# State Route 1 Traffic Operational Systems Improvements Project

San Mateo County, California
District 04- SM-1 (Postmile 26.43/R47.20)
EA 04-2K880/ Project ID 417000040

## Recirculated Initial Study with Proposed Negative Declaration


**Prepared by the**
**State of California, Department of Transportation**

**March 2021**

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# General Information about this Document

## What's in this document:

The California Department of Transportation (Caltrans) has prepared this Initial Study (IS) with Proposed Negative Declaration, which examines the potential environmental impacts of the proposed State Route 1 Traffic Operational Systems Improvements Project located from Miramontes Point Road Intersection to Clarinada Avenue Undercrossing in San Mateo County, California. Caltrans is the lead agency under the California Environmental Quality Act. This document explains why the project is being proposed, the existing environment that could be affected by the project, potential impacts of each of the alternatives, and the proposed avoidance and minimization measures.

## What you should do:

- Please read this document.
- Additional copies of this IS and related technical studies are available by request from Caltrans at the same contact for comments shown below.

This document can also be accessed electronically at the following website: https://dot.ca.gov/caltrans-near-me/district-4/d4-popular-links/d4-environmental-docs

- Attend a virtual public meeting on April 8, 2021.
- We'd would like to hear what you think. If you have comments regarding the proposed project, please send your written comments to Caltrans by April 20, 2021.
- Send requests for additional copies of this IS or related technical studies via email to nina.hofmarcher@dot.ca.gov.
- Email the project team with comments to nina.hofmarcher@dot.ca.gov (preferred during COVID-19).
- Or send comments via postal mail to:

  Caltrans District 4
  Office of Environmental Analysis
  ATTN: Nina Hofmarcher
  P.O. Box 23660, MS-8B
  Oakland, CA 94623-0660

## What happens next:

After comments are received from the public and reviewing agencies, Caltrans may (1) give environmental approval to the proposed project, (2) do additional environmental studies, or (3) abandon the project. If the project is given environmental approval and funding is obtained, Caltrans could design and construct all or part of the project.

## Alternate formats:

For individuals with sensory disabilities, this document can be made available in Braille, in large print, or digital audio. To obtain a copy in one of these alternate formats, please call or write to the California Department of Transportation, District 4, Attn: Zachary Gifford, Environmental Senior, P.O. Box 23660, Oakland, CA 94623-0660; (510) 506-1264 (Voice), or use the California Relay Service 1 (800) 735-2929 (TTY), 1 (800) 735-2929 (Voice) or 711

An Americans with Disabilities Act-compliant electronic copy of this document is available to download at: the Caltrans environmental document website (https://dot.ca.gov/caltrans-near-me/district-4/d4-popular-links/d4-environmental-docs).

## Initial Study with Proposed Negative Declaration

| 04-SM-1 | 26.43/47.20 | 04-2K880 |
|---|---|---|
| Dist. – Co. – Rte. | Postmile | E.A. |

| | |
|---|---|
| Project title: | Traffic Operational Systems Improvement Project |
| Lead agency name and address: | California Department of Transportation<br>111 Grand Avenue, Oakland, CA 94612 |
| Contact person and phone number: | Zachary Gifford, Senior Environmental Planner. (510) 506-1264 |
| Project location: | San Mateo County, California |
| General plan description: | Highway |
| Zoning: | Highway, Public Facilities |
| Other public agencies whose approval is required (e.g., permits, financial approval, or participation agreements) | • California Transportation Commission<br>• United States Fish and Wildlife Service<br>• California Coastal Commission<br>• City of Half Moon Bay Local Coastal Program<br>• City of Pacifica Local Coastal Program<br>• San Mateo County Local Coastal Program |

The document, maps, project information, and supporting technical studies are available upon request from: Nina Hofmarcher; nina.hofmarcher@dot.ca.gov. The document is also available to download at the Caltrans environmental document website (https://dot.ca.gov/caltrans-near-me/district-4/d4-popular-links/d4-environmental-docs).

03/19/2021

Lindsay Vivian
Office Chief
Office of Environmental Analysis
Caltrans District 4

Date

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# Proposed Negative Declaration

Pursuant to: Division 13, Public Resources Code

## Project Description

The California Department of Transportation (Caltrans) is proposing to construct the State Route (SR) 1 Traffic Operational Systems Improvements project. The project would provide emergency and incident-management related information to the traveling public on SR 1 and inform Caltrans' Traffic Management Center in Oakland, California, of recurrent and non-recurrent congestion on the corridor and the causes of that congestion. This project would include installation of wireless detection systems on existing or new structures, ground mounting variable message signs onto wooden poles, adding Midwest guardrail system, and maintenance vehicle pullouts at strategically selected locations along SR 1 from Miramontes Point Road Intersection in Half Moon Bay to Clarinada Avenue Undercrossing in Daly City (postmile 26.43 to 47.20).

## Determination

This proposed Negative Declaration (ND) is included to give notice to interested agencies and the public that it is Caltrans' intent to adopt a ND for this project. This does not mean that Caltrans' decision regarding the project is final. This ND is subject to change based on comments received by interested agencies and the public.

Caltrans has prepared an Initial Study for this project, and pending public review, expects to determine from this study that the proposed project would not have a significant effect on the environment for the following reasons:

The proposed project would have no effect on agriculture and forest resources, air quality, cultural resources, land use and planning, mineral resources, noise, population and housing, public services, recreation, or tribal cultural resources. The proposed project would have a less-than-significant impact to geology and soils, hazards and hazardous materials, hydrology/water quality, greenhouse gas emissions, noise, transportation and traffic, utilities and service systems, and wildfire.

With standard Caltrans conservation measures and project-specific avoidance and minimization measures, the proposed project would have less-than-significant effects to aesthetics and biological resources, including the California red-legged frog and San Francisco garter snake. The proposed project will not impact wetlands or waters of the U.S., riparian habitat, protected and migratory birds, or essential fish habitat.

Melanie Brent Deputy District Director — Date
Environmental Planning and Engineering
California Department of Transportation

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# Chapter 1 Proposed Project

## 1.1 Introduction

The California Department of Transportation (Caltrans) proposes to install six wireless detection systems (WDS), five ground mounted variable message signs (VMS), Midwest guardrail systems (MGS), and maintenance vehicle pullouts (MVP) on State Route (SR) 1 in San Mateo County from the Miramontes Point Road Intersection to the Clarinada Avenue Undercrossing. The project would also update software at an existing changeable message sign (CMS) at the entrance to the Tom Lantos Tunnels at Devil's Slide. The total length of the project is approximately 20.9 miles. The proposed project would occur in San Mateo County on SR 1 from postmile 26.43 to 47.20.[1]

### 1.1.1 CEQA Lead Agency Status

The SR 1 Traffic Operational Systems Improvements Project (proposed project or project) by Caltrans is subject to state environmental review requirements. Project documentation has been prepared in compliance with the California Environmental Quality Act (CEQA). Caltrans is the lead agency under CEQA and sponsor for the proposed project and has prepared this Initial Study (IS) with Negative Declaration (ND) for the proposed project.

### 1.1.2 Background

Caltrans prepared a CEQA IS with an ND document and circulated it for public review on August 14, 2020. A virtual public meeting was held on September 10, 2020, and the public review period was scheduled to end on September 13 but was extended to October 30, 2020. Comments were reviewed, and subsequent additional outreach was conducted with some of the individual communities within the project limits. As a result of the comments received and consultation with the local communities, the project's design was reviewed and revised with respect to the use and locations of the signs system. This included changing the proposed use of the signs for displaying general travel time information to a focus on providing information related to emergencies—such as floods, mudslides, wildfire, and resulting evacuations—power safety shutoffs, accidents, road

[1] To identify specific work locations, Caltrans uses its postmile system. A postmile is the way that a specific location on a state or federal route is specified within the Linear Reference System. The postmile value measures the distance, in miles, from the start of the route, or from the point at which the route enters the county. Thus, postmile values reset to zero each time the route crosses a county border. Sometimes, postmiles include a prefix or suffix code, or qualifiers, to distinguish two postmile specifications, representing two distinct geographic locations that differ in their postmile listing only in whether a single qualifier is present. Information about Caltrans postmiles and a mapping tool can be viewed at https://postmile.dot.ca.gov/PMQT/PostmileQueryTool.html.

closures or construction, or other events that could result in substantial delays where drivers would benefit from timely information.

The proposed signs would be activated during emergencies or incidents only and would be off most of the time. The signs would only be programed to be lighted when needed to convey emergency and incident-related information to motorists. In addition, some of the VMS locations were reviewed and relocated in response to public review and input. In response to concerns expressed over the visual impacts associated with the signs, Caltrans reviewed and identified new locations for the proposed signs at locations 5, 6, and 9.

Placement of signs at the revised locations would still serve the purpose of the project and would result in reduced visual impacts from the VMS. Location 2—adjacent to a car dealership in Half Moon Bay—was also considered for relocation, but after a detailed review, Caltrans determined that there were no other locations that served the project's purpose. The location would place the VMS before the SR 1 and 92 intersection, making it possible for motorists to safely turn around in the case of an emergency. Furthermore, Caltrans considered the possibility of reducing the size of the VMS panels. Caltrans determined that the size could not be reduced because a reduction in size of the panel would not be large enough to effectively deliver useful messaging on emergencies and incidents to the traveling public. VMS proposed for the project would be approximately 12 feet wide by 5 feet tall.

Because the proposed project was revised to focus on emergency and incident-related messaging and some sign locations were modified, Caltrans decided to recirculate this document. This IS and ND has been updated based on these changes, and additional information has been provided on the appearance of the signs, including visual simulations of the signs and proposed changes. The comments that were received during the review period in 2020 were considered in making changes to the project, and a summary of coordination with external stakeholders is provided in Chapter 3.

### 1.1.3 Project Location

The project is located along a 20.9-mile stretch of SR 1, starting at Miramontes Point Road Intersection and extending to the Clarinada Avenue Undercrossing (postmile 26.43 to 47.20) (Figure 1-1). SR 1 is a major north-south state highway that runs along the Pacific Ocean coastline for 656 miles. Along the San Mateo County coastline, from the beginning of the county line to the City of Pacifica, SR 1 is known as the "Cabrillo Highway" and operates as a conventional highway throughout most of the project limits. The route provides primary access to several coastal communities as well as access to beaches, parks, and other attractions along the coast, and it is a popular route for tourists.


**Figure 1-1 Project Vicinity Map**

The portion of SR 1 within the project limits varies from a two- to four-lane highway with no high-occupancy vehicle lanes.

Despite having no sidewalks or continuous dedicated bike lanes, this portion of SR 1 is part of the Pacific Coast Bicycle Route from Mexico to Canada and is also part of the California Coastal Trail (CCT).

### 1.1.4 Local Planning

This project is in the coastal zone and would be governed by Local Coastal Programs (LCPs) of San Mateo County, Pacifica, and Half Moon Bay. All development in the Coastal Zone requires either a Coastal Development Permit (CDP) or an exemption from CDP requirements. For a permit to be issued, the development must comply with the policies of the LCP and those ordinances.

### 1.1.5 Existing Facility

The segment of SR 1 within the project limits is primarily a semi-rural highway from postmile 26.43 to 47.20. Frequent landslides and erosion along the coast have caused portions of SR 1 to either be closed for long periods or re-routed entirely. Devil's Slide is a stretch of roadway between Half Moon Bay and Pacifica that has been prone to major landslides that can result in road closures. Entering San Mateo County from the south, SR 1 follows the west coast of the San Francisco Peninsula, passing by marine mammal colonies at Año Nuevo State Park and the historic Pigeon Point Lighthouse, before reaching Half Moon Bay. Between Half Moon Bay and Pacifica, the highway bypasses the Devil's Slide area via the Tom Lantos Tunnels, which were opened to traffic in 2013.

There is little existing traffic monitoring along SR 1; however, the main intersections along this section of the highway within the project limits are signalized. The Annual Average Daily Traffic (AADT) on SR 1 from postmile 26.0 to 47.27, where the proposed project is located, varies between 14,000 and 70,000 vehicles per day according to the 2015 Traffic Volumes on California State Highways report.

SR 1 provides access to coastal communities, beaches, state parks and national recreation areas.

Bicycle, transit and park and ride facilities are not included as part of this project.

## 1.2 Purpose and Need

The purpose of this project is to provide the traveling public using SR 1 with real-time travel information related to emergency events, such as notifications regarding evacuations, fires, earthquakes, and tsunamis; plus information related

to public safety power shutoffs, accidents, tunnel closures, and Amber Alerts. The project would also inform Caltrans' Traffic Management Center (TMC) in Oakland, California, of recurrent and non-recurrent congestion on the corridor and the causes of that congestion. Emergency and incident-related information provided will help inform the public traveling on SR 1 of upstream roadway conditions, so that people can make informed decisions regarding their travel. As a result, this project will improve traffic operations, public safety system performance, and minimize the duration and impacts of non-recurring congestion due to incidents and roadway and tunnel closures.

This project is needed because there are currently no traffic management systems along this route that can provide real time information on roadway conditions and emergency situations to Caltrans, the traveling public, and emergency first responders. This limits Caltrans' ability to inform the traveling public of roadway conditions quickly and effectively. The TMC is limited in understanding causes of routine congestion and managing traffic conditions along SR 1, including those caused by emergencies. This is due to a lack of data collection tools, such as WDS, which are designed to collect information on traffic speeds and roadway conditions. Overall, Caltrans anticipates that this project will improve traffic congestion along the corridor by reducing the duration and impact of non-recurring congestion.

## 1.3 Project Description

### 1.3.1 Proposed Traffic Event Information System

The proposed scope of work includes installing six WDS, five ground-mounted VMS, and MGS where necessary to protect equipment and motorists from collisions with infrastructure placed in the Clear Recovery Zone, two MVPs to assist with equipment maintenance; and updating software on an existing CMS at the Tom Lantos Tunnels at Devil's Slide.

WDS are small wireless devices used for traffic monitoring. They use sensors to detect the presence of vehicles. WDS would be installed on existing traffic signal poles (Locations 1, 3, 4, and 9-1), an existing lighting pole (Location 7), or a new pole (Location 10). These are small boxes and would not be very visible to the public. The installation of WDS modules involves work on new or existing poles and connecting to power using existing or new utility cabinets.

VMS are electronic traffic signs that are used to provide motorists with real time traffic safety and guidance information about traffic, congestion, and emergencies. The VMS would provide emergency and incident-related information to the traveling public on SR 1, and inform the Caltrans' TMC in Oakland, California, of recurrent and non-recurrent congestion on the corridor

and the causes of that congestion. Key locations for VMS have been determined by Caltrans. This project would install VMS at locations where motorists could safely reroute and turn around to avoid roadway closures, emergencies, and other incidents. The new VMS would be turned on only when communicating necessary information and would remain off most of the time.

The VMS proposed for the project would be approximately 12 feet wide by 5 feet tall. The VMS panels would be installed on two wooden poles. The VMS foundations would require two holes; each hole would be 12 inches in diameter and 6 feet in depth. New controller cabinets and service cabinets would be installed near the signs at VMS Locations 2, 5, 6, and 9-2 for power. Only controller cabinets would be installed at Location 10. Controller cabinets would be approximately 67 inches high by 24 inches wide by 30 inches deep. Service cabinets would be approximately 48 inches high by 12 inches wide by 7.25 inches deep.

The controller cabinets and service cabinets would be placed on new concrete pads. These foundations would require excavation. Controller cabinet foundations would be approximately 20 inches by 32 inches. Service cabinet foundations would be approximately 16 inches by 24 inches. Controller and service cabinets would be place adjacent to each other. Additionally, new pull boxes would be installed in the ground. Pull boxes are concrete boxes that are used to assist with wire pulling. Pull boxes would lay flat on the ground and be approximately 20 inches by 11 inches. The number of pull boxes would be finalized during the design phase of the project, but it is estimated that at least two pull boxes would be needed per VMS location.

The proposed project would include software upgrades of an existing CMS at the Tom Lantos Tunnels. The software at the existing CMS at the Tom Lantos Tunnels (Location 8) would be updated to enable the sign to display emergency and incident-related information. CMS are electronic traffic signs used to provide motorists with real time traffic safety and guidance information about traffic, congestion, and emergencies. The project does not propose installation of any new CMS.

MVPs would be installed at two locations (Locations 5 and 6). MVPs provide additional space for vehicles to safely allow maintenance workers to access highway-related infrastructure. MVPs reduce worker exposure to high speed traffic. MVPs will be within Caltrans' right-of-way (ROW). Final dimensions of the MVPs will be determined during the design phase of the project. Backfill for MVPs would consist of hot mix asphalt type A and aggregate base.

MGS would be installed at several locations (Locations 2, 5, 6, and 10), most of which have pre-existing MVP. The MGS would be installed to protect the traveling public from fixed objects and the VMS at various locations. MGS would be installed in drilled holes that are 6 inches in diameter and 6 feet deep. MGS is installed to reduce the possibility and severity of possible run-off-road collisions, and for worker safety.

### 1.3.2 Construction Details by Specific Location

Ten separate locations with specific traffic information system elements are proposed along the SR 1 corridor in the project area. Table 1-1 summarizes the elements involved at each project location and the totals of those elements for the entire project.

Specific details and figures for each location are presented below, including visual simulations. Visual simulations illustrate how the proposed project components would appear in the proposed locations.

**Table 1-1 List of Locations and Construction Elements**

| Location Number | Postmile | Direction | WDS | VMS | MVP | MGS (in feet) |
|---|---|---|---|---|---|---|
| 1 | 26.43 | SB | 1 | 0 | 0 | 0 |
| 2 | 27.95 | NB | 0 | 1 | 0 | 100 |
| 3 | 29.04 | NB | 1 | 0 | 0 | 0 |
| 4 | 32.86 | NB | 1 | 0 | 0 | 0 |
| 5 | 33.55 | SB | 0 | 1 | 1 | 100 |
| 6 | 33.35 | NB | 0 | 1 | 1 | 100 |
| 7 | 38.48 | SB | 1 | 0 | 0 | 0 |
| 8 | 39.36 | SB | 0 | 0 | 0 | 0 |
| 9-1 | 42.58 | NB | 1 | 0 | 0 | 0 |
| 9-2 | 42.27 | NB | 0 | 1 | 0 | 0 |
| 10 | 47.20 | SB | 1 | 1 | 0 | 100 |
| **Total** | **-** | **-** | **6** | **5** | **2** | **400** |

Notes:
MGS = Midwest guardrail systems
MVP = maintenance vehicle pullout
NB = northbound
SB = southbound
VMS = variable message sign
WDS = wireless detection system

### 1.3.3 Location 1. SR 1 at Miramontes Point Road

Location 1 would occur at postmile 26.43 at the southwestern corner of SR 1 and Miramontes Road, 2.6 miles south of the SR 1 and SR 92 intersection (see Figure 1-2). The proposed work at this location includes installing WDS modules on an existing traffic signal pole (see Figure 1-3).

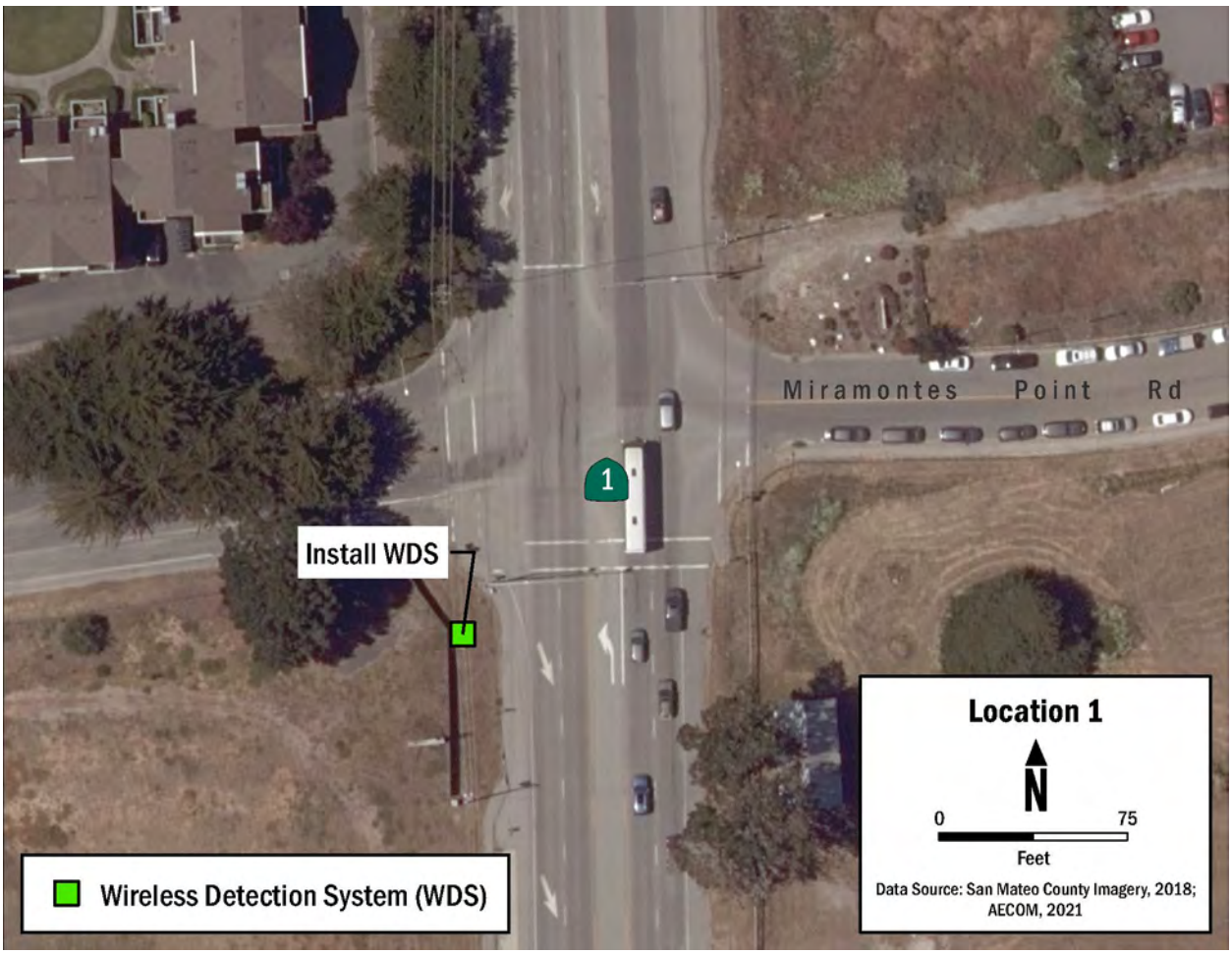


**Figure 1-2 Location 1 Map Figure**


**Figure 1-3 Street View Facing South on SR 1 at Location 1**

### 1.3.4 Location 2. SR 1 approaching Seymour Street

Location 2 is at postmile 27.95 near Seymour Street. The proposed work at this location includes installing a VMS approximately 12 feet from the edge of shoulder, and an MGS between the road shoulder and new VMS. A controller cabinet and service cabinet would be installed near the sign. Power for the VMS to the existing Pacific Gas and Electric Company (PG&E) pole would likely be supplied by excavating under the road across Seymour Street. Figures 1-4 through 1-7 summarize the location, proposed system elements and provide visual simulations at this location.


**Figure 1-4 Location 2 Map Figure**


**Figure 1-5 Existing Conditions at Location 2**


**Figure 1-6 Visual Simulation of VMS (shown without message displayed) and MGS at Location 2**


**Figure 1-7 Visual Simulation of VMS (shown with message displayed) and MGS at Location 2**

### 1.3.5 Location 3. SR 1 at Intersection with SR 92

The proposed work at Location 3 would occur at postmile 29.04, at the intersection of SR 1 and SR 92 in the city of Half Moon Bay. Existing conditions at this site include a paved shoulder with mowed ruderal vegetation. Proposed traffic system elements here would include installing WDS modules on an existing traffic signal pole at the northeast corner and connecting to existing power. Figures 1-8 and 1-9 describe the proposed location for the WDS.

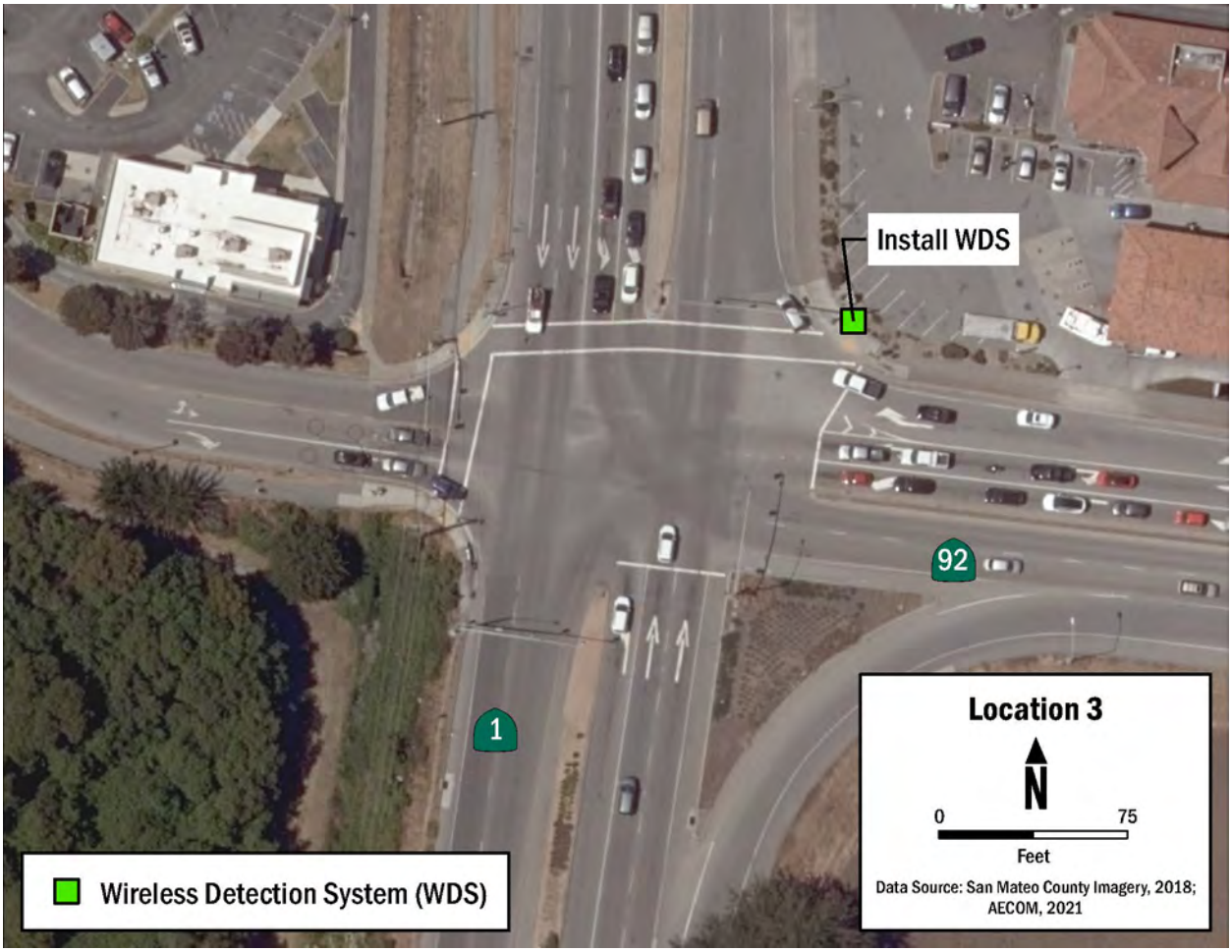


**Figure 1-8 Location 3 Map Figure**

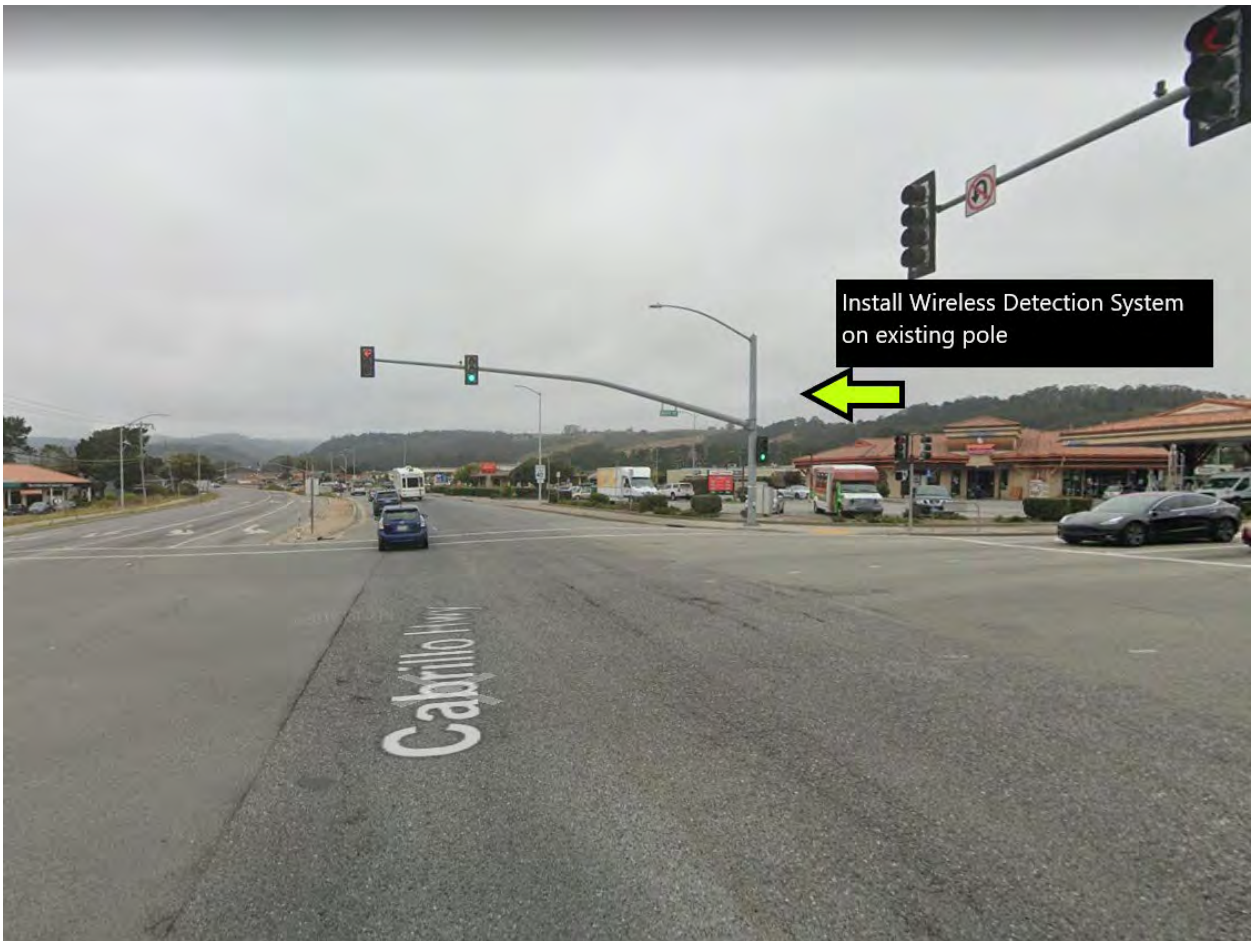


**Figure 1-9 Street View Facing North on SR 1 at Location 3**

### 1.3.6 Location 4. SR 1 at Capistrano Road

The proposed work at Location 4 would occur at postmile 32.86 at the northeast corner of Capistrano Road (see Figure 1-10). Proposed traffic event system elements would include installing WDS modules to an existing traffic signal pole and connecting to the power using an existing utility cabinet (see Figure 1-11).

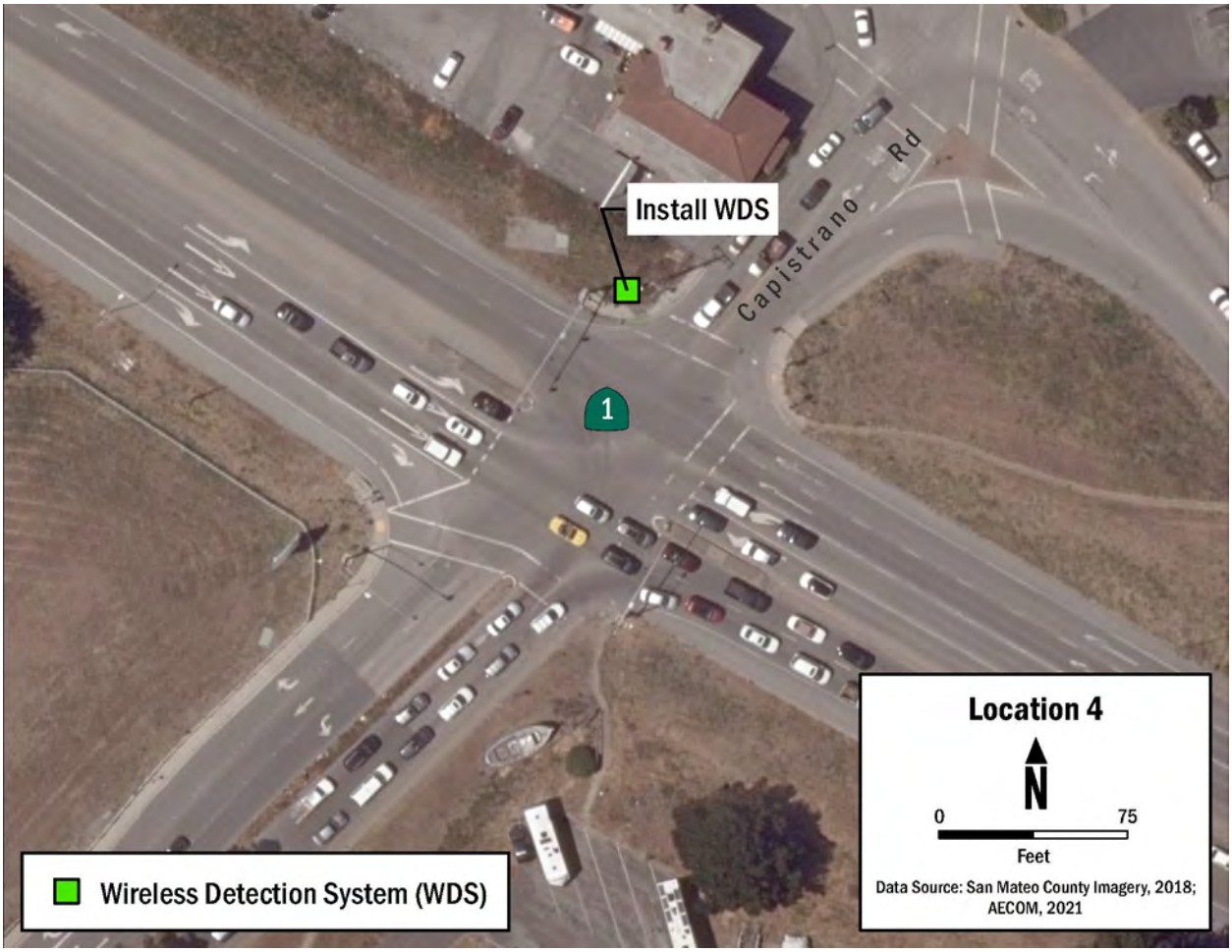


**Figure 1-10 Location 4 Map Figure**


**Figure 1-11 Street View Facing North on SR 1 at Location 4**

### 1.3.7 Location 5. SR 1 Approaching Coral Reef Avenue

Work at this location would occur at postmile 33.55, along the southbound shoulder approaching Coral Reef Avenue (see Figure 1-12 and Figure 1-13). Existing conditions include a gravel shoulder and regularly mowed ruderal upland vegetation. A drainage ditch that drains into Denniston Creek occurs approximately 35 feet from the roadway and is outside of the proposed work area. Work at Location 5 would include a VMS installed on two wooden poles, a MVP, and 100 feet of MGS. Power for VMS would be provided by an adjacent PG&E pole (see Figure 1-14 and Figure 1-15). A controller cabinet and a service cabinet near the sign would be installed.

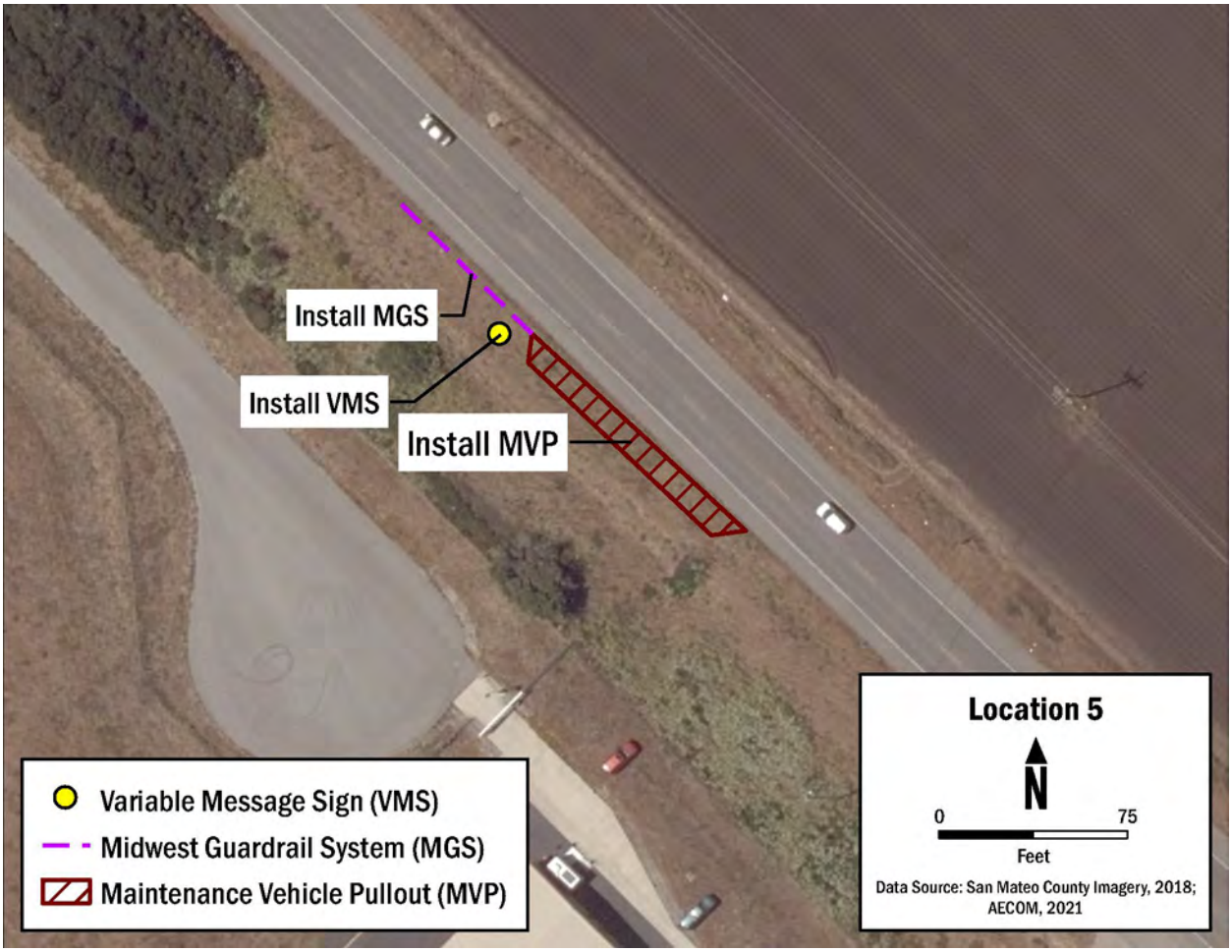


**Figure 1-12 Location 5 Map Figure**

**Figure 1-13 Existing Conditions at Location 5**

**Figure 1-14 Visual Simulation of VMS (shown without message displayed) and MGS at Location 5**


**Figure 1-15 Visual Simulation of VMS (shown with message displayed) and MGS at Location 5**

### 1.3.8 Location 6. SR 1 North of Coral Reef Avenue

Work for Location 6 would occur at postmile 33.35, along the northbound SR 1 shoulder north of Coral Reef Avenue (see Figure 1-16 and Figure 1-17). Existing conditions at this site include a gravel shoulder and mowed ruderal vegetation. Denniston Creek passes under SR 1, approximately 70 feet from where proposed work would occur. Proposed traffic event information elements would include a VMS, MVP and 100 feet of MGS. Power for VMS would be sourced from a nearby existing power pole (Figure 1-18 and Figure 1-19). A controller cabinet and service cabinet near the sign would be installed.

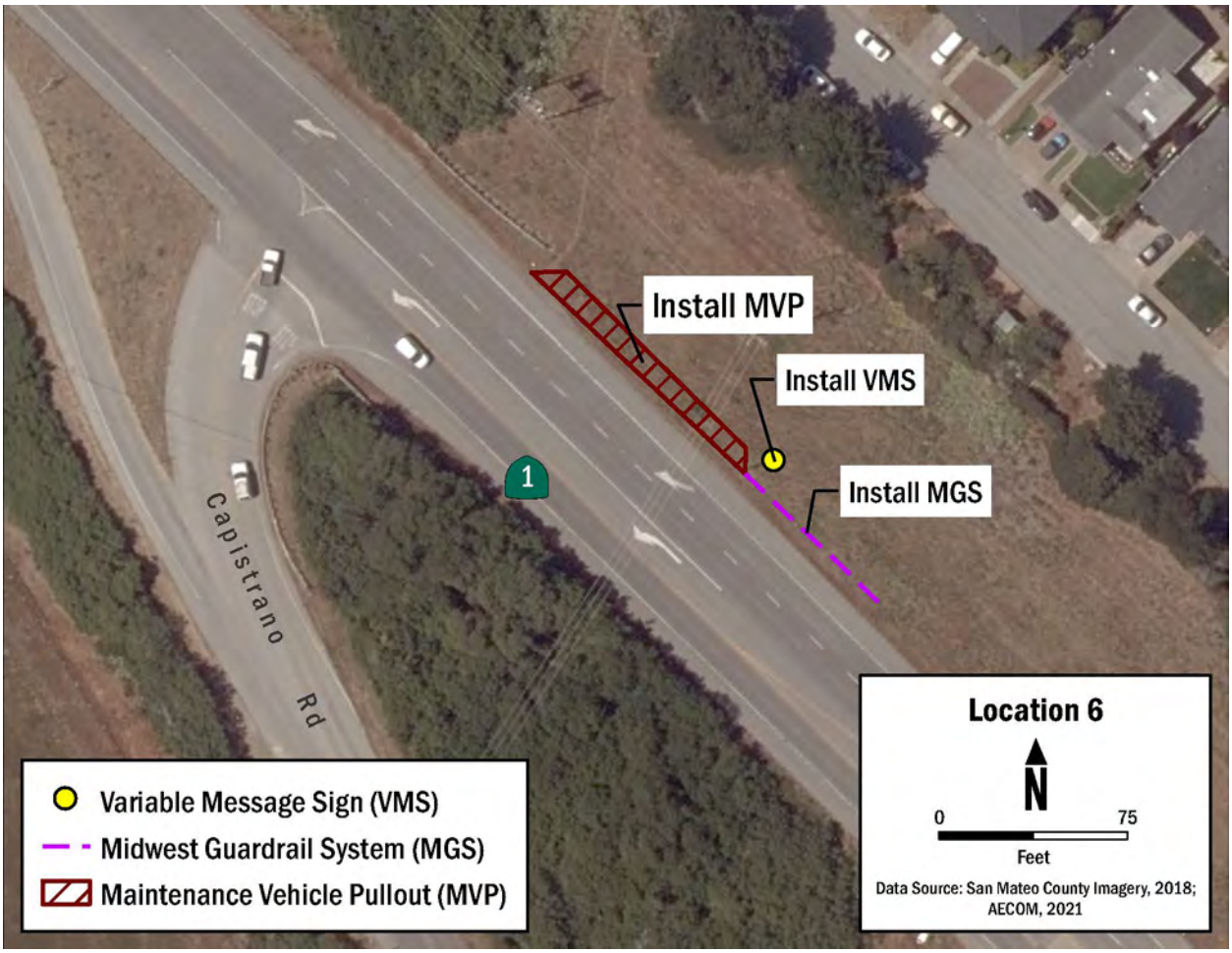


**Figure 1-16 Location 6 Map Figure**

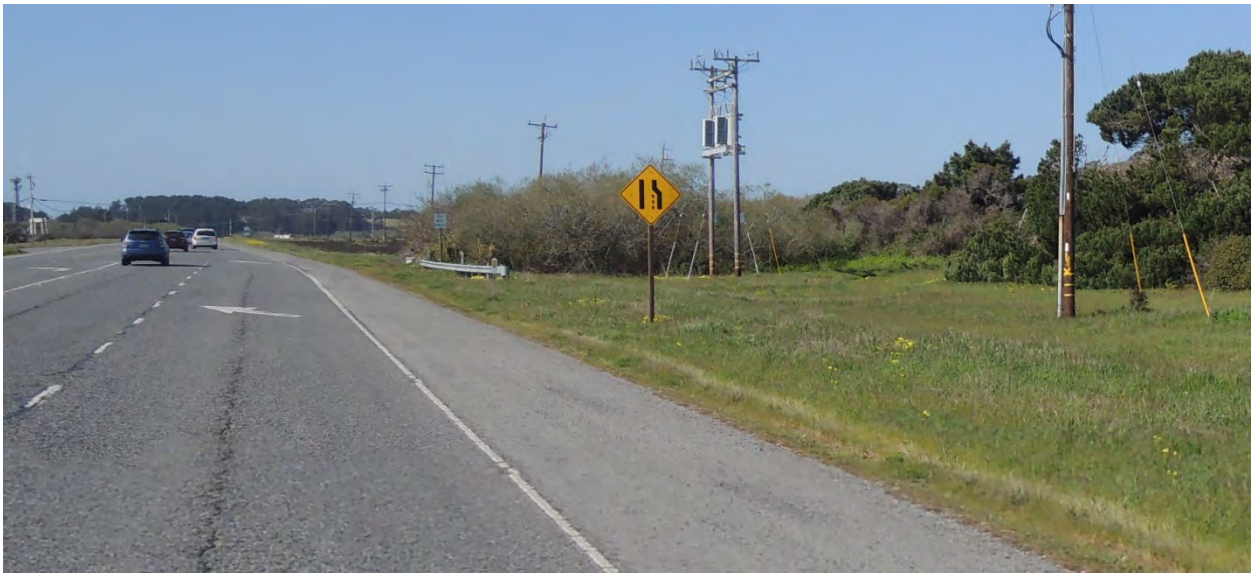

**Figure 1-17 Existing Conditions at Location 6**

**Figure 1-18 Visual Simulation of VMS (shown without message displayed), MVP and MGS at Location 6**


**Figure 1-19 Visual Simulation of VMS (shown with message displayed), MVP and MGS at Location 6**

### 1.3.9 Location 7: SR 1 South of Tom Lantos Tunnels

The proposed work at Location 7 would occur at postmile 38.48 south of the Tom Lantos tunnels (Figure 1-20 and Figure 1-21). This location includes installing WDS modules on an existing highway lighting pole and connecting to power using an existing utility cabinet.

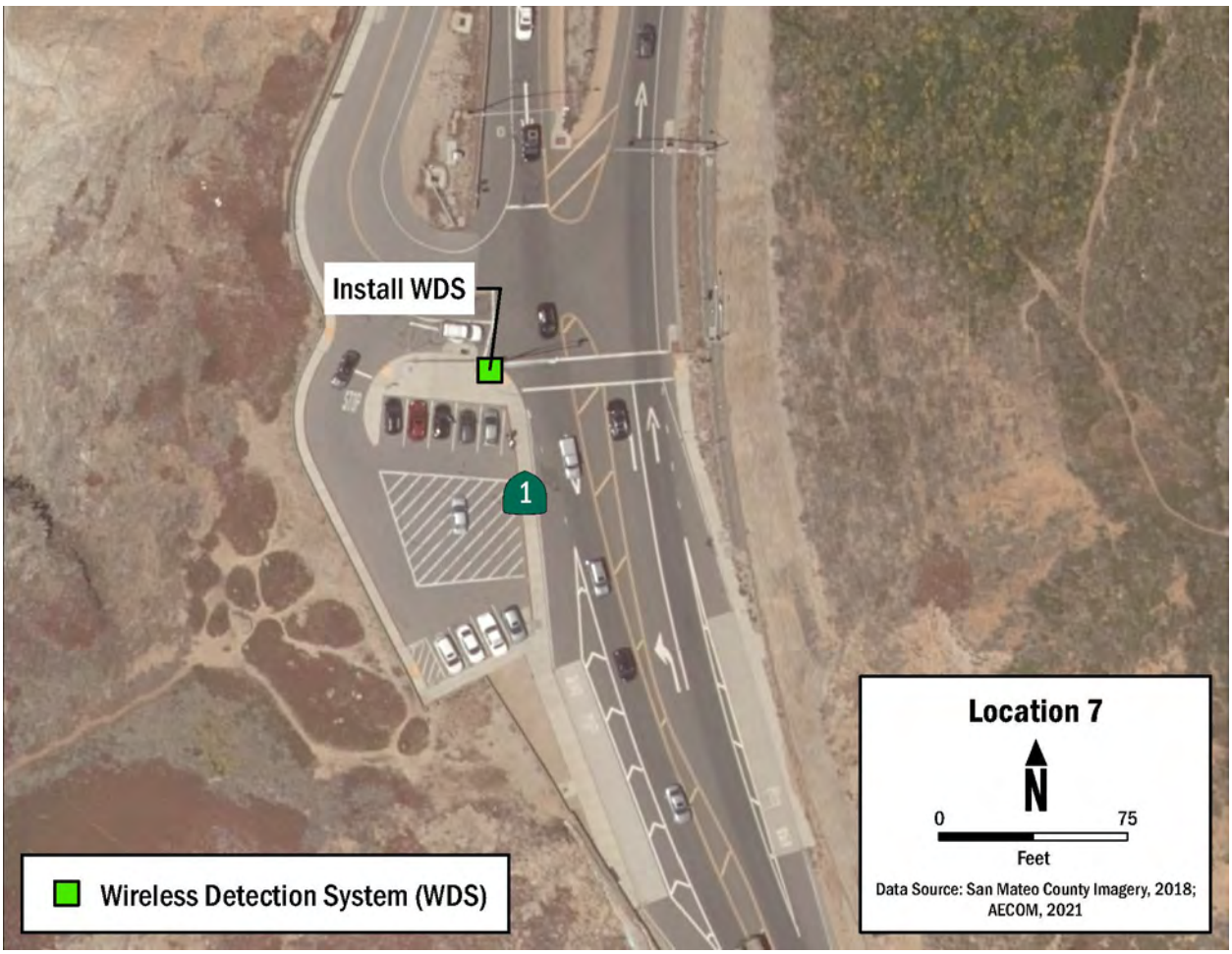


**Figure 1-20 Location 7 Map Figure**


**Figure 1-21 Street View of SR 1 Facing South near Tom Lantos Tunnels at Location 7**

### 1.3.10 Location 8. SR 1 at North End of Tom Lantos Tunnels

Proposed work would occur at postmile 39.36, at the existing CMS in the northbound lanes, which are situated just before the entrance to the Tom Lantos tunnels at Location 8 (see Figure 1-22). New software would be downloaded and installed to enable the existing CMS at this location. The existing CMS could then be used to display emergency and incident-management information.


**Figure 1-22 Location 8 Map Figure**

### 1.3.11 Location 9-1, SR 1 Approaching Reina del Mar Avenue

Work at Location 9-1 would occur within the Pacifica city limits at postmile 42.58, at the northeastern corner of the SR 1 intersection with Reina Del Mar Avenue (see Figure 1-23 and Figure 1-24). Installation of traffic information system elements would include installing WDS modules on an existing traffic signal pole and connecting to existing power.

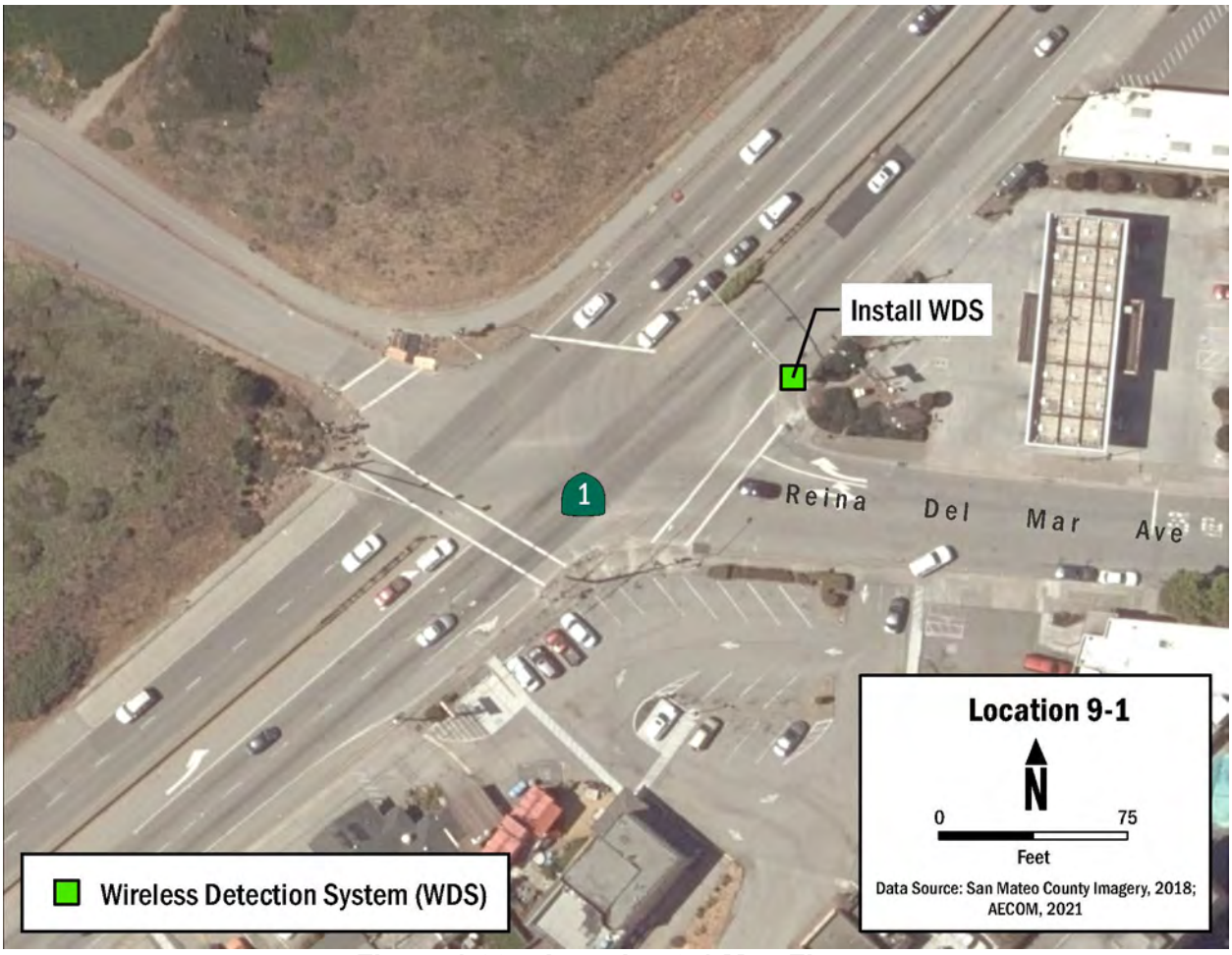


**Figure 1-23 Location 9-1 Map Figure**


**Figure 1-24 Street View Facing North on SR 1 at Location 9-1**

### 1.3.12 Location 9-2. SR 1 Approaching Reina Del Mar Avenue

Work at this location would occur at postmile 42.27, approaching Reina Del Mar Avenue along the northbound shoulder of SR 1 (see Figure 1-25 and Figure 1-26). Installation of traffic event information system elements would include a VMS on wooden poles, and a new controller cabinet and service cabinet near the sign (see Figure 1-27 and Figure 1-28). Power for VMS would be provided via the existing power utility cabinet.


**Figure 1-25 Location 9-2 Map Figure**

**Figure 1-26 Location 9-2 Existing Conditions**

**Figure 1-27 Visual Simulation of VMS (shown without message displayed) at Location 9-2**


**Figure 1-28 Visual Simulation of VMS (shown with message displayed) at Location 9-2**

### 1.3.13 Location 10. SR 1 at Clarinada Avenue

Work at Location 10 would occur at postmile 47.20, between the exit and entrance ramps for Clarinada Avenue (see Figure 1-29 and Figure 1-30). Installation of traffic event information system elements would include a VMS on wooden poles, approximately 100 feet of MGS, a WDS module on a new pole, and a new controller cabinet and service cabinet (Figure 1-31 and Figure 1-32). Elements requiring power would be connected via existing utility cabinets at this location.

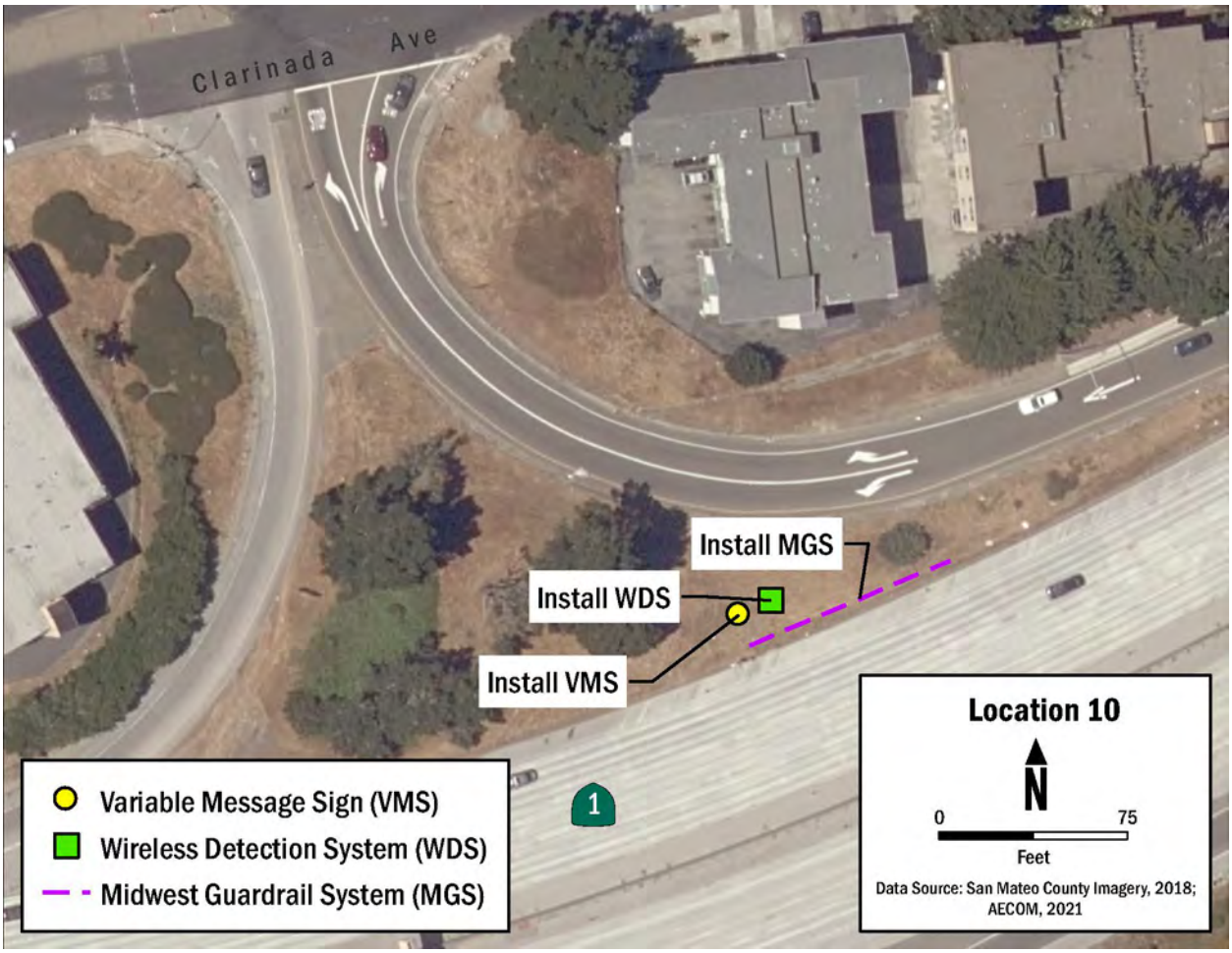


**Figure 1-29 Location 10 Map Figure**

**Figure 1-30 Existing Conditions at Location 10**

**Figure 1-31 Visual Simulation of VMS (shown without message displayed) and MGS at Location 10**


**Figure 1-32 Visual Simulation of VMS (shown with message displayed and MGS at Location 10**

### 1.3.14 Excavation

A total of 100 cubic yards of soil would be excavated for installation of the two MVPs and for installation of the new VMS, MGS, poles, and cabinet foundations. Any excess soil would be removed according to Caltrans standards for the proper handling and disposal of any excess soil. If necessary, a disposal site would be determined based on soil contamination levels.

There would be trenching along the shoulders to install conduits for power and communications at all locations that include VMS and new poles. Typical excavation depths for trenching would be 12 inches under pavement and 30 inches under the soil.

### 1.3.15 Structures

Five VMS will be ground mounted on wooden poles. A total of 400 linear feet of MGS would be installed to protect the VMS. Locations 2, 5, and 6 would each have about 100 feet of MGS installed. Location 10 would have 100 feet of MGS installed.

### 1.3.16 Construction Equipment

Equipment that would be used includes backhoes, utility trucks, semi-trucks, small drill rigs, and a paving machine.

### 1.3.17 Utilities

This project would not involve utility relocations. No existing utilities have been identified that conflict with the work proposed by this project. Connecting to electrical power connections during construction may result in short-term, temporary interruptions of service.

### 1.3.18 Drainage

There are no new drainage features for this project nor would the project impact existing drainage features.

### 1.3.19 Construction Schedule

Construction is anticipated to take 60 working days to complete. Work would occur during the summer months and during daytime hours between 8 a.m. and 5 p.m.

### 1.3.20 Access Routes

No access routes will be required for this project. All locations can be fully accessed from existing state ROW. There would be occasional lane closures, which would require traffic control.

### 1.3.21 Project Funding

This project is funded by the State Highway Operation and Protection Program for fiscal year 2021/2022. The project is funded by the Transportation Management Program (201.315) for a total project cost of $2,408,000.

## 1.4 Project Features

Project features are design elements and/or standard measures that are incorporated into a project and are intended to reduce environmental effects resulting from proposed project activities. The proposed project contains several standardized project components which are employed on most, if not all, of Caltrans projects and were not developed in response to any specific environmental impact resulting from the proposed project. These components are referenced as project features in this chapter as they pertain to different environmental resources, and are separated out from avoidance and minimization measures (AMMs), which directly relate to the impacts resulting from the proposed project. AMMs and other measures are discussed separately within each environmental section.

A summary of project features is presented in Table 1-2.

**Table 1-2 Project Feature Summary**

| Resource Area | Project Feature Reference | Project Feature |
|---|---|---|
| Aesthetics/ Visual | PF-AES-01 | During construction operations, unsightly material and equipment in staging areas shall be placed where it is less visible and/or covered where possible. |
| Air Quality | PF-AIR-01 | Caltrans Standard Specifications Section 7-1.02A and 7-1.02C, Emissions Reduction, require contractors to comply with all laws applicable to the project and to certify they are aware of and will comply with all ARB emission reduction regulations. |
| Air Quality | PF-AIR-02 | Caltrans Standard Specifications Section 14-9.02, Air Pollution Control, requires contractors to comply with all air pollution control rules, regulations, ordinances, and statutes. |
| Biological Resources | PF-BIO-01 | Worker Environmental Awareness Training: Construction personnel will attend a mandatory environmental education program delivered by the Department Biologist prior to taking part in site construction activities. The program will include an explanation on how to identify and avoid take of special-status species. At a minimum, the training will include a description of the species; how they might be encountered in the project area; their status and protection; and any relevant Conservation Measures and Terms and Conditions in project permits. |

| Resource Area | Project Feature Reference | Project Feature |
|---|---|---|
| Biological Resources | PF-BIO-02 | Environmentally Sensitive Area Fencing: Before the start of construction, ESAs (defined as areas containing sensitive habitats adjacent to or within construction work areas for which physical disturbance is not allowed) will be clearly delineated using high-visibility fencing as directed by the approved biologist. Construction work areas will include the active construction site and all areas providing support for the project, including areas used for parking, equipment and material storage and staging, and access roads. The high-visibility fencing will remain in place throughout the duration of construction activities, will be inspected regularly, and fully maintained throughout construction. The final project plans will show all locations where the fencing will be installed and will provide installation specifications. The bid solicitation package special provisions will clearly describe acceptable fencing material and prohibited construction-related activities, including vehicle operation, material and equipment storage, access roads and other surface-disturbing activities within ESAs. |
| Biological Resources | PF-BIO-03 | Soil Storage: Where necessary and appropriate, native topsoil will be removed and stored for reuse or offsite disposal in a designated location as specified by the project biologist in coordination with the Resident Engineer until project completion. |
| Biological Resources | PF-BIO-04 | Vegetation Removal: Vegetation removal will be limited to the designated work areas needed for access and workspace. Where possible, vegetation will be trimmed instead of removed. Vegetation in temporary work areas will be cut above soil level to promote re-vegetative growth of established plants following construction to the maximum extent feasible. Vegetation will be mowed to a height greater than 4 inches. |

| Resource Area | Project Feature Reference | Project Feature |
|---|---|---|
| Biological Resources | PF-BIO-05 | Replant, Reseed, and Restore Disturbed Areas: Caltrans will restore temporarily disturbed areas to preconstruction conditions and topographical contours, to the maximum extent practicable. Where soil compaction is unintended, compacted soils will be loosened after heavy construction activities are complete. Exposed slopes and bare ground will be reseeded with native grasses and shrubs to the maximum extent feasible to stabilize the soil and prevent erosion. |
| Biological Resources | PF-BIO-06 | Migratory Bird Treaty Act: To protect migratory birds and their nests, all initial major vegetation clearing, but not grubbing, will be conducted between October 1 and January 31, outside the typical bird nesting season, when possible. Upon completion of vegetation clearing, Caltrans will install storm water and erosion control BMPs as needed. A qualified biologist with appropriate construction and species experience will conduct nest and bird surveys and other wildlife surveys before and during tree cutting.<br>If construction activities occur between February 1 and September 30, preconstruction surveys for nesting birds will be conducted by a qualified biologist no more than 72 hours prior to the start of construction activities. If work is to occur within 300 feet of active raptor nests or 50 feet of active passerine nests, a non-disturbance buffer will be established at a distance sufficient to minimize disturbance based on the nest location, topography, cover, the species' sensitivity to disturbance, and the intensity/type of potential disturbance. Buffer size should be determined in cooperation with CDFW and USFWS. All clearing and grubbing of woody vegetation will be performed by hand or using light construction equipment, such as backhoes and excavators. |

| Resource Area | Project Feature Reference | Project Feature |
|---|---|---|
| Biological Resources | PF-BIO-07 | Invasive Species Management: To reduce the spread of invasive non-native plant species and minimize the potential decrease of palatable vegetation for wildlife species, Caltrans will comply with Executive Order 13112. The purpose of this order is to prevent the introduction of invasive species and provide for their control to minimize economic, ecological, and human health impacts. In the event that high- or medium-priority noxious weeds, as defined by the California Department of Food and Agriculture or the California Invasive Plant Council, are disturbed or removed during construction-related activities, the contractor will contain the plant material associated with these noxious weeds and will dispose of it in a manner that will not promote the spread of the species. The contractor will be responsible for obtaining all permits, licenses, and environmental clearances for properly disposing materials. Areas subject to noxious weed removal or disturbance will be replanted with fast-growing native grasses or a native erosion control seed mixture. If seeding is not possible, the area will be covered to the extent practicable with heavy black plastic solarization material until completion of construction. All earthmoving equipment, as well as seeding equipment to be used during project construction will be thoroughly cleaned before arriving on the project site. |
| Biological Resources | PF-BIO-08 | Water Quality/Erosion Control BMPs: To avoid and minimize potential impacts on water quality in aquatic species habitats, erosion control BMPs will be developed and implemented to minimize any wind or water-related erosion, in compliance with the requirements of the RWQCB. Protective measures will include, at a minimum:<br>a. No discharge of pollutants from vehicle and equipment cleaning will be allowed into any storm drains or watercourses. |

| Resource Area | Project Feature Reference | Project Feature |
|---|---|---|
| | | b. Equipment will be inspected daily for leaks. If any leaks are found, a drip pan will be placed under the leak and the leak will be repaired immediately by the contractor.<br>c. Vehicle and equipment fueling, and maintenance operations will occur at least 50 feet away from watercourses, except at established commercial gas stations or established vehicle maintenance facilities.<br>d. Concrete wastes will be collected in washouts, and water from curing operations will be collected and disposed of properly. Neither will be allowed into watercourses.<br>e. Spill containment kits will be kept on-site during construction operations and/or staging or fueling of equipment.<br>f. Dust control measures will include use of water trucks and dust palliatives to control dust in excavation-and-fill areas, covering temporary access road entrances and exits with rock (rocking), and covering temporary stockpiles when weather conditions require.<br>g. Coir rolls or straw wattles that do not contain plastic or synthetic monofilament netting will be installed along or at the base of slopes during construction, to capture sediment.<br>h. Graded areas will be protected from erosion using a combination of silt fences and fiber rolls along toes of slopes or along edges of designated staging areas, and erosion control netting (e.g., jute or coir) will be used as appropriate on sloped areas. No plastic or synthetic netting erosion control materials will be used. Acceptable materials will include natural fibers, such as jute, coconut, twine or other similar natural fibers. |

| Resource Area | Project Feature Reference | Project Feature |
|---|---|---|
| Biological Resources | PF-BIO-9 | Agency Access: If requested, before, during, or upon completion of groundbreaking and construction activities, Caltrans will allow access by regulatory agency personnel (e.g., USFWS, CDFW, RWQCB, CCC, and USACE) into the project footprint to inspect the project and its activities. |
| Cultural Resources | PF-CULT-01 | If remains are discovered during excavation, all work within 60 feet of the discovery will halt and Caltrans' OCRS will be called. Caltrans OCRS staff will assess the remains and, if determined to be human, will contact the County Coroner in accordance with PRC Sections 5097.98, 5097.99, and 7050.5 of the California Health and Safety Code. If the Coroner determines the remains to be Native American, the Coroner will contact the NAHC, who will assign a Most Likely Descendant. Caltrans will consult with the Most Likely Descendent on treatment and reburial of the remains. Further provisions of PRC 5097.98 are to be followed as applicable. |
| Cultural Resources | PF-CULT-02 | If archaeological materials are discovered during construction, all earth-moving activity within and around the immediate discovery area will be diverted until a qualified archaeologist can assess the nature and substance of the find. |
| Energy | PF-ENRG-01 | Caltrans standard specifications and BMPs will be implemented during construction to reduce any inefficient or unnecessary energy resource usages, such as by limiting the idling of vehicles. |
| Hazardous Materials | PF-HAZ-01 | Caltrans standards will be followed for the proper handling and disposal of any unanticipated hazardous waste discovered during construction. |
| Hazardous Materials | PF-HAZ-02: | The project will implement BMPs according to Caltrans specifications special provision 12-11.09 "Minimal Disturbance of Regulated Material Containing ADL." |

| Resource Area | Project Feature Reference | Project Feature |
|---|---|---|
| Hydrology/ Water Quality | PF-HYDRO-01 | Standard BMPs. The potential for adverse effects to water quality will be avoided. Caltrans erosion control BMPs will be used to minimize any wind- or water-related erosion. |

Notes:
ADL = aerially deposited lead
ARB = California Air Resources Board
BMP = best management practice
Caltrans = California Department of Transportation
CCC = California Coastal Commission
CDFW = California Department of Fish and Wildlife
ESA = environmentally sensitive area
NAHC = Native American Heritage Commission
OCRS = Office of Cultural Resource Studies
PRC = Public Resources Code
RWQCB = Regional Water Quality Control Board
USACE = United States Army Corps of Engineers
USFWS = United States Fish and Wildlife Service

## 1.5 Permits and Approvals

Table 1-3 summarizes the permits anticipated for the proposed project by the respective agencies as well as permit status. Approval of project funding is required by the California Transportation Commission board for each phase of the project.

**Table 1-3 Required Permits**

| Issuing Agency | Permit, Authorization or Agreement | Impacted Resource |
|---|---|---|
| U.S. Fish and Wildlife Service | Letter of Concurrence | California red-legged, San Francisco garter snake |
| San Mateo County | Coastal Development Permit | Project lies within jurisdiction and placement of signs would have no substantial visual impact |
| City of Half Moon Bay | Coastal Development Permit | Project lies within jurisdiction and placement of signs would have no substantial visual impact |
| City of Pacifica | Coastal Development Permit | Project lies within jurisdiction and placement of signs would have no substantial visual impact |

# Chapter 2 California Enviornmental Quality Act Evaluation

The proposed project by Caltrans is subject to CEQA and project documentation has been prepared in compliance with CEQA. Caltrans is the lead agency under CEQA. This chapter evaluates potential environmental impacts of the proposed project, as described in Chapter 1 as they relate to the CEQA checklist to comply with State CEQA Guidelines (Title 14 California Code of Regulations, Division 6, Chapter 3, Section 15091).

## 2.1 CEQA Environmental Checklist

This checklist identifies physical, biological, social, and economic factors that might be affected by the proposed project. The checklist is presented as a table at the beginning of each resource section. The first column lists pertinent questions applicable to the resource, and the other four columns includes the degree of impact for each of those questions. In many cases, technical studies performed in connection with the project indicate that there are no impacts to a particular resource. A “no impact” answer in the last column reflects this determination. The words “significant” and “significance” used throughout the checklist are related to CEQA impacts. The questions in this form are intended to encourage the thoughtful assessment of impacts and do not represent thresholds of significance. Significance determinations (e.g., no impact, less than significant, potentially significant impact) are responded to for each of the CEQA checklist questions; a “yes” or “no” response is given for each significance determination column in each question row. A “yes” response indicates that this is the significance determination that applies for that question. A “no” response indicates that the significance determination in that column does not apply to that question.

Both project features and AMMs will be part of this project. Project features, which can include both design elements of the project, and standardized measures that are applied to all or most Caltrans projects such as best management practices (BMPs) and measures included in Caltrans’ Standard Plans and Specifications or as Standard Special Provisions, are considered to be an integral part of the project and have been considered prior to any significance determinations documented below; see Section 1.4 for a detailed discussion of these features. All proposed measures are provided in Appendix C. No mitigation measures are being proposed, only AMMs are proposed.

Potentially affected environmental factors are indicated in Table 2-1. All environmental factors that could be potentially affected are marked with a yes. All of the environmental factors that would not be affected by the project are marked with a no.

**Table 2-1 Environmental Factors Potentially Affected**

| Environmental Factor | Potential to Affect |
|---|---|
| Aesthetics | Yes |
| Biological Resources | Yes |
| Geology/Soils | Yes |
| Hydrology/Water Quality | Yes |
| Noise | Yes |
| Recreation | No |
| Utilities/Service Systems | Yes |
| Aesthetics | Yes |
| Agriculture and Forestry | No |
| Cultural Resources | No |
| Greenhouse Gas Emissions | Yes |
| Land Use/Planning | No |
| Population/Housing | No |
| Transportation/Traffic | Yes |
| Wildfire | Yes |
| Air Quality | No |
| Energy | No |
| Hazards and Hazardous Materials | Yes |
| Mineral Resources | No |
| Public Services | No |
| Tribal Cultural Resources | No |
| Mandatory Findings of Significance | Yes |

### 2.1.1 Aesthetics

*CEQA Significance Determinations for Aesthetics*

| Would the project: | Potentially Significant Impact | Less than Significant with Mitigation | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| a) Have a substantial adverse effect on a scenic vista? | No | No | No | Yes |
| b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway? | No | No | No | Yes |
| 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? | No | No | Yes | No |
| d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area? | No | No | No | Yes |

A Visual Impact Assessment (VIA) was initially prepared by Caltrans in April 2020. In response to concerns from the public regarding visual impacts at Locations 5, 6, and 9, alternate locations were identified, and the VIA was revised in March 2021 (Caltrans 2020d). The findings of the VIA are analyzed as they apply to CEQA in this section.

#### a) No Impact – at all project locations

A scenic vista is a viewpoint of natural scenery, historic, and/or architectural features possessing visual qualities of value to the community. A vista typically refers to expansive views, usually from an elevated and open area. Certain

stretches of SR 1 have scenic vistas. SR 1 within the project limits is eligible for designation as a scenic highway, and its scenic qualities have been considered during project development to avoid substantial adverse effects on scenic vistas. Views from SR 1 in the southern half of the project corridor are predominantly of agriculture and open space divided by urban and residential developments. The hills to the east provide a continuous scenic backdrop. From the town of Montara to the Tom Lantos Tunnels at Devil's Slide, the highway runs along scenic coastal bluffs, with views of the ocean to the west and recreational open space to the east. North of the tunnels are views or a mixture of urban and rural lands. At the northernmost extent of the project corridor, the highway widens to eight lanes in Daly City. This portion of SR 1 contains urban views, softened by highway landscaping and, for northbound highway travelers, a view of San Bruno Mountain.

Project Locations 1, 2, 3, 4, 9-1, and 10 are in more developed areas and do not contain scenic vistas. At Location 5, the proposed VMS would create a minor obstruction to distant views of coastal hills. The views of coastal hills at Location 6 are less prominent and would be unaffected by the project. Locations 7 and 8 contain scenic views of the ocean from SR 1. However, the project features being installed at these locations would not affect scenic views. At Location 7, Caltrans has proposed a WDS that would be mounted to an existing traffic light pole. The WDS is a small box (similar in size to a shoe box) and would not be readily noticeable. At Location 8, no new visible elements are proposed. New software would be installed to an existing CMS. Scenic views of background hills and foreground vegetation are seen at Location 9-2. These views would not be affected by the project. For these reasons, the project would have no substantial adverse effect on a scenic vista, and there would be no impact.

**b) No Impact – at all project locations**

The project would not damage scenic resources within a state scenic highway. AMMs described in Appendix C would be implemented to minimize project-related visual impacts to the project corridor. The implementation of the project would not require the removal or destruction of visual scenic resources such as trees, rock outcroppings, and historic buildings. Therefore, there would be no impact to scenic resources.

**c) No Impact for Locations 1, 3, 4, 7, 8, and 9-1. Less than Significant Impact for Locations 2, 5, 6, 9-2, and 10.**

The existing corridor has a moderate to high visual quality. The visual character of the project limits is generally defined by a rural and coastal setting, divided by

suburban/urban development. The southern half of the project corridor has a predominantly rural character, punctuated by urban development in the communities of Half Moon Bay and Granada. The highway travels through coastal prairies and plains with a mix of agriculture and open space, but also some urban residential and commercial developments. The hills to the east provide a continuous scenic backdrop. The Pacific Ocean is not continuously visible along SR 1 in the project limits; however, its proximity is apparent in westward views toward the horizon. From the town of Montara to the Tom Lantos Tunnels at Devil's Slide, the highway runs along scenic coastal bluffs, with views of the ocean to the west and recreational open space to the east. North of the tunnels, the project corridor has a more urban character, with more frequent development punctuated by rural segments. At the northernmost extent of the project corridor, the highway widens to eight lanes in Daly City, where adjacent dense urban development is softened by highway landscaping and, for northbound highway travelers, a view of San Bruno Mountain.

Visual impacts are determined by assessing both the changes to the visual resources (e.g., visual character and quality) in the project area and the predicted viewer response. Visual character focuses on how the project would fit in with the overall character of the community. Visual quality describes how scenic the existing corridor is, rated from low to moderate to high. To minimize their degree of visual impact, VMS have been located near more developed areas or where similar built features occur and will be programmed to remain off until needed to convey critical emergency or hazard information. WDS are proposed for existing poles and would have no visual impacts.

### Location 1

Location 1 is adjacent to an existing intersection. It is a semi-urbanized area that includes existing light poles, utility lines, traffic lights, and signage. It is also near existing parking lots and/or commercial buildings. Caltrans proposes a WDS at this location. The WDS would be mounted on an existing light pole. The WDS would be small and not be readily visible to the public, appearing to be an attachment to the pole. It would blend in with similar existing infrastructure. Therefore, there would be no substantial change to the visual character and quality at this location. There would be no conflicts with applicable zoning and other regulations governing scenic quality. Therefore, there would be no impact.

### Location 2

Areas immediately adjacent to the project location are predominantly rural. Commercial and residential development is generally set back from the highway and partially screened by vegetation. The existing Ford car dealership to the east

of the project location is a feature that stands out in the rural landscape. There are partial views of the coastal hills in the background, resulting in a moderate visual quality. Caltrans proposes a VMS, utility cabinets, and 100 feet of MGS, which would be installed adjacent to the dealership. The VMS would be more visible when lighted. However, the VMS would be turned off the majority of the time and would only be lighted to convey emergency and incident-related information to the traveling public. The wooden poles to which the VMS panel would attach would blend in with the surrounding area.

The VMS, utility cabinets, and MGS are in character with existing signage, utility lines, and other built features in this location. Both highway travelers and highway neighbors are anticipated to have a moderate to low response to the proposed changes, as the sign would be placed in an area that already has many structures. The new elements will be noticeable; however, they will be framed within a view that has elements typical for developed commercial areas. Any resulting visual impact is expected to be from a moderate to low response. Therefore, the VMS would not affect scenic views and is not expected to substantially degrade the existing visual character or quality of public views of the site and its surroundings. For these reasons, impacts would be less than significant.

**Location 3**

Visual effects would be the same as those described in Location 1. At this location, existing utility cabinets will be used for the work, and the WDS would be mounted to an existing traffic light pole. There would be no substantial change to visual character and quality at this location. There would be no conflicts with applicable zoning and other regulations governing scenic quality. Therefore, there would be no impacts.

**Location 4**

At Location 4, the surrounding area is urbanized containing different commercial uses (e.g., a hotel, restaurants, shops, etc.) to the west and commercial and residential uses to the east. Existing utility cabinets would be used for the work at this location. The WDS would be mounted on an existing traffic signal pole. There would be no substantial change to visual character and quality at this location. There would be no conflicts with applicable zoning and other regulations governing scenic quality at this location. Therefore, there would be no impact.

**Location 5**

Location 5 has a rural appearance with mainly agricultural uses. There are existing overhead utility lines to the east and west that follow the alignment of

SR 1. Half Moon Bay airfield is to the west, separated by a chain-link fence next to a drainage ditch that drains to nearby Denniston Creek. Hangars at the northern edge of the airfield are visible from SR 1. Southbound highway travelers have just passed the airfield's paved runways, storage sheds and cell towers, which are just coming into view for northbound travelers. These features stand out in the rural environment. Partial views of coastal hills are visible in the distance. This location has moderate visual quality.

Caltrans proposes a VMS, MVP, utility cabinets, and 100 feet of MGS along the southbound side of SR 1. The VMS and MGS creates a new visual intrusion at this location. The MVP is in the ground plane and not a prominent visual feature. The VMS is a noticeable visual change in the foreground and creates a minor obstruction to distant views of the coastal hills in the background. The VMS would be more noticeable when in a lighted state. However, the VMS would be turned off most of the time and would only be lighted to convey emergency and incident-related information to motorists traveling on SR 1. Furthermore, the wooden poles would blend in with the surroundings. This would reduce the visual intrusion of the VMS. The utility cabinets and guardrail are common built features along the coastal highway and constitute a minor visual change. Both highway travelers and highway neighbors are anticipated to have a moderate response to the proposed changes. AMMs described in Appendix C would be incorporated and would further reduce visual impacts. The project would have less-than-significant impacts to the visual character and quality. There would be no conflicts with applicable zoning and other regulations governing scenic quality.

**Location 6**

Location 6 is located close to Location 5, but on the northbound side of SR 1. Location 6 has a rural appearance and is adjacent to agriculture and open space. The existing area contains overhead utility lines, a traffic sign and guardrail to the east. The view of the coastal hills in the background is relatively less prominent than much of the project corridor. Existing guardrail marks the Denniston Creek crossing, and the riparian vegetation along the creek's banks is visible in the mid-ground of the view. Vegetation to the right of the proposed sign location screens adjacent development, and hangars for the Half Moon Bay airport are a minor visual feature to the left. Overall visual quality is moderate.

Caltrans proposes a VMS, MVP, utility cabinets, and 100 feet of MGS at Location 6. These project elements would somewhat blend in with existing adjacent infrastructure such as adjacent utility lines, traffic sign, and guardrails. The VMS is a noticeable visual change in the foreground, partially obstructing the view of riparian vegetation behind it. The VMS would be more noticeable when in a lighted state. However, the VMS would be turned off the majority of the time

and would only be lighted to convey emergency and incident-related information to motorists traveling on SR 1. This would reduce the visual intrusion of the VMS. Furthermore, the wooden posts on which the VMS panels would be mounted would blend in with the surroundings. Both highway travelers and highway neighbors are anticipated to have a moderate response to the proposed changes due to the location near existing infrastructure. The utility cabinets and guardrail are common built features along the coastal highway and constitute a minor visual change. With the presence of existing visual intrusions, the project will have a moderate to moderate-low change to visual quality at this location. AMMs described in Appendix C would be incorporated and would further reduce visual impacts. There would be no conflicts with applicable zoning and other regulations governing scenic quality. Therefore, the project would have less-than-significant impacts to the visual character and quality.

**Location 7**

SR 1 at Location 7 provides views of the ocean to the west. Caltrans proposes to install a WDS to an existing traffic light pole. Existing utilities would be used for the work. The WDS would be small and not be readily visible. There would be no conflicts with applicable zoning and other regulations governing scenic quality. Therefore, there would be no impact to visual character and quality at this location.

**Location 8**

SR 1 at Location 8 provides views of the ocean to the west. At Location 8, no new equipment is proposed. Caltrans would install new software to an existing CMS. Existing utility cabinets would be used for the work. There would be no impact to visual character or quality at this location. There would be no conflicts with applicable zoning and other regulations governing scenic quality.

**Location 9-1**

Location 9-1 is located adjacent to an existing intersection. It is a semi-urbanized area that includes existing light poles, utility lines, traffic lights, and signage. It is also near existing parking lots and/or commercial buildings. Caltrans proposes a WDS at this location. The WDS would be mounted on an existing light pole. The WDS would be small and not be very visible to the public. It would blend in with similar existing infrastructure. Therefore, there would be no impact to visual character and quality at this location. There would be no conflicts with applicable zoning and other regulations governing scenic quality.

## Location 9-2

There are existing overhead utility lines and a traffic sign at this location. Development at Rockaway Beach is out of view for motorists traveling in the northbound direction. Development at the intersection with Reina Del Mar is just coming into view in the distance. The median barrier separating directions of travel on the highway adds an engineered feature to the rural highway. The surrounding hills provide a scenic backdrop and the foreground vegetation softens the development. Overall visual quality is moderate.

Caltrans proposes a VMS and utility cabinets at this location. The VMS and utility cabinets would add to the visual intrusions of the existing utility lines and traffic sign. The view of the coastal hills is unaffected and still visible in the background beyond the foreground vegetation and built features. Even with the new VMS and utility cabinets, the natural landscape dominates the view. The VMS would be more noticeable when in a lighted state. However, the VMS would be turned off the majority of the time and would only be lighted to convey emergency and incident-related information to motorists traveling on SR 1. This would reduce the visual intrusion of the VMS. Furthermore, the wooden poles on which the VMS panels would be mounted would blend in more with the surroundings. Change to visual quality is expected to be moderate-low to moderate. Both highway travelers and highway neighbors are anticipated to have a moderate response to the proposed changes due to the location near existing development. The incorporation of AMMs described in Appendix C would further reduce visual impacts. There would be no conflicts with applicable zoning and other regulations governing scenic quality. The project would have less-than-significant impacts.

## Location 10

Location 10 has more urban character than the other segments of the project corridor, with a concrete median barrier separating four lanes of traffic in each direction. There is an existing large freeway sign on the southbound side of SR 1 but visible from the northbound side. Roadside trees help to screen dense adjacent development and soften the engineered character of the roadway. Overall visual quality is moderate to low.

Caltrans propose WDS on a new pole, VMS, a utility cabinet, and 100 feet of MGS. The VMS would be more noticeable when in a lighted state. However, the VMS would be turned off the majority of the time and would only be lighted to convey emergency and incident-related information to motorists traveling on SR 1. This would reduce the visual intrusion. Furthermore, the wooden posts on which the VMS panels would be mounted would blend in more with the surroundings. The VMS, utility cabinet, and MGS would stand out from the trees

directly to the east; however, because this area is mainly urbanized, the overall visual resource change is low. The VMS, utility cabinets, WDS, and MGS are common features of a controlled access highway. Both highway travelers and highway neighbors are anticipated to have a moderate to low response to the proposed changes. Resulting visual impact is expected to be moderate-low. There would be no conflicts with applicable zoning and other regulations governing scenic quality. Therefore, impacts to the visual character and quality would be less than significant.

**d) No Impact – at all project locations.**

Caltrans proposes VMS at Locations 2, 5, 6, 9-2, and 10. Although the VMS would create a new source of light, it would not be substantial. Furthermore, the VMS would be off most of the time. VMS would be programmed to be lighted only when needed to convey critical emergency, incident, or hazard messaging to the traveling public.

At Location 2, existing sources of light and glare would be from the adjacent commercial car lot to the east and vehicles traveling on SR 1. At Locations 5, 6, and 10, major sources of light and glare would be from vehicles traveling along SR 1. At Location 9-2, sources of light and glare would be from vehicles traveling on SR 1.

The VMS when lighted would be bright enough to be seen by motorists on SR 1, but would not create substantial light and glare that would adversely affect day or nighttime views in the area. There would also be some glare from the reflectors at the end of the proposed MGS at Locations 2, 5, 6, and 10. This glare would not be substantial. There would be no light or glare impacts from the project at the other locations. Because impacts of light and glare would not be substantial, the project would have no impacts.

### 2.1.2 Agriculture and Forest Resources

| Would the project: | Potentially Significant Impact | Less than Significant with Mitigation | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use? | No | No | No | Yes |
| b) Conflict with existing zoning for agricultural use, or a Williamson Act contract? | No | No | No | Yes |
| 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))? | No | No | No | Yes |
| d) Result in the loss of forest land or conversion of forest land to non-forest use? | No | No | No | Yes |
| 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? | No | No | No | Yes |

**a), b), c), d), and e) No Impact – all project locations**

Although some of the project locations occur in areas with productive soils (NRCS no date), all project locations are within Caltrans' ROW. The project footprint does not contain any land under a Williamson Act contract (San Mateo County no date; California Department of Conservation 2017) and none of the project locations are zoned as forest land, timberland, or timberland production (San Mateo County 2020; City of Half Moon Bay 2015; City of Pacifica 2017). Therefore, the project would not convert or result in the conversion of Prime Farmland, Unique Farmland, and Farmland of Statewide Importance. There would be no loss or conversion of forest land to non-forest land. Thus, the project would have no impact on agriculture and forest land, or conflict with existing zoning laws for farmland and timberland.

### 2.1.3 Air Quality

*CEQA Significance Determinations for Air Quality*

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

**a) No Impact – all project locations**

The project sites are located in the San Francisco Bay Area Air Basin and within the jurisdiction of the Bay Area Air Quality Management District (BAAQMD) and the California Air Resources Board (ARB). The proposed project would not interfere with any of the control measures described in BAAQMD's 2017 Clean Air Plan (BAAQMD 2017). As described in the project description, the project would involve installing six WDS, five VMS, MGS, MVP areas, and updating software of an existing CMS. The project is not a capacity-increasing project and is not included in the current Regional Transportation Plan (RTP), *Plan Bay Area*

*2040* (ABAG and MTC 2017). Nevertheless, the project would not interfere with the implementation of the goals set forth in the RTP. During operation of the project, air emissions would not be changed from existing levels. Therefore, the project would not conflict with or obstruct implementation of the applicable air quality plan.

**b) No Impact – all project locations**

During construction of the project, there would be temporary air emissions from the use of construction equipment and vehicles, which would be powered by gas and diesel. Dust particles from trenching operations to install conduits for power would also contribute to air emissions. San Mateo County is in nonattainment for the 8-Hour Ozone (2015) and particulate matter equal to or less than 2.5 microns in diameter ($PM_{2.5}$) (2006) standards in 2021 (U.S. EPA 2021). However, project construction would be of limited duration, and a substantial amount of pollutants would not be generated that would result in a cumulatively considerable net increase of criteria pollutants. Project operation is not expected to contribute to air emissions, because the project is not a capacity-increasing project and would not add new traffic to the area. There may be some air emissions associated with ongoing maintenance operations from the use of trucks and equipment. These maintenance operations would occur periodically but are not expected to contribute significantly to criteria pollutants.

The project would be in compliance with federal and state ozone standards. It would not increase criteria pollutants or mobile source air toxics (MSAT) over existing conditions or exceed the BAAQMD's recommended thresholds for construction emissions. The project would not result in a cumulatively considerable net increase of ozone and $PM_{2.5}$. Therefore, the project would not cause or contribute to any state or federal air quality violations for criteria air pollutants.

**c) No Impact – all project locations**

Sensitive receptors include children, elderly, people with asthma, and other members of the population who are at a heightened risk of negative health outcomes due to exposure to air pollution. Schools, childcare facilities, hospitals, nursing homes, and residential communities are where sensitive receptors typically occur. Project Locations 2, 3, 4, 5, 6, 9, and 10 are all within 0.25-mile from residential communities and/or childcare and school facilities. However, as discussed above in item b, the majority of air emissions from the project would be during construction activities. Construction would be temporary and of short duration. The proposed project would generate a less-than-significant amount of pollutants during construction.

The project would not increase emissions of criteria pollutants or MSATs over existing conditions or exceed BAAQMD's recommended thresholds for construction emissions. Therefore, the project would not expose sensitive receptors that could occur near the project area to substantial pollutant concentrations.

**d) No Impact – all project locations**

The project would not introduce odors that are not already associated with existing traffic.

### 2.1.4 Biological Resources

*CEQA Significance Determinations for Biological Resources*

| Would the project: | Potentially Significant Impact | Less than Significant with Mitigation | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife, U.S. Fish and Wildlife Service, or NOAA Fisheries? | No | No | Yes | No |
| b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service? | No | No | No | Yes |

| Would the project: | Potentially Significant Impact | Less than Significant with Mitigation | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? | No | No | No | Yes |
| 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? | No | No | No | Yes |
| e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? | No | No | No | Yes |

| Would the project: | Potentially Significant Impact | Less than Significant with Mitigation | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| 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? | No | No | No | Yes |

### a) Less than Significant Impact

Caltrans completed a natural environment study (NES) to identify natural resources including special-status plants, animals and their habitats that have potential to occur within the project area and to assess potential impacts from the proposed project on biological resources. The Biological Study Area (BSA) in the NES encompasses all areas within 200 feet of the project footprint at each location, to account for potential direct and indirect effects of construction activities and human presence. This includes, but is not limited to, impacts due to construction-related noise, vibration, ground disturbance, hydrologic disturbance, vegetation removal, and compaction. A complete summary of all special-status plant and animal species inventoried is provided in Appendix D.

### Special-Status Plant Species

The NES evaluated 62 plant species for their potential to occur within the project footprint (Appendix D). Assessment of special-status plants entailed review of online databases, including the United States Fish and Wildlife Service (USFWS) species list, the California Native Plant Society inventory of Rare and Endangered Plants Database, and the California Natural Diversity Database (CNDDB). This review was followed by floristic surveys at locations with potential for special-status plant to occur. Rare plant surveys were conducted in the BSA in 2019 and 2020. In 2021, Locations 5, 6, and 9 were relocated from where they were proposed when the NES was completed, and new surveys were conducted by a Caltrans biologist at those locations. Surveys were floristic in nature; biologists identified all plant species encountered during the surveys to the taxonomic level necessary to determine rarity. The goal of the protocol-level surveys was to locate, map, and census any special-status plant populations in

the BSA. No special-status plant species were observed in the BSA during the rare plant surveys.

**Special-Status Wildlife Species**

**Section 1: California Red-Legged Frog (*Rana draytonii*)**

The California red-legged frog (CRLF) (*Rana draytonii*) is the largest native frog in the western United States and ranges from 1.75 to 5.25 inches in length. CRLF can move overland considerable distances, with known instances of up to 2 miles. Based on this information, it is reasonable to assume that upland habitat within 2 miles from a known or potential breeding pond is potential CRLF dispersal and aestivation habitat (aestivation refers to a state of animal dormancy, similar to hibernation, that occurs in the summer). Multiple CRLF occurrences are documented within 2 miles of nearly all locations, except for Location 10 where there are no CRLF occurrences within 2 miles. Work at all locations would be short-lived in nature and would occur during daytime when frogs are unlikely to initiate movements.

CRLF is listed under the Federal Endangered Species Act (FESA) as a threatened species. CRLF is considered by California Department of Fish and Wildlife (CDFW) to be a Species of Special Concern (SSC). There are 22 documented occurrences of the CRLF within 2 miles of the project locations according to the CNDDB (CDFW 2018). One occurrence is known to be extirpated (no longer existing at that location) and one is presumed extirpated, but the remaining 20 occurrences are all presumed extant (still in existence).

Construction activities with potential to impact adult or juvenile CRLF include the use of heavy equipment, use of hand tools, vegetation removal, fencing installation, soil removal and distribution, construction-related noise, vibration, and dust. Other minor direct effects may result from fencing installation and vegetation removal. These stressors may create temporary dispersal barriers or cause minor temporary changes in behavior. Construction activities are unlikely to affect eggs and larvae as CRLF breeding habitat does not occur within the areas where construction activities would occur, and all construction activities would be timed to occur outside of the CRLF breeding season and when the species is most active.

Vibration and soil movement resulting from construction activities have the potential to collapse burrows in which CRLF may be aestivating. Burrows in upland CRLF habitat have low potential to be present within the project areas where construction would occur. The existing unpaved ground surface within the project footprint is likely compacted to at least 95 percent per industry standards and would absorb construction-related vibrations. Studies have concluded that

vibrational energy decreases rapidly over distance from the source of disturbance (Attewell and Farmer, 1973, as cited in USFWS 2007; Caltrans 2004). However, the use of equipment still has a low potential to collapse burrows that could result in impacts to CRLF.

Noise from construction has the potential to startle or alarm individuals and cause changes in behavior, or even displacement of individuals. Studies suggest that anthropogenic noise has the potential to either increase or decrease calling rates of CRLF (Sun and Narens 2005).

The project would not create any new permanent barriers to frog dispersal. MGS and post-mounted VMS are not expected to impact frog movements. MVP locations would convert vegetated land. MVP width would be limited to approximately 15 feet and be unused by vehicles most of the time.

CRLF dispersal habitat impacts from site disturbance are anticipated at three project locations. Potential temporary impacts to approximately 0.126 acre are anticipated during construction at Location 2 due to staging and excavation activities. Potential permanent impacts to approximately 0.284 acre of CRLF dispersal habitat are anticipated from construction of MVPs at Locations 5 and 6. A further discussion of work proposed at these three locations follows.

**Location 2.** Work at Location 2 would consist of installing MGS and a VMS on the northbound shoulder of SR 1. Relatively undeveloped lands occur to the southwest and southeast of Location 2, providing a potential route, aside from SR 1, free of major barriers for frogs to disperse though the BSA. A roadside ditch on the northbound shoulder of SR 1 may further increase connectivity between other open areas and the BSA. The ditch and associated culverts may provide shelter as well as aquatic habitat during portions of the year. The project footprint is, however, subject to regular mowing and its value to frogs is likely restricted to frogs dispersing through the area.

**Location 5.** Work at this location would occur on the western side (southbound) of SR 1 and would consist of MVP construction and installation of MGS and VMS. Existing conditions west of SR 1 include ruderal vegetation that is regularly mowed by others; a drainage ditch approximately 35 feet from the roadway and outside of the proposed work area that drains into Denniston Creek; and the southern portion of the Half Moon Bay Airport (also referred to as the Andreini Sr. airfield). On the opposite side of the road, to the north and east, lies active agricultural lands, Denniston Creek (approximately 480 feet from the roadway), and residential development, with open lands beyond. The project footprint is characterized by packed soil and gravel, and colonized by ruderal vegetation, mostly consisting of grasses and weeds. The footprint and open land on the

opposite side of SR 1 is subject to regular mowing, reducing its value as potential shelter. In addition, the project footprint lacks burrows typical of aestivation habitat and does not contain any aquatic features. Frogs may use the project footprint while dispersing, though the disturbance of vehicle traffic on SR 1 and adjacent agricultural operations may deter frog individuals from using the project footprint. The proposed project would observe a dry season work window, and frogs are not expected to disperse through active construction areas during work.

**Location 6**. The area to the east of this location consists of agricultural and undeveloped land. To the west is a small airport with varying amounts of open land. Work at this location consists of constructing an MVP and installing a VMS and MGS. Most of the footprint lies within the highway prism, which typically consists of packed soils and gravel. A portion of the footprint where trenching for power would occur does consist of undeveloped land. The project footprint is subject to regular mowing, removing potential cover for the frog. The footprint does not contain aquatic features, but the footprint may be used by frogs dispersing through the area. Although SR 1 may constitute a barrier to frog movement into the BSA from the west, the lands to the east are open agricultural fields or undeveloped, and frogs may potentially disperse into the BSA.

**Section 2: San Francisco Garter Snake (*Thamnophis sirtalis tetrataenia*)**

The San Francisco garter snake (SFGS) is a colorful slender snake that can reach 3 feet or greater in length. SFGS is found in scattered wetland areas on the San Francisco Peninsula, including the area within the proposed project's BSA. SFGS is primarily active during daylight hours, difficult to locate, and quick to rush to water when disturbed. Adult SFGS primarily feed on CRLF, but may also feed on juvenile bullfrogs. Juvenile SFGS depend heavily on Pacific tree frogs (*Pseudacris regilla*) as prey. SFGS prefers densely vegetated freshwater ponds near open hillsides. Habitat near brackish waters is avoided as it does not support its primary prey (i.e., CRLF). SFGS is less active in coastal areas during winter months, as it estivates (enters a dormant state) with periodic emergences to bask. SFGS may move several hundred yards from wetlands to estivate in upland rodent burrows. Peak activity is observed between March and July when adults emerge from their winter refuge and concentrate around aquatic habitats to mate and forage. The existing threats to this species include the loss of habitat from agricultural, commercial and urban development, and illegal collection (USFWS 2007).

SFGS is listed under both FESA and the California Endangered Species Act (CESA) as an endangered species. CRLF is listed under CESA. Additionally, SFGS is protected under California Fish and Game Code (CFGC) as a "fully protected" species (CFGC Section 5050). This protection does not allow SFGS

individuals to be taken or possessed at any time. CFGC Section 5050 does not authorize the issuance of a permit or license to take a fully protected reptile or amphibian, and no permit or license previously issued shall have any force or effect for that purpose.

Although habitat for the SFGS occurs in the BSA, no habitat for SFGS was observed where work is proposed within the project footprint along the shoulders of SR 1. These portions of the project footprint are made up primarily of paved surfaces, graveled shoulders, and regularly mowed areas that do not provide the physical or biological elements required to support SFGS in any of its life stages. Encountering SFGS individuals in the BSA during construction would not be expected at most locations and would be raised to an unlikely possibility at Locations 5 and 6.

Project-related indirect effects that could impact SFGS habitat include increased erosion and sedimentation from soil disturbance and stormwater runoff during or after construction, contamination from chemical spills, introduction of non-native invasive plant species, or changes in hydrology to SFGS habitat in the BSA. Any of these detrimental effects could occur either during construction or post-construction.

### Other Protected and Migratory Bird Species

Protected and migratory bird species have potential to occur in the BSA. No raptors were observed nesting in the BSA. Native bird species could potentially nest in the riparian forest/woodlands that occur adjacent to the BSA. The use of construction equipment to remove vegetation within the project footprint has the potential to impact nesting birds, including migratory birds protected under the Migratory Bird Treaty Act of 1918 and native birds protected under CFGC Section 3503, including causing nest abandonment and/or loss of eggs or young.

### Significance Determination

#### *Special-Status Plants*

Because no special-status plant species have been observed in the BSA, no impacts to special-status plants are anticipated.

#### *California Red-Legged Frog*

By implementing the specific AMMs in Appendix C, including seasonal work windows, worker environmental training, biological monitoring, and species relocation, along with the project features listed in Section 1.4, Caltrans

anticipates potential direct and indirect effects on CRLF would be negligible and less than significant.

### *San Francisco Garter Snake*

Implementation of the general AMMs in Section 1.4 would serve to avoid and minimize potential project-related impacts to SFGS habitat, including provisions of worker environmental awareness training, onsite presence of a biological monitor, and minimization of vegetation removal. In addition, implementation of standard BMPs would avoid or reduce the potential for project-related run-off or accidental spills to affect SFGS aquatic habitat. Because SFGS is a fully protected species under CFGC, AMMs in Appendix C are proposed to completely avoid take or possession of this species during construction. With implementation of complete avoidance of this species, the project would have no impact on individual SFGS and impacts on SFGS habitat are expected to be negligible and less than significant

### *Special-Status Birds*

With implementation of measures described in Section 1.4, no impacts to protected bird species are anticipated.

### b) No Impact

Riparian habitat is protected under Sections 1600-1616 of the CFGC. CDFW regulates activities that will interfere with the natural flow of, or substantially alter, the channel, bed, or bank of a lake, river, or stream, including riparian habitat linked to the health of the waterway. A site assessment identified no riparian features within the project footprint at all locations. No impacts to riparian habitat or other sensitive natural community were identified in local or regional plans, policies, or regulations, or by CDFW or USFWS.

### c) No Impact

A site assessment identified aquatic features in the BSA near Locations 4, 5, and 6. Aquatic features at these locations are classified as riverine wetland by the National Wetland Inventory, are assumed to be jurisdictional waters of the U.S. and State, and may also be considered streams or wetlands under the California Coastal Act (CCA) (Public Resources Code [PRC] Section 3000-30900). However, the project design has sited project elements a substantial distance away from aquatic features, and no aquatic features exist in the work areas of the project footprints. Standard measures described in Section 1.7 would be implemented as part of the proposed project. No impacts to wetlands or waters of the U.S.,

waters of the State, or coastal wetlands or streams are anticipated from the proposed project.

**d) No Impact**

The proposed project would have no impact on the movement of any native resident or migratory fish; would not substantially interfere with the movement of any wildlife species or with established native resident or migratory wildlife corridors; and would not impede the use of native wildlife nursery sites. Therefore, the proposed project is anticipated to have no impact on wildlife movement, corridors, or nurseries.

**e) No Impact**

The proposed project would not conflict with any local policies or ordinances protecting biological resources; therefore, there would be no impact.

**f) No Impact**

There is no Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan in the proposed project area. Therefore, there would be no impact.

### 2.1.5 Cultural Resources

*CEQA Significance Determinations for Cultural Resources*

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

**a), b), and c) No Impact – at all project locations**

This section is summarized from the Caltrans District 4 Office of Cultural Resource Studies (OCRS) Completion of Section 106 Compliance Memorandum that was previously prepared for this project on March 8, 2019, and then updated on March 16, 2021, due to the changes to Locations 5, 6, and 9-2.

The project was reviewed by Caltrans' archaeologist and architectural historian to determine its potential to affect archeological and historical resources, respectively. OCRS staff reviewed cultural resources office files, maps, and online aerial photographs; and conducted field reviews, including soil testing. No historical properties were documented in the work areas.

At locations where WDS would be installed, no ground-disturbing activities would be required (e.g., no digging or trenching) because the WDS would be mounted on existing infrastructure. Work at Location 8 involves updating software of an existing CMS and would not require ground-disturbing activities. Some work areas would require digging up to a depth of 6 feet. However, based on field surveys and research conducted, Caltrans does not anticipate impacts to archaeological resources to occur as a result of this project.

For these reasons, Caltrans has determined that the project would have no impact on archeological and historic resources. Furthermore, standard measures described in Table 1-2, Project Feature Summary**,** would be implemented. Therefore, there would be no impact to archaeological and historical resources or human remains.

### 2.1.6 Energy

*CEQA Significance Determinations for Biological Resources*

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

**a) No Impact – at all project locations**

During construction activities, energy in the form of gas and diesel would be consumed by construction equipment and vehicles including backhoes, utility trucks, semi-trucks, small drill rigs, and a paving machine. Trucks would be delivering equipment and supplies to and from the project sites. Caltrans would implement BMPs to reduce any inefficient or unnecessary energy resource usages. BMPs include limiting the idling of vehicles and equipment onsite, and properly maintaining vehicles and equipment, so that they run efficiently and are not leaking gas or diesel. Energy consumption during project construction would be temporary and minimized to the maximum extent practicable.

Following construction, electricity would be used to power the VMS, WDS and CMS. Energy in the form of gas and diesel would be used during ongoing maintenance activities, which would occur periodically. The amount of energy required for project operation is not expected to be substantial and would be similar to current energy uses and requirements for operating and maintaining existing light poles and other existing electronic equipment along SR 1. As such, the project would not result in an inefficient, wasteful, and unnecessary consumption of energy. Therefore, there would be no impact to energy resources.

**b) No Impact – at all project locations**

The project involves implementing six WDS, five VMS, MGS, and two MVP, and updating software of an existing CMS. It would not conflict with state or local plans for renewable energy or energy efficiency.

### 2.1.7 Geology and Soils

*CEQA Significance Determinations for Geology and Soils*

| Would the project: | Potentially Significant Impact | Less than Significant with Mitigation | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: | No | No | No | Yes |
| i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42. | No | No | No | Yes |
| ii) Strong seismic ground shaking? | No | No | No | Yes |
| iii) Seismic-related ground failure, including liquefaction? | No | No | No | Yes |
| iv) Landslides? | No | No | No | Yes |
| b) Result in substantial soil erosion or the loss of topsoil? | No | No | Yes | No |
| 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? | No | No | No | Yes |

| Would the project: | Potentially Significant Impact | Less than Significant with Mitigation | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property? | No | No | No | Yes |
| 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? | No | No | No | Yes |
| f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? | No | No | No | Yes |

**a) No Impact – all project locations**

No active or potentially active faults cross the project limits; therefore, the risk of surface fault rupture does not exist. Caltrans' design and construction guidelines incorporate engineering standards that address seismic risks, including ground failure related to liquefaction, landslides and lateral spreading. Project elements would be designed and constructed to meet seismic design requirements for ground shaking and ground motions, as determined for the project vicinity and site conditions. Therefore, the project would not exacerbate the potential for seismic shaking; the intensity of the earthquake ground motion at the site would depend on the characteristics of the generating fault, distance to the earthquake epicenter, magnitude, and duration of the earthquake, and specific site geologic conditions.

**b) Less than Significant – at all project locations**

A Storm Water Pollution Prevention Plan or Water Pollution Control Program (WPCP) would be prepared before project construction, which would require implementation of BMPs to minimize erosion and topsoil loss. Potential erosion and transportation of soil particles would be managed through standard construction BMPs, such as installation of silt fences, which would substantially reduce potential sediment transport from the construction site.

**c) No Impact – all project locations**

Discussion of earthquake-induced landslides and other seismic related ground failure was discussed previously under Impact (a). The project would not disturb native ground or native subsurface. Therefore, the project would not be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project. Caltrans also requires additional geotechnical subsurface and design investigations to be performed during the final project design and engineering phase.

**d) No Impact – all project locations**

All of the project locations are within Caltrans' ROW on nonnative soils, and the majority of the project locations are in an urban and built environment. The project would not include construction of habitable structures, and therefore is not expected to create substantial risks to life or property. Additionally, Caltrans' design and construction guidelines incorporate engineering standards that address expansive soils.

**e) No Impact**

The project would not include the use of septic tanks or alternative wastewater disposal systems.

**f) No Impact – all project locations**

Although ground-disturbing activities would occur as a result of this project, the project is not expected to result in the disturbance or overlap with paleontological resources. All construction would take place on previously disturbed soil and would not impact native soil or rock. Therefore, the project would not directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

### 2.1.8 Greenhouse Gas Emissions

*CEQA Significance Determinations for Greenhouse Gas Emissions*

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

**a) Less than Significant Impact – at all project locations**

The project would result in construction-related greenhouse gas (GHG) emissions such as carbon dioxide ($CO_2$) and methane ($CH_4$). GHG emissions would be emitted by use of construction equipment (e.g., backhoe, small drill rigs, paving machine) and construction vehicles (e.g., utility truck, semi-truck). The emissions would be produced at different rates depending on the activities involved at various phases of construction.

Construction-related GHG emissions were calculated using the Road Construction Emissions Model, version 8.1.0, provided by the Sacramento Metropolitan Air Quality Management District. It was estimated that for a construction duration of 6 months, the total amount of $CO_2$ produced for the construction of the project would be 166.00 tons. Total carbon dioxide equivalent ($CO_2e$) emissions ($CO_2$, $CH_4$, and nitrous oxide [$N_2O$]) would be 151.51 metric tons.

Operation of the proposed project would not increase highway or roadway capacity, and therefore would not cause a substantial change in operational GHG emissions. Project features would use electrical power and would not contribute to GHG emissions. There may be some GHG emissions associated with ongoing maintenance operations from the use of vehicles and gas or diesel equipment.

Nonetheless, maintenance operations would occur periodically and are not expected to contribute significantly to GHG emissions.

**b) No impact – at all project locations**

All construction contracts include Caltrans Standard Specifications Section 7-1.02A and 7 1.02C, Emissions Reduction, which require contractors to comply with all laws applicable to the project and to certify they are aware of and would comply with all ARB emission reduction regulations; and Section 14-9.02, Air Pollution Control, which requires contractors to comply with all air pollution control rules, regulations, ordinances, and statutes. Certain common regulations, such as equipment idling restrictions, that reduce construction vehicle emissions also help reduce GHG emissions. Thus, the project would not conflict with plans, policies or regulations aimed at reducing GHG emissions.

### 2.1.9 Hazards and Hazardous Materials

*CEQA Significance Determinations for Hazards and Hazardous Materials*

| Would the project: | Potentially Significant Impact | Less than Significant with Mitigation | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? | No | No | Yes | No |
| 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? | No | No | Yes | No |
| c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? | No | No | Yes | No |
| d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment? | No | No | No | Yes |

| Would the project: | Potentially Significant Impact | Less than Significant with Mitigation | Less than Significant Impact | No 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? | No | No | Yes | No |
| f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? | No | No | No | Yes |
| g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires? | No | No | Yes | No |

**a) and b) Less than Significant Impact – all project locations**

Project construction and maintenance activities are expected to involve the routine transport, use, and disposal of hazardous materials (e.g., fuels, paints, and lubricants). In addition, construction of MVPs at project Locations 5 and 6 would require excavation of roadside soils that could contain regulated levels of aerially deposited lead from past vehicle emissions. Testing and characterization of the soils to be excavated would be necessary during the project design phase to determine the required waste management practices for the excavated, surplus lead-contaminated soils. Using the site investigation results, the necessary special provisions would be prepared by the Caltrans Hazardous

Waste Branch to specify the waste material disposal requirements for the construction contractor.

However, adherence to federal and state regulations during project construction and maintenance would reduce the risk of exposure to hazardous materials and accidental hazardous materials releases. California regulates hazardous materials, waste, and substances under the authority of the California Health and Safety Code and is also authorized by the federal government to implement the Resource Conservation and Recovery Act in the state. California law also addresses specific handling, storage, transportation, disposal, treatment, reduction, cleanup, and emergency planning of hazardous waste. Compliance with existing regulations is mandatory; therefore, construction of the project is not expected to create a hazard to construction workers, the public, or the environment through the routine transport, use, disposal, or accidental release of hazardous materials.

**c) Less than Significant Impact – all project locations**

There are schools within 0.25 mile of the project locations; however, compliance with existing regulations would limit the risk of emitting or handling hazardous materials near the schools.

**d) No Impact – all project locations**

There are no known hazardous material or hazardous waste sites pursuant to Government Code Section 65962.5 (Cortese List) near the project locations.

**e) Less than Significant Impact – all project locations**

Project Locations 4, 5, and 6 would be located within 2 miles of Half Moon Bay Airport. However, due to the relatively short duration of construction and adherence to federal and state regulations during project construction, construction and operation of the project improvements are not expected to result in a safety hazard for people residing or working in the project area.

**f) No Impact – all project locations**

The project would be subject to the San Mateo County's Emergency Operations Plan (EOP). The EOP provides guidelines for emergency response planning, preparation, training, and execution throughout the county. The relatively limited amount of proposed improvements and associated construction would result in only minor increases in short-term, construction-related traffic on SR 1 and local roadways. Additionally, Caltrans would prepare a Traffic Management Plan (TMP) to maintain the flow of traffic during construction and ensure accessibility

through the project locations for vehicles with essential services such as fire and police protection.

### g) Less than Significant Impact – all project locations

Project Locations 7 and 8 would be located in a State Responsibility Area, adjacent to high fire hazard severity zones (CAL FIRE 2021). Section 2.20, Wildfire, describes wildfire risks of the project.

### 2.1.10 Hydrology and Water Quality

*CEQA Significance Determinations for Hydrology and Water Quality*

| Would the project: | Potentially Significant Impact | Less than Significant with Mitigation | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality? | No | No | Yes | No |
| b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin? | No | No | Yes | No |
| 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: | No | No | Yes | No |
| (i) result in substantial erosion or siltation on- or off-site; | No | No | Yes | No |
| (ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite; | No | No | Yes | No |

| Would the project: | Potentially Significant Impact | Less than Significant with Mitigation | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| (iii) create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff; or | No | No | Yes | No |
| (iv) impede or redirect flood flows? | No | No | Yes | No |
| d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation? | No | No | No | Yes |
| e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan? | No | No | Yes | No |

**a) Less than Significant Impact – all project locations**

Temporary impacts to water quality may result from soil disturbance related to construction activities, including potential changes to localized pH and turbidity of receiving water courses. Construction of MVPs and MGSs would have the highest potential to affect local water quality due to having the most disturbance of existing soil. Although temporary impacts from soil disturbance and the operation of construction equipment have the potential to negatively impact water quality, incorporation of project features described in Section 1.4, AMMs proposed in Appendix C, and BMPs as required by the Regional Water Quality Control Board (RWQCB)-approved WPCP would avoid or reduce impacts to surface and groundwater quality.

**b) Less than Significant Impact – all project locations**

The addition of impervious surfaces has the potential to reduce the availability of unpaved area where runoff can infiltrate into native soils and recharge aquifers. However, the amount of new impervious surface area is approximately 0.10 acre.

Therefore, the additional impervious area is minimal in comparison with the total area of the local aquifers and groundwater basins and the project is not anticipated to substantially decrease groundwater supplies or interfere with groundwater recharge.

**c) Less than Significant Impact – all project locations**

The project would not alter the course of a stream or river nor remove access to existing drainages within the project limits. The project includes the addition of MVPs and MGSs which would result in minor increases in the amount of impervious surface within the project limits. However, impervious surface added to the project area would not result in substantially increased runoff as the amount added is small when compared to the amount of undeveloped areas remaining and the surrounding urban landscape as a whole.

Incorporation of project features described in Section 1.4, AMMs proposed in Appendix C, and additional BMPs as required in the RWQCB-accepted WPCP would avoid or minimize the project's potential to result in substantial erosion or siltation, increase runoff volumes in a way that would result in flooding, exceed drainage system capacity or provide substantial polluted runoff, or impede or redirect flood flows.

**d) No Impact – all project locations**

The majority of SR 1 within the project limits overlap Zone X for minimal flood hazard. The project would not include any features that would increase the risk of flooding. Additionally, as discussed above in Section 2.8, Greenhouse Gas Emissions, the project is not expected to have any impacts to the floodplains.

**e) Less than Significant Impact – all project locations**

The project would be required to adhere to the Clean Water Act, the Porter-Cologne Water Quality Control Act, the Caltrans Municipal Separate Storm Sewer System Permit, and the other applicable federal and state laws and regulations. Therefore, the project is not anticipated to conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

### 2.1.11 Land Use and Planning

*CEQA Significance Determinations for Land Use and Planning*

| Would the project: | Potentially Significant Impact | Less than Significant with Mitigation | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| a) Physically divide an established community? | No | No | No | Yes |
| 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? | No | No | Yes | No |

**a) No Impact – at all project locations**

The project features would be constructed within Caltrans' existing ROW and would not physically divide an established community.

**b) Less than Significant Impact – at all project locations**

As discussed above, the project features would be constructed within Caltrans' ROW. Project features would not change existing land uses in the project area and would not conflict with existing or future land use designations. In addition, the project would be designed to be as visually compatible with the character of the surrounding area as possible to meet local plan requirements.

Several land use and planning policies and ordinances govern development along SR 1 within the project limits, primarily the CCA (PRC Division 20 California Coastal Act [30000-30900]) and three LCPs. This project would be required to undergo review of the three LCPs and the California Coastal Commission (CCC) during the project's design phase. Caltrans will coordinate with the CCC, County of San Mateo, City of Pacifica, and City of Half Moon Bay to ensure that the design of the project remains compatible with the local surroundings. Caltrans would continue to coordinate with the cities and counties that have LCPs to refine the project design to be compatible with their respective policies for visual requirements. The following paragraphs identify how this project would be largely consistent with land use policies and regulations.

SR 1 within the project limits is used as a primary access road to San Mateo County coastal areas, providing access to public parks, beaches, visitor-serving facilities, and coastal residential developments. Land uses at the proposed sign locations—except for Location 10—include commercial, planned unit development, light industrial, and single-family residential development. The project limits span a nearly 21-mile stretch of SR 1; it includes state beaches, such Gray Whale Cove State Beach and Surfer's Beach, and agricultural lands. No changes in land use are anticipated for the project area or the San Mateo Coast near the project.

This section of SR 1 is part of the Pacific Coast Bicycle Route, and sections of the CCT run adjacent to SR 1 within the project limits. Impacts to segments of the CCT are further discussed under the "Coastal Zone Management Act" subheading below.

The highway would remain open during construction, with construction and staging occurring on the roadway shoulders or other access areas off the mainline. Existing pull-out areas would be used for construction parking, staging, and stockpiling of materials. During the construction and operation phase of the project, there would be no effect on public access, tourism and visitor-serving facilities, or agricultural lands.

**Consistency with State, Regional, and Local Plans and Programs**

***State Scenic Highway Program***

SR 1 from the southern limits of the City of Half Moon Bay to Daly City is eligible for state scenic highway designation. This means that the California State Legislature marked the state route as eligible due to its outstanding scenic qualities, and local governments with land use authority have adopted a "scenic corridor protection program" that has been approved by Caltrans. The scenic corridor protection program limits adjacent development and other land uses.

It is not anticipated that the project's temporary and permanent visual resource impacts would affect the eligibility of the highway for the State Scenic Highway Program, and the impact to this program would be less than significant.

***Coastal Zone Management Act***

The project lies within the California Coastal Zone—except for Location 10 in Daly City—and resources in this zone are protected by the federal Coastal Zone Management Act of 1972 (16 United States Code [USC] 1451-1464, as amended). States with an approved coastal management plan are able to review

federal permits and activities to determine whether they are consistent with the state's management plan.

California has developed a coastal zone management plan and, with the passing of the CCA, has enacted its own law to protect the coastal zone. The policies established by the CCA include the protection and expansion of public access and recreation; the protection of agricultural lands; the protection of scenic beauty; and the protection of property and life from coastal hazards. The CCC is responsible for implementation and oversight under the CCA.

The CCA delegates power to local governments to enact their LCPs; in this case, the San Mateo County LCP (SMCLCP) (San Mateo County 2013). The state-certified LCP includes all LCP policies, with amendments approved through August 8, 2012. The SMCLCP requires that planning projects within the Coastal Zone be designed to comply with these requirements. The SMCLCP covers the unincorporated areas of San Mateo County that fall within the coastal zone. The signs at Locations 5 and 6 would be subject to the provisions of the SMCLCP and fall within that planning region.

The project also lies within the Half Moon Bay Local Coastal Land Use Plan (Location 2) and Plan Pacifica 2040 (Locations 9-1 and 9-2). Caltrans considers the proposed WDS to be consistent with all provisions of the CCA because they will be attached to existing infrastructure and not be perceived by the public.

The project is within the permitting jurisdiction of San Mateo County, Half Moon Bay, Pacifica, and the CCC and would require individual permits from all three local entities and the CCC, or a consolidated CDP with agency approval.

The policies of the CCA give the highest priority to the preservation and protection of prime agricultural land and timber lands. The next highest priorities are public recreation and visitor-serving facilities. The project would not conflict with agricultural land uses or timber land uses in the project area. The proposed sign locations do not overlap with land zoned for either use, and there are no timber lands in the project area. Additionally, the signs would not conflict and do not overlap with land designated as open space. This project would not adversely impact the CCT or its use in the long term. The proposed signs would not conflict with the uses of the trail.

Key provisions of the CCA are provided below, along with an evaluation of permitting activities of the project (see Table 2-2). The text below also describes how the project aligns with the SMCLCP for Locations 5 and 6 and how the signs at Locations 2 and 9-2 are consistent with the Half Moon Bay LCP and the Pacifica LCP, respectively.

## Table 2-2 Key Provisions of the California Coastal Act

| Policy Number | Subject of Policy | Coastal Zone Assessment |
|---|---|---|
| Section 30210 | Maximum public access and recreational opportunities shall be provided. | This project would not affect access to or recreational opportunities involving the coast. The signs would not interfere with the public's access to the beach. |
| Section 30211 | Development shall not interfere with public access to the sea. | Development would not interfere with the public's access to the coast. |
| Section 30212 | New development projects shall provide for public access to the shoreline and along the coast. | Access to the coast already exists near the project, and this project would not affect this access. |
| Section 30252 | Public Access | The public's access to coastal resources would be preserved as described above. Public access and use of the CCT and recreational areas would not be adversely affected by the project. |
| Section 30231 | Biological activity; water quality | With the proposed project features and avoidance and minimization measures, this project would not have any impact on biological activity. The project would not affect water quality either directly or indirectly. |
| Section 30233 | Diking, filing, dredging of wetlands | Caltrans would conduct the project entirely from the highway shoulders and adjacent disturbed areas. No wetlands would be impacted. |
| Section 30235 | Construction altering natural shoreline | There would be no alterations to the natural shoreline as part of this project because the work areas do not overlap or occur near the shoreline. |
| Section 30240 | Environmentally sensitive habitat areas | There would be no impact to environmentally sensitive habitat areas because the project would be confined to paved and highly compacted surfaces. No work would be conducted in wetlands or riparian areas. |
| Section 30241-30242 | Agricultural land | No Prime Farmland or lands under a Williamson Act contract are present within the project footprint. |
| Section 30244 | Archaeological/Paleontological resources | There would be no impact to any archaeological or paleontological resources as part of the project. |
| Section 30251 | Scenic and visual qualities | During construction, activities would have a temporary negative impact on scenic and visual qualities in the project area. The signs would also have a permanent impact on visual qualities in the project area. However, the signs have been sited away from areas that would obstruct open views of the coast, scenic vistas, or agricultural areas. The highway's status as an eligible state scenic highway would not be affected by the project. There would be a less-than-significant impact from temporary visual impacts during construction. |

| Policy Number | Subject of Policy | Coastal Zone Assessment |
|---|---|---|
| Section 30254 | Public works facilities | This project would not change the character of SR 1, which would remain a scenic two-lane highway. |
| Section 30604 | Coastal Development Permits shall include a finding that the development is in conformity with public access and public recreation policies; housing opportunities for low and moderate income persons | Caltrans would be in conformity with public access and public recreation policies. Creating housing opportunities for low and moderate income persons is outside of the scope of this project. |
| Section 30609.5 | State lands between the first public road and the sea; sale or transfer | No state lands would be sold to a private entity as part of the project. |

Notes:
Caltrans = California Department of Transportation
CCT = California Coastal Trail
SR = State Route

The parcel adjacent to Location 2 consists of planned unit development in Half Moon Bay. The sign at Location 2 would be within Caltrans' ROW and would not conflict with the ability for the parcel to be developed in the future. The sign would be compatible with preserving coastal views and coastal access. The sign would not interrupt any scenic views, or views of ridgelines or prominent landforms. SR 1 through the Half Moon Bay city limits is a four-lane highway, and the sign would be placed near a local car dealership. Overall, the project would remain consistent with the policies of the Half Moon Bay LCP.

Locations 5 and 6 are within SMCLCP jurisdiction. Like Location 2, the signs would be constructed in Caltrans' ROW. Zoning adjacent to Location 5 is light industrial and is in the airport compatibility zone. Adjacent land use to Location 6 includes single-family residential development. The proposed signage would not preclude the use and development of adjacent parcels.

Other policies relevant to Locations 5 and 6 include those related to public works—specifically, highway capacity would not be increased, as specified in Section 2.44b of the SMCLCP. SR 1 would remain a scenic two-lane road after construction. At both Locations 5 and 6, the signs would be in a rural area of SR 1 and would not have impacts to housing. Because the proposed signs are sited next to or in close proximity to existing infrastructure, like overhead utility lines, Caltrans does not believe the signs degrade the rural character and feel of the area. Additionally, the project does not include the construction of any oil or gas wells, onshore oil facilities, pipelines or transmission lines, or alternative energy facilities. The project may result in temporary service interruptions to draw power to the new poles. Caltrans would coordinate with affected property owners in the event of short service disruptions. The project would be constructed within

Caltrans' ROW and would not impact agricultural land or land zoned for timber harvest. The project would not affect aquaculture facilities or construct any new aquaculture facilities.

There are sensitive habitats in the BSA, including at Locations 5 and 6, which are near Denniston Creek. Project activities would be confined to paved or highly compacted surfaces, and upland areas and would not be placed in wetlands, riparian corridors, or environmentally sensitive habitat areas. Locations 5 and 6 comprise potential dispersal habitat for the CRLF and SFGS, though the direct work areas likely provide minimal habitat value to both species.

At Locations 5 and 6, activities during construction would have a temporary negative impact on visual resources in the project area. The signs would also have a permanent impact on visual qualities in the project area. However, the signs have been sited away from areas that would obstruct open views of the coast, scenic vistas, or agricultural areas. The highway's status as an eligible state scenic highway would not be affected by the project. Additionally, the signs would remain off except during emergency events only and would not degrade dark night sky views and aesthetics.

During circulation of the first draft environmental document for this project, comments from the public included various concerns regarding placement of the signs in areas that interrupt views of the coast and prominent landforms. The area adjacent to the proposed sign at Location 9 is zoned for commercial development. The proposed sign at Location 9 was also sited in an area that would not disrupt any coastal views or viewpoints in Pacifica. The sign would be in an area that is beneath and approaching other utility lines and would slightly block the view of a patch of evergreen trees. The sign would not block views of coastal hills to the north (Sweeney Ridge). The proposed sign would not conflict with LCP policies of preserving agricultural lands, recreational use, coastal access, or coastal views. SR 1 leading up to and away from Location 9 is a four-lane highway and would not conflict with LCP policies to maintain SR 1 as a two-lane highway.

### *San Mateo County General Plan 2013*

The proposed project would be consistent with the *San Mateo County General Plan* (San Mateo County 2013). This project aligns with the following policies, goals, and objectives by providing a safe, reliable highway for motorized vehicles and multi-modal users, while maintaining or enhancing the visual quality of the highway:

- Goal and Objective 12.6: Plan for a transportation system that provides for the safe, efficient, and convenient movement of people and goods in and through San Mateo County.
- Goal and Objective 12.11: Balance and attempt to minimize adverse environmental impacts resulting from transportation system improvements in the County.

There would be no impact from the project due to inconsistencies with the San Mateo County General Plan. The project would contribute to enhancing the safe movement of people throughout the project corridor.

The project would not cause a substantial adverse effect on coastal resources and is anticipated to have no significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted to avoid or mitigate an environmental effect. The impact would be less than significant.

### 2.1.12 Mineral Resources

*CEQA Significance Determinations for Mineral Resources*

| Would the project: | Potentially Significant Impact | Less than Significant with Mitigation | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state? | No | No | No | Yes |
| 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? | No | No | No | Yes |

**a) and b) No Impact – all project locations**

Project construction would occur within disturbed soils; therefore, no impacts to known mineral resources are expected to occur from project construction. In addition, according to the U.S. Geological Survey Mineral Resources On-Line Spatial Data, the project locations are not in close proximity to or on a known mineral resource (USGS 2021).

### 2.1.13 Noise

*CEQA Significance Determinations for Noise*

| Would the project: | Potentially Significant Impact | Less than Significant with Mitigation | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| 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? | No | No | Yes | No |
| b) Generation of excessive ground borne vibration or ground borne noise levels? | No | No | No | Yes |
| c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels? | No | No | No | Yes |

**a) Less than Significant – at all project locations**

Construction noise would be short-term and intermittent. Noise would be generated from diesel-powered construction equipment during excavation activities for implementing power conduits, VMS, and MGS, and paving for the MVP. Noise from utility and semi-trucks coming to and from the site would also be generated. The Caltrans 2018 Standard Specifications 14-8.02 requires that the Maximum Sound Level not exceed 86 A-weighted decibels at 50 feet from the job site from 9:00 p.m. to 6:00 a.m. Construction noise would not exceed thresholds or Caltrans' standards. Thus, construction noise would be within acceptable levels for construction activities. Project operation is not expected to change noise levels from existing levels. Therefore, the project would not

generate noise in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies and the impact would be less than significant.

**b) No Impact – at all project locations**

Groundborne vibration and groundborne noise levels would slightly increase during construction of the project. Vibration would be intermittent, depending on what construction activities are occurring. Small drill rigs would be used, which would increase vibration. This vibration would be minimal, temporary, and short in duration. Therefore, there would be no impact related to vibration.

**c) No Impact – at all project locations**

Location 2 is approximately 0.5 mile from Eddie Andreini Sr. Airfield in Half Moon Bay. However, the project would not expose motorists on SR 1, or populations residing or working in the area to excessive airport-related noise levels.

### 2.1.14 Population and Housing

*CEQA Significance Determinations for Population and Housing*

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

**a) No Impact – all project locations**

The project would not involve the construction of new residential buildings, businesses, or expand transportation services/facilities that could induce population growth.

**b) No Impact – all project locations**

The project would not require residential or business relocations, and therefore, would not displace substantial numbers of people or housing, and would not necessitate the construction of replacement housing elsewhere.

### 2.1.15 Public Services

*CEQA Significance Determinations for Public Services*

| Would the project: | Potentially Significant Impact | Less than Significant with Mitigation | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: | | | | |
| Fire protection? | No | No | No | Yes |
| Police protection? | No | No | No | Yes |
| Schools? | No | No | No | Yes |
| Parks? | No | No | No | Yes |
| Other public facilities? | No | No | No | Yes |

**a) No Impact – all project locations**

The proposed project would have no effect on the provision or need for public services. Project construction has the potential to increase traffic delays on SR 1 that could affect response times of emergency response vehicles. However, Caltrans would prepare a TMP to ensure that traffic flows are maintained during construction and to ensure accessibility throughout the corridor for emergency service providers. Because the project is not growth-inducing, project operation would have no effect on existing demands for schools, parks, and public facilities in the surrounding area. Therefore, the project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or need for new or physically altered governmental facilities. Thus, there would be no impact to public services.

### 2.1.16 Recreation

*CEQA Significance Determinations for Recreation*

| Would the project: | Potentially Significant Impact | Less than Significant with Mitigation | 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? | No | No | No | Yes |
| 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? | No | No | No | Yes |

**a) and b) No Impact – all project locations**

The project would involve installing six WDS, five VMS, MGS, two MVP and update software of an existing CMS. It would not induce growth in the surrounding area that would result in increased use of existing neighborhood and regional parks or other recreational facilities such that deterioration would occur or be accelerated. The project does not include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

### 2.1.17 Transportation and Traffic

*CEQA Significance Determinations for Transportation/Traffic*

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

**a) No Impact – all project locations**

The project would not change the existing circulation pattern as it does not involve changing the number or operation of lanes within the project limits on SR 1. During construction, a TMP would be implemented to minimize impacts to the traveling public. Therefore, the project would be consistent with applicable programs, plans, ordinances, and policies regarding the circulation system.

**b) No Impact – all project locations**

The project would not conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b). The project may result in a slight increase in vehicle

miles traveled (VMT) during construction from crews traveling to and from the project locations. However, the project would not result in an increase in VMT during operation as there would be no change to the number of travel lanes on SR 1 within the project limits.

**c) No Impact – all project locations**

The project would include improvements along the same alignment as the existing facility and would not increase hazards due to a geometric design feature.

**d) Less than Significant Impact – all project locations**

Project construction has the potential to increase traffic delays on SR 1 that could affect response times of emergency response vehicles. In addition, temporary lane closures may be required to construct the project. However, Caltrans would prepare a TMP to maintain the flow of traffic during construction and ensure accessibility through the project locations for vehicles with essential services such as fire and police protection. The project is not expected to result in significantly decreased response times or inadequate emergency access.

### 2.1.18 Tribal Cultural Resources

*CEQA Significance Determinations for Tribal Cultural Resources*

| Would the project: | Potentially Significant Impact | Less than Significant with Mitigation | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| 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 | No | No | No | Yes |
| 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 Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe. | No | No | No | Yes |

**a) and b) No Impact – all project locations**

There are no resources listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in PRC section 5020.1(k). There are no resources determined by the lead agency to be significant pursuant to criteria set forth in subdivision(C) of PRC section 5024.1. Native American outreach occurred throughout the consultation process and as part of resource identification efforts for the proposed project; however, no resources have been identified. There would be no impact.

### 2.1.19 Utilities and Service Systems

*CEQA Significance Determinations for Utilities and Service Systems*

| Would the project: | Potentially Significant Impact | Less than Significant with Mitigation | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects? | No | No | Yes | No |
| b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years? | No | No | No | Yes |
| 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? | No | No | No | Yes |
| 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? | No | No | No | Yes |

| Would the project: | Potentially Significant Impact | Less than Significant with Mitigation | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste? | No | No | No | Yes |

**a) Less than Significant Impact – all project locations**

There would be no utility relocations required for construction and operation of the project. Although most project features would connect to existing electrical connections, controller cabinet and service cabinets would be installed near the signs for the locations that do not have existing cabinets to use. Connecting to electrical power connections during construction may result in short-term, temporary interruptions of service. Final verification of utilities would be performed during the project's detailed design phase, and Caltrans would coordinate with the affected utility owner to minimize potential interruptions of service. Physical impacts related to installation of new infrastructure to connect to electrical connections are addressed in relevant sections throughout this IS/ND in connection with discussions of the impacts of the overall project.

**b) No Impact**

The project does not include new development or uses that would require water supplies.

**c) No Impact**

The project would not generate new wastewater flows or affect public utilities for wastewater treatment.

**d) and e) No Impact**

The project would not result in the production of solid waste other than during construction. The project would not generate or require solid waste disposal in excess of state or local standards, or in excess of the capacity of local infrastructure. Construction waste that could not be recycled would be disposed at a certified facility based on the waste type and would not affect landfill capacity. The project at all locations would comply with federal, state, and local statutes and regulations related to solid waste.

### 2.1.20 Wildfire

*CEQA Significance Determinations for Wildfire*

| If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project: | Potentially Significant Impact | Less than Significant with Mitigation | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| a) Substantially impair an adopted emergency response plan or emergency evacuation plan? | No | No | No | Yes |
| 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? | No | No | Yes | No |
| 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? | No | No | Yes | No |
| d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes? | No | No | Yes | No |

### a) No Impact – all project locations

Project Locations 1, 2, 3, 4, 5, 6, 9-1, 9-2, and 10 would not be located within a State Responsibility Area or within a Very High Fire Hazard Severity Zone. However, project Locations 7, and 8 would be located in a State Responsibility Area, adjacent to moderate and high fire hazard severity zones (CAL FIRE 2021). The project would be subject to San Mateo County's EOP. The EOP provides guidelines for emergency response planning, preparation, training, and execution throughout the county. The relatively limited amount of proposed improvements and associated construction would result in only minor increases in short-term, construction-related traffic on SR 1 and local roadways. Additionally, Caltrans would prepare a TMP to maintain the flow of traffic during construction and ensure accessibility through the project locations for vehicles with essential services such as fire and police protection.

### b) Less than Significant Impact

As discussed above, project Locations 7, and 8 would be located in a State Responsibility Area, adjacent to high fire hazard severity zones (CAL FIRE 2021). Project Locations 7 and 8 would include work on existing poles adjacent to SR 1 in developed areas. The project location areas do not contain steep slopes or high vegetation, and construction of the project would not alter the existing site topography that would increase susceptibility to wildfire hazards. Additionally, the majority of the work would occur in Caltrans' ROW, and measures for minimizing fire risks would be incorporated during construction.

### c) Less than Significant Impact

Construction of the project features would occur within and along SR 1 and Caltrans' ROW. The project would include installation of MVPs to assist with equipment maintenance. Most project features would connect to existing cabinets for power. Construction and operation of new cabinets would follow state and federal fire regulations. Therefore, the project would not substantially exacerbate fire risk.

### d) Less than Significant Impact

Frequent landslides and erosion are known to occur along SR 1. However, implementation of erosion control measures would avoid or minimize the project's potential to result in downslope or downstream flooding or landslides as a result of runoff, post-fire slope instability, or drainage changes. These measures are incorporated into the project design as a matter of Caltrans practice and are not mitigation. In addition, construction and operation of the project would not alter the existing site topography or create slopes that would increase susceptibility to wildfire hazards, including downslope or downstream flooding, or landslides.

### 2.1.21 Mandatory Findings of Significance

*CEQA Significance Determinations for Mandatory Findings of Significance*

| Would the project: | Potentially Significant Impact | Less than Significant with Mitigation | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| 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? | No | No | Yes | No |
| 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)? | No | No | Yes | No |

| Would the project: | Potentially Significant Impact | Less than Significant with Mitigation | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly? | No | No | Yes | No |

**a), b), c) Less than Significant Impact**

As noted in the previous CEQA checklist items above, the project would have a less-than-significant impact or no impact on the environment, including on habitat and threatened and endangered species and cultural resources. This project does not have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species or cause a drop in their population below self-sustaining levels.

Caltrans considered a future multi-asset project (EA0Q130K), another Caltrans project, as part of its cumulative analysis. The purpose of the multi-asset project would be to restore the roadway to a condition that would require only minimal maintenance expenditures, and to upgrade existing traffic system infrastructure. The multi-asset project would take place along SR 1 between Wavecrest Road and 0.1 mile south of Marine Boulevard, in San Mateo County and overlapping a portion of the project limits.

Based on the analysis provided in the CEQA checklist items above, the project would not have impacts that would be cumulatively considerable. The short-term and temporary nature of construction impacts and negligible long-term effects would result in less-than-significant or no impacts for all resource areas evaluated. Therefore, the project, in combination with known past, present, or future projects, would not contribute in a cumulative manner to effects on the environment. This project would not have any environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly.

### 2.1.22 Climate Change

Climate change refers to long-term changes in temperature, precipitation, wind patterns, and other elements of the earth's climate system. An ever-increasing body of scientific research attributes these climatological changes to GHG emissions, particularly those generated from the production and use of fossil fuels.

Although climate change has been a concern for several decades, the establishment of the Intergovernmental Panel on Climate Change by the United Nations and World Meteorological Organization in 1988 led to increased efforts devoted to GHG emissions reduction and climate change research and policy. These efforts are primarily concerned with the emissions of GHGs generated by human activity, including $CO_2$, $CH_4$, $N_2O$, tetrafluoromethane, hexafluoroethane, sulfur hexafluoride, and various hydrofluorocarbons (HFCs). $CO_2$ is the most abundant GHG; although it is a naturally occurring component of the Earth's atmosphere, fossil-fuel combustion is the main source of additional, human-generated $CO_2$.

Two terms are typically used when discussing how to address the impacts of climate change: *greenhouse gas mitigation* and *adaptation*. GHG mitigation covers the activities and policies aimed at reducing GHG emissions to limit or "mitigate" the impacts of climate change. Adaptation, on the other hand, is concerned with planning for and responding to impacts resulting from climate change (such as adjusting transportation design standards to withstand more intense storms and higher sea levels). This analysis will include a discussion of both.

#### Regulatory Setting

This section outlines federal and state efforts to comprehensively reduce GHG emissions from transportation sources.

#### *Federal*

To date, no national standards have been established for nationwide mobile-source GHG reduction targets, nor have any regulations or legislation been enacted specifically to address climate change and GHG emissions reduction at the project level.

The National Environmental Policy Act (NEPA) (42 USC Part 4332) requires federal agencies to assess the environmental effects of their proposed actions prior to making a decision on the action or project.

The Federal Highway Administration (FHWA) recognizes the threats that extreme weather, sea-level change, and other changes in environmental conditions pose to valuable transportation infrastructure and those who depend on it. FHWA therefore supports a sustainability approach that assesses vulnerability to climate risks and incorporates resilience into planning, asset management, project development and design, and operations and maintenance practices (FHWA 2019). This approach encourages planning for sustainable highways by addressing climate risks while balancing environmental, economic, and social values—"the triple bottom line of sustainability" (FHWA n.d.). Program and project elements that foster sustainability and resilience also support economic vitality and global efficiency, increase safety and mobility, enhance the environment, promote energy conservation, and improve the quality of life.

Various efforts have been promulgated at the federal level to improve fuel economy and energy efficiency to address climate change and its associated effects. The most important of these was the Energy Policy and Conservation Act of 1975 (42 USC Section 6201) and Corporate Average Fuel Economy Standards. This act establishes fuel economy standards for on-road motor vehicles sold in the United States. Compliance with federal fuel economy standards is determined through the Corporate Average Fuel Economy program based on each manufacturer's average fuel economy for the portion of its vehicles produced for sale in the United States.

Energy Policy Act of 2005, 109th Congress H.R.6 (2005–2006): This act sets forth an energy research and development program covering: (1) energy efficiency; (2) renewable energy; (3) oil and gas; (4) coal; (5) the establishment of the Office of Indian Energy Policy and Programs within the Department of Energy; (6) nuclear matters and security; (7) vehicles and motor fuels, including ethanol; (8) hydrogen; (9) electricity; (10) energy tax incentives; (11) hydropower and geothermal energy; and (12) climate change technology.

The United States Environmental Protection Agency (U.S. EPA) in conjunction with the National Highway Traffic Safety Administration is responsible for setting GHG emission standards for new cars and light-duty vehicles to significantly increase the fuel economy of all new passenger cars and light trucks sold in the United States. Fuel efficiency standards directly influence GHG emissions.

### *State*

California has been innovative and proactive in addressing GHG emissions and climate change by passing multiple Senate and Assembly bills and executive orders (EOs) including, but not limited to the following:

EO S-3-05 (June 1, 2005): The goal of this EO is to reduce California's GHG emissions to: (1) year 2000 levels by 2010, (2) year 1990 levels by 2020, and (3) 80 percent below year 1990 levels by 2050. This goal was further reinforced with the passage of Assembly Bill (AB) 32 in 2006 and Senate Bill (SB) 32 in 2016.

AB 32, Chapter 488, 2006, Núñez and Pavley, The Global Warming Solutions Act of 2006: AB 32 codified the 2020 GHG emissions reduction goals outlined in EO S-3-05, while further mandating that ARB create a scoping plan and implement rules to achieve "real, quantifiable, cost-effective reductions of greenhouse gases." The Legislature also intended that the statewide GHG emissions limit continue in existence and be used to maintain and continue reductions in emissions of GHGs beyond 2020 (Health and Safety Code Section 38551(b)). The law requires ARB to adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective GHG reductions.

EO S-01-07 (January 18, 2007): This order sets forth the low carbon fuel standard for California. Under this EO, the carbon intensity of California's transportation fuels is to be reduced by at least 10 percent by the year 2020. ARB re-adopted the low carbon fuel standard regulation in September 2015, and the changes went into effect on January 1, 2016. The program establishes a strong framework to promote the low-carbon fuel adoption necessary to achieve the Governor's 2030 and 2050 GHG reduction goals.

SB 375, Chapter 728, 2008, Sustainable Communities and Climate Protection: This bill requires ARB to set regional emissions reduction targets for passenger vehicles. The Metropolitan Planning Organization (MPO) for each region must then develop a "Sustainable Communities Strategy" (SCS) that integrates transportation, land-use, and housing policies to plan how it will achieve the emissions target for its region.

SB 391, Chapter 585, 2009, California Transportation Plan: This bill requires the State's long-range transportation plan to identify strategies to address California's climate change goals under AB 32.

EO B-16-12 (March 2012) orders State entities under the direction of the Governor, including ARB, the California Energy Commission, and the Public Utilities Commission, to support the rapid commercialization of zero-emission vehicles. It directs these entities to achieve various benchmarks related to zero-emission vehicles.

EO B-30-15 (April 2015) establishes an interim statewide GHG emission reduction target of 40 percent below 1990 levels by 2030 to ensure California

meets its target of reducing GHG emissions to 80 percent below 1990 levels by 2050. It further orders all state agencies with jurisdiction over sources of GHG emissions to implement measures, pursuant to statutory authority, to achieve reductions of GHG emissions to meet the 2030 and 2050 GHG emissions reductions targets. It also directs ARB to update the Climate Change Scoping Plan to express the 2030 target in terms of million metric tons of carbon dioxide equivalent ($MMTCO_2e$). Finally, it requires the Natural Resources Agency to update the state's climate adaptation strategy, Safeguarding California, every 3 years, and to ensure that its provisions are fully implemented.

SB 32, Chapter 249, 2016, codifies the GHG reduction targets established in EO B-30-15 to achieve a mid-range goal of 40 percent below 1990 levels by 2030.

SB 1386, Chapter 545, 2016, declared "it to be the policy of the state that the protection and management of natural and working lands … is an important strategy in meeting the state's GHG reduction goals, and would require all state agencies, departments, boards, and commissions to consider this policy when revising, adopting, or establishing policies, regulations, expenditures, or grant criteria relating to the protection and management of natural and working lands."

AB 134, Chapter 254, 2017, allocates GHG Reduction Funds and other sources to various clean vehicle programs, demonstration/pilot projects, clean vehicle rebates and projects, and other emissions-reduction programs statewide.

SB 743, Chapter 386 (September 2013): This bill changes the metric of consideration for transportation impacts pursuant to CEQA from a focus on automobile delay to alternative methods focused on VMT, to promote the state's goals of reducing GHG emissions and traffic-related air pollution and promoting multimodal transportation while balancing the needs of congestion management and safety.

SB 150, Chapter 150, 2017, Regional Transportation Plans: This bill requires ARB to prepare a report that assesses progress made by each MPO in meeting their established regional GHG emission reduction targets.

EO B-55-18 (September 2018) sets a new statewide goal to achieve and maintain carbon neutrality no later than 2045. This goal is in addition to existing statewide targets of reducing GHG emissions.

EO N-19-19 (September 2019) advances California's climate goals in part by directing the California State Transportation Agency to leverage annual transportation spending to reverse the trend of increased fuel consumption and reduce GHG emissions from the transportation sector. It orders a focus on

transportation investments near housing, managing congestion, and encouraging alternatives to driving. This EO also directs ARB to encourage automakers to produce more clean vehicles, formulate ways to help Californians purchase them, and propose strategies to increase demand for zero-emission vehicles.

## Environmental Setting

The segment of SR 1 within the project limits is in the City of Half Moon Bay, the City of Pacifica, and unincorporated areas in San Mateo County. This segment of SR 1 is in a semi-rural environment, and adjacent to both undeveloped areas and developed areas with commercial and residential uses. SR 1 provides access to beaches, state parks and national recreation areas. The majority of GHG gases emissions in the project limits are from vehicle use. The traffic volumes of SR 1 from postmile 26.43 to 47.20 has an AADT between 14,000 and 70,000 vehicles per day according to the 2015 Traffic Volumes on California State Highways.

The Bay Area Air Quality Management District's 2017 clean air plan addresses GHGs in the project region. The U.S. EPA is responsible for documenting GHG emissions nationwide, and the ARB does so for the state, as required by H&SC Section 39607.4.

### *National GHG Inventory*

The U.S. EPA has prepared *the Inventory of the U.S. Greenhouse Gas Emissions and Sinks* every year since the 1990s and submits it to the United Nations in accordance with the Framework Convention on Climate Change (see Figure 2-1). The inventory provides a comprehensive accounting of all human-produced sources of GHGs in the United States, reporting emissions of $CO_2$, $CH_4$, $N_2O$, HFCs, perfluorocarbons, SF6, and nitrogen trifluoride. It also accounts for emissions of $CO_2$ that are removed from the atmosphere by "sinks" such as forests, vegetation, and soils that uptake and store $CO_2$ (carbon sequestration). In 2018, GHG emissions from the transportation sector accounted for 28 percent of US GHG emissions (U.S. EPA 2020).

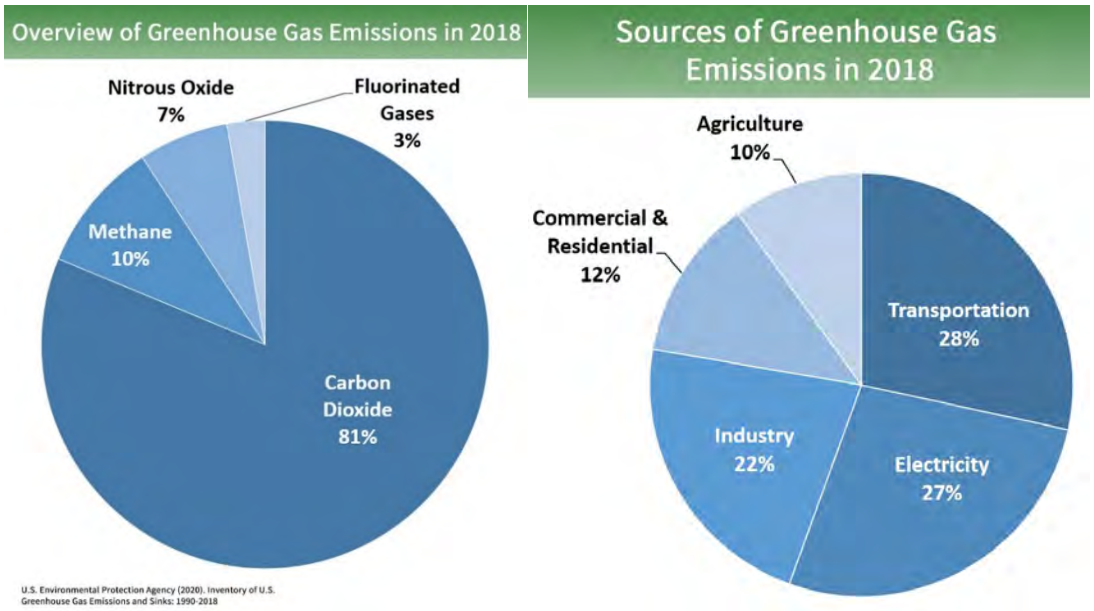


**Figure 2-1 U.S. 2016 Greenhouse Gas Emissions**

### *State GHG Inventory*

ARB collects GHG emissions data for transportation, electricity, commercial/ residential, industrial, agricultural, and waste management sectors each year (see Figure 2-2). It then summarizes and highlights major annual changes and trends to demonstrate the state's progress in meeting its GHG reduction goals. The 2019 edition of the GHG emissions inventory found total California emissions of 424.1 $MMTCO_2e$ for 2017, with the transportation sector responsible for 41 percent of total GHGs. It also found that overall statewide GHG emissions declined from 2000 to 2017 despite growth in population and state economic output (ARB 2019a) (see Figure 2-3).

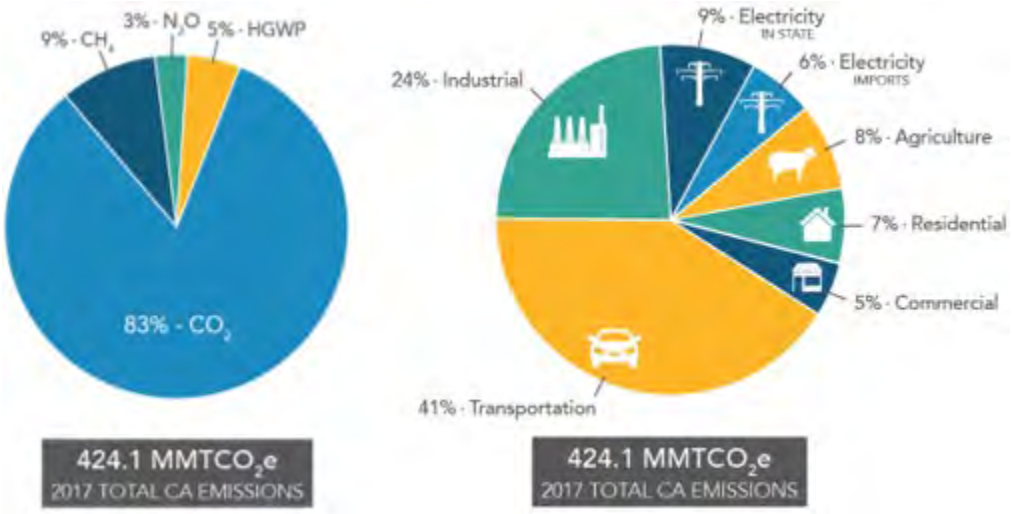


**Figure 2-2 California 2017 Greenhouse Gas Emissions**

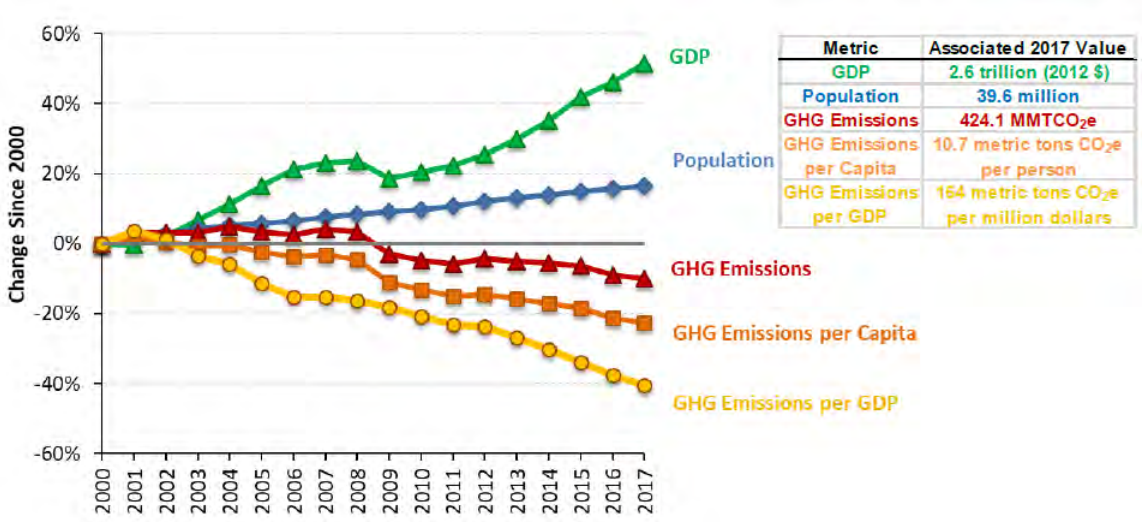


**Figure 2-3 Change in California GDP, Population, and GHG Emissions since 2000 (*Source*: ARB 2019b)**

AB 32 required ARB to develop a Scoping Plan that describes the approach California will take to achieve the goal of reducing GHG emissions to 1990 levels by 2020, and to update it every 5 years. ARB adopted the first scoping plan in 2008. The second updated plan, *California's 2017 Climate Change Scoping Plan*, adopted on December 14, 2017, reflects the 2030 target established in EO B-30-15 and SB 32. The AB 32 Scoping Plan and the subsequent updates contain the main strategies California will use to reduce GHG emissions.

### *Regional Plans*

ARB sets regional targets for California's 18 MPOs to use in their RTP/SCS to plan future projects that will cumulatively achieve GHG reduction goals. Targets are set at a percent reduction of passenger vehicle GHG emissions per person from 2005 levels. The Metropolitan Transportation Commission is the MPO and regional transportation planning agency for the project region, for which ARB has established GHG reduction targets of 10 percent by 2020 and 19 percent by 2035. However, the proposed project is not included in the RTP/SCS project list.

*Plan Bay Area* goals align with those of the California Transportation Plan 2040, which include $CO_2$ emissions reduction to tackle future climate change and fixing an aging transportation system (ABAG and MTC 2017:26).

The Bay Area Air Quality Management District's 2017 clean air plan, *Spare the Air, Cool the Climate*, defines strategies for climate protection in the Bay Area that support goals laid out in *Plan Bay Area*. Goals include transforming the transportation sector to reduce motor vehicle travel, promote zero-emissions vehicles and renewable fuels, adopt fixed- and flexible-route transit services, and

support infrastructure and planning that enable a large share of trips by bicycling, walking, and transit.

San Mateo County adopted an energy efficiency climate action plan in 2013 with a GHG reduction target of 17 percent below 2005 emissions levels by 2020. The climate action plan aligns with GHG-reduction goals and policies of the San Mateo County General Plan that focus on energy efficiency, waste reduction, and efficient land use in the unincorporated county (San Mateo County 2013).

### *Project Analysis – Construction Emissions*

GHG gasses are responsible for causing climate change. As discussed in *Section 2.8. Greenhouse Gas Emissions*, GHG gasses would be generated during construction of the project. It was estimated that for a construction duration of 6 months, the total amount of $CO_2$ produced for the construction of the project would be 166.00 tons. Total $CO_2e$ emissions ($CO_2$, $CH_4$, and $N_2O$) would be 151.51 metric tons. The CEQA Guidelines generally address GHG emissions as a cumulative impact due to the global nature of climate change (Pub. Resources Code, § 21083(b)(2)). As the California Supreme Court explained, “because of the global scale of climate change, any one project's contribution is unlikely to be significant by itself.” (Cleveland National Forest Foundation *v.* San Diego Assn. of Governments (2017) 3 Cal.5th 497, 512.). In assessing cumulative impacts, it must be determined if a project’s incremental effect is “cumulatively considerable” (CEQA Guidelines Sections 15064(h)(1) and 15130).

To make this determination, the incremental impacts of the project must be compared with the effects of past, current, and probable future projects. Although climate change is ultimately a cumulative impact, not every individual project that emits GHGs must necessarily be found to contribute to a significant cumulative impact on the environment. Because GHG emissions associated with the construction of this project are not substantial, this project is not expected to contribute a significant cumulative impact. There may be some GHG emissions associated with ongoing maintenance operations from the use of vehicles and gas or diesel equipment. Nonetheless, maintenance operations would occur periodically and are not expected to contribute significantly to GHG emissions.

### *Project Analysis – Operational Emissions*

The purpose of this project is to provide the traveling public on SR 1 with real time travel information related to evacuations and also inform Caltrans’ TMC in Oakland, California of recurrent and non-recurrent congestion on the corridor and the causes of that congestion. The proposed project is not a capacity increasing project. Because the project would not increase the number of travel lanes, no increase in VMT would occur as result of project implementation. Although some

GHG emissions during the construction period would be unavoidable, no increase in operational GHG emissions is expected.

## Greenhouse Gas Reduction Strategies

### *Statewide Efforts*

Major sectors of the California economy, including transportation, will need to reduce emissions to meet the 2030 and 2050 GHG emissions targets. Former Governor Edmund G. Brown promoted GHG reduction goals that involved (1) reducing today's petroleum use in cars and trucks by up to 50 percent; (2) increasing from one-third to 50 percent our electricity derived from renewable sources; (3) doubling the energy efficiency savings achieved at existing buildings and making heating fuels cleaner; (4) reducing the release of methane, black carbon, and other short-lived climate pollutants; (5) managing farms and rangelands, forests, and wetlands so they can store carbon; and (6) periodically updating the state's climate adaptation strategy, *Safeguarding California* (see Figure 2-4).

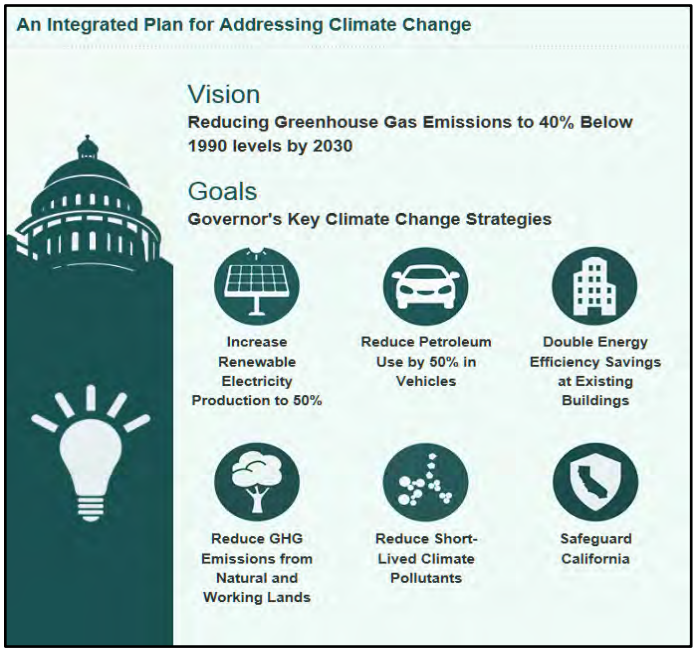


**Figure 2-4 California Climate Strategy**

The transportation sector is integral to the people and economy of California. To achieve GHG emission reduction goals, it is vital that the state build on past successes in reducing criteria and toxic air pollutants from transportation and goods movement. GHG emission reductions will come from cleaner vehicle technologies, lower-carbon fuels, and reduction of VMT. A key state goal for reducing GHG emissions is to reduce today's petroleum use in cars and trucks by up to 50 percent by 2030 (State of California 2019).

In addition, SB 1386 (Wolk 2016) established as state policy the protection and management of natural and working lands and requires state agencies to consider that policy in their own decision making. Trees and vegetation on forests, rangelands, farms, and wetlands remove $CO_2$ from the atmosphere through biological processes and sequester the carbon in above- and below-ground matter.

## Caltrans Activities

Caltrans continues to be involved on the Governor's Climate Action Team as the ARB works to implement EOs S-3-05 and S-01-07 and help achieve the targets set forth in AB 32. EO B-30-15, issued in April 2015, and SB 32 (2016), set an interim target to cut GHG emissions to 40 percent below 1990 levels by 2030. The following major initiatives are underway at Caltrans to help meet these targets.

### *Caltrans Strategic Management Plan*

The Strategic Management Plan, released in 2015, creates a performance-based framework to preserve the environment and reduce GHG emissions, among other goals. Specific performance targets in the plan that will help to reduce GHG emissions include:

- Increasing percentage of non-auto mode share
- Reducing VMT
- Reducing Caltrans' internal operational (buildings, facilities, and fuel) GHG emissions

### *Funding and Technical Assistance Programs*

In addition to developing plans and performance targets to reduce GHG emissions, Caltrans also administers several sustainable transportation planning grants. These grants encourage local and regional multimodal transportation, housing, and land use planning that furthers the region's RTP/SCS; contribute to the State's GHG reduction targets and advance transportation-related GHG emission reduction project types/strategies; and support other climate adaptation goals (e.g., *Safeguarding California*).

### *Caltrans Policy Directives and Other Initiatives*

Caltrans Director's Policy 30 (DP-30) Climate Change (June 22, 2012) is intended to establish a Department policy that will ensure coordinated efforts to incorporate climate change into Departmental decisions and activities. *Caltrans*

*Activities to Address Climate Change* (April 2013) provides a comprehensive overview of Caltrans' statewide activities to reduce GHG emissions resulting from agency operations.

### *Project-Level GHG Reduction Strategies*

The following measures will be implemented in the project to reduce GHG emissions and potential climate change impacts from the project.

1. Caltrans Standard Specifications such as Section 14-9.02, Air Pollution Control, require contractors to comply with all federal, state, and local air pollution control rules, regulations, and ordinances. Requirements such as idling restrictions and keeping engines properly tuned reduce emissions, including GHG emissions.

2. A TMP will be prepared during the design phase of the project to minimize traffic disruptions from project construction. Minimizing traffic delays during construction will help reduce GHG emissions from idling vehicles.

3. BMPs for air quality will be incorporated during construction activities such as limiting the idling of vehicles and equipment onsite and maintaining vehicles and equipment.

## Adaptation

Adaptation strategies refer to how Caltrans and others can plan for the effects of climate change on the State's transportation infrastructure and strengthen or protect the facilities from damage or, planning and design for resilience. Reducing GHG emissions is only one part of an approach to addressing climate change. Caltrans must plan for the effects of climate change on the state's transportation infrastructure and strengthen or protect the facilities from damage. Climate change is expected to produce increased variability in precipitation, rising temperatures, rising sea levels, variability in storm surges and their intensity, and in the frequency and intensity of wildfires. Flooding and erosion can damage or wash out roads; longer periods of intense heat can buckle pavement and railroad tracks; storm surges combined with a rising sea level can inundate highways. Wildfire can directly burn facilities and indirectly cause damage when rain falls on denuded slopes that landslide after a fire. Effects will vary by location and may, in the most extreme cases, require that a facility be relocated or redesigned. Accordingly, Caltrans must consider these types of climate stressors in how highways are planned, designed, built, operated, and maintained.

### *Federal Efforts*

Under NEPA assignment, Caltrans is obligated to comply with all applicable federal environmental laws and FHWA NEPA regulations, policies, and guidance.

The U.S. Global Change Research Program delivers a report to Congress and the president every 4 years, in accordance with the Global Change Research Act of 1990 (15 USC Ch. 56A § 2921 et seq). The *Fourth National Climate Assessment*, published in 2018, presents the foundational science and the "human welfare, societal, and environmental elements of climate change and variability for 10 regions and 18 national topics, with particular attention paid to observed and projected risks, impacts, consideration of risk reduction, and implications under different mitigation pathways." Chapter 12, "Transportation," presents a key discussion of vulnerability assessments. It notes that "asset owners and operators have increasingly conducted more focused studies of particular assets that consider multiple climate hazards and scenarios in the context of asset-specific information, such as design lifetime" (USGCRP 2018).

The United States Department of Transportation (U.S. DOT) Policy Statement on Climate Adaptation in June 2011 committed the federal Department of Transportation to "integrate consideration of climate change impacts and adaptation into the planning, operations, policies, and programs of U.S. DOT to ensure that taxpayer resources are invested wisely, and that transportation infrastructure, services and operations remain effective in current and future climate conditions" (U.S. DOT 2011).

FHWA order 5520 (*Transportation System Preparedness and Resilience to Climate Change and Extreme Weather Events,* December 15, 2014) established FHWA policy to strive to identify the risks of climate change and extreme weather events to current and planned transportation systems. FHWA has developed guidance and tools for transportation planning that foster resilience to climate effects and sustainability at the federal, state, and local levels (FHWA 2019).

### *State Efforts*

Climate change adaptation for transportation infrastructure involves long-term planning and risk management to address vulnerabilities in the transportation system. *California's Fourth Climate Change Assessment* (State of California 2018) is the state's effort to "translate the state of climate science into useful information for action" in a variety of sectors at both statewide and local scales. It adopts the following key terms used widely in climate change analysis and policy documents:

- *Adaptation* to climate change refers to adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities.

- *Adaptive capacity* is the "combination of the strengths, attributes, and resources available to an individual, community, society, or organization

that can be used to prepare for and undertake actions to reduce adverse impacts, moderate harm, or exploit beneficial opportunities."

- *Exposure* is the presence of people, infrastructure, natural systems, and economic, cultural, and social resources in areas that are subject to harm.

- *Resilience* is the "capacity of any entity—an individual, a community, an organization, or a natural system—to prepare for disruptions, to recover from shocks and stresses, and to adapt and grow from a disruptive experience". Adaptation actions contribute to increasing resilience, which is a desired outcome or state of being.

- *Sensitivity* is the level to which a species, natural system, or community, government, etc., would be affected by changing climate conditions.

- *Vulnerability* is the "susceptibility to harm from exposure to stresses associated with environmental and social change and from the absence of capacity to adapt." Vulnerability can increase because of physical (built and environmental), social, political, and/or economic factor(s). These factors include, but are not limited to ethnicity, class, sexual orientation and identification, national origin, and income inequality. Vulnerability is often defined as the combination of sensitivity and adaptive capacity as affected by the level of exposure to changing climate.

Several key state policies have guided climate change adaptation efforts to date. Recent state publications produced in response to these policies draw on these definitions.

EO S-13-08, issued by then-governor Arnold Schwarzenegger in November 2008, focused on sea-level rise and resulted in the *California Climate Adaptation Strategy* (2009), updated in 2014 as *Safeguarding California: Reducing Climate Risk* (Safeguarding California Plan). The Safeguarding California Plan offers policy principles and recommendations and continues to be revised and augmented with sector-specific adaptation strategies, ongoing actions, and next steps for agencies.

EO S-13-08 also led to the publication of a series of sea-level rise assessment reports and associated guidance and policies. These reports formed the foundation of an interim *State of California Sea-Level Rise Interim Guidance Document* in 2010, with instructions for how state agencies could incorporate "sea-level rise projections into planning and decision making for projects in California" in a consistent way across agencies. The guidance was revised and augmented in 2013. *Rising Seas in California – An Update on Sea-Level Rise Science* was published in 2017 and its updated projections of sea-level rise and

new understanding of processes and potential impacts in California were incorporated into the *State of California Sea-Level Rise Guidance Update* in 2018.

EO B-30-15, signed in April 2015, requires state agencies to factor climate change into all planning and investment decisions. This EO recognizes that effects of climate change other than sea-level rise also threaten California's infrastructure. At the direction of EO B-30-15, the Office of Planning and Research published *Planning and Investing for a Resilient California: A Guidebook for State Agencies* in 2017, to encourage a uniform and systematic approach. Representatives of Caltrans participated in the multi-agency, multidisciplinary technical advisory group that developed this guidance on how to integrate climate change into planning and investment.

AB 2800 (Quirk 2016) created the multidisciplinary Climate-Safe Infrastructure Working Group, which in 2018 released its report, *Paying it Forward: The Path Toward Climate-Safe Infrastructure in California*. The report provides guidance to agencies on how to address the challenges of assessing risk in the face of inherent uncertainties still posed by the best available science on climate change. It also examines how state agencies can use infrastructure planning, design, and implementation processes to address the observed and anticipated climate change impacts.

### *Caltrans Adaptation Efforts*

*Caltrans Vulnerability Assessments*

Caltrans is conducting climate change vulnerability assessments to identify segments of the State Highway System vulnerable to climate change effects including precipitation, temperature, wildfire, storm surge, and sea-level rise. The approach to the vulnerability assessments was tailored to the practices of a transportation agency, and involves the following concepts and actions:

- *Exposure* – Identify Caltrans assets exposed to damage or reduced service life from expected future conditions.

- *Consequence* – Determine what might occur to system assets in terms of loss of use or costs of repair.

- *Prioritization* – Develop a method for making capital programming decisions to address identified risks, including considerations of system use and/or timing of expected exposure.

The climate change data in the assessments were developed in coordination with climate change scientists and experts at federal, state, and regional

organizations at the forefront of climate science. The findings of the vulnerability assessments will guide analysis of at-risk assets and development of adaptation plans to reduce the likelihood of damage to the State Highway System, allowing Caltrans to both reduce the costs of storm damage and to provide and maintain transportation that meets the needs of all Californians.

## Project Adaptation Analysis

### *Sea-Level Rise Analysis*

The California Ocean Protection Council (OPC) provides the most current accepted estimates for sea level rise in California. Projected sea level rise based on the OPC *State of California Sea Level Rise Guidance 2018 Update* (OPC 2018) at the nearest tide gauge (San Francisco) assuming a high emissions scenario to end of century (i.e., the year 2100) with a 1 in 20 (5 percent) probability indicates that sea level rise would rise to meet or exceed 4.4 feet above current conditions. To analyze how this level of impact would have impact on the project area, the National Oceanic and Atmospheric Administration (NOAA) Sea Level Rise viewer (https://coast.noaa.gov/digitalcoast/tools/slr.html) and Point Blue's Our Coast Our Future viewer (https://data.pointblue.org/apps/ocof/cms/index.php?page=flood-map) were used to review the SR 1 corridor in the project area. Both tools were examined using the nearest sea level rise scenario to the OPC projection identified above that was available in each viewer (5 feet of modeled sea level rise using the NOAA viewer and 4.9 feet using the Point Blue viewer). After reviewing the entire SR 1 corridor using both tools, Caltrans determined that the proposed project is not in an area subject to sea-level rise at the conservatively estimated highest potential sea level increase to end of century. Accordingly, direct impacts to transportation facilities proposed by the project due to projected sea-level rise are not expected.

### *Floodplains*

Reference was made to Federal Emergency Management Agency Flood Insurance Rate Map (FIRM) numbers, 06081C0260E dated 10/16/12, 06081C0266F, 06081C0138F, 06081C0109F, 06081C0036F all dated 8/2/17. Based on these FIRMs, there are no locations where proposed project work is within a base floodplain. However, Location 9-1 at postmile 42.58 under FIRM 06081C0126F dated 8/2/17, is in the 0.2 percent Annual Chance Flood Hazard Zone X. This work at Location 9 does not change the existing grade and is not in the base flood plain as well. Therefore, the proposed work is not expected to have any impacts to these floodplains.

# Chapter 3 Comments and Coordination

Early and continuing coordination with the general public and public agencies is an essential part of the environmental process. It helps planners determine the necessary scope of environmental documentation and the level of analysis required, and to identify potential impacts and avoidance, minimization, and/or mitigation measures and related environmental requirements. Consultation and public participation for this project will be accomplished through a variety of formal and informal methods. This chapter summarizes the results of Caltrans' preliminary efforts to fully identify, address, and resolve project-related issues through early and continuing coordination.

## 3.1 Consultation and Coordination with Public Agencies

### 3.1.1 U.S. Fish and Wildlife Service Consultation Summary

The proposed project received a letter of concurrence (LOC) from the USFWS on December 7, 2021. A LOC indicates that a project is unlikely to result in the take (as defined under FESA as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct) of listed species. Specific measures for the proposed project required by the USFWS in its LOC are consistent with the AMMs in Appendix C, and Caltrans standard measures found in the project features described in Section 1.4 of this IS.

Caltrans made the following determinations for species under USFWS jurisdiction:

- *May affect, not likely to adversely affect* the CRLF;
- *May affect, not likely to adversely affect* the SFGS.

No effects to any other listed, candidate, or proposed species are anticipated. Caltrans biologists have worked closely with project engineers to limit the size and scope of the proposed project. In addition, AMMs, including but not limited to, training for construction personnel, seasonal avoidance, environmentally sensitive area fencing, entrapment avoidance, preconstruction surveys, and biological monitoring, will be implemented to reduce impacts to listed, candidate, and proposed species and their habitats.

By implementing these measures, Caltrans anticipates minimal adverse direct impacts to the CRLF and SFGS.

The proposed project would permanently impact 0.284 acre of potential CRLF dispersal habitat as a result of MVP construction. This loss of habitat is not anticipated to result in the take as defined under FESA of individual CRLF.

The proposed project would also temporarily impact 0.126 acre of potential CRLF dispersal habitat from construction of project features at Location 2. This will result in a temporary reduction in the area of dispersal habitat. All temporary impacts to listed species' habitat will be minimized by restoring disturbed areas on-site to pre-project or ecologically enhanced conditions. These impacts are considered temporary because the impacted area would be replanted or reseeded with vegetation upon project completion.

### 3.1.2 California Department of Fish and Wildlife Consultation Summary

CESA stipulates that incidental take of a state listed species be fully mitigated with financial assurance; if required, appropriate measures for state-listed species would be designed in coordination with CDFW. As defined by CESA and CFGC, “take” means to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill (CFGC Section 86). This is slightly different from the federal definition of “take” defined in Section 3(18) of the FESA: “The term ‘take’ means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” Take under CESA and CFGC does not include harm or harassment. This difference is important in understanding why the SFGS may have potential for take under FESA regulations, which includes less impactful actions (harm and harassment) in its take definition, but does not have potential for take under CESA.

Additionally, in the 1960s, prior to passage of CESA, California classified certain animals that were rare or faced possible extinction as “fully protected” in the CFGC. Fully protected species may not be taken (as defined by CESA and CFGC) or possessed at any time, and no licenses or permits may be issued for their take except for necessary scientific research, relocation for the protection of livestock, or if they are new species whose conservation and management is provided for in a Natural Community Conservation Plan. Lists were created for fish, birds, amphibians, reptiles, and mammals (CFGC Sections 3511, 4700, and 5050). The SFGS is protected under CFGC as a “fully protected” species (CFGC Section 5050). Some suitable habitat for SFGS occurs in the project’s study area, and individuals have a low potential to occur in the project area. Caltrans will implement measures to completely avoid take, as defined in CESA and the CFGC, during all project activities.

CDFW also administratively designates some species as SSCs (“Species of Special Concern”). CDFW defines SSC as a species, subspecies, or distinct population of an animal native to California that is considered rare for various

reasons. These species may be federally listed as threatened or endangered but not designated as such under CESA. SSC are generally given consideration under CEQA.

Caltrans has considered all species protected under CESA and CFGC, and those that are considered SSC (Appendix D), and determined that only CRLF and SFGS have potential to occur in the project area. No take of state listed species, fully protected species, or SSC is anticipated.

### 3.1.3 Coastal Zone Coordination

The proposed project is within the jurisdiction of three LCPs (City of Half-Moon Bay, City of Pacifica, and San Mateo County) and CCC.

On February 11, 2020, Caltrans staff reached out to City of Pacifica staff to discuss proposed work at Location 9.

On May 1, 2020, Caltrans staff spoke with all three LCPs. As a result of the discussion with the City of Half Moon Bay staff, the location of one of the proposed signs was moved to avoid any potential impacts to nearby coastal wetland habitats.

On August 14, 2020, all three LCPs and Coastal Commission staff were provided a copy of the previous Draft Environmental Document for review and comment.

During the public review period from August 14, 2020, to October 30, 2020, representatives from City of Pacifica, City of Half Moon Bay, and San Mateo County all provided comments on the previously circulated Draft Environmental Document. These comments included notes about public access, visual impacts, agricultural resources, other planned works nearby, and requirements to obtain a CDP in respective LCP jurisdictions. Comments about the previously circulated document's consistency in approach were also noted. Caltrans has incorporated this feedback into this revised IS. As a result of feedback from the San Mateo County coastal community, Caltrans revised the project to focus on safety-oriented traffic management, rather than the day-to-day traffic management that was previously presented.

On October 4, 2020, Caltrans presented a summary of the project as previously proposed to the Midcoast Community Council.

On October 6, 2020, Caltrans presented a summary of the project as previously proposed to the Half Moon Bay City Council.

On October 14, 2020, Caltrans presented a summary of the project as previously proposed to the Midcoast Community Council Meeting.

On February 22, 2021, the City of Half Moon Bay transmitted a letter to Caltrans requesting that the VMS proposed in Half Moon Bay be relocated south of Miramontes Point Road to more effectively reduce congestion; voicing concerns about the aesthetics and nighttime light impacts of the proposed VMS signs and their appropriateness in the coastal setting; and requesting that the project include a VMS on SR 92. A VMS was not included on SR 92 as part of this project because it is outside the project limits and scope. However, a VMS could be included on SR 92 in a future Caltrans project. Caltrans has considered these comments in this IS and believes that the project changes reflected in this IS address much of the comments received. Caltrans will continue to work with the City of Half Moon Bay to refine the project as the design develops.

Caltrans will continue to coordinate with all three LCPs and Coastal Commission staff as the project moves forward.

## 3.2 Circulation, Review, and Comment on the Draft Environmental Document

As noted in the introduction, An IS with Proposed ND was circulated for public review beginning on August 14, 2020, and ending on October 30, 2020. A public meeting on the IS was held on September 10, 2020. Caltrans staff made presentations to the local Midcoast community, including the City of Half Moon Bay City Council on October 6, and the Midcoast Community Council on October 14, 2020.

During the public comment period in the fall of 2020, Caltrans received a vast amount of input from the local community. Members of the public and local council members expressed concerns about the project, including that the proposed VMS are incompatible with the rural character of Highway 1 through San Mateo County. Comments previously received during the public review period related to the project not fitting into the coastal and rural character of the community; VMS being urban solutions for a rural area; data privacy concerns with the WDS; interruption of scenic views with placement of the signs; light pollution from the VMS; and the project not being needed because of existing cellphone applications such as WAZE. As a result of feedback from the local coastal community, Caltrans revised the project to focus on safety-oriented traffic management, rather than the day-to-day traffic management that was previously presented. Additionally, Caltrans has since reconsidered all sign locations and moved three of the signs that were thought to be most in conflict with scenic views. The proposed VMS at Locations 5, 6, and 9 have been moved from their

original proposed locations, with the goal of further minimizing the potential impacts of this project on visual resources.

Public input on the project will be solicited during the review period for this recirculated IS, which will last 30 days. Interested stakeholders will be notified by several methods, including postings on the Caltrans website and notifications to interested agencies and individuals. A Notice of Completion will be filed with the State Clearinghouse. During the review period, Caltrans will hold a public meeting to share information about the project and collect comments on the IS from interested parties. The review period and instructions for submitting comments are included on the first page of this document. All formal comments will be addressed, and responses published in the Final IS. If the Final IS is approved, a ND will be signed and included with the Final IS.

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# Chapter 6 References

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# Appendices

# Appendix A Title 6 Policy Statement

STATE OF CALIFORNIA—CALIFORNIA STATE TRANSPORTATION AGENCY Gavin Newsom, Governor

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*Making Conservation a California Way of Life.*

August 2020

**NON-DISCRIMINATION POLICY STATEMENT**

The California Department of Transportation, under Title VI of the Civil Rights Act of 1964, ensures *"No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance."*

Caltrans will make every effort to ensure nondiscrimination in all of its services, programs and activities, whether they are federally funded or not, and that services and benefits are fairly distributed to all people, regardless of race, color, or national origin. In addition, Caltrans will facilitate meaningful participation in the transportation planning process in a nondiscriminatory manner.

Related federal statutes, remedies, and state law further those protections to include sex, disability, religion, sexual orientation, and age.

For information or guidance on how to file a complaint, or obtain more information regarding Title VI, please contact the Title VI Branch Manager at (916)e324-8379 or visit the following web page:e https://dot.ca.gov/programs/civil-rights/title-vi.e

To obtain this information in an alternate format such as Braille or in a language other than English, please contact the California Department of Transportation, Office of Civil Rights, at 1823 14th Street, MS-79, Sacramento, CA 95811; (916) 324-8379 (TTY 711); or at <Title.VI@dot.ca.gov>.e

*Original signed by*
Toks Omishakin
Director

*"Provide a safe, sustainable, integrated and efficient transportation system to enhance California's economy and livability"*

# Appendix B List of Acronyms and Abbreviations

| Abbreviation | Definition |
|---|---|
| AADT | Annual Average Daily Traffic |
| AB | Assembly Bill |
| ABAG | Association of Bay Area Governments |
| ADL | aerially deposited lead |
| AMM | Avoidance and Minimization Measure |
| ARB | California Air Resources Board |
| BAAQMD | Bay Area Air Quality Management District |
| BMP | best management practice |
| BSA | Biological Study Area |
| CAL FIRE | California Department of Forestry and Fire Protection |
| Caltrans | California Department of Transportation |
| CCA | California Coastal Act |
| CCC | California Coastal Commission |
| CCT | California Coastal Trail |
| CDFW | California Department of Fish and Wildlife |
| CDP | Coastal Development Permit |
| CEQA | California Environmental Quality Act |
| CESA | California Endangered Species Act |
| CFGC | California Fish and Game Code |
| $CH_4$ | methane |
| CMS | changeable message sign |
| CNDDB | California Natural Diversity Database |
| CNPS | California Native Plant Society |
| $CO_2$ | carbon dioxide |
| $CO_2e$ | carbon dioxide equivalent |
| CRLF | California red-legged frog |
| EO | Executive Order |
| EOP | Emergency Operations Plan |
| ESA | environmentally sensitive area |
| FESA | Federal Endangered Species Act |
| FHWA | Federal Highway Administration |
| FIRM | Flood Insurance Rate Map |
| GHG | greenhouse gas |
| HFC | hydrofluorocarbon |
| IS | Initial Study |
| LCP | Local Coastal Program |
| LOC | letter of concurrence |
| MGS | Midwest guardrail systems |
| $MMTCO_2e$ | million metric tons of carbon dioxide equivalent |

| | |
|---|---|
| MPO | Metropolitan Planning Organization |
| MSAT | mobile source air toxics |
| MTC | Metropolitan Transportation Commission |
| MVP | maintenance vehicle pullout |
| $N_2O$ | nitrous oxide |
| NB | northbound |
| ND | Negative Declaration |
| NEPA | National Environmental Policy Act |
| NES | natural environment study |
| NOAA | National Oceanic and Atmospheric Administration |
| NRCS | Natural Resources Conservation Service |
| OCRS | Office of Cultural Resource Studies |
| OPC | Ocean Protection Council |
| PG&E | Pacific Gas and Electric Company |
| $PM_{2.5}$ | particulate matter equal to or less than 2.5 microns in diameter |
| PRC | Public Resources Code |
| ROW | right-of-way |
| RTP | Regional Transportation Plan |
| RWQCB | Regional Water Quality Control Board |
| SB | Senate Bill |
| SB | southbound |
| SCS | Sustainable Communities Strategy |
| SFGS | San Francisco garter snake |
| SMCLCP | San Mateo County Local Coastal Program |
| SR | State Route |
| SSC | Species of Special Concern |
| TMC | Traffic Management Center |
| TMP | Traffic Management Plan |
| U.S. DOT | United States Department of Transportation |
| U.S. EPA | United States Environmental Protection Agency |
| USACE | United States Army Corps of Engineers |
| USC | United States Code |
| USFWS | United States Fish and Wildlife Service |
| USGCRP | United States Global Change Research Program |
| USGS | United States Geological Survey |
| VIA | Visual Impact Assessment |
| VMS | variable message sign |
| VMT | vehicle miles traveled |
| WDS | wireless detection system |
| WPCP | Water Pollution Control Program |

## Appendix C Avoidance and Minimization Measures

Caltrans has incorporated several avoidance and minimization measures (AMMs) into the proposed project to avoid and minimize the impacts of this project on environmental resources. The proposed AMMs are as follows:

| Resource | AMM Reference | Proposed Avoidance and Minimization Measure |
|---|---|---|
| **Aesthetics/ Visual** | **AES-1** | Vegetation removal will be limited to the work areas that require clearing and grubbing. |
| **Aesthetics/ Visual** | **AES-2** | Trees and vegetation outside of clearing and grubbing limits shall be protected from the contractor's operations, equipment, and materials storage. |
| **Aesthetics/ Visual** | **AES-3:** | All temporarily disturbed ground surfaces shall be restored and treated with and treated with erosion control including native, locally appropriate seed. |
| **Aesthetics/ Visual** | **AES-4** | The addition of paved surfaces, such as MVPs, shall be limited to meet minimum safe work access requirements where they are proposed. |
| **Aesthetics/ Visual** | **AES-5** | The VMS sign panel size shall be the smallest necessary to convey critical emergency or hazard information. |
| **Aesthetics/ Visual** | **AES-6** | Sign materials used will suit the rural coastal highway vernacular and blend with the landscape. |
| **Aesthetics/ Visual** | **AES-7** | Construction activities shall limit all construction lighting to within the area of work and avoid light trespass in residential areas through directional lighting, shielding, and other measures**.** |
| **Biological** | **BIO-01** | Protocol for Biological Monitor and Species Observation:<br>The names and qualifications of proposed biological monitor(s) will be submitted to the USFWS for approval prior to the start of construction. The approved biological monitor(s) will conduct worker environmental awareness training and keep a copy of the USFWS Letter of Concurrence in their possession when on-site. Through communication with the Resident Engineer, the approved biological monitor(s) will be on-site during |

| Resource | AMM Reference | Proposed Avoidance and Minimization Measure |
|---|---|---|
| | | all work at Locations 5 and 6. The approved biological monitor(s) will have the authority to stop work that may result in the unauthorized take of federally listed species. If the approved biological monitor exercises this authority, the Service will be notified by telephone and e-mail message within one (1) working day.<br>The Resident Engineer will have the authority to halt work if a listed species is observed in the BSA. The Resident Engineer will keep construction activities suspended in any construction area where the biologist has determined that a potential take of the species could occur. Work will resume after observed listed individuals leave the site voluntarily, the biologist determines that no wildlife is being harassed or harmed by construction activities, and upon USFWS and/or CDFW approval. |
| **Biological** | **BIO-02** | Pre-Construction Surveys:<br>Pre-construction surveys for CRLF and San Francisco garter snake will be conducted by a USFWS approved biological monitor no more than 20 calendar days prior to any initial ground disturbance and immediately prior to ground-disturbing activities (including vegetation removal and temporary high visibility fencing installation) within the project footprint. These efforts will consist of walking surveys of the project limits and, if possible, accessible adjacent areas within at least 50 feet of the project limits. The approved biological monitor will investigate potential cover sites when it is feasible and safe to do so. This includes thorough investigation of mammal burrows, rocky outcrops, appropriately sized soil cracks, tree cavities, and debris. Native vertebrates found in the cover sites within the project limits will be documented and relocated to an adequate cover site in the vicinity. Safety permitting, the approved biological monitor will also investigate areas of disturbed soil for signs of CRLF and San Francisco garter snake within 30 minutes following initial disturbance of the given area. The need for further pre-construction surveys would be determined by the biological monitor based on site conditions and construction timelines. |

| Resource | AMM Reference | Proposed Avoidance and Minimization Measure |
|---|---|---|
| **Biological** | **BIO-03** | Staging:<br>Staging and parking areas will be located in designated areas outside ESAs, as specified by the project biologist in coordination with the Resident Engineer. |
| **Biological** | **BIO-04** | Construction Site BMPs:<br>The following site restrictions will be implemented to avoid or minimize impacts on special-status species and their habitats:<br>a. Routes and boundaries of roadwork will be clearly marked before the start of construction or grading.<br>b. All food and food-related trash items will be enclosed in sealed trash containers and will be properly disposed off-site.<br>c. No pets belonging to project personnel will be allowed anywhere in the Action Area during construction.<br>d. A Spill Response Plan will be prepared. Hazardous materials (e.g., fuels, oils, solvents) will be stored in sealable containers in a designated location that is at least 50 feet from any hydrologic features.<br>e. All equipment will be properly maintained and free of leaks. Servicing of vehicles and construction equipment, including fueling, cleaning, and maintenance, will occur at least 50 feet from any hydrologic features unless it is an existing gas station. |
| **Biological** | **BIO-05** | Dry Season Work Window:<br>Construction actions will be scheduled to avoid and minimize habitat impacts to CRLF and San Francisco garter snake. To reduce impacts to special-status species and habitat, construction activities off paved or graveled roadside surfaces will be conducted during the dry season, between June 15 and October 15. |
| **Biological** | **BIO-06** | Inclement Weather Restriction:<br>No work will occur during or within 24 hours following a rain event exceeding 0.2-inch as measured by the National Oceanic and Atmospheric Administration National Weather Service for Half Moon Bay Airport, CA (KHAF) base station available at https://www.wrh.noaa.gov/mesowest/timeseries.php?sid=KHAF& |

| Resource | AMM Reference | Proposed Avoidance and Minimization Measure |
|---|---|---|
| | | num=72&banner=gmap&raw=0&w=325. USFWS/ CDFW approval to continue work during or within 24 hours of a rain event will be considered on a case-by-case basis. |
| **Biological** | **BIO-07** | Proper Use of Erosion Control Devices:<br>Erosion control materials that use plastic or synthetic monofilament netting will not be used within the action area to avoid entanglement of CRLF and San Francisco garter snake. |
| **Biological** | **BIO-08** | Avoidance of Entrapment:<br>To prevent inadvertent entrapment of the CRLF and San Francisco garter snake during construction, all excavated, steep-walled holes or trenches more than 1-foot deep will be covered at the close of each working day by plywood or similar materials, or provided with one or more escape ramps constructed of earth fill or wooden planks at an angle no greater than 30 degrees. Before such holes or trenches are filled they must be thoroughly inspected for trapped animals. All replacement pipes, hoses, culverts, or similar structures less than 12 inches in diameter will be closed, capped, or covered upon entry to the project site. All similar structures greater than 12 inches must be inspected before they are subsequently moved, capped and/or buried. |
| **Biological** | **BIO-09** | Handling of Listed Species:<br>If a listed species is discovered, the Resident Engineer and agency-approved biological monitor will be immediately informed.<br>• If a CRLF gains access to a construction zone, work will be halted immediately within 50 feet until the animal leaves the site or is captured and relocated by the agency-approved biological monitor.<br>• The captured CRLFs will be released within appropriate habitat outside of the construction area but near the capture location. The release location will be determined by the agency-approved biological monitor. |

| Resource | AMM Reference | Proposed Avoidance and Minimization Measure |
|---|---|---|
| | | • If a San Francisco garter snake gains access to a construction zone, work will be halted immediately within 50 feet until the animal leaves the site.<br>• The USFWS will be notified within one (1) working day if a CRLF or San Francisco garter snake is discovered within the construction site.<br>• The agency-approved biological monitor will take precautions to prevent introduction of amphibian diseases in accordance with currently accepted USFWS guidance.<br>• Equipment and clothing will be disinfected before biologists enter the BSA to handle amphibians. |
| **Biological** | **BIO-10** | Worker Environmental Awareness Training:<br>Construction personnel will attend a mandatory environmental education program delivered by the agency-approved biological monitor or project biologist prior to taking part in site construction, including vegetation clearing. The program will focus on the conservation measures that are relevant to an employee's personal responsibility and will include an explanation on how to avoid take of the CRLF and SFGS. At a minimum, the training will include a description of species; how they might be encountered within the project area; their status and protection; and the relevant Conservation Measures and Terms and Conditions of the USFWS Letter of Concurrence. A fact sheet conveying this information will be prepared and distributed to all construction and project personnel. Distributed materials will include cards with distinctive photographs of the CRLF and SFGS, compliance reminders, and relevant contact information. Documentation of the training, including sign-in sheets, will be kept on file and made available to the project's environmental regulatory agencies upon request. |

| Resource | AMM Reference | Proposed Avoidance and Minimization Measure |
|---|---|---|
| **Hazardous Materials** | **HAZ-1** | The construction of MVPs will require excavation of roadside soils that could contain regulated levels of aerially deposited lead from past vehicle emissions. Testing and characterization of the soils to be excavated will be completed by Caltrans prior to construction to determine the required waste management practices for any excavated, surplus lead contaminated soils. Using the site investigation results, the necessary contract special provisions will be prepared by Caltrans' Hazardous Waste Branch to specify the waste material disposal requirements for the construction contractor. |
| **Water Quality** | **HYDRO-1:** | Prior to commencement of construction activities, a WPCP will be prepared by the Contractor and approved by Caltrans. The WPCP addresses potential temporary impacts via implementation of appropriate BMPs, such as those mentioned above, to the maximum extent practicable. |

Notes:
BMP = best management practice
BSA = Biological Study Area
Caltrans = California Department of Transportation
CDFW = California Department of Fish and Wildlife
CRLF = California red-legged frog
ESA = environmentally sensitive area
MVP = maintenance vehicle pullout
SFGS = San Francisco garter snake
USFWS = United States Fish and Wildlife Service
VMS = variable message sign
WPCP = Water Pollution Control Program

# Appendix D Special-Status Plant and Wildlife Species

## Table D-1 List of Special-Status Plant Species and their Potential to Occur in the BSA

| Common Name (*Scientific Name*) | Fed / State/ Rare Plant Status | Habitat | Habitat Presence | Potential to Occur |
|---|---|---|---|---|
| Alkali milk-vetch (*Astragalus tener* var. *tener*) | - / - / 1B.2 | Alkali playa \| Valley and foothill grassland \| Vernal pool \| Wetland. Low ground, alkali flats, and flooded lands; in annual grassland or in playas or vernal pools. | Absent | No potential to occur. No suitable habitat is present within the footprint. |
| Anderson's manzanita (*Arctostaphylos andersonii*) | - / - / 1B.2 | Broadleaved upland forest \| Chaparral \| North coast coniferous forest. Open sites, redwood forest. 95 to 765 m. | Absent | No potential to occur. No suitable habitat is present within the footprint. |
| Arcuate bush-mallow (*Malacothamnus arcuatus*) | - / - / 1B.2 | Chaparral, cismontane woodland. Gravelly alluvium. 1 to 735 m. | Absent | No potential to occur. No suitable habitat is present within the footprint. |
| Bent-flowered fiddleneck (*Amsinckia lunaris*) | - / - / 1B.2 | Cismontane woodland \| Coastal bluff scrub \| Valley and foothill grassland. 3 to 795 m. | Absent | No potential to occur. No suitable habitat is present within the footprint. |
| Blasdale's bent grass (*Agrostis blasdalei*) | - / - / 1B.2 | Coastal bluff scrub \| Coastal dunes \| Coastal prairie \| Sandy or gravelly soil close to rocks; often in nutrient-poor soil with sparse vegetation. 5 to 365 m. | Absent | No potential to occur. No suitable habitat is present within the footprint. |
| Blue coast gilia (*Gilia capitata ssp. chamissonis*) | - / - / 1B.1 | Coastal dunes, coastal scrub. 3 to 200 m. | Absent | No potential to occur. No suitable habitat is present within the footprint. |
| California seablite (*Suaeda californica*) | FE / - / 1B.1 | Freshwater marsh \| Marsh and swamp \| Wetland. Margins of coastal salt marshes. 0 to 5 m. | Absent | No potential to occur. No suitable habitat is present within the footprint. |
| Chaparral ragwort (*Senecio aphanactis*) | - / - / 2B.2 | Chaparral, cismontane woodland, coastal scrub. Drying alkaline flats. 20 to 855 m. | Absent | No potential to occur. No suitable habitat is present within the footprint. |

| Common Name (*Scientific Name*) | Fed / State/ Rare Plant Status | Habitat | Habitat Presence | Potential to Occur |
|---|---|---|---|---|
| Choris' popcornflower (*Plagiobothrys chorisianus* var. *chorisianus*) | - / - / 1B.2 | Chaparral, coastal scrub, coastal prairie. Mesic sites. 5 to 705 m. | Absent | No potential to occur. No suitable habitat is present within the footprint. |
| Coast yellow leptosiphon (*Leptosiphon croceus*) | - / CC / 1B.1 | Coastal bluff scrub, coastal prairie. 10 to 150 m. | Absent | No potential to occur. No suitable habitat is present within the footprint. |
| Coastal marsh milk-vetch *(Astragalus pycnostachyus* var. *pycnostachyus*) | - / - / 1B.2 | Coastal dunes \| Coastal scrub \| Marsh and swamp \| Wetland. Mesic sites in dunes or along streams or coastal salt marshes. 0 to 155 m. | Absent | No potential to occur. No suitable habitat is present in the BSA. |
| Coastal triquetrella (*Triquetrella californica*) | - / - / 1B.2 | Coastal bluff scrub, coastal scrub. Grows within 30 m from the coast in coastal scrub, grasslands and in open gravels on roadsides, hillsides, rocky slopes, and fields. On gravel or thin soil over outcrops. 10 to 100 m. | Absent | No potential to occur. No suitable habitat is present in the BSA. |
| Compact cobwebby thistle (*Cirsium occidentale* var. *compactum*) | - / - / 1B.2 | Chaparral \| Coastal dunes \| Coastal prairie \| Coastal scrub. On dunes and on clay in chaparral; also in grassland. 5 to 245 m. | Absent | No potential to occur. No suitable habitat is present in the BSA. |
| Congested-headed hayfield tarplant (*Hemizonia congesta* ssp. *congesta*) | - / - / 1B.2 | Valley and foothill grassland. Grassy valleys and hills, often in fallow fields; sometimes along roadsides. 5 to 520 m. | Absent | No potential to occur. No suitable habitat is present in the BSA. |
| Crystal Springs fountain thistle (*Cirsium fontinale* var. *fontinale*) | FE / SE / 1B.1 | Chaparral \| Cismontane woodland \| Meadow and seep \| Ultramafic \| Valley and foothill grassland \| Wetland. Serpentine seeps and grassland. 45 to 185 m. | Absent | No potential to occur. No suitable habitat is present in the BSA. |

| Common Name (*Scientific Name*) | Fed / State/ Rare Plant Status | Habitat | Habitat Presence | Potential to Occur |
|---|---|---|---|---|
| Crystal Springs lessingia (*Lessingia arachnoidea*) | - / - / 1B.2 | Coastal sage scrub, valley and foothill grassland, cismontane woodland. Grassy slopes on serpentine; sometimes on roadsides. 90 to 200 m. | Absent | No potential to occur. No suitable habitat is present within the footprint. |
| Dark-eyed gilia (*Gilia millefoliata*) | - / - / 1B.2 | Coastal dunes. 1 to 60 m. | Absent | No potential to occur. No suitable habitat is present in the BSA. |
| Davidson's bush-mallow (*Malacothamnus davidsonii*) | - / - / 1B.2 | Chaparral \| Oak woodland \| Sandy soils | Absent | No potential to occur. No suitable habitat is present in the BSA. |
| Diablo helianthella (*Helianthella castanea*) | - / - / 1B.2 | Coastal dunes. 1 to 60 m. | Absent | No potential to occur. No suitable habitat is present in the BSA. |
| Dudley's lousewort (*Pedicularis dudleyi*) | - / CR / 1B.2 | Chaparral, cismontane woodland, North Coast coniferous forest, valley and foothill grassland. Deep shady woods of older coast redwood forests; also in maritime chaparral. 60 to 330 m. | Absent | No potential to occur. No suitable habitat is present in the BSA. |
| Fragrant fritillary (*Fritillaria liliacea*) | - / - / 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 to 385 m. | Absent | No potential to occur. No suitable habitat is present within the footprint. |
| Franciscan manzanita (*Arctostaphylos franciscana*) | FE / - / 1B.1 | Chaparral \| Ultramafic. Serpentine outcrops in chaparral. 30 to 215 m. | Absent | No potential to occur. No suitable habitat is present within the footprint. |
| Franciscan onion (*Allium peninsulare* var. *franciscanum*) | - / - / 1B.2 | Cismontane woodland \| Ultramafic \| Valley and foothill grassland. Clay soils; often on serpentine; sometimes on volcanics. Dry hillsides. 5 to 320 m. | Absent | No potential to occur. No suitable habitat is present within the footprint. |

| Common Name (*Scientific Name*) | Fed / State/ Rare Plant Status | Habitat | Habitat Presence | Potential to Occur |
|---|---|---|---|---|
| Franciscan thistle (*Cirsium andrewsii*) | - / - / 1B.2 | Broadleaved upland forest \| Coastal bluff scrub \| Coastal prairie \| Coastal scrub \| Ultramafic. Sometimes serpentine seeps. 0 to 295 m. | Absent | No potential to occur. No suitable habitat is present within the footprint. |
| Hall's bush-mallow (*Malacothamnus hallii*) | - / - / 1B.2 | Chaparral, coastal scrub. Some populations on serpentine. 10 to 735 m. | Absent | No potential to occur. No suitable habitat is present within the footprint. |
| Hickman's cinquefoil (*Potentilla hickmanii*) | FE / SE / 1B.1 | Coastal bluff scrub, closed-cone coniferous forest, meadows and seeps, marshes and swamps and wetlands. Freshwater marshes, seeps, and small streams in open or forested areas along the coast. 5 to 125 m. | Absent | No potential to occur. Occurrence records exist in near the BSA at Location 7. Species was not observed within BSA during surveys and work will be restricted to paved surfaces at this location. |
| Hillsborough chocolate lily (*Fritillaria biflora* var. *ineziana*) | - / - / 1B.1 | Cismontane woodland \| Ultramafic \| Valley and foothill grassland. Probably only on serpentine; most recent site is in serpentine grassland. 90 to 170 m. | Absent | No potential to occur. No suitable habitat is present within the footprint. |
| Indian Valley bush-mallow (*Malacothamnus aboriginum*) | - / - / 1B.2 | Chaparral \| Cismontane woodland \| Rocky, granitic, often in burned areas | Absent | No potential to occur. No suitable habitat is present within the footprint. |
| Island rock lichen (*Hypogymnia schizidiata*) | - / - / 1B.3 | Chaparral, closed-cone coniferous forest. On bark and wood of hardwoods and conifers. 260 to 540 m. | Absent | No potential to occur. No suitable habitat is present within the footprint. |
| Kellogg's horkelia (*Horkelia cuneata* var. *sericea*) | - / - / 1B.1 | Closed-cone coniferous forest, coastal scrub, coastal dunes, chaparral. Old dunes, coastal sandhills; openings. Sandy or gravelly soils. 5 to 430 m. | Absent | No potential to occur. No suitable habitat is present within the footprint. |

| Common Name (*Scientific Name*) | Fed / State/ Rare Plant Status | Habitat | Habitat Presence | Potential to Occur |
|---|---|---|---|---|
| Kings Mountain manzanita (*Arctostaphylos regismontana*) | - / - / 1B.2 | Broadleaved upland forest \| Chaparral \| North coast coniferous forest. Granitic or sandstone outcrops. 240 to 705 m. | Absent | No potential to occur. No suitable habitat is present within the footprint. |
| Marin checker lily (*Fritillaria lanceolata* var. *tristulis*) | - / - / 1B.1 | Coastal bluff scrub \| Coastal prairie \| Coastal scrub \| Ultramafic. Occurrences reported from canyons and riparian areas as well as rock outcrops; often on serpentine. 5 to 305 m. | Absent | No potential to occur. No suitable habitat is present within the footprint. |
| Marin western flax *(Hesperolinon congestum*) | FT / ST / 1B.1 | Chaparral, valley and foothill grasslands. In serpentine barrens and in serpentine grassland and chaparral. 60 to 400 m. | Absent | No potential to occur. No suitable habitat is present within the footprint. |
| Marsh microseris (*Microseris paludosa*) | - / - / 1B.2 | Closed-cone coniferous forest, cismontane woodland, coastal scrub, valley and foothill grassland. 3 to 610 m. | Absent | No potential to occur. No suitable habitat is present within the footprint. |
| Minute pocket moss (*Fissidens pauperculus*) | - / - / 1B.2 | North coast coniferous forest \| Redwood. Moss growing on damp soil along the coast. In dry streambeds and on stream banks. 10 to 1024 m. | Absent | No potential to occur. No suitable habitat is present within the footprint. |
| Montara manzanita *(Arctostaphylos montaraensis*) | - / - / 1B.2 | Chaparral \| Coastal scrub. Slopes and ridges. 270 to 460 m. | Absent | No potential to occur. No suitable habitat is present within the footprint. |
| Northern curly-leaved monardella (*Monardella sinuata* ssp. *nigrescens*) | - / - / 1B.2 | Coastal dunes, coastal scrub, chaparral, lower montane coniferous forest. Sandy soils. 10 to 245 m. | Absent | No potential to occur. No suitable habitat is present within the footprint. |
| Oregon polemonium (*Polemonium carneum*) | - / - / 2B.2 | Coastal prairie, coastal scrub, lower montane coniferous forest. 0 to 1830 m. | Absent | No potential to occur. No suitable habitat is present within the footprint. |

| Common Name (*Scientific Name*) | Fed / State/ Rare Plant Status | Habitat | Habitat Presence | Potential to Occur |
|---|---|---|---|---|
| Ornduff's meadowfoam (*Limnanthes douglasii* ssp. *ornduffii*) | - / - / 1B.1 | Meadows and seeps, agricultural fields. 5 to 15 m. | Present | Low potential to occur. Species not observed during surveys but agricultural fields exist adjacent to project footprints. |
| Pacific manzanita (*Arctostaphylos pacifica*) | - / SE / 1B.1 | Chaparral \| Coastal scrub. 320 m. | Absent | No potential to occur. No suitable habitat is present within the footprint. |
| Pappose tarplant (*Centromadia parryi* ssp. *parryi*) | - / - / 1B.2 | Chaparral \| Coastal prairie \| Marsh and swamp \| Meadow and seep \| Valley and foothill grassland. Vernally mesic, often alkaline sites. 1 to 500 m. | Absent | No potential to occur. No suitable habitat is present within the footprint. |
| Perennial goldfields (*Lasthenia californica* ssp. *macrantha*) | - / - / 1B.2 | Coastal bluff scrub, coastal dunes, coastal scrub. 5 to 185 m. | Absent | No potential to occur. No suitable habitat is present within the footprint. |
| Point Reyes horkelia (*Horkelia marinensis*) | - / - / 1B.2 | Coastal dunes, coastal prairie, coastal scrub. Sandy flats and dunes near coast; in grassland or scrub plant communities. 2 to 775 m. | Absent | No potential to occur. No suitable habitat is present within the footprint. |
| Presidio manzanita (*Arctostaphylos montana* ssp. *ravenii*) | FE / SE / 1B.1 | Chaparral \| Coastal prairie \| Coastal scrub \| Ultramafic. Open, rocky serpentine slopes. 20 to 215 m. | Absent | No potential to occur. No suitable habitat is present within the footprint. Project locations are outside of known range and plant was not observed during surveys. |

| Common Name (*Scientific Name*) | Fed / State/ Rare Plant Status | Habitat | Habitat Presence | Potential to Occur |
|---|---|---|---|---|
| Robust spineflower (*Chorizanthe robusta* var. *robusta*) | FE / - / 1B.1 | Chaparral \| Cismontane woodland \| Coastal bluff scrub \| Coastal dunes. Sandy terraces and bluffs or in loose sand. 5 to 245 m. | Absent | No potential to occur. One recorded occurrence within 2 miles of Location 10, but observation is 100+ years old and consists of a 'best guess' of location. No suitable habitat is present within the footprint and species not observed during surveys. |
| Rose leptosiphon *(Leptosiphon rosaceus*) | - / - / 1B.1 | Coastal bluff scrub. 10 to 140 m. | Absent | No potential to occur. No suitable habitat present in the footprint. |
| Round-headed Chinese-houses (*Collinsia corymbosa*) | - / - / 1B.2 | Coastal dunes. 0 to 30 m. | Absent | No potential to occur. No suitable habitat is present within the footprint. |
| San Bruno Mountain manzanita (*Arctostaphylos imbricata*) | - / SE / 1B.1 | Chaparral \| Coastal scrub. Mostly known from a few sandstone outcrops in chaparral. 275 to 305 m. | Absent | No potential to occur. No suitable habitat is present within the footprint. |
| San Francisco Bay spineflower (*Chorizanthe cuspidata* var. *cuspidata*) | - / - / 1B.2 | Coastal bluff scrub \| Coastal dunes \| Coastal prairie \| Coastal scrub. Closely related to *C. pungens*. Sandy soil on terraces and slopes. 2 to 550 m. | Absent | No potential to occur. No suitable habitat is present within the footprint. |
| San Francisco campion (*Silene verecunda ssp. verecunda*) | - / - / 1B.2 | Coastal scrub, valley and foothill grassland, coastal bluff scrub, chaparral, coastal prairie. Often on mudstone or shale; one site on serpentine. 30 to 645 m. | Absent | No potential to occur. No suitable habitat is present within the footprint. |

| Common Name (*Scientific Name*) | Fed / State/ Rare Plant Status | Habitat | Habitat Presence | Potential to Occur |
|---|---|---|---|---|
| San Francisco collinsia (*Collinsia multicolor*) | - / - / 1B.2 | Closed-cone coniferous forest \| Coastal scrub \| Ultramafic. | Absent | No potential to occur. No suitable habitat is present within the footprint. |
| San Francisco lessingia (*Lessingia germanorum*) | FE / SE / 1B.1 | Coastal scrub. On remnant dunes. Open sandy soils relatively free of competing plants. 3 to 155 m. | Absent | No potential to occur. No recorded observations within 2 miles of project locations. Project locations are outside of known range and species was not observed during surveys. |
| San Francisco owl's-clover (*Triphysaria floribunda*) | - / - / 1B.2 | Coastal prairie, coastal scrub, valley and foothill grassland. On serpentine and non-serpentine substrate (such as at Pt. Reyes). 1 to 150 m. | Absent | No potential to occur. No suitable habitat is present within the footprint. |
| San Mateo thorn-mint (*Acanthomintha duttonii*) | FE / SE / 1B.1 | Chaparral, Ultramafic, and Valley and foothill grassland. Chaparral, Uncommon serpentinite vertisol clays; in relatively open areas. 50 to 185 m. | Absent | No potential to occur. No suitable habitat is present within the footprint. |
| San Mateo woolly sunflower (*Eriophyllum latilobum*) | FE / SE / 1B.1 | Cismontane woodland \| Coastal scrub \| Lower montane coniferous forest \| Ultramafic. Often on roadcuts; found on and off of serpentine. 30 to 610 m. | Absent | No potential to occur. No recorded observations within 2 miles of project locations and species was not observed during surveys. |
| Scouler's catchfly (*Silene scouleri ssp. scouleri*) | - / - / 2B.2 | Coastal bluff scrub, coastal prairie, valley and foothill grassland. 5 to 315 m. | Absent | No potential to occur. No suitable habitat is present within the footprint. |
| Short-leaved evax (*Hesperevax sparsiflora* var. *brevifolia*) | - / - / 1B.2 | Coastal bluff scrub, coastal dunes, coastal prairie. Sandy bluffs and flats. 0 to 640 m. | Absent | No potential to occur. No suitable habitat is present within the footprint. |

| Common Name (*Scientific Name*) | Fed / State/ Rare Plant Status | Habitat | Habitat Presence | Potential to Occur |
|---|---|---|---|---|
| Two-fork clover (*Trifolium amoenum*) | FE / - / 1B.1 | Valley and foothill grassland, coastal bluff scrub. Sometimes on serpentine soil, open sunny sites, swales. Most recently cited on roadside and eroding cliff face. 5 to 310 m. | Absent | No potential to occur. One recorded occurrence within 2 miles of Location 10, but observation is 100+ years old, isolated by urban development, and occurrence record consists of a 'best guess' of location. Species not observed during surveys. |
| Water star-grass (*Heteranthera dubia*) | - / - / 2B.2 | Marshes and swamps. Alkaline, still or slow-moving water. Requires a pH of 7 or higher, usually in slightly eutrophic waters. 15 to 1510 m. | Absent | No potential to occur. No suitable habitat is present within the footprint. |
| Western leatherwood (*Dirca occidentalis*) | - / - / 1B.2 | Broadleaved upland forest \| Chaparral \| Cismontane woodland \| Closed-cone coniferous forest \| North coast coniferous forest \| Riparian forest \| Riparian woodland. On brushy slopes, mesic sites; mostly in mixed evergreen and foothill woodland communities. 20 to 640 m. | Absent | No potential to occur. No suitable habitat is present within the footprint. |
| White-rayed pentachaeta (*Pentachaeta bellidiflora*) | FE / SE / 1B.1 | Valley and foothill grassland, cismontane woodland. Open, dry rocky slopes and grassy areas, often on soils derived from serpentine bedrock. 35 to 610 m. | Absent | No potential to occur. No suitable habitat is present within the footprint. |

| Common Name (*Scientific Name*) | Fed / State/ Rare Plant Status | Habitat | Habitat Presence | Potential to Occur |
|---|---|---|---|---|
| Woodland woolythreads (*Monolopia gracilens*) | - / - / 1B.2 | Chaparral, valley and foothill grassland, cismontane woodland, broad-leafed 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 to 975 m. | Absent | No potential to occur. No suitable habitat is present within the footprint. |

Notes:

[a] Scientific nomenclature based on the California Natural Diversity Data Base (CNDDB; CDFW 2018); common names from CNDDB and other sources.

[b] Acronym definitions are as follows:

BSA = Biological Study Area

United States Fish and Wildlife Service Designations:

FE Endangered: any species in danger of extinction throughout all or a significant portion of its range.
FT Threatened: any species likely to become endangered within the foreseeable future.

California Department of Fish and Wildlife Designations:

SE Endangered: any species in danger of extinction throughout all or a significant portion of its range.
ST Threatened: any species likely to become endangered within the foreseeable future.

California Native Plant Society (CNPS) Rankings:

1A Plant presumed extinct in California
1B Plants rare, threatened or endangered in California and elsewhere.

CNPS threat categories:

.1 Seriously endangered in California.
.2 Moderately threatened in California.

[c] Blooming period and habitat information from CNPS (2018).

**Sources:**

CDFW. 2018 *California Natural Diversity Database (CNDDB) Rarefind 5*: Habitat Conservation Division. Sacramento, California. Available online at: https://www.wildlife.ca.gov/Data/CNDDB/Maps-and-Data

CNPS. 2018. *The California Native Plant Society's Inventory of Rare and Endangered Plants of California* (Online edition, version 7.7). http://www.rareplants.cnps.org

USFWS. 2018. *The Information, Planning, and Consultation System*. Available online at: https://ecos.fws.gov/ipac/

## Table D-2. List of Special-Status Wildlife Species and their Potential to Occur in the BSA

| Common Name (Scientific Name) | Federal/State Status | Habitat | Habitat Presence | Potential to Occur |
|---|---|---|---|---|
| American badger (*Taxidea taxus*) | -/SSC | Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils and open, uncultivated ground | Absent | **No:** The footprint does not contain suitable habitat. |
| Big free-tailed bat (*Nyctinomops macrotis*) | -/SSC | Roosts in buildings, caves, and occasionally in holes in trees. Prefers rugged, rocky canyons. Small nursery colonies are formed in rocky crevices in high cliffs. | Absent | **No:** The footprint does not contain suitable habitat. |
| Salt marsh harvest mouse (*Reithrodontomys raviventris*) | FE/SE and FPS | Found only in the saline emergent wetlands of San Francisco Bay and its tributaries. Salicornia is the primary habitat. Does not burrow, but builds loosely organized nests. Requires higher areas for flood escape. | Absent | **No:** The footprint does not contain suitable habitat. |
| Southern sea otter (*Enhydra lutris nereis*) | FT/SE and FPS | Nearshore marine environments from about Año Nuevo, San Mateo County to Point Sal, Santa Barbara County. Needs canopies of giant kelp and bull kelp for rafting and feeding. Prefers rocky substrates with abundant invertebrates. | Absent | **No:** The footprint does not contain suitable habitat. |
| California clapper rail (*Rallus longirostris obsoletus*) | FE/SE and FPS | Nests and forages in tidal marshes and will occur in upland transitional habitats during high tides or flooding events when marshes are inundated. | Absent | **No:** The footprint does not contain suitable habitat. |

| Common Name (Scientific Name) | Federal/State Status | Habitat | Habitat Presence | Potential to Occur |
|---|---|---|---|---|
| California Least Tern (*Sterunlla antillarum brownii*) | FE/SE and FPS | Migratory in California; seacoasts, beaches, bays, estuaries, lagoons, lakes, and rivers. | Absent | **No:** The footprint does not contain suitable habitat. |
| Marbled Murrelet (*Brachyramphus marmoratus*) | FT/SE | Marine subtidal and pelagic habits from Oregon to Point Sal, Santa Barbara. Uses stands of mature Douglas fir and redwoods up to 40 miles inland for nesting. | Absent | **No:** The footprint does not contain suitable habitat. |
| Merlin (*Falco columbarius*) | -/SSC | Frequents coastlines, open grasslands, savannahs, woodlands, lakes, wetlands, edges, and early successional stages. Ranges from annual grasslands to ponderosa pine and montane hardwood-conifer habitats. | Absent | **No:** The footprint does not contain suitable habitat. |
| Saltmarsh Common Yellowthroat (*Geothlypis trichas sinuosa*) | -/SSC | Woody swamps, brackish marshes, and freshwater marshes along the coast or San Francisco Bay region | Absent | **No:** The footprint does not contain suitable habitat. |
| Short-tailed Albatross (*Phoebastria* (=*Diomedea*) *albatrus*) | FE/- | Nests on sloping grassy terraces on two rugged, isolated, windswept islands in Japan. After breeding, short-tailed albatrosses move to feeding areas in the North Pacific. | Absent | **No:** The footprint does not contain suitable habitat. |
| Western snowy plover (*Charadrius nivosus nivosus*) | FT/- | Found on sandy beaches, salt pond levees, and shores of large alkali lakes. Needs sandy, gravelly or friable soils for nesting. | Absent | **No:** The footprint does not contain suitable habitat. |

| Common Name (Scientific Name) | Federal/State Status | Habitat | Habitat Presence | Potential to Occur |
|---|---|---|---|---|
| East Pacific green sea turtle (*Chelonia mydas*) | FT/- | Marine species that needs adequate supply of seagrasses and algae. The species primarily uses three types of habitat: beaches for nesting open ocean convergence zones, and coastal areas for "benthic" feeding. | Absent | **No:** The footprint does not contain suitable habitat. |
| San Francisco garter snake (*Thamnophis sirtalis tetrataenia*) | FE/SE and FPS | Freshwater marshes, ponds, and slow-moving streams in San Mateo County and extreme northern Santa Cruz County. Prefers dense cover and water depths of at least one foot. Upland areas near water are also very important. | Present | **Yes:** Locations 9-2 and 6 contain potentially suitable habitat. |
| California red-legged frog (*Rana draytonii*) | FT/- | 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. | Present | **Yes:** The Alpine Road location contains potentially suitable habitat. |
| Delta smelt (*Hypomesus transpacificus*) | FT/SE | Euryhaline, nektonic and anadromous. Found in open waters of estuaries, mostly in middle or bottom of water column. Prefer salinities of 15-30 parts per thousand (ppt) but can be found in completely freshwater to almost pure seawater. | Absent | **No:** The proposed project will not occur in suitable aquatic habitat. |
| Steelhead, Central California Coast DPS (*Oncorhynchus mykiss irideus*) | FT/- | From Russian River, south to Soquel Creek and to, but not including, Pajaro River. | Absent | **No:** The proposed project will not occur in suitable aquatic habitat. |

| Common Name (Scientific Name) | Federal/State Status | Habitat | Habitat Presence | Potential to Occur |
|---|---|---|---|---|
| Tidewater goby (*Eucyclogobius newberryi*) | FE/- | Brackish water habitats along the California coast from Agua Hedionda Lagoon, San Diego County to the mouth of the Smith River, Humboldt County. Found in shallow lagoons and lower stream reaches, they need fairly still but not stagnant water and high oxygen levels. | Absent | **No:** The proposed project will not occur in suitable aquatic habitat. |
| Bay checkerspot butterfly (*Euphydryas editha bayensis*) | FT/- | Coastal dunes, and valley and foothill grassland. Restricted to native grasslands on outcrops of serpentine soil in the vicinity of San Francisco Bay. *Plantago erecta* is the primary host plant, and *Orthocarpus densiflorus* and *O. purpurscens* are the secondary host plants. | Absent | **No:** The footprint does not contain suitable habitat. |
| Callippe silverspot butterfly (*Speyeria callippe callippe*) | FE/- | Open hillsides where wild pansy (*Viola pedunculata*) grows. Larvae feed on Johnny jump-up plants, whereas adults feed on native mints and non-native thistles. | Absent | **No:** The footprint does not contain suitable habitat. |
| Mission blue butterfly (*Plebejus icarioides missionensis*) | FE/- | Hills and ridgetops, as well as slopes with southern exposure with caterpillar food plants, *Lupinus spp.* | Absent | **No:** The footprint does not contain suitable habitat. |
| Myrtle's Silverspot Butterfly (*Speyeria zerene myrtleae*) | FE/- | Coastal terrace prairie, coastal bluff scrub, and associated non-native grassland habitats where the larval foodplant, *Viola sp.*, occurs. | Absent | **No:** The footprint does not contain suitable habitat. |

| Common Name (Scientific Name) | Federal/State Status | Habitat | Habitat Presence | Potential to Occur |
|---|---|---|---|---|
| San Bruno elfin butterfly (*Callophrys mossii bayensis*) | FE/- | Coastal, mountainous areas with grassy ground cover, mainly in the vicinity of San Bruno Mountain, San Mateo County. Colonies are located on steep, north-facing slopes within the fog belt. Larval host plant is *Sedum spathulifolium*. | Absent | **No:** The footprint does not contain suitable habitat. |

Notes:
BSA Biological Study Area
FESA Federal Endangered Species Act:
FE Federally Endangered: any species listed under FESA in danger of extinction throughout all or a significant portion of its range.
FT Federally Threatened: any species listed under FESA likely to become endangered within the foreseeable future.
CDFW California Department of Fish and Wildlife
CESA California Endangered Species Act
SE State Endangered: any species listed under CESA as in danger of extinction throughout all or a significant portion of its range.
ST State Threatened: any species listed under CESA likely to become endangered within the foreseeable future.
FPS Fully Protected Species: Species protected under California Fish and Game Code (CFGC) as a "fully protected" species (CFGC Section 5050). This State protection does not allow SFGS individuals to be taken or possessed at any time.
SSC State Species of Special Concern: is a species, subspecies, or distinct population of an animal (fish, amphibian reptile or bird) native to California that currently satisfies one or more of the following (not necessarily mutually exclusive) criteria:

- is extirpated from the State or, in the case of birds, is extirpated in its primary season or breeding role;
- is listed as Federally-, but not State-, threatened or endangered; meets the State definition of threatened or endangered but has not formally been listed;
- is experiencing, or formerly experienced, serious (noncyclical) population declines or range retractions (not reversed) that, if continued or resumed, could qualify it for State threatened or endangered status;
- has naturally small populations exhibiting high susceptibility to risk from any factor(s), that if realized, could lead to declines that would qualify it for State threatened or endangered status.