# STATE ROUTE 12
# PAVEMENT REHABILITATION PROJECT

NAPA AND SOLANO COUNTIES, CALIFORNIA
CALTRANS DISTRICT 04
NAPA, POST MILE 0.0/3.31
SOLANO, POST MILE 0.0/7.90
EA: 04-4W230
0422000128

## Initial Study with
## Proposed Negative Declaration

Prepared by the

California Department of Transportation

# General Information About This Document

## What's in this document:

The California Department of Transportation (Caltrans) has prepared this Draft Initial Study (IS) with Proposed Negative Declaration (ND) for the State Route 12 Pavement Rehabilitation Project (Project), which examines the potential environmental impacts of alternatives being considered for the proposed Project on State Route 12 in Napa and Solano Counties in California. The document explains why the Project is being proposed, the alternatives being considered for the Project, the existing environment that could be affected by the Project, the potential impacts of each of the alternatives, and the proposed avoidance and minimization measures (AMMs).

## What you should do:

- Please read the document. This document may be downloaded at the following website: https://dot.ca.gov/caltrans-near-me/district-4/d4-popular-links/d4-environmental-docs
- Hard copies of the document are available for review at the Caltrans District 4 Office located at 111 Grand Ave #300 Oakland, California 94612.
- Additional hard copies will be available to the public at the following locations:
    - Fairfield Cordelia Library
      5050 Business Center Dr,
      Fairfield, CA 94534
    - Suisun City Library
      601 Pintail Dr,
      Suisun City, CA 94585
- Tell us what you think. If you have any comments regarding the proposed Project or would like to request a public information meeting, please send your written comments or request to Caltrans by the deadline of **Tuesday, July 22nd, 2026**.
- Submit comments via e-mail to: Matthew.Coughlin@dot.ca.gov
- Or submit comments via the following website: https://dot.ca.gov/caltrans-near-me/district-4/d4-popular-links/d4-environmental-docs
- Or submit comments via U.S. mail to:

Caltrans, District 4

ATTN: Matthew Coughlin, Environmental Scientist

Caltrans District 4

P.O Box 23360, MS 8B Oakland, CA 94623-0660

## What happens next:

Per CEQA Section 15073, Caltrans will circulate the Draft IS/ND for review for 30 days. During the 30-day public review period, the general public and responsible and trustee agencies can submit comments on this document to Caltrans. Caltrans will consider the comments and will respond to the comments after the 30-day public review period. After comments are received from the public and reviewing agencies, Caltrans may (1) grant environmental approval to the proposed Project, (2) conduct 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.

## Alternative Formats:

For individuals with sensory disabilities, this document can be made available in Braille, in large print, on audiocassette, or on computer disk by writing to the above address or email **or call the California Relay Service at 1 (800) 735-2929 (TTY to Voice), 1 (800) 735-2922 (Voice to TTY), 1 (800) 855-3000 (Spanish TTY to Voice and Voice to TTY), 1-800-854-7784 (Spanish and English Speech-to-Speech) or 711.**

An ADA-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-NAP/SOL-12 | 0.0 – 3.31 (NAP)<br>0.0 – 7.90 (SOL) | 04-4W230 |
|---|---|---|
| Dist. – Co. – Rte. | PM | E.A. |

| | |
|---|---|
| Project title: | State Route 12 Pavement Rehabilitation Project |
| Lead agency name and address: | California Department of Transportation<br>111 Grand Avenue, Oakland, CA 94612 |
| Contact person and phone number: | Matthew Coughlin, Environmental Scientist<br>415-852-2142 |
| Project location: | Napa and Solano Counties State Route 12 |
| General plan description: | Highway |
| Zoning: | Highway, Agricultural, Residential, Industrial, Urban, and Commercial |
| Other public agencies whose approval is required (e.g., permits, financial approval, or participation agreements) | • Biological Opinion from the US Fish and Wildlife Service<br>• Bay Area Conservation and Development Commission Maintenance Permit<br>• 401 Permit from the Regional Water Quality Control Board<br>• 404 Nationwide Permit from the United States Army Corps of Engineers |

The document is available for review and download at the Caltrans environmental document website (https://dot.ca.gov/caltrans-near-me/district-4/d4-popular-links/d4-environmental-docs).

Lawrence Bonner
Caltrans District 4, Office Chief
Office of Environmental Analysis

5/28/2026
Date

# Proposed Negative Declaration

**Pursuant to: Division 13, Public Resources Code**

## Project Description

Caltrans proposes to rehabilitate the highway pavement, perform drainage work, install pedestrian islands, and provide upgrades or updates to several elements within the Project area between postmile (PM) 0.0 to 3.31 in Napa County and PM 0.0 to 7.90 on State Route (SR) 12 in Solano County in California. A detailed description of this work can be found in Section 2.2 Build Alternative – Proposed Project.

This proposed Negative Declaration (ND) is included to provide notice to interested agencies and the public that it is Caltrans' intent to adopt an ND for this Project. This does not mean that the Department's 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 aesthetics, agriculture and forestry, air quality, cultural resources, energy, geology and soils, hydrology and water quality, land use and planning, mineral resources, population and housing, public services, recreation, tribal cultural resources, utilities and service systems, and wildfire.

The proposed Project would have a less than significant impact on greenhouse gas emissions, hazards and hazardous materials, noise, transportation and traffic, and biological resources.

_____ _____

Christopher Caputo
Deputy District Director
Environmental Science and Engineering
Caltrans District 4

Date

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# Chapter 1 Proposed Project

## 1.1 Introduction

Caltrans is the California Environmental Quality Act (CEQA) lead agency for the proposed Project and has prepared this Draft Initial Study with Proposed Negative Declaration.

Caltrans proposes to rehabilitate the highway pavement, perform drainage work, install pedestrian islands, and provide upgrades or updates to several elements within the Project area between postmile (PM) 0.0 to 3.31 in Napa County and PM 0.0 to 7.90 on State Route (SR) 12 in Solano County in California. Figure 1-1 below shows the Project's location.

This Project is funded under the State Highway Operation and Protection Program (SHOPP) program code 201.121, the Minor Pavement Rehabilitation program. The SHOPP is a multi-year 'fix-it-first' program focused on preserving and protecting California's state highway system by funding maintenance, safety, and operational improvements on existing roads and infrastructure.

## 1.2 Purpose and Need

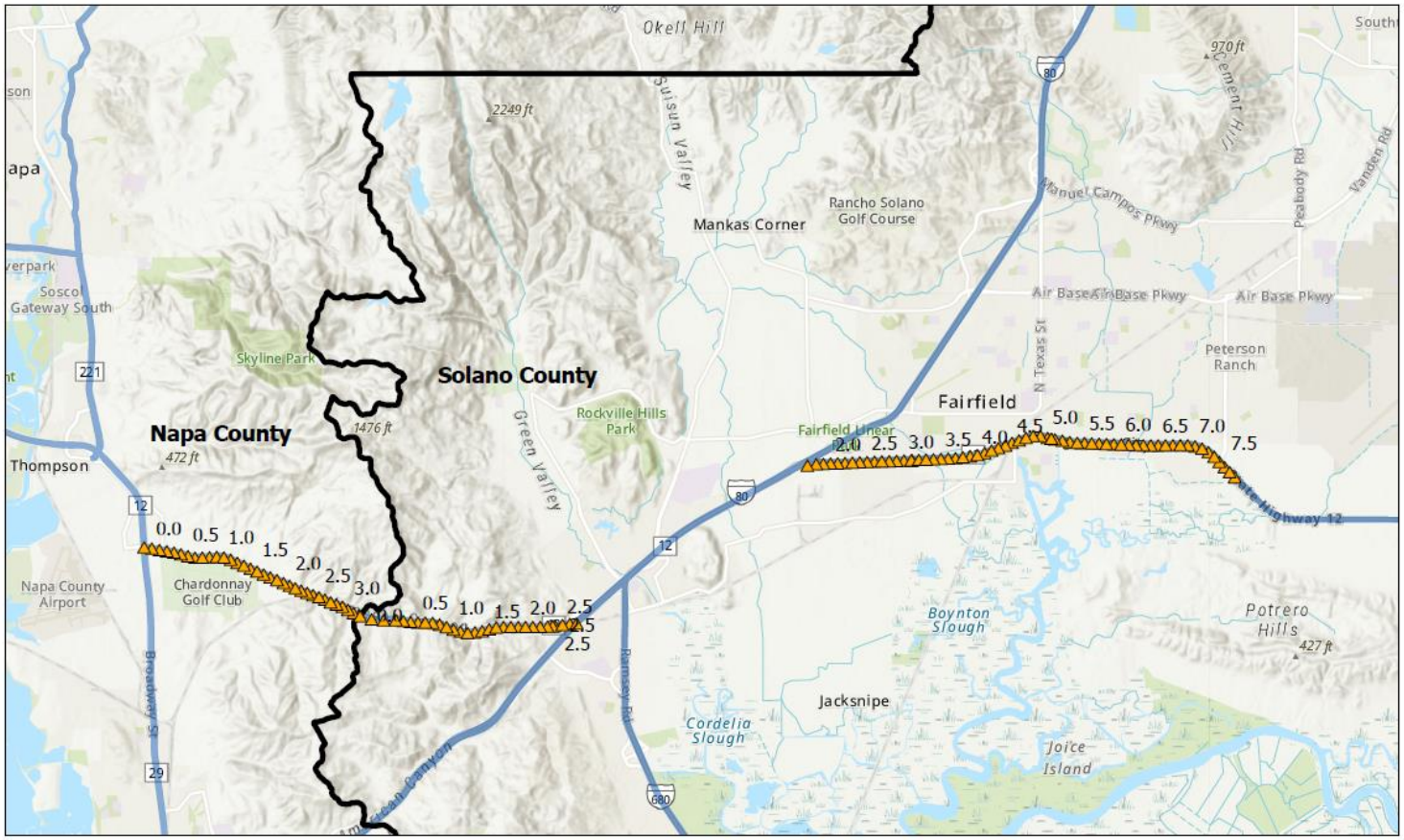
**Purpose:**

The purpose of the Project is to preserve, repair and extend the service life of the existing pavement and improve ride quality for the travelling public. Additionally, the project would also enhance pedestrian and bicycle infrastructure.

**Need:**

This Project is needed because portions of SR 12 within the Project limits are experiencing pavement deterioration. The existing pavement shows signs of cracks and surface wear. The current drainage infrastructure is also aging and deteriorating. Pavement rehabilitation is essential to prevent further degradation, which could compromise the highway's structural integrity and ultimately require extensive roadway rehabilitation. Several infrastructure elements, including guardrails and signage, require updates to meet current standards. Moreover, the Transportation Planning Scoping Information Sheet identifies several deficiencies in pedestrian access and bicycle infrastructure, including improved curb ramps, bike lanes, and pedestrian islands.

## Figure 1-1: Project Location



# Chapter 2 Project Description

## 2.1 Overview

The proposed Project is located on SR 12 from PM 0.0 – 3.31 in Napa County and 0.0 – 7.90 in Solano County. SR 12 is a four-lane highway with two lanes in both directions. In Napa County, the Project area is bordered by industrial and agricultural land uses. In Solano County, the Project traverses a mix of urban industrial, urban residential, urban commercial, and agricultural land uses. Notably, the Solano County section of the Project area is within Fairfield and Suisun City.

A pavement conditions survey has indicated that portions of SR 12 in Napa and Solano Counties show signs of distressed pavement, such as small cracks. They are likely the result of poor highway drainage. Additionally, some of the cracks are found in areas where culverts are installed beneath the highway, so it is possible that the cracked pavement is in part due to culverts beginning to lose their structural integrity with age. Caltrans proposes to repair the pavement and improve the drainage features to treat both the symptoms and root cause of the pavement deterioration. In addition to improvements to correct the observed drainage and pavement deterioration, several highway upgrades and updates are also proposed. Improvements such as updating existing guardrail and installing new guardrail, reinstalling shoulder rumble strips, adding pedestrian islands, upgrading bike lanes, upgrading roadway signage, and adding Americans with Disabilities Act (ADA) curb ramps are proposed. Electrical updates such as adding new pedestrian push buttons and installing new loop detectors are also proposed.

There are two alternatives that Caltrans has evaluated for the proposed Project. The first alternative is the Build Alternative, which would include the proposed improvements and repairs to the highway, drainage work, and additional upgrades and updates. The second alternative is the No-Build Alternative. Under the No-Build Alternative, no upgrades would be made to SR 12. The current conditions of the Project area serve as the baseline condition upon which impacts of the Build Alternative are evaluated.

### 2.1.1 Explanation of Project Post Miles

Within the proposed Project's postmile limits on SR-12 (PM 0.0 – 7.90), several field postmile markers contain the prefixes "R" and "L." These prefixes indicate segments affected by historical realignments of the highway. The "R" prefix denotes a segment where SR-12 was realigned, and the post mile sequence was preserved by adding an

“R” to differentiate it from the original alignment. The “L” prefix designates leftover or parallel roadway segments that remained after a realignment and required differentiation from both the mainline and the realigned segment. Although these prefixed postmiles occur physically within the proposed Project limits, the logical postmile range remains correctly defined as PM 0.0–7.90, and the presence of “R” and “L” markers reflects the route’s historical reconfiguration rather than a change to the Project’s limits. Please refer to Figure 2-1 on the following page for a visualization of where the proposed Project post miles are located.

## Figure 2-1: Project Post Miles

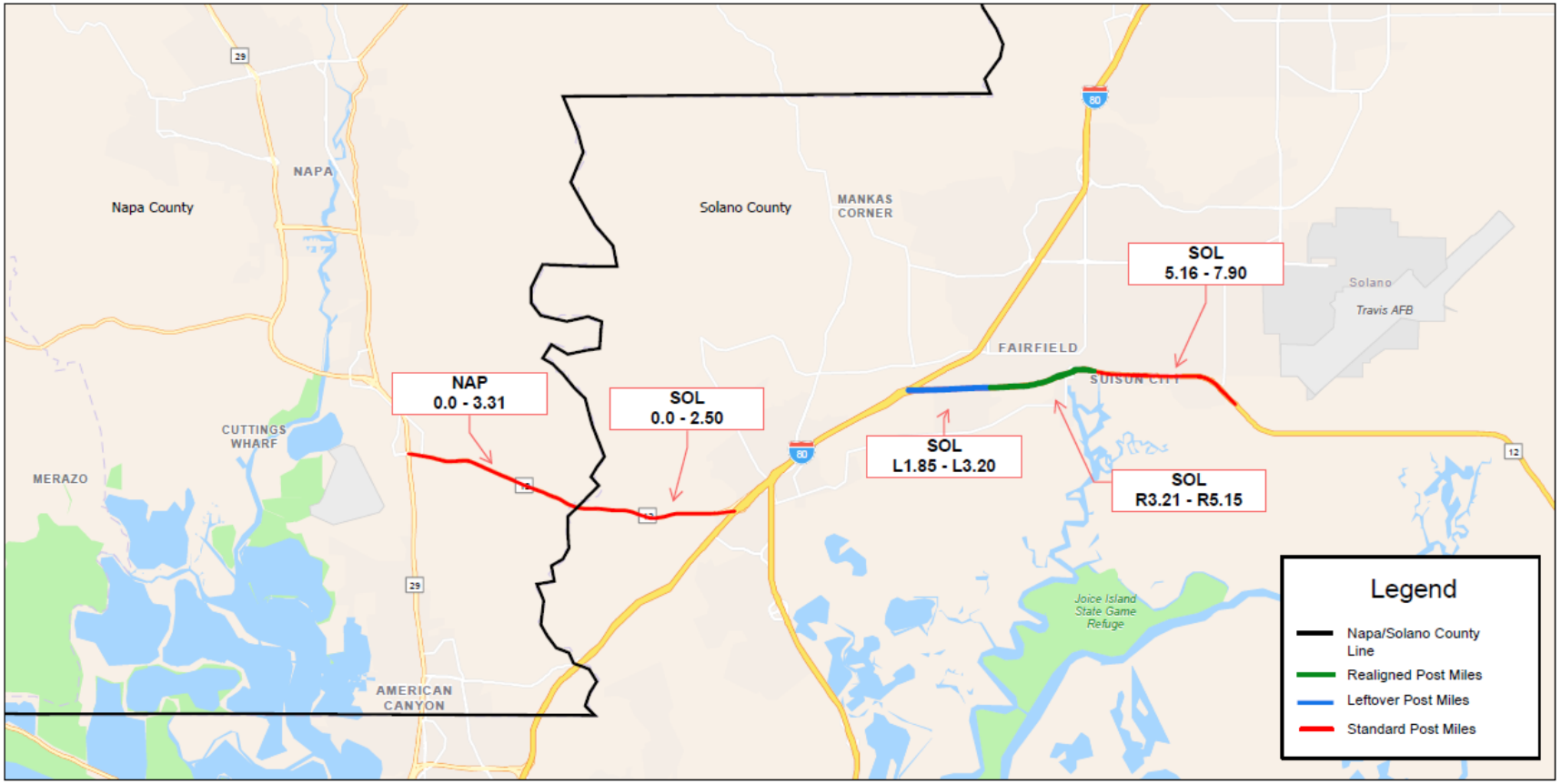



**Figure 2-1: Project Post Miles**
State Route 12 Pavement Rehabilitation Project
NAP-12-0.0/3.31 and SOL-12-0.0/7.90
EA: 04-4W230 EFIS: 0422000128
Napa/Solano Counties, California

**Scale: 1:150,000**

0 1.25 2.5 5 7.5 10 Miles

N

### 2.1.2 Build Alternative – Proposed Project

The Build Alternative for the Project proposes pavement rehabilitation, drainage improvements, complete streets improvements, and general highway updates pertaining to traffic circulation and safety measure upgrades.

### 2.1.3 Pavement Rehabilitation

The Project proposes pavement rehabilitation for two sections of SR 12, the first in Napa County (NAP PM 0.0 – 3.31) and the second in Solano County (SOL PM 0.0 – 7.90). In order to remove the cracked and distressed pavement, the Build Alternative proposes to use a technique called “cold planing”, which is essentially stripping the highway of its existing asphalt concrete (AC) pavement. In addition to cold planing, the Build Alternative proposes the use of “dig outs”, which are used when the base material (the material underneath the AC pavement) has become degraded due to the distressed pavement on top of it. Dig outs are proposed to replace any degraded base material under the AC pavement within the Project area, thus prolonging the lifespan of the highway. After the highway has been cold planed and the dig outs have been finished, the highway would be repaved with Rubberized Hot Mix Asphalt (RHMA).

Additionally, shoulder rumble strips would be re-installed along both sides of SR 12 throughout the Project area. These rumble strips serve as a physical and audible warning to drivers who drift from the travel lane, thereby enhancing highway safety. The Project would also include updating existing road signs and final striping, including lane lines, crosswalks, and other pavement markers. These updates are essential for maintaining safe and clear traffic flow throughout the corridor.

### 2.1.4 Drainage Improvements and Stormwater Management

Drainage improvements are proposed as a part of this Project. Two culverts in Solano County would be repaired via a method known as “pipelining” (See Table 2-1). This method entails pulling a new culvert pipe through an existing one (lining the inside of a culvert pipe with a new pipe), which restores the culvert’s function and structure without needing to fully replace it. Other proposed drainage elements include hot mix asphalt (HMA) dikes and overside drains. HMA dikes are curb-like structures placed alongside the outer edge of the shoulder of highways that channel water to a designated area, in this case an overside drain, which is a small ditch made of HMA that drains downslope of a highway. Locations for HMA dike and overside work can be found in Tables 2-2 and 2-3, respectively. The flared end sections (FES) of culverts at various locations within the Project area show signs of damage and would be replaced with new FES to

promote the flow of water through the culverts (See Table 2-4). Lastly, the rock slope protection (RSP) at PM 0.24 along SR 12 in Napa County would be reinstalled. The goal of replacing the RSP at this location is to prevent erosion of the slope and promote highway drainage.

In addition to improving highway drainage, the Project proposes to improve stormwater management within the Project area. During rainstorms, water runs off the pavement carrying sediment and pollutants from the highway with it. Stormwater Best Management Practices (BMPs) are proposed to prevent the flow of these materials into sensitive aquatic habitats. One stormwater BMP proposed for the Project is biofiltration strips, as noted in Table 2-5. These are patches of vegetation/greenery in the median or along the shoulder of a highway whose purpose is to absorb and contain water carrying pollutants and sediment running off the highway.

**Table 2-1: Culvert Pipelining**

| County / Postmile | Postmile Culvert Diameter (In) | Culvert Length (ft) |
|---|---|---|
| SOL / PM 4.39 | 18 | 70 |
| SOL / PM 4.41 | 18 | 70 |

**Table 2-2: Removal and Replacement of HMA Dikes**

| County | Postmile |
|---|---|
| SOL | PM 0.57 – Eastbound |
| SOL | PM 1.70 to 1.78 – Eastbound |
| SOL | PM 1.8 – Eastbound |
| SOL | PM 1.95 – Eastbound |

**Table 2-3: Upgrading Overside Drains**

| County | Postmile |
|---|---|
| SOL | PM 4.38 – Eastbound |
| SOL | PM 4.42 – Westbound |
| SOL | PM 4.43 – Eastbound |
| SOL | PM 4.83 – Westbound |

**Table 2-4: Remove and Replace FES**

| County | Postmile | Culvert Diameter |
|---|---|---|
| SOL | PM 3.33 – Westbound | 18” |
| SOL | PM 3.49 – Westbound | 18” |
| SOL | PM 3.59 – Westbound | 18” |
| SOL | PM 3.78 – Westbound | 18” |
| SOL | PM 3.89 – Westbound | 24” |
| SOL | PM 3.97 – Westbound | 18” |
| SOL | PM 4.02 – Westbound | 18” |
| SOL | PM 4.39 – Eastbound & Westbound | 18” |
| SOL | PM 4.41 – Eastbound & Westbound | 18” |
| SOL | PM 7.76 – Eastbound & Westbound | 18” |

**Table 2-5: Proposed Biofiltration Strip Locations**

| Location | County | Post Mile | Proposed Work | Acreage |
|---|---|---|---|---|
| 1 | NAP | 1.08 | Biofiltration strip proposed on eastbound side. | 0.19 |
| 2 | NAP | 2.70 | Biofiltration strip proposed on eastbound side. | 0.06 |
| 3 | SOL | 7.03 | Biofiltration strip proposed on median. | 1.12 |

### 2.1.5 Complete Streets Improvements

The Build Alternative includes complete streets improvements, which are intended to enhance multi-modal transportation by upgrading bike and pedestrian safety and mobility.

To improve pedestrian safety and accessibility, the Project would upgrade existing pedestrian refuge islands and install new pedestrian refuge islands along SR 12 in Solano County. These islands provide a protected space for pedestrians to wait mid-crossing, increasing visibility and safety. Please see Tables 2-6 and 2-7 below for exact locations of this work. The Project would also upgrade ADA curb ramps and pedestrian push buttons throughout the Project limits to meet current accessibility standards. The locations for this work can be found below in Table 2-8.

The Project would upgrade existing Class II bike lanes to Class II buffered bike lanes between PMs 0.0 and 3.31 in Napa County (East of Napa County Airport) and PM 0.0

and 2.45 in Solano County (From Creston headed East toward I-80). This upgrade would enhance cyclist safety by providing a wider, designated buffer between bike lanes and vehicle traffic. Class II bike lanes are portions of a highway that are designated for cyclists and are typically indicated by painted markings on the highway pavement. Upgrading class II bike lanes to buffered bike lanes would primarily involve restriping and minor pavement modifications within the existing highway in order to create a buffer that would further separate cyclists and motorists traveling on the highway. This upgrade would improve the overall quality of cyclist transit within the Project area.

**Table 2-6: Installation of New Pedestrian Refuge Islands**

| County | Postmile / Intersection |
|---|---|
| SOL | PM 5.15 / SR 12 & Marina Blvd Intersection |
| SOL | PM 5.75 / SR 12 & Sunset Ctr Westbound T-Intersection |
| SOL | PM 6.55 / SR 12 & Emperor Dr Intersection |

**Table 2-7: Upgrades to Existing Pedestrian Refuge Islands**

| County | Postmile | Intersection | Pedestrian Island Location |
|---|---|---|---|
| SOL | L3.2 | Route 12 & Beck Ave | East side of Intersection |
| SOL | R4.05 | Route 12 & Pennsylvania Ave | West side of Intersection |

**Table 2-8: Upgrades to ADA Curb Ramps and Pedestrian Push Buttons**

| County | Postmile / Intersection | Curb Ramp Location |
|---|---|---|
| SOL | PM L2.23 / Chadbourne Rd & Automall Pkwy | All 4 corners |
| SOL | PM L2.23 / WB Exit onto Chadbourne Rd | North and South ramps |
| SOL | PM L2.23 / EB Entrance from Chadbourne Rd | North and South ramps |
| SOL | PM L3.2 / SR 12 & Beck Ave | Northeast and Southeast ramps |
| SOL | PM R4.05 / SR 12 Pennsylvania Ave | Northwest, Southwest, and Southeast ramps |
| SOL | PM 7.42 / SR 12 & Lawler Ranch Pkwy | West ramp |

### 2.1.6 Guardrail Upgrade

As part of the proposed Project, existing metal beam guardrail (MBGR) would be removed and replaced with Midwest guardrail systems (MGS). MGS is a crash-tested safety barrier developed under the American Association of State Highway and

Transportation Officials (AASHTO) Manual for Assessing Safety Hardware (MASH), and it is the current standard guardrail. The MBGR removal and replacement would occur throughout the entire length of the Project. Where MBGR would be replaced by MGS, there is a proposed 15-foot increase in guardrail length as shown in Table 2-9.

**Table 2-9: Metal Beam Guardrail Updates**

| County | Location | Length (ft) | Proposed Length (ft) |
|---|---|---|---|
| NAP | PM 0.40 WB | 77 | 92 |
| NAP | PM 0.70 WB | 152 | 167 |
| NAP | PM 1.14 EB | 78 | 93 |
| NAP | PM 1.71 WB | 82 | 97 |
| NAP | PM 1.90 WB | 135 | 150 |
| NAP | PM 1.90 EB | 125 | 140 |
| NAP | PM 2.15 EB | 72 | 87 |
| NAP | PM 2.30 WB | 140 | 155 |
| NAP | PM 2.40 EB | 88 | 103 |
| NAP | PM 2.60 WB | 82 | 97 |
| NAP | PM 2.77 EB | 110 | 125 |
| NAP | PM 2.84 EB | 100 | 115 |
| NAP | PM 2.96 EB | 65 | 80 |
| NAP | PM 3.00 WB | 65 | 80 |
| NAP | PM 3.26 WB | 115 | 130 |
| SOL | PM 0.30 WB | 90 | 105 |
| SOL | PM 0.48 EB | 100 | 115 |
| SOL | PM 0.63 WB | 115 | 130 |
| SOL | PM 0.88 WB | 75 | 90 |
| SOL | PM 1.03 WB | 90 | 105 |
| SOL | PM 1.12 WB | 100 | 115 |
| SOL | PM 1.15 - 1.26 EB | 677 | 692 |
| SOL | PM 1.21 WB | 61 | 76 |
| SOL | PM 1.29 EB | 87 | 102 |
| SOL | PM 1.33 WB | 124 | 139 |
| SOL | PM 1.32 - 1.60 EB | 1000 | 1015 |
| SOL | PM 1.47 WB | 70 | 85 |
| SOL | PM 1.77 WB | 105 | 120 |
| SOL | PM 1.76 - 1.89 EB | 667 | 682 |
| SOL | PM 1.96 – 2.00 EB | 182 | 197 |
| SOL | PM 2.35 EB | 562 | 577 |

| County | Location | Length (ft) | Proposed Length (ft) |
|---|---|---|---|
| SOL | PM R2.45 EB | 270 | 285 |
| SOL | PM R2.55 EB | 140 | 155 |
| SOL | PM L1.85 WB | 60 | 75 |
| SOL | PM L1.96 EB | 89 | 104 |
| SOL | PM L2.20 EB | 60 | 75 |
| SOL | PM L2.25 WB | 60 | 75 |
| SOL | PM L2.51 WB | 120 | 135 |
| SOL | PM L2.64 EB | 110 | 125 |
| SOL | PM L2.92 EB | 75 | 90 |
| SOL | PM L2.96 WB | 85 | 100 |
| SOL | PM L3.00 EB | 75 | 90 |
| SOL | PM L3.19 EB | 70 | 85 |
| SOL | PM R3.40 EB | 85 | 100 |
| SOL | PM R3.42 WB | 85 | 100 |
| SOL | PM R3.96 EB | 117 | 132 |
| SOL | PM R4.45 EB | 60 | 75 |
| SOL | PM R4.51 WB | 85 | 100 |
| SOL | PM R4.54 EB | 60 | 75 |
| SOL | PM R4.68 WB | 55 | 70 |
| SOL | PM R4.73 EB | 80 | 95 |
| SOL | PM R5.00 EB | 126 | 141 |
| SOL | PM 6.25 EB | 115 | 130 |
| SOL | PM 6.32 WB | 55 | 70 |
| SOL | PM 7.62 WB | 80 | 95 |

### 2.1.7 Loop Detector Replacement

The Project also proposes to upgrade existing loop detectors and perform associated electrical work. Loop detectors are embedded in the pavement and detect vehicles at intersections, supporting traffic signal timing and data collection. Updating these components would help ensure continued reliable traffic operations. Refer to Table 2-10 below for exact locations of work.

**Table 2-10: Updating Existing Loop Detector Work**

| County | Postmile |
|---|---|
| SOL | PM L2.2 / Chadbourne Rd & Automall Pkwy Intersection. |
| SOL | PM 5.15 / SR 12 & Marina Blvd Intersection |
| SOL | PM 5.75 / SR 12 & Sunset Ave Intersection |
| SOL | PM 6.57 / SR 12 & Emperor Dr Intersection |
| SOL | PM 7.47 / SR 12 & Walters Rd Intersection |

### 2.1.8 Removal of Wildlife Exclusionary Fencing

The Project proposes the removal of the existing wildlife exclusion fencing (WEF), which is a type of fencing intended to direct wildlife away from areas being developed for a project. This fencing was installed during a previously completed Caltrans project known as the Jameson Canyon Road Widening project. The WEF no longer serves its original purpose and has substantially degraded. The removal of the WEF would be done by hand or with simple hand tools. Please see Table 2-11 for the locations of this work.

**Table 2-11: Wildlife Exclusionary Fencing Removal**

| County | Postmile Range | Orientation |
|---|---|---|
| Napa | 0.25 – 1.32 | Eastbound |
| Napa | 1.45 – 1.83 | Westbound |
| Napa | 1.90 – 2.29 | Eastbound |

### 2.1.9 Sign Replacement Work

Finally, sign replacement work is proposed for this Project. This would include upgrading up to 480 single-post signs and up to 40 double-post signs throughout the entire Project area. Existing signposts would be removed with pulling equipment mounted from a truck. New signpost installation would require boom trucks outfitted with post driving equipment. Additionally, three overhead highway signs would be replaced, as noted below in Table 2-12. Note that only two of the three signs require full removal and replacement of the sign panel and post. Overhead highway signposts would be removed by first disassembling sign panels from the posts and then excavating and the base material and lifting the posts from the ground. A truck outfitted with an auger would then be used to drill holes for installing new overhead signposts, and foundation would be poured into the holes to secure to posts. New panels would then be attached to the signposts.

**Table 2-12: Overhead Highway Sign Replacement**

| County | Postmile | Replacement Type |
|---|---|---|
| SOL | L1.96 | Full removal and replacement of panel and post |
| SOL | L2.56 | Full removal and replacement of panel and post |
| SOL | 2.38 | Panel replacement only |

## 2.2 Construction Methodology, Schedule, and Equipment

Please see below for more information on the methodology, schedule, and equipment that would be expected for this Project.

### 2.2.1 Construction Staging Areas

Construction staging areas would be required to store equipment and materials and would occur on and off SR 12. Staging would be located within single-lane closures during non-peak hours or night closures or on compacted gravel and disturbed areas adjacent to the work areas within Caltrans' Right of Way (ROW).

### 2.2.2 Traffic Management

A traffic management plan (TMP) would be prepared to minimize the delays to the traveling public and any disruption to emergency services. Traffic management would include temporary single-lane and shoulder closures during non-peak hours and at night along SR 12 in Napa and Solano counties. Exact lane closure hours would be decided during the design phase of the Project. The TMP would include press releases to notify and inform motorists, businesses, community groups, local entities, and emergency services of upcoming lane closures or detours. Various TMP elements such as portable changeable message signs may be utilized to alleviate and minimize delay to the traveling public.

### 2.2.3 Right-of-Way Requirements

The Project would not require the permanent acquisition of private property. Most construction would take place within the Caltrans ROW; however, Project construction would require three Permits to Enter and Construct (PTEC) to perform work that is slightly outside of Caltrans' ROW. Table 2-13 below displays all areas in the Project in which a PTEC is needed to work outside of Caltrans' ROW, note that the work proposed in these areas involves grinding and overlaying asphalt, as well as final pavement striping.

**Table 2-13: ROW Requirements**

| County / PM | Usage | ROW Owner | Acreage |
|---|---|---|---|
| Solano / 5.10 – 5.30 | PTEC | City of Suisun | 0.67 |
| Solano / 5.45 – 5.78 | PTEC | California Department of Fish and Wildlife (CDFW) | 1.63 |
| Solano / 6.26 – 6.91 | PTEC | City of Suisun | 5.18 |

### 2.2.4 Utilities

Several types of utilities exist within the Project area. For gas and electric lines, Pacific Gas & Electric (PG&E) and Kinder Morgan lines are present. Telecommunications utilities include American Telephone & Telegraph (AT&T), Comcast, Level 3, Zayo Group, and Verizon. Water utilities include lines for the City of Fairfield, City of Suisun, City of Vallejo, Solano Irrigation District, and California Water Service Company. For sewer and wastewater, there are utilities belonging to the Fairfield-Suisun sewer district, and systems for the Cities of Fairfield, Vallejo, and Suisun.

The proposed work for this Project would not result in any utility relocations for the utilities that exist within the Project area.

### 2.2.5 Schedule

Construction duration for the proposed work is estimated at 132 working days and is slated to occur between March and September of 2028. Though most work would occur during the day, night work is anticipated for this Project.

### 2.2.6 Construction Methodology

The following section describes a potential construction methodology for the work proposed by the Project. It is meant to inform the reader about how the proposed work could be performed. Ultimately, the exact construction methodology, equipment, and sequencing would be determined by the contractor that is awarded the Project.

#### PAVEMENT REHABILITATION

As part of the proposed improvements, the Build Alternative would involve rehabilitating the distressed pavement found on SR 12 in Napa County (PM 0.0 – 3.31) and Solano County (PM 0.0 – 7.90). This process begins with cold planing, which involves grinding off the top layer of existing AC pavement. A large piece of equipment known as a milling machine, or cold planer, would be used to remove the worn AC pavement without

damaging the underlying structure. Cold planing (removal of AC) would occur throughout the entirety of the Project limits listed above.

After cold planing the AC pavement, if the base material beneath the surface is damaged, it may be dug out and replaced with new base material, which is known as a “dig out”. The process starts with using a backhoe or excavator to dig out the degraded base material. Next, a skid-steer loader would help with removal and loading of material into dump trucks, which would be used to haul the old base material away and load in the new base material. After the new base material is loaded in place, it would be compressed with a compactor to achieve the proper density.

Next, a grader would be used to ensure the base is even and at the desired height.

Once the base material is repaired as needed, a paver would lay down a new layer of RHMA. Dump trucks would deliver the hot asphalt to the paver, which would spread it evenly over the highway. Following the paving, rollers (either static or vibratory) would be used to compact the new asphalt.

As part of the proposed Project, existing in-pavement loop detectors would be removed and replaced to maintain signal functionality following pavement rehabilitation or other improvements at signalized intersections. Work would involve saw-cutting the highway using a walk-behind or truck-mounted saw, cleaning the trench with a vacuum or blower, and installing new loop wires using preformed kits or manually shaped wire. Sealant would be applied to secure and protect the loops. Electrical connections to existing conduit and signal cabinets would be completed using a utility truck equipped with testing and diagnostic tools. Traffic control equipment, including cones, barricades, and arrow boards, would be used to maintain a safe work zone.

Shoulder and edge-line rumble strips would be reinstalled within the Project limits on both the left and right shoulders. A truck-mounted milling machine would be used to grind shallow grooves into the pavement surface at regular intervals along the designated areas. In advance of milling, existing pavement markings may be adjusted or removed using a walk-behind grinder. A vacuum or sweeper truck would follow the milling operation to remove debris.

#### DRAINAGE IMPROVEMENTS AND STORMWATER MANAGEMENT

To improve drainage and extend the service life of the highway, the Project includes rehabilitation of two existing culverts using a technique known as “pipelining”. Instead of

fully removing and replacing the old culverts, this method allows a new liner to be installed inside the existing pipe, minimizing surface disruption and construction time.

Before work begins, construction crews may use a closed-circuit television (CCTV) inspection system to examine the condition of the existing culvert and confirm that it is suitable for lining. If necessary, excavators may be used to access the ends of the pipe where the liner would be installed.

Specialized pipelining equipment, such as a liner inversion drum or air inversion system, would then be used to install a flexible liner into the existing pipe. This liner is expanded and cured in place, creating a new, seamless pipe within the old one. In some cases, pulling equipment may also be used to draw the liner into position. This equipment may include a winch system or hydraulic pulling rig, designed to pull the new pipe through the existing culvert in a controlled manner. After installation, another CCTV inspection would be performed to verify that the new liner is properly seated and functional.

Deteriorated hot mix asphalt (HMA) dikes and overside drains would be removed and replaced to improve surface water management and maintain highway integrity. The removal process would begin with the use of a cold planer or pavement breaker to cut and remove existing HMA dikes. In areas where overside drains are being replaced, a backhoe or excavator would be used to excavate around the existing pipes and lift them out, particularly where the drains are embedded in slopes or anchored to the subgrade. A skid steer loader would assist in clearing debris and preparing the work area for installation. Removed materials would be loaded into dump trucks for off-site disposal.

Installation of new HMA dikes would be performed using a dike paving machine or a specialized dike box attachment mounted to a truck or paver, depending on site conditions. Once placed, the asphalt would be compacted using a roller or plate compactor to ensure durability and adhesion to the highway edge.

For overside drains, new prefabricated components (made of HMA) would be installed using boom trucks where necessary. These components would be set into place and connected or anchored using hand tools and, if applicable, welding or mechanical fasteners.

Throughout the operation, a water truck would be on-site as needed to control dust and support any slope compaction or moisture conditioning requirements.

The Project includes the removal and replacement of damaged FES on existing culverts to restore proper drainage function and reduce erosion at culvert outlets and inlets. To perform this work, hand tools would be used to carefully remove soil and debris around the existing FES components, exposing them for removal. In some cases, cutting tools may be needed to detach metal FES that are rusted or embedded into the culvert barrel. Once the damaged FES are removed, dump trucks would be used to haul off debris and import any needed backfill.

New concrete FES units measuring 18 inches in diameter would be positioned and installed using a skid steer loader. In some instances, the culvert may require minor reshaping or grading of the surrounding area to ensure a proper fit and stable base for the new FES. If heavy equipment is used for this element, a temporary increase in ambient noise is possible.

Following installation, the disturbed area would be backfilled and compacted using hand tools or light compacting equipment. Where needed, erosion control materials such as erosion control blankets, or hydroseeding would be applied to stabilize the work area and minimize future erosion potential.

Lastly, the RSP located at the outfall of a culvert at PM 0.24 on SR 12 in Napa County would be removed and replaced using excavators. If heavy equipment is used for this element, a temporary increase in ambient noise and vibration from the unloading and compacting of rocks is possible.

#### COMPLETE STREETS IMPROVEMENTS

Pedestrian refuge islands would be constructed at the intersections of Emperor Drive, Sunset Avenue, and Marina Boulevard along SR 12 in Solano County to enhance pedestrian safety and accessibility.

Construction would begin with removal of existing pavement or median features using a skid steer or small excavator equipped with a breaker or bucket. Where necessary, minor grading would be completed using a backhoe or compact loader to prepare the area for concrete placement. New refuge islands would be formed and poured in place using a concrete mixer truck, hand tools, and vibratory screeds. ADA-compliant elements such as detectable warning surfaces would be installed where applicable.

Material delivery and transport would be supported by flatbed trucks and utility vehicles. Once the concrete has cured, striping and signage would be updated using a striping truck or walk-behind striping machine. Temporary traffic control, including cones, arrow

boards, and signage, would be used to guide vehicles and pedestrians safely through the work zone.

Existing Class II bike lanes along SR 12 would be upgraded to Class II buffered bike lanes to improve cyclist safety and comfort. This upgrade would create a buffer to increase the distance between motorists and cyclists traveling on the portions of SR 12 within the Project area, which would contribute to improved ride quality for cyclists.

Crews would grind or remove existing striping using a walk-behind grinder or truck-mounted removal equipment. New pavement markings and buffer striping would be applied using a striping truck or walk-behind striping machine, depending on site access and configuration.

Existing curb ramps and pedestrian push buttons within the Project limits would be upgraded to meet current ADA standards and improve accessibility at signalized intersections.

Curb ramp work would involve saw-cutting and removing existing concrete using a walk-behind saw and jackhammer, followed by grading with a skid steer or backhoe to prepare the subgrade. New ramps would be formed and poured using a concrete mixer truck, with installation of detectable warning surfaces as required. Hand tools and finishing equipment would be used to ensure proper slope, alignment, and surface texture.

Pedestrian push buttons would be upgraded by removing existing assemblies and installing new accessible units. This work would involve minor trenching or conduit adjustments using hand tools or a small excavator, and electrical connections would be completed using a utility truck equipped with testing equipment.

#### REPLACE METAL BEAM GUARDRAIL

As noted in Section 2.2.3, the existing guardrail system would be removed and upgraded to meet current safety standards. This work would involve both the demolition of outdated guardrail components and the installation of new systems along designated highway segments.

To remove and adjust existing guardrail posts, crews would utilize an excavator. Installation of new guardrail posts would be completed using a truck equipped with a post driver attachment. A truck with a forklift attachment would be used to transport and position new guardrail segments for installation along the corridor.

Where minor grading or earthwork is required to accommodate the new system, a skid steer or backhoe would be deployed to dig or adjust terrain. To prepare the work area and maintain long-term site visibility and safety, small concrete pads would be placed on the ground beneath the new guardrail system to prevent the growth of vegetation up through the guardrail.

#### UPDATE ROAD SIGNS AND FINAL STRIPING

Existing highway signs and pavement markings within the Project limits would be updated to reflect current standards and the final highway configuration. This would include the replacement or repositioning of regulatory and warning signs, as well as installation of final striping, including lane lines, crosswalks, arrows, and other pavement markers.

Sign replacement would be completed using a utility truck equipped with a lift or bucket to remove and install signs on existing or new posts. Pavement markings would be removed as needed using grinder or water blasting equipment. Final striping would be applied using a striping truck or walk-behind striping machine, depending on site conditions and layout complexity.

A total of three overhead signs would be replaced during this Project. Two of the three proposed locations would require replacing old signposts and panels and installing new ones. The location at PM 2.38 would only require replacement of the sign panel because the signpost at this location is within compliance, which would likely require hand tools for disassembly and a crane for replacing the sign panel. Note that total replacement of signposts and panels would entail using a backhoe excavator to dig out the post, as well as a crane for lifting segments of the panels, metal framework, and signpost. A drill would be used to excavate holes for the new signposts, and subsequently concrete would be poured into the new holes to serve as foundation for replacement signposts.

#### REMOVAL OF WILDLIFE EXCLUSION FENCING

The Project would include removal of existing wildlife exclusion fencing left over from a previous project known as the Jameson Canyon Road Widening.

Removing the WEF would be done by hand or involve hand tools to extract fence posts and mesh. Crews would work carefully to avoid ground disturbance beyond the original fence alignment. All removed materials would be loaded into utility trucks or trailers for off-site disposal or recycling.

### 2.2.7 Vegetation Removal

Vegetation clearing and removal would occur within the Project limits immediately adjacent to construction activities. The Project is expected to require minimal vegetation removal to clear obstructions for construction equipment where work is proposed off pavement. The vegetation that would be disturbed or removed would primarily be grasses or shrubs, specifically 1.37 acres of annual grassland habitat is anticipated to be removed due to installing bio strips as a treatment BMP for water quality. The locations for proposed biofiltration strips are listed in Table 2-5. Tree removal is not anticipated for this Project.

### 2.2.8 Project Features

This Project contains a number of standardized measures that are employed on most, if not all, Caltrans projects in accordance with standard specifications, state and federal laws, and anticipated standard environmental permit conditions, and were not developed in response to any specific environmental impact resulting from the proposed Project. Project features (PFs) are separate from avoidance and/or minimization measures (AMMs) or mitigation measures (MMs), which directly relate to the impacts resulting from the proposed Project. AMMs and other measures are discussed separately in each environmental section of Chapter 3. A list of these Project features is included below in the order of environmental resource area.

**PF-AES-1: Vegetation Protection.** Existing trees and vegetation would be preserved to the extent feasible. Trees and vegetation outside of the clearing and grubbing limits would be protected from the contractor's operations, equipment, and materials storage. Tree trimming and pruning, where required, would be under the direction of a certified arborist.

**PF-AES-2: Erosion Control.** After construction, all areas cleared within the Project limits for uses such as contractor access, staging, and trenching operations would be treated with appropriate erosion control measures where required.

**PF-AES-3: Construction Staging.** Except as detailed in the Contract Plans, staging areas would not affect existing landscaped areas resulting in death and/or removal of trees and shrubs, or disruption and destruction of existing irrigation facilities.

**PF-AES-4: Construction Waste.** During construction operations, unsightly material and equipment in staging areas would be placed where they are less visible and/or covered where possible.

**PF-AES-5: Construction Lighting.** Construction lighting would be directed toward the immediate vicinity of active work and would avoid light trespass through directional lighting, shielding, and other measures as needed.

**PF-AQ-1: Contractor Air Quality Compliance.** The contractor will adhere to Caltrans Standard Specifications for Construction, Sections 14.9-02 and 7-1.02c, which require contractor compliance with all applicable laws and regulations related to air quality, including air pollution control district and air quality management district regulations and local ordinances.

**PF-AQ-2: Control Measures for Construction Emissions of Fugitive Dust.** Dust control measures would be implemented to minimize airborne dust and soil particles generated from construction. For disturbed soil areas, the use of tackifier to control dust emissions would be included in the construction contract. Any material stockpiles would be watered, sprayed with tackifier, or covered to minimize dust production and wind erosion.

**PF-BIO-1: Documentation at Project Site.** A Permit Compliance Binder would be maintained at the construction site at all times and presented to resource agency (U.S. Army Corps of Engineers (USACE), U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW), Bay Conservation and Development Commission (BCDC) and/or Regional Water Quality Control Board (RWQCB) personnel upon request. The Permit Compliance Binder would include a copy of all original permits and agreements, and any extensions and amendments to the permits and agreements.

**PF-BIO-2: Work According to Documents.** Except as they are contradicted by measures within the permits and agreements, all work would be conducted in conformance with the Project description in the permits and agreements and the AMMs provided in the permits and agreements.

**PF-BIO-3: Agency-Approved Biologist(s)**. Prior to construction, the qualifications of the biological monitor(s) would be submitted to USFWS and CDFW for review and approval. An approved biologist will be present during construction activities where take of a listed species could occur. Through communication with the Resident Engineer or designee, the approved biologist may stop work if deemed necessary for any reason to protect listed species; the biological monitor will advise the Resident Engineer or designee on how to proceed.

**PF-BIO-4: Designation of Environmentally Sensitive Areas (ESAs) and Construction and Storage Areas.** Caltrans will delineate construction areas and ESAs (defined as areas containing sensitive habitats adjacent to or within construction work areas for which physical disturbance is not allowed) on the final construction plans. The approved biological monitor will be onsite to direct the installation of high-visibility, orange ESA fencing to prevent encroachment of construction personnel and equipment onto sensitive areas during construction activities, as needed. Staging, storage, and parking areas will be located on paved or graveled surfaces within the ROW and away from any designated ESAs, as specified by the Project biologist, to avoid construction impacts to natural communities. Equipment and materials storage sites will be located as far away from residential and park uses as practicable. At the discretion of the Caltrans biologist, ESA fencing may be removed at times when construction is no longer active in the area.

**PF-BIO-5: Fence and Signpost Caps.** Fence or signposts would have the top of the post capped and/or the top three post holes covered or filled with screws or bolts to prevent the entrapment of wildlife, specifically birds of prey.

**PF-BIO-6: Invasive Weed Control.** To reduce the spread of non-native, invasive plants, these species would be controlled within the Project footprint to the maximum extent practicable, in accordance with Caltrans' Highway Design Manual Topic 110.5, Control of Noxious Weeds – Exotic and Invasive Species, and Executive Order 13112, Invasive Species, and by methods approved by a Caltrans' landscape architect or vegetation control specialist. Vehicles and equipment would be thoroughly cleaned before arriving on the site to prevent the spread of noxious weeds from other locations. In work areas where California Department of Food and Agriculture listed noxious weeds or California Invasive Plant Council (Cal-IPC) Moderate or High-rated weed species occur in fruit or flower and may be disturbed during construction-related activities, the contractor would be required to clear vegetation at the beginning of location disturbance, and contain the plant material associated with these noxious weeds, and dispose of them in a manner that will not promote the spread of the species. Areas subject to noxious weed removal or disturbance will be replanted with fast growing native grasses or a native erosion control seed mixture.

**PF-BIO-7: Construction Site Best Management Practices.** The following site restrictions would be implemented to avoid or minimize potential effects on listed species and their habitats:

- Vehicles would not exceed 15 miles per hour in unpaved areas of the Project footprint, to reduce dust and excessive soil disturbance.
- Food and food-related trash items would be secured in sealed trash containers and removed from the site at the end of each day.
- Pets would be prohibited from entering the Project limits during construction.
- Firearms would be prohibited within the Project limits, except for those carried by authorized security personnel or local, state, or federal law enforcement officials.

**PF-BIO-8: Vegetation Removal.** Vegetation that is within the cut and fill line or growing in locations where permanent structures would be placed would be cleared. Vegetation would be cleared only where necessary and would be cut above soil level, except in areas that would be permanently impacted or excavated. This would allow plants that reproduce vegetatively to resprout after construction. Clearing and grubbing of woody vegetation would occur by hand or using construction equipment such as mowers, backhoes and excavators. Cleared vegetation would be chipped and left onsite if appropriate or removed from the Project footprint if it could be used as nesting habitat.

**PF-BIO-9: Construction Lighting and Signage.** Construction area lighting would be used only where necessary for safety and signage. Downcast lighting and shielding to minimize artificial lighting of natural areas would be used throughout the Project footprint.

**PF-BIO-10: Cover Staged Materials.** Culverts, pipes, hoses, and similar structures less than 12 inches in diameter would be closed, covered or capped to prevent animal entry upon arrival to the Project site. Culverts, pipes, hoses, and similar structures would be inspected for wildlife before it is buried, capped, used, or moved.

**PF-BIO-11: Worker Environmental Awareness Training.** Prior to ground-disturbing activities, an agency-approved biologist will conduct an education program for all construction personnel. At a minimum, the training will include a description of special-status species with potential to occur, migratory birds and their habitats, how the species might be encountered within the Project area, an explanation of the status of these species and protection under the federal and state regulations, the measures to be implemented to conserve listed species and their habitats as they relate to the work site, boundaries within which construction may occur, and how to best avoid the incidental take of listed species. The field meeting will include topics on species identification, life history, descriptions, and habitat requirements during various life stages. Emphasis will be placed on the importance of the habitat and life stage requirements within the context of Project maps showing areas where AMMs are to be

implemented. The program will include an explanation of applicable federal and state laws protecting endangered species as well as the importance of compliance with Caltrans and various resource agency conditions.

**PF-BIO-12: Discovery of Injured or Dead Special-Status Species.** Immediately upon discovery of any dead, or injured, or species regulated by USFWS, National Marine Fisheries Service, or CDFW, Caltrans would provide appropriate notifications to the agency(s) with jurisdiction. Storage and transport to the nearest wildlife care facility may be necessary in direct coordination with agencies.

**PF-BIO-13: Prevention of Inadvertent Entrapment and Entanglement.** To prevent inadvertent entrapment of animals during construction, all excavated, steep-walled holes or trenches more than 1 foot deep will be covered at the close of each working day with plywood or similar materials or provided with one or more escape ramps constructed of earthen fill or wooden planks, with a slope no greater than 30 degrees. Before such holes or trenches are filled, they will be thoroughly inspected for trapped animals. Pipes, culverts, or similar structures stored in the Project area overnight will be inspected before they are subsequently moved, capped, or buried. To prevent wildlife from becoming entangled or trapped in erosion control materials, plastic monofilament netting (e.g., erosion control matting) or similar material will not be used. Acceptable substitutes include coconut coir matting or tackifying hydroseeding compounds.

**PF-CULT-1: Discovery of Cultural Resources.** If previously unidentified cultural resources are unearthed during construction, work would be halted in that area until a qualified archaeologist can assess the significance of the discovery.

**PF-CULT-2: Discovery of Human Remains.** If remains are discovered during dredging activities, all work within 60 feet of the discovery would halt and Caltrans Cultural Studies Office would be called. Caltrans Cultural Studies Office Staff would assess the remains and, if they are determined to be human, would contact the County Coroner, per Public Resources Code, 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, then the coroner would contact the Native American Heritage Commission, which would assign a Most Likely Descendant. Caltrans would consult with the Most Likely Descendant on treatment and reburial of the remains. Further provisions of Public Resources Code, Section 5097.98 would be followed as applicable.

**PF-GHG-1: Minimize Energy Consumption from Construction Activities.** Energy consumption from construction activities would be minimized by the use of construction BMPs, including, but not limited to the following:

- Limit idling of vehicles and equipment.
- Use solar power as a power source, if feasible.
- Ensure regular maintenance of construction vehicles and equipment.
- If feasible, recycle nonhazardous waste and excess materials to reduce disposal offsite.

**PF-HAZ-1: Caltrans Standard Specifications and Hazardous Waste Regulations.** The current Caltrans Standard Specifications Section 13-4, Job Site Management, would be implemented to prevent and control spills or leaks from construction equipment and from storage of fuels, paints, cleaners, solvents, and lubricants. All aspects of the Project associated with transport, storage, use, and disposal of hazardous materials would be done in accordance with the California Health and Safety Code and the appropriate local, state, and federal hazardous waste regulations. Handling and management of hazardous materials would comply with the current Caltrans Standard Specification Section 14-11, Hazardous Waste and Contamination, which outlines handling, storing, and disposing of hazardous waste.

**PF-NOI-1: Idling of Internal Combustion Engines.** Unnecessary idling of internal combustion engines would be avoided within 100 feet of sensitive receptors.

**PF-NOI-2: Maintaining Internal Combustion Engines.** All internal combustion engines would be maintained properly to minimize noise generation. Internal combustion engine driven equipment must be equipped with manufacturer recommended intake and exhaust mufflers that are in good condition and appropriate for the equipment.

**PF-NOI-3: Quiet Air Compressors.** The Project would use quiet air compressors and other quiet equipment where such technology exists.

**PF-NOI-4: Construction Schedule.** Construction activities would mostly occur during the day, between 6:00 a.m. and 9:00 p.m. Noisy operations would be scheduled to occur within the same time period to the greatest extent possible. The total noise level would not be significantly greater than the level produced if operations are performed separately. Some nighttime construction would occur and would adhere to Caltrans Standard Specification 14-8.02.

**PF-NOI-5: Equipment Staging.** Locate all stationary noise-generating construction equipment as far as practical from noise-sensitive receptors or provide baffled housing or sound aprons to equipment when sensitive receptors adjoin or are near a construction project area.

**PF-WQ-1: Trash Management.** All food-related trash items, such as wrappers, cans, bottles, and food scraps, would be disposed of in closed containers and removed by the contractor at least once daily from the Project limits. A trash reduction system would also be developed by the contractor, approved by Caltrans, and implemented per Caltrans Statewide National Pollutant Discharge Elimination System Permit and San Francisco RWQCB Cease and Desist Order.

**PF-UTIL-1: Notify Utility Owners of Construction Schedule.** Caltrans would notify utility companies of construction schedules for proposed Project work to minimize potential disruption of utility service.

### 2.2.9 No Build Alternative

The No Build Alternative would not meet the purpose and need of the Project. If no action is taken, continued degradation of the highway would occur affecting the structural integrity and ultimately creating more costly repairs to the highway.

## 2.3 Permits and Approvals Needed

The following permits would need to be obtained for the Project.

**Table 2-14: List of Permits**

| Agency | Permit | Permit Status |
|---|---|---|
| San Francisco Bay Conservation and Development Commission | BCDC Maintenance Permit | Caltrans has a Maintenance Permit with BCDC and anticipates it will be able to be authorized to cover the work proposed within BCDC jurisdiction for this Project by 9/15/28. |
| US Fish and Wildlife Service | Biological Opinion | The Biological Opinion would be obtained during the design phase. Section 7 consultation has been initiated as of 06/12/2025. |
| US Army Corps of Engineers | 404 Nationwide Verification | The permit would be obtained during the design phase. |
| Regional Water Quality Control Board | 401 Water Quality Certification | The permit would be obtained during the design phase. |

# Chapter 3 California Environmental Quality Act Evaluation

This chapter evaluates potential environmental impacts of the Project described in Chapter 2 as they relate to the CEQA checklist for compliance with State CEQA Guidelines (Title 14 California Code of Regulations, Division 6, Chapter 3, Section 15091).

## 3.1 Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by this Project. Please see the full CEQA Environmental Checklist for additional information.

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

## 3.2 Determination

Based on this initial evaluation:

| | |
|---|---|
| X | I find that the proposed Project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared. |
| | I find that although the proposed Project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the Project have been made by or agreed to by the Project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared. |
| | I find that the proposed Project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required. |
| | I find that the proposed Project MAY have a “potentially significant impact” or “potentially significant unless mitigated” impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed. |
| | I find that although the proposed Project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed Project, nothing further is required |
| Signature: Larry E. Bonner | **Date:** 5/28/2026 |
| Printed Name: Lawrence Bonner | |

## 3.3 CEQA Environmental Checklist

The CEQA Environmental Checklist (presented at the beginning of each resource section below in the form of a table listing the pertinent questions applicable to the resource) identifies physical, biological, social, and economic factors that might be affected by the proposed Project. In many cases, background studies performed in connection with Projects would indicate that there are no impacts to a particular resource. Each resource category subsection that follows begins with a summary table that lists the CEQA checklist questions that pertain to that resource, along with the determinations for each question resulting from the analysis presented in each subsection. A “No Impact” answer in the CEQA Determination column reflects this determination. The words “significant” and “significance” used throughout this chapter are related to CEQA, not National Environmental Policy Act, impacts. The questions in the CEQA checklist are intended to encourage the thoughtful assessment of impacts and do not represent thresholds of significance.

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 BMPs and measures included in the 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. Proposed Project Features and Avoidance and Minimization Measures can be found in Appendix B.

Sections 3.3.1 through 3.3.21 present the CEQA determinations under Appendix G of the CEQA Guidelines. The CEQA determinations depend on the level of potential environmental impact that would result from the Project. The level of significance determinations are defined as follows:

- No Impact: Indicates no physical environmental change from existing conditions.
- Less than Significant Impact: Indicates the potential for an environmental impact that is not significant with or without the implementation of AMMs.
- Less than Significant Impact with Mitigation Incorporated: Indicates the potential for a significant impact that would be mitigated with the implementation of a MM to a level of less than significance.
- Potentially Significant Impact: Indicates the potential for significant and unavoidable environmental impact.

### 3.3.1 Aesthetics

Except as provided in Public Resources Code Section 21099, would the Project:

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

Caltrans prepared a Visual Impact Assessment (VIA) on August 29, 2025 (Caltrans 2025a). The VIA was prepared in accordance with the guidelines in the Federal Highway Administration's (FHWA) Visual Impact Assessments for Highway Projects (FHWA 1981).

The Project corridor is defined as the land that is visible from, adjacent to, and outside the highway right of way (ROW). It is determined by topography, vegetation, and viewing distance. Within the Project corridor, the visual character of the Project area is defined by a rural highway that runs along the foothills of Napa and Solano counties. Within Napa County, the corridor is bordered by farmlands and lush green vineyards set against a backdrop of gently rolling hills. As the highway passes through the cities of Fairfield and Suisun in Solano County, the landscape transitions to a mix of residential neighborhoods, industrial areas, and business zones. Soundwalls in the residential sections provide a visual screen. Vegetation along the highway includes mature trees lining the roadside and shrubs planted in the median.

**a, b) No Impact**

The VIA memo describes the scenery within the Project area to be relatively uniform and consequently have low visual memorability. The Project would not have any adverse effect on a scenic vista. As analyzed in the VIA (Caltrans 2025a), the Project would not adversely affect any designated scenic resource (such as a rock outcropping, tree grouping, or historic property), as defined by CEQA statutes or guidelines, or

Caltrans policy. Therefore, there would be no impact to scenic vistas, existing visual character or quality of public views.

**c) Less Than Significant Impact**

The Project would not substantially degrade the existing visual character or quality of public view of the site and its surroundings. The work proposed for the Project would be compatible with the existing visual character and quality of the corridor.

The Project will result in temporary impacts to visual/aesthetics resources due to the presence of construction equipment and materials necessary during construction. Temporary construction impacts to visual resources would be less than significant and would include roadside vegetation removal, staging of materials and equipment, and lighting during nightwork. Toward the end of construction, hydroseeding with a regionally appropriate native seed mix would help ensure that native vegetation is quickly reestablished, thereby largely erasing the minor and temporary visual impacts of the Project.

**d) No Impact**

The Project would not create a new source of permanent light or glare. Construction activities would require the need for temporary lighting primarily due to nighttime paving of SR 12. However, this lighting would be temporary and only during construction activities. Travel lanes would be restriped after paving is completed with reflective paint, since this is replacement in-kind it would not be a new source of light or glare. Finally, proposed RSP at PM 0.24 in Napa County would be completed as specified in AMM AES-2 and AMM AES-3 to minimize glare impacts and visual contrast.

***Avoidance and Minimization Measures***

Caltrans would incorporate the following AMMs into the Project to offset or avoid potential impacts to aesthetics. AMMs AES-1 through 3 are listed here and in Appendix B.

**AMM AES-1: Irrigation Repair.** Irrigation damaged and/or removed because of the Project shall require repair/replacement. Existing plants must continue to receive regularly scheduled water from an alternative source until the irrigation system is repaired and functioning.

**AMM AES-2: Limiting Glare and Contrast.** Incorporate aesthetic treatments to visible Project features where appropriate such as color and/or texture to help minimize glare, limit visual contrast, and support visual unity and intactness along the corridor.

**AMM AES-3: Rock Slope Protection.** Design rock slope protection with material of an appropriate size, scale, and color such that it reduces visual contrast.

### 3.3.2 Agriculture and Forest Resources

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

Would the Project:

| Question | CEQA Determination |
|---|---|
| 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 Impact |
| b) Conflict with existing zoning for agricultural use, or a Williamson Act contract? | No Impact |
| 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 Impact |
| d) Result in the loss of forest land or conversion of forest land to non-forest use? | No Impact |
| 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 Impact |

According to the California Department of Conservation's Important Farmland Finder (Conservation 2025a), the majority of the Project area in Solano County is located adjacent to Urban Land and Non-agricultural Land. In Napa County, the Project Area passes by Prime Agricultural Land, Farmland of Statewide Importance, Unique Farmland, Farmland of Local Importance, and relatively smaller amounts of Urban Land and Non-agricultural Land. It is important to note that although the proposed work is intended to occur alongside the several types of farmland listed above, the Project area

is primarily within Caltrans ROW, with the exception of three permits to enter and construct (PTECs) needed in Solano County from between PMs 5.10 – 6.91. The three parcels of land for which the Project will obtain a PTEC is classified as Urban and Built-up Land, and Grazing Land.

**a, b, c, d, e) No Impact**

No farmland near the Project area in Napa and Solano Counties would be converted to non-agricultural use as a result of the Project. None of the proposed work for the Project would alter farmland and consequently no impact to existing farmland would occur.

The California Department of Conservation's Williamson Act Enrollment Finder (Conservation 2025b) is a mapping tool used to determine the location of land enrolled in the Williamson Act. In Napa County, the Project area bypasses Prime Agriculture Land and Nonprime Agriculture Land, both of which are categories of land that can be enrolled in the Williamson Act. In Solano County, the Project area bypasses Nonprime Agriculture Land, also known as Grazing Land, according to the California Department of Conservation's Important Farmland Finder. No work for this Project would encroach on land enrolled in the Williamson Act or land zoned for agricultural use, which includes the PTECs needed in Solano County.

There would be no loss or conversion of forest land to non-forest land, or any other changes to the existing environment that would convert farmland to nonagricultural use or forest land to non-forest use. Therefore, the Project would have no impact on agriculture and forest resources.

### 3.3.3 Air Quality

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

| Question | CEQA Determination |
|---|---|
| a) Conflict with or obstruct implementation of the applicable air quality plan? | No Impact |
| 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? | Less Than Significant Impact |
| c) Expose sensitive receptors to substantial pollutant concentrations? | No Impact |
| d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people? | No Impact |

The Project footprint is within Napa and Solano Counties, which are located in the San Francisco Bay Area Air Basin (SFBAAB). The Bay Area Air Quality Management District is the regulatory agency for the SFBAAB in which the Project is located. The SFBAAB is designated as nonattainment for both the federal and state ozone standards, and for the state and federal PM2.5 annual standard. It is also in nonattainment for the state PM10 standard. The basin is in attainment or unclassified for all other state and federal air quality standards (CARB 2024).

**a, c, d) No Impact**

During construction, air pollutants are expected to be minimal to negligible. The Project would not conflict with or obstruct the implementation of an applicable air quality plan, expose sensitive receptors to substantial pollutant concentrations, or result in other emissions adversely affecting a substantial number of people.

**b) Less than Significant Impact**

The Project would be required to comply with Caltrans Standard Specification 14-9, Air Quality, which requires compliance with air-pollution control rules, regulations, ordinances, and statutes that apply in the Project area. Construction emissions are expected to be short-term and are not expected to result in a cumulative net increase in the criteria pollutants. Additionally, the Project would not increase the capacity of SR 12

within the Project limits. For these reasons, impacts to air quality would be less than significant.

### 3.3.4 Biological Resources

Would the Project:

| Question | CEQA Determination |
|---|---|
| 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? | Less Than Significant Impact |
| 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? | Less Than Significant 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? | Less Than Significant Impact |
| 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 Impact |
| e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? | 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 Impact |

Caltrans prepared a Natural Environment Study (NES) (Caltrans 2025b) to determine potential impacts of this Project on biological resources, including sensitive plant and wildlife species. The BSA includes the areas surveyed to identify, evaluate, and quantify the natural resources potentially affected within the Project footprint. The Project footprint is defined as the entire area of direct impacts including areas that could be potentially disturbed due to construction activities.

The BSA includes the entire Project footprint, including areas that would be permanently and temporarily impacted by all activities of the Project, with an additional 100-foot buffer. The BSA measures approximately 455 acres and includes 11 drainage system (DS) locations (see Table 3-1).

**Table 3-1: Proposed Drainage Work by Drainage System**

| Location | County | Post Mile | BSA Segment | Proposed Work |
|---|---|---|---|---|
| DS 1 | SOL | 3.33 | 2 | Replace 18” flared end section (FES) on westbound side |
| DS 2 | SOL | 3.49 | 2 | Replace 18” FES on westbound side |
| DS 3 | SOL | 3.59 | 2 | Replace 18” FES on westbound side |
| DS 4 | SOL | 3.78 | 2 | Replace 18” FES on westbound side |
| DS 5 | SOL | 3.88 | 2 | Replace 24” FES on westbound side |
| DS 6 | SOL | 3.97 | 2 | Replace 18” FES on westbound side |
| DS 7 | SOL | 4.01 | 2 | Replace 18” FES on westbound side |
| DS 8 | SOL | 4.39 | 2 | Replace 18” FES on westbound side and eastbound sides; Line 18” pipe |
| DS 9 | SOL | 4.41 | 2 | Replace 18” FES on westbound and eastbound sides; Line 18” pipe |
| DS 10 | SOL | 7.75 | 2 | Replace 18” FES on westbound and eastbound sides |
| DS 11 | NAP | 0.24 | 1 | Replace rock slope protection on eastbound side |

The BSA for this Project has been divided into two segments, referred to as BSA Segment 1 and BSA Segment 2, which are divided by the I-80 interchange along SR 12 in Solano County. Segment 1 is split between Napa and Solano County, beginning in Napa County at PM 0.0 – 3.31, and continuing into Solano County from PM 0.0 – 2.5, extending to SR 12/I-80 interchange. This segment is surrounded by mostly undeveloped land, particularly agricultural land and vineyards. Several waterways within this segment are classified as wetlands, primarily freshwater emergent wetland types. Segment 2 of the BSA begins at the SR 12/I-80 interchange, spanning PM R1.85 – 7.90 of SR 12. This segment is primarily developed land that also includes portions of wetland habitats to the south of SR 12.

Both segments of the BSA are generally comprised of the following vegetation types: annual grassland and ruderal, coast live oak-willow riparian forest, coast live oak woodland, wetlands and water, alkali grassland, landscaped vegetation, and agricultural land. The most common vegetation type within the BSA along SR 12 is grassland dominated by non-native ruderal vegetation.

Sensitive aquatic habitat types identified in the BSA include riverine, freshwater pond, freshwater emergent wetland, freshwater forested/shrub wetland, coastal brackish marsh, and estuarine and marine deepwater habitats. These features occur primarily in

Segment 2 of the BSA, near Suisun Marsh and Hill Slough, while smaller freshwater wetlands and drainage features are scattered throughout the remainder of the corridor.

Databases were used to evaluate potential impacts that could occur to sensitive biological resources as a result of the Project. Database searches included the U.S. Fish and Wildlife Service Information for Planning and Consultation (IPaC), the CDFW California Natural Diversity Database (CNDDB), the California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants of California database, the National Wetlands Inventory, and the Natural Resources Conservation Service soils information database.

In addition to database queries, field studies were conducted at each location within the BSA to assess existing natural resources. Field studies used in the preparation of the NES include several rare plant surveys and a wildlife habitat assessment.

**a) Less Than Significant Impact**

Special-status species potentially present within or adjacent to the BSA are discussed in the following subsections and compiled in Appendix E (Table E-1).

#### SPECIAL-STATUS PLANT SPECIES

Based on the literature and database review, Caltrans biologists determined that ten special-status plant species could be present within the BSA. However, only five of those species were determined to have potential to occur within the Project area based on the habitat conditions present during field surveys. These species include:

- Contra Costa goldfields *(Lasthenia conjugens*),
- Keck's checkerbloom (*Sidalcea keckii*),
- Two-fork clover *(Trifolium amoenum*),
- San Joaquin Valley orcutt grass (*Orcuttia inaequalis*), and
- Santa Cruz tarplant (*Holocarpha macradenia*).

These species are typically associated with foothill grasslands, seasonal wetlands, marsh habitats, alkaline flats, and other such features found within the BSA. Several of these species, including Contra Costa goldfields, are associated with seasonal wetlands or areas exhibiting seasonal inundation, while others such as Santa Cruz tarplant and Two-fork clover are more associated with upland grasslands and disturbed soils. Habitat conditions were not present for the other plant species identified in Table E-1. A total of

three separate rare plant surveys were conducted from April to July of 2025 to account for the optimal bloom periods of each species. In each focused survey, no special-status plant species were observed. It was noted that the absence of these species within the Project area is likely due to poor soil conditions and limited habitat quality.

While rare plant presence cannot be entirely ruled out based on a single season of surveys, the field effort was conducted during optimal bloom windows for all target species and covered all accessible habitat areas. In addition to negative survey results, several site-specific environmental conditions further reduce the likelihood that special status plant species occur within the Project impact area. Specifically, the majority of the Project footprint occurs within the existing roadway prism and shoulder, where habitat conditions are heavily disturbed. These areas are composed of imported fill, compacted and modified soils, and are subject to regular vegetation management such as mowing and herbicide application. These conditions are generally unsuitable for supporting rare plant species, particularly those associated with intact clay soils, seasonal wetlands, or undisturbed native grasslands.

Based on the negative survey findings, combined with the poor soil condition and limited habitat quality within the Project footprint, special-status plant species are largely considered absent from the BSA.

Despite finding no special status plant species during the 2025 surveys, Contra Costa goldfields (CCG) is still being considered for this analysis because critical habitat for this species is located in BSA Segment 2 at PM R3.21-R4.50 and PM 7.60-7.90. USFWS defines critical habitat as specific areas that are essential to the conservation of a federally listed endangered or threatened species.

**Contra Costa Goldfields (*Lasthenia conjugens*)**

Contra Costa goldfields (CCG) is a species of wildflower that is federally listed as endangered. No CCG were observed during Caltrans rare plant surveys, so there are no impacts anticipated to individual CCG. However, critical habitat for CCG is located in BSA Segment 2 at PM L3.20-R4.50 and PM 7.60-7.90. Temporary impacts to 0.14 acres of CCG critical habitat are anticipated as a result of FES replacement and drainage improvements at DS 9 (PM R4.41) and DS 10 (PM 7.75). CCG are associated with seasonal wetlands or areas exhibiting seasonal inundation, which have been identified near DS 9 and DS 10. At DS 9, proposed work includes culvert pipelining and FES replacement, which would temporarily disturb the seasonal wetlands (CCG critical

habitat) that have been identified at these drainage systems. Similarly for DS 10, only FES replacement at either end of the culvert is proposed.

No permanent impacts to special-status plant species are anticipated because disturbance of special-status plant habitat would be temporary and short term. The impact would be less than significant.

### SPECIAL-STATUS WILDLIFE SPECIES

#### Vernal Pool Fairy Shrimp ( *Branchinecta lynchi)* and Vernal Pool Tadpole Shrimp (*Lepidurus packardi*)

Two special-status wildlife species are being discussed in this subsection, the vernal pool fairy shrimp (VPFS) and the vernal pool tadpole shrimp (VPTS). The VPFS is federally listed as threatened, and the VPTS is federally listed as endangered. Both species are a type of crustacean known as branchiopods and are known to occur in vernal pool habitats. These species' lifecycles depend on vernal pools and the seasonal inundations that create them, so hydrological conditions must be adequate in depth and duration for supporting the species that are associated with these areas. Vernal pools are characterized by depressions in the earth containing stagnant water that forms as a result of heavy winter rains and poorly-drained soil, which is usually a claypan or hardpan base. These are a type of seasonal wetland that have historically supported vernal pool branchiopods as well as a wide variety of amphibians and plant species.

According to the NES, the CNDDB contains more than 20 records of VPFS within five miles of the BSA. The CNDDB also contains 11 records of VPTS within five miles of the BSA in Solano County east of the BSA. Due to this proximity of vernal pool branchiopod observations in the same general region as the Project area, additional information was needed in order to determine the species' likelihood of occurrence and subsequently, their potential to be impacted by the Project. Protocol level surveys were not conducted for vernal pool branchiopods in 2025 to confirm presence or absence. However, in 2022 and 2023, Helm Biological Consulting conducted surveys during the wet and dry seasons at the parcel to the north of DS 10, in which VPFS were found at multiple locations (HBC 2023). Helm Biological Consulting detected no evidence of vernal pool fairy shrimp presence at the seasonal wetland located within the BSA at DS 10. However, the feature was determined to have the potential for federally listed large branchiopods (HBC 2023). Further investigation by Caltrans was needed to determine the potential for VPFS and VPTS to occur within the Project area. A Caltrans biologist observed during a field visit on April 30th, 2026, that the area near DS 10 believed to be

a vernal pool is more likely a freshwater emergent wetland due to it being too small to support the plants and animals typical of vernal pools. Additionally, the biologist observed clear signs of mowing and routine maintenance, which indicates that frequent disturbance occurs at this location and likely renders it inhospitable to species such as VPFS and VPTS. Furthermore, the freshwater emergent wetland is largely outside of the work area, with only an estimated 10% of the wetland being within Caltrans' right-of-way (ROW).

It was noted during this field visit that the vegetation adjacent to DS 10 was primarily non-native grasses, which are not supportive of vernal pool branchiopods because they block sunlight, which both VPFS and VPTS need to emerge from the egg stage of their respective lifecycles. The National Resource Conservation Service (NCRS) has confirmed that the soil type at westbound DS 10 is “Antioch-San Ysidro complex, 0 to 2 percent slopes”, which is classified as moderately well-drained soil class (USDA 2026). A vernal pool is required to have a hardpan soil base that allows water to pool, so a well-drained soil type is not conducive to providing the hydrological conditions needed to support a vernal pool. Furthermore, the proximity of SR 12 and the roadway chemicals that would run of into DS 10 would further impair the growth and development of vernal pool branchiopods. The combination of factors present such as 1) An inhospitable vegetation community, 2) Well-drained soil, and 3) Likely introduction of harmful roadway chemical pollutants, are all indicative of inadequate conditions for both a vernal pool and vernal pool branchiopods being present at DS 10. Moreover, the area surrounding DS 10 is subject to frequent mowing and maintenance, which further decreases the likelihood of vernal pool branchiopods occurring due to repetitive disturbance.

The Project activities at DS 10 include the removal and replacement of two existing FES and pipelining the culvert to restore its structural integrity. This work may involve excavation, replacement of damaged FES, equipment access, and soil disturbance within the adjacent habitat area. These Project related impacts may include temporary disturbance of seasonal wetland hydrology, soil compaction or sedimentation, and indirect effects from equipment staging or surface runoff. The new FES would be approximately the same size as the current FES in place, so no permanent impacts are expected at DS 10.

Caltrans has determined that the Project may affect, but is not likely to adversely affect the VPFS, VPTS, and their critical habitats. The proposed Project may result in 0.01 acre of temporary impacts to critical habitat for VPFS and VPTS, specifically wetland

areas within DS 10. However, no permanent impacts to VPFS or VPTS are anticipated. Temporary impacts to critical habitat would occur as a result of FES replacement, which would be addressed through AMM BIO-1, which requires preconstruction surveys to be done prior to work beginning. These surveys would confirm the absence of vernal pool branchiopods in order to assure that impacts to these species are avoided during construction. With the implementation of this AMM, impacts to VPFS, VPTS and their critical habitat would be less than significant.

**California red-legged frog (*Rana draytonii*)**

The California red-legged frog (CRLF) is federally listed as threatened and is also a California Species of Special Concern (SSC). CRLF predominantly inhabits a wide range of water sources, including creeks, lakes, ponds, drainages, marshes, lagoons, and ephemeral or permanent streams, and can be found in valley bottoms and foothills.

Protocol level surveys for CRLF within the BSA segments were not conducted for the Project. BSA Segment 1 of the Project is located near but not within designated critical habitat for CRLF. The California Natural Diversity Database (CNDDB) records show that the closest CRLF occurrence to the Project is located near SR 12 and I-80, approximately 0.02 mile east of Segment 1 and approximately 3.75 miles southeast of Segment 2. There is no critical habitat for CRLF within BSA Segment 2.

Suitable aquatic habitat for CRLF is absent from the BSA; however, there is some potential for dispersal in the BSA at DS 11. Dispersal refers to a species using suboptimal habitat for moving from one patch of suitable habitat to another. The proposed work for DS 11 includes removal and replacement of RSP on the westbound side, which may temporarily disturb adjacent upland habitat that could be used by dispersing CRLF. Seasonal wetland and upland grassland habitat near DS 11 may support dispersing individuals, particularly in years with higher-than-average precipitation.

Despite DS 11 being well-positioned for dispersal between two areas of CRLF critical habitat, there are several factors present in the surrounding area that make occurrence of CRLF unlikely. DS 11 is located approximately 35 feet from the highway shoulder, surrounded by commercial development in the north/northwest, and a vineyard in the east/southeast. According to a report assessing the conservation status of CRLF, the USFWS stated that this species tends to avoid major roadways and agricultural areas due to threats such as passing vehicles, predator species, and pesticides (USFWS

2022). Due to the proximity of DS 11 to these areas, occurrence is highly unlikely. There is otherwise no suitable habitat in other portions of the BSA.

While permanent impacts to CRLF are not anticipated, the Project may result in up to 0.06 acre of temporary impacts to potential dispersal habitat for CRLF, near DS 11. No aquatic breeding habitat is present within the BSA and no CRLF individuals were observed during field surveys. Caltrans has preliminarily determined that the Project may affect, but is not likely to adversely affect CRLF. Consultation with the USFWS is ongoing.

AMMs BIO-1, BIO-2 and BIO-4 would minimize or avoid impacts to CRLF. AMMs BIO-1 and BIO-2 pertain to conducting preconstruction wildlife surveys and installing wildlife exclusionary fencing (WEF) to keep wildlife out of the Project area. AMM BIO-4 provides guidance for relocating CRLF in the event they are found on the Project site. With the implementation of these AMMs, impacts to CRLF would be less than significant. Additionally, Caltrans proposes to offset temporary impacts to suitable CRLF habitat through onsite revegetation and restoration to preconstruction conditions, as per AMM BIO-8 (Restoration of Disturbed Areas).

**California tiger salamander (*Ambystoma californiense*)**

California tiger salamander (CTS) is both state and federally listed as a threatened species. They are large, terrestrial salamanders most commonly found in annual grassland habitat. CTS are typically associated with vernal pools or similar habitats consisting of seasonal pools or ponds surrounded by grasslands.

CTS require two major habitat components: aquatic breeding sites (typically vernal pools) and nearby terrestrial refuge sites, which are normally small burrows in grassland or woodland habitats.

No protocol level surveys have been conducted for CTS. According to the CNDDB, there are no records of CTS in Napa County. All known occurrences of CTS in Solano County are located east or southeast of the BSA, with the closest occurrences ranging from 1.25 - 2.00 miles away. Furthermore, no CTS have been observed within the BSA. No critical habitat for CTS is present within the BSA. While potential aquatic breeding habitat was identified at DS 10, no small burrows in the surrounding grassland were found, which indicates a distinct lack of refuge habitat for CTS.

Notably, CTS has a strong preference for vernal pools as breeding habitat because CTS larval offspring needs 3-6 months in inundated conditions in order to develop

properly. Vernal pools typically have inundation depths of about 6 inches and a hydroperiod (or flooding duration) sufficient for supporting CTS reproduction and development, whereas other types of seasonal wetland might be shallower and have a relatively shorter hydroperiod. DS 10 was the only location in the BSA that has potential for CTS to occur, given its proximity to freshwater emergent wetlands.

There are observations from a survey dated March 11, 2025, indicating the presence of saturated soil and shallow, aggregated pools of water less than two inches deep near DS 10. In order to investigate recent hydrologic trends in the area surrounding DS 10, the biologist reviewed visual data from Google Maps spatial imagery, as well as quantitative rainfall data provided by the California Department of Water Resources (CDWR). This review entailed comparing ground-level spatial data observations of the area surrounding DS 10 with rainfall data for that part of Solano County. According to the CDWR, the Bay Area in 2019 had significantly higher seasonal precipitation than other recent years with February precipitation 227% above the February average from 1981-2010 (CDWR 2019). Additionally, the spatial imagery data from March of 2019 showed a layer of water roughly 2 inches deep in aggregated puddles around DS 10. Given that the area's soil has poor water retention and cannot seem to form a pool of water for long enough to support CTS, it is highly unlikely that they would use DS 10 as aquatic breeding habitat. This analysis concludes that the area surrounding DS 10 is unfit to serve as aquatic breeding habitat for CTS, although because this location is within CTS's known range, it is likely that the area could still function as dispersal habitat. For these reasons, Caltrans determined that the Project may affect, but is not likely to adversely affect CTS due to an absence of refuge habitat and lack of sufficient hydrologic conditions for supporting aquatic breeding habitat.

While no permanent impacts are anticipated for CTS, the Project may result in 0.01 acre of temporary impacts to low quality CTS dispersal habitat due to the FES replacement and culvert work proposed for DS 10. Note that this work would also provide a long-term beneficial impact for CTS, seeing as new FES would more evenly distribute the flow of water at this area, which would reduce erosion and subsequent sedimentation of the wetland habitat at this location. Temporary impacts would be addressed through AMMs BIO-1 (Preconstruction Survey) and BIO-2 (Wildlife Exclusionary Fencing), as well as AMMs BIO-4 (Wildlife Species Relocation), BIO-5 (Non-work Buffer for Special-status species), and BIO-6 (Biological Monitoring). Preconstruction surveys and biological monitoring would ensure frequent checks for listed species such as CTS, and the additional AMMs listed would ensure that CTS is avoided or excluded from the Project

area during construction. With these AMMs implemented, impacts to CTS would be less than significant.

**Swainson's Hawk (*Buteo swainsoni*)**

Swainson's hawk (SWHA) is listed as a state threatened species. This raptor breeds in open grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands with suitable nesting sites and adjacent foraging habitat. SWHA typically nests in mature trees and forage in alfalfa fields, pastures, or other open habitats supporting abundant prey such as small mammals and insects. The species returns to California in March for nesting and departs by late September.

CNDDB records indicate more than 30 SWHA occurrences within five miles of the BSA. The nearest active nest was documented in 2022 at the intersection of I-80 and SR-12. No CNDDB records were found within 0.5 mile of DS 1–DS 9, but mature trees suitable for nesting are present along Ledgewood Creek. The nearest known record to DS 10 is approximately 1.3 miles northeast at Travis Air Force Base.

The Project area lies within the known breeding and foraging range of SWHA. While no direct removal of nest trees is proposed, construction activities could cause temporary disturbance from noise or vibration, if nesting occurs nearby. However, noise impacts are minimal due to the presence of existing freeway traffic and the noise it generates on a regular basis. If the Project setting changes between the finalization of this document and construction of the Project, and Swainson's hawk nests are discovered within 0.5 mile of the Project area, appropriate avoidance buffers would be established through coordination with CDFW to avoid take of SWHA. AMM BIO-1 (Preconstruction Surveys) would be implemented to avoid disturbance. With these measures implemented, there would be no impact to SWHA.

**Tricolored blackbird (*Agelaius tricolor*)**

The tricolored blackbird is a state-listed threatened species. Highly colonial and largely endemic to California, this species breeds primarily in the Central Valley and nearby regions. The species requires open water, dense nesting substrates such as cattails, bulrush, or Himalayan blackberry, and nearby foraging areas rich in insect prey. Breeding colonies are often located in marshes, irrigated pastures, or agricultural fields within a few kilometers of foraging habitat, which may include alfalfa, hay, and grain crops.

CNDDB records identify 13 tricolored blackbird occurrences within five miles of the BSA. The nearest record lies less than 0.5 mile southwest of DS 11 in Napa County, with additional records in Solano County approximately 1.3 miles south of DS 10 at Potrero Hills Landfill and three miles southeast near DS 9. No nesting colonies or suitable nesting vegetation were observed within the BSA during field surveys. The nearest potential nesting habitat occurs along riparian vegetation bordering Ledgewood Creek within 500 feet of the BSA for DS 2 and DS 3 in Solano County. Nesting habitat also occurs in perennial brackish marsh habitat 2.75 miles south of DS 10.

Project activities at DS 1, DS 2, and DS 9 include FES replacement, which could cause indirect noise impacts if tricolored blackbirds are present during the breeding season. To avoid such impacts, the Project would implement AMM BIO-1 (Preconstruction Surveys). With this measure, no impacts to tricolored blackbird are expected.

**Migratory and Nesting Birds**

The BSA has the potential to support birds protected by the MBTA and Sections 3503, 3513, and 3800 of the California Fish and Game Code. Most birds found in the BSA are protected under the MBTA. Project construction has the potential to result in the take of nests, eggs, young, or individuals of protected species. Construction disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings or otherwise lead to the abandonment of nests. Take of protected birds or eggs would be avoided through AMM BIO-1 (Preconstruction Surveys) and AMM BIO-13 (Nesting Bird Protection). With these measures, there would be no impact to birds protected by the MBTA and Sections 3503, 3513, and 3800 of the California Fish and Game Code.

## b, c) Less Than Significant Impact

Sensitive natural communities within the BSA include riverine, freshwater emergent wetland, coastal brackish marsh, freshwater pond, freshwater forested/shrub wetland, and seasonal wetland habitats. These communities are recognized by the CDFW and USFWS as sensitive due to their ecological importance and potential to support special-status species.

Temporary impacts to 0.18 acre of freshwater emergent wetland at DS 1-11 would result from culvert work, and replacement of FES and RSP. The temporary impacts for drainage work would be a result of short-term disturbance of the areas around the various DS locations needed to pipeline culverts and replace FES and RSP. These areas would be restored post-construction through AMM BIO-8 (Restoration of Disturbed Areas). Implementation of AMM BIO-7 (Marking Environmentally Sensitive

Areas) would ensure protection of riparian and wetland habitats through marking environmentally sensitive areas (ESAs).

Federally protected wetlands, as defined by Section 404 of the Clean Water Act (CWA), occur at multiple drainage locations within the BSA. These areas are comprised of freshwater emergent wetland habitats. According to delineation data and review from the National Wetlands Inventory (NWI), freshwater emergent wetland habitat features are present at all DS locations. Table 3-2 below displays impacts to wetland types as well as the agency or agencies maintaining jurisdiction over each area of impact.

## Table 3-2: Wetland Impacts

| Location | County-Route | Post Mile | Area Sq Ft | Area Acres | Impact Type | Wetland Type | USACE Jurisdiction | RWQCB Jurisdiction |
|---|---|---|---|---|---|---|---|---|
| DS 1 | SOL 12 | R3.33 | 945 | 0.02 | Temporary | Freshwater emergent wetland | Yes | Yes |
| DS 2 | SOL 12 | R3.49 | 326 | 0.01 | Temporary | Freshwater emergent wetland | Yes | Yes |
| DS 3 | SOL 12 | R3.59 | 466 | 0.01 | Temporary | Freshwater emergent wetland | Yes | Yes |
| DS 4 | SOL 12 | R3.78 | 356 | 0.01 | Temporary | Freshwater emergent wetland | Yes | Yes |
| DS 5 | SOL 12 | R3.88 | 492 | 0.01 | Temporary | Freshwater emergent wetland | Yes | Yes |
| DS 6 | SOL 12 | R3.97 | 354 | 0.01 | Temporary | Freshwater emergent wetland | Yes | Yes |
| DS 7 | SOL 12 | R4.01 | 603 | 0.01 | Temporary | Freshwater emergent wetland | Yes | Yes |
| DS 8 | SOL 12 | R4.39 | 581 | 0.01 | Temporary | Freshwater emergent wetland | Yes | Yes |
| DS 9 | SOL 12 | R4.41 | 449 | 0.07 | Temporary | Freshwater emergent wetland | Yes | Yes |
| DS 10 | SOL 12 | 7.75 | 250 | 0.01 | Temporary | Freshwater emergent wetland | Yes | Yes |
| DS 11 | NAP 12 | 0.24 | 396 | 0.01 | Temporary | Freshwater emergent wetland | Yes | Yes |

Project activities at these locations would result in temporary impacts during work such as culvert and FES replacement, localized grading, and RSP repair. According to the NES (Caltrans 2025b), these actions would temporarily impact a combined 0.18 acre of freshwater emergent wetland habitat at DS 1-11. The FES and RSP at these locations would be replaced in kind, which means that the size and weight of these elements would remain consistent with the current FES at these DS locations. The culvert pipes that would be used to line the existing culverts would be less than or equal to the diameter of the existing culvert pipes at the locations noted in Table 2-1. No permanent fill, dredging, or hydrologic modification of wetland features would occur.

The majority of the work proposed in the Project would be confined to previously disturbed and paved areas, with exception of the impacts to freshwater emergent wetland habitats disclosed above. The Project would obtain the appropriate U.S. Army Corps of Engineers Section 404 Nationwide Permit and Regional Water Quality Control Board Section 401 Water Quality Certification prior to construction. Construction-related impacts to wetlands within the Project area would be minimized through AMM WQ-1 (Stormwater Pollution Prevention Plan), AMM WQ-2 (Construction Site BMPs), and AMM WQ-3 (Permanent Treatment BMPs). Additionally, implementation of AMM BIO-7 (Marking Environmentally Sensitive Areas) would further prevent degradation of wetland habitat.

Temporarily disturbed wetland habitat would be restored post-construction through AMM BIO-8 (Restoration of Disturbed Areas). Potential impacts to wetlands from asphalt waste would be addressed through AMM HAZ-6 (Proper Disposal of Asphaltic Waste). Due to the fact that the drainage work would be in kind and that the function of these wetland habitats would not be impaired, there would be no net loss of wetland habitats. With these measures and permit conditions in place, the Project would not result in the loss or long-term alteration of state or federally protected wetlands.

Impacts to sensitive natural communities and state and federally protected wetlands would be less than significant.

**d) No Impact**

The Project area includes multiple culvert and drainage crossings assessed for their potential to support wildlife movement. The CDFW Fish Passage Assessment Database lists fifteen crossings within the Project footprint; however, each is classified as either “unassessed” or “unknown” and none provide habitat suitable for anadromous fish

passage. No instream habitat for salmonids or other migratory fish species was observed within the Project limits, and therefore no additional coordination or design measures are required for fish passage.

According to the California Essential Habitat Connectivity Project (Caltrans 2010), BSA Segment 1 is located within an essential connectivity area, and BSA Segment 2 is adjacent to such an area. BSA Segment 1 overlaps with the Jameson Canyon Project corridor, which already includes a 12-foot-by-12-foot wildlife undercrossing (at PM 0.8 in Napa County). In contrast, opportunities for wildlife passage improvement in BSA Segment 2 are limited by surrounding urban development.

Project activities would consist of pavement rehabilitation, culvert and FES replacement, and localized slope and shoulder work entirely within previously disturbed or paved areas. These activities would maintain culverts that could function as small mammal or amphibian movement pathways. No tree or vegetation removal is proposed that would affect nesting or roosting habitat, and no wildlife nursery sites are located within the work limits.

AMM BIO-1 and AMM BIO-2 require preconstruction surveys and installation of wildlife exclusion fencing. Preconstruction surveys would occur no less than 30 days prior to the start of construction and would identify the presence of listed species in the Project vicinity, and wildlife exclusion fencing would direct wildlife away from the Project area. These AMMs would ensure that wildlife movement is not impeded during construction.

Given the limited nature of the proposed improvements, the existing wildlife undercrossing in BSA Segment 1, and the absence of migratory fish passage or nursery sites, the Project would not interfere substantially with the movement of native or migratory species or impede established corridors. Therefore, there would be no impact.

**e) No Impact**

This Project would not conflict with any local policies or ordinances protecting biological resources. There would be no impact.

**f) No Impact**

The Project is located along SR-12 in Napa and Solano Counties. The Project area is not located within the boundaries of any adopted Habitat Conservation Plan (HCP) or Natural Community Conservation Plan (NCCP).

The nearest approved plan is the Solano County Multispecies HCP, which covers portions of southeastern Solano County; however, the Project area lies outside the plan's boundaries and does not overlap with any covered lands or mitigation zones identified in the plan. Napa County does not have an adopted HCP or NCCP, nor does the Project area fall within any other regional habitat conservation planning area administered by the USFWS or the CDFW.

The Project does not occur within or adjacent to any adopted or proposed HCP/NCCP areas, it would not conflict with the goals, policies, or provisions of such plans. For this reason, there would be no impact.

***Avoidance and Minimization Measures***

**AMM-BIO-1: Preconstruction Surveys.** A USFWS-approved biologist will conduct preconstruction surveys for special-status species as needed. A visual encounter survey will be conducted at least 30 days before ground disturbing activities. Suitable habitat, as determined by the agency-approved biologist, within the Project alignment will be visually inspected. If special-status species are encountered in the Project alignment, work within 50 feet of the animal will cease immediately, and the Resident Engineer and approved biologist will be notified. Based on the professional judgment of the biologist, if Project activities can be conducted without harming or injuring the animal, it may be left at the location of discovery and monitored by the biological monitor. Project personnel will be notified of the finding, and at no time will work occur within 50 feet of the animal without a biological monitor present.

**AMM-BIO-2: Wildlife Exclusion Fencing.** Before starting construction, at the discretion of the Caltrans biologist, WEF will be installed along the impact area perimeter in the culvert work areas where wildlife could enter the Project alignment. WEF will be removed following completion of construction activities. At the discretion of the Caltrans biologist, WEF may be removed at times when construction is no longer active in the area.

**AMM-BIO-3: Invasive Species Control.** Invasive and exotic plants rated Moderate to High by the California Invasive Plant Council would be controlled to the maximum extent practicable, pursuant to Executive Order 13112- Invasive Species.

**AMM-BIO-4**: **Wildlife Species Relocation.** If wildlife is encountered during construction, all work in the vicinity that could result in the injury or death of the wildlife would be stopped immediately and it would be allowed to leave the job site unharmed. If

it is determined that they could be injured or killed by construction activities, the agency-approved biologist, in coordination with Caltrans and the appropriate state and federal wildlife agencies, would identify appropriate methods for capture, handling, exclusion, and relocation of individuals that could be affected. The agency-approved biologist, with appropriate handling permits or licenses from state and/or federal wildlife protection agencies as required, would do the following:

- Conduct, monitor, and supervise all capture, handling, exclusion, and relocation activities.
- Ensure that sufficient personnel are available for safe and efficient collection of wildlife.
- Ensure that proper training and any required permitting or licensing is current for personnel identifying, handling, and conducting safe capture of listed species Where listed species cannot be captured, handled, excluded, or relocated, actions that could injure or kill individuals would be avoided or delayed until the species leaves the affected area.

**AMM-BIO-5: Non-work Buffer for Special-status species.** If any special-status species are encountered during construction, work within at least 50 feet of the species will cease immediately. The Resident Engineer and approved biologist will be notified. Based on the biologist's professional judgment, if the project activities can be conducted without harming or injuring the animal, it may be left at the site of discovery and monitored by the biologist. Project personnel will be notified of the finding, and at no time will work occur within 50 feet of the animal without a biological monitor present.

The protective buffer may be adjusted depending on the species, site topography, species sensitivity to disturbance, and the scale of the impact. The animal will be allowed to leave the work area on its own volition, and appropriate regulatory agencies will be contacted. Under no circumstances would the capture, handling, or relocation of special-status species occur unless expressly authorized by the agencies. Construction activities would not resume without the Department-approved Biologist's approval.

**AMM-BIO-6: Biological Monitoring.** An approved biologist will be present during construction activities where take of a listed species could occur. Upon communication with the Resident Engineer or designee, the approved biologist may stop work if, for any reason, deemed necessary to protect listed species; the biological monitor will advise the Resident Engineer or designee on how to proceed.

**AMM-BIO-7: Mark Environmentally Sensitive Areas.** Before construction begins, Environmentally Sensitive Areas (ESAs) will be clearly delineated using high-visibility orange fencing, flagging, or similar marking to delineate sensitive habitats. The ESA marking will remain in place throughout construction or until work is completed at a particular location. It may be removed during the wet season (and subsequently reinstalled) if needed to prevent materials from being washed away. The final Project plans will depict all locations where ESA markings will be installed, along with the installation methods. The bid solicitation package special provisions will clearly describe acceptable marking material and prohibited construction-related activities, vehicle operation, material and equipment storage, and other surface-disturbing activities within ESAs. ESA markings will be maintained in good repair throughout the Project as needed.

**AMM-BIO-8: Restoration of Disturbed Areas.** Temporarily disturbed areas will be restored to the maximum extent practicable. Exposed slopes and bare ground will be reseeded with native grasses to stabilize and prevent erosion. Where disturbance includes the removal of trees and woody shrubs, native species will be replanted, based on the local species composition.

**AMM-BIO-9: Rail Species Preconstruction Survey.** Prior to initiation of work activities at DS 9, the agency-approved biologist will passively survey the work area for the presence of California Ridgeway's rails and black rails. If rails are encountered, activities will be halted until the individual has left the area on their own. If activities may take place during the breeding season at DS 9, a California Ridgway's rail or black rail, United States Fish and Wildlife Service (USFWS) protocol-level surveys at the proposed project site in appropriate habitat for the rail to determine the absence/presence of the rail. If rails are detected during breeding season surveys, activities should not occur within a buffer distance determined by site-specific noise analysis from the suitable habitat during the breeding season.

**AMM-BIO-10: Rare Bumble Bees Preconstruction Survey.** Immediately prior to vegetation removal or impact activities, a qualified biologist will perform a preconstruction survey for the western bumblebee. If construction is halted because bumble bees are in harm's way, construction may only resume after the bumble bees leave the active area in the Project Area.

**AMM-BIO-11: High Tide Work Restriction.** Work activities at DS 9 should not occur within two hours before or after extreme tides (6.5 feet or above measured at the Suisun

Slough adjusted to the timing of local high tides) or when the marsh plain is inundated, which could prevent California Ridgeway's rail, black rail or salt marsh harvest mouse from reaching available cover. Current and predicted tides and currents at Suisun Slough can be accessed on the National Oceanic and Atmospheric Administration (NOAA) website at Tide Predictions - NOAA Tides & Currents.

**AMM-BIO-12: Night Lighting.** Nighttime work will be avoided to the maximum extent practicable. For unavoidable nighttime work, all lighting will be shielded and directed downward toward the active construction area to avoid exposing nocturnal wildlife to excessive glare.

**AMM-BIO-13: Nesting Bird Protection.** During the bird nesting season (February 1 to September 30), an agency-approved biologist would conduct pre-construction surveys for active bird nests no more than 3 days before the start of ground or vegetation disturbance events and every 14 days during Project activities. Tree and/or shrub trimming would be conducted outside of bird nesting season unless monitoring results show no active nesting is taking place as discussed for the following buffer zones. If an active nest is identified during construction that may be impacted by Project activities, a no-disturbance buffer of 300 feet for raptors and 50 feet for non-raptors would be established immediately and the agency-approved biologist would be notified so that the nest can be monitored. A reduced or enlarged buffer and other protection measures would be implemented as needed and in consultation with the appropriate wildlife agency.

### 3.3.5 Cultural Resources

Would the Project Result in:

| Question | CEQA Determination |
|---|---|
| a) Cause a substantial adverse change in the significance of a historical resource pursuant to in §15064.5? | No Impact |
| b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5? | No Impact |
| c) Disturb any human remains, including those interred outside of dedicated cemeteries? | No Impact |

This section summarizes the findings of the Section 106 Screening Memo prepared by Caltrans for the Pavement Rehabilitation Project at SR 12 PM 0.0 – 3.3 in Napa County and SR 12 PM 0.0 – 7.9 in Solano County (Caltrans 2025c).

The review for the Project was carried out in accordance with the Programmatic Agreement Among the Federal Highway Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, the United States Army Corps of Engineers' Sacramento District, San Francisco District, and Los Angeles District, and the California Department of Transportation regarding compliance with Section 106 of the National Historic Preservation Act (NHPA) as it pertains to the Administration of the Federal-Aid Highway Program in California (2024) (Section 106 PA).

Caltrans contacted the Native American Heritage Commission (NAHC) on December 20, 2024, with a request for a Sacred Lands File Search. The NAHC responded with positive results on December 26, 2024, along with a list of representatives from Native American Tribes that may have a specific interest in the region. Per CEQA Public Resource Code section 21084.3 (a), 21084.3 (c) 21080.3.1 (c), 21080.3.1 (d) (AB 52) and the NHPA Section 106 36 CFR § 800.2(c)(2)(ii), and using the NAHC contact list, letters regarding the proposed Project were electronically sent via email on December 31, 2024. Responses were received from the Yocha Dehe Wintun Nation on February 28, 2025, and the Mishewal-Wappo Tribe of Alexander Valley on January 5, 2025. In accordance with CEQA, and through good faith and subsequent consultation, the Project area was identified by both tribes as within their ancestral territories and as a culturally sensitive area but noted that monitoring is not requested due to the lack of sites in the Project area. Caltrans committed to keeping the tribes aware of any future changes to the Project.

**a, b, and c) No Impact**

Pursuant to the Section 106 PA, Caltrans has determined that the proposed Project will not impact cultural resources as there are no known Section 106 resources within the Project footprint, and no further review is necessary pursuant to the PA, Stipulation VII, “Screened Undertakings.”

### 3.3.6 Energy

Would the Project:

| Question | CEQA Determination |
|---|---|
| a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during Project construction or operation? | Less Than Significant Impact |
| b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency? | No Impact |

An Energy Analysis Report (Caltrans 2025d) was completed for the Project. This section summarizes the findings of this report.

**a) Less than Significant Impact**

Activities that consume energy also generate byproducts. Greenhouse gases (GHGs) are the most closely studied byproducts of energy consumption because they are linked to climate change (also refer to Section 3.3.8, Greenhouse Gas Emissions). The Caltrans Construction Emission Tool (CAL-CET 2021), version 1.0.2, was used to estimate diesel and gasoline fuel consumption that generates from construction equipment and vehicles. A summary of energy usage in terms of fuel consumption is shown in Table 3-3. Fuel consumption for the Project construction activities would be 35,853 gallons of diesel fuel and 10,780 gallons of gasoline.

**Table 3-3: Total Energy Consumption**

| Diesel (gallons) | Gasoline (gallons) | Electricity (kWh) |
|---|---|---|
| 35,853 | 10,780 | 6,496.136 |

Because construction activities would be temporary and short-term, the increase of energy consumption within the Project area would also be short-term. It is assumed that diesel would be used by all construction vehicles and equipment and gasoline and electricity would be used during worker's commute.

During construction, BMPs, as described in PF-GHG-1, would be implemented for energy efficiency of construction equipment. Operation of the Project would have minimal energy consumption pertaining to routine maintenance.

The Project would not result in changes in traffic volumes, vehicle mix, or any other factor that would cause an increase in energy consumption. The impact would be less than significant.

**b) No Impact**

The purpose of the Project is to restore pavement, perform drainage work, and provide additional updates to SR 12. Addressing these needs proactively would reduce the need for maintenance later on. Traffic volumes and types of vehicles using the highway would not change as a result of the Project.

The Project would not conflict with a state or local plan for renewable energy or energy efficiency. There would be no impact.

### 3.3.7 Geology and Soils

Would the Project result in:

| Question | CEQA Determination |
|---|---|
| a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:<br><br>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 Impact |
| ii) Strong seismic ground shaking? | No Impact |
| iii) Seismic-related ground failure, including liquefaction? | No Impact |
| iv) Landslides? | No Impact |
| b) Result in substantial soil erosion or the loss of topsoil? | No Impact |
| 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 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 Impact |
| e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water? | No Impact |
| f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? | No Impact |

A geologic, seismic, and palaeontologic analysis report was completed for this Project (Caltrans 2025e). This section summarizes the findings of this report.

The proposed Project spans the southern Howell Mountains in Napa and Solano Counties on the west to the Suisun Valley in the east. The geology of the western portion of the Project consists of Tertiary marine sedimentary units overlain locally by Quaternary Alluvium (Jameson Canyon) while the east is underlain by Pleistocene alluvial fans derived from the Vaca Mountains to the north as well as Holocene deposits at the northern extent of the Suisun Marsh. The alignment crosses the active Green Valley and Cordelia faults near Cordelia as well as several large landslides on the eastern edge of Jameson Canyon.

**a, b, c, d, e) No Impact**

The Project would not expose the public to significant geologic or seismic hazards. While strong ground shaking may occur at the site, proposed Project elements pose no additional impacts to the public. The Project would not expose the public to fault rupture or seismically induced slope instability or liquefaction. There are no hazards due to collapsible or expansive soils, erodible soils or landslides. Septic tanks or alternative wastewater disposal systems are not proposed for this Project. There would be no impact.

**f) No Impact**

Native Quaternary deposits, Pleistocene deposits, and Holocene deposits throughout the Project site may contain fossils below 5 feet, however Project elements would be confined to the highway prism and not impact native soils (Caltrans 2025e). There would be no impact on a unique paleontological resource or site, or unique geologic feature.

### 3.3.8 Greenhouse Gas Emissions

Would the Project result in:

| Question | CEQA Determination |
|---|---|
| a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? | Less Than Significant Impact |
| b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases? | No Impact |

**a) <u>Less than Significant Impact</u>**

The GHG emissions due to construction activities would not result in long-term impacts on the environment. Construction-generated GHGs would include emissions resulting from material processing by onsite construction equipment, workers commuting to and from the Project site, and traffic delays resulting from construction. The emissions would be produced at different rates throughout the Project, depending on the activities involved at various phases of construction. The analysis was focused on vehicle emitted GHG. Carbon Dioxide (CO2) is the single most important GHG pollutant due to its abundance when compared to other vehicle-emitted GHGs, including methane, nitrous oxide, hydrofluorocarbons, and black carbon. See Table 3-4 for a breakdown of emissions anticipated for this Project.

**Table 3-4: Summary of Construction-related GHG Emissions**

| Greenhouse Gas Parameter | Project Total |
|---|---|
| Carbon Dioxide ($CO_2$) | 511 tons |
| Methane ($CH_4$) | 0.012 tons |
| Nitrous Oxide ($N_20$) | 0.026 tons |
| Hydrofluorocarbons (HFC) | 0.013 tons |
| Carbon Dioxide Equivalent ($CO_2e$) | 496 metric tons |

Based on Project information from the environmental studies, the construction-related GHG emissions were calculated using the 2021 Caltrans Construction Emissions Tool, version 1.0.2 (CAL-CET-2021). It was estimated that for the entirety of proposed construction for the Project, 511 tons of CO2 would be produced. While the project would result in GHG emissions during construction, no change in roadway capacity as a result of the project would occur. Therefore, the project is not expected to result in an increase in operational GHG emissions. With implementation of construction emissions PFs, GHG emissions would be reduced through PF GHG-1, which is listed in Section 2.2.8 and Appendix B.

**b) <u>No Impact</u>**

During construction of the proposed project, Caltrans would require compliance with all local climate action plans, and State regulations, ordinances, and statutes that apply to GHG emissions. The proposed Project would not increase the capacity of the highway and therefore would not contribute to a long-term increase in greenhouse gas (GHG) emissions. The proposed Project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing emissions of GHGs. There would be no impact.

### 3.3.9 Hazards and Hazardous Materials

Would the Project:

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

Caltrans prepared an Initial Site Assessment memo that identifies potential sources of hazardous waste, hazardous materials, and contamination within or near the proposed Project. The results of that memo are summarized in this section.

There are several routine contaminants that are likely within the project area, and these are typically further investigated during the project design phase. Several AMMs have been developed for the proper handling, treatment, and disposal of these routine hazardous materials or wastes during construction to protect the health of workers, the public, and the environment.

**Aerially deposited lead (ADL):**

The historic use of leaded gasoline in automobiles has resulted in soils along roadways throughout California containing elevated concentrations of lead. Soil with lead

concentrations exceeding certain thresholds must be managed under the July 1, 2016, ADL Agreement between Caltrans and the California Department of Toxic Substances Control (DTSC). The ADL Agreement outlines which soils can be safely reused within the project limits, and which soils must be off-hauled and disposed of as hazardous waste. Caltrans has developed AMMs to comply with the 2016 ADL Agreement and to ensure the proper management, reuse, and disposal of ADL-contaminated soils. A review of the District 4 Hazardous Materials Data Viewer resulted in one soil report completed in 2009 along SR 12 at Jameson Canyon, showing unregulated ADL soil.

**Yellow thermoplastic or yellow-painted traffic stripe:**

Yellow traffic paint purchased by Caltrans prior to 1997 contained high concentrations of lead. Application of yellow thermoplastic material containing high concentrations of lead continued until at least 2004 to 2006. The lead concentrations in the older yellow paint and yellow thermoplastic are high enough to make these hazardous materials when they are removed.

The following AMMs would be implemented:

- AMM HAZ-2 pertains to safely removing and disposing of yellow paint from the highway.
- AMM HAZ-3 would manage waste and potential ADL from cold planing and removing asphalt concrete.

A bid item for a lead compliance plan could also be required.

**Treated wood waste (TWW):**

Wooden guardrail posts and signposts are often treated with chemical preservatives to prevent rot or insect-related degradation. Treated wood waste is considered to be hazardous waste, but is subject to alternative management standards under Health and Safety Code section 25230 that allow for simplified management and transport of TWW, and disposal at non-hazardous waste landfills that meet certain requirements.

This project is anticipated to generate TWW because guardrails are being replaced. AMM HAZ-4 will be added to the construction contract for proper management and disposal of TWW.

**Electrical equipment:**

Removal and disposal of electrical equipment may generate hazardous waste or require special handling. Electrical equipment could include mercury containing switches, sensors, or timers, ballasts with polychlorinated biphenyl (PCB), and other e-wastes or electrical components that require special handling. Electrical waste could be generated by the proposed loop detectors updates at traffic signals within the Project limits.

AMM HAZ-5 contains the requirements for management and disposal of electrical equipment, including instructions for packaging and transport to an appropriately permitted disposal facility.

**Conclusions and Recommendations:**

Routine hazardous waste issues including ADL, TWW, and electrical waste may be encountered during construction, but would be appropriately handled, treated, and disposed of with implementation of the AMMs listed at the end of this section.

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

The potential for significant hazard to the public or the environment from routine use or foreseeable upset and accident conditions during construction would be addressed through AMMs, construction methods, and adherence to applicable regulations, as described below.

Caltrans best management practices (BMPs) would be implemented to prevent spills or leaks from construction equipment, as well as from storage of materials, such as fuels, lubricants, and solvents. All aspects of the Project associated with removal, storage, transportation, and disposal would be in strict accordance with the appropriate regulations of the California Health and Safety Code. Handling of hazardous materials would comply with Caltrans Standard Specification 14-11, Hazardous Waste and Contamination, which outlines handling, storing, and disposing of hazardous waste. The Project would not result in operational conditions that would increase hazardous emissions or handling of hazardous materials. Impacts would be less than significant.

The Project area is adjacent to three schools and one daycare center. Crystal Middle School, Crescent Elementary School, Rainbow Early Learning Preschool and Coco's Learning Center are all within 0.25 mile of the Project area in Solano County. According to the California Air Resources Board (CARB 2025), areas such as schools or daycare

centers are considered to be “sensitive receptors” due to the fact that children are at a heightened risk of negative health outcomes due to exposure to air pollution.

The Project could emit pollutants through the generation of dust from disturbing soil containing ADL and removal of yellow paint. The Project would also handle hazardous materials, including ADL containing soils, yellow paint, TWW, and removed electrical equipment. Potential construction impacts from emitted dust would be minimized or avoided by AMM HAZ-2 and AMM HAZ-3, which provide construction protocols to contain any lead from either source via dust suppression and removal and management of potentially contaminated soils. Additionally, AMMs HAZ-2 through 5 require the Project to handle and dispose of these materials according to Caltrans standard practices and consistent with regulations, minimizing or avoiding potential impacts to the public. With these AMMs, the Project would result in a less than significant impact from emissions, handling, and routine transport of hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.

**d) No Impact**

Caltrans reviewed the California Department of Toxic and Substance Controls Envirostor map (Envirostor 2025) which shows all active hazardous waste cleanup sites within the state of California. Review indicated that there are no active clean-up sites with the Project limits. Therefore, there would be no impact.

**e) No Impact**

Napa County Airport is located approximately one mile from the westernmost edge of the Project area, SR 12 PM 0.0 in Napa County. No Project components, including construction equipment, would reach heights or have elements that have the potential to pose a safety hazard to airport operations. The Project would not construct any features that would expose people to excessive aviation-related noise levels, as discussed in Section 2.2.13. No impact would result from the Project.

**f) Less Than Significant Impact**

The Napa Valley Transportation Authority maintains an evacuation routes map for Napa County and lists primary evacuation routes, which includes SR 12 in Napa County from post mile (PM) 0.0 - 3.31. (NVTA 2025b). The Solano County Office of Emergency Services implements a zone-based mapping tool that directs residents of Solano County to designated evacuation areas based on situational needs. Construction

activities may require the temporary closure of one lane during off-peak hours, but at least one lane of traffic in each direction will be maintained except for extremely short durations as needed to move equipment. The Project would minimally interfere with any emergency response or evacuation plan. Prior to construction, a TMP (refer to AMM TRANS-1 in Appendix B) would be developed to control traffic and minimize traffic delays. Emergency response times would not be anticipated to change during construction because the TMP would provide priority to emergency vehicles during single-lane closures. The TMP would provide instructions for emergency response or evacuation in an emergency, such as opening closed lanes in the direction of emergency travel. In addition, the Project would not conflict with any other emergency response or evacuation plan. The impact would be less than significant.

**g) No Impact**

The Project would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires. Caltrans proposes to resurface distressed pavement, restore drainage systems, and improve multimodal access on SR 12, which would not create infrastructure or conditions that could potentially exacerbate fire risks to communities or structures. There would be no impact.

***Avoidance and Minimization Measures***

**AMM-HAZ-1: Soil and Groundwater Investigation.** A soil and groundwater investigation for metals, primarily lead, and other contaminants of concern (e.g., petroleum hydrocarbons and volatile organic compounds) would be completed during the Project's design phase to characterize and profile the soil and groundwater to be encountered by the construction of the proposed Build Alternatives. Depending upon the findings of the site investigation, appropriate hazardous waste management special provisions would be prepared and included in the Project specifications.

**AMM-HAZ-2: Removal and Disposal of Yellow Highway Paint.** When grinding or other authorized methods are used to remove yellow thermoplastic and yellow painted traffic stripe and pavement marking that produces hazardous waste residue:

- Immediately contain and collect residue, including dust.
- Use a HEPA filter-equipped vacuum attachment operated concurrently with the removal operations or other equivalent approved method for collection of the residue.

**AMM-HAZ-3: Cold Planing ADL Management.** Throughout the cold planing process, ADL would be managed via dust suppression methods in addition to stockpiling and transportation of potentially contaminated soils away from the Project site for proper disposal.

**AMM-HAZ-4: Removal of Treated Wood Waste.** TWW would be gathered and disposed of away from the Project site after removing the guardrail that is proposed to be upgraded.

**AMM-HAZ-5: Removal of Electrical Waste.** Manage and dispose of universal waste under 22 CA Code Regs § 66261.9. Transport universal wastes to an appropriately permitted recycling or disposal facility.

**AMM-HAZ-6: Proper Disposal of Asphalt Waste.** All grindings and asphaltic-concrete waste will be stored within previously disturbed areas absent of habitat, and at a minimum of 150 feet from any aquatic habitat or drainage feature.

### 3.3.10 Hydrology and Water Quality

Would the Project:

| Question | CEQA Determination |
|---|---|
| a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality? | Less Than Significant Impact |
| b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such the project may impede sustainable groundwater management of the basin? | Less Than Significant Impact |
| c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:<br><br>(i) result in substantial erosion or siltation on- or off-site; | No Impact |
| (ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite; | No Impact |
| (iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or | No Impact |
| (iv) impede or redirect flood flows? | No Impact |
| d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to Project inundation? | No Impact |
| e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan? | No Impact |

Caltrans completed a *Hydrology Study* memorandum (Caltrans 2025f) and a *Water Quality Study* (Caltrans 2025g) for the Project. This section summarizes the findings of those reviews.

The Project location is within the jurisdiction of the San Francisco Bay Water Quality Control Board (Region-2), which is responsible for implementing and enforcing State and Federal Laws and regulations concerning water quality. Please see Table 3-5 below detailing the watershed and sub-watersheds for the Project area.

**Table 3-5: Watersheds and Sub-watersheds in Project Area**

| County | Watershed(s) | Sub-watershed(s) |
|---|---|---|
| Napa | San Pablo Bay | Tulucay Creek-Frontal San Pablo Bay Estuaries |
| Solano | Suisun Bay | Wooden Valley Creek-Frontal Suisun Bay Estuaries |
| Solano | Suisun Bay | Suisun Bay |

The receiving waterbodies for this Project are Suisun Creek, Ledgewood Creek, and the Napa River, which are all listed on the 303(d) list of impaired waterbodies.

**a, b) Less Than Significant Impact**

The proposed Project would not violate water quality standards or waste discharge requirements. The scope of work for this Project is expected to have a total disturbed soil area (DSA) of 1.47 acres. Disturbing soil as a result of construction is a temporary impact of the work proposed, and there are protocols that would be prepared in order to address this impact.

Implementation of AMM WQ-1 would require that a Stormwater Pollution Prevention Plan (SWPPP) be prepared by the contractor awarded the Project, which would detail Best Management Practices to be implemented on the Project. BMPs are practices that minimize or avoid impacts associated with construction, which are outlined in AMM WQ-2 (Construction-site BMPs) and AMM WQ-3 (Permanent Treatment BMPs).

As result of the proposed work, the Project area would have 0.41 acre of new impervious surface (NIS) area. This increase in NIS within the Project area necessitates permanent BMPs such as biofiltration strips, which are vegetated zones to collect and absorb stormwater containing potential pollutants as it runs off of the highway. The proposed locations for biofiltration strips are noted in Table 2-5.

By trapping debris contained in runoff, the proposed biofiltration strips would filter harmful materials contained in stormwater while allowing water to pass through, thus improving overall water quality from runoff generated within the Project area.

Additionally, the Project would not have any effect to groundwater supplies or groundwater recharge areas within the Project vicinity. There would be a less than significant impact to water quality standards, waste discharge requirements, or to surface water or ground water resources.

**c) (i), (ii), (iii), and (iv) No Impact**

The Project would not substantially alter the existing drainage pattern of the Project area. Any erosion from the disturbed soil would be managed by the SWPPP and BMPs mentioned above. The Project would reestablish drainage elements such as HMA dikes to ensure that the highway drainage system is directing flows into the appropriate drainage system inlets. Additionally, the increase in the surface runoff would be accommodated with the existing stormwater facilities. The proposed biofiltration strips would treat polluted runoff as described previously. There would be no impact.

**d, e) No Impact**

Two portions of the Project corridor are within the 100-year floodplain as defined by the Federal Emergency Management Agency (FEMA) Flood Hazard Mapping (FEMA 2025). The Project area is within floodplain zones AE, AO and A, all of which indicate a 1% annual chance flood. The remaining areas of the project are located in zone X which are areas determined to be outside the 0.2% annual chance floodplain. The FEMA Flood Insurance Rates maps 06055C0650E, 06095C0452F, 06095C0456F, 06095C0457F, and 06095C0476E visualizes these floodplain types within the Project area. There is a miniscule chance that during construction, contractor equipment could release relatively small amounts of pollutants if the work area was suddenly inundated during a flood. Finally, this Project would not conflict with or obstruct the implementation of a water quality control plan or sustainable groundwater management plan. There would be no impact.

***Avoidance and Minimization Measures***

**AMM WQ-1: Water Quality Best Management Practices (BMPs).** Adverse effects on water quality will be avoided by implementing temporary and permanent BMPs outlined in Section 13 of the 2024 Caltrans Standard Specifications. The State Water Resources Control Board has issued a National Pollution Discharge Elimination System Statewide Storm Water Permit to Caltrans to regulate storm water and non-storm water discharges from Caltrans facilities.

A Stormwater Pollution Prevention Plan (SWPPP) will be developed for the Project if the Project will have one acre or more of soil disturbance, and a Water Pollution Control Program (WPCP) will be developed for projects with a disturbed soil area less than one acre. The SWPPP complies with the Caltrans Storm Water Management Plan (SWMP). The SWMP includes guidance for design staff to include provisions in construction

contracts, to include measures to protect sensitive areas, and to prevent and minimize stormwater and non-stormwater discharges. The SWPPP will reference the Caltrans Construction Site BMPs Manual. The WPCP complies with the WPCP Preparation Manual.

**AMM WQ-2: Construction Site BMPs.** To prevent or reduce impacts to water quality during construction, construction site BMPs would be deployed for sediment control and material management. These include the following:

- **Job Site Management:** This non-stormwater discharge and waste management practice includes considerations for operations, illicit discharge detention and reporting, vehicle and equipment cleaning, vehicle and equipment fueling, and material use.
- **Temporary Fiber Rolls:** A fiber roll consists of straw or other similar materials placed on the face of the slopes at regular intervals to intercept runoff, reduce its flow velocity, release the runoff as sheet flow, and provide removal of sediment from the runoff.
- **Silt Fence:** A silt fence is a temporary linear sediment barrier of permeable fabric designed to intercept and slow the flow of sediment-laden sheet flow runoff. Silt fences allow sediment to settle from runoff before water leaves the construction site. Silt fences are placed below the toe of exposed and erodible slopes, downslope of exposed soil areas, around temporary stockpiles and along streams and channels. Silt fences should not be used to divert flow or in streams, channels, or anywhere flow is concentrated.
- **Drainage Inlet Protection:** Drainage inlet protection is a practice to reduce sediment from stormwater runoff discharging from the construction site prior to entering the storm drainage system. Effective drainage inlet protection allows sediment to settle out of stormwater or filters sediment from the stormwater before it enters the drain inlet. Drainage inlet protection is the last line of sediment control defense prior to stormwater leaving the construction site.
- **Portable Concrete Washout:** This waste management BMP contains procedures and practices that would minimize or eliminate the discharge of concrete waste materials to the storm drain systems or watercourses.
- **Temporary Cover:** This BMP involves the placement of geosynthetic fabrics (geotextiles), plastic covers, or erosion control blankets/mats to stabilize the disturbed soil area and protect soil from erosion by wind or water.
- **Stockpile Management:** This BMP consists of procedures and practices to eliminate pollution of stormwater from stockpiles of soil and paving materials (such as concrete rubble, aggregate, and AC). These procedures include locating stockpiles away from drainages, and providing perimeter sediment barriers, soil stabilization, and wind erosion control measures.

- **Solid Waste Management:** This BMP consists of procedures and practices to minimize or eliminate the discharge of pollutants to storm drain systems or watercourses as a result of creation, stockpiling, or removal of construction site wastes. Measures include education as well as collection, storage, and disposal practices (such as plywood and tarp directly on streambed).
- **Stream Diversion System:** The system consists of upstream and downstream berms, with a pipe conveying runoff to create a dry working environment for temporary access. The system would be required at specific culvert locations and used during the summer months for one or both summers of the construction period. Each stream diversion system would be removed immediately after instream work is completed at the location, and would not be left in place during the wet season (typically beginning October 15). A risk analysis would be done to determine the design flow for the stream diversion system.

**AMM WQ-3: Permanent Treatment BMPs.** Permanent treatment BMPs are as follows:

- **Design Pollution Prevention BMP Strategy:** The goal of an effective erosion control strategy is to maintain the natural pre-construction conditions. Existing vegetation would be preserved to the maximum extent practicable, and areas disturbed by construction activities would be minimized using construction site BMPs. Preservation involves the identification and protection of desirable vegetation to provide erosion and sediment control benefits. No slopes would be steeper than a 2:1 ratio. When slopes steeper than 2:1 are required, a geotechnical recommendation would be required to support the steeper slope. Disturbed soil areas created by construction activities would receive erosion control treatments sufficient to address the erosion potential of the slope. Permanent design pollution prevention measures would be identified during later Project phases and may include decompaction, compost mulch, fiber rolls, coir netting, and hydroseed/hydromulch.
- **Treatment BMP Strategy:** Treatment BMPs would address the postconstruction water quality impacts and remove pollutants from stormwater runoff before discharging to receiving waters. The locations of the treatment BMPs would be determined during later Project phases.

### 3.3.11 Land Use and Planning

Would the Project:

| Question | CEQA Determination |
|---|---|
| a) Physically divide an established community? | No Impact |
| 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 Impact |

SR 12 principally serves as an east–west state highway connecting the Napa and Sonoma valleys to the Sacramento–San Joaquin Delta, carrying a mix of local, agricultural, commuter, and through traffic across the region.

In Napa County, the Project area is bordered by industrial and agricultural land. In Solano County, the Project traverses a mix of urban industrial, urban residential, urban commercial, and agricultural land uses.

**a) No Impact**

The Project would not physically divide an established community. There would be no permanent alteration to the transportation system, and no permanent changes that would divide an established community. There would be no impact.

**b) No Impact**

Land use plans, policies and regulations that are applicable to the Project are included within the Napa County General Plan (Napa 2025a), Solano County General Plan (Solano 2025a), Suisun Valley Strategic Plan (Solano 2025b), SR 12 Corridor System Management Plan (SR 12a), Suisun Marsh Protection Plan (Suisun Marsh 2025), and the Final Plan Bay Area 2050+ (FPBA 2026).

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

**San Francisco Bay Area Conservation and Development Commission**

This Project is partially within the jurisdiction of the San Francisco Bay Area Conservation and Development Commission (BCDC) along SR 12 in Solano County from approximately PM R5.15 - 5.80, and again from PM 7.61 - 7.90, which falls within BCDC's Bays or Certain Waterway (Tidal Marsh) and Suisun Marsh jurisdictions.

The California Legislature passed Suisun Marsh Preservation Act in 1974. The Act directed the BCDC, with assistance from the Department of Fish and Game, to prepare

the Suisun Marsh Protection Plan “to preserve the integrity and assure continued wildlife use” of the Suisun Marsh. The objectives of the Protection Plan are to preserve and enhance the quality and diversity of the Suisun Marsh aquatic and wildlife habitats and to assure retention of upland areas adjacent to the Marsh in uses compatible with its protection. BCDC has permitting authority in the Suisun Marsh management area.

The Project is expected to be covered by Caltrans' programmatic maintenance permit (BCDC Permit 1987.042.08). The Activity Class for the Project under the maintenance permit is Activity Class 2, which pertains to conducting routine maintenance and rehabilitation activities until December 31, 2030. This activity class requires the permittee to submit a Project Notification for the activity for review by BCDC within 30 days of receipt of a complete proposal.

Per BCDC's Suisun Marsh Protection Plan, maintaining public access to shoreline and recreational areas must be considered for projects within BCDC jurisdiction. The Grizzly Island Trail is a multi-use pedestrian and bicycle pathway located in southern Suisun City in Suisun Marsh. This trail is a BCDC public access facility that runs along the south side of SR 12 and provides a safe non-motorized connection between residential neighborhoods south of the highway and nearby schools, commercial areas, and the Suisun waterfront. The trail also enhances regional pedestrian and bicycle connectivity between neighborhoods such as Lawler Ranch and key destinations including the downtown and waterfront districts. The Project would not restrict access to Grizzly Island Trail or result in any closures, per AMM LAN-1.

**Napa County Plan and Solano County General Plan**

The Napa County General Plan and Solano County General Plan balance agricultural uses with housing, infrastructure, services, and other growth, especially in unincorporated areas. Both plans include provisions protecting sensitive ecological resources, for example, riparian areas in Napa County and wetlands or marshland zones (such as within the Suisun Marsh Local Protection Program) in Solano County. Additionally, both plans contain growth management and land use consistency policies designed to direct development in appropriate locations and discourage sprawl.

**SR 12 Corridor System Management Plan**

The SR 12 Corridor System Management Plan provides a corridor-wide vision and strategic framework for managing and improving the SR 12 corridor across Napa and Solano Counties. The CSMP emphasizes multimodal functionality, coordination among

jurisdictions, and performance-based decision making. It aims to balance mobility, safety, and efficiency along SR 12 by integrating land use, access management, transit, and corridor operations. The plan also identifies priorities for infrastructure improvements, preservation of corridor capacity, and system management strategies to accommodate growth while maintaining service reliability.

**Suisun Valley Strategic Plan**

The Suisun Valley Strategic Plan offers guidance specifically for the agricultural region of Suisun Valley. Its primary purpose is to preserve and enhance the valley's agricultural viability by aligning land use, economic development, and conservation goals. This plan supports agricultural uses, agritourism, and farm-compatible businesses, while discouraging incompatible growth. It also promotes economic opportunities and marketing strategies for local producers, and includes design guidelines to ensure that non-farm development in the valley respects the rural and agricultural character.

**Final Plan Bay Area 2050+**

The Final Plan Bay Area 2050+ outlines policies and investments that aim to make the Bay Area more affordable, connected, diverse, healthy and economically vibrant for all residents through 2050 and beyond. Among these policies, there are 10 transportation strategies that focus on maintaining and optimizing the existing transit system and improving multi-modal access. This Project would contribute to these objectives through pavement rehabilitation and complete streets improvements.

The Project would comply with Napa and Solano County land use, transportation, and circulation goals, in addition to regional plans. The Project would not cause a significant environmental impact due to conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environment effect. Therefore, there would be no impacts.

***Avoidance and Minimization Measures***

**AMM-LAN-1: Public Access Management.** The Grizzly Island Trail adjacent to SR 12 in Solano County shall be kept open and accessible at all times during construction.

### 3.3.12 Mineral Resources

Would the Project result in:

| Question | CEQA Determination |
|---|---|
| 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 Impact |
| 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 Impact |

According to the Napa County General Plan Land Use Policy Map, no locally important mineral resource recovery sites have been designated within the Project Area (Napa County 2008). Mineral resources mined or produced in Solano County include mercury, sand and gravel, clay, stone products, calcium, and sulfur (Solano County 2008), however there are no mining sites within the Project area. The western portion of the Project near Travis Air Force Base (AFB) falls within Mineral Resource Zones described in the California Surface Mining and Reclamation Act mineral land classification reports for Special Report 156 (Conservation 2025c). Near the east end of the Project by Shiloh/Lambie Road, the Project area is within a mineral resource area zoned as MRZ-3; these are areas that contain mineral deposits of which the significance cannot be evaluated from current available data. Approximately 1 mile from the Project site, one quarry has been identified by the California Department of Conservation, Office of Mine Reclamation, as follows: Potrero Hills Quarry (91-48-0004) (Conservation 2025c).

**a) and b) No Impact**

The Project would not result in the loss of availability of a known mineral resource that would be of value or result in the loss of availability of a locally important mineral resource recovery site. Therefore, no impacts on mineral resources would result from the Project.

### 3.3.13 Noise

Would the Project result in:

| Question | CEQA Determination |
|---|---|
| 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? | Less Than Significant Impact |
| b) Generation of excessive groundborne vibration or groundborne noise levels? | Less Than Significant Impact |
| c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project expose people residing or working in the Project area to excessive noise levels? | Less Than Significant Impact |

The Project does not qualify as either a Type I or Type II Project under 23 CFR 772. Noise abatement does not need to be considered, and a traffic noise study is not required. However, there are noise-sensitive receptors, such as residential houses, located in proximity to areas where construction activities may take place, which have been identified in Table 3-6. Therefore, a Construction Noise Analysis memorandum (Caltrans 2025h) was prepared for this Project.

**Table 3-6: Sensitive Noise Receptors**

| Receptor Number | Receptor Address | Receptor Type |
|---|---|---|
| R1 | 679 Lincoln Hwy, American Canyon, CA 94503 | Residential |
| R2 | 3980 Jameson Canyon Rd, American Canyon, CA 94558 | Residential |
| R3 | 3875 State Highway 12, American Canyon, CA 94503 | Residential |
| R4 | 5000 Jameson Canyon Rd, American Canyon, CA 94558 | Residential |
| R5 | 38°12'30.00"N, 122°9'55.03"W | Residential |
| R6 | Sierra School of Solano County – School, 1745 Enterprise Dr, Fairfield, CA 94533 | School |
| R7 | 201 Jackson St, Fairfield, CA 94533 | Residential |
| R8 | 208 Jackson St, Fairfield, CA 94533 | Residential |
| R9 | 502 Snow Dr, Suisun City, CA 94585 | Residential |

| Receptor Number | Receptor Address | Receptor Type |
|---|---|---|
| R10 | 501 Snow Dr, Suisun City, CA 94585 | Residential |
| R11 | 901 Harlequin Way, Suisun City, CA 94585 | Residential |
| R12 | 505 Prairie Ct, Suisun City, CA 94585 | Residential |
| R13 | 500 Woodlark Dr, Suisun City, CA 94585 | Residential |
| R14 | 1101 Partridge Pl, Suisun City, CA 94585 | Residential |

Caltrans has assessed Project-related noise levels at the receptors listed in Table 3-6. Noise levels anticipated during Project construction have been estimated using the Roadway Construction Noise Model (RCNM), which is the Federal Highway Administration's (FHWA) national model for the prediction of construction noise. This model includes representative sound levels for the most common types of construction equipment and the estimated usage factor of each equipment. The usage factor represents the percentage of time that the equipment would be operating at full power. Vehicles and equipment likely to be used during each phase of construction were factored into RCNM to estimate the maximum (Lmax) and the average hourly noise levels (Leq) at various distances. These noise levels are noted for each receptor in Table 3-7, below.

Lmax is the highest instantaneous noise level during a specified time. Leq is the averaged level equivalent in energy to the time-varying noise levels during the same period. In some instances, maximum noise levels estimated can be slightly lower than the average noise levels. This occurs because maximum noise levels generated in short bursts by multiple pieces of construction equipment are not likely to occur at the same moment. Hourly average noise levels resulting from multiple pieces of construction equipment would be additive resulting in slightly higher calculated noise levels. While geometric spreading (increased distance) is considered in the model, noise reduction due to other factors such as ground absorption or shielding along the path are not figured in. For this reason, the model tends to overestimate the noise levels for locations at longer distance or where obstructions (i.e. buildings) are present. Therefore, the predicted sound level results presented in this report are conservative.

Please note the following when reviewing Table 3-7 below:

- Standard Specification 14-8.02 specifies noise levels during construction should not exceed **86 dBA Lmax** at 50 feet from the job site from 9:00 pm to 6:00 am. Noise levels in exceedance are shown in underlined text.
- HP 50, 100, 200, and 500 provide estimates for construction noise levels measured at several distances from the Project area. These hypothetical scenarios demonstrate potential noise levels at 50, 100, 200, and 500 ft from the Project area.
- Regarding R6 being divided into interior and exterior components: This location is the Sierra School of Solano County, and according to the California Streets and Highway Code, Section 216 requires interior noise not to exceed **52 dBA Leq** in classrooms, library, multipurpose room, or space used for pupil personnel services. The noise study assumed the school building is a typical light-frame structure with standard windows that are closed, which reduces outside noise by about 20 decibels (FHWA-HEP-10-025). Even with that level of noise reduction, the predicted indoor noise level at R6 is expected to be higher than the 52 dBA limit that applies to schools.

## Table 3-7: Summary Construction Noise Results from RCNM

| | | Pavement Removal | | Pavement Overlay | | Installing Guardrail System | |
|---|---|---|---|---|---|---|---|
| **Receptor Map Label** | **Receptor Distance (ft)** | **Lmax** | **Leq** | **Lmax** | **Leq** | **Lmax** | **Leq** |
| **HP 50** | 50 | 89.5 | 86.4 | 85 | 85.2 | 85 | 84.1 |
| **HP 100** | 100 | 83.5 | 80.4 | 79 | 79.2 | 79 | 78.1 |
| **HP 200** | 200 | 77.5 | 74.3 | 73 | 73.2 | 73 | 72 |
| **HP 500** | 500 | 69.5 | 66.4 | 65 | 65.2 | 65 | 64.1 |
| **R1** | 118 | 82 | 78.9 | 77.5 | 77.7 | N/A | N/A |
| **R2** | 58 | 88.2 | 85.1 | 83.7 | 83.9 | N/A | N/A |
| **R3** | 56 | 88.5 | 85.4 | 84 | 84.2 | N/A | N/A |
| **R4** | 98 | 83.7 | 80.5 | 79.2 | 79.4 | 79.2 | 77.6 |
| **R5** | 180 | 78.4 | 75.2 | 73.9 | 74.1 | N/A | N/A |
| **R6-Interior** | 290 | 54.2 | 51.1 | 49.7 | 49.9 | N/A | N/A |
| **R6-Exterior** | 290 | 74.2 | 71.1 | 69.7 | 69.9 | N/A | N/A |
| **R7** | 37 | 92.1 | 89 | 87.6 | 87.8 | N/A | N/A |
| **R8** | 40 | 91.4 | 88.3 | 86.9 | 87.1 | N/A | N/A |
| **R9** | 93 | 84.1 | 81 | 79.6 | 79.8 | N/A | N/A |
| **R10** | 88 | 84.6 | 81.5 | 80.1 | 80.3 | N/A | N/A |
| **R11** | 73 | 86.2 | 83.1 | 81.7 | 81.9 | N/A | N/A |
| **R12** | 95 | 83.9 | 80.8 | 79.4 | 79.6 | N/A | N/A |
| **R13** | 89 | 84.5 | 81.4 | 80 | 80.2 | N/A | N/A |
| **R14** | 82 | 85.2 | 82.1 | 80.7 | 80.9 | N/A | N/A |

**a) Less Than Significant Impact**

Project construction has the potential to result in short term and temporary increases in noise levels within the vicinity of construction. While most construction would take place during the day, some nighttime construction would be necessary, as described in Section 2.3.5. The specific timing, duration, and locations of nighttime construction activities would be determined during the detailed design and preconstruction phases. Removing the AC pavement and overlaying RHMA, along with installing the guardrail in location R4 (see Table 3-6), are anticipated to temporarily surpass noise thresholds for six residential locations and one school in the Project vicinity.

Pursuant to Caltrans Standard Specification 14.8-02, construction noise levels are not to exceed 86 A-weighted decibels (dBA) at 50 feet from the job site from 9:00 pm – 6:00 am. Additionally, the California Streets and Highway Code, Section 216 requires interior noise not to exceed 52 dBA in classrooms, libraries, multipurpose rooms, or spaces used for pupil personnel services. Implementation of AMM-NOI-1 (Construction Noise Levels) would further minimize temporary noise impacts within the Project vicinity. Additionally, AMM-NOI-2 (Noise Level Monitoring) and AMM-NOI-3 (School Hours Noise Level Monitoring) would entail noise level monitoring for nearby communities and schools. The Project would not result in permanent increases in noise levels for any sensitive receptors evaluated within the Project area. However, temporary increases in noise levels during construction are anticipated and some Project construction activities are expected to exceed the noise thresholds for short durations. However, with the incorporation of the AMMs and the temporary nature of the noise increases, the impacts of noise will be less than significant

**b) Less Than Significant Impact**

Removal and replacement of rock slope protection (RSP) could potentially generate vibrations if heavy equipment is used. There are no structures near the RSP installation that would be affected, so impacts would be less than significant.

**c) Less Than Significant Impact**

The Project is located approximately 1.25 air-miles from Travis Air Force Base (Travis AFB). Due to the length of the Project, multiple noise contours established by the Travis AFB Air Installation Compatible Use Zone Study are within the Project area and range from 60 to 79 decibels (Travis AFB 2009). Noise levels associated with the use of

construction equipment with occasional air traffic going to and from Travis AFB and vehicle traffic along SR 12 would be considered excessive at times. There are no sensitive receptors within the area subject to these noise levels, and construction workers would use earplugs or other sound-dampening devices in accordance with Occupational Safety and Health Administration guidelines. The impact would be less than significant.

***Avoidance and Minimization Measures***

**AMM-NOI-1: Construction Noise Levels.** The following measures will be incorporated to reduce noise levels during construction where feasible:

- Public outreach will be required throughout the Project to update residents, businesses, and others regarding upcoming construction-related activities and time frame of Project.

**AMM-NOI-2: Noise Level Monitoring.** Noise control and monitoring will be included as part of the Contact documents to minimize construction noise. Construction noise levels shall not exceed 86 dBA at 50 feet from the job site between the hours of 9:00 pm to 6:00 am.

**AMM-NOI-3: School Hours Noise Level Monitoring.** Construction noise levels shall not exceed 52 dBA Lmax interior noise within school facilities during school hours.

### 3.3.14 Population and Housing

Would the Project Result in:

| Question | CEQA Determination |
|---|---|
| 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 Impact |
| b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere? | No Impact |

The proposed Project would improve existing transportation infrastructure, drainage systems, and multimodal access. It does not have elements that would directly or indirectly induce substantial unplanned population growth.

**a), b) No Impact**

The Project would not induce substantial, unplanned, population growth either directly or indirectly because it does not increase the capacity of SR 12, remove barriers to future growth, or increase population or housing growth (or demand for new housing, utilities, or public services). The Project would not displace existing people or housing or necessitate the construction of replacement housing elsewhere. There would be no impact to population and housing.

### 3.3.15 Public Services

Would the Project 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 following public services:

| Question | CEQA Determination |
|---|---|
| a) Fire protection? | No Impact |
| b) Police protection? | No Impact |
| c) Schools? | No Impact |
| d) Parks? | No Impact |
| e) Other public facilities? | No Impact |

**a, b, c, d, e) No Impact**

The proposed Project would not result in substantial alteration of government facilities, such as fire and police protection, schools, parks, or other public facilities, in the Project area. Additionally, the proposed Project would not trigger the need for new government facilities or alter the demand for public services.

Traffic delays could result from the need for one lane closure during construction. A TMP would be prepared in the next phase of the Project that would provide accommodation for police, fire, emergency, and medical services in the local area during construction (AMM TRANS-1). There would be no impact.

### 3.3.16 Recreation

Would the Project Result in:

| Question | CEQA Determination |
|---|---|
| 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 Impact |
| b) Does the Project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment? | No Impact |

**a, b) No Impact**

Several ADA curb ramps and pedestrian islands are proposed to be upgraded or installed along PM R5.15 - 7.00 in Solano County. These proposed elements are adjacent to the Grizzly Island Trail and the Central County Bikeway and would likely result in improved pedestrian and cyclist accessibility.

The Project would improve access to existing recreational facilities but would not directly or indirectly increase the demand of existing recreational facilities such that substantial deterioration of the facilities would occur. Additionally, the proposed Project does not require the construction or expansion of recreational facilities. There would be no impact.

### 3.3.17 Transportation

Would the Project result in:

| Question | CEQA Determination |
|---|---|
| a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities? | No Impact |
| b) Would the Project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)? | No Impact |
| 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 Impact |
| d) Result in inadequate emergency access? | Less Than Significant Impact |

SR 12 is an east-west route that connects Napa, Solano, Sacramento, San Joaquin and Calaveras counties and is used for local and interregional travel. SR 12 is a four-lane highway with two lanes in each direction. Within Caltrans District 4, the corridor begins at the intersection of SR 116 and SR 12 at Sebastopol in Sonoma County and continues east, ending at the intersection of SR 49 just north of San Andreas in Calaveras County. The corridor is approximately 140 miles long and is considered a major route for the eastern part of the state to access Napa and Sonoma counties. SR 12 connects the Bay Area and Central Valley and allows for the movement of a significant amount of goods while providing access to the Delta.

In addition to vehicular transit, the Project area within SR 12 also supports cyclist access along the shoulder, as well as pedestrian and ADA access at several intersections (see Tables 2-7 and 2-8). Part of the proposed work for the Project includes upgrades to multimodal access, which includes installing pedestrian refuge islands and ADA curb ramps in addition to upgrading bike lanes within the Project area, as noted in Section 2.2.3 Complete Streets Improvements.

Local transportation planning in Solano County includes Solano County Transit (SCT), which administers the Comprehensive Transportation Plan (SCT 2025a) and the Connected Mobility Implementation Plan (SCT 2025b). In Napa County, local transportation is led by the Napa Valley Transit Authority (NVTA), which oversees the Countywide Transportation Plan (NVTA 2025a). Additionally, the Napa County General Plan (Napa County 2025a) and the Solano County General Plan (Solano County 2025a) contain sections pertaining to transit planning that outline goals focusing on increasing transit safety and accessibility while maintaining the existing character of transit corridors.

According to the NVTA and SCT, the portions of SR 12 within the Project area are part of public transit systems for both Napa and Solano Counties. The VINE Transit Route 21 leaves from downtown Napa and continues along SR 12 destined for Suisun City in Solano County. The Solano County bus system, SolTrans, runs several routes through the Project area, namely the Red, Blue, and Green lines.

The Metropolitan Transportation Commission (MTC), which functions as both the state-designated Regional Transportation Planning Agency and federally designated Metropolitan Planning Organization, is responsible for regional transportation planning. MTC's Plan Bay Area 2050, serves as the San Francisco Bay Area's Regional Transportation Plan and Sustainable Communities Strategy (ABAG and MTC 2021).

**a, b, c) No Impact**

The Project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, highway, bicycle, and pedestrian facilities. The Project would rehabilitate pavement, repair drainage systems, implement complete streets improvements and provide general highway upgrades (signage, guardrail, etc.) to SR 12. The scope of work for this Project supports the goals outlined in the transit plans for Napa and Solano Counties that are listed above. The Project would maintain and improve all existing highway facilities and would not permanently alter the circulation or increase the capacity of SR 12 within the Project area.

As discussed in AMM TRANS-1, a TMP would be developed to minimize potential effects from construction to all users. The TMP would include elements, such as haul routes, flaggers, and phasing, to reduce impacts to local residents and emergency and medical service providers. The TMP would also ensure access to businesses in the local area is maintained. Therefore, there would be no permanent impact to components of the transportation system.

The Project would not conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b). The Project would have no permanent impact on vehicle miles traveled (VMT). Under Section 15064.3, subdivision b, transportation Projects that have no impact on VMT should be presumed to cause no impact on transportation.

The Project would not increase hazards because of a geometric design feature. The Project would not include any design features or construction elements (such as sharp curves or dangerous intersections) that would substantially increase hazards. There would be no impact.

**d) Less than Significant Impact**

The Project would not result in inadequate emergency access. The Project could cause short-term, localized, traffic congestion and delays, resulting from temporary closures of one lane of SR 12. Single-lane closures would be required during construction, but detours are not anticipated. One lane of traffic in each direction would be maintained.

Under the TMP (AMM TRANS-1), medical and emergency vehicles would be able to continue to use routes along the Project corridor to serve fire, medical, and law enforcement purposes. Flaggers would give priority to emergency vehicles. The impact would be less than significant.

***Avoidance and Minimization Measures***

**AMM-TRANS-1: Traffic Management Plan.** A Traffic Management Plan would be developed by Caltrans during the design phase. The TMP would include public information, motorist information, incident management, construction, and alternate routes. In addition, single-lane closures, flaggers and phasing, portable changeable message signs, and the California Highway Patrol's Construction Zone Enhanced Enforcement Program would be incorporated into the TMP to minimize delays to local residents and highway users, as feasible. The TMP would also provide access for police and emergency service providers. Lane closures would be planned in coordination with Caltrans and Solano County and would include notices to emergency services providers, and the public in advance.

### 3.3.18 Tribal Cultural Resources

Would the Project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

| Question | CEQA Determination |
|---|---|
| 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 Impact |
| 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 Impact |

Caltrans prepared a memorandum on cultural compliance for the Project titled Office of Cultural Resource Studies Section 106 Screening Memo for the Pavement Rehabilitation Project at SR 12 PM 0.0-3.31 in Napa County and SR 12 PM 0.0-7.9 in Solano County (Caltrans 2025b). This section summarizes the findings of this memorandum. No further archaeology or architectural history studies are required.

Refer to section 3.3.5, Cultural Resources, for a discussion of Caltrans coordination with the NAHC, as well as the individual tribes summarized from the memorandum.

**a, b) No Impact**

The Project would not cause a substantial, adverse change in the significance of a tribal cultural resource. The Section 106 memo (Caltrans 2025b) was prepared to identify historic properties in the Area of Potential Effects developed by Caltrans. No tribal cultural resources were reported in record searches or in consultation with Native American groups and individuals. Based on this report, there would be no impact.

PFs CULT-1 and CULT-2, discussed under Cultural Resources (Section 3.3.5) and Appendix B, would be implemented if cultural resources or human remains are discovered during Project construction.

### 3.3.19 Utilities and Service Systems

Would the Project:

| Question | CEQA Determination |
|---|---|
| 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 Impact |
| b) Have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry and multiple dry years? | No Impact |
| 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 Impact |
| 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 Impact |
| e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste? | No Impact |

**a), b), c), d), and e) No Impact**

Utility relocations are not anticipated to be necessary for this Project. The proposed Project would not generate a demand for potable water supplies or the services of a wastewater treatment provider. Therefore, there would be no impact.

The proposed Project would not result in any substantial demands for solid waste disposal and would comply with federal, state, and local statutes regarding the disposal of solid waste. Implementation of AMM WQ-1 and AMM HAZ-6 would require the proper disposal of construction trash and waste. There would be no impact.

### 3.3.20 Wildfire

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the Project:

| Question | CEQA Determination |
|---|---|
| a) Substantially impair an adopted emergency response plan or emergency evacuation plan? | Less Than Significant Impact |
| 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 Impact |
| 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 Impact |
| 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 Impact |

Within Napa County, the Project is located within a State Responsibility Area (SRA) that ranges from a moderate to high fire severity zone. In Solano County, the Project is in a local responsibility area (LRA) that ranges from a moderate to high fire severity zone (Cal Fire 2025). An SRA signifies that the State of California is financially responsible for preventing and suppressing wildfires, whereas an LRA places said responsibility on a local agency.

#### a) Less Than Significant Impact

The Project would not substantially impair an adopted emergency response plan or emergency evacuation plan. During later Project phases, a TMP (noted in AMM TRANS-1) would be developed that would identify traffic diversion, staging, and alternative routes. Emergency response times would not be anticipated to change during construction because the TMP would provide measures to ensure priority for emergency vehicles during single-lane closures. The TMP would provide instructions for response and evacuation in an emergency. In addition, the Project would not conflict with any other emergency response or evacuation plan. The impact would be less than significant.

**b) c), and d) No Impact**

The construction and operation of the proposed Project would not exacerbate wildfire risks, require the installation or maintenance of infrastructure that may exacerbate wildfire risk, or expose people or structures to significant risks as a result of runoff, post-fire slope instability, or drainage changes. The Project proposes to rehabilitate existing pavement and highway shoulders along SR 12. The Project does not involve the occupation of habitable structures and does not include the installation of associated infrastructure that would exacerbate wildfire risk.

### 3.3.21 Mandatory Findings of Significance

| Question | CEQA Determination |
|---|---|
| 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? | Less Than Significant Impact |
| b) Does the Project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)? | Less Than Significant Impact |
| c) Does the Project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly? | Less Than Significant Impact |

**a) Less than Significant Impact**

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, 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.

There are certain resource types that are anticipated to have impacts, but in most cases for this Project, impacts are temporary and less than significant.

As discussed in Section 3.3.4, temporary construction-related impacts to biological resources are anticipated as a result of the Project. Temporary impacts to CCG, CRLF, CTS, VPFS, and VPTS, as well as their habitat are anticipated. However, with the implementation of AMMs outlined in Appendix B, biological impacts would be reduced to less than significant.

**b) Less than significant**

Under CEQA (Guidelines Section 15355), “cumulative impacts” refers to two or more individual effects which, when considered together, are considerable or which

compound or increase other environmental impacts. The individual effects may be changes resulting from a single project or a number of separate projects. The cumulative impact from several projects is the change in the environment which results from the incremental impact of the Project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.

Cumulative impacts to resources in the Project area may result from residential, commercial, industrial, and highway development, as well as from agricultural development and the conversion to more intensive agricultural cultivation. These land use activities can degrade habitat and species diversity through consequences such as displacement and fragmentation of habitats and populations, alteration of hydrology, contamination, erosion, sedimentation, disruption of migration corridors, changes in water quality, and introduction or promotion of predators. They can also contribute to potential community impacts identified for the Project, such as changes in community character, traffic patterns, housing availability, and employment. CEQA Guidelines Section 15130 describes when a cumulative impact analysis is necessary and what elements are necessary for an adequate discussion of cumulative impacts.

The cumulative impacts analysis follows the Caltrans six-step process established in the May 2025 interim guidance on cumulative impact analysis under CEQA (Caltrans 2025), as follows:

1. Determine which environmental resources to include in the cumulative impact analysis.
2. Determine the resource study area.
3. Describe the existing cumulative condition.
4. Discuss whether the project's impacts are cumulatively considerable
5. If the project's contribution is cumulatively considerable, discuss any additional proposed mitigation for Caltrans' contribution to cumulative condition.
6. State post-mitigation conclusion (if additional mitigation was added to address cumulative impacts).

This analysis determines whether the Project, in combination with projects that are planned, approved, or under construction, would result in cumulatively considerable impacts, and, if so, whether the Project's contribution to the cumulative effect would be considerable. Resources that are typically considered in a cumulative impact analysis are those that are considered to be in poor health or those that are significantly

impacted by a project and projects in the same general vicinity. Table 3-8 below provides information about current and planned projects that are being evaluated for potential cumulative impacts in this analysis.

### Resources Considered for Cumulative Impact Analysis

The Project is anticipated to have no impact or less than significant impacts on the majority of resources identified within this document. It has also been determined that many of the resources which are less than significantly impacted are not in poor or declining health.

There are several biological resources that would be impacted by the Project and require CEQA Mitigation and/or are in poor or declining health, or at risk and therefore included in the cumulative analysis:

- Wetlands and Other Waters of the United States regulated by the San Francisco Bay RWQCB: freshwater emergent wetlands
- Endangered Species: Vernal pool tadpole shrimp (VPTS)
- Threatened Species: Vernal pool fairy shrimp (VPFS), California tiger salamander (CTS), California red-legged frog (CRLF)
- Critical Habitat: Contra Costa goldfields (CCG), Vernal pool fairy shrimp (VPFS), Vernal pool tadpole shrimp (VPTS)

### Resource-by-Resource Cumulative Impact Analysis

Section 3.3.4 of this document outlines the potential impacts of the Build Alternative on biological resources. The projects listed in this table are based on resource study areas (RSAs), which are zones used to study the potential for a project and nearby projects to cumulatively impact a resource.

In a cumulative impact analysis, the shape and spatial extent of RSAs are determined using data and information pertaining to each resource. RSAs for biological resources were determined by using observational data for wildlife, known species ranges, critical habitat data, species dispersal range, and land use data. RSAs have been created to study impacts for the following biological resources:

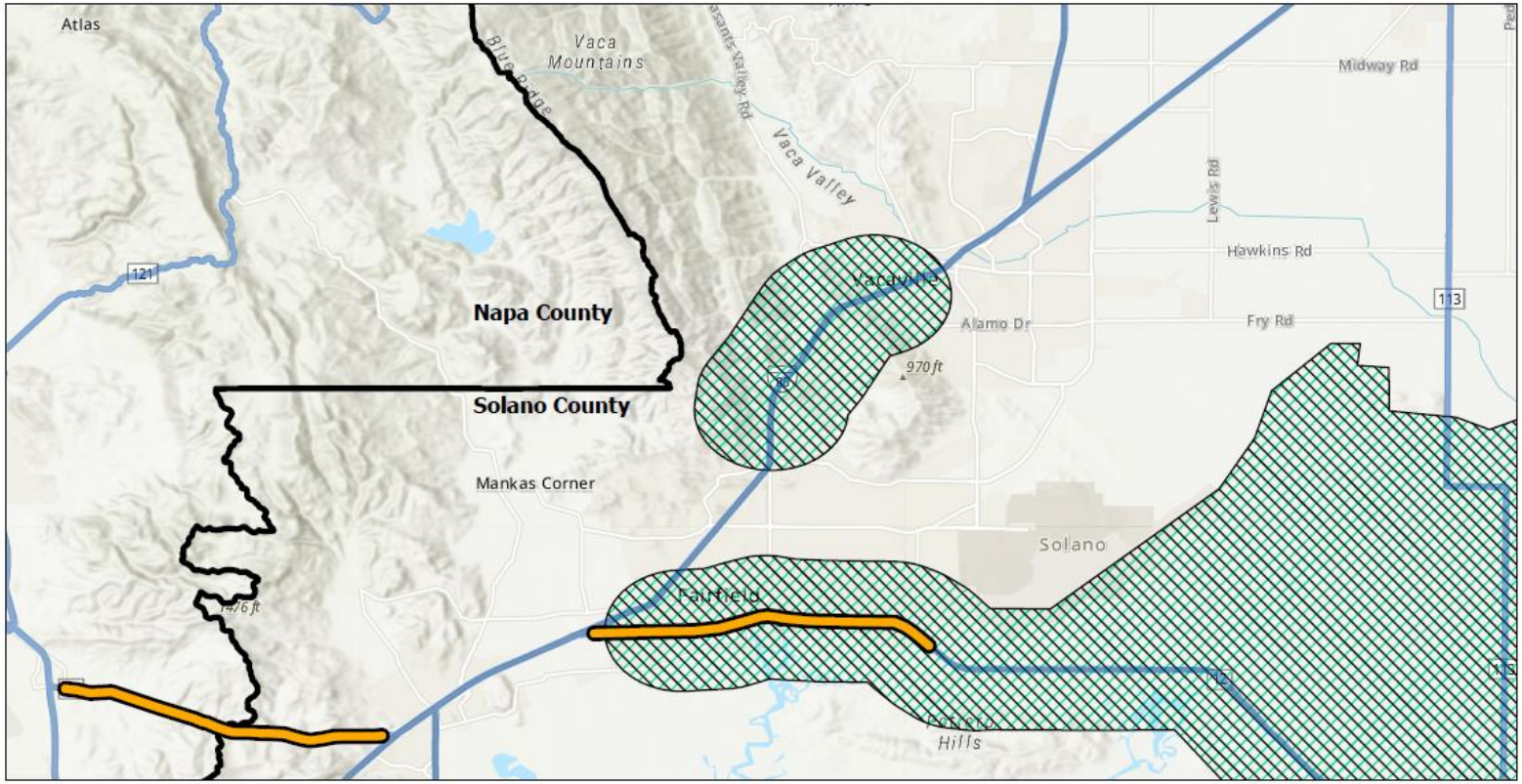
- California tiger salamander
- California red-legged frog
- Vernal pool fairy shrimp and Vernal pool fairy shrimp critical habitat
- Vernal pool tadpole shrimp and Vernal pool tadpole shrimp critical habitat
- Contra Costa goldfields critical habitat

- Freshwater emergent wetlands

**DETERMINING RESOURCE STUDY AREAS**

RSA 1 displays an area of cumulative impact for CTS and is outlined below in Figure 3-1. This RSA was determined by using a combination of CTS range and CTS observational data from the California Natural Diversity Database (CNDDB) in relation to the Project area, as well as that of current and planned projects in the same general vicinity. An additional factor in determining the shape and spatial extent of this RSA is the presence of the Jepson Prairie Preserve along State Route 113 in Solano County, which contains a largescale vernal pool ecosystem that acts as habitat for CTS. The boundary of the RSA was determined by accounting for the dispersal range of CTS, which is known to be a maximum of two miles.

## Figure 3-1: RSA 1 Map




**Legend**

- Project Postmiles
- Napa-Solano Boundary
- State Highway Network
- RSA 1: CTS

N

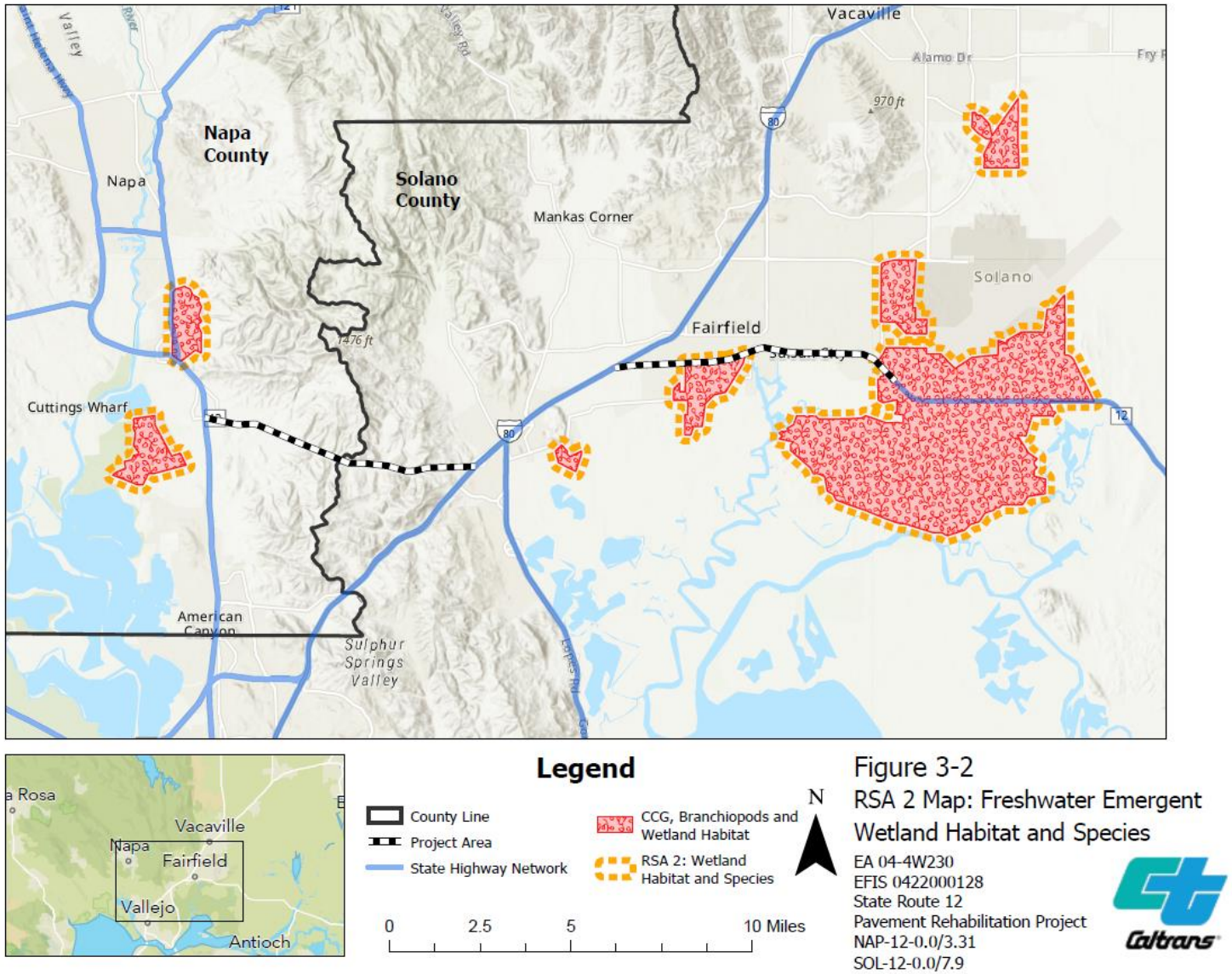
0 2.5 5 10 Miles

Figure 3-1
RSA 1 Map: CTS
EA 04-4W230
EFIS 0422000128
State Route 12
Pavement Rehabilitation Project
NAP-12-0.0/3.31
SOL-12-0.0/7.90

Caltrans

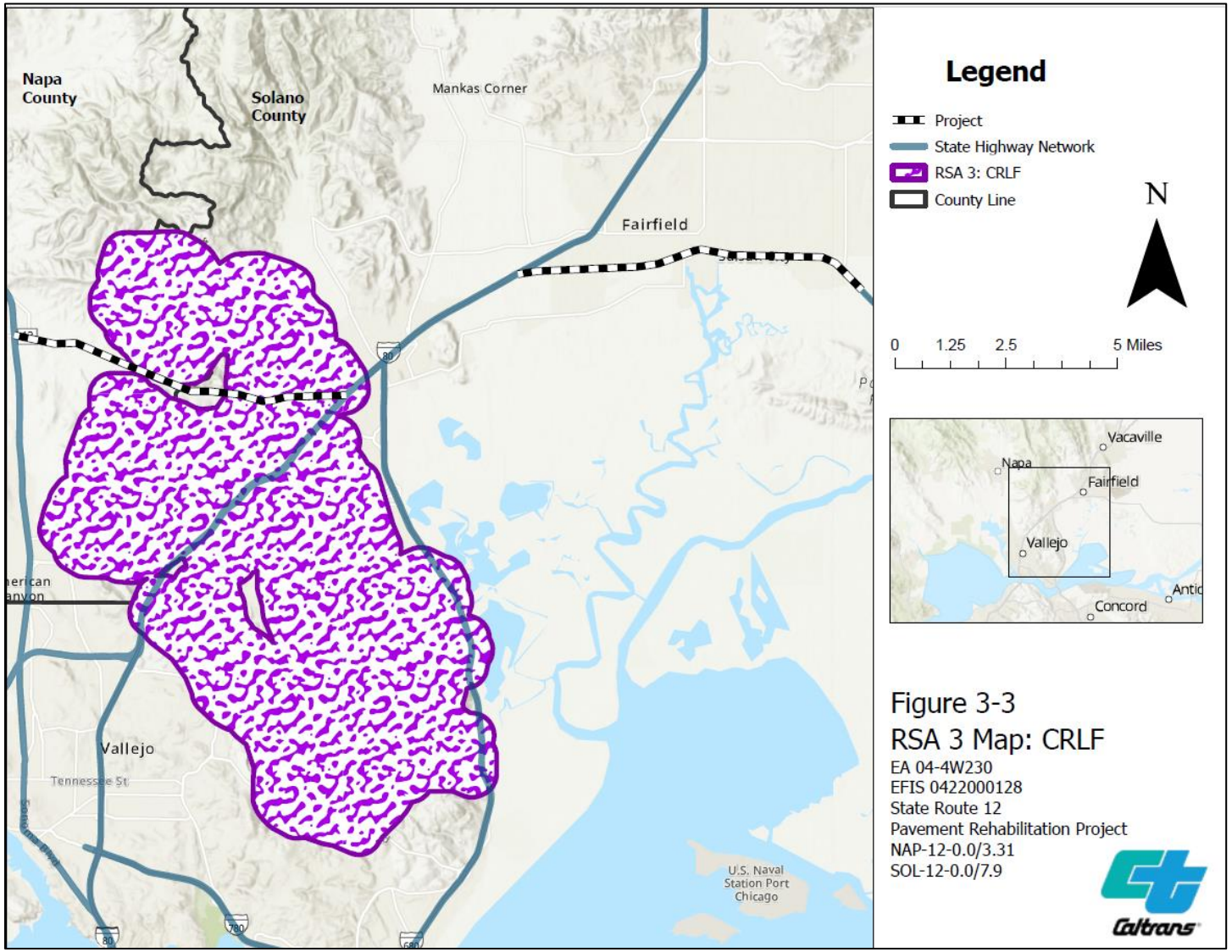
RSA 2 is shown in Figure 3-2 and was used to spatially determine the study limits to analyze cumulative impacts to freshwater emergent wetland habitats and several species that have the potential to occur in these habitats, including CCG and the vernal pool branchiopods VPFS and VPTS. These species have been included in this RSA because they are highly dependent on freshwater wetlands and are not commonly found elsewhere, nor do they disperse beyond these habitats. The shape and placement of the various parts of this RSA are a combination of designated critical habitat units of CCG, VPFS, and VPTS overlapping with freshwater wetland habitat.

## Figure 3-2: RSA 2 Map



As noted in Chapter 3.3.4, the Project would temporarily impact 0.06 acres of dispersal habitat for CRLF. This dispersal habitat is located at PM 0.24 on SR 12 in Napa County, specifically at drainage system (DS) 11. This portion of SR 12 is closely bordered by critical habitat for CRLF on either side, and for that reason this location is potentially used by CRLF to traverse SR 12 in order to access critical habitat, dispersing from one section of critical habitat to another. RSA 3 is shown below in Figure 3-3 and studies cumulative impacts to this species. The shape of this RSA is based on the location of designated critical habitat for CRLF, while also factoring in the species' typical dispersal range, which averages to 0.5 miles from critical habitat.

**Figure 3-3: RSA 3 Map**



The projects within the three RSAs represent a mix of construction, maintenance, safety improvements, and private development, most of which would not contribute meaningfully to cumulative biological impacts. Only a subset of projects would affect special-status species or habitats. Larger private development projects, including the Suisun Expansion project, Highway 12 Logistics Center, and Suisun Logistics Center would contribute the most substantial effects to biological resources, while Caltrans projects with anticipated impacts would implement AMMs to reduce their contributions to cumulative conditions. Although several future Caltrans projects are still in early planning phases, any potential biological effects would be further defined through later technical studies and environmental review.

#### EXISTING CUMULATIVE CONDITION

This section details the current condition of biological resources being studied in this analysis, in addition to the historical pressures and conditions that led to these resources becoming special-status species or sensitive natural communities. The purpose of this section is to provide information on past and current stressors for these biological resources in order to explain potential impacts from this Project and from current and planned projects coinciding with the RSAs outlined in the previous section. See Table 3-8 further below for a list of current and planned projects that have potential impacts to the biological resources being considered in this analysis.

### Contra Costa goldfields

Contra Costa Goldfields is endemic to California and historically occurred across portions of the San Francisco Bay Area and nearby regions, including Alameda, Contra Costa, Napa, Solano, Santa Clara, Mendocino, and Santa Barbara counties. Much of this historical distribution has been lost, and the species is now restricted to a small number of remaining populations, primarily in Solano and Napa counties, with scattered occurrences elsewhere in the Bay Area.

The species faces significant pressure due to the rarity and fragmentation of its seasonal wetland habitat, which has resulted from urban development, agricultural conversion, hydrologic disruption of wetlands, and other disturbances. Additional pressures include grazing impacts and invasive plant species. These factors have culminated in CCG becoming federally listed as endangered. Presently, CCG's limiting factors are a lack of optimal habitat and increased competition from invasive species, with the species now only having 13 known populations across four counties in California. The success of this species is dependent on the creation and protection of vernal pools or other seasonal wetlands.

### Freshwater Emergent Wetlands

Freshwater emergent wetlands occur throughout lowland valleys, alluvial floodplains, and coastal drainages of California where shallow, sustained inundation or saturated soils support the growth of persistent emergent vegetation. Historically, these wetlands were more extensive along major river corridors and in broad depressional basins; however, a substantial portion of this habitat has been lost or degraded due to agricultural conversion, channelization, flood control infrastructure, and urban development. Remaining freshwater emergent wetlands are often highly fragmented and restricted to narrow bands along creeks, irrigation canals, or remnant floodplain features.

Due to the fact that they provide important functions such as water filtration, flood attenuation, groundwater recharge, and habitat for a wide range of wildlife, freshwater emergent wetlands are considered a sensitive natural community in California. These wetlands support diverse assemblages of hydrophytic plant species such as cattails, bulrushes, and rushes. Additionally, they provide breeding, foraging, and cover habitat for amphibians, waterfowl, wading birds, and aquatic invertebrates. Ongoing threats include hydrologic modification, vegetation clearing, sedimentation, invasive plant encroachment, and activities that alter the timing or duration of inundation needed to sustain emergent wetland vegetation and dependent species. Conservation initiatives often focus on protecting and restoring wetland hydrology, controlling invasive species, and preserving remnant wetland patches, with additional support provided through mitigation banking and watershed-scale restoration programs.

### Vernal pool branchiopods

VPFS and VPTS are native to California's Central Valley and surrounding foothill and coastal regions where suitable vernal pools occur. Historically, these species were distributed throughout extensive vernal pools associated with California's Mediterranean climate grasslands. However, much of this habitat has been lost or fragmented as a result of urban development, agricultural conversion, and infrastructure expansion. The primary threat to these species is the loss and degradation of vernal pool habitat, including alterations to natural hydrology, land grading, soil compaction, and other disturbances that disrupt the seasonal inundation patterns necessary for successful reproduction. These historic pressures have resulted in VPFS becoming federally listed as threatened and VPTS becoming federally listed as endangered. As these species are largely dependent on vernal pools for survival, their conservation status is heavily

influenced by available vernal pool habitat. Changes in hydrology and plant communities, as well as soil integrity are all important factors in these species' survival. Conservation efforts aimed at vernal pools are what provide additional habitat for them.

**California tiger salamander**

Historically, CTS occurred throughout much of the Central Valley and surrounding foothill and coastal regions of California, including the San Francisco Bay Area, Central Coast, and interior valleys. However, the species' range has been impacted by widespread loss and fragmentation of both breeding and upland habitat.

Primary threats to the species include the loss and alteration of seasonal wetland habitat, conversion of native grasslands to urban or agricultural uses, and fragmentation of upland dispersal habitat by roads and infrastructure. Additional threats include predation by introduced aquatic species, hybridization with non-native barred tiger salamanders (*Ambystoma mavortium*), and alterations to wetland hydrology that reduce breeding success. Since the species depends on both seasonal wetlands and extensive surrounding upland habitat, conservation efforts typically focus on protecting intact grassland landscapes that maintain both breeding and dispersal habitat. CTS is currently federally listed as threatened. The species possesses high potential for recovery if breeding and upland habitats are protected.

**California red-legged frog**

California red-legged frogs typically inhabit a variety of aquatic and riparian habitats, including ponds, slow-moving streams, marshes, and other freshwater systems with dense emergent or riparian vegetation. The species previously occurred in coastal drainages and interior valleys from Mendocino County south to Baja California and inland to the Sierra Nevada foothills. CRLF has experienced substantial declines throughout its historical range and is now absent from much of the Central Valley and other areas where suitable habitat has been lost or degraded due to urban development, agricultural conversion, and modification of aquatic systems. Additional threats include predation by introduced aquatic species such as American bullfrogs and non-native fish, degradation of riparian habitat, and changes in hydrology that reduce the availability or suitability of breeding sites. Due to ongoing stressors, this species is federally listed as threatened. Active conservation measures include habitat restoration, reintroduction programs, and the creation of conservation banks

## Table 3-8: Current and Future Projects Within Project Limits

| Project Title | EA | County-Route | Post Mile | Description | Impacts | Current Status | RSA(s) Impacted |
|---|---|---|---|---|---|---|---|
| SR 12 Pavement Preservation | 04 – 0AA53 | SOL – 012 | 14.10 – 20.68 | Pavement preservation along SR 12. | Biological studies for this project are ongoing; impacts are currently unknown. | Preparation of environmental document | 1 |
| Pavement Rehabilitation | 04 – 2Q550 | SOL – 012 | 7.90 – 14.10 | Pavement rehabilitation along SR 12. | The project is expected to impact CTS and their critical habitat, as well as the critical habitat of VPFS. | In construction | 1 |
| Pedestrian Safety Enhancement | 04 – 0W110 | SOL – 012 | 3.26 – 7.50 | Installation of pedestrian safety enhancements along SR 12. | Biological studies indicate that no impacts to the species or habitats included in this cumulative impact analysis would occur. | In construction | None |
| Replace Backflow Preventer Assembly | 04 – 4Y100 | SOL - 012 | 1.80 – 1.80 | Install a stainless steel wilkins 375ASTR pressure zone assembly. | Given the implementation of AMMs, BMPs, location, nature, timeframe and methods of the proposed construction, the proposed project would have no impact on any listed species. | In construction | None |
| Storm Damage - Permanent Restoration | 04 – 0Q690 | NAP - 012 | 2.10 – 2.60 | Repair of storm-damaged slopes and restore ditches on SR 12 near the City of Napa. | Appropriate BMPs and AMMs would minimize or avoid impacts to biological resources. | In construction | None |
| Horizontal Alignment Warning Signs on SR 12 | 04 – 4AC90 | NAP – 012 | 0.0 – 3.1 | Installing and upgrading horizontal alignment warning signs. | The project would not impact biological resources or have a cumulative impact since work would be spaced apart and minimal in scope. | Contractor bidding open | None |
| APS Signal Upgrade | 04 – 0K100 | SOL - 080 | 5.70 | This project proposes to install accessible pedestrian signal (APS) systems. | Potential impacts to CCG and CRLF were identified. No compensatory mitigation was required with the implementation of AMMs. | Contractor bidding open | 2 |
| District Director's Order | 04 – 0X350 | SOL - 012 | 2.67 | This project proposes to repair the distressed pavement and installing steel casing along the existing MBGR, but no additional project information is provided. | No information pertaining to impacts on biological resources is available. | In construction | 1, 2, 3 |
| Director's Order | 04 – 3Y050 | SOL - 012 | 7.50 - 13.50 | This project proposes to perform emergency roadway storm-related failure repair. Despite documented occurrences of listed species within 1 mile of the proposed project, it was determined that there would be no effect to listed species with implementation of AMMs and biological surveys and monitoring. | It was determined that there would be no impact to listed species with implementation of appropriate AMMs. The proposed project would not result in any permanent loss in habitat supporting listed wildlife species. | In construction | None |

| Project Title | EA | County-Route | Post Mile | Description | Impacts | Current Status | RSA(s) Impacted |
|---|---|---|---|---|---|---|---|
| Highway 12 Logistics Center (Private Project) | N/A | SOL - 012 | 7.50 | This project would construct a warehouse and logistics center east of Walters Rd. and south of Petersen Rd along SR 12. | Impacts to individual CCG and CCG critical habitat, including impacts to acres of vernal pool habitat, are anticipated as a result of this project. However, several MMs are proposed to support offsite mitigation for CCG and vernal pool habitat. | In planning review, construction pending | 2 |
| Suisun Logistics Center (Private Project) | N/A | SOL - 012 | R3.7 | This project would construct a warehouse and logistics center south of SR 12 at Pennsylvania Ave. | The project is anticipated to impact individual CCG, and VPFS critical habitat. Currently, mitigation strategies for these impacts entail purchasing preservation credits through a USFWS-approved mitigation bank in order to create and protect habitat for CCG and VPFS through a conservation easement. | In planning review | 2 |
| Traffic Management Systems Life Cycle Replacements | 04 – 4W590 | NAP - 012<br>SOL - 012 | Napa: SR-29, PM R2.07/39.504; I-80, PM 7.5/7.5; SR-121 PM 0.16/7.69 Solano: SR-12, PM 0.088/0.088; I-80, PM 0.331/33.46; I-680, PM R0.26R/R11.6; I-780 PM 0.265R/1.35 | This project would update and replace several traffic management elements on routes 80 and 680 in Solano County. | The project is still within its initial scoping phase and has identified critical habitat for CTS and CRLF. More detailed information on potential impacts on biological resources would be available during later phases of project development. | Preliminary scoping | 1, 3 |
| Minor Pavement Rehabilitation (CAPM) | 04 – 4W250 | SOL - 680 | R0.00 - 13.12 | The project would rehabilitate pavement on I-680 in Solano County. | Biological studies for this project have not yet been completed, potential impacts to biological resources are currently unknown. | Preliminary scoping | 3 |
| Maintenance Facility Rehabilitation | 04 – 4W240 | SOL - 080 | 17.12 | This project seeks to build a new vehicle maintenance facility along I-80. | Although special-status species such as CTS are present within the vicinity of the station, the project is not anticipated to have any impact to biological resources because the footprint would be contained to the existing facility. | Environmental document approved | None |
| Mobility - Weigh in Motion Scales & CVFS | 04 – 3W320 | SOL - 080 | 14.80 | Replacement of pit covers for Cordelia Vehicle Enforcement Facility | No information on biological impacts available regarding biological resources being studied in this cumulative analysis. | Awaiting environmental studies | 3 |
| Suisun Creek Bridge Scour Mitigation | 04 – 4G872 | SOL - 080 | 14.60 | Repair the scour in Suisun Creek at the Interstate 80 (1-80) bridge in Solano County. | The project's environmental document states a low probability of impacting CTS and CRLF, as the project site is within habitat area for the species. | In construction | 1, 3 |

| Project Title | EA | County-Route | Post Mile | Description | Impacts | Current Status | RSA(s) Impacted |
|---|---|---|---|---|---|---|---|
| N/A | 04 – 3X470 | SOL - 080 | 12.90 | Repairing the subsidence on the AC pavement off the Green Valley Creek Bridge and reconstruct the slope below the bridge. | The project's environmental document does not anticipate any impacts anticipated to biological resources being studied in this cumulative analysis. | In construction | None |
| N/A | 04 – 3Y650 | SOL - 680 | 8.40 | Stabilizing the slope adjacent the highway by installing a sheet pile retaining wall. | The project's environmental document does not anticipate any impacts anticipated to biological resources being studied in this cumulative analysis. | In construction | None |
| Suisun Expansion Project (Private Project) | N/A | SOL - 012 | 10.00 (Approximately) | The Suisun Expansion Project is a privately funded development initiative proposing to build a new, large-scale urban community in eastern Solano County, California, adjacent to and east of Suisun City. | The proposed project has the potential to impact critical habitat for VPFS, VPTS, CCG. There could also be impacts to CTS and vernal pool wetlands. | In planning review | 1, 2 |

**PROJECT'S CUMULATIVE CONTRIBUTIONS**

The proposed Project would rehabilitate highway pavement, perform repairs to drainage systems, upgrade loop detectors and guard rails, and improve multi-modal access on SR 12 in Napa and Solano Counties. Within the scope of work for this Project, the proposed repairs to drainage systems are what would result in impacts to the biological resources being considered for this cumulative impact analysis. All of the species and habitats being studied are situated in or have the potential to occur within the jurisdictional drainages that would be impacted by this work. Particular work items that would contribute to cumulative impacts are replacement of flared end sections (FES) and rock slope protection (RSP), as well as grading at the various drainage systems outlined in Table 3-1. Construction practices such as minor excavation and grading needed to replace the FES and RSP would have a temporary impact on the freshwater emergent wetlands within the Project area. Despite this temporary impact, the installing new FES would provide a more even flow of water from the highway, which would reduce erosion and sedimentation. Additionally, the newly installed RSP would retain more sediment and reduce erosion and improve water quality. Although both operations would temporarily impact these wetland habitats, the long-term impacts would be positive.

When considered alongside regional development patterns and the reasonably foreseeable impacts of the other projects that have the potential to affect listed species, the Build Alternative would minimally contribute to cumulative impacts on freshwater emergent wetlands and the plant and animal species considered in this analysis. However, with the implementation of AMMs, the Project's contribution would not be cumulatively considerable under CEQA. Overall, while cumulative pressures on these biological resources remain high due to historic and ongoing loss of habitat in the region, the Project's effects are limited and would not substantially increase cumulative impacts within the three RSAs.

Analysis of current and planned projects within RSAs 1, 2, and 3 has identified several projects with the potential to impact the biological resources being studied under this cumulative impact analysis. For CTS, impacts are possible from the Suisun Expansion project (CA Forever 2025), as well as project EAs 04-2Q550, 04-4W590, and 04-4G872, which are noted in Table 3-8. Impacts to VPFS and VPTS are possible due to the Suisun Expansion Project and Suisun Logistics Center (Suisun Logistics 2025) projects and project EA 04-2Q550. For CCG critical habitat and vernal pool wetlands, impacts are possible due to the Suisun Expansion Project and Suisun Logistics Center and Highway 12 Logistics Center projects, as well as impacts from project EA 04-

0K100. Notably, both the Suisun Logistics Center and Highway 12 Logistics Center (HLC 2025) projects have proposed MMs for CCG, VPFS, and vernal pools. Finally, several Caltrans projects have had or potentially could have impacts to CRLF. Project EAs 04-3W320 and 04-4W250 would occur in or near critical habitat for CRLF, however biological studies have not yet been conducted in order to quantify these potential impacts. Project EAs 04-4W590, 04-4G872, and 04-0K100 would potentially have low impacts to CRLF or its dispersal habitat, according to the biological studies prepared by Caltrans for these projects.

#### RESULTS AND NEED FOR MITIGATION

Potential cumulative impacts to the biological resources considered in this analysis were determined by identifying resources susceptible to cumulative impacts, defining RSAs using spatial and biological data, and observing trends in construction-related impacts to biological resources within those areas. This information contextualizes the impacts to biological resources of the Project within a broader scope of development and maintenance projects near Fairfield, Suisun City and Vallejo.

Current and future SHOPP projects located within the Project vicinity include pavement repair projects, environmental mitigation projects, storm and wildfire damage repairs, and plant establishment and planting. These projects have the potential to impact several of the biological resources being considered in this cumulative impact analysis. However, since many of these projects are through Caltrans, the implementation of PFs and AMMs, and potentially mitigation measures, would help to reduce or avoid impacts.

Private projects that are planned for the general area covered by the three RSAs are anticipated to impact vernal pool branchiopods, CCG critical habitat, CTS habitat, and vernal pools. The likely extent of these impacts is known for all private projects listed except for the Suisun Expansion project, which is still in planning review. For the species and habitats impacted by private projects, there are planned mitigation measures for supporting offsite creation of habitat for CCG, vernal pool branchiopods, and vernal pools. The impacts to biological resources as a result of private projects would be largely addressed through these mitigation measures, however, it is recommended that agencies with jurisdiction over these resources consider a larger, connected, and combined mitigation strategy to offset the impacts of smaller projects in a more effective manner for the resources being affected.

Based on the status of the biological resources studied in this analysis within the RSAs, the Project described in this environmental document would not increase highway

capacity, induce growth, or change land use patterns. The analysis presented does identify potential temporary construction related impacts to biological resources as a result of the drainage upgrades at 11 locations. However, impacts from this Project are expected to be limited and would not be considerable when viewed in connection with current or future projects with the implementation of AMMs.

CRLF, CTS, and the vernal pool branchiopods being studied in this analysis all have a low probability of occurring within the Project area due to factors such as physical movement barriers, well-draining soil, and proximity to agricultural lands that render freshwater emergent wetlands within the Project limits largely unsuitable for any of these species. Contra costa goldfields (CCG) is highly unlikely to occur in the Project area due to frequent mowing and maintenance at the drainage systems where the freshwater emergent wetland where it would hypothetically be found. Finally, the freshwater emergent wetlands that could support these species are only temporarily impacted by work at the drainage systems, as all work would be done in kind, which would retain the function of these wetlands without increasing the impact posed by existing infrastructure such as the current flared end sections at these locations. With the implantation of the aforementioned AMMs, the proposed scope of work would have a less than significant impact on the species and habitats considered in this analysis.

The Project's impacts to biological resources in context of the impacts of current and planned projects to the same species and habitats are relatively minimal but still present. The projects outlined in Table 3-8 do pose potential impacts to these biological resources. Most projects have measures in place to offset potential impacts, although the magnitude of impact for projects such as the Suisun Expansion project are still unknown.

In comparison with the potential impacts of current and planned projects within the defined RSAs for biological resources, the Project's impacts to biological resources are cumulatively considerable, but are still temporary and minimal in scale, and do not require mitigation. The implementation of AMMs for this Project would make cumulatively considerable impacts less than significant.

**c) Less than significant**

One of the factors considered for a project having potential hazardous waste impacts is the Project’s proximity to sensitive populations such as elderly communities or schools. As noted in Section 3.3.9, there are three schools and one daycare within 0.25 miles of the Project area. The primary concern for these sensitive communities is potential

exposure to aerially deposited lead (ADL) which would be released due to removing painted lane lines and pavement markets, roadside sign replacement, cold planing asphalt concrete and excavating soil beneath the highway, as this is where lead from vehicle exhaust tends to accumulate. Firstly, AMM HAZ-1 entails soil and water testing within the Project area in order to assess current lead levels within the Project area. During construction, AMM HAZ-2 and AMM HAZ-3 contain provisions such as dust suppression and proper management and disposal of soils potentially contaminated with lead, which would avoid or minimize lead from becoming airborne. Additional hazardous waste concerns for the Project are treated wood waste (TWW) from replacing the guardrail system and electrical waste from replacing the loop detectors, which would be covered by AMM HAZ-4 and AMM HAZ-5, respectively. As such, impacts would be less than significant.

Noise-related impacts from this Project are outlined in Section 3.3.13. These temporary and short-term noise impacts would be caused by construction equipment such as cold planing asphalt pavement and replacement of guard rail and road signs . A list of sensitive receptors has been compiled, and a set of PFs and AMMs would be implemented to prevent or minimize excessive noise to nearby communities. Additionally, the public would be informed of the work schedule in advance of construction. Impacts would be less than significant.

This Project would not permanently impact human beings directly or indirectly. It is anticipated that Project impacts would be minor and temporary as a result of construction-related activities and delays due to traffic management. Night work and one way lane closures are anticipated which would cause potential impacts to vehicles traveling through the Project vicinity. With the implementation of the AMMs these impacts would be reduced.

# Chapter 4 Climate Change

Climate change refers to long-term changes in temperature, precipitation, wind patterns, and other elements of the Earth's climate system. The Intergovernmental Panel on Climate Change, established by the United Nations and World Meteorological Organization in 1988, is devoted to greenhouse gas (GHG) emissions reduction and climate change research and policy. Climate change in the past has generally occurred gradually over millennia, or more suddenly in response to cataclysmic natural disruptions. The research of the Intergovernmental Panel on Climate Change and other scientists over recent decades, however, has unequivocally attributed an accelerated rate of climatological changes over the past 150 years to GHG emissions generated from the production and use of fossil fuels.

Human activities generate GHGs consisting primarily of carbon dioxide, methane, nitrous oxide, tetrafluoromethane, hexafluoroethane, sulfur hexafluoride ($SF_6$), and various hydrofluorocarbons. $CO_2$ is the most abundant GHG; while it is a naturally occurring and necessary component of Earth's atmosphere, fossil-fuel combustion is the main source of additional, human-generated $CO_2$ that is the main driver of climate change. In the U.S. and in California, transportation is the largest source of GHG emissions, mostly $CO_2$.

The impacts of climate change are already being observed in the form of sea level rise, drought, extended and severe fire seasons, and historic flooding from changing storm patterns. The most important strategy to address climate change is to reduce GHG emissions. Additional strategies are necessary to mitigate and adapt to these impacts. In the context of climate change, "mitigation" involves actions to reduce GHG emissions to lessen adverse impacts that are likely to occur. "Adaptation" is planning for and responding to impacts to reduce vulnerability to harm, such as by adjusting transportation design standards to withstand more intense storms, heat, and higher sea levels. This analysis will include a discussion of both in the context of this transportation Project.

## 4.1 Regulatory Setting

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

### 4.1.1 Federal

To date, no nationwide numeric mobile-source GHG reduction targets have been established; however, federal agencies are mandated to consider the effects of climate change in their environmental reviews.

The National Environmental Policy Act (NEPA) (42 United States Code [USC] Part 4332) is the basic national charter for protection of the environment which establishes policy, sets goals, and provides direction for carrying out the policy. NEPA requires federal agencies to assess the environmental effects of their proposed actions prior to making a decision on the action or Project. In May 2024, the White House Council on Environmental Quality (CEQ) issued the National Environmental Policy Act Implementing Regulations Revisions Phase 2 (89 Fed. Reg. 35442). The CEQ regulations do not establish numeric thresholds of significance, but mandate that federal agencies consider the effects of climate change in their environmental reviews, including direct, indirect, and cumulative impacts. The CEQ regulations further require that agencies quantify GHG emissions, where feasible, from the proposed action and alternatives. The regulations also direct agencies to identify reasonable alternatives that reduce climate change-related effects.

The Federal Highway Administration recognizes the threats that extreme weather, sea level rise, 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 2022). 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.

Early efforts by the federal government to improve fuel economy and energy efficiency to address climate change and its associated effects include The Energy Policy and Conservation Act of 1975 (42 USC Section 6201); and Corporate Average Fuel Economy (CAFE) Standards. The U.S. Department of Transportation's National Highway Traffic and Safety Administration sets and enforces corporate average fuel economy standards for on-road motor vehicles sold in the United States. The Environmental Protection Agency (U.S. EPA) calculates average fuel economy levels for manufacturers, and also sets related GHG emissions standards for vehicles under the Clean Air Act. Raising CAFE standards leads automakers to create a more fuel-efficient fleet, which improves our nation's energy security, saves consumers money at the pump, and reduces GHG emissions (U.S. DOT 2014). These standards are periodically updated and published through the federal rulemaking process.

### 4.1.2 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).

In 2005, EO S-3-05 initially set a goal to reduce California's GHG emissions to 80 percent below year 1990 levels by 2050, with interim reduction targets. Later EOs and Assembly and Senate bills refined interim targets and codified the emissions reduction goals and strategies. The California Air Resources Board was directed to create a climate change scoping plan and implement rules to achieve "real, quantifiable, cost-effective reductions of greenhouse gases." Ongoing GHG emissions reduction was also mandated in Health and Safety Code (H&SC) Section 38551(b). In 2022, the California Climate Crisis Act was passed, establishing state policy to reduce statewide human-caused GHG emissions by 85 percent below 1990 levels, achieve net zero GHG emissions by 2045, and achieve and maintain negative emissions thereafter.

Beyond GHG reduction, the State maintains a climate adaptation strategy to address the full range of climate change stressors, and passed legislation requiring state agencies to consider protection and management of natural and working lands as an important strategy in meeting the state's GHG reduction goals.

## 4.2 Environmental Setting

### 4.2.1 GHG Inventories

A GHG emissions inventory estimates the amount of GHGs discharged into the atmosphere by specific sources over a period of time. Tracking annual GHG emissions allows countries, states, and smaller jurisdictions to understand how emissions are

changing and what actions may be needed to attain emission reduction goals. U.S. EPA is responsible for documenting GHG emissions nationwide, and the CARB does so for the state of California, as required by H&SC Section 39607.4. Cities and other local jurisdictions may also conduct local GHG inventories to inform their GHG reduction or climate action plans. The proposed Project is in a rural area, surrounded by lands zoned as Exclusive Agriculture, Marsh Preservation, and Suisun Marsh Agriculture.

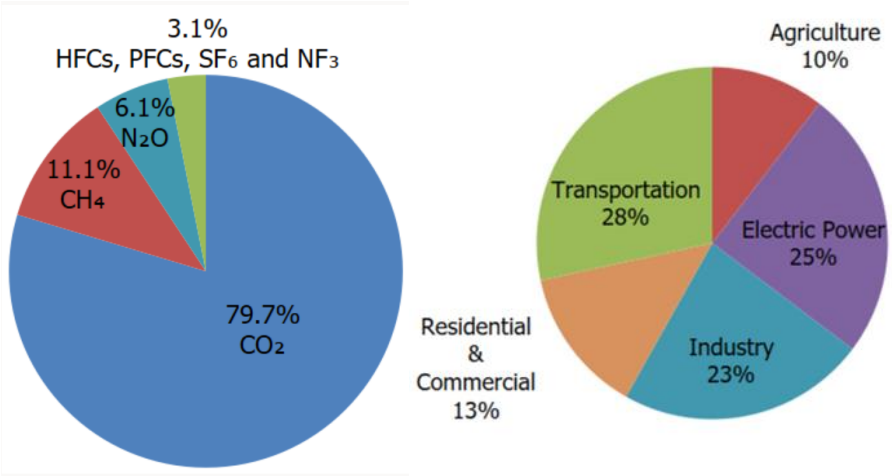
SR 12 is considered a major route for the eastern part of the state to access Napa, Solano, and Sonoma counties. Within the Project limits, SR 12 is a conventional highway with two lanes of travel, one in each direction. The Project would not increase vehicular capacity, and there are no high occupancy vehicle lanes along the route. The Transportation and Circulation element of the Solano County General Plan guides transportation development and addresses GHGs in the Project area. The Project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.

### NATIONAL GHG INVENTORY

The annual GHG inventory submitted by the U.S. EPA to the United Nations provides a comprehensive accounting of all human-produced sources of GHGs in the United States. Total national GHG emissions from all sectors in 2022 were 5,489.0 million metric tons, factoring in deductions for carbon sequestration in the land sector. (Land Use, Land Use Change, and Forestry provide a carbon sink equivalent to 15% of total U.S. emissions in 2022 [U.S. EPA 2024a].) While total GHG emissions in 2022 were 17% below 2005 levels, they increased by 1% over 2021 levels. Of these, 80% were $CO_2$, 11% were CH4, and 6% were N2O; the balance consisted of fluorinated gases. From 1990 to 2022, $CO_2$ emissions decreased by only 2% (U.S. EPA 2024a).

The transportation sector's share of total GHG emissions remained at 28% in 2022 and continues to be the largest contributing sector (Figure 4-1). Transportation activities accounted for 37% of U.S. $CO_2$ emissions from fossil fuel combustion in 2022. This is a decrease of 0.5% from 2021 (U.S. EPA 2024a, 2024b)).

**Figure 4-1: U.S. 2022 Greenhouse Gas Emissions**

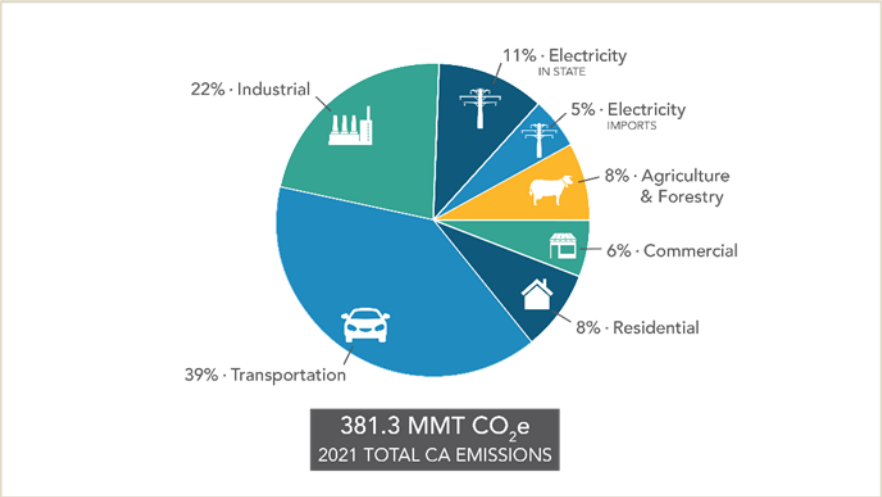



(Source: U.S. EPA 2024b)

### STATE GHG INVENTORY

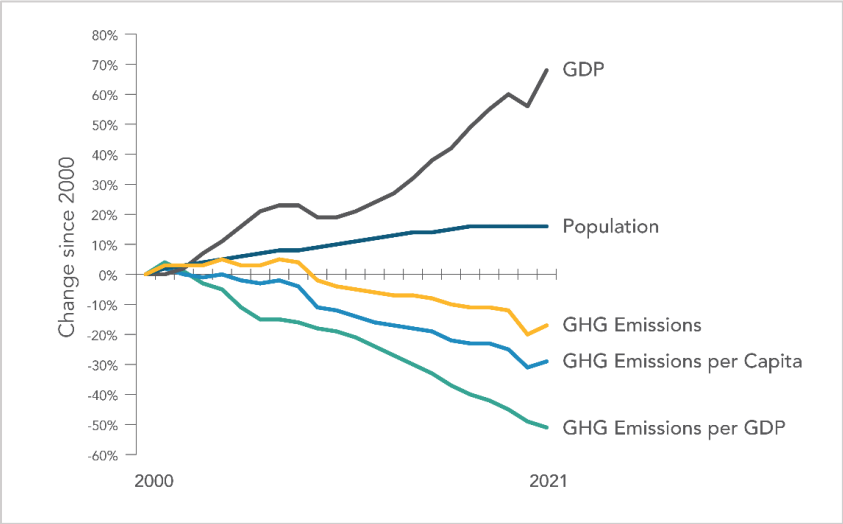
CARB collects GHG emissions data for transportation, electricity, commercial/residential, industrial, agricultural, and waste management sectors each year. It then summarizes and highlights major annual changes and trends to demonstrate the state's progress in meeting its GHG reduction goals. Overall statewide GHG emissions declined from 2000 to 2021 despite growth in population and state economic output (Figure 4-2). Transportation emissions remain the largest contributor to GHG emissions in the state (Figure 4-3) (CARB 2023).

**Figure 4-2: California 2021 Greenhouse Gas Emissions by Economic Sector**




*(Source: CARB 2023)*

**Figure 4-3: Change in California GDP, Population, and GHG Emissions since 2000**




*(Source: CARB 2023)*

AB 32 required CARB 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. The AB 32 Scoping Plan and the subsequent updates contain the main strategies California will use to reduce GHG emissions. CARB 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 2022 Scoping Plan for Achieving Carbon Neutrality, adopted September 2022, assesses progress toward the statutory 2030 reduction goal and defines a path to reduce human-caused emissions to 85 percent below 1990 levels and achieve carbon neutrality no later than 2045, in accordance with AB 1279 (CARB 2022a).

## 4.3 Regional Plans

As required by The Sustainable Communities and Climate Protection Act of 2008, CARB sets regional GHG reduction targets for California's 18 metropolitan planning organizations (MPOs) to achieve through planning future projects that will cumulatively achieve those goals, and reporting how they will be met in the Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). Targets are set at a percent reduction of passenger vehicle GHG emissions per person from 2005 levels. The proposed project is included in the RTP/SCS for the Metropolitan Transportation Commission. The regional reduction target for MTC is 15 percent by 2035 (CARB 2021).

**Table 4-1: Regional and Local Greenhouse Gas Reduction Plans**

| Title | GHG Reduction Policies or Strategies |
|---|---|
| Association of Bay Area Governments (ABAG) Plan Bay Area 2050/Sustainable Communities Strategy and Regional Transportation Plans (Adopted 2021) | • Promote compact, mixed-use commercial and residential development close to mass transit, jobs, recreation, etc.<br>• Expand the public transit network<br>• Strategic capacity and technology enhancements to existing highways |
| Napa County Regional Climate Action & Adaptation Plan (Adopted 2025) | • Expand public transit access and frequency<br>• Promote multimodal connectivity |
| Solano County Climate Action Plan (Adopted 2024) | • Encourage transit-oriented development<br>• Enhance intercity and commuter transit |
| Fairfield Forward 2050 General Plan & Climate Action Plan (Adopted 2024) | • Improve active and public transportation networks |
| City of Vacaville Energy & Conservation Action Strategy (Adopted 2021) | • Employer transit subsidy program |

Based on the MTCs Plan Bay Area 2040 document MTC plans to reduce GHG emissions by implementing transportation demand management strategies that include creating more bicycle and pedestrian networks, targeted transportation alternatives, trip cars, car sharing, vanpool incentives, and commuter benefits ordinances. Additionally, MTC plans to implement alternative fuel and vehicle strategies such as plug-in electric vehicle infostructure upgrades, incentives for plug-in vehicles particularly for low to moderate income households, promotion of emission reduction technology as well as marketing and education efforts.

## 4.4 Project Analysis

GHG emissions from transportation projects can be divided into those produced during operation and use of the State Highway System (operational emissions) and those produced during construction. The primary GHGs produced by the transportation sector are $CO_2$, $CH_4$, $N_2O$, and HFCs. $CO_2$ emissions are a product of burning gasoline or diesel fuel in internal combustion engines, along with relatively small amounts of $CH_4$ and $N_2O$. A small amount of HFC emissions related to refrigeration is also included in the transportation sector. (GHGs differ in how much heat each traps in the atmosphere, called global warming potential (GWP). $CO_2$ is the most important GHG, so amounts of other gases are expressed relative to $CO_2$, using a metric called “carbon dioxide equivalent”, or $CO_2e$. The global warming potential of $CO_2$ is assigned a value of 1, and the GWP of other gases is assessed as multiples of $CO_2$.)

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.

### 4.4.1 Operational Emissions

The purpose of the proposed Project is to rehabilitate the highway surfaces, upgrade drainage culverts, promote multimodal transportation access, as well as other general highway updates. Therefore, it would not increase the vehicle capacity of the highway. This type of project generally causes minimal or no increase in operational GHG emissions. Because the Project would not increase the number of travel lanes on SR 12, no increase in VMT would occur. While some GHG emissions during the construction period would be unavoidable, no increase in operational GHG emissions is expected.

### 4.4.2 Construction Emissions

Construction GHG emissions would result from material processing and transportation, on-site construction equipment, and traffic delays due to construction. These emissions will be produced at different levels throughout the construction phase; their frequency and occurrence can be reduced through innovations in plans and specifications and by implementing better traffic management during construction phases. While construction GHG emissions are only produced for a short time, they have long-term effects in the atmosphere, so cannot be considered “temporary” in the same way as criteria pollutants that subside after construction is completed.

Use of long-life pavement, improved traffic management plans, and changes in materials can also help offset GHG emissions produced during construction by allowing longer intervals between maintenance and rehabilitation activities. Based on Project information available for environmental studies, the construction-related GHG emissions

were calculated using CAL-CET 2021, version 1.0.3. It was estimated that for construction of the Build Alternative of this Project, the total amount of emissions produced due to construction would be 511 tons of carbon dioxide, 0.012 tons of methane, 0.026 tons of nitrous oxide, 0.013 tons of hydrofluorocarbon (HFC), and 496 metric tons of $CO_2e$.

PF-AQ-2 (Idling and Access Points), PF-AQ-3 (Maintaining Construction Equipment and Vehicles), and PF-GHG-1 (Energy Reduction) would be implemented to reduce or eliminate construction-related GHG emissions where practicable. These PFs can be found in Appendix B.

All construction contracts include Caltrans Standard Specifications related to air quality. Section 7-1.02A and 7 1.02C, Emissions Reduction, requires contractors to comply with all laws applicable to the Project and to certify they are aware of and will comply with all CARB emission reduction regulations. Section 14-9.02, Air Pollution Control, 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.

### 4.4.3 CEQA Conclusion

The Project would not increase highway capacity along SR 12. Non-capacity increasing projects are considered by Caltrans to have less than significant GHG impacts under CEQA.

Caltrans is firmly committed to implementing measures to help reduce GHG emissions. These measures are outlined in the following section.

## 4.5 Greenhouse Gas Reduction Strategies

### 4.5.1 Statewide Efforts

In response to Assembly Bill 32, the Global Warming Solutions Act, California is implementing measures to achieve emission reductions of GHGs that cause climate change. Climate change programs in California are effectively reducing GHG emissions from all sectors of the economy. These programs include regulations, market programs, and incentives that will transform transportation, industry, fuels, and other sectors to take California into a sustainable, cleaner, low-carbon future, while maintaining a robust economy (CARB 2022b).

Major sectors of the California economy, including transportation, will need to reduce emissions to meet 2030 and 2050 GHG emissions targets. The Governor's Office of Planning and Research identified five sustainability pillars in a 2015 report: (1) Increasing the share of renewable energy in the State's energy mix to at least 50 percent by 2030; (2) Reducing petroleum use by up to 50 percent by 2030; (3) Increasing the energy efficiency of existing buildings by 50 percent by 2030; (4) Reducing emissions of short-lived climate pollutants; and (5) Stewarding natural resources, including forests, working lands, and wetlands, to ensure that they store carbon, are resilient, and enhance other environmental benefits (OPR 2015).

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 vehicle VMT. Reducing today's petroleum use in cars and trucks is a key state goal for reducing GHG emissions by 2030.

In addition, SB 1386 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 carbon dioxide from the atmosphere through biological processes and sequester the carbon in above- and below-ground matter.

Subsequently, Governor Gavin Newsom issued Executive Order N-82-20 to combat the crises in climate change and biodiversity. It instructs state agencies to use existing authorities and resources to identify and implement near- and long-term actions to accelerate natural removal of carbon and build climate resilience in our forests, wetlands, urban greenspaces, agricultural soils, and land conservation activities in ways that serve all communities and in particular low-income, disadvantaged, and vulnerable communities. To support this order, the California Natural Resources Agency released Natural and Working Lands Climate Smart Strategy (California Natural Resources Agency 2022).

### 4.5.2 Caltrans Activities

Caltrans continues to be involved on the Governor's Climate Action Team as the CARB 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.

### Climate Action Plan for Transportation Infrastructure

The California Action Plan for Transportation Infrastructure (CAPTI) builds on executive orders signed by Governor Newsom in 2019 and 2020 targeted at reducing GHG emissions in transportation, which account for more than 40 percent of all polluting emissions, to reach the state's climate goals. Under CAPTI, where feasible and within existing funding program structures, the state will invest discretionary transportation funds in sustainable infrastructure projects that align with its climate, health, and social equity goals (California State Transportation Agency 2021).

### California Transportation Plan

The California Transportation Plan (CTP) is a statewide, long-range transportation plan to meet our future mobility needs and reduce GHG emissions. It serves as an umbrella document for all the other statewide transportation planning documents. The CTP 2050 presents a vision of a safe, resilient, and universally accessible transportation system that supports vibrant communities, advances racial and economic justice, and improves public and environmental health. The plan’s climate goal is to achieve statewide GHG emissions reduction targets and increase resilience to climate change. It demonstrates how GHG emissions from the transportation sector can be reduced through advancements in clean fuel technologies; continued shifts toward active travel, transit, and shared mobility; more efficient land use and development practices; and continued shifts to telework (Caltrans 2021a).

### Caltrans Strategic Plan

The Caltrans 2020–2024 Strategic Plan includes goals of stewardship, climate action, and equity. Climate action strategies include developing and implementing a Caltrans Climate Action Plan; a robust program of climate action education, training, and outreach; partnership and collaboration; a VMT monitoring and reduction program; and engaging with the most vulnerable communities in developing and implementing Caltrans climate action activities (Caltrans 2021b).

### Caltrans Policy Directives and Other Initiatives

Caltrans Director’s Policy 30 (DP-30) Climate Change (June 22, 2012) established a policy to ensure coordinated efforts to incorporate climate change into Caltrans decisions and activities. Other Director’s policies promote energy efficiency,

conservation, and climate change, and commit Caltrans to sustainability practices in all planning, maintenance, and operations. Caltrans Greenhouse Gas Emissions and Mitigation Report (Caltrans 2020) provides a comprehensive overview of Caltrans' emissions and current Caltrans procedures and activities that track and reduce GHG emissions. It identifies additional opportunities for further reducing GHG emissions from Department-controlled emission sources, in support of Caltrans and State goals.

### 4.5.3 Project-Level GHG Reduction Strategies

The following measures would also be implemented in the Project to reduce GHG emissions and potential climate change impacts from the Project:

**PF-AQ-2: Limit Idling and Access Points.** Idling times would be minimized either by shutting off equipment when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure [Title 13, Section 2485 of California Code of Regulations]). Clear signage would be provided for construction workers at all access points. Construction activities involving the extended idling of diesel equipment or vehicles would be prohibited, to the extent feasible.

**PF-Energy-1: Minimize Energy Consumption from Construction Activities**. Energy consumption from construction activities would be minimized by the use of construction BMPs, including, but not limited to the following:

- Limit idling of vehicles and equipment.
- Use solar power as a power source, if feasible.
- Ensure regular maintenance of construction vehicles and equipment.
- If feasible, recycle nonhazardous waste and excess materials to reduce disposal offsite.

**PF-GHG-1: Energy Reduction.** Solar energy would be used to reduce the use of non-renewable energy during construction.

**PF-TRANS-1: Traffic Management Plan.** A Traffic Management Plan would be developed by Caltrans during the design phase. The TMP would include public information, motorist information, incident management, construction, and alternate routes. In addition, single-lane closures, flaggers and phasing, portable changeable message signs and the California Highway Patrol's Construction Zone Enhanced Enforcement Program would be incorporated into the TMP to minimize delays to local residents and highway users, as feasible. The TMP would also provide access for police and emergency service providers. Lane closures would be planned in coordination with

Caltrans and Solano County and would include notices to emergency services providers, and the public in advance.

## 4.6 Adaptation

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. Furthermore, the combined effects of transportation projects and climate stressors can exacerbate the impacts of both on vulnerable communities in a project area. Accordingly, Caltrans must consider these types of climate stressors in how highways are planned, designed, built, operated, and maintained.

### 4.6.1 Federal Efforts

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

The Fifth National Climate Assessment, published in 2023, presents the most recent science and "analyzes the effects of global change on the natural environment, agriculture, energy production and use, land and water resources, transportation, human health and welfare, human social systems, and biological diversity; [It] analyzes current trends in global change, both human-induced and natural, and projects major trends for the subsequent 25 to 100 years … to support informed decision-making across the United States." Building on previous assessments, it continues to advance "an inclusive, diverse, and sustained process for assessing and communicating scientific knowledge on the impacts, risks, and vulnerabilities associated with a changing global climate" (U.S. Global Change Research Program 2023).

The U.S. Department of Transportation recognizes the transportation sector's major contribution of GHGs that cause climate change and has made climate action one of the department's top priorities (U.S. DOT 2023). FHWA's policy is 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 fosters resilience to climate effects and sustainability at the federal, state, and local levels (FHWA 2022).

The National Oceanic and Atmospheric Administration provides sea level rise projections for all U.S. coastal waters to help communities and decision makers assess their risk from sea level rise. Updated projections through 2150 were released in 2022 in a report and online tool (NOAA 2022).

### 4.6.2 State Efforts

Climate change adaptation for transportation infrastructure involves long-term planning and risk management to address vulnerabilities in the transportation system. A number of state policies and tools have been developed to guide adaptation efforts.

California's Fourth Climate Change Assessment (Fourth Assessment) (2018) provides information to help decision makers across sectors and at state, regional, and local scales protect and build the resilience of the state's people, infrastructure, natural systems, working lands, and waters. The Fourth Assessment reported that if no measures are taken to reduce GHG emissions by 2021 or sooner, the state is projected to experience an up to 8.8 degrees Fahrenheit increase in average annual maximum daily temperatures; a two-thirds decline in water supply from snowpack resulting in water shortages; a 77% increase in average area burned by wildfire; and large-scale erosion of up to 67% of Southern California beaches due to sea level rise. These effects will have profound impacts on infrastructure, agriculture, energy demand, natural systems, communities, and public health (State of California 2018).

Sea level rise is a particular concern for transportation infrastructure in the coastal zone. Major urban airports will be at risk of flooding from sea level rise combined with storm surge as early as 2040; San Francisco airport is already at risk. Miles of coastal highways vulnerable to flooding in a 100-year storm event will triple to 370 by 2100, and 3,750 miles will be exposed to temporary flooding. The Fourth Assessment's findings highlight the need for proactive action to address these current and future impacts of climate change.

To help actors throughout the state address the findings of California's Fourth Climate Change Assessment, AB 2800's multidisciplinary Climate-Safe Infrastructure Working Group published Paying it Forward: The Path Toward Climate-Safe Infrastructure in California. This report provides guidance on assessing risk in the face of inherent

uncertainties still posed by the best available climate change science. It also examines how state agencies can use infrastructure planning, design, and implementation processes to respond to the observed and anticipated climate change impacts (Climate-Safe Infrastructure Working Group 2018).

EO S-13-08, issued in 2008, directed state agencies to consider sea level rise scenarios for 2050 and 2100 during planning to assess project vulnerabilities, reduce risks, and increase resilience to sea level rise. It gave rise to the 2009 California Climate Adaptation Strategy, the Safeguarding California Plan, and a series of technical reports on statewide sea level rise projections and risks, including the State of California Sea-Level Rise Guidance Update in 2018. The reports addressed the full range of climate change impacts and recommended adaptation strategies. The current California Climate Adaptation Strategy incorporates key elements of the latest sector-specific plans such as the Natural and Working Lands Climate Smart Strategy, Wildfire and Forest Resilience Action Plan, Water Resilience Portfolio, and the CAPTI (described above). Priorities in the 2023 California Climate Adaptation Strategy include acting in partnership with California Native American Tribes, strengthening protections for climate-vulnerable communities that lack capacity and resources, implementing nature-based climate solutions, using best available climate science, and partnering and collaboration to best leverage resources (California Natural Resources Agency 2023).

EO B-30-15 recognizes that effects of climate change threaten California’s infrastructure and requires state agencies to factor climate change into all planning and investment decisions. Under this EO, the Office of Planning and Research published Planning and Investing for a Resilient California: A Guidebook for State Agencies, to encourage a uniform and systematic approach to building resilience.

SB 1 Coastal Resources: Sea Level Rise (Atkins 2021) established statewide goals to “anticipate, assess, plan for, and, to the extent feasible, avoid, minimize, and mitigate the adverse environmental and economic effects of sea level rise within the coastal zone.” As the legislation directed, the Ocean Protection Council collaborated with 17 state planning and coastal management agencies to develop the State Agency Sea-Level Rise Action Plan for California in February 2022. This plan promotes coordinated actions by state agencies to enhance California's resilience to the impacts of sea level rise (California Ocean Protection Council 2022).

### 4.6.3 Caltrans Adaptation Efforts

#### CALTRANS VULNERABILITY ASSESSMENTS

Caltrans completed climate change vulnerability assessments to identify segments of the State Highway System vulnerable to climate change effects of precipitation, temperature, wildfire, storm surge, and sea level rise.

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 guide analysis of at-risk assets and development of Adaptation Priority Reports as a method to make capital programming decisions to address identified risks.

#### CALTRANS SUSTAINABILITY PROGRAMS

The Director's Office of Equity, Sustainability and Tribal Affairs supports implementation of sustainable practices at Caltrans. The Sustainability Roadmap is a periodic progress report and plan for meeting the Governor's sustainability goals related to EOs B-16-12, B-18-12, and B-30-15. The Roadmap includes designing new buildings for climate change resilience and zero-net energy, and replacing fleet vehicles with zero-emission vehicles (Caltrans 2023).

### 4.6.4 Project Adaptation Analysis

A climate change vulnerability assessment was completed to identify segments of the State Highway System vulnerable to climate change effects from precipitation, temperature, wildfire, storm surge, and sea level rise.

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 guide analysis of at-risk assets and development of Adaptation Priority Reports as a method to make capital programming decisions to address identified risks.

#### SEA LEVEL RISE

The proposed Project is outside the coastal zone but is still susceptible to potential impacts from sea level rise. The portion of the Project area west of the I-80 interchange is not susceptible to sea level rise, however SR 12 within Suisun City is within a low-lying area that would be vulnerable to sea level rise of 3 to 10 feet, the range expected after 2100. Accordingly, long term impacts to transportation facilities are possible. Figure 4-4 demonstrates the impact that 10 feet of sea level rise would have in the

Project area. The data for this figure was pulled from the Caltrans Environmental GIS Library (Caltrans GIS). Additionally, sea level rise data for the San Francisco Bay Area is contained in Table 4-2 below, demonstrating likely sea level rise from years 2030 – 2100 in both low and high emission scenarios.

**Figure 4-4: Sea Level Rise Map – 9.5 ft Scenario**

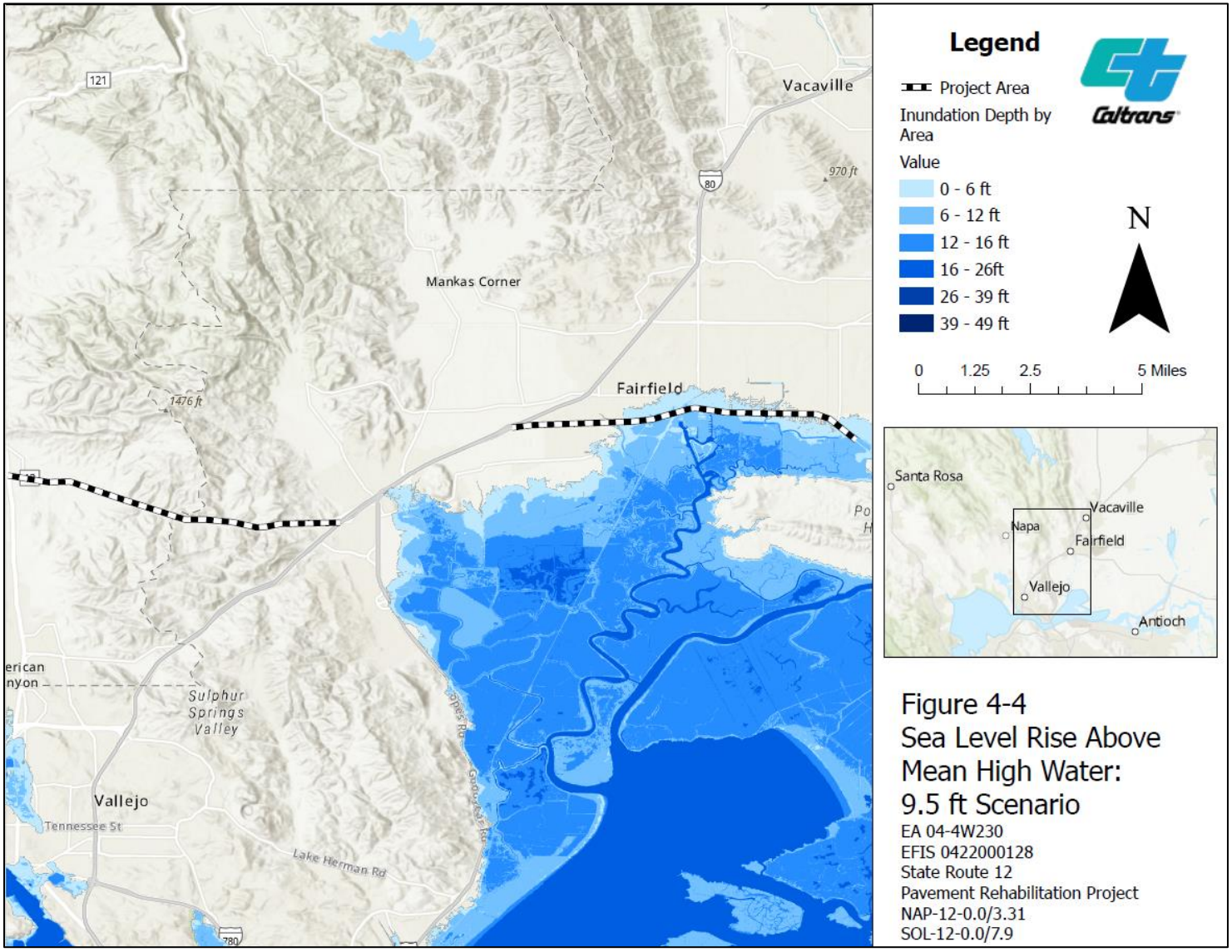


**Table 4-2: Median Sea Level Rise for San Francisco Bay Area**

| Scenario | Year | Low Risk Aversion (ft) | Medium – High Risk Aversion (ft) | Extreme Risk Aversion (ft) |
|---|---|---|---|---|
| High emissions | 2030 | 0.5 | 0.8 | 1.0 |
| High emissions | 2040 | 0.8 | 1.3 | 1.8 |
| High emissions | 2050 | 1.1 | 1.9 | 2.7 |
| Low emissions | 2060 | 1.3 | 2.4 | 3.9 |
| High emissions | 2060 | 1.5 | 2.6 | 3.9 |
| Low emissions | 2070 | 1.5 | 3.1 | 5.2 |
| High emissions | 2070 | 1.9 | 3.5 | 5.2 |
| Low emissions | 2080 | 1.8 | 3.9 | 6.6 |
| High emissions | 2080 | 2.4 | 4.5 | 6.6 |
| Low emissions | 2090 | 2.1 | 4.7 | 8.3 |
| High emissions | 2090 | 2.9 | 5.6 | 8.3 |
| Low emissions | 2100 | 2.4 | 5.7 | 10.2 |
| High emissions | 2100 | 3.4 | 6.9 | 10.2 |

### PRECIPITATION AND FLOODING

As noted in the Hydraulics Memorandum (Caltrans 2025e) prepared for this document, the Project is within floodplain zones AE, AO and A, all of which indicate a 1% annual chance flood. The nature of the proposed work for this Project would have a minimal impact on these floodplains and would not result in substantial encroachment.

The Caltrans District 4 Climate Change Vulnerability Assessment (Caltrans Vulnerability 2019) discusses the potential increase in rainfall depth during abnormally high precipitation events within District 4. Such events are dubbed “100-year storms” in the sense that they have a 1% probability of occurring in any given year due to the sheer volume of rainfall that they produce compared to average rainfall for an area. This report indicates the potential for a 0.6 – 4.9% increase in 100-year storm precipitation depth in the Project vicinity for 2025 and 2055. For 2085, the assessment indicates a 5.0 – 9.9% increase in 100-year storm precipitation depth in the Project vicinity. Precipitation volume during storm events within the Project vicinity is expected to progressively increase towards the end of this century, however as noted in Section 3.3.10, the Project would not change the 100-year water surface elevation within the Project area. There would be an additional 0.41 acre of NIS created as a result of the Project, but the stormwater runoff generated from these impervious surfaces from the highway would be accommodated by the current drainage system.

### WILDFIRE

Within Napa County, the Project is located within an SRA that ranges from a moderate to high fire severity zone. In Solano County, the Project is in an LRA that ranges from a moderate to high fire severity zone (Cal Fire 2025).

The Caltrans District 4 Climate Change Vulnerability Assessment indicates that the Project area in both Napa and Solano Counties and much of the Project vicinity are not expected to have an increased likelihood of wildfires. The assessment presents a model of areas that are anticipated to experience a greater likelihood of wildfires by the years 2025, 2055, and 2085. In all three scenarios, the Project area is not shown to have an increase in wildfire frequency. Caltrans proposes to repave SR 12, provide upgrades to drainage and stormwater management, perform complete streets improvements, and increase multimodal access, which would all have limited susceptibility to wildfires. Furthermore, construction activities would not increase the negative effects of wildfires. Lastly, Caltrans would work with local officials to ensure SR 12 remains open to emergency traffic.

### TEMPERATURE

The District Climate Change Vulnerability Assessment does not indicate temperature changes during the Project's design life that would require adaptive changes in pavement design or maintenance practices.

# Chapter 5 List of Preparers

The primary persons responsible for contributing to, preparing, and reviewing this report are listed in Table 5-1.

**Table 5-1: List of Preparers and Reviewers**

| Organization | Name | Role |
|---|---|---|
| Caltrans | Lawrence Bonner | Office Chief, Office of Environmental Analysis |
| Caltrans | Kristina Montgomery | Branch Chief, Office of Cultural Resource Studies |
| Caltrans | Sean Marquis | Branch Chief, Office of Biological Studies and Permits |
| Caltrans | Ambreen Ansari | Project Manager |
| Caltrans | Mojgan Osooli | Branch Chief, Office of Water Quality |
| Caltrans | Reem Mansour | Project Engineer |
| Caltrans | Makhmud Allokh | Project Engineer |
| Caltrans | Abra Spiciarich | Environmental Scientist, Archaeology |
| Caltrans | Shilpa Mareddy | Branch Chief, Air Quality and Noise |
| Caltrans | Gloria Ramirez | Branch Chief, Landscape Architecture |
| Caltrans | Maxwell Lammert | Branch Chief, Office of Environmental Analysis |
| Caltrans | Matthew Coughlin | Environmental Scientist, Analysis |
| Caltrans | Zaira Narvaez-Lopez | Biologist |
| Caltrans | Revisha Brar | Water Quality Specialist |
| Caltrans | Elena Avanesova | Landscape Associate |
| Caltrans | Va Lee | Air and Noise Specialist |
| Caltrans | Masis Kayaian | Office of Hydraulic Engineering |
| Caltrans | Christopher Risden | Senior Engineering Geologist, Office of Geotechnical Design West |
| Caltrans | Anonh Sengmany | Senior Design Engineer |
| Caltrans | Carlos Mora | Acting Branch Chief, Hazardous Waste |
| Caltrans | Brandon Young | Hazardous Waste Specialist |

# Chapter 6 Distribution List

The Initial Study with Proposed Negative Declaration would be circulated by June 23rd, 2026 to the following agencies and government officials:

**Agencies**

U.S. Fish and Wildlife Service

U.S. Army Corps of Engineers

North Coast Regional Water Quality Control Board

California Department of Fish and Wildlife

Native American Heritage Commission

California Highway Patrol

Office of Historic Preservation

California Transportation Commission

**Elected Officials**

US Senator Adam Schiff

US Senator Alex Padilla

US Congressman John Garamendi

US Congressman Mike Thompson

California State Senator Christopher Cabaldon

California State Assemblymember Lori Wilson

California State Assemblymember Cecilia Aguiar-Curry

Napa County Supervisor Joelle Gallagher

Napa County Supervisor Belia Ramos

Solano County Supervisor Mitch Mashburn

Solano County Supervisor Monica Brown

Mayor Catherine Moy - City of Fairfield

Mayor Pierre Washington - City of American Canyon

Mayor Alma Hernandez - City of Suisun City

Mayor Scott Sedgley - City of Napa

**Public Library**

Fairfield Cordelia Library

Suisun City Library

# Appendix A Title VI Policy Statement

CALIFORNIA STATE TRANSPORTATION AGENCY

GAVIN NEWSOM, GOVERNOR

**California Department of Transportation**

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September 2025

**TITLE VI/NON-DISCRIMINATION POLICY STATEMENT**

It is the policy of the California Department of Transportation (Caltrans), in accordance with Title VI of the Civil Rights Act of 1964 and the assurances set forth in the Caltrans' Title VI Program Plan, to ensure that no person in the United States shall on the grounds 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. Related non-discrimination authorities, remedies, and state law further those protections, including sex, disability, religion, sexual orientation, age, low income, and Limited English Proficiency (LEP).

Caltrans is committed to complying with 23 C.F.R. Part 200, 49 C.F.R. Part 21, 49 C.F.R. Part 303, and the Federal Transit Administration Circular 4702.1B. 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 (including LEP). In addition, Caltrans will facilitate meaningful participation in the transportation planning process in a non-discriminatory manner.

The overall responsibility for this policy is assigned to the Caltrans Director. The Caltrans Title VI Coordinator is assigned to the Caltrans Office of Civil Rights Deputy Director, who then delegates sufficient responsibility and authority to the Office of Civil Rights' managers, including the Title VI Branch Manager, to effectively implement the Caltrans Title VI Program. Individuals with questions or requiring additional information relating to the policy or the implementation of the Caltrans Title VI Program should contact the Title VI Branch Manager at title.vi@dot.ca.gov or at (916) 639-6392, or visit the following web page: https://dot.ca.gov/programs/civil-rights/title-vi.

Dina El-Tawansy (Sep 12, 2025 16:52:12 PDT)

DINA A. EL-TAWANSY
Director

"Improving lives and communities through transportation."

# Appendix B Summary of Project Features and Avoidance and Minimization Measures

## Project Features

This appendix summarizes proposed Project features and avoidance and minimization measures to reduce potential environmental impacts resulting from Project implementation.

### Aesthetics

**PF-AES-1: Vegetation Protection.** Existing trees and vegetation would be preserved to the extent feasible. Trees and vegetation outside of the clearing and grubbing limits would be protected from the contractor's operations, equipment, and materials storage. Tree trimming and pruning, where required, would be under the direction of a certified arborist.

**PF-AES-2: Erosion Control.** After construction, all areas cleared within the Project limits for uses such as contractor access, staging, and trenching operations would be treated with appropriate erosion control measures where required.

**PF-AES-3: Construction Staging.** Except as detailed in the Contract Plans, staging areas would not affect existing landscaped areas resulting in death and/or removal of trees and shrubs, or disruption and destruction of existing irrigation facilities.

**PF-AES-4: Construction Waste.** During construction operations, unsightly material and equipment in staging areas would be placed where they are less visible and/or covered where possible.

**PF-AES-5: Construction Lighting.** Construction lighting would be directed toward the immediate vicinity of active work and would avoid light trespass through directional lighting, shielding, and other measures as needed.

### Air Quality

**PF-AQ-1: Contractor Air Quality Compliance.** The contractor will adhere to Caltrans Standard Specifications for Construction, Sections 14.9-02 and 7-1.02c, which require contractor compliance with all applicable laws and regulations related to air quality,

including air pollution control district and air quality management district regulations and local ordinances.

**PF-AQ-2: Control Measures for Construction Emissions of Fugitive Dust.** Dust control measures would be implemented to minimize airborne dust and soil particles generated from construction. For disturbed soil areas, the use of tackifier to control dust emissions would be included in the construction contract. Any material stockpiles would be watered, sprayed with tackifier, or covered to minimize dust production and wind erosion.

**Biological Resources**

**PF-BIO-1: Documentation at Project Site.** A Permit Compliance Binder will be maintained at the construction site at all times and presented to resource agency (i.e., USACE, U.S. Fish and Wildlife Service, National Marine Fisheries Service, RWQCB, and/or California Department of Fish and Wildlife personnel upon request. The Permit Compliance Binder will include a copy of all original permits and agreements and any extensions and amendments to the permits and agreements.

**PF-BIO-2: Work According to Documents.** Except as they are contradicted by measures within the permits and agreements, all work would be conducted in conformance with the Project description in the permits and agreements and the AMMs provided in the permits and agreements.

**PF-BIO-3: Agency-Approved Biologist(s)**. Prior to construction, the qualifications of the biological monitor(s) would be submitted to USFWS and CDFW for review and approval. An approved biologist will be present during construction activities where take of a listed species could occur. Through communication with the Resident Engineer or designee, the approved biologist may stop work if deemed necessary for any reason to protect listed species; the biological monitor will advise the Resident Engineer or designee on how to proceed.

**PF-BIO-4: Designation of Environmentally Sensitive Areas and Construction and Storage Areas.** Caltrans will delineate construction areas and ESAs (defined as areas containing sensitive habitats adjacent to or within construction work areas for which physical disturbance is not allowed) on the final construction plans. The approved biological monitor will be onsite to direct the installation of high-visibility, orange ESA fencing to prevent encroachment of construction personnel and equipment onto sensitive areas during construction activities, as needed. Staging, storage, and parking

areas will be located on paved or graveled surfaces within the ROW and away from any designated ESAs, as specified by the Project biologist, to avoid construction impacts to natural communities. Equipment and materials storage sites will be located as far away from residential and park uses as practicable. At the discretion of the Caltrans biologist, ESA fencing may be removed at times when construction is no longer active in the area.

**PF-BIO-5: Fence and Signpost Caps.** Fence or signposts would have the top of the post capped and/or the top three post holes covered or filled with screws or bolts to prevent the entrapment of wildlife, specifically birds of prey.

**PF-BIO-6: Invasive Weed Control.** To reduce the spread of non-native, invasive plants, these species would be controlled within the Project footprint to the maximum extent practicable, in accordance with Caltrans' Highway Design Manual Topic 110.5, Control of Noxious Weeds – Exotic and Invasive Species, and Executive Order 13112, Invasive Species, and by methods approved by a Caltrans' landscape architect or vegetation control specialist. Vehicles and equipment would be thoroughly cleaned before arriving on the site to prevent the spread of noxious weeds from other locations. In work areas where California Department of Food and Agriculture listed noxious weeds or California Invasive Plant Council (Cal-IPC) Moderate or High-rated weed species occur in fruit or flower and may be disturbed during construction-related activities, the contractor would be required to clear vegetation at the beginning of location disturbance, and contain the plant material associated with these noxious weeds, and dispose of them in a manner that will not promote the spread of the species. Areas subject to noxious weed removal or disturbance will be replanted with fast growing native grasses or a native erosion control seed mixture.

**PF-BIO-7: Construction Site Best Management Practices.** The following site restrictions would be implemented to avoid or minimize potential effects on listed species and their habitats:

- Vehicles would not exceed 15 miles per hour in unpaved areas of the Project footprint, to reduce dust and excessive soil disturbance.
- Food and food-related trash items would be secured in sealed trash containers and removed from the site at the end of each day.
- Pets would be prohibited from entering the Project limits during construction.
- Firearms would be prohibited within the Project limits, except for those carried by authorized security personnel or local, state, or federal law enforcement officials.

**PF-BIO-8: Vegetation Removal.** Vegetation that is within the cut and fill line or growing in locations where permanent structures would be placed would be cleared. Vegetation would be cleared only where necessary and would be cut above soil level, except in areas that would be permanently impacted or excavated. This would allow plants that reproduce vegetatively to resprout after construction. Clearing and grubbing of woody vegetation would occur by hand or using construction equipment such as mowers, backhoes and excavators. Cleared vegetation would be chipped and left onsite if appropriate or removed from the Project footprint if it could be used as nesting habitat.

**PF-BIO-9: Construction Lighting and Signage.** Construction area lighting would be used only where necessary for safety and signage. Downcast lighting and shielding to minimize artificial lighting of natural areas would be used throughout the Project footprint.

**PF-BIO-10: Cover Staged Materials.** Culverts, pipes, hoses, and similar structures less than 12 inches in diameter would be closed, covered or capped to prevent animal entry upon arrival to the Project site. Culverts, pipes, hoses, and similar structures would be inspected for wildlife before it is buried, capped, used, or moved.

**PF-BIO-11: Worker Environmental Awareness Training.** Prior to ground-disturbing activities, an agency-approved biologist will conduct an education program for all construction personnel. At a minimum, the training will include a description of special-status species with potential to occur, migratory birds and their habitats, how the species might be encountered within the Project area, an explanation of the status of these species and protection under the federal and state regulations, the measures to be implemented to conserve listed species and their habitats as they relate to the work site, boundaries within which construction may occur, and how to best avoid the incidental take of listed species. The field meeting will include topics on species identification, life history, descriptions, and habitat requirements during various life stages. Emphasis will be placed on the importance of the habitat and life stage requirements within the context of Project maps showing areas where AMMs are to be implemented. The program will include an explanation of applicable federal and state laws protecting endangered species as well as the importance of compliance with Caltrans and various resource agency conditions.

**PF-BIO-12: Discovery of Injured or Dead Special-Status Species.** Immediately upon discovery of any dead, or injured, or species regulated by USFWS, National Marine Fisheries Service, or CDFW, Caltrans would provide appropriate notifications to the

agency(s) with jurisdiction. Storage and transport to the nearest wildlife care facility may be necessary in direct coordination with agencies.

**PF-BIO-15: Prevention of Inadvertent Entrapment and Entanglement.** To prevent inadvertent entrapment of animals during construction, all excavated, steep-walled holes or trenches more than 1 foot deep will be covered at the close of each working day with plywood or similar materials or provided with one or more escape ramps constructed of earthen fill or wooden planks, with a slope no greater than 30 degrees. Before such holes or trenches are filled, they will be thoroughly inspected for trapped animals. Pipes, culverts, or similar structures stored in the Project area overnight will be inspected before they are subsequently moved, capped, or buried. To prevent wildlife from becoming entangled or trapped in erosion control materials, plastic monofilament netting (e.g., erosion control matting) or similar material will not be used. Acceptable substitutes include coconut coir matting or tackifying hydroseeding compounds.

### Cultural Resources

**PF-CULT-1: Discovery of Cultural Resources.** If previously unidentified cultural resources are unearthed during construction, work would be halted in that area until a qualified archaeologist can assess the significance of the discovery.

**PF-CULT-2: Discovery of Human Remains.** If remains are discovered during dredging activities, all work within 60 feet of the discovery would halt and Caltrans Cultural Studies Office would be called. Caltrans Cultural Studies Office Staff would assess the remains and, if they are determined to be human, would contact the County Coroner, per Public Resources Code, 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, then the coroner would contact the Native American Heritage Commission, which would assign a Most Likely Descendant. Caltrans would consult with the Most Likely Descendant on treatment and reburial of the remains. Further provisions of Public Resources Code, Section 5097.98 would be followed as applicable.

### Greenhouse Gas

**PF-GHG-1: Minimize Energy Consumption from Construction Activities.** Energy consumption from construction activities would be minimized by the use of construction BMPs, including, but not limited to the following:

- Limit idling of vehicles and equipment.

- Use solar power as a power source, if feasible.
- Ensure regular maintenance of construction vehicles and equipment.
- If feasible, recycle nonhazardous waste and excess materials to reduce disposal offsite.

**Hazards and Hazardous Materials**

**PF-HAZ-1: Caltrans Standard Specifications and Hazardous Waste Regulations.** The current Caltrans Standard Specifications Section 13-4, Job Site Management, would be implemented to prevent and control spills or leaks from construction equipment and from storage of fuels, paints, cleaners, solvents, and lubricants. All aspects of the Project associated with transport, storage, use, and disposal of hazardous materials would be done in accordance with the California Health and Safety Code and the appropriate local, state, and federal hazardous waste regulations. Handling and management of hazardous materials would comply with the current Caltrans Standard Specification Section 14-11, Hazardous Waste and Contamination, which outlines handling, storing, and disposing of hazardous waste.

**Noise**

**PF-NOI-1: Idling of Internal Combustion Engines.** Unnecessary idling of internal combustion engines would be avoided within 100 feet of sensitive receptors.

**PF-NOI-2: Maintaining Internal Combustion Engines.** All internal combustion engines would be maintained properly to minimize noise generation. Internal combustion engine driven equipment must be equipped with manufacturer recommended intake and exhaust mufflers that are in good condition and appropriate for the equipment.

**PF-NOI-3: Quiet Air Compressors.** The Project would use quiet air compressors and other quiet equipment where such technology exists.

**PF-NOI-4: Construction Schedule.** Construction activities would mostly occur during the day, between 6:00 a.m. and 9:00 p.m. Noisy operations would be scheduled to occur within the same time period to the greatest extent possible. The total noise level would not be significantly greater than the level produced if operations are performed separately. Some nighttime construction would occur and would adhere to Caltrans Standard Specification 14-8.02.

**PF-NOI-5: Equipment Staging.** Locate all stationary noise-generating construction equipment as far as practical from noise-sensitive receptors or provide baffled housing or sound aprons to equipment when sensitive receptors adjoin or are near a construction project area.

### Utilities

**PF-UTIL-1: Notify Utility Owners of Construction Schedule.** Caltrans would notify utility companies of construction schedules for proposed Project work to minimize potential disruption of utility service.

### Hydrology and Water Quality

**PF-WQ-1: Trash Management.** All food-related trash items, such as wrappers, cans, bottles, and food scraps, would be disposed of in closed containers and removed by the contractor at least once daily from the Project limits. A trash reduction system would also be developed by the contractor, approved by Caltrans, and implemented per Caltrans Statewide National Pollutant Discharge Elimination System Permit and San Francisco RWQCB Cease and Desist Order.

## Avoidance and Minimization Measures

**AMM-AES-1: Irrigation Repair.** Irrigation damaged and/or removed because of the Project shall require repair/replacement. Existing plants must continue to receive regularly scheduled water from an alternative source until the irrigation system is repaired and functioning.

**AMM-AES-2: Limiting Glare and Contrast.** Incorporate aesthetic treatments to visible Project features where appropriate such as color and/or texture to help minimize glare, limit visual contrast, and support visual unity and intactness along the corridor.

**AMM-AES-3: Rock Slope Protection.** Design rock slope protection with material of an appropriate size, scale, and color such that it reduces visual contrast.

**AMM-BIO-1: Preconstruction Surveys.** A USFWS-approved biologist will conduct preconstruction surveys for special-status species as needed. A visual encounter survey will be conducted at least 30 days before ground disturbing activities. Suitable habitat, as determined by the agency-approved biologist, within the Project alignment will be visually inspected. If special-status species are encountered in the Project alignment, work within 50 feet of the animal will cease immediately, and the Resident Engineer and approved biologist will be notified. Based on the professional judgment of the biologist, if Project activities can be conducted without harming or injuring the animal, it may be left at the location of discovery and monitored by the biological monitor. Project personnel will be notified of the finding, and at no time will work occur within 50 feet of the animal without a biological monitor present.

**AMM-BIO-2: Wildlife Exclusion Fencing.** Before starting construction, at the discretion of the Caltrans biologist, WEF will be installed along the impact area perimeter in the culvert work areas where wildlife could enter the Project alignment. WEF will be removed following completion of construction activities. At the discretion of the Caltrans biologist, WEF may be removed at times when construction is no longer active in the area.

**AMM-BIO-3: Invasive Species Control.** Invasive and exotic plants rated Moderate to High by the California Invasive Plant Council would be controlled to the maximum extent practicable, pursuant to Executive Order 13112- Invasive Species.

**AMM-BIO-4: Wildlife Species Relocation.** If wildlife is encountered during construction, all work in the vicinity that could result in the injury or death of the wildlife would be stopped immediately and it would be allowed to leave the job site unharmed. If it is determined that they could be injured or killed by construction activities, the agency-approved biologist, in coordination with Caltrans and the appropriate state and federal wildlife agencies, would identify appropriate methods for capture, handling, exclusion, and relocation of individuals that could be affected. The agency-approved biologist, with appropriate handling permits or licenses from state and/or federal wildlife protection agencies as required, would do the following:

- Conduct, monitor, and supervise all capture, handling, exclusion, and relocation activities.
- Ensure that sufficient personnel are available for safe and efficient collection of wildlife.
- Ensure that proper training and any required permitting or licensing is current for personnel identifying, handling, and conducting safe capture of listed species Where listed species cannot be captured, handled, excluded, or relocated, actions that could injure or kill individuals would be avoided or delayed until the species leaves the affected area.

**AMM-BIO-5: Non-work Buffer for Special-status species.** If any special-status species are encountered during construction, work within at least 50 feet of the species will cease immediately. The Resident Engineer and approved biologist will be notified. Based on the biologist's professional judgment, if the project activities can be conducted without harming or injuring the animal, it may be left at the site of discovery and monitored by the biologist. Project personnel will be notified of the finding, and at no time will work occur within 50 feet of the animal without a biological monitor present.

The protective buffer may be adjusted depending on the species, site topography, species sensitivity to disturbance, and the scale of the impact. The animal will be allowed to leave the work area on its own volition, and appropriate regulatory agencies will be contacted. Under no circumstances would the capture, handling, or relocation of special-status species occur unless expressly authorized by the agencies. Construction activities would not resume without the Department-approved Biologist's approval.

**AMM-BIO-6: Biological Monitoring.** An approved biologist will be present during construction activities where take of a listed species could occur. Upon communication with the Resident Engineer or designee, the approved biologist may stop work if, for any reason, deemed necessary to protect listed species; the biological monitor will advise the Resident Engineer or designee on how to proceed.

**AMM-BIO-7: Mark Environmentally Sensitive Areas.** Before construction begins, Environmentally Sensitive Areas (ESAs) will be clearly delineated using high-visibility orange fencing, flagging, or similar marking to delineate sensitive habitats. The ESA marking will remain in place throughout construction or until work is completed at a particular location. It may be removed during the wet season (and subsequently reinstalled) if needed to prevent materials from being washed away. The final Project plans will depict all locations where ESA markings will be installed, along with the installation methods. The bid solicitation package special provisions will clearly describe acceptable marking material and prohibited construction-related activities, vehicle operation, material and equipment storage, and other surface-disturbing activities within ESAs. ESA markings will be maintained in good repair throughout the Project as needed.

**AMM-BIO-8: Restoration of Disturbed Areas.** Temporarily disturbed areas will be restored to the maximum extent practicable. Exposed slopes and bare ground will be reseeded with native grasses to stabilize and prevent erosion. Where disturbance includes the removal of trees and woody shrubs, native species will be replanted, based on the local species composition.

**AMM-BIO-9: Rail Species Preconstruction Survey.** Prior to initiation of work activities at DS 10, the agency-approved biologist will passively survey the work area for the presence of California Ridgeway's rails and black rails. If rails are encountered, activities will be halted until the individual has left the area on their own. If activities may take place during the breeding season at DS 10, a California Ridgway's rail or black rail, United States Fish and Wildlife Service (USFWS) protocol-level surveys at the proposed project site in appropriate habitat for the rail to determine the absence/presence of the rail. If rails are detected during breeding season surveys, activities should not occur within a buffer distance determined by site-specific noise analysis from the suitable habitat during the breeding season.

**AMM-BIO-10: Rare Bumble Bees Preconstruction Survey.** Immediately prior to vegetation removal or impact activities, a qualified biologist will perform a preconstruction survey for the western bumblebee. If construction is halted because bumble bees are in harm's way, construction may only resume after the bumble bees leave the active area in the Project Area.

**AMM-BIO-11: High Tide Work Restriction.** Work activities at DS 10 should not occur within two hours before or after extreme tides (6.5 feet or above measured at the Suisun

Slough adjusted to the timing of local high tides) or when the marsh plain is inundated, which could prevent California Ridgeway's rail, black rail or salt marsh harvest mouse from reaching available cover. Current and predicted tides and currents at Suisun Slough can be accessed on the National Oceanic and Atmospheric Administration (NOAA) website at Tide Predictions - NOAA Tides & Currents.

**AMM-BIO-12: Night Lighting.** Nighttime work will be avoided to the maximum extent practicable. For unavoidable nighttime work, all lighting will be shielded and directed downward toward the active construction area to avoid exposing nocturnal wildlife to excessive glare.

**AMM-BIO-13: Nesting Bird Protection.** During the bird nesting season (February 1 to September 30), an agency-approved biologist would conduct pre-construction surveys for active bird nests no more than 3 days before the start of ground or vegetation disturbance events and every 14 days during Project activities. Tree and/or shrub trimming would be conducted outside of bird nesting season unless monitoring results show no active nesting is taking place as discussed for the following buffer zones. If an active nest is identified during construction that may be impacted by Project activities, a no-disturbance buffer of 300 feet for raptors and 50 feet for non-raptors would be established immediately and the agency-approved biologist would be notified so that the nest can be monitored. A reduced or enlarged buffer and other protection measures would be implemented as needed and in consultation with the appropriate wildlife agency.

**AMM HAZ-1: Soil and Groundwater Investigation.** A soil and groundwater investigation for metals, primarily lead, and other contaminants of concern (e.g., petroleum hydrocarbons and volatile organic compounds) would be completed during the Project's design phase to characterize and profile the soil and groundwater to be encountered by the construction of the proposed Build Alternatives. Depending upon the findings of the site investigation, appropriate hazardous waste management special provisions would be prepared and included in the Project specifications.

**AMM-HAZ-2: Removal and Disposal of Yellow Highway Paint.** When grinding or other authorized methods are used to remove yellow thermoplastic and yellow painted traffic stripe and pavement marking that produces hazardous waste residue:

- Immediately contain and collect residue, including dust.

- Use a HEPA filter-equipped vacuum attachment operated concurrently with the removal operations or other equivalent approved method for collection of the residue.

**AMM-HAZ-3: Cold Planing ADL Management.** Throughout the cold planing process, ADL would be managed via dust suppression methods in addition to stockpiling and transportation of potentially contaminated soils away from the Project site for proper disposal.

**AMM-HAZ-4: Removal of Treated Wood Waste.** TWW would be gathered and disposed of away from the Project site after removing the guardrail that is proposed to be upgraded.

**AMM-HAZ-5: Removal of Electrical Waste.** Manage and dispose of universal waste under 22 CA Code Regs § 66261.9. Transport universal wastes to an appropriately permitted recycling or disposal facility.

**AMM-HAZ-6: Proper Disposal of Asphalt Waste.** All grindings and asphaltic-concrete waste will be stored within previously disturbed areas absent of habitat, and at a minimum of 150 feet from any aquatic habitat or drainage feature.

**AMM LAN-1: Public Access Management.** The Grizzly Island Management trail adjacent SR 12 in Solano County shall be kept open and accessible at all times during construction.

**AMM NOI-1: Public Outreach.** Public outreach will be required throughout the Project to update residents, businesses, and others regarding upcoming construction-related activities and time frame of Project.

**AMM NOI-2: Noise Level Monitoring.** Noise control and monitoring will be included as part of the Contact documents to minimize construction noise. Construction noise levels shall not exceed 86 dBA at 50 feet from the job site between the hours of 9:00 pm to 6:00 am. Construction noise levels shall not exceed 52 dBA Lmax interior noise within school facilities during school hours.

**AMM NOI-3: School Hours Noise Level Monitoring.** Construction noise levels shall not exceed 52 dBA Lmax interior noise within school facilities during school hours.

**AMM-TRANS-1: Traffic Management Plan.** A Traffic Management Plan would be developed by Caltrans during the design phase. The TMP would include public information, motorist information, incident management, construction, and alternate

routes. In addition, single-lane closures, flaggers and phasing, portable changeable message signs, and the California Highway Patrol's Construction Zone Enhanced Enforcement Program would be incorporated into the TMP to minimize delays to local residents and highway users, as feasible. The TMP would also provide access for police and emergency service providers. Lane closures would be planned in coordination with Caltrans and Solano County and would include notices to emergency services providers, and the public in advance.

**AMM WQ-1: Water Quality Best Management Practices (BMPs).** Adverse effects on water quality will be avoided by implementing temporary and permanent BMPs outlined in Section 13 of the 2024 Caltrans Standard Specifications. The State Water Resources Control Board has issued a National Pollution Discharge Elimination System Statewide Storm Water Permit to Caltrans to regulate storm water and non-storm water discharges from Caltrans facilities.

A Stormwater Pollution Prevention Plan (SWPPP) will be developed for the Project if the Project will have one acre or more of soil disturbance, and a Water Pollution Control Program (WPCP) will be developed for projects with a disturbed soil area less than one acre. The SWPPP complies with the Caltrans Storm Water Management Plan (SWMP). The SWMP includes guidance for design staff to include provisions in construction contracts, to include measures to protect sensitive areas, and to prevent and minimize stormwater and non-stormwater discharges. The SWPPP will reference the Caltrans Construction Site BMPs Manual. The WPCP complies with the WPCP Preparation Manual.

**AMM WQ-2: Construction Site BMPs.** To prevent or reduce impacts to water quality during construction, construction site BMPs would be deployed for sediment control and material management. These include the following:

- **Job Site Management:** This non-stormwater discharge and waste management practice includes considerations for operations, illicit discharge detention and reporting, vehicle and equipment cleaning, vehicle and equipment fueling, and material use.
- **Temporary Fiber Rolls:** A fiber roll consists of straw or other similar materials placed on the face of the slopes at regular intervals to intercept runoff, reduce its flow velocity, release the runoff as sheet flow, and provide removal of sediment from the runoff.
- **Silt Fence:** A silt fence is a temporary linear sediment barrier of permeable fabric designed to intercept and slow the flow of sediment-laden sheet flow runoff. Silt fences allow sediment to settle from runoff before water leaves the construction

site. Silt fences are placed below the toe of exposed and erodible slopes, downslope of exposed soil areas, around temporary stockpiles and along streams and channels. Silt fences should not be used to divert flow or in streams, channels, or anywhere flow is concentrated.

- **Drainage Inlet Protection:** Drainage inlet protection is a practice to reduce sediment from stormwater runoff discharging from the construction site prior to entering the storm drainage system. Effective drainage inlet protection allows sediment to settle out of stormwater or filters sediment from the stormwater before it enters the drain inlet. Drainage inlet protection is the last line of sediment control defense prior to stormwater leaving the construction site.
- **Portable Concrete Washout:** This waste management BMP contains procedures and practices that would minimize or eliminate the discharge of concrete waste materials to the storm drain systems or watercourses.
- **Temporary Cover:** This BMP involves the placement of geosynthetic fabrics (geotextiles), plastic covers, or erosion control blankets/mats to stabilize the disturbed soil area and protect soil from erosion by wind or water.
- **Stockpile Management:** This BMP consists of procedures and practices to eliminate pollution of stormwater from stockpiles of soil and paving materials (such as concrete rubble, aggregate, and AC). These procedures include locating stockpiles away from drainages, and providing perimeter sediment barriers, soil stabilization, and wind erosion control measures.
- **Solid Waste Management:** This BMP consists of procedures and practices to minimize or eliminate the discharge of pollutants to storm drain systems or watercourses as a result of creation, stockpiling, or removal of construction site wastes. Measures include education as well as collection, storage, and disposal practices (such as plywood and tarp directly on streambed).
- **Stream Diversion System:** The system consists of upstream and downstream berms, with a pipe conveying runoff to create a dry working environment for temporary access. The system would be required at specific culvert locations and used during the summer months for one or both summers of the construction period. Each stream diversion system would be removed immediately after instream work is completed at the location, and would not be left in place during the wet season (typically beginning October 15). A risk analysis would be done to determine the design flow for the stream diversion system.

**AMM WQ-3: Permanent Treatment BMPs.** Permanent treatment BMPs are as follows:

- **Design Pollution Prevention BMP Strategy:** The goal of an effective erosion control strategy is to maintain the natural pre-construction conditions. Existing vegetation would be preserved to the maximum extent practicable, and areas disturbed by construction activities would be minimized using construction site BMPs. Preservation involves the identification and protection of desirable vegetation to provide erosion and sediment control benefits. No slopes would be steeper than a 2:1 ratio. When slopes steeper than 2:1 are required, a

geotechnical recommendation would be required to support the steeper slope. Disturbed soil areas created by construction activities would receive erosion control treatments sufficient to address the erosion potential of the slope. Permanent design pollution prevention measures would be identified during later Project phases and may include decompaction, compost mulch, fiber rolls, coir netting, and hydroseed/hydromulch.

- **Treatment BMP Strategy:** Treatment BMPs would address the postconstruction water quality impacts and remove pollutants from stormwater runoff before discharging to receiving waters. The locations of the treatment BMPs would be determined during later Project phases.

**AMM-TRANS-1: Traffic Management Plan.** A Traffic Management Plan would be developed by Caltrans during the design phase. The TMP would include public information, motorist information, incident management, construction, and alternate routes. In addition, single-lane closures, flaggers and phasing, portable changeable message signs, and the California Highway Patrol's Construction Zone Enhanced Enforcement Program would be incorporated into the TMP to minimize delays to local residents and highway users, as feasible. The TMP would also provide access for police and emergency service providers. Lane closures would be planned in coordination with Caltrans and Solano County and would include notices to emergency services providers, and the public in advance.

# Appendix C List of Acronyms and Abbreviations

| Acronym | Definition |
|---|---|
| AASHTO | American Association of State Highway and Transportation Officials |
| AC | Asphalt Concrete |
| ADA | Americans with Disabilities Act |
| ADL | Aerially deposited lead |
| AFB | Air Force Base |
| AMM | Avoidance and Minimization Measure |
| APE | Area of Potential Effect |
| AT&T | American Telephone and Telegraph Company |
| BCDC | Bay Area Conservation and Development Commission |
| BMP | Best management practice |
| BSA | Biological study area |
| CAFE | Corporate Average Fuel Economy |
| Caltrans | California Department of Transportation |
| CAL-CET 2020 | California Emissions Tool 2020 |
| Cal-IPC | California Invasive Plant Council |
| CAPTI | California Action Plan for Transportation Infrastructure |

| | |
|---|---|
| CARB | California Air Resources Board |
| CBR | California black rail |
| CCG | Contra costa goldfields |
| CCTV | Closed-circuit television |
| CDFW | California Department of Fish and Wildlife |
| CDWR | California Department of Water Resources |
| CESA | California Endangered Species Act |
| CEQ | White House Counsil on Environmental Quality |
| CEQA | California Environmental Quality Act |
| CGP | Construction general plan |
| $CH_4$ | Methane |
| CNDDB | California Natural Diversity Database |
| CNPS | California Native Plant Society |
| $CO_2$ | Carbon Dioxide |
| CRLF | California Red-legged Frog |
| CRR | California ridgeway rail |
| CTS | California Tiger Salamander |
| CTP | California Transportation Plan |
| dBA | A-weighted decibels |
| DS | Drainage System |

| | |
|---|---|
| EO | Executive Order |
| ESA | Environmentally Sensitive Area |
| FEMA | Federal Emergency Management Agency |
| FES | Flared End Section |
| FESA | Federal Endangered Species Act |
| FWHA | Federal Highway Administration |
| GHG | Greenhouse Gas |
| GWP | Global warming potential |
| HFC | Hydrofluorocarbons |
| HMA | Hot Mix Asphalt |
| H&SC | Health and Safety Code |
| IPaC | Information for Planning and Consultation |
| IS | Initial Study |
| ITP | Incidental Take Permit |
| LRA | Local responsibility area |
| MASH | Manual for Assessing Safety Hardware |
| MBTA | Migratory Bird Treaty Act |
| MGBR | Metal beam guardrail |
| MGS | Midwest guardrail system |
| MM | Mitigation measure |
| MTC | Metropolitan Transportation Commission |
| NAHC | Native American Heritage Commission |

| | |
|---|---|
| $N_2O$ | Nitrous oxide |
| NES | Natural Environment Study |
| NHPA | National Historic Preservation Act |
| NIS | New impervious surface |
| NMFS | National Marine Fisheries Service |
| NPT | Northwestern pond turtle |
| NRCS | National Resource Conservation Service |
| NVTA | Napa Valley Transit Authority |
| OCRS | Office of Cultural Resource Studies |
| PF | Project Feature |
| PG&E | Pacific Gas & Electric |
| PM | Post Mile |
| PTEC | Permit to Enter and Construct |
| RHMA | Rubberized hot mix asphalt |
| ROW | Right of Way |
| RSA | Resource study area |
| RSP | Rock Slope Protection |
| RTP/SCS | Regional Transportation Plan/Sustainable Communities Strategy |
| RWQCB | Regional Water Quality Control Board |
| SCT | Solano County Transit |
| SFBAAB | San Francisco Bay Area Air Basin |

| | |
|---|---|
| $SF_6$ | Sulfur Hexafluoride |
| SHOPP | State Highway Operation and Protection Program |
| SHPO | State Historic Preservation Officer |
| SR | State Route |
| SRA | State responsibility area |
| SSC | Species of Special Concern |
| SWHA | Swainson's Hawk |
| SWPPP | Stormwater Pollution Prevention Plan |
| TMP | Traffic Management Plan |
| USACE | United States Army Corps of Engineers |
| U.S. EPA | United States Environmental Protection Agency |
| USFWS | United States Fish and Wildlife Service |
| VIA | Visual Impact Assessment |
| VMT | Vehicle Miles Traveled |
| VPFS | Vernal Pool Fairy Shrimp |
| VPTS | Vernal Pool Tadpole Shrimp |
| WEF | Wildlife Exclusionary Fencing |

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# Appendix E Potential for Special-Status Species to Occur Within BSA

**Table E-1 Special Status Species Occurring or Known to Occur Within the BSA**

| *Scientific Name* | Common Name | [1]Federal / State Status | General Habitat Description | Habitat Present /Absent | [2]Presence and Effect/Impact Determination |
|---|---|---|---|---|---|
| **Amphibian** | | | | | |
| *Rana draytonii* | California red- legged frog | FT, Critical Habitat / SSC | Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11-20 weeks of permanent water for larval development. Must have access to estivation habitat. | Habitat present | **Low.** Suitable aquatic habitat is absent from the BSA, but the species may have a low chance of dispersing at DS 1. Vineyards and existing traffic at DS 1 reduce the likelihood of species dispersal. The species may still be present off-road along SR 12 at PM SOL-12-PM0.9/2.5 due to the proximity to the designated critical habitat.<br><br>**May affect, not likely to adversely affect** with sufficient implementation of Avoidance and Minimization Measures (AMMs).<br>**None (critical habitat presence).** The BSA does not overlap with designated critical habitat for this species.<br><br>**No effect** on critical habitat due to its absence from the BSA. |
| *Ambystoma californiense* pop. *1* | California tiger salamander - central California DPS | FT / ST, WL | Lives in vacant or mammal-occupied burrows throughout most of the year; in grassland, savanna, or open woodland habitats. Need underground refuges, especially ground squirrel burrows, and vernal pools or other seasonal water sources for breeding. | Habitat present | **Moderate.** Marginally suitable upland habitats are present at DS 11. Frequent species occurrences are recorded within five miles of DS 11. No suitable breeding habitats are observed at this location. Species is not expected at other locations within the BSA.<br><br>**May affect, not likely to adversely affect** with sufficient implementation of AMMs. |
| *Spea hammondii* | Western spadefoot | PT / SSC | Grasslands and occasionally valley-foothill hardwood woodlands; vernal pools or similar ephemeral pools required for breeding. | Habitat absent | **None.** No records within five miles of the BSA. Suitable habitat is absent.<br><br>**No effect** due to the likely absence of species in the BSA. |
| *Rana boylii* | Foothill yellow- legged frog - north coast DPS | -- / SSC | Partly shaded, shallow streams and riffles with a rocky substrate in a variety of habitats. Needs at least some cobble-sized substrate for egg-laying and at least 15 weeks to attain metamorphosis. | Habitat absent | **None.** Suitable habitat is absent from the BSA.<br><br>**No impact** due to the likely absence of the species in the BSA. |
| **Reptiles** | | | | | |
| *Actinemys marmorata* | Northwestern pond turtle | PT / SSC | Habitat includes streams, ponds, lakes and permanent and ephemeral wetlands. Spend most of their lives in water, but they also require terrestrial habitats for nesting. Nesting occurs from late May until the middle of July. Suitable nest sites usually have dry soils, sparse vegetation, and a southern exposure. | Habitat present | **Low**. Suitable aquatic habitat is absent from the BSA but Ledgewood Creek, located between the BSA at DS 2 and DS 3 provides suitable habitat. An adult northwestern pond turtle was observed in the creek during field surveys. There is low potential for overland movement into the BSA at DS 2, DS 3, and DS 4.<br><br>**No effect** because work will happen within existing pavement and disturbed shoulders where conditions are not favorable for the species. |
| *Thamnophis gigas* | Giant garter snake | FT / ST | Vicinity of freshwater marshes, ponds, and slow-moving streams. Prefers dense cover and water depths of at least 1 foot. Upland areas near water are also important. Is highly aquatic and rarely occurs away from water. Suitable habitat is stagnant or slow-moving water bodies with abundant emergent vegetation. | Habitat absent | **None**. The BSA is outside of the current known species range, and suitable habitat is absent.<br><br>**No effect** due to the likely absence of species in the BSA. |
| *Masticophis lateralis euryxanthus* | Alameda whipsnake | FT / ST | Typically found in chaparral and scrub habitats but will also use adjacent grassland, oak savanna and woodland habitats. Mostly south-facing slopes and ravines, with rock outcrops, deep crevices or abundant rodent burrows, where shrubs form a vegetative mosaic with oak trees and grasses. | Habitat absent | **None**. The BSA is outside of the current known species range and suitable habitat is absent.<br><br>**No effect** due to the likely absence of species in the BSA. |
| **Birds** | | | | | |
| *Athene cunicularia* | Burrowing owl | BCC / SC, SSC | Open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel. | Habitat present | **Low**. No suitable burrows were observed in the BSA, but small mammal burrows may exist in adjacent areas for nesting or overwintering. There are species occurrence records within 5 miles of the BSA.<br><br>**No impact** with sufficient implementation of AMMs during construction. |

| *Scientific Name* | Common Name | [1]Federal / State Status | General Habitat Description | Habitat Present /Absent | [2]Presence and Effect/Impact Determination |
|---|---|---|---|---|---|
| *Buteo swainsoni* | Swainson's hawk | BCC / ST | Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands with groves or lines of trees. Requires adjacent suitable foraging areas such as grasslands, or alfalfa or grain fields supporting rodent populations. | Habitat present | **Moderate.** Suitable nesting habitat is absent from the BSA, but the Project is within the current range of the species, and suitable nest sites and historic nests are present within 0.25 miles of the BSA at DS 1. Fewer suitable nest sites are present near other portions of the BSA.<br><br>**No impact** with sufficient implementation of AMMs during construction. |
| *Agelaius tricolor* | Tricolored blackbird | BCC / ST, SSC | Highly colonial species, most numerous in Central Valley and vicinity. Largely endemic to California. Requires open water, protected nesting substrate, and foraging area with insect prey within a few km of the colony. | Habitat present | **Moderate**. Suitable nesting habitat is absent from the BSA, but is present in the Project vicinity along Ledgewood Creek and within marsh habitat south of SR 12.<br><br>**No impact** with sufficient implementation of AMMs during construction. |
| *Charadrius nivosus nivosus* | Western snowy plover | FT, BCC / SSC | Sandy beaches, salt pond levees and shores of large alkali lakes. Needs sandy, gravelly or friable soils for nesting. | Habitat absent | **None.** Suitable habitat is absent from the BSA.<br><br>**No effect** due to the likely absence of species from the BSA. |
| *Falco peregrinus anatum* | American peregrine falcon | Delisted / Delisted | Near wetlands, lakes, rivers, or other water; on cliffs, banks, dunes, mounds; also, human-made structures. Nest consists of a scrape, a depression, or a ledge in an open site. | Habitat present | **Low**. No suitable nesting habitat is present within the BSA. There is one broadly mapped CNDDB-reported occurrence within five miles of the BSA.<br><br>**No impact** due to the likely absence of species from the BSA. |
| *Laterallus jamaicensis coturniculus* | California black rail | BCC / ST, FP | Inhabits freshwater marshes, wet meadows and shallow margins of saltwater marshes bordering larger bays. Needs water depths of about 1 inch that do not fluctuate during the year and dense vegetation for nesting habitat. | Habitat present | **Low**. Suitable habitat is absent from the BSA, but the species has a low chance of dispersing from the perennial brackish marsh on the south side of SR 12, within two miles of DS 10.<br><br>**No impact** due to the likely absence of species from the BSA. Sufficient implementation of AMMs will avoid impacts if species are found present near the BSA. |
| *Rallus obsoletus obsoletus* | California Ridgway's rail | FE / SE, FP | Salt water and brackish marshes traversed by tidal sloughs in the vicinity of San Francisco Bay. Associated with abundant growths of pickleweed but feeds away from cover on invertebrates from mud-bottomed sloughs. | Habitat present | **Low**. Suitable habitat is absent from the BSA, but the species has a low chance of dispersing from the perennial brackish marsh on the south side of SR 12, within two miles of DS 10.<br><br>**No effect** due to the likely absence of species from the BSA. Sufficient implementation of AMMs will avoid impacts if species are found present near the BSA. |
| *Riparia riparia* | Bank swallow | BCC / ST | Colonial nester; nests primarily in riparian and other lowland habitats west of the desert. Requires vertical banks/cliffs with fine-textured/sandy soils near streams, rivers, lakes, ocean to dig nesting hole. | Habitat absent | **None**. BSA is outside of the current known species range, and suitable habitat is not within the BSA.<br><br>**No impact** due to the likely absence of species from the BSA. |
| *Sternula antillarum browni* | California least tern | FE, BCC / SE, FP | Relatively open beaches where vegetation is limited by the tidal scouring; some tern colonies nest at more inland mudflat and dredge fill sites. | Habitat absent | **None**. Suitable habitat is absent within the BSA.<br><br>**No effect** due to the likely absence of species from the BSA. |
| *Strix occidentalis caurina* | Northern spotted owl | FT, BCC / ST | Old-growth forests or mixed stands of old-growth and mature trees; occasionally in younger forests with patches of big trees. | Habitat absent | **None**. Suitable habitat is absent within the BSA.<br><br>**No effect** due to the likely absence of species from the BSA. |
| **Mammals** | | | | | |
| *Reithrodontomys raviventris* | Salt marsh harvest mouse | FE / SE, FP | Only in the saline emergent wetlands of San Francisco Bay and its tributaries. Pickleweed is primary habitat, but may occur in other marsh vegetation types and in adjacent upland areas. Does not burrow; builds loosely organized nests. Requires higher areas for flood escape. | Habitat present | **Low**. Suitable habitat is absent from the BSA, but it may be present in remnant pickleweed stands on the south side of SR 12 near the BSA at DS 10. The nearest documented occurrence of SMHM is approximately 750 feet of DS 10.<br><br>**No effect** due to the likely absence of species from the BSA. Sufficient implementation of AMMs will avoid impacts if species are found present near the BSA. |

| *Scientific Name* | Common Name | [1]Federal / State Status | General Habitat Description | Habitat Present /Absent | [2]Presence and Effect/Impact Determination |
|---|---|---|---|---|---|
| *Sorex ornatus sinuosus* | Suisun shrew | -- / SSC | Tidal marshes of the northern shores of San Pablo and Suisun bays. Require dense low-lying covers, driftwood and other litter above the mean hightide line for nesting and foraging. | Habitat present | **Low**. Suitable habitat is absent from the BSA but suitable habitat may be present on the south side of SR 12 near the BSA at DS 10. The nearest CNDDB record is located in this area approximately 750 feet south of the BSA, beyond the Caltrans ROW.<br><br>**No impact** due to the likely absence of species from the BSA. Sufficient implementation of AMMs will avoid impacts if species are found present near the BSA. |
| *Taxidea taxus* | American badger | -- / SSC | Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Needs sufficient food, friable soils and open, uncultivated ground. Preys on burrowing rodents. Digs burrows. | Habitat present | **Low**. No suitable burrows were observed within the BSA. Suitable habitat may be present outside of the BSA at DS 11. Not expected at other locations. Habitat west of DS 11 is fragmented and likely lacks sufficient small mammal prey.<br><br>**No impact** due to the likely absence of species from the BSA. Sufficient implementation of AMMs will avoid impacts if species are found present near the BSA. |
| *Antrozous pallidus* | Pallid bat | -- / SSC | Deserts, grasslands, shrublands, woodlands and forests. Most common in open, dry habitats with rocky areas for roosting. | Habitat present | **Low**. No suitable pallid bat crevice roost habitat was observed, but potentially suitable pallid bat roost habitat was observed in a tree on the south side of SR 12 near the BSA at DS 8.<br><br>**No impact** because the work will not take place directly under a potential bat roosting site. Most work happens at night after bats have emerged from their roosts. |
| *Corynorhinus townsendii* | Townsend's big- eared bat | -- / SSC | Throughout California, in a wide variety of habitats. Most common in mesic sites. Roosts in the open, hanging from walls and ceilings. Roosting sites are limited. Extremely sensitive to human disturbance. | Habitat absent | **None**. Majority of the BSA takes place in disturbed urban areas. No suitable Townsend's big- eared bat cavity / open roost habitat was observed within the low-development level of the BSA.<br><br>**No impact** due to the likely absence of species from the BSA |
| *Lasiurus frantzii* | Western red bat | -- / SSC | Roosts primarily in trees, 2-40 feet above ground, from sea level up through mixed conifer forests. Prefers habitat edges and mosaics with trees that are protected from above and open below with open areas for foraging. | Habitat present | **None**. Suitable roost habitat with preferred features is absent from the BSA. Trees recorded near the BSA are solitary and lack protection at both ends.<br><br>**No impact** because the work will not take place directly under a potential bat roosting site. Most work happens at night after bats have emerged from their roosts. |
| *Nyctinomops macrotis* | Big free-tailed bat | -- / SSC | Low-lying arid areas in Southern California. Need high cliffs or rocky outcrops for roosting sites. Feeds principally on large moths. | Habitat absent | **None**. The BSA is outside of the current range of the species.<br><br>**No impact** due to the likely absence of species from the BSA. |
| **Insects** | | | | | |
| *Bombus occidentalis* | Western bumble bee | -- /SC | Once common and widespread, species has declined precipitously from central California to southern British Columbia, perhaps from disease. Often found on plants with small flowers, including spirea, lupine, and goldenrod, as well as several non- native plants. | Habitat present | **None**. CDFW notes that the range for this habitat is no longer in Bay Area, but shifted up north near Shasta County. Habitat within the Project footprint is of low quality due to regular roadside mowing, resulting in limited availability of suitable floral resources preferred by the species. During the July 16, 2025 plant survey, one bumblebee (unidentified species) was observed on a bristly oxtongue flower. However, the CNDDB has no recent records of the western bumble bee within five miles of the BSA.<br><br>**No impact** due to the likely absence of species from the BSA. |

| *Scientific Name* | Common Name | [1]Federal / State Status | General Habitat Description | Habitat Present /Absent | [2]Presence and Effect/Impact Determination |
|---|---|---|---|---|---|
| *Danaus plexippus plexippus pop. 1* | Monarch - California overwintering population | PT / -- | Winter roost sites extend along the coast from northern Mendocino to Baja California, Mexico. Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, cypress), with nectar and water sources nearby. | Habitat absent | **None**. Suitable overwintering sites are absent from the BSA. Milkweed (*Asclepias californica*) was not observed within the BSA during reconnaissance surveys. No recent observations were identified from a nearby historic overwintering site reported in the CNDDB west of Fairfield. There are no other CNDDB-reported occurrences within five miles of the BSA.<br><br>**No effect** due to the likely absence of species from the BSA. |
| *Desmocerus californicus dimorphus* | Valley elderberry longhorn beetle | FT / -- | Occurs only in the Central Valley of California, in association with blue elderberry (*Sambucus mexicana*). Prefers to lay eggs in elderberries 2- 8 inches in diameter; some preference shown for "stressed" elderberries. The valley elderberry longhorn beetle is dependent on its host plant, the elderberry. | Habitat absent | **None**. Suitable habitat is absent from the BSA.<br><br>**No effect** due to the likely absence of species from the BSA. |
| *Elaphrus viridis* | Delta green ground beetle | FT/-/- | Restricted to the margins of vernal pools in the grassland area between Jepson Prairie and Travis AFB. Prefers the sandy mud substrate where it slopes gently into the water, with low-growing vegetation, 25- 100% cover. | Habitat absent | **None**. Suitable habitat is absent from the BSA.<br><br>**No effect** due to the likely absence of species from the BSA. |
| *Speyeria callippe callippe* | Callippe silverspot butterfly | FE/ -- | Restricted to the northern coastal scrub of the San Francisco Peninsula. The host plant is *Viola pedunculata*. Most adults are found on east-facing slopes; males congregate on hilltops in search of females. | Habitat present | **Low**. The BSA at DS 1 is within the potential range of this species but suitable habitat is absent. The CNDDB contains three records within five miles of the BSA. Surveys for host plant (*Viola pedunculata*) were conducted in spring and summer 2025 and the species was not detected.<br><br>**No effect** with sufficient implementation of AMMs during construction. |
| **Crustaceans** | | | | | |
| *Branchinecta conservatio* | Conservancy fairy shrimp | FE/ -- | Endemic to the grasslands of the northern two-thirds of the Central Valley; found in large, turbid pools. Inhabit astatic pools located in swales formed by old, braided alluvium; filled by winter/spring rains, last until June. | Habitat absent | **None**. The western portion of the BSA is outside of the current known species range. Suitable habitats in the form of large playa-like depressions are not present in other portions of the BSA.<br><br>**No effect** due to the likely absence of species from the BSA. |
| *Branchinecta lynchi* | Vernal pool fairy shrimp | FT, Critical Habitat / -- | Endemic to the grasslands of the Central Valley, Central Coast mountains, and South Coast mountains, in astatic rain-filled pools. Inhabit small, clear-water sandstone-depression pools and grassed swale, earth slump, or basalt-flow depression pools. | Habitat present | **Moderate (species presence)**. Suitable habitat is present in a shallow seasonal wetland within the BSA at DS 11. Wet- and dry-season sampling conducted in 2022 and 2023 on the adjoining parcel that includes the wetland did not detect the species within the wetland, but it was detected in other habitats on the parcel by Helm Biology Consulting in 2023 for a project under the City of Suisun City.<br><br>**May affect, not likely to adversely affect the species** with sufficient implementation of AMMs.<br><br>**Moderate (critical habitat presence)**: Critical habitat for vernal pool fairy shrimp is found in Segment 2 between PMs 7.4 and 7.9. The BSA at DS 11 is located within Critical Habitat Unit 16A for the species. No other portions of the BSA are located within designated critical habitat for this species.<br><br>**May affect, not likely to adversely affect species' critical habitat** with sufficient implementation of AMMs. |

| *Scientific Name* | Common Name | [1]Federal / State Status | General Habitat Description | Habitat Present /Absent | [2]Presence and Effect/Impact Determination |
|---|---|---|---|---|---|
| *Lepidurus packardi* | Vernal pool tadpole shrimp | FE, Critical Habitat / - - | Inhabits vernal pools and swales in the Sacramento Valley containing clear to highly turbid water. Pools commonly found in grass-bottomed swales of unplowed grasslands. | Habitat present | **Low (species presence)**. The seasonal wetland within the BSA at DS 11 may provide suitable habitat for the species.<br>However, no CNDDB records are known from the immediate area, and protocol-level surveys conducted in 2022 and 2023 that included the seasonal wetland and approximately 70 other aquatic habitats on the parcel immediately to the north of DS 11 resulted in a negative finding for vernal pool tadpole shrimp (HBC 2023).<br><br>**May affect, not likely to adversely affect the species** with sufficient implementation of AMMs.<br><br>**Moderate (critical habitat presence)** Critical habitat for VPTS is found in Segment 2 between PMs 7.4 and 7.9. The BSA at DS 11 is located within Critical Habitat Unit 11D for the VPTS. No other portions of the BSA are located within designated critical habitat for this species.<br><br>**May affect, not likely to adversely affect species' critical habitat** with sufficient implementation of AMMs. |
| *Syncaris pacifica* | California freshwater shrimp | FE / SE | Endemic to Marin, Napa, and Sonoma counties. Found in low elevation, low gradient streams where riparian cover is moderate to heavy. Shallow pools away from main streamflow. Winter: undercut banks with exposed roots. Summer: leafy branches touching water. | Habitat absent | **None**. Suitable habitat is absent from the BSA.<br><br>**No effect** due to the likely absence of species from the BSA. |
| **Fish** | | | | | |
| *Acipenser medirostris pop. 1* | Green sturgeon - southern DPS | FT / ST | Spawning site fidelity. Spawns in the Sacramento, Feather and Yuba Rivers. Presence in upper Stanislaus and San Joaquin Rivers may indicate spawning. Non-spawning adults occupy marine/estuarine waters. Delta estuary is important for rearing juveniles. Spawning occurs primarily in cool (11-15 C) sections of mainstem rivers in deep pools (8-9 meters) with substrate containing small to medium sized sand, gravel, cobble, or boulder. | Habitat absent | **None.** Suitable aquatic habitat is absent from the BSA.<br><br>**No effect** due to the likely absence of species from the BSA. |
| *Hypomesus transpacificus* | Delta smelt | FT / SE | Sacramento-San Joaquin Delta.<br>Seasonally in Suisun Bay, Carquinez Strait and San Pablo Bay. Seldom found at salinities > 10 ppt. Most often at salinities < 2ppt. | Habitat absent | **None.** Suitable aquatic habitat is absent from the BSA.<br><br>**No effect** due to the likely absence of species from the BSA. |
| *Oncorhynchus mykiss* | Steelhead - central California coast DPS | FT / ST | DPS includes all naturally spawned populations of steelhead (and their progeny) in streams from the Russian River to Aptos Creek, Santa Cruz County, California (inclusive). Also includes the drainages of San Francisco and San Pablo Bays. | Habitat absent | **None.** Suitable aquatic habitat is absent from the BSA.<br><br>**No effect** due to the likely absence of species from the BSA. |
| *Eucyclogobius newberryi* | Tidewater goby | FE / SE | Inhabits brackish water lagoons, estuaries, and marshes. Brackish water habitats along the California coast from Agua Hedionda Lagoon, San Diego County to the mouth of the Smith River. Found in shallow lagoons and lower stream reaches, they need fairly still but not stagnant water and high oxygen levels. | Habitat absent | **None.** Suitable aquatic habitat is absent from the BSA.<br><br>**No effect** due to the likely absence of species from the BSA. |

| *Scientific Name* | Common Name | [(1)]Federal / State Status | General Habitat Description | Habitat Present /Absent | [(2)]Presence and Effect/Impact Determination |
|---|---|---|---|---|---|
| *Spirinchus thaleichthys pop. 2* | Longfin smelt - San Francisco Bay- Delta DPS | FE / -- | Pelagic and anadromous within the Sacramento-San Joaquin River Delta, San Francisco Bay, and Gulf of the Farallones. Spawns in lower freshwater reaches of Sacramento and San Joaquin Rivers. First year in Suisun Bay; later SF Bay or Gulf of the Farallones. Occurs in salinities ranging from pure freshwater to pure saltwater (i.e., 14-28 parts per thousand). Generally, occupies water temperatures from 61-68 F, with spawning occurring in water temperatures from 41-58 F. | Habitat absent | **None.** Suitable aquatic habitat is absent from the BSA.<br><br>**No effect** due to the likely absence of species from the BSA. |
| **Plants** | | | | | |
| *Castilleja affinis var. neglecta* | Tiburon paintbrush | FE / ST, 1B.2 CNPS Ranking | Valley and foothill grassland. Rocky serpentine sites. 120-400 m. Blooms April to June. | Habitat absent | **None.** No suitable habitat is present in the BSA. Rocky serpentine soil type is not present.<br><br>**No effect** due to the likely absence of species from the BSA. |
| *Chloropyron molle ssp. molle* | Soft salty bird's- beak | FE / SR, 1B.2 CNPS Ranking | Coastal salt marsh. In coastal salt marsh with *Distichlis, Salicornia, Frankenia*, etc. 0-5 m. Blooms June- Sep. | Habitat absent | **None.** Suitable habitat is present within Suisun Marsh along Segment 2. However, the construction will not extend into this habitat.<br><br>**No effect** due to the likely absence of species from the BSA. |
| *Cirsium hydrophilum var. hydrophilum* | Suisun thistle | FE / 1B.1 CNPS Ranking | Marshes and swamps. Grows with *Scirpus, Distichlis* near small watercourses within saltmarsh. 0-1 m. Blooms June-Sep. | Habitat absent | **None.** Suitable habitat is present within Suisun Marsh along Segment 2. However, the construction will not extend into this habitat.<br><br>**No effect** due to the likely absence of species from the BSA. |
| *Lasthenia conjugens* | Contra Costa goldfields | FE, Critical Habitat / 1B.1 CNPS Ranking | Valley and foothill grassland, vernal pools, alkaline playas, cismontane woodland. Vernal pools, swales, low depressions, in open grassy areas. 1-450 m. Blooms Mar-Jun. | Habitat present | **Moderate (species occurrence).** DS 11 contains seasonal wetlands within grassland that match the species' preferred habitats. CNDDB occurrences are present along Ledgewood Creek and south of SR 12 on Pennsylvania Avenue. Field visits in DS 11 conducted in 2024 and 2025 did not observe species presence.<br><br>**May affect, not likely to adversely affect** the species with sufficient implementation of the AMMs.<br><br>**Moderate (critical habitat)** Critical habitat for Contra Costa goldfields is found in Segment 2 at PM R3.206-R4.5 and PM 7.6-7.9.<br><br>**May affect, not likely to adversely affect** the species' critical habitat with sufficient implementation of the AMMs. |
| *Lilaeopsis masonii* | Mason's lilaeopsis | -- / SR, 1B.1 CNPS Ranking | Marshes and swamps, riparian scrub. Tidal zones, in muddy or silty soil formed through river deposition or riverbank erosion. In brackish or freshwater. 0-10 m. Blooms Apr-Nov. | Habitat absent | **None**: Suitable marsh habitat is present within 1 mile buffer of eastern segment of project. There is no suitable habitat in the Project impact area.<br><br>**No impact** due to the likely absence of species from the BSA. |
| *Sidalcea keckii* | Keck's checkerbloom | FE / 1B.1 CNPS Ranking | Cismontane woodland, valley and foothill grassland. Grassy slopes in blue oak woodland. On serpentine- derived, clay soils, at least sometimes. 85-505 m. Blooms Apr- May. | Habitat present | **Low:** Clay soils are present in the BSA. However, species was not detected during rare plant surveys conducted in April, May, and July 2025.<br><br>**No effect** with sufficient implementation of AMMs. |
| *Trifolium amoenum* | Two-fork clover | FE / 1B.1 CNPS Ranking | Valley and foothill grassland, coastal bluff scrub. Sometimes on serpentine soil, open sunny sites, swales. Most recently cited on roadside and eroding cliff face. 5-310 m. Blooms Apr-Jun. | Habitat present | **Low:** California annual grassland is present within the BSA. However, serpentine soils are not present. Species was not detected during rare plant surveys conducted in April, May, and July 2025.<br><br>**No effect** with sufficient implementation of AMMs. |

| *Scientific Name* | Common Name | [1]Federal / State Status | General Habitat Description | Habitat Present /Absent | [2]Presence and Effect/Impact Determination |
|---|---|---|---|---|---|
| *Orcuttia inaequalis* | San Joaquin Valley orcutt grass | FT / SE, -1B.1 CNPS Ranking | Vernal pools. Blooms April to September. | Habitat present | **Low.** Suitable habitat is present on eastern segment. Vernal pools are present immediately east of the BSA and southwest of Travis Air Force Base. Species was not detected during rare plant surveys conducted in April, May, and July 2025.<br><br>**No effect** with sufficient implementation of AMMs. |
| *Holocarpha macradenia* | Santa Cruz tarplant | FT / SE, 1B.1 CNPS Ranking | Coastal prairie, coastal scrub, and valley and foothill grassland (often clay, sandy). 10-220 m (33-722 feet). Blooms Jun-Sep. | Habitat present | **Low.** Suitable habitat is present along Segment 2. Clay and sandy soils are present in BSA. Species was not detected during rare plant surveys conducted in April, May, and July 2025.<br><br>**No effect** with sufficient implementation of AMMs. |

*(1) Abbreviation List for Special-status Title*

**FT**: Federal Threatened
**FE**: Federal Endangered
**PT**: Federally Proposed Threatened
**BBC**: Birds of Conservation Concern
**ST**: State Threatened
**SE**: State Endangered
**SC**: State Candidate
**SSC**: Species of Special Concern
**SR**: State Rare (for plants only)
**FP**: State Fully Protected (for animals only)
**WL**: State Watch List (for animals only)

*(2) "Effect determination" is the official language required by USFWS during consultation for species and critical habitats that are currently listed or proposed to be listed under the USFWS' Endangered Species Act. Therefore, "Impact determination" is used for all other species that are not listed under the Federal Endangered Species Act, but still carry state-level special status.*

# Appendix F Project Footprint Map

**Figure 5-1: Project Elements**

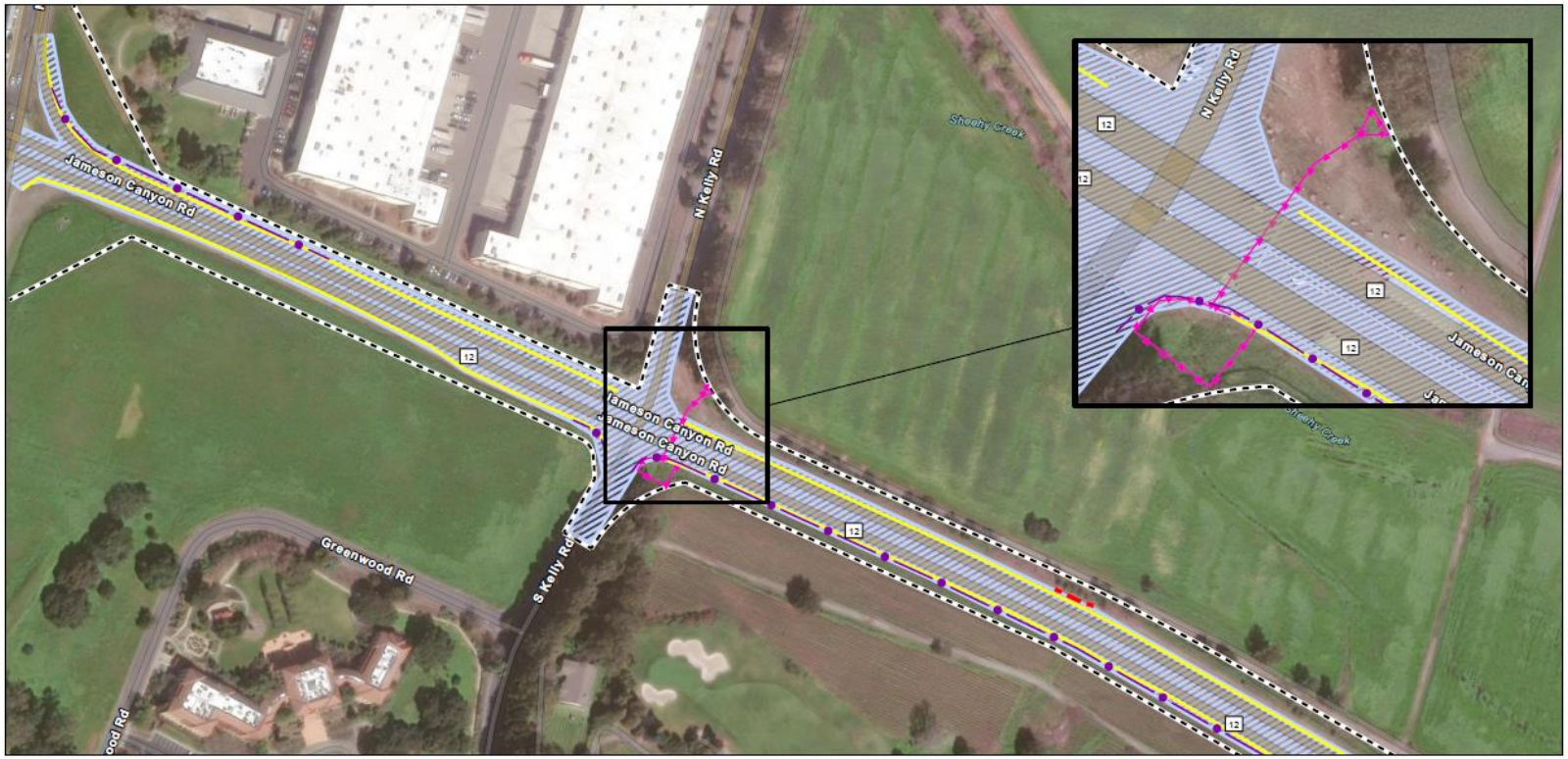


**Figure 5-1: Project Elements**
State Route 12 Pavement Rehabilitation Project
NAP-12-0.0/3.31 and SOL-12-0.0/7.90
EA: 04-4W230 EFIS: 0422000128
Napa/Solano Counties, California

**Scale: 1:3,000**

0 0.05 0.1 Miles

N

**Legend**

- Right of Way (ROW)
- Guardrail Work
- Drainage Dike Work
- Culvert Work
- ADA Curbrmps
- Biofiltration
- Pavement Overlay
- Work out of ROW
- Existing Maintenan Easment
- Bike Lane

Caltrans

# Figure 5-2: Project Elements

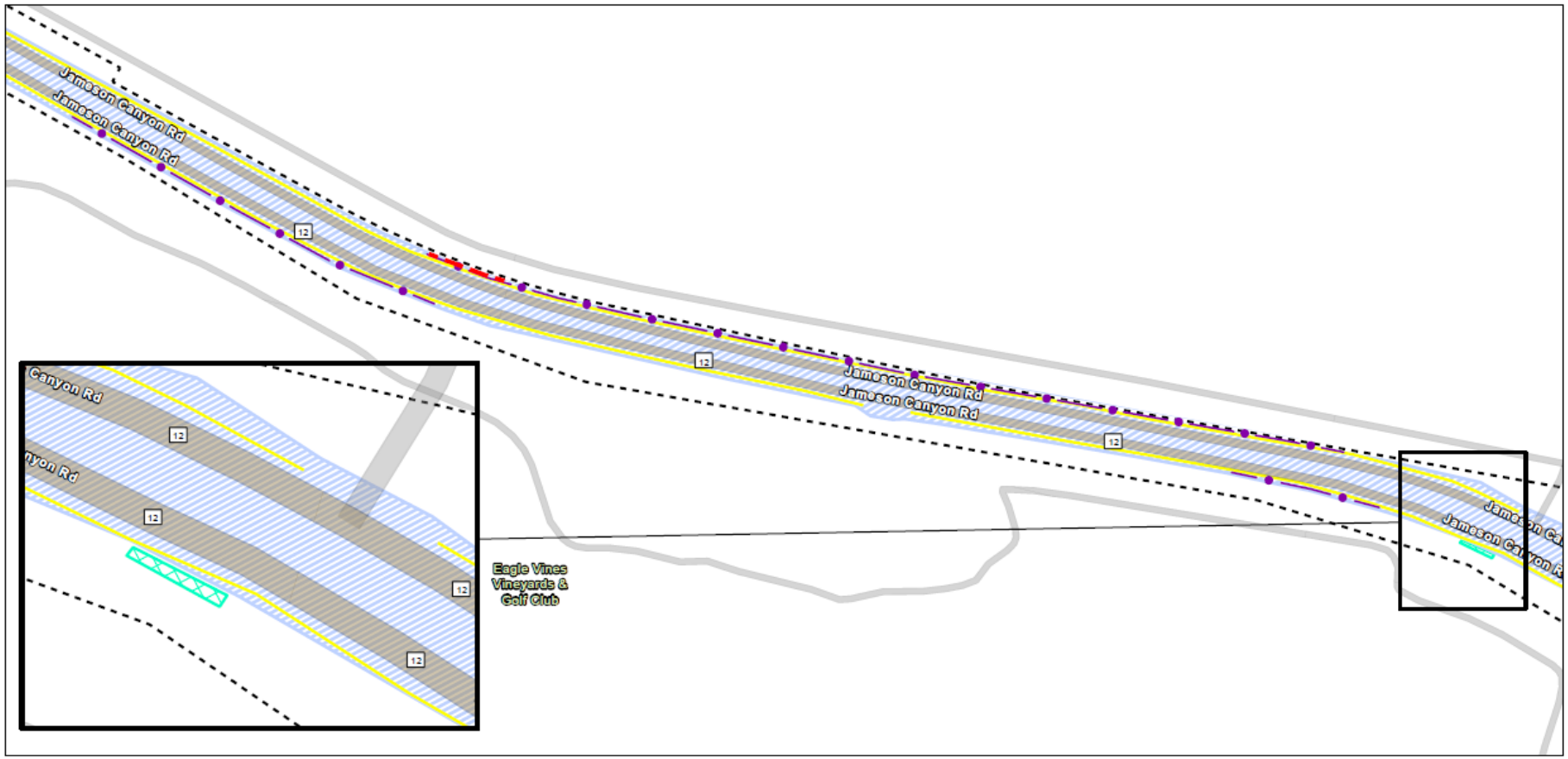


**Figure 5-2: Project Elements**
State Route 12 Pavement Rehabilitation Project
NAP-12-0.0/3.31 and SOL-12-0.0/7.90
EA: 04-4W230 EFIS: 0422000128
Napa/Solano Counties, California

**Scale: 1:3,000**

0 0.05 0.1 Miles

N

**Legend**

- Right of Way (ROW)
- Guardrail Work
- Drainage Dike Work
- Culvert Work
- ADA Curbrmps
- Biofiltration
- Pavement Overlay
- Work out of ROW
- Existing Maintenance Easment
- Bike Lane

Caltrans

## Figure 5-3: Project Elements

**Figure 5-3: Project Elements**
State Route 12 Pavement Rehabilitation Project
NAP-12-0.0/3.31 and SOL-12-0.0/7.90
EA: 04-4W230 EFIS: 0422000128
Napa/Solano Counties, California

**Scale: 1:3,000**

0 0.05 0.1 Miles

N

**Legend**

- Right of Way (ROW)
- Guardrail Work
- Drainage Dike Work
- Culvert Work
- ADA Curbrmps
- Biofiltration
- Pavement Overlay
- Work out of ROW
- Existing Maintenance Easment
- Bike Lane

Caltrans

## Figure 5-4: Project Elements

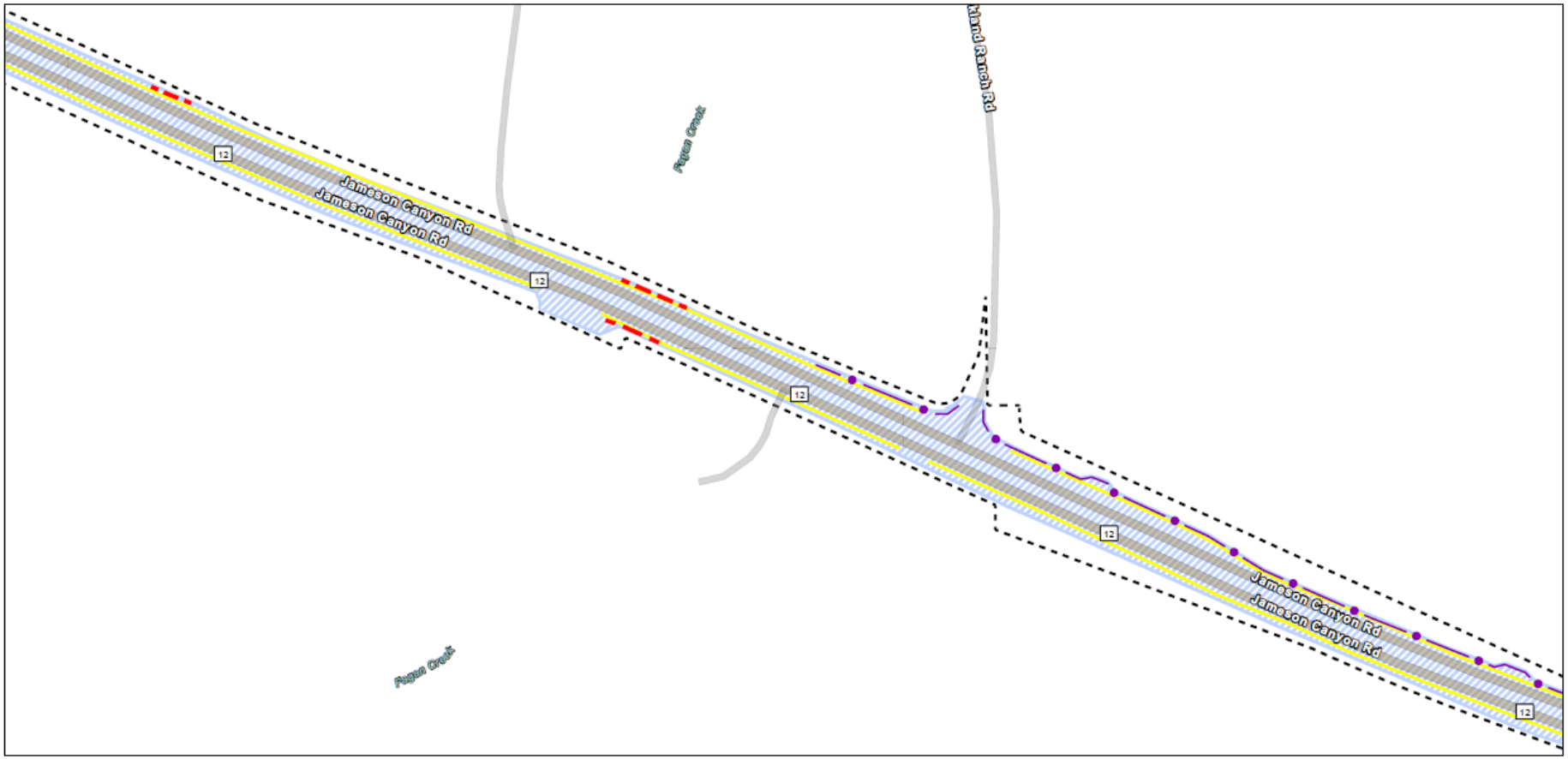


**Figure 5-4: Project Elements**
State Route 12 Pavement Rehabilitation Project
NAP-12-0.0/3.31 and SOL-12-0.0/7.90
EA: 04-4W230 EFIS: 0422000128
Napa/Solano Counties, California

**Scale: 1:3,000**

0 0.05 0.1 Miles

N

**Legend**

- Right of Way (ROW)
- Guardrail Work
- Drainage Dike Work
- Culvert Work
- ADA Curbrmps
- Biofiltration
- Pavement Overlay
- Work out of ROW
- Existing Maintenance Easment
- Bike Lane

Caltrans

## Figure 5-5: Project Elements

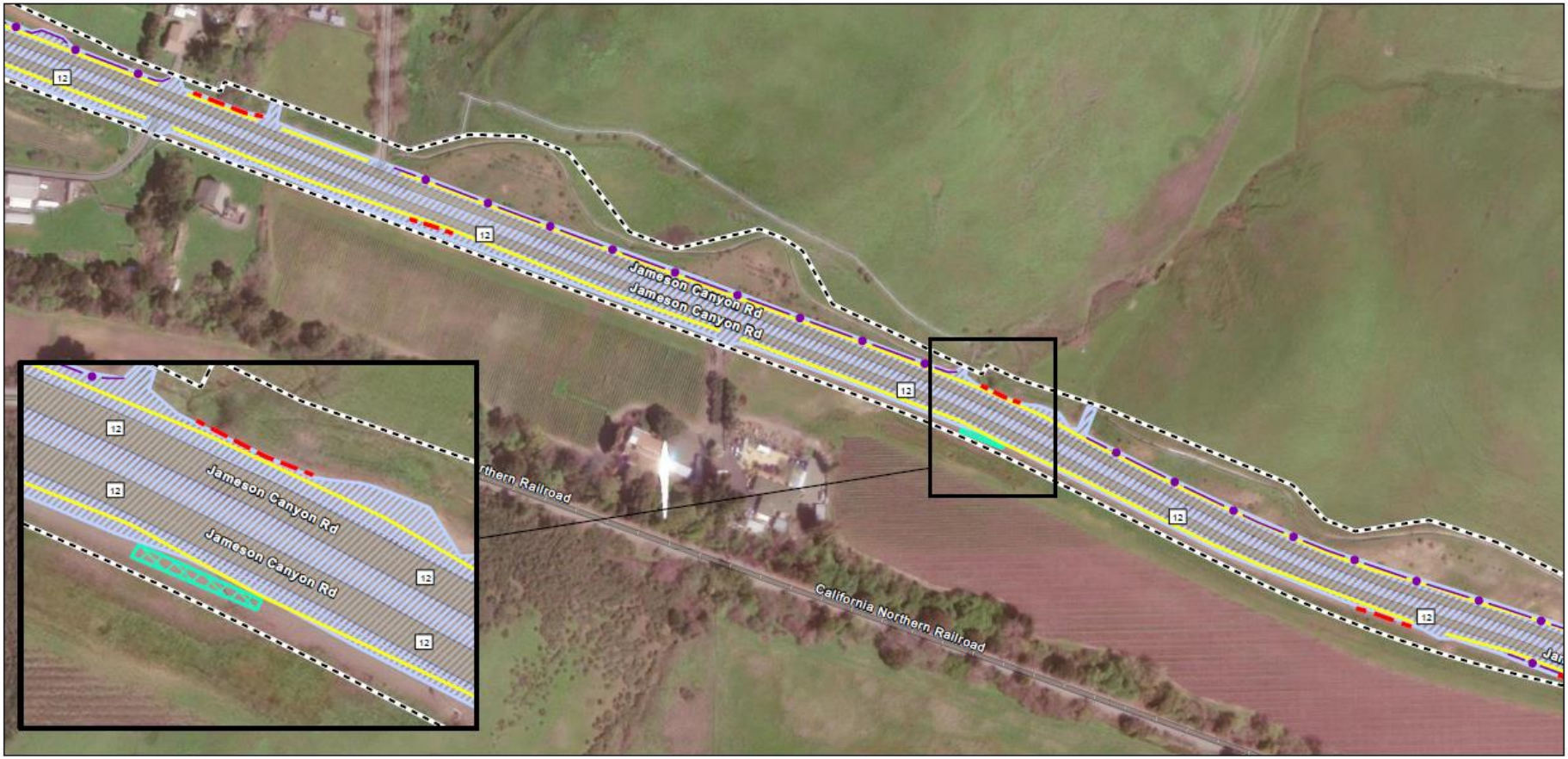


**Figure 5-5: Project Elements**
State Route 12 Pavement Rehabilitation Project
NAP-12-0.0/3.31 and SOL-12-0.0/7.90
EA: 04-4W230 EFIS: 0422000128
Napa/Solano Counties, California

**Scale: 1:3,000**

0 0.05 0.1 Miles

N

**Legend**

- Right of Way (ROW)
- Guardrail Work
- Drainage Dike Work
- Culvert Work
- ADA Curbrmps
- Biofiltration
- Pavement Overlay
- Work out of ROW
- Existing Maintenance Easment
- Bike Lane

Caltrans

## Figure 5-6: Project Elements

**Figure 5-6: Project Elements**
State Route 12 Pavement Rehabilitation Project
NAP-12-0.0/3.31 and SOL-12-0.0/7.90
EA: 04-4W230 EFIS: 0422000128
Napa/Solano Counties, California

**Scale: 1:3,000**

0 0.05 0.1 Miles

N

**Legend**

- Right of Way (ROW)
- Guardrail Work
- Drainage Dike Work
- Culvert Work
- ADA Curbrmps
- Biofiltration
- Pavement Overlay
- Work out of ROW
- Existing Maintenance Easment
- Bike Lane

Caltrans

## Figure 5-7: Project Elements

**Figure 5-7: Project Elements**
State Route 12 Pavement Rehabilitation Project
NAP-12-0.0/3.31 and SOL-12-0.0/7.90
EA: 04-4W230 EFIS: 0422000128
Napa/Solano Counties, California

**Scale: 1:3,000**

0 0.05 0.1 Miles

N

**Legend**

- Right of Way (ROW)
- Guardrail Work
- Drainage Dike Work
- Culvert Work
- ADA Curbrmps
- Biofiltration
- Pavement Overlay
- Work out of ROW
- Existing Maintenance Easment
- Bike Lane

Caltrans

## Figure 5-8: Project Elements

**Figure 5-8: Project Elements**
State Route 12 Pavement Rehabilitation Project
NAP-12-0.0/3.31 and SOL-12-0.0/7.90
EA: 04-4W230 EFIS: 0422000128
Napa/Solano Counties, California

**Scale: 1:3,000**

0 0.05 0.1 Miles

N

**Legend**

- Right of Way (ROW)
- Guardrail Work
- Drainage Dike Work
- Culvert Work
- ADA Curbrmps
- Biofiltration
- Pavement Overlay
- Work out of ROW
- Existing Maintenance Easment
- Bike Lane

Caltrans

## Figure 5-9: Project Elements

**Figure 5-9: Project Elements**
State Route 12 Pavement Rehabilitation Project
NAP-12-0.0/3.31 and SOL-12-0.0/7.90
EA: 04-4W230 EFIS: 0422000128
Napa/Solano Counties, California

**Scale: 1:3,000**

0 0.05 0.1 Miles

N

**Legend**

- Right of Way (ROW)
- Guardrail Work
- Drainage Dike Work
- Culvert Work
- ADA Curbrmps
- Biofiltration
- Pavement Overlay
- Work out of ROW
- Existing Maintenance Easment
- Bike Lane

Caltrans

## Figure 5-10: Project Elements

**Figure 5-10: Project Elements**
State Route 12 Pavement Rehabilitation Project
NAP-12-0.0/3.31 and SOL-12-0.0/7.90
EA: 04-4W230 EFIS: 0422000128
Napa/Solano Counties, California

**Scale: 1:3,000**

0 0.05 0.1 Miles

N

**Legend**

- Right of Way (ROW)
- Guardrail Work
- Drainage Dike Work
- Culvert Work
- ADA Curbrmps
- Biofiltration
- Pavement Overlay
- Work out of ROW
- Existing Maintenance Easment
- Bike Lane

Caltrans

## Figure 5-11: Project Elements

**Figure 5-11: Project Elements**
State Route 12 Pavement Rehabilitation Project
NAP-12-0.0/3.31 and SOL-12-0.0/7.90
EA: 04-4W230 EFIS: 0422000128
Napa/Solano Counties, California

**Scale: 1:3,000**

0 0.05 0.1 Miles

N

**Legend**

- Right of Way (ROW)
- Guardrail Work
- Drainage Dike Work
- Culvert Work
- ADA Curbrmps
- Biofiltration
- Pavement Overlay
- Work out of ROW
- Existing Maintenance Easment
- Bike Lane

Caltrans

## Figure 5-12: Project Elements

**Figure 5-12: Project Elements**
State Route 12 Pavement Rehabilitation Project
NAP-12-0.0/3.31 and SOL-12-0.0/7.90
EA: 04-4W230 EFIS: 0422000128
Napa/Solano Counties, California

**Scale: 1:3,000**

0 0.05 0.1 Miles

N

**Legend**

- Right of Way (ROW)
- Guardrail Work
- Drainage Dike Work
- Culvert Work
- ADA Curbrmps
- Biofiltration
- Pavement Overlay
- Work out of ROW
- Existing Maintenance Easment
- Bike Lane
- Overhead Sign Work

Caltrans

## Figure 5-13: Project Elements

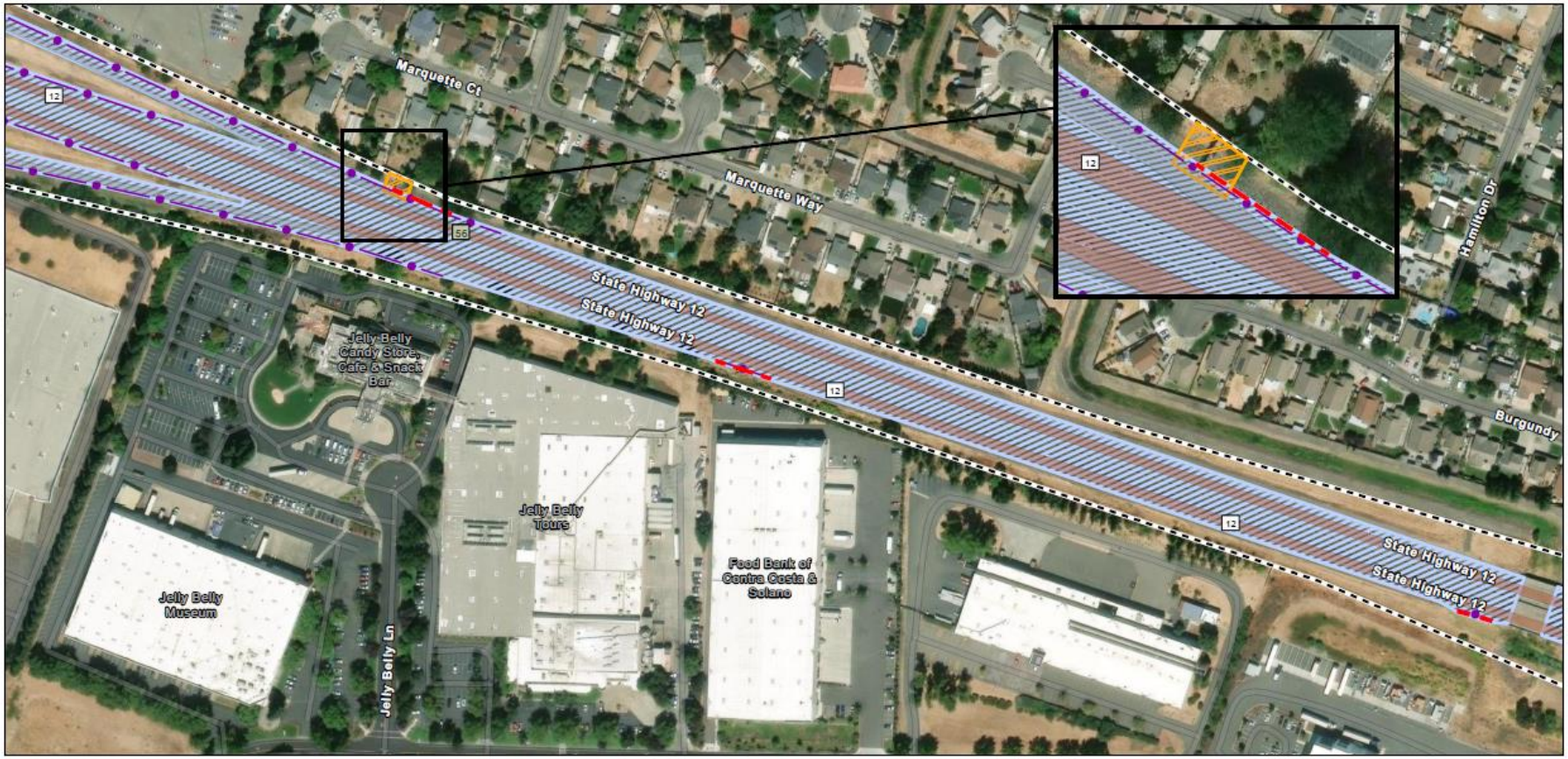


**Figure 5-13: Project Elements**
State Route 12 Pavement Rehabilitation Project
NAP-12-0.0/3.31 and SOL-12-0.0/7.90
EA: 04-4W230 EFIS: 0422000128
Napa/Solano Counties, California

**Scale: 1:3,000**

0 0.05 0.1 Miles

N

**Legend**

- Right of Way (ROW)
- Guardrail Work
- Drainage Dike Work
- Culvert Work
- ADA Curbrmps
- Biofiltration
- Pavement Overlay
- Work out of ROW
- Existing Maintenance Easment
- Bike Lane
- Overhead Sign Work

Caltrans

## Figure 5-14a: Project Elements

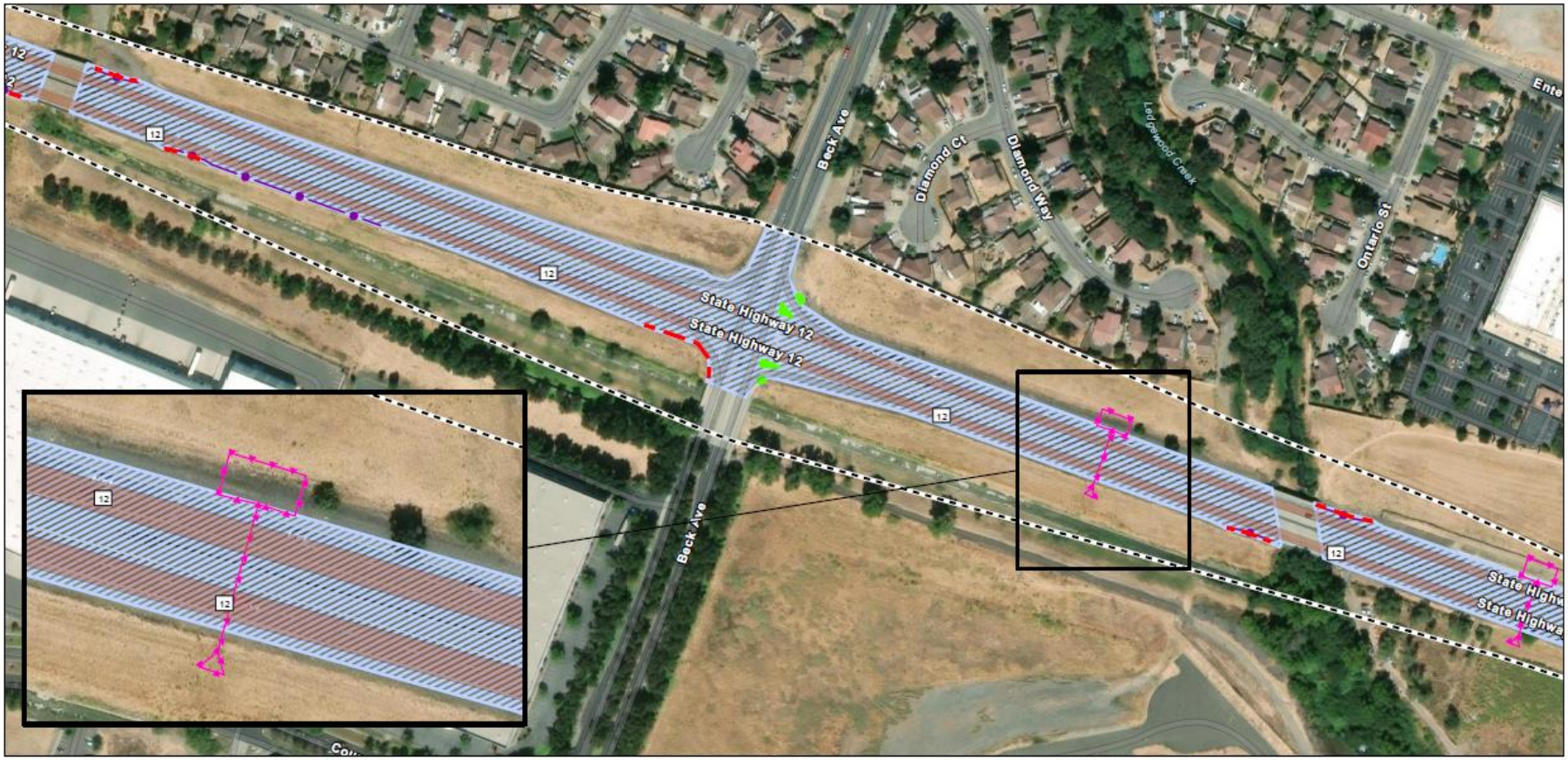


**Figure 5-14a: Project Elements**
State Route 12 Pavement Rehabilitation Project
NAP-12-0.0/3.31 and SOL-12-0.0/7.90
EA: 04-4W230 EFIS: 0422000128
Napa/Solano Counties, California

**Scale: 1:3,000**

0 0.05 0.1 Miles

N

**Legend**

- Right of Way (ROW)
- Guardrail Work
- Drainage Dike Work
- Culvert Work
- ADA Curbrmps
- Biofiltration
- Pavement Overlay
- Work out of ROW
- Existing Maintenance Easment
- Bike Lane

Caltrans

## Figure 5-14b: Project Elements

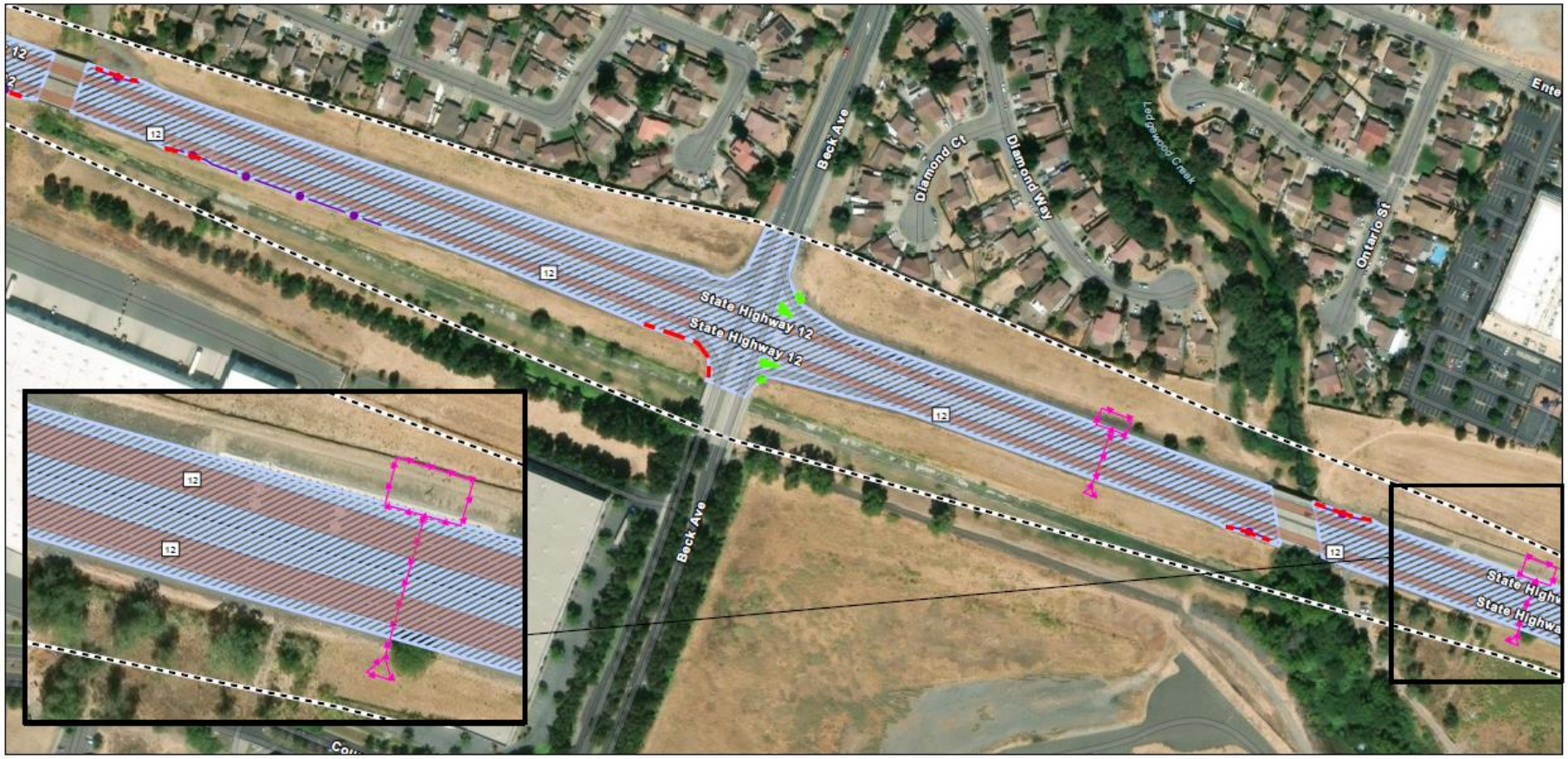


**Figure 5-14b: Project Elements**
State Route 12 Pavement Rehabilitation Project
NAP-12-0.0/3.31 and SOL-12-0.0/7.90
EA: 04-4W230 EFIS: 0422000128
Napa/Solano Counties, California

**Scale: 1:3,000**

0 0.05 0.1 Miles

N

**Legend**

- Right of Way (ROW)
- Guardrail Work
- Drainage Dike Work
- Culvert Work
- ADA Curbrmps
- Biofilbration
- Pavement Overlay
- Work out of ROW
- Existing Maintenance Easment
- Bike Lane

Caltrans

## Figure 5-15a: Project Elements

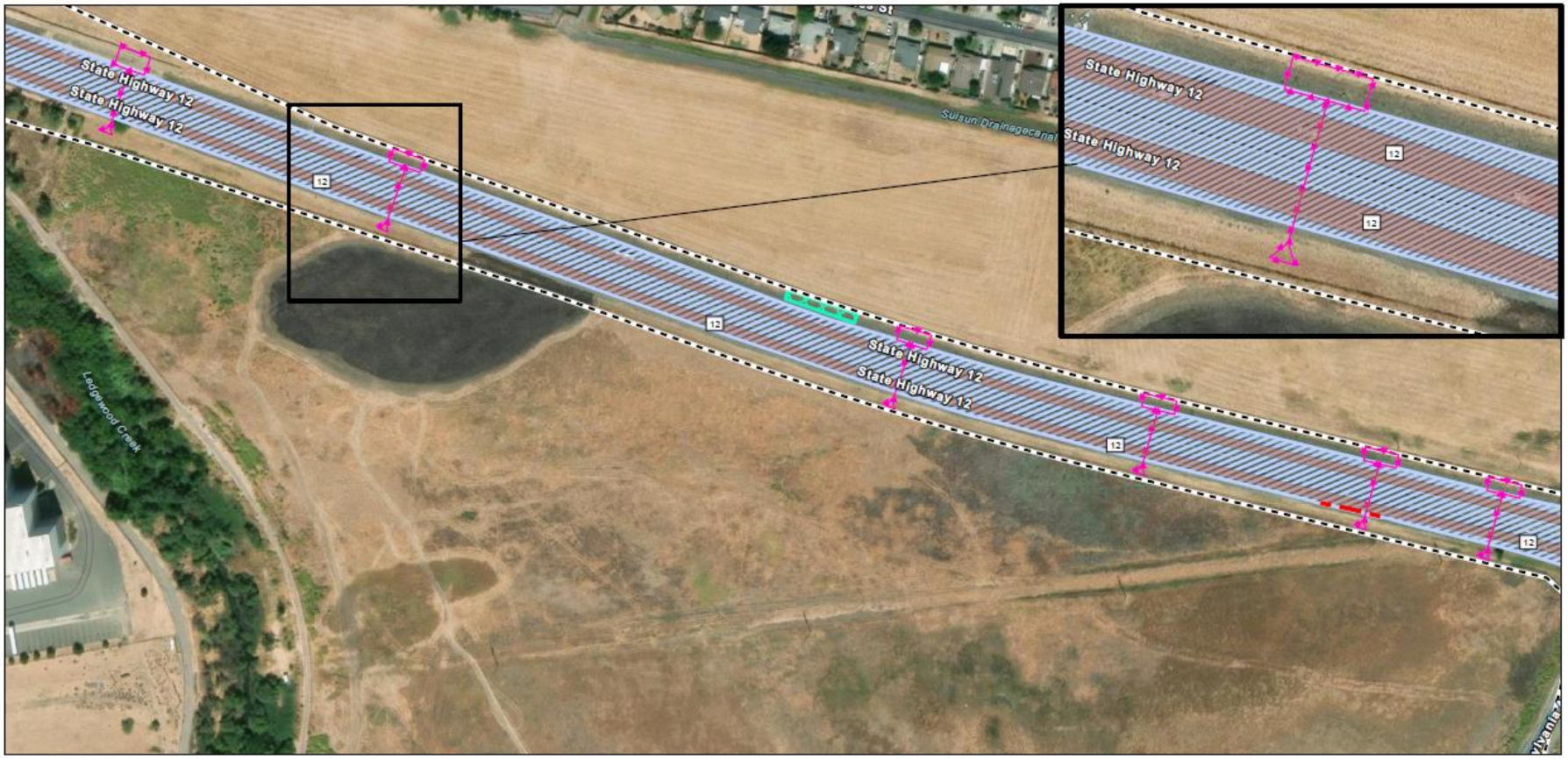


**Figure 5-15a: Project Elements**
State Route 12 Pavement Rehabilitation Project
NAP-12-0.0/3.31 and SOL-12-0.0/7.90
EA: 04-4W230 EFIS: 0422000128
Napa/Solano Counties, California

**Scale: 1:3,000**

0 0.05 0.1 Miles

N

**Legend**

- Right of Way (ROW)
- Guardrail Work
- Drainage Dike Work
- Culvert Work
- ADA Curbrmps
- Biofiltration
- Pavement Overlay
- Work out of ROW
- Existing Maintenance Easment
- Bike Lane

Caltrans

## Figure 5-15b: Project Elements

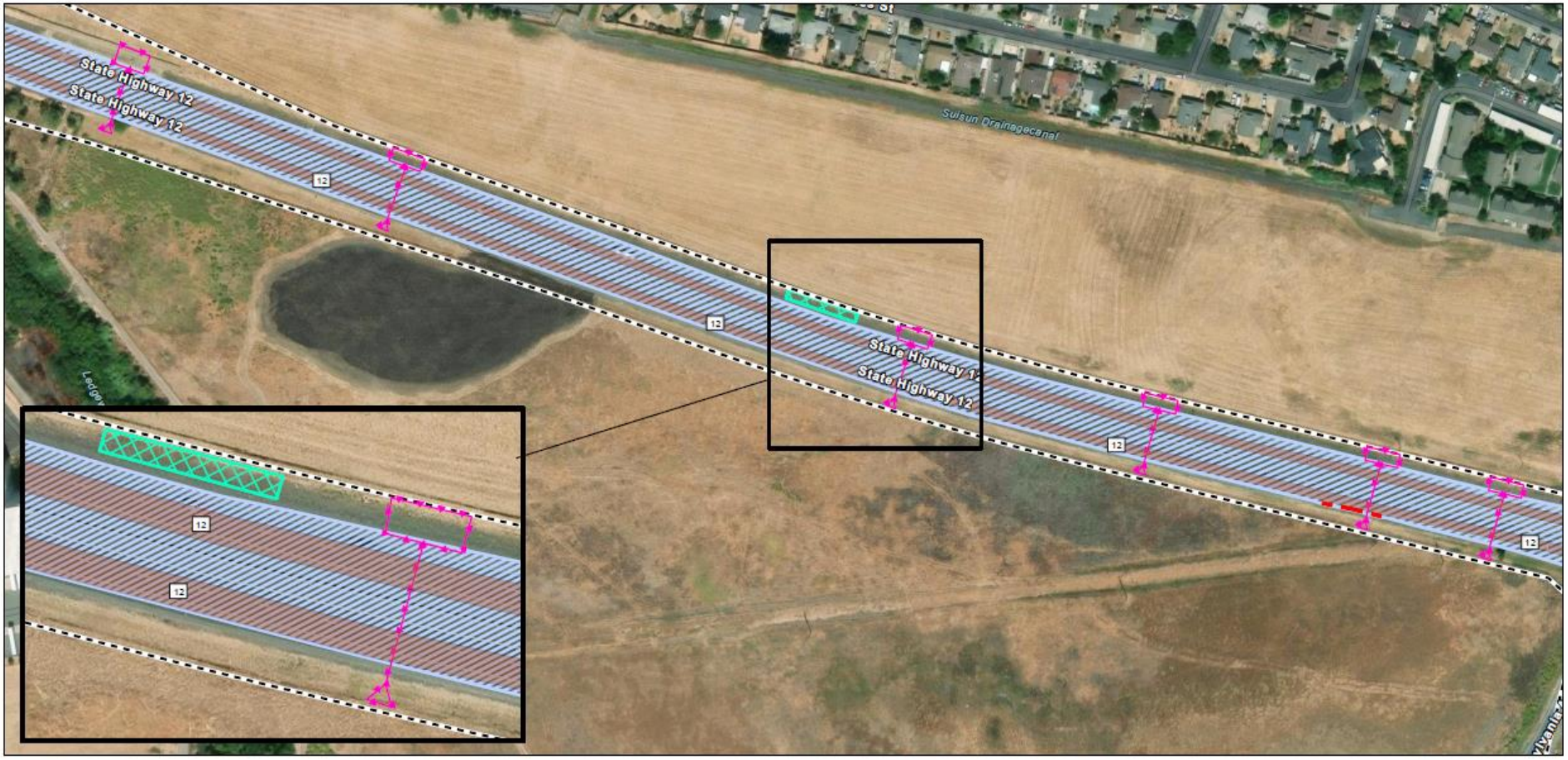


**Figure 5-15b: Project Elements**
State Route 12 Pavement Rehabilitation Project
NAP-12-0.0/3.31 and SOL-12-0.0/7.90
EA: 04-4W230 EFIS: 0422000128
Napa/Solano Counties, California

**Scale: 1:3,000**

0 0.05 0.1 Miles

N

**Legend**

- Right of Way (ROW)
- Guardrail Work
- Drainage Dike Work
- Culvert Work
- ADA Curbrmps
- Biofiltration
- Pavement Overlay
- Work out of ROW
- Existing Maintenance Easment
- Bike Lane

Caltrans

## Figure 5-15c: Project Elements

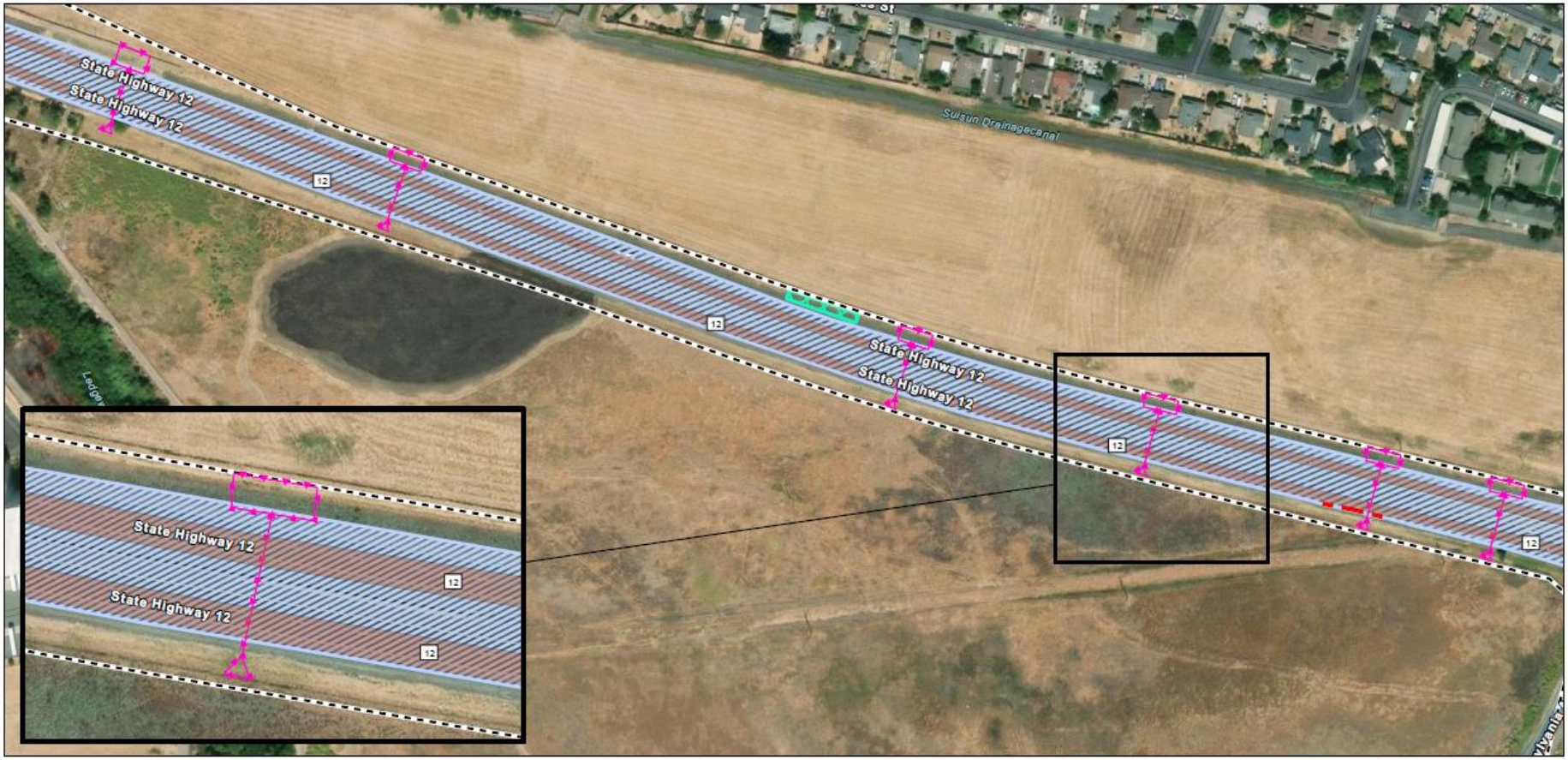


**Figure 5-15c: Project Elements**
State Route 12 Pavement Rehabilitation Project
NAP-12-0.0/3.31 and SOL-12-0.0/7.90
EA: 04-4W230 EFIS: 0422000128
Napa/Solano Counties, California

**Scale: 1:3,000**

0 0.05 0.1 Miles

N

**Legend**

- Right of Way (ROW)
- Guardrail Work
- Drainage Dike Work
- Culvert Work
- ADA Curbrmps
- Biofiltration
- Pavement Overlay
- Work out of ROW
- Existing Maintenance Easment
- Bike Lane

Caltrans

## Figure 5-15d: Project Elements

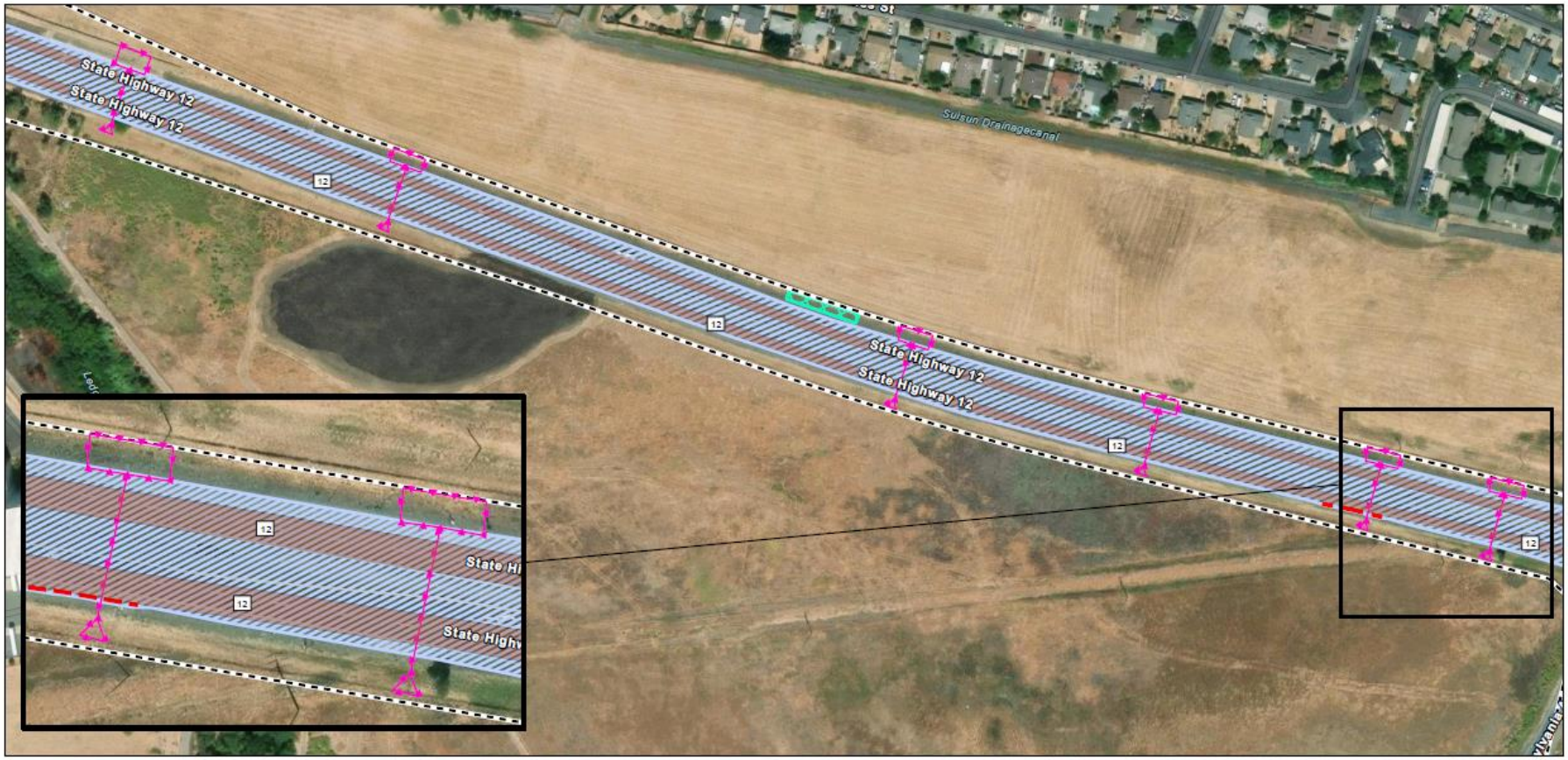


**Figure 5-15d: Project Elements**
State Route 12 Pavement Rehabilitation Project
NAP-12-0.0/3.31 and SOL-12-0.0/7.90
EA: 04-4W230 EFIS: 0422000128
Napa/Solano Counties, California

**Scale: 1:3,000**

0 0.05 0.1 Miles

N

**Legend**

- Right of Way (ROW)
- Guardrail Work
- Drainage Dike Work
- Culvert Work
- ADA Curbrmps
- Biofiltration
- Pavement Overlay
- Work out of ROW
- Existing Maintenance Easment
- Bike Lane

Caltrans

## Figure 5-16a: Project Elements

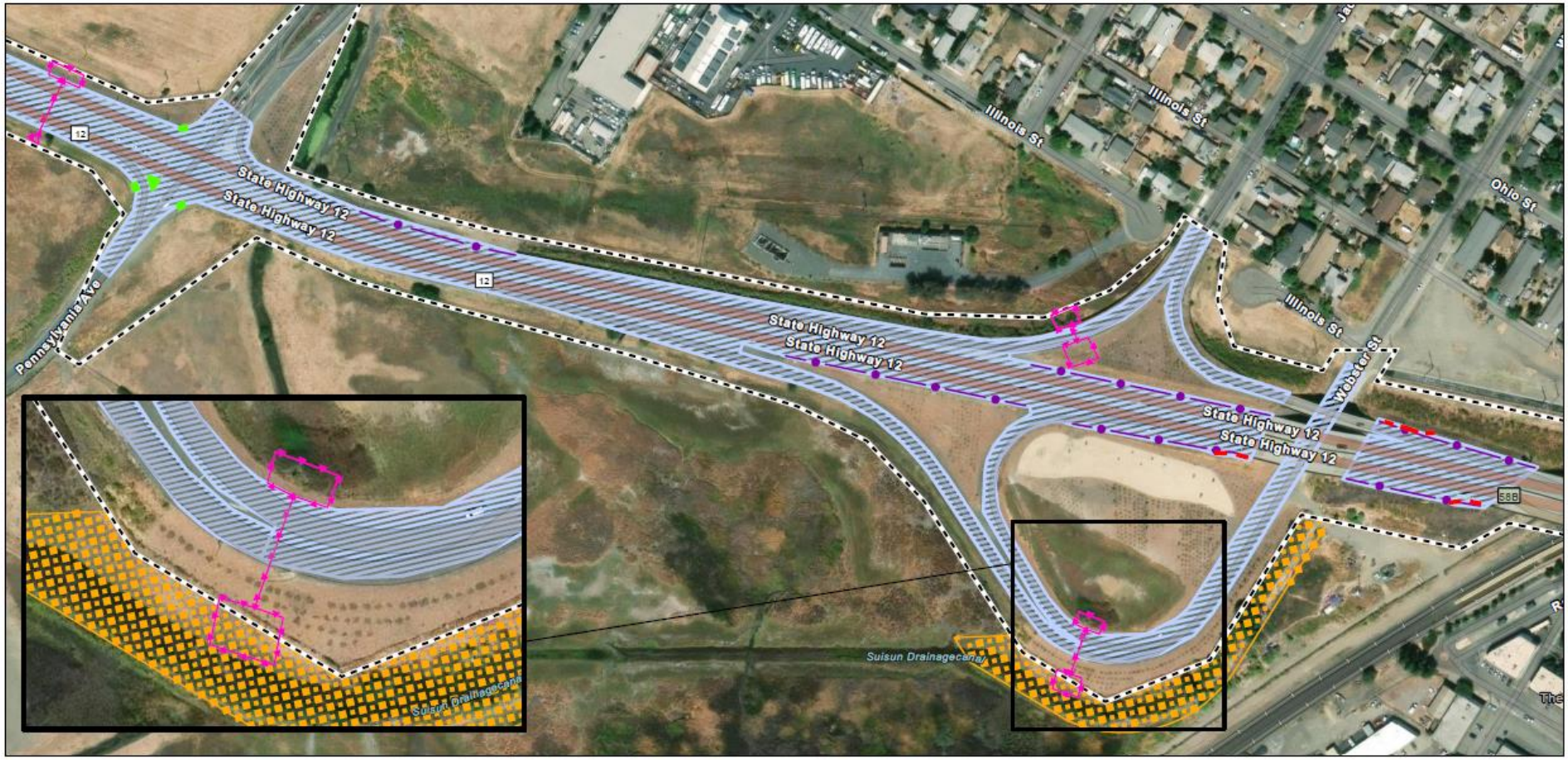


**Figure 5-16a: Project Elements**
State Route 12 Pavement Rehabilitation Project
NAP-12-0.0/3.31 and SOL-12-0.0/7.90
EA: 04-4W230 EFIS: 0422000128
Napa/Solano Counties, California

**Scale: 1:3,000**

0 0.05 0.1 Miles

N

**Legend**

- Right of Way (ROW)
- Guardrail Work
- Drainage Dike Work
- Culvert Work
- ADA Curbrmps
- Biofiltration
- Pavement Overlay
- Work out of ROW
- Existing Maintenance Easment
- Bike Lane

Caltrans

## Figure 5-16b: Project Elements

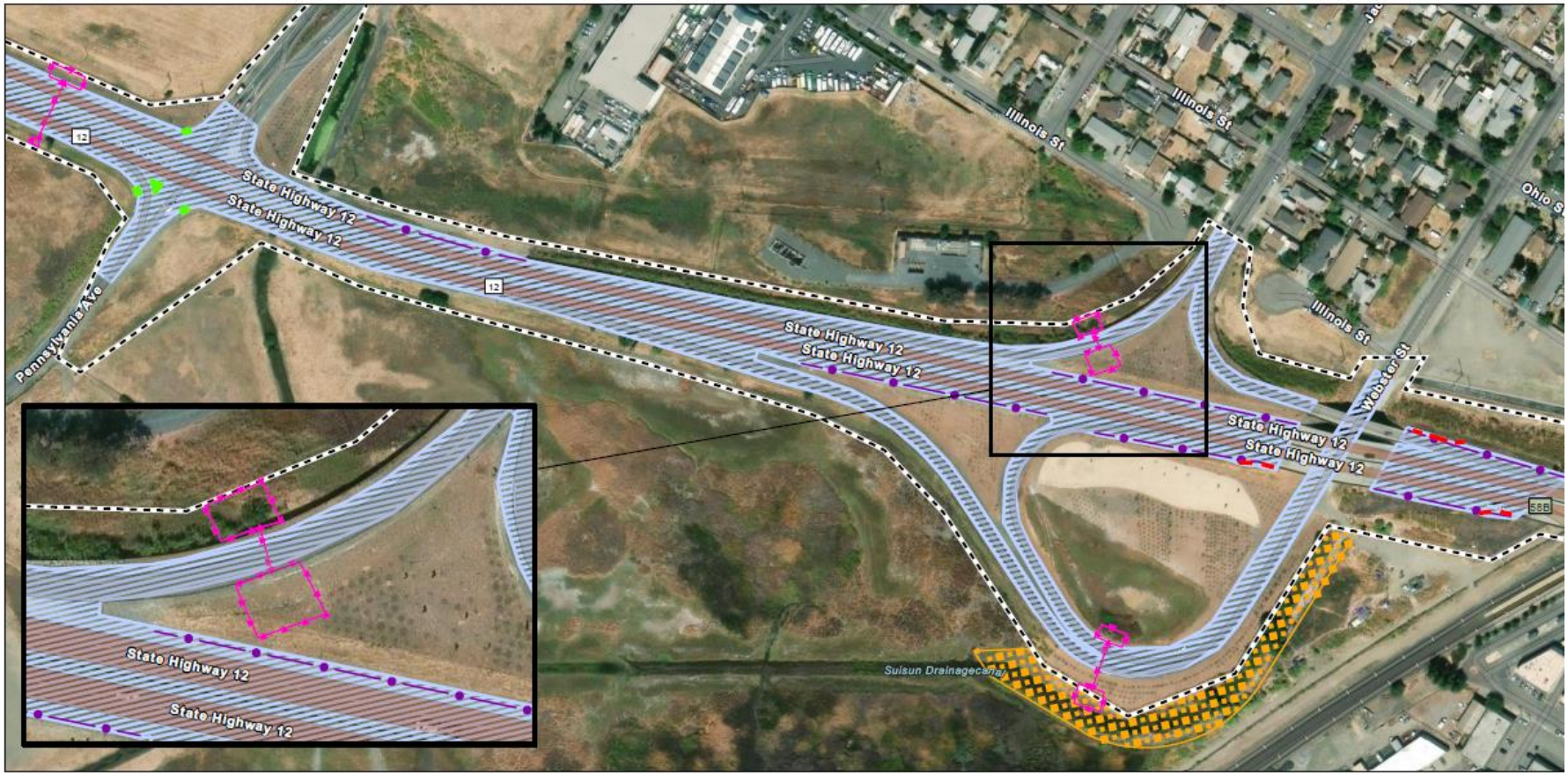


**Figure 5-16b: Project Elements**
State Route 12 Pavement Rehabilitation Project
NAP-12-0.0/3.31 and SOL-12-0.0/7.90
EA: 04-4W230 EFIS: 0422000128
Napa/Solano Counties, California

**Scale: 1:3,000**

0 0.05 0.1 Miles

N

**Legend**

- Right of Way (ROW)
- Guardrail Work
- Drainage Dike Work
- Culvert Work
- ADA Curbrmps
- Biofiltration
- Pavement Overlay
- Work out of ROW
- Existing Maintenance Easment
- Bike Lane

Caltrans

## Figure 5-17: Project Elements

**Figure 5-17: Project Elements**
State Route 12 Pavement Rehabilitation Project
NAP-12-0.0/3.31 and SOL-12-0.0/7.90
EA: 04-4W230 EFIS: 0422000128
Napa/Solano Counties, California

**Scale: 1:3,000**

0 0.05 0.1 Miles

N

**Legend**

- Right of Way (ROW)
- Guardrail Work
- Drainage Dike Work
- Culvert Work
- ADA Curbrmps
- Biofiltration
- Pavement Overlay
- Work out of ROW
- Existing Maintenance Easment
- Bike Lane

Caltrans

## Figure 5-18: Project Elements

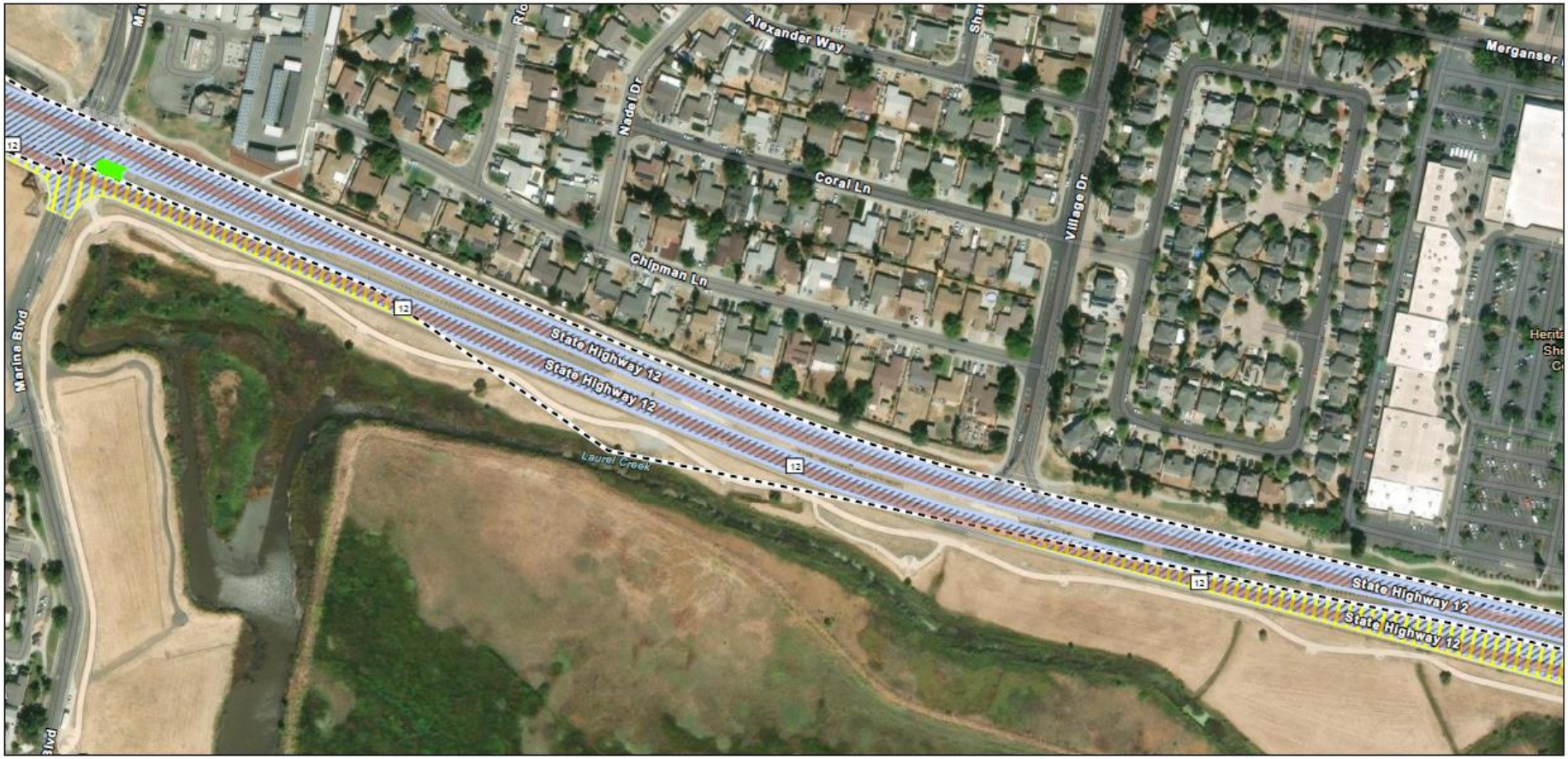


**Figure 5-18: Project Elements**
State Route 12 Pavement Rehabilitation Project
NAP-12-0.0/3.31 and SOL-12-0.0/7.90
EA: 04-4W230 EFIS: 0422000128
Napa/Solano Counties, California

**Scale: 1:3,000**

0 0.05 0.1 Miles

N

**Legend**

- Right of Way (ROW)
- Guardrail Work
- Drainage Dike Work
- Culvert Work
- ADA Curbrmps
- Biofiltration
- Pavement Overlay
- Work out of ROW
- Existing Maintenance Easment
- Bike Lane

Caltrans

## Figure 5-19: Project Elements

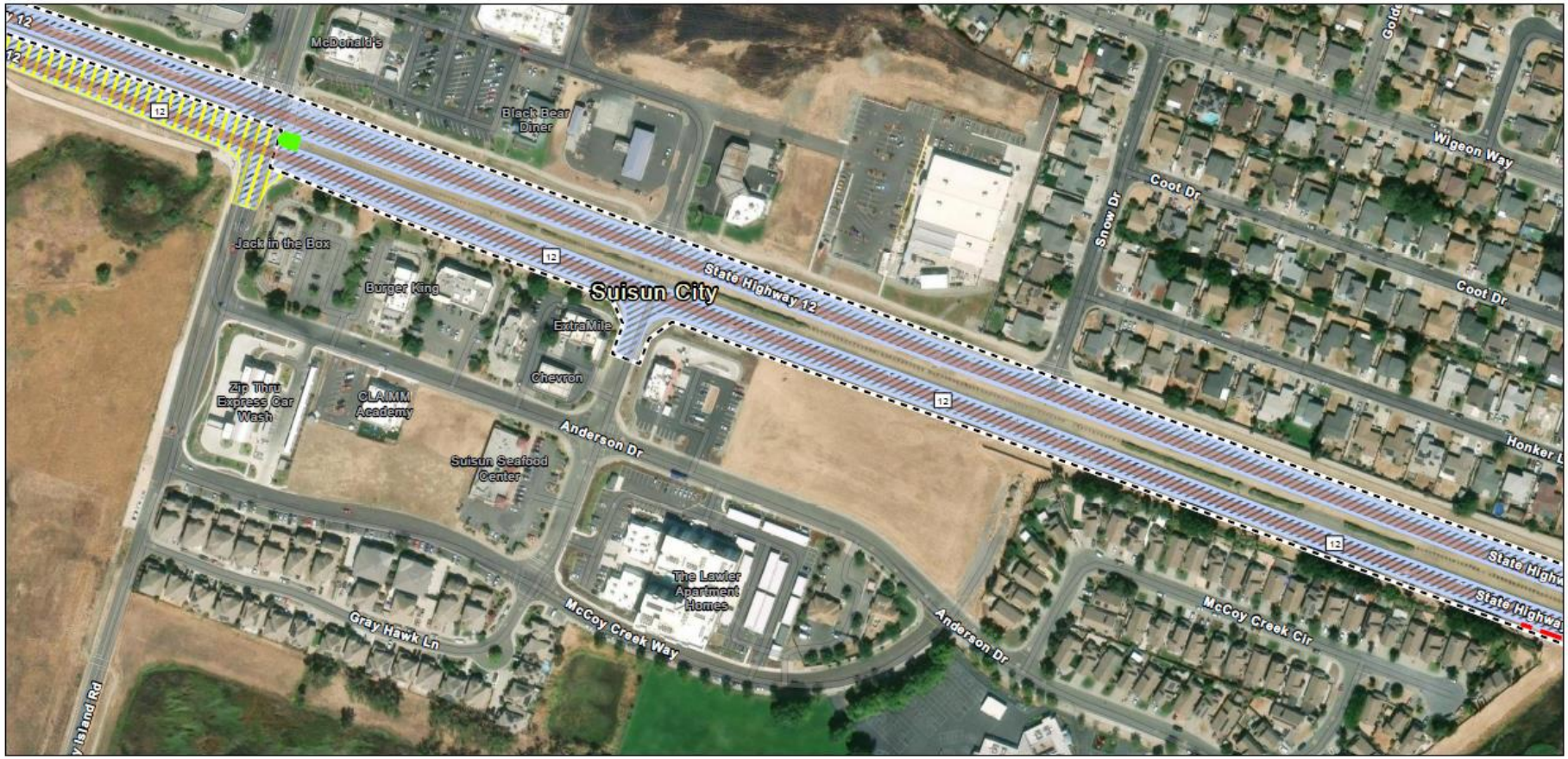


**Figure 5-19: Project Elements**
State Route 12 Pavement Rehabilitation Project
NAP-12-0.0/3.31 and SOL-12-0.0/7.90
EA: 04-4W230 EFIS: 0422000128
Napa/Solano Counties, California

**Scale: 1:3,000**

0 0.05 0.1 Miles

N

**Legend**

- Right of Way (ROW)
- Guardrail Work
- Drainage Dike Work
- Culvert Work
- ADA Curbrmps
- Biofiltration
- Pavement Overlay
- Work out of ROW
- Existing Maintenance Easment
- Bike Lane

Caltrans

## Figure 5-20: Project Elements

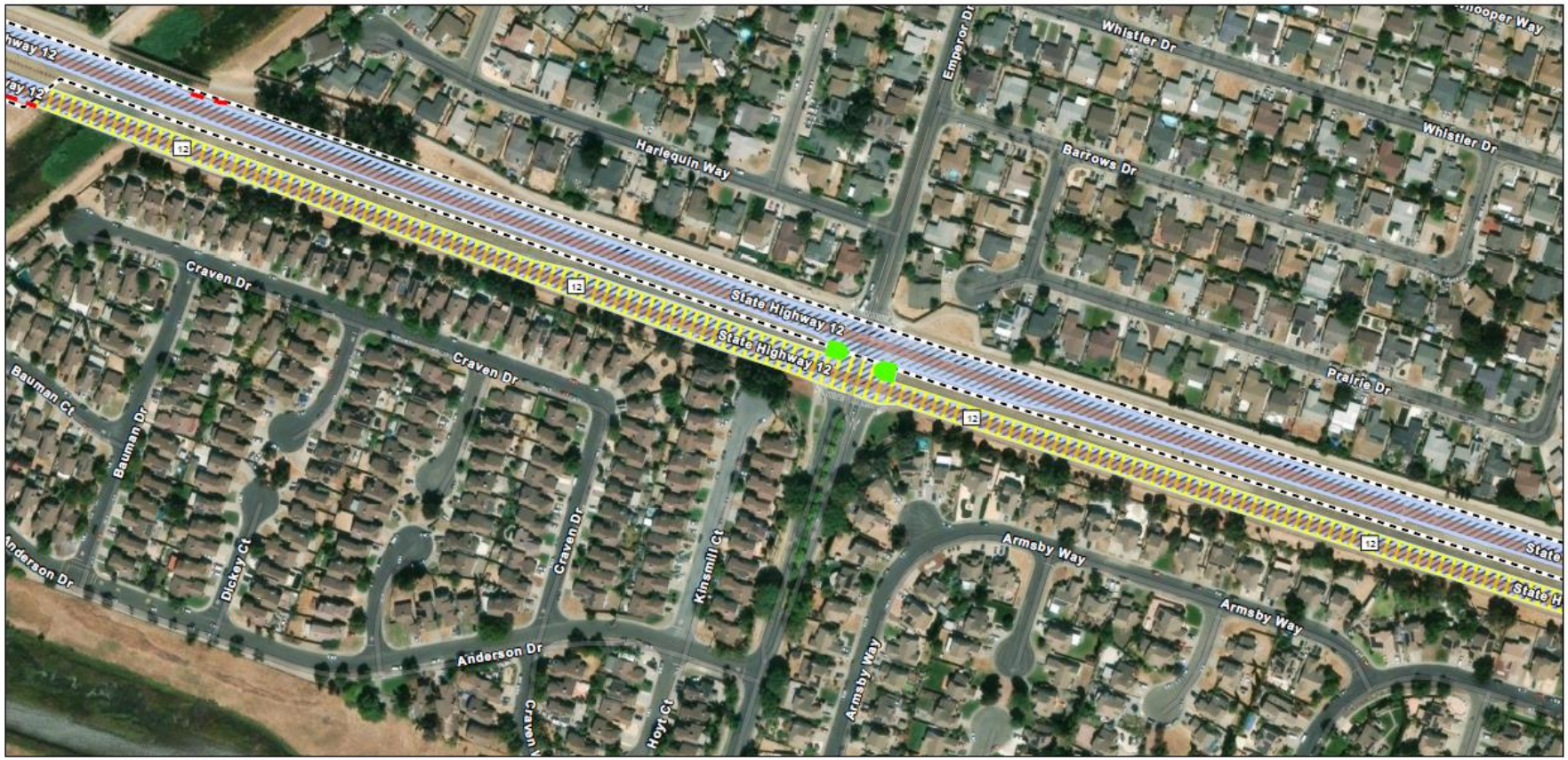


**Figure 5-20: Project Elements**
State Route 12 Pavement Rehabilitation Project
NAP-12-0.0/3.31 and SOL-12-0.0/7.90
EA: 04-4W230 EFIS: 0422000128
Napa/Solano Counties, California

**Scale: 1:3,000**

0 0.05 0.1 Miles

N

**Legend**

- Right of Way (ROW)
- Guardrail Work
- Drainage Dike Work
- Culvert Work
- ADA Curbrmps
- Biofiltration
- Pavement Overlay
- Work out of ROW
- Existing Maintenance Easment
- Bike Lane

Caltrans

## Figure 5-21: Project Elements

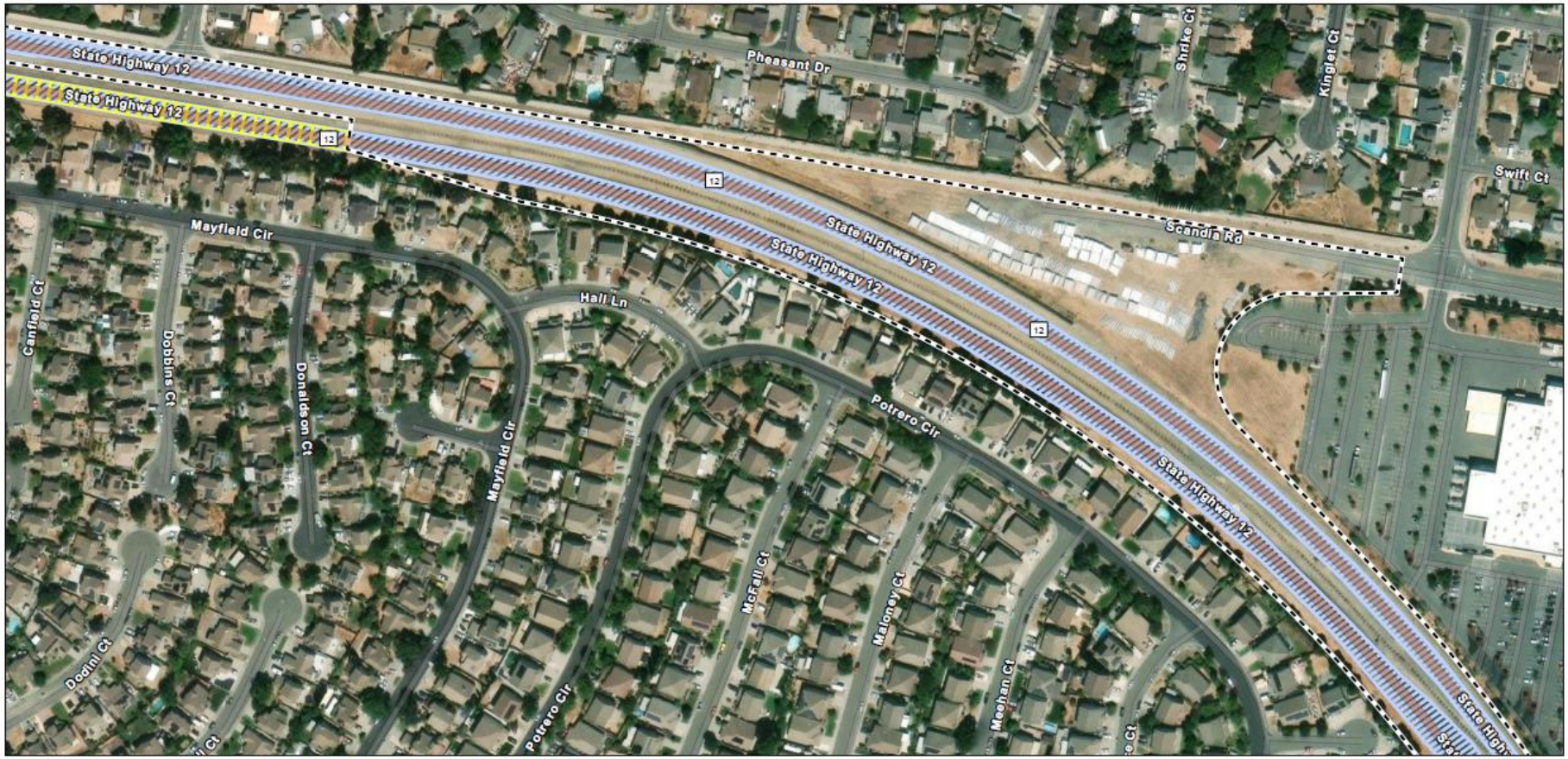


**Figure 5-21: Project Elements**
State Route 12 Pavement Rehabilitation Project
NAP-12-0.0/3.31 and SOL-12-0.0/7.90
EA: 04-4W230 EFIS: 0422000128
Napa/Solano Counties, California

**Scale: 1:3,000**

0 0.05 0.1 Miles

N

**Legend**

- Right of Way (ROW)
- Guardrail Work
- Drainage Dike Work
- Culvert Work
- ADA Curbrmps
- Biofiltration
- Pavement Overlay
- Work out of ROW
- Existing Maintenance Easment
- Bike Lane

Caltrans

## Figure 5-22: Project Elements

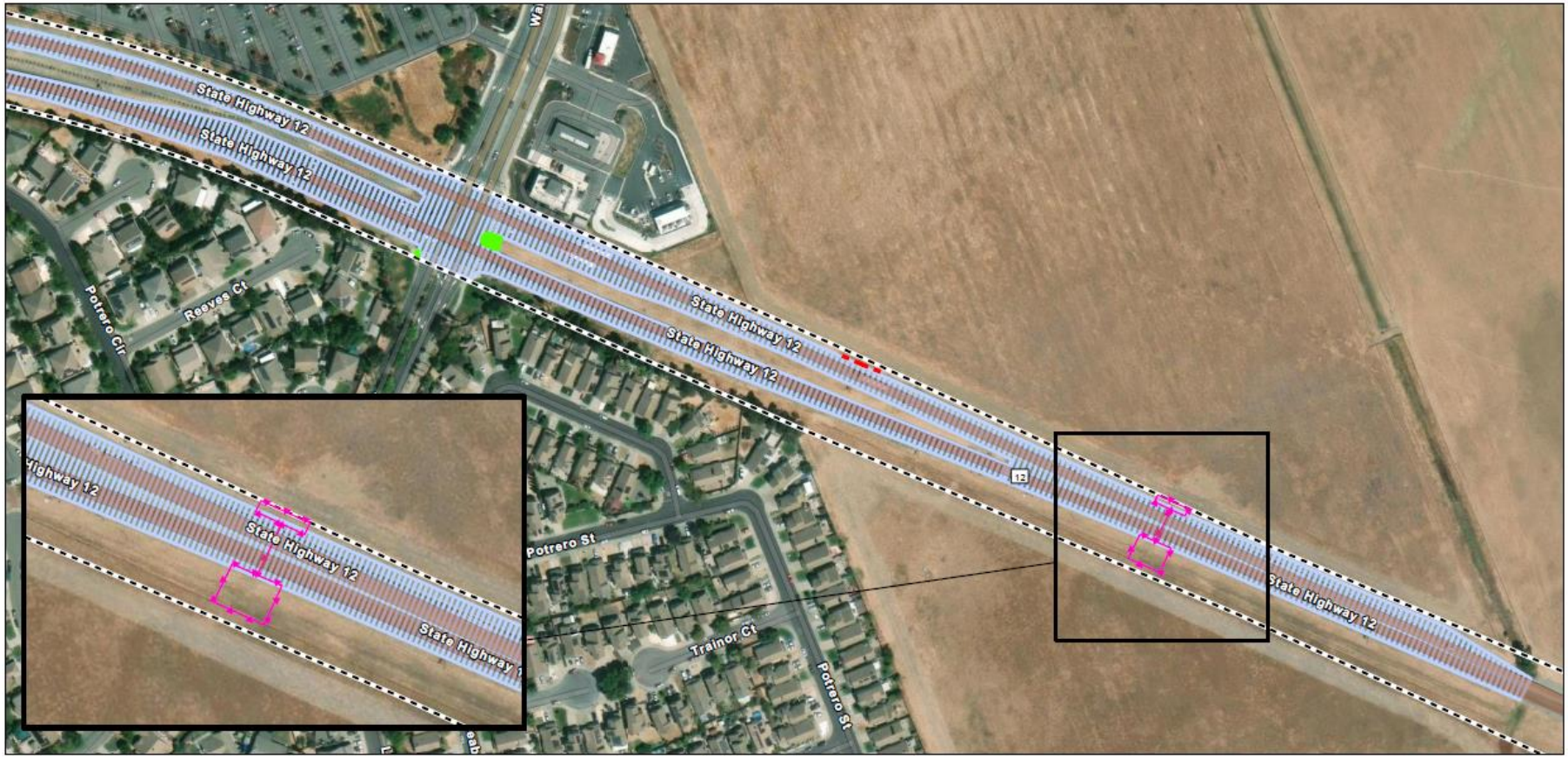


**Figure 5-22: Project Elements**
State Route 12 Pavement Rehabilitation Project
NAP-12-0.0/3.31 and SOL-12-0.0/7.90
EA: 04-4W230 EFIS: 0422000128
Napa/Solano Counties, California

**Scale: 1:3,000**

0 0.05 0.1 Miles

N

**Legend**

- Right of Way (ROW)
- Guardrail Work
- Drainage Dike Work
- Culvert Work
- ADA Curbrmps
- Biofiltration
- Pavement Overlay
- Work out of ROW
- Existing Maintenance Easment
- Bike Lane

Caltrans

## Figure 6-1: Biofiltration Strips

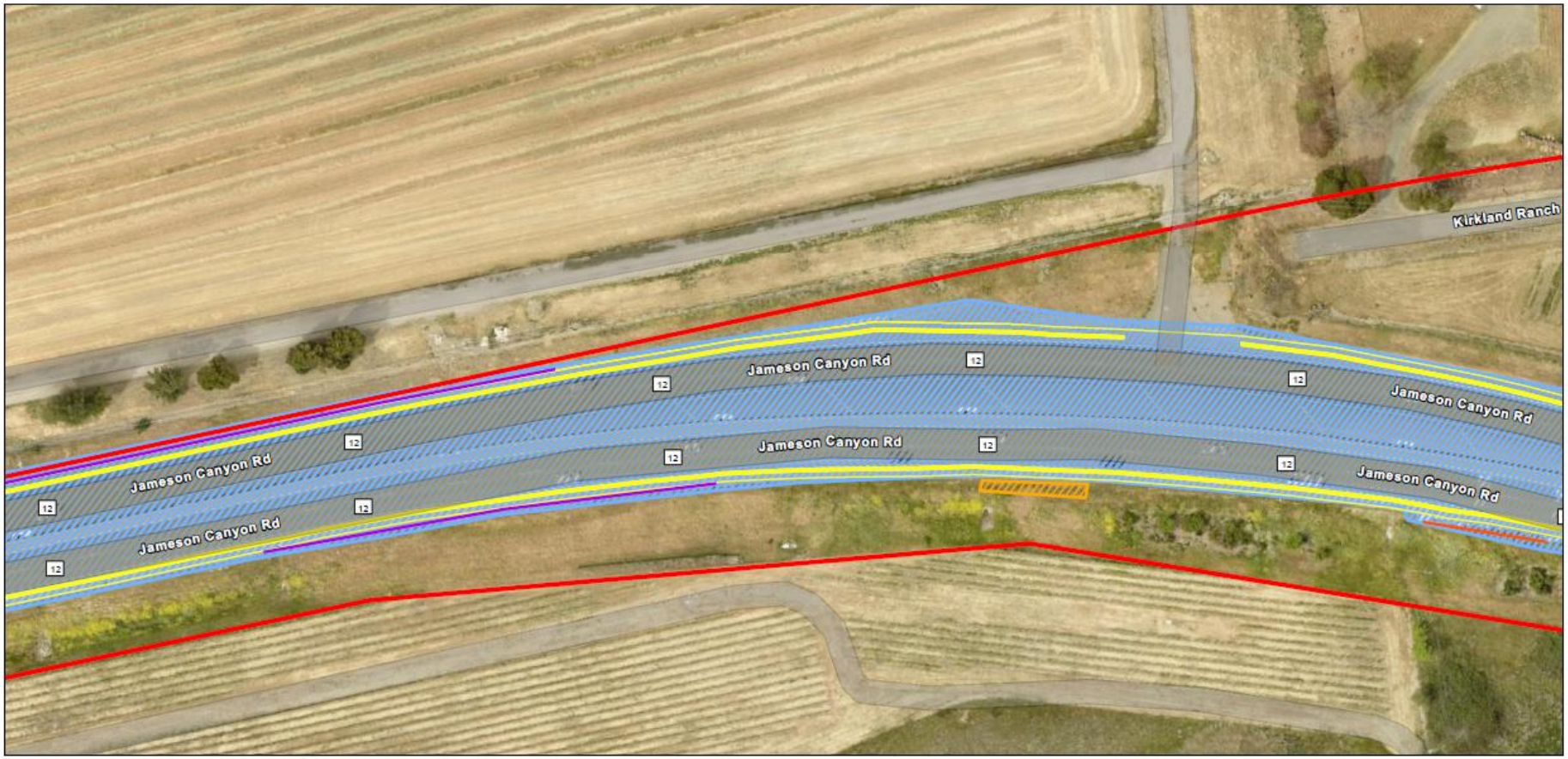


**Figure 6: Biofiltration Strips**
State Route 12 Pavement Rehabilitation Project
NAP-12-0.0/3.31 and SOL-12-0.0/7.90
EA: 04-4W230 EFIS: 0422000128
Napa/Solano Counties, California

**Scale: 1:1,000**

0 0.010.01 0.02 0.03 0.04 Miles

N

**Legend**

- Right of Way (ROW)
- Guardrail Work
- Drainage Dike Work
- Culvert Work
- ADA Curbrmps
- Biofiltration
- Pavement Overlay
- Work out of ROW
- Existing Maintenance Easment

Caltrans

## Figure 6-2: Biofiltration Strips

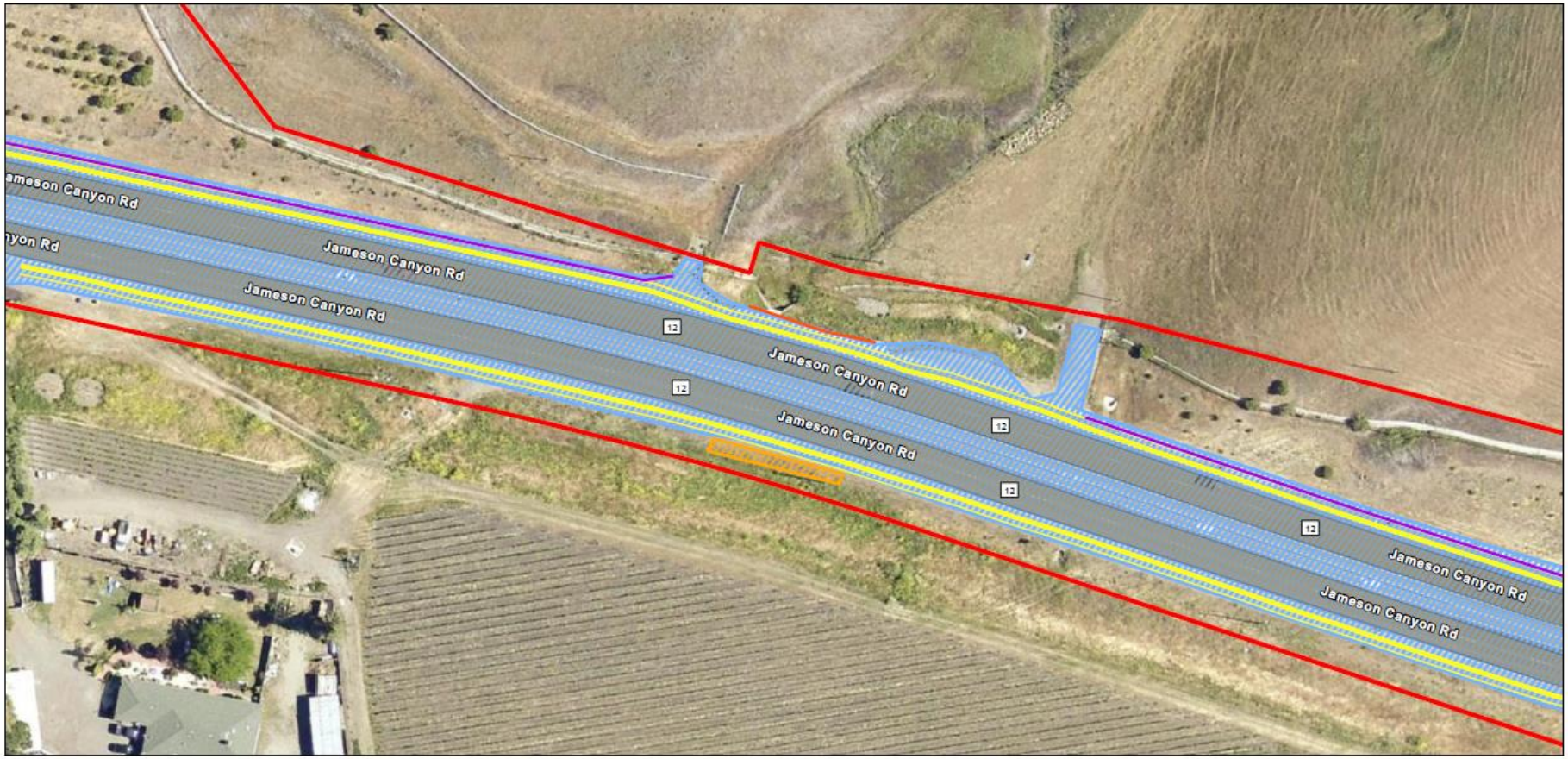


**Figure 6: Biofiltration Strips**
State Route 12 Pavement Rehabilitation Project
NAP-12-0.0/3.31 and SOL-12-0.0/7.90
EA: 04-4W230 EFIS: 0422000128
Napa/Solano Counties, California

**Scale: 1:1,000**

0 0.010.01 0.02 0.03 0.04 Miles

N

**Legend**

- Right of Way (ROW)
- Guardrail Work
- Drainage Dike Work
- Culvert Work
- ADA Curbrmps
- Biofiltration
- Pavement Overlay
- Work out of ROW
- Existing Maintenance Easment

Caltrans

## Figure 6-3: Biofiltration Strips

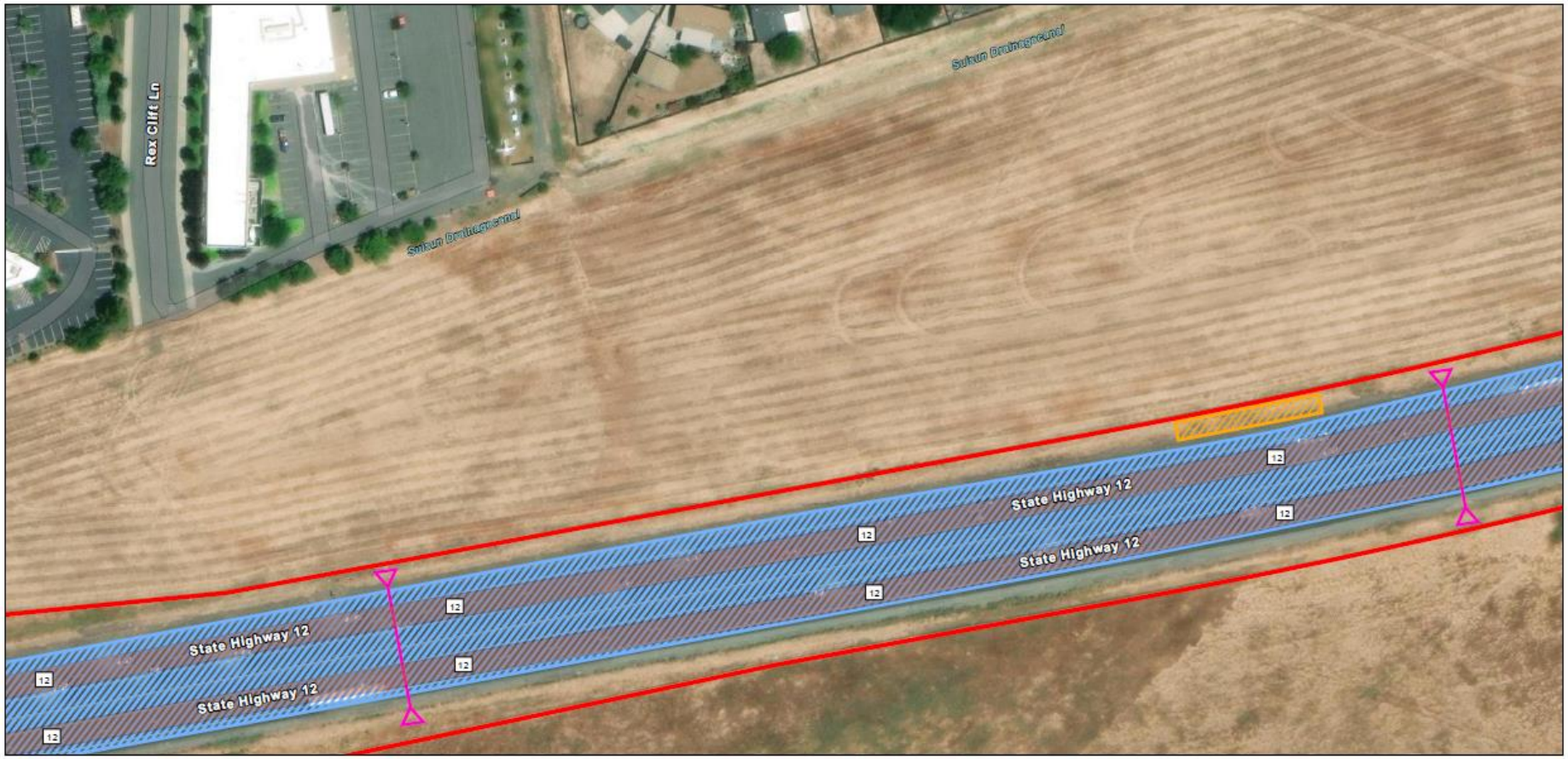


**Figure 6: Biofiltration Strips**
State Route 12 Pavement Rehabilitation Project
NAP-12-0.0/3.31 and SOL-12-0.0/7.90
EA: 04-4W230 EFIS: 0422000128
Napa/Solano Counties, California

**Scale: 1:1,500**

0 0.010.01 0.03 0.04 0.06 Miles

N

**Legend**

- Right of Way (ROW)
- Guardrail Work
- Drainage Dike Work
- Culvert Work
- ADA Curbrmps
- Biofiltration
- Pavement Overlay
- Work out of ROW
- Existing Maintenance Easment

Caltrans