

Pescadero Creek Bridge Rails

SAN MATEO COUNTY, CALIFORNIA
CALTRANS DISTRICT 04
STATE ROUTE 1, POST MILE 14.0
EA: 04- 4J870
EFIS: 0416000029

Initial Study with Proposed Negative Declaration



Prepared by the
California Department of Transportation



August 2020

General Information about this Document

What's in this document:

The California Department of Transportation (Caltrans) has prepared this Initial Study with Proposed Negative Declaration (IS/ND) to examine the potential environmental impacts of replacing the bridge railing on the Pescadero Creek Bridge on State Route 1 in San Mateo County, California (Project). Caltrans is the lead agency under the California Environmental Quality Act (CEQA). The document tells you why the Project is being proposed, how the existing environment could be affected by the Project, the potential impacts of each proposed activity, and the proposed avoidance, and minimization measures.

What you should do:

- Please read this document.
- The document, maps, and Project information are available to download at the Caltrans environmental document website (<https://dot.ca.gov/caltrans-near-me/district-4/d4-popular-links/d4-environmental-docs>).
- We would like to hear what you think. Send comments, including requests that Caltrans hold a public meeting to:
Caltrans, District 4
ATTN: Arnica MacCarthy, Senior Environmental Planner
P.O. Box 23660,
Oakland, CA 94623-0660
Or Maxwell.Lammert@dot.ca.gov (**preferred method of contact during COVID-19**)
- Be sure to send comments by the deadline: October 1, 2020.

What happens next:

Per CEQA Section 15073, Caltrans will circulate the 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 calling **California Relay Service 1 (800) 735-2929 (TTY), 1 (800) 735-2929 (Voice), 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) (https://dot.ca.gov/caltrans-near-me/district-4/d4-popular-links/d4-environmental-docs).

Initial Study with Proposed Negative Declaration

04-SM-1	14.0	04-4J870
Dist. – Co. – Rte.	PM	E.A.

Project title:	Pescadero Creek Bridge Rails
Lead agency name and address:	California Department of Transportation 111 Grand Avenue, Oakland, CA 94612
Contact person and phone number:	Arnica MacCarthy, Senior Environmental Planner (510) 286-7195
Project location:	San Mateo, California
General plan description:	Highway
Zoning:	Transportation Corridor
Other public agencies whose approval is required (e.g., permits, financial approval, or participation agreements)	<ul style="list-style-type: none"> • California Transportation Commission • Coastal Development Permit from the California Coastal Commission and San Mateo County

The document, maps, Project information, and supporting technical studies are 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) (<https://dot.ca.gov/caltrans-near-me/district-4/d4-popular-links/d4-environmental-docs>).



August 26, 2020

Lindsay Vivian
Caltrans District 4, Office Chief
Office of Environmental Analysis

Date

Proposed Negative Declaration

Pursuant to: Division 13, Public Resources Code

Project Description

The California Department of Transportation (Caltrans) proposes a bridge rail replacement project (Project) on State Route (SR) 1, at Post Mile (PM) 14, on the Pescadero Creek Bridge, west of the community of Pescadero, in San Mateo County, California.

Determination

This proposed Negative Declaration (ND) is included to give notice to interested agencies and the public that it is Caltrans' intent to adopt an ND for this Project. This does not mean that Caltrans' decision regarding the Project is final. This ND is subject to change based on comments received by interested agencies and the public. Caltrans has prepared an Initial Study for this Project, and pending public review, has determined from this study that the proposed Project would not have a significant effect on the environment for the following reasons:

The proposed Project would have no effect on agriculture and forestry, air quality, biological resources, cultural resources, mineral resources, noise, population and housing, public services, tribal cultural resources, utilities and service systems, and wildfire.

The proposed Project would have a less than significant impact on aesthetics, energy, greenhouse gas emissions, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, recreation, and transportation.

Melanie Brent
Deputy District Director
Environmental Planning and Engineering
Caltrans District 4

Date

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Chapter 1 Proposed Project

1.1 Introduction

The California Department of Transportation (Caltrans) is the California Environmental Quality Act (CEQA) lead agency and sponsor for the proposed Pescadero Creek Bridge Rail Project (Project) and has prepared this Initial Study with Proposed Negative Declaration.

The Project is located on State Route (SR) 1, at Post Mile (PM) 14, on the Pescadero Creek Bridge, west of the community of Pescadero, in San Mateo County, California (see Figure 1).

This Project is funded by the State Highway Operation and Protection Program, under 201.110, the “Bridge Rehabilitation Program”, for the 2021/2022 fiscal year.

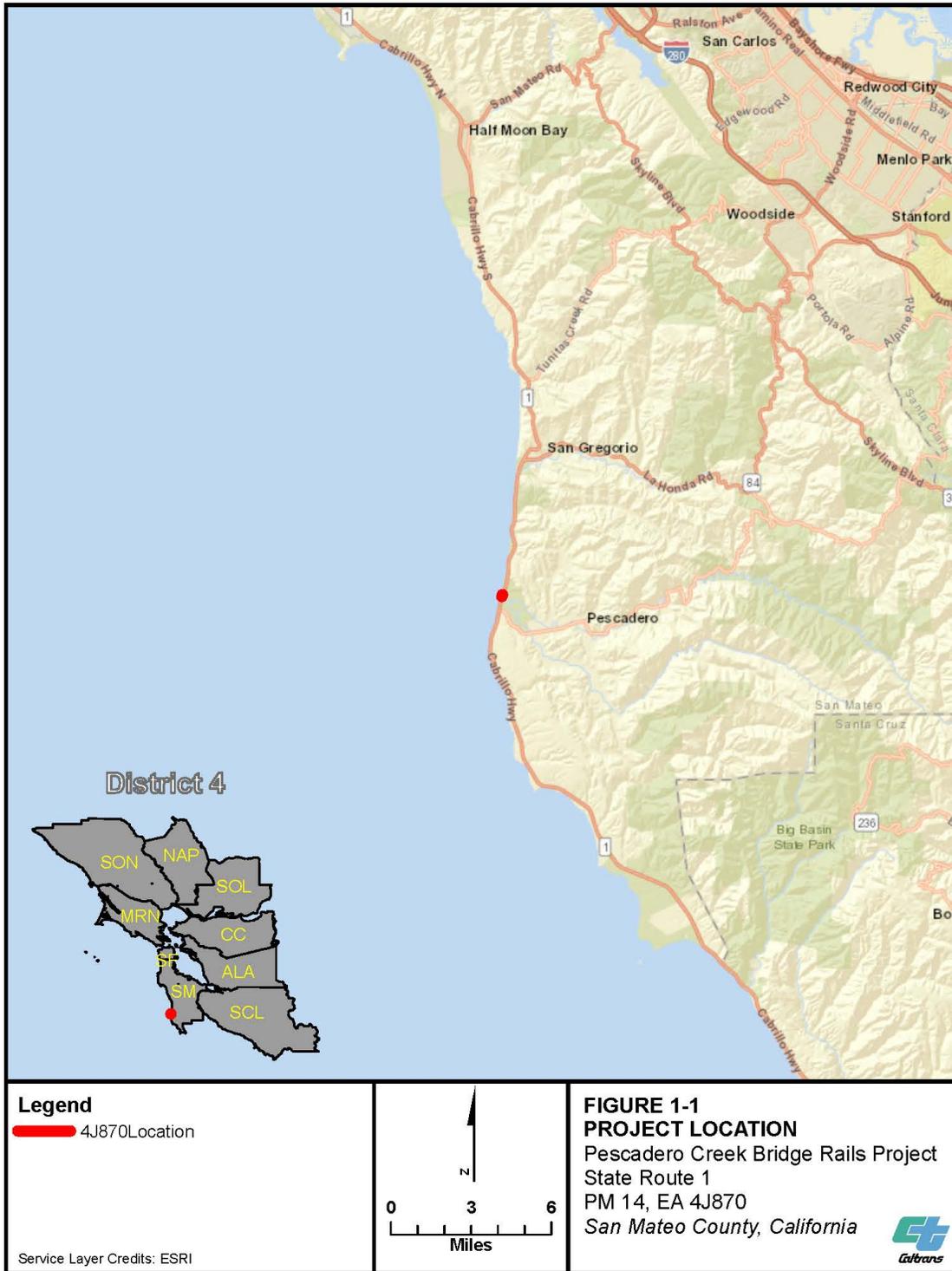
1.2 Purpose and Need

The purpose of the Project is to prevent errant vehicles from running off the bridge, reduce the severity of potential crashes, and protect the structural integrity of the bridge, thereby enhancing the safety of the highway.

The Project is needed to improve the safety of the bridge roadway as the deterioration of the concrete reduces the structural integrity and service life of the highway.

The Caltrans Office of Structure Maintenance and Investigations – North investigated the Pescadero Creek Bridge on October 20, 2014, and documented in the Bridge Inspection Records Information System that sections on the southbound barrier rail of the Pescadero Creek Bridge have delaminations and spalls due in part to the marine environmental conditions. Upon further examination, both the southbound and northbound barrier rails have unsound concrete and patch spalls with exposed rebars. Unsound concrete, exposed rebar, and spalls have also been observed in the approach slabs. The deterioration of concrete reduces the structural integrity and service life of the bridge barriers and attached railings.

Figure 1-1 Project Location



Chapter 2 Project Description

2.1 Introduction

The proposed Project would occur on and nearby the Pescadero Creek Bridge on SR 1 in San Mateo County.

Along the San Mateo County coastline, from Pacifica to Santa Cruz, SR 1 is known as the “Cabrillo Highway” and operates as a conventional highway. The route provides primary access to several coastal communities as well as access to beaches, parks, and other attractions along the coast, making it a popular route for tourists. Within the Project limits, SR 1 is a two-lane conventional highway that runs north-south with twelve-foot lanes and eight-foot shoulders.

The Pescadero Creek Bridge was built in 1991 and is a three-span, continuous, cast-in-place, pre-stressed, box girder structure that is supported by two flared reinforced concrete (RC) column bents and open-end RC seat abutments. The northern abutment and bent are founded on RC spread footings, and the southern abutment and bent are founded on RC piles. The bridge is approximately 50 feet wide and 380 feet long. There are monolithic wingwalls at the east side of the northern abutment and the west and east sides of the southern abutment. There is a retaining wall on the west side of the southern abutment that supports a parking lot for Pescadero State Beach. On the west side of the bridge there is an approximately five-foot-wide pedestrian path.

There are three different railings on the existing facility. The westernmost railing is a Type 26 pedestrian barrier, which acts as fall protection for the pedestrian path. A Type 27 bike barrier separates the pedestrian path and the southbound shoulder. The easternmost railing is a Type 25 concrete barrier which is adjacent to the northbound shoulder. In addition to railings on the bridge, the transitional railing on both the north and south ends of the bridge is comprised of metal beam guardrail.

Caltrans has explored five total Alternatives for the Project; however, three Alternatives were eliminated from further consideration during an earlier phase of Project development. Alternatives 1 and 2 were eliminated because they proposed railing types that are now outdated. Alternative 3 was eliminated because the Type 90 railing proposed would be visually inconsistent with the Project’s surroundings, and the railing was declared obsolete by the Caltrans July 2019 memo from the Manual for Assessing Safety Hardware.

The current Project Alternatives being evaluated are Alternative 4 (Build Alternative) and the No-build Alternative which is the fifth Alternative.

2.1.1 Bridge Damage

Surveys from Caltrans Structure Maintenance and Investigations – North have revealed spalls and patches of delamination on the bridge deck, portions of the bridge structure, joint seals, and railings. A spall is an area of concrete where water has entered the surface of the concrete and weakened the integrity of the material. This causes the surface of the concrete to become brittle and flake, peel, or pop out. An area of delamination is generally caused by water damage and is characterized by concrete that peels or falls off the structure layer by layer.

In areas of the three different bridge railings, portions of rebar have been exposed by the spalls and delamination of the concrete. Rebar is defined as bars made of steel that are used to reinforce concrete structures. When rebar is exposed to marine environments, rust forms quickly, weakening these reinforcing elements.

2.2 Build Alternative – Proposed Project

Under the Build Alternative being evaluated, Caltrans proposes to remove and replace the existing concrete barriers on the bridge, the approach slabs, joint seals, tops of the wingwalls, and rusted railings. All barriers and railings would be replaced with the new design standard. Caltrans would maintain the 5-foot wide pedestrian sidewalk on the west side of the bridge throughout construction.

2.2.1 Bridge Rail Work

Caltrans would replace the existing Type 27 bike barrier and the Type 25 concrete barrier with standard Type 85 barriers. This barrier type is made of concrete reinforced with rebar and was selected because it meets the requirements of the Manual for Assessing Safety Hardware and its design is more transparent than other options, minimizing its visual intrusion with the Project's surroundings.

The Project would include replacing the existing modified Type 26 pedestrian barrier with a forty-two-inch-tall, picket pedestrian rail. The pedestrian rail would be made of galvanized steel that has been treated with a matte finish to reduce glare.

2.2.2 Replacement of Approach Slabs

Approach slabs are where the highway prism ends, and the bridge deck begins. The approach slabs on this bridge sit above the open-ended RC abutments and are each

approximately 775 square feet in size. Caltrans proposes to replace the damaged approach slabs with a standard Type R approach slab, which would involve minor excavation, resealing of the joints, and placement of a carbon fiber reinforced polymer strip near each slab.

2.2.3 Metal Beam Guardrail

On the approach to both the north and south ends of the bridge, there is existing metal beam guardrail (MBGR). The existing MBGR would be upgraded to Midwest guardrail system (MGS) which is the standard guardrail system currently used by Caltrans. Installing the MGS would involve soil auguring to an approximate depth of three feet for the new wooden posts.

2.2.4 Right-of-Way Requirements

The Project would occur completely within Caltrans' right of way. No temporary easements or permanent acquisitions would be needed to construct the Project.

2.3 Construction Methodology, Schedule, and Equipment

The details described in this section represent the most likely procedure for the construction of the Project. Construction procedures would be better defined during the next phase of the Project when the design is completed and coordination with regulatory agencies is conducted. Ultimately some details of Project construction would be left to the discretion of the contractor who is awarded the Project.

2.3.1 Staged Construction and Traffic Management

The Project would be constructed in two stages. The first stage would involve removal and replacement of the eastern railing with controlled one-way reversing traffic shifted to the west (southbound lane). In the second stage, traffic would be shifted to the east (northbound lane) and the western railings would be removed and replaced.

Traffic would be separated from construction in both stages by a temporary K-rail. K-rails are portable concrete barriers that provide safety for both workers and the travelling public. Caltrans intends to use one-way reversing traffic control with signage and flaggers at both ends of the bridge. During the later construction activities, both directions of traffic may be opened.

2.3.2 Methodology

At the beginning of each stage, traffic on the bridge would be shifted either west or east away from the work area. Then K-rail would be installed or repositioned to provide protection for construction workers from active traffic.

After traffic is shifted, the next order of work for both stages would be to install a temporary containment platform along the entire length of the bridge (approximately 380 feet). Examples of containment platforms are shown in Figure 2-1. The containment platform would be used as fall-protection for workers as well as containment for debris. Debris generated from this Project would include concrete material and water from saw-cutting blades. The containment platform would prevent the smaller items and waste water from entering Pescadero Creek. The containment platform would be supported by deck overhang brackets, which would need to be installed throughout the span of the bridge and the length of the wingwalls. The brackets would be installed using an under-bridge inspection and utility truck, essentially a flatbed truck with a long, flexible mechanical arm connected to a basket for carrying construction personnel (see Figure 2-2). A worker in the basket would anchor the brackets into the bridge concrete using hand tools. After installing the containment platform, the existing bridge rails would be demolished.

The existing rails would be sawcut horizontally and removed. Jackhammers and excavators would break the barriers down into manageable pieces that would be loaded onto a truck and taken offsite. The barriers on the wingwalls would also be demolished. To remove the wingwall barriers, the top of the wingwalls would be sawcut. After the barriers are removed, they would be replaced.

Installing the new Type 85 barriers and the picket pedestrian rail would involve drilling and bonding dowels into the existing bridge deck overhang and wingwalls to anchor reinforcement bars. The reinforcement bars would be bonded to the new carbon fiber reinforced polymer strip. After reinforcement bars are placed, concrete would need to be poured for the Type 85 barriers. Wooden forms would be constructed around the reinforcement bars to provide a structure in which to pour the concrete. After the concrete has been poured and has hardened, the forms would be removed. The bridge deck would then be refinished within one foot of the new barriers throughout the length of the bridge.

The approach slabs would be demolished and removed using jackhammers and front loaders. Replacing the approach slabs would require approximately three inches of

excavation beneath the existing slabs, since the new standard slabs are thicker. The new slabs would be casted in place, and then workers would reseal the joints between the slabs and the bridge deck.

Figure 2-1 **Containment Platform Examples**



Figure 2-2 Example of an Under Bridge Inspection and Utility Truck



2.3.3 Schedule

Construction is anticipated to begin in 2023 and take a total of 120 working days, including 30 days of nightshift work, to complete.

2.3.4 Bicycle and Pedestrian Access Options

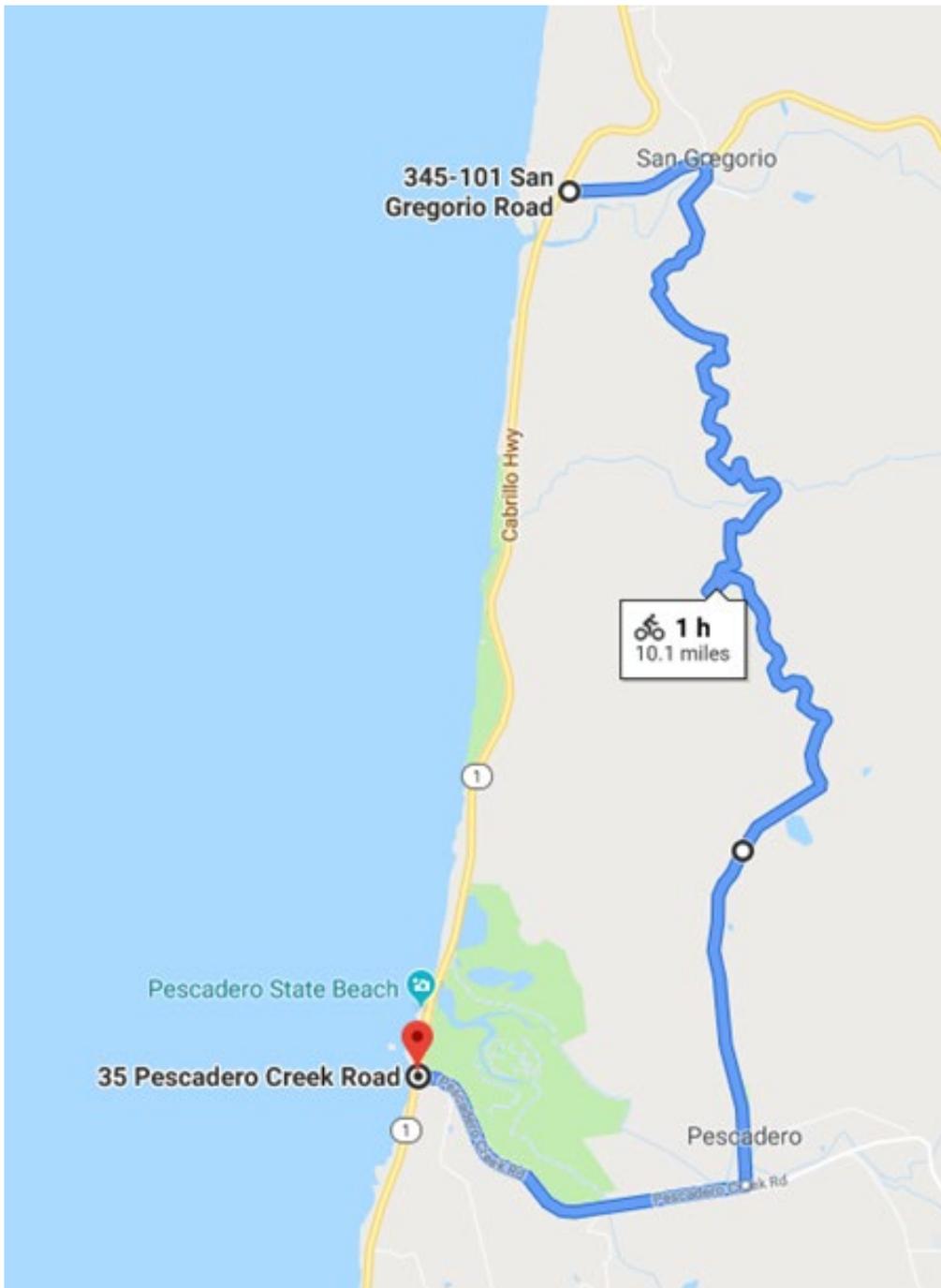
During construction, access to the bridge for cyclists and pedestrians would be maintained. This would include maintenance of a five-foot-wide path for pedestrians as part of traffic management. During the first stage, when the eastern rails are being replaced, the existing five-foot-wide path will be maintained. During the second stage, a five-foot-wide temporary pedestrian path would be delineated using K-rail and the newly installed eastern Type 85 barrier. After construction, access for non-motorized traffic would be returned to the existing configuration.

During construction, cyclists would be given two options to move through the Project limits. In the first option, cyclists could dismount and walk their bicycles, joining pedestrians on the five-foot-wide pedestrian path. Appropriate signage would be placed at the ends of the bridge (within the Project limits) advising cyclists to dismount and

walk with pedestrians. In the second option, an alternative route would be advertised with signage for cyclists who do not wish to dismount and walk their bikes. When headed southbound, the alternative route would begin at the intersection of SR 1 and La Honda Road (SR 84) where signs would advise cyclists to turn left onto La Honda. Cyclists would continue east on La Honda Road for approximately 0.8 mile before turning right onto Stage Road. The alternative route would continue on Stage Road for approximately 7.3 miles before turning onto Pescadero Creek Road. After 2 miles on Pescadero Creek Road, Cyclists would return to SR 1 with a left turn. When travelling northbound, the route would be reversed. Normally, travelling on SR 1 between La Honda Road and Pescadero Creek Road is approximately 4.6 miles. This detour would be approximately 10.1 miles and would add an additional 5.5 miles to the normal route. Mapping of the alternative route is provided in Figure 2-3.

After construction, bicycle access would be returned to the existing condition.

Figure 2-3 Alternative Bicycle Route



2.3.5 Equipment

Construction equipment would include, but not be limited to: an under-bridge inspection and utility truck, back hoes, excavators, cranes, paving machines, dump trucks, jack hammers, saw cutters, generators, vacuums, water trucks, and street sweepers.

Construction equipment and materials would be stored at the existing maintenance vehicle parking area near the bridge at PM 13.9, within Caltrans' right of way.

2.3.6 Impacts to Vegetation

The Project's activities would not have impacts to vegetation. The majority of the Project would be located on the Pescadero Creek Bridge structure, with the exception of staging and guardrail work. Staging would occur on paved areas only and would not have any impact on vegetation, while guardrail upgrades would take place where transitional MBGR guardrail already exists.

2.4 Project Features

The Project contains several standardized Project components which are employed on most, if not all, of Caltrans projects and were not developed in response to any specific environmental impact resulting from the Project. These components are referenced as Project Features in Chapter 3 as they pertain to different environmental resources, and are separated out from AMMs and Mitigation Measures, which directly relate to the impacts resulting from the Project.

Table 2-1 lists the Project Features that would be implemented by Caltrans to reduce or avoid potential impacts to the human and natural environment.

Table 2-1 Project Feature Summary

Resource Area	Project Feature Reference	Project Feature
Air Quality	Feature AQ-1	Control Measures for Construction Emissions of Fugitive Dust. Dust control measures would be implemented to minimize airborne dust and soil particles generated from graded areas. For disturbed soil areas, the use of an organic tackifier to control dust emissions would be included in the construction contract. Watering guidelines would be established by the contractor and approved by the Caltrans resident engineer. Any material stockpiles would be watered, sprayed with tackifier, or covered to minimize dust production and wind erosion.
Air Quality	Feature AQ-2	Air Pollution Control. Caltrans Standard Specifications Section 14-9.02, Air Pollution Control, requires contractors to follow all air pollution control rules, regulations, ordinances, and statutes.

Resource Area	Project Feature Reference	Project Feature
Biological Resources	Feature BIO-1	Worker Environmental Training: Construction personnel will attend a mandatory environmental education program delivered by a qualified Caltrans biologist prior to taking part in site construction. The program will focus on the conservation measures that are relevant to an employee's personal responsibilities and will include an explanation as how to best avoid take of California red-legged frog and San Francisco garter snake. At a minimum, the training will include a description of species; how they might be encountered within the project area; their status and protection. A fact sheet conveying this information will be prepared and distributed to all construction and project personnel. Distributed materials will include cards with distinctive photographs of the California red-legged frog and San Francisco garter snake, compliance reminders, and relevant contact information. Documentation of the training, including sign-in sheets, will be kept on file and made available to regulatory agencies upon request.
Biological Resources	Feature BIO-2	Proper Use of Erosion Control Devices. To avoid entanglement or injury of susceptible, protected biological resources, erosion control materials that use plastic or synthetic monofilament netting will not be used during the Project's construction.
Biological Resources	Feature BIO-3	Bird Protection Measures. To avoid take of migratory birds during the bird nesting season (February 1 to September 30): Agency approved biologists would conduct preconstruction nesting bird surveys no more than three days prior to construction. If an active nest is discovered, the biologists would establish an appropriate exclusion buffer around the nest. The area within the buffer would be avoided until the young are no longer dependent on the adults or the nest is no longer active. If a nesting special-status bird species is discovered, an agency approved biologist would notify the USFWS and/or CDFW for further guidance. Partially constructed and inactive nests would be removed to prevent occupation.
Biological Resources	Feature BIO-4	Vegetation Removal. Vegetation removal of any kind is prohibited from any Project related activities.
Biological Resources	Feature BIO-5	Night Lighting. Artificial lighting during nighttime hours will be minimized to the maximum extent practicable. Lighting must be directed to illuminate the immediate work area only, while minimizing spillage into adjacent areas.
Biological Resources	Feature BIO-6	Trash Control. Food and food related trash items would be secured in sealed trash containers and removed from the site at the end of each day.
Biological Resources	Feature BIO-7	Pets. Pets would be prohibited from entering the Project limits.
Biological Resources	Feature BIO-8	Firearms. Firearms would be prohibited within the Project Limits except for those carried by authorized security personnel or local, state, or federal law enforcement.

Resource Area	Project Feature Reference	Project Feature
Cultural Resources	Feature CULT -1	Stop Work Upon Discovery of Cultural Materials. If cultural materials are discovered during construction, all earth-moving activities within a sixty-foot radius would be halted until a Caltrans Professionally Qualified Staff (PQS) can assess the nature and significance of the find.
Cultural Resources	Feature CULT-2	Additional Actions if Cultural Materials Contain Human Remains. If Caltrans PQS determines that cultural materials contain human remains, State Health and Safety Code Section 7050.5 states that further disturbances and activities shall stop in any area or nearby area suspected to overlie remains. Caltrans' OCRS would contact the San Mateo County Coroner. Pursuant to PRC Section 5097.98, if the remains are thought by the coroner to be Native American, the coroner would notify the Native American Heritage Commission, which would then notify the Most Likely Descendent. OCRS would work with the Most Likely Descendent on the respectful treatment and disposition of the remains. Further provisions of PRC 5097.98 are to be followed as applicable.
Greenhouse Gas Emissions	Feature GHG-1	Emissions Reduction. Caltrans Standard Specifications Section 7-1.02A and 7-1.02C, Emissions Reduction, require contractors to comply with all laws applicable to the Project and to certify they are aware of and would comply with all ARB emission reduction regulations.
Hydrology and Water Quality	Feature WQ-1	<p>Water Quality BMPs: The potential for adverse effects to water quality will be avoided by implementing temporary and permanent BMPs outlined in Section 7-1.01 G of the Caltrans Standard Specifications. Caltrans erosion control BMPs will be used to minimize any wind or water related erosion. The State Water Resources Control Board has issued a National Pollutant Discharge Elimination System Statewide Storm Water Permit to Caltrans to regulate storm water and non-storm water discharges from Caltrans facilities. A Water Pollution Control Plan would be developed for the Project, as one is required for all projects that have less than one acre of soil disturbance.</p> <p>Protective measures will be included in the contract, including, at a minimum:</p> <ul style="list-style-type: none"> • No discharge of pollutants from vehicle and equipment cleaning are allowed into the storm drain or water courses. • Vehicle and equipment fueling and maintenance operations must be 50 feet away from water courses. • Concrete wastes are collected in washouts and water from curing operations is collected and disposed of and not allowed into water courses. • Dust control will be implemented, including use of water trucks and tackifiers to control dust in excavation and fill areas, rocking temporary access roads entrances and exits, and covering temporary stockpiles when weather conditions require.

Resource Area	Project Feature Reference	Project Feature
Tribal Cultural Resources	Feature TRIBE-1	Protect Discovered Tribal Cultural Resources with Temporary Fencing: If any tribal cultural resources are found during construction, a Caltrans PQS archaeologist shall determine whether the resources can be avoided by the Project. If the resources can be avoided, the resources would be delineated on the ground with temporary fencing and avoided by construction. No construction-related activities or staging are permitted within these areas.

2.5 No Build Alternative

The No Build Alternative would not address the purpose and need of the Project. If no action was taken, continual degradation of the bridge rails and deck would affect the structural integrity of SR 1 and ultimately the safety of the travelling public.

2.6 Permits and Approvals Needed

Agency	Permit	Permit Status
California Coastal Commission and San Mateo County	Consolidated Coastal Development Permit	Application submittal anticipated during next Project phase.

Figure 2-4 Project Footprint

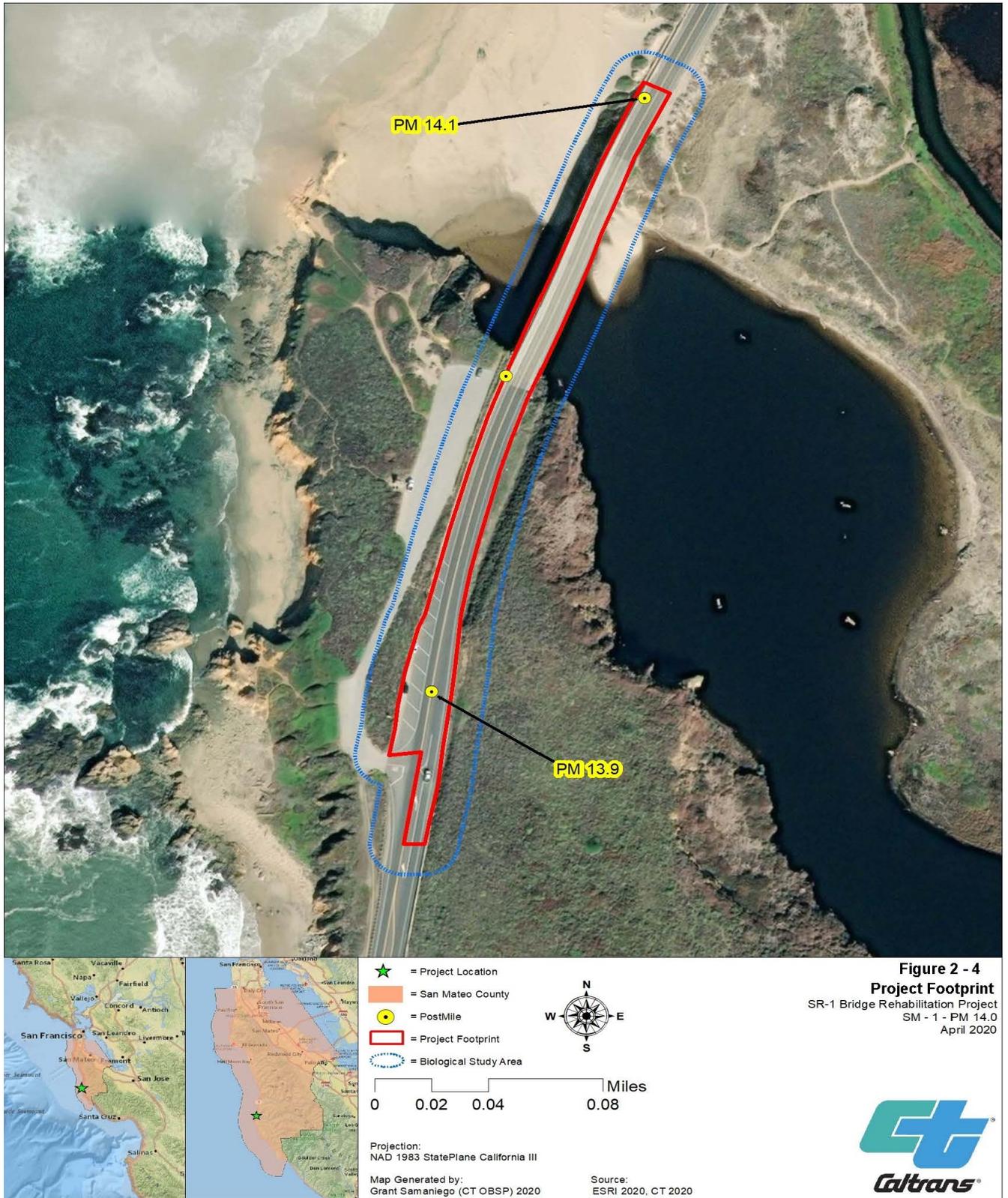
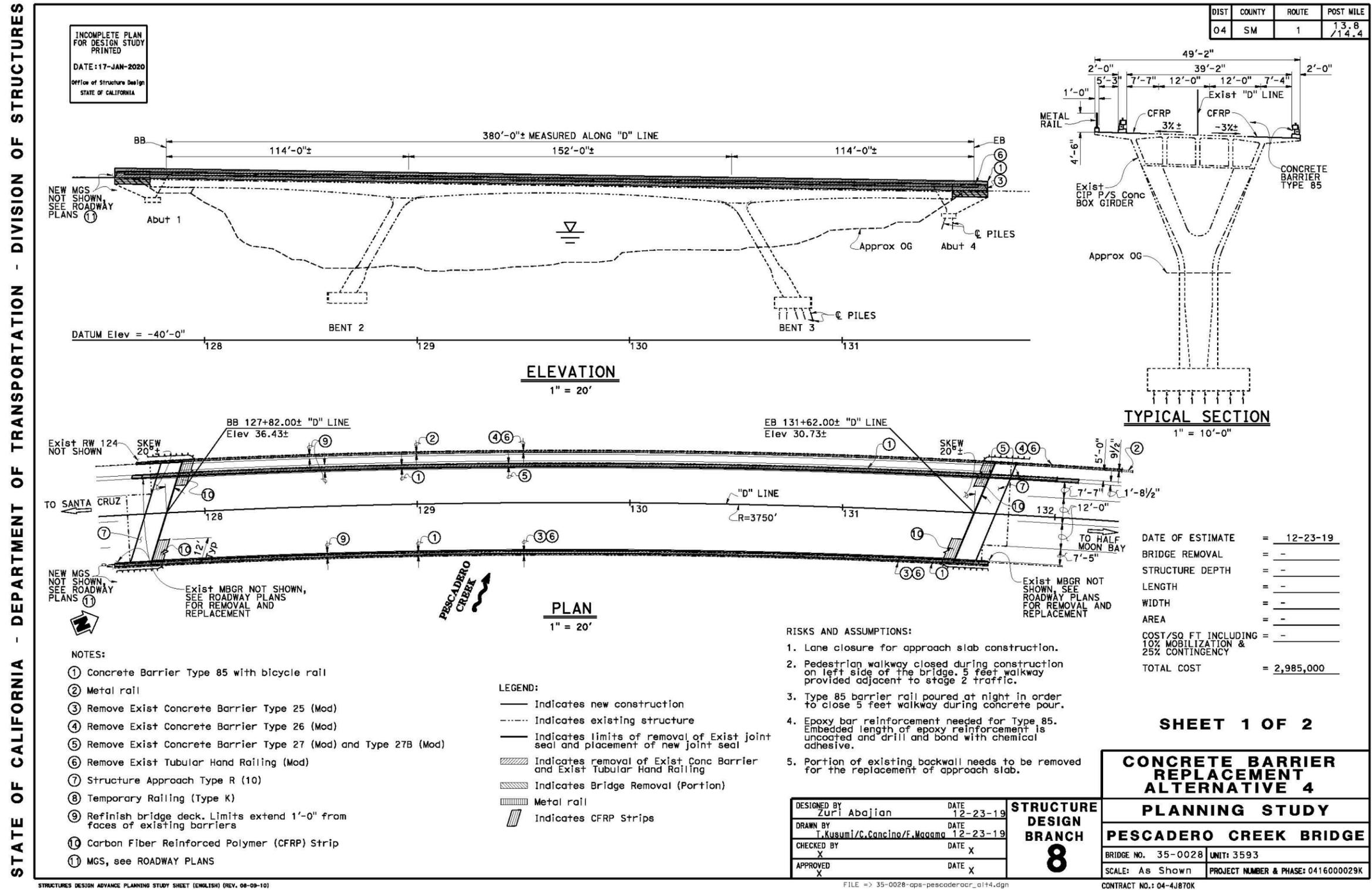


Figure 2-5 Preliminary Design Plans



STRUCTURES DESIGN ADVANCE PLANNING STUDY SHEET (ENGLISH) (REV. 08-09-10)

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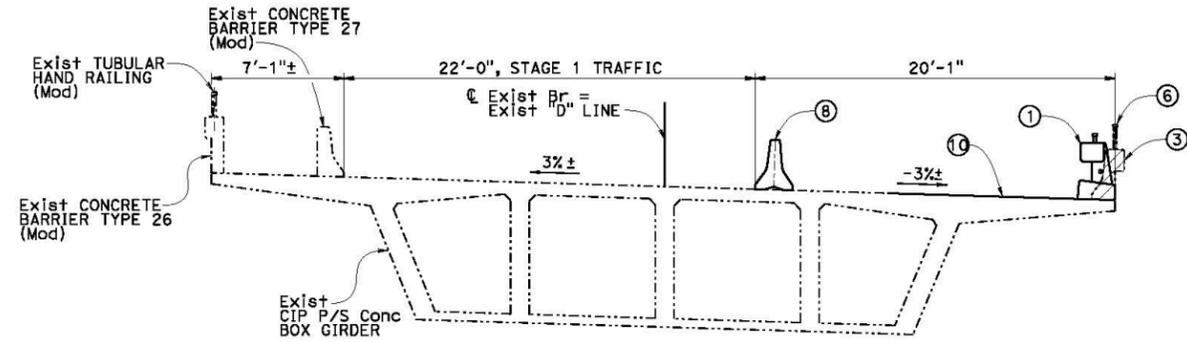
CONTRACT NO.: 04-4J870K

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - DIVISION OF STRUCTURES

INCOMPLETE PLAN
FOR DESIGN STUDY
PRINTED
DATE: 17-JAN-2020
Office of Structure Design
STATE OF CALIFORNIA

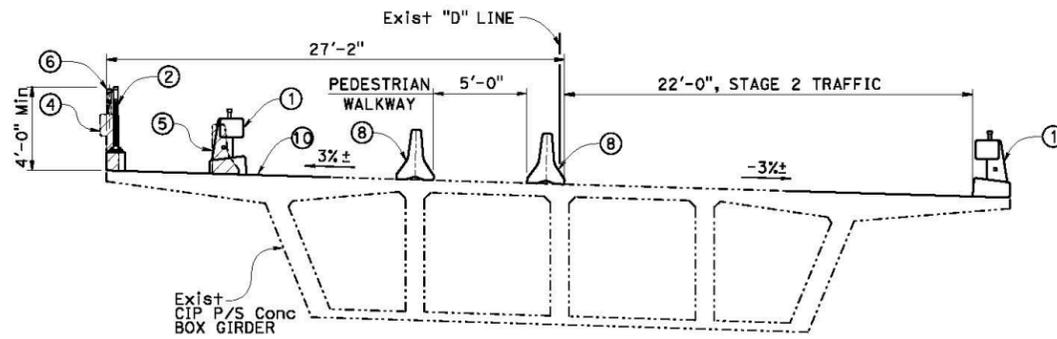
DIST	COUNTY	ROUTE	POST MILE
04	SM	1	13.8 /14.4

LEGEND:
 ——— Indicates new construction
 - - - - - Indicates existing structure
 [Hatched Box] Indicates removal of Exist Conc Barrier and Exist Tubular Hand Railing



STAGE 1 TRAFFIC AND CONSTRUCTION

1/4" = 1'-0"



STAGE 2 TRAFFIC AND CONSTRUCTION

1/4" = 1'-0"

NOTES:

- ① Concrete Barrier Type 85 with bicycle rail
- ② Metal rail
- ③ Remove Exist Concrete Barrier Type 25 (Mod)
- ④ Remove Exist Concrete Barrier Type 26 (Mod)
- ⑤ Remove Exist Concrete Barrier Type 27 (Mod) and Type 27B (Mod)
- ⑥ Remove Exist Tubular Hand Railing (Mod)
- ⑧ Temporary Railing (Type K)
- ⑩ Carbon Fiber Reinforced Polymer (CFRP) Strip

SHEET 2 OF 2

DESIGNED BY Zuri Abajian	DATE 12-23-19
DRAWN BY T. Kusumi/C. Cancio/F. Magama	DATE 12-23-19
CHECKED BY X	DATE X
APPROVED X	DATE X

STRUCTURE
DESIGN
BRANCH
8

CONCRETE BARRIER REPLACEMENT ALTERNATIVE 4	
PLANNING STUDY	
PESCADERO CREEK BRIDGE	
BRIDGE NO. 35-0028	UNIT: 3593
SCALE: As Shown	PROJECT NUMBER & PHASE: 0416000029K

STRUCTURES DESIGN ADVANCE PLANNING STUDY SHEET (ENGLISH) (REV. 08-09-10)

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Chapter 3 California Environmental Quality Act Evaluation

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

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.

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

Determination

On the basis of 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: 	Date: August 26, 2020
	Printed Name: Lindsay Vivian	

CEQA Environmental Checklist

This checklist (presented at the beginning of each resource section below in the form of a table listing the pertinent questions applicable to the resource and four columns where the degree of impact is indicated) identifies physical, biological, social, and economic factors that might be affected by the Project. In many cases, technical studies performed in connection with the Project indicate that there are no impacts to a particular resource. A “no impact” answer in the last column reflects this determination. The words “significant” and “significance” used throughout the checklist are related to CEQA impacts. The questions in this form are intended to encourage the thoughtful assessment of impacts and do not represent thresholds of significance.

As noted previously, Project Features, which may 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 are considered prior to any significance determinations. A list of the proposed Project’s Project Features and AMMs can be reviewed in Appendix B.

Aesthetics

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?			X	
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				X
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from 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?			X	
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?			X	

The Caltrans Office of Landscape Architecture prepared the “Visual Impact Assessment: Bridge Rail Replacement” (VIA; Caltrans 2020a) for the Project. The findings of the VIA are analyzed as they apply to CEQA in this section.

The Project corridor is defined as the land that is visible from, adjacent to, and outside the highway right of way. The Project corridor is determined by topography, vegetation, and viewing distance. Within the Project corridor, the landscape is characterized by rolling hills in a coastal setting and by predominately undeveloped scenery with occasional agricultural and commercial developments. In addition, the highway is straddled by Pescadero State Beach to the east and west of the right of way. One of the beach’s main attractions are coastal views.

For pedestrians, motorists, and cyclists on SR 1, the existing, dilapidated bridge railings are visual obstructions that block and detract from the views in the Project area.

In Figures 3-1, 3-2, 3-3, and 3-4 visual simulations compare the existing condition to the proposed railings.

Figure 3-1 Close-up View Towards Ocean From Eye Level Southbound Edge of Travelled Way – Existing Condition



Figure 3-2 Close-up View Towards Ocean From Eye Level, Southbound Edge of Travelled Way – Barrier Type 85



Figure 3-3 View Looking South From Eye Level, Southbound Lane – Existing Condition

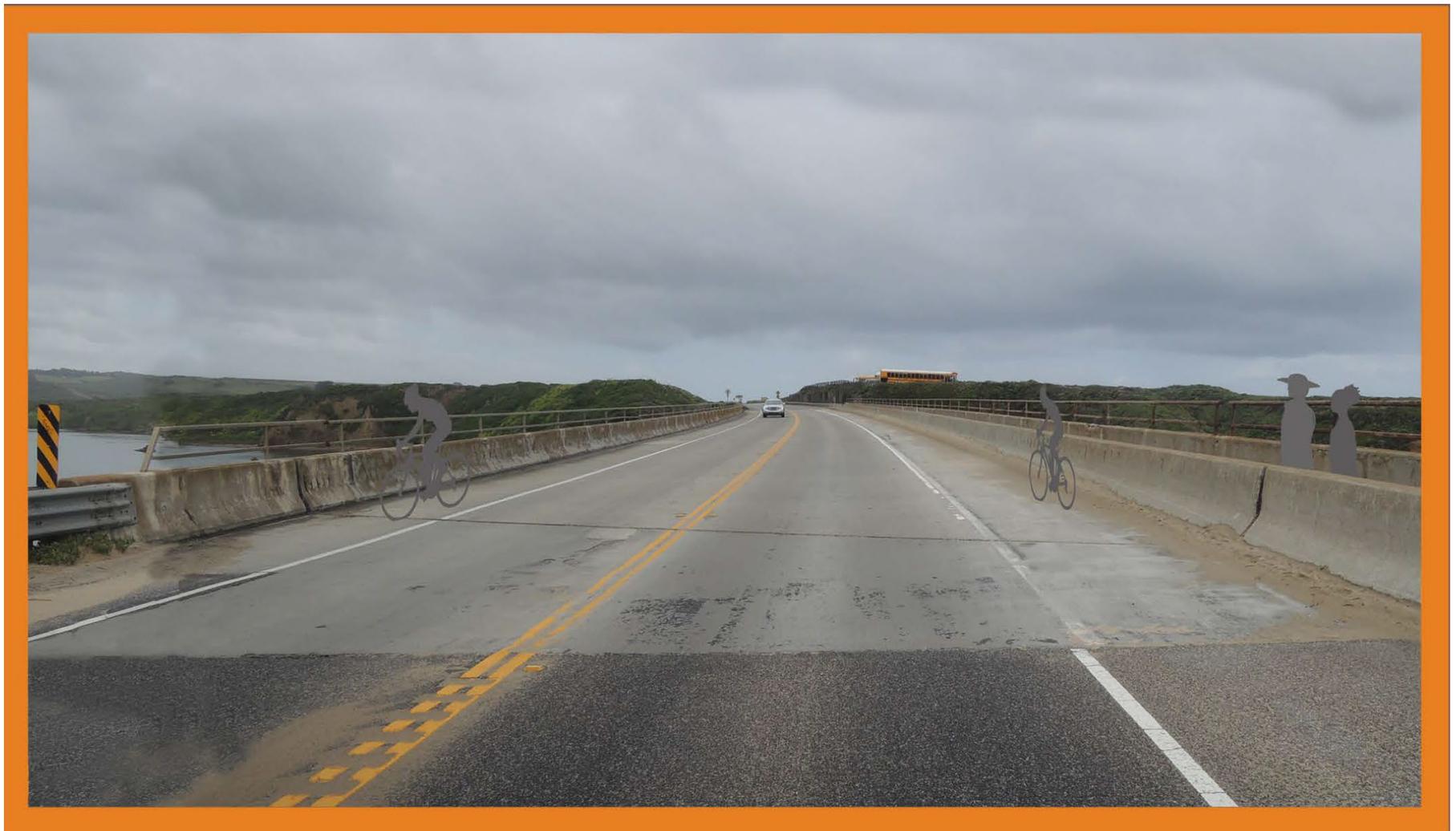


Figure 3-4 View South From Eye Level, Southbound Lane – Barrier Type 85



a) Less Than Significant Impact

The permanent changes most likely to be noticed by the travelling public would include the new railing types on the bridge and upgraded transitional guardrail. In addition to the permanent changes, the traveling public would be exposed to temporary visual impacts due to construction activities, containment platforms, equipment storage, and one-way traffic control.

Permanent changes to the bridge railings and transitional guardrail are expected to have a positive effect on scenic vistas. The current solid concrete barrier blocks ocean and beach views while the proposed barrier would be of similar dimensions but more transparent than the existing barrier and would offer improved views to pedestrians, cyclists, and motorists.

Temporary impacts during construction would have a negative impact to the scenic vistas offered in the Project corridor but would be less than significant due to their limited duration.

b) No Impact

The Project occurs along a scenic stretch of SR 1 that is an Officially Designated State Scenic Highway. The area throughout the Project corridor is of extremely high scenic quality, and it includes highly scenic views of the Pacific Ocean, the coastline, and the surrounding hills. There would be no damage to scenic resources visible from the highway as part of the Project because the permanent changes are anticipated to improve overall visual conditions. There would be no impact.

c) Less Than Significant Impact

Permanent changes to the bridge railings and transitional guardrail are expected to have a positive effect on public views of the Project site and its surroundings. The current solid concrete barrier blocks ocean and beach views. The proposed barrier would be of similar dimensions as the existing rail, and it would be more transparent than the existing barrier and would offer improved views to pedestrians, cyclists, and motorists.

Temporary impacts during construction would have a negative impact to the public views of the Project site and its surroundings but would be less than significant due to their limited duration.

d) Less Than Significant Impact

The new barriers and transition railing would have metal components that could be a new source of glare. The metal components of the barrier and railings would be treated with a matte treatment to reduce glare. Project construction would also require 30 days of night work. Due to the short duration of the nightwork, the impacts are expected to be minimal. Project Feature BIO-5 would also reduce visual impacts from lighting during nightwork. The impact from any new sources of glare and nightwork would be less than significant.

Avoidance and Minimization Measures

AMM AES-1: Transparent Railing: Caltrans would incorporate aesthetically pleasing high transparent bridge rails which would be instrumental in minimizing visual impacts.

AMM AES-2: Erosion Control: Post construction, all disturbed ground areas would be restored to pre-construction conditions and treated with erosion control.

Agriculture and Forest Resources

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

a,b,c,d) No Impact

The Project would take place completely within Caltrans' right of way, which does not consist of any farmland. Therefore, there would be no impact to agriculture and forest resources as a result of the Project. The Project would not include the conversion of farmland to non-agricultural use. The Project footprint does not contain land zoned for agricultural uses, land under the Williamson Act, or land zoned as forest land, timber land, or timberland production. 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 non-agricultural use or forest land to non-forest use. There would be no impact to agriculture and forest resources.

Air Quality

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

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

The Project is exempt from conformity determination per 40 CRF 93.126 – Safety: widening narrow pavements or reconstructing bridges (no additional travel lanes). This Project would not conflict with or obstruct implementation of the applicable air quality plan, result in a cumulatively considerable net increase in any criteria pollutant, expose sensitive receptors to substantial pollutant concentrations, or result in other emissions that adversely affect a substantial number of people. Construction air pollutants are expected to be minimal to negligible. Potential impacts to air quality, including violation of air quality standards, criteria pollutants, exposure of sensitive receptors to pollutants and creation of odors, are not anticipated based on the scope of the proposed Project. Project Features AQ-1 and AQ-2 would help ensure that there are no impacts from fugitive dust.

Biological Resources

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service, or NOAA Fisheries?				X
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?				X
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				X
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?				X
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				X
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				X

The Office of Biological Sciences and Permits prepared a Natural Environmental Study Minimal Impacts (NESMI; Caltrans 2020b) for the Project. The following text summarizes and analyzes the information presented in the NES-MI.

The Biological Study Area (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 a 50-foot buffer around the Project footprint and/or the edge of pavement. The BSA for this Project is approximately 4.75 acres and is depicted in Figure 2-4. The BSA does not include Pescadero Creek due to the containment platform which would prevent impacts to the waterway.

The BSA lies in a predominately undeveloped coastal setting of the larger San Francisco Bay Area Peninsula region. It is surrounded by public lands on all sides with Pescadero State Beach comprising the western boundary and Pescadero Marsh Natural Preserve on the eastern edge of the BSA.

A regional list of special-status wildlife and plant species was compiled by querying databases from the U.S Fish and Wildlife Service (USFWS; USFWS 2019a), California Native Plant Society (CNPS; CNPS 2020), California Natural Diversity Database (CNDDDB; CDFW 2019), and National Wetlands Inventory (USFWS 2019b). Each special-status wildlife and plant species on these regional lists was evaluated to determine its potential to occur within the Project's BSA. The NES-MI summarizes the special-status plant and animal species with the potential to occur within the BSA and shows the CNDDDB special-status plant and animal species occurrences within five miles of the BSA.

Various studies were conducted in the preparation of this NES-MI, including:

- Biological reconnaissance-level survey and wildlife habitat surveys
- Rare plant surveys

a) No Impact

SPECIAL-STATUS PLANT SPECIES

Special-status plants are considered by scientists and regulatory agencies to be sufficiently rare to warrant protection. The California Native Plant Society (CNPS) provides rankings to all plant species to classify their rareness. Environmental laws such as the Federal Endangered Species Act (FESA) and the California Endangered Species Act (CESA) provide protection to these species. Habitat within the BSA provides some potential for 3 special-status species to occur: perennial goldfields

(*Lasthenia californica* spp. *macrantha*), coastal marsh milkvetch (*Astragalus pycnostachyus* var. *pycnostachyus*), and rose leptosiphon (*Leptosiphon rosaceus*). No individual plants were observed during the focused rare plant surveys conducted between August 2019 and May 2020. Caltrans will continue rare plant surveys leading up to construction to ensure that dormant life stages of protected plant species are not present. In addition, the Project description does not require the removal or clearing of vegetation. This Project would not impact any special-status plant species.

SPECIAL-STATUS WILDLIFE SPECIES

Special-status wildlife species, like special-status plants, are determined to be sufficiently rare to warrant protection by environmental laws and regulatory agencies. There are several species that could exist near the Project, but with the implementation of the containment platform described in Chapter 2, impacts to special-status wildlife species that have the potential to aquatically disperse, via Pescadero Creek, through the Project vicinity would be avoided. Both the California red-legged frog (*Rana draytonii*; CRLF) and the San Francisco garter snake (*Thamnophis sirtalis* ssp. *Tetrataenia*; SFGS) have habitat within the BSA and have the potential to disperse through the construction site. However, the Project would not result in impacts to species habitat.

California Red-legged Frog

The CRLF is federally listed as threatened species under FESA. Historical records indicate that CRLF populations have occupied several areas in and around the BSA. The BSA along the eastern portion of SR 1 contains potential upland dispersal habitat which could be utilized by CRLF to travel between breeding pools.

The Project's activities would be limited to paved and compacted surfaces and would not include the removal of any potential upland dispersal habitat for the CRLF or have permanent effects on CRLF. Any potential impacts to the CRLF would be limited to temporary direct and indirect impacts from construction activities.

Direct impacts could result from the use of heavy equipment, night lighting, removal of soil, redistribution of soils, grading, dust, and noise. Removal, redistribution, and grading of soils are only anticipated to occur beneath the approach slabs and would not result in the removal of vegetation. Indirect effects could include increased erosion, sedimentation, or changes in hydrology, any of which could occur during or post-construction. Direct and indirect impacts would be limited by Project Features and

avoidance and minimization measures. Any potential impacts would be limited to the point where they would be discountable, and there would be no impact to CRLF.

San Francisco Garter Snake

The SFGS is listed as endangered under FESA and CESA. Previous scientific records indicate that the species historically occupied several fragmented parcels in and around the BSA.

The Project's activities would be limited to paved and compacted surfaces and would not remove any potential upland dispersal habitat for SFGS or have permanent impacts on SFGS. Any potential impacts to SFGS would be limited to temporary direct and indirect impacts from construction activities.

Direct impacts could result from the use of heavy equipment, night lighting, removal of soil, redistribution of soils, grading, dust, and noise. Removal, redistribution, and grading of soils are only anticipated to occur beneath the approach slabs and would not result in the removal of vegetation. Indirect effects could include increased erosion, sedimentation, or changes in hydrology, any of which could occur during or post-construction. Direct and indirect impacts would be limited by Project Features and avoidance and minimization measures. Any potential impacts would be limited to the point where they would be discountable, and there would be no impact to SFGS.

b), c) No Impact

Project activities would be restricted to paved or highly compacted surfaces, and the containment platform would prevent debris from entering Pescadero Creek. There would be no impact to sensitive natural communities or wetlands within the BSA.

d) No Impact

SR 1 currently serves as a major barrier for wildlife along the Project corridor. The high traffic volumes of the highway deter and prevent the crossing of wildlife throughout the Project limits. Caltrans would not install any new barriers that would affect wildlife crossings or make the existing situation worse. The Project would have no impact on the movement of native resident or migratory fish or wildlife.

e) No Impact

The Project would not adversely affect any biological resources that are protected by any local policies or ordinances. There would be no impact.

f) No Impact

The Project limits would be confined to paved or highly compacted surfaces and would not have any impact on Habitat Conservation Plans, Natural Community Conservation Plans, or any other approved habitat conservation plan.

Avoidance and Minimization Measures

AMM BIO-1: Pre-construction Survey: Pre-construction surveys for special-status species will be conducted by a qualified Caltrans biologist(s) no more than 20 calendar days prior to any ground disturbance. These efforts will consist of walking surveys of the Project limits and, if possible, accessible adjacent areas within at least 50 feet of the Project limits. The biologist(s) will investigate potential cover sites when it is feasible and safe to do so.

AMM BIO-2: Special-Status Animal Species on Site: If a special-status animal species(s) is observed within a construction zone, construction activities within a 50-foot radius of the animal will be suspended until the animal leaves the site voluntarily or an agency-approved protocol for removal has been established.

Cultural Resources

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

Caltrans prepared a memorandum on cultural compliance for the Project titled “Office of Cultural Resource Studies (OCRS) Section 106 Review of Pescadero Creek Bridge Rails Project at Postmiles in San Mateo County, California” (Cultural Study) (Caltrans 2019f).

The cultural study was carried out in a manner consistent with Caltrans’ regulatory responsibilities under the January 2014 *First Amended Programmatic Agreement Among the Federal Highway Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, the California Department of Transportation Regarding Compliance with Section 106 of the National Historic Preservation Act, as it pertains to the Administration of the Federal-Aid Highway Program in California* (Programmatic Agreement).

a), b), and c) No Impact

The OCRS’s review consisted of a detailed search of records, maps, plans, and digital files found in Caltrans’ Cultural Resources Database, and based on the results of the review, Caltrans has determined that the Project has no potential to affect cultural resources and is exempt from further review pursuant to the Programmatic Agreement, Stipulation VII, “Screened Undertakings.” The review also determined that there are no historical resources present for the purposes of CEQA. Project Features CULT-1 and CULT-2 would help ensure there would be no impact to cultural resources.

Energy

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

a) Less Than Significant Impact

The Project would not result in a significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy. During construction, BMPs would be implemented for energy efficiency of construction equipment. During Project operation, energy consumption would be limited to routine maintenance. The impact would be less than significant

b) No Impact

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

Geology and Soils

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.				X
ii) Strong seismic ground shaking?				X
iii) Seismic-related ground failure, including liquefaction?				X
iv) Landslides?				X
b) Result in substantial soil erosion or the loss of topsoil?			X	
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?				X
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?				X
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?				X
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?				X

a(i) No Impact

The Project is approximately 2.5 miles away from the San Gregorio Fault; however, according to mapping provided by the California Department of Conservation, the Project area is not within an Earthquake Fault Zone. There would be no impact.

a(ii) No Impact

Due to the Project's proximity to the San Gregorio fault, the Project area has the potential to experience strong ground shaking. The Project would have no direct or indirect impact on the potential for ground shaking or on the public's risk for loss, injury, or death from seismic events. Caltrans would design the Project to resist ground-shaking associated with the nearby fault. There would be no impact.

a(iii) No Impact

The Project is not located in an area that is susceptible to liquefaction. This Project would not increase the risk of loss, injury, or death due to liquefaction, so there would be no impact.

a(iv) No Impact

The Project is not located in an area that is susceptible to landslides. This Project would not increase the risk of loss, injury, or death due to landslides, so there would be no impact.

b) Less Than Significant Impact

Caltrans would design the Project so that no erosion or loss of topsoil would occur as a result, either directly or indirectly, of the Project. Project Feature WQ-1 would be implemented to reduce any erosion or loss of topsoil that may occur. There would be a less than significant impact.

c) No Impact

The Project is not located in a geologic unit or soil that is unstable or that would become unstable because of the Project. Additionally, this Project would not increase the risk of on- or off-site landslides, lateral spreading, subsidence, liquification, or collapse. There would be no impact.

d), e), and f) No Impact

The Project is not located on expansive soil (as defined in Table 18-1-B of the Uniform Building Code [1994]), and there are no septic tanks, alternative wastewater disposal systems, or any other solid waste disposal facilities planned as part of the Project. Additionally, the Project is not located in an area that contains a geologic unit that is paleontologically sensitive, and Caltrans does not anticipate the discovery or destruction of any unique paleontological resources during construction. There would be no impact.

Greenhouse Gas Emissions

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

a) and b) Less Than Significant Impact

While the Project would not result in any increase in operational greenhouse gas (GHG) emissions, it is anticipated that the Project would result in GHG emissions during construction.

Operational GHG emissions are emitted through the regular daily use of the highway, and as the Project would not increase the capacity of the highway, operational emissions would not increase.

Construction GHG emissions would result from material processing, on-site construction equipment, and traffic delays due to construction. These emissions would 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.

In addition, with innovations such as longer pavement lives and changes in materials, the GHG emissions produced during construction can be offset to some degree by longer intervals between maintenance and rehabilitation activities.

The analysis focused on vehicle-emitted GHGs and CO₂ emissions, because CO₂ is the single most important GHG pollutant due to its abundance when compared with other vehicle-emitted GHGs.

Construction-related GHG emissions were calculated using the Road Construction Emissions Model, version 9.0.0, provided by the Sacramento Metropolitan Air Quality Management District. It was estimated that for a construction duration of 7 months, the

total amount of CO₂ produced during the Project's construction would be 863.20 tons. Total CO₂e emissions (CO₂, CH₄, and N₂O)¹ would be 872.01 metric tons.

All construction contracts include Caltrans Standard Specifications Section 7-1.02A and 7-1.02C, Emissions Reduction, which require contractors to comply with all laws applicable to the Project and to certify they are aware of and would comply with all California Air Resource Board (ARB) emission reduction regulations; and Section 14-9.02, Air Pollution Control, which requires contractors to comply with all air pollution control rules, regulations, ordinances, and statutes. Certain common regulations, such as equipment idling restrictions, that reduce construction vehicle emissions also help reduce GHG emissions.

The Project does not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases. With implementation of Project Features and AMM-TRANS-1: Develop and Implement a Traffic Management Plan, the impact would be less than significant.

¹ Gases are converted to CO₂e, or carbon dioxide equivalent, by multiplying their global warming potential (GWP) compared to CO₂. GWP is a measure of how much energy 1 ton of a gas will absorb over a given period of time relative to 1 ton of CO₂.

Hazards and Hazardous Materials

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

a) and b) No Impact

Caltrans Standard Specifications BMPs would be implemented to prevent spills or leaks from construction equipment and from storage of fuels, lubricants, and solvents. All aspects of the Project associated with removal, storage, transportation, and disposal of hazardous material would be done in accordance with the appropriate 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.

A bridge survey for asbestos containing materials would be conducted during the next phase of the Project to determine what special provisions would be required to limit the impact on workers and the public. There would be less than significant impacts.

c) No Impact

There are no existing or proposed schools within a quarter mile of the Project area. There would be no impact.

d) Less Than Significant Impact

Screening of environmental regulatory databases (the State Water Resources Control Board's Geotracker and the California Department of Toxic Substances Control's [DTSC's] EnviroStor) revealed no known hazardous waste sites within the Project limits. A bridge survey would be conducted to test for asbestos contained within the bridge structure during the next Project phase. There would be a less than significant impact.

e) No Impact

There are no airports or airstrips in the Project vicinity. There would be no impact.

f) Less Than Significant Impact

SR 1 is a major north-south highway for the communities near the Project location, and it is likely that SR 1 would be used as an evacuation route in the event of an emergency threatening one or more of these communities. In the event of such an emergency, Caltrans would coordinate with local officials to ensure that SR-1 remains open to emergency traffic.

g) Less Than Significant Impact

The Project is not located in lands classified as very high fire severity (CAL FIRE 2007). Caltrans proposes to construct bridge railings and guardrail made of concrete and metal

and would therefore have a limited susceptibility to fires. AMM TRANS-1 would reduce fire risk to local residents and the traveling public by limiting any possible delays to emergency services during construction; the impact would be less than significant.

Hydrology and Water Quality

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

Caltrans investigated impacts to hydrology and water quality from the proposed Project and prepared the Floodplain Encroachment Review (Caltrans 2019b) and Water Quality Study (Caltrans 2019a). This section summarizes the findings of that review.

The Project is located within the jurisdiction of the North Coast Regional Water Quality Control Board (Region 1), which is responsible for implementation and enforcement of state and federal laws and regulations concerning water quality.

This Project is within the San Mateo Hydrologic Unit, Pescadero Creek Hydrologic Area, and Hydrologic Sub-Area 202.40. The Project is within the Pescadero Creek Watershed and the Lower Pescadero Creek Subwatershed.

The receiving waterbody of the Project is Pescadero Creek which runs below the Pescadero Creek Bridge that is the focus of the Project.

a) Less Than Significant Impact

Temporary impacts to water quality during construction may include oil and grease from vehicles and construction equipment, sanitary wastes, chemicals used for equipment, concrete material, construction debris, and litter. With the implementation of Project Feature WQ-1, Project activities would not substantially degrade surface or groundwater quality or result in violations of water quality standards or waste discharge requirements. Impacts would be less than significant.

b) No Impact

The Project would not involve dewatering. There would be no impact to groundwater or the groundwater recharge rate.

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

Other than minor soil auguring for metal beam guardrail upgrades and excavation for approach and departure slab replacement, all construction activities would take place on pavement or the bridge structure. Construction activities are not anticipated to alter the drainage pattern of the Project area. There would be no impact.

c) (iv) No Impact

According to the Flood Insurance Rate Map 06081C0368F, the Pescadero Creek bridge is located in an area denoted as a regulatory floodway with a base flood elevation of fourteen feet. The lowest portion of the bridge is 31 feet.

Sea level rise has the potential to increase the frequency of flooding, damage from flooding, and the size of the floodplain area of risk. The 2018 Ocean Protection Council’s *State of California Sea-Level Rise Guidance* provides probabilistic projections for the height of sea-level rise for different areas along the California Coast. Table 13 provides the projected sea-level rise for the San Francisco Tide Gauge for the years 2030, 2050, 2070, and 2100; as follows:

YEAR (High Emissions)	Projected Sea-Level Rise (in feet) for San Francisco Tide Gauge		
	LOW RISK AVERSION (66% Probability)	MED-HIGH RISK AVERSION (0.5% Probability)	EXTREME RISK AVERSION (H++ Scenario)
2030	0.5	0.8	1.0
2050	1.1	1.9	2.7
2070	1.9	3.5	5.2
2100	3.4	6.9	10.1

According to sea level rise modeling from the National Oceanic and Atmospheric Administration (NOAA), the land around Pescadero Creek is already in a low-lying area and would be vulnerable to an increase in sea level elevations between three and four feet (see, <http://coast.noaa.gov/slr/>). The above table from the Ocean Protection Council shows this amount of sea level rise is expected to occur around the year 2070 under the Medium-High Risk Aversion scenario, and not until around 2100 in the Low Risk Aversion scenario. The H++ Scenario suggests that the sea level elevation could increase by 10.1 feet by the year 2100. Since the bridge deck is currently between 31.44 and 36.22 feet above sea level, it would remain well above sea level elevations in 2100. There would be no impact.

d) Less Than Significant

According to the Tsunami Inundation Map for Emergency Planning for the San Gregorio Quadrangle (California Emergency Management Agency 2009), the Project is in a tsunami inundation area. After the Project’s completion, there would be no risk of pollutants being released due to inundation from a tsunami. However, during construction, equipment and materials would be staged onsite, and any sudden inundation of the Project area could transport materials, tools, and equipment (including any chemicals or fuel necessary to operate the equipment) outside of the Project area where they would be considered pollutants. Due to the brief construction period and the

rarity of tsunami events, there would be a less than significant impact from any potential pollutants that could be released from inundation during construction.

e) No Impact

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.

Land Use and Planning

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Physically divide an established community?				X
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?			X	

a) No Impact

The Project location is in a rural area of San Mateo County and does not have any potential to physically divide an established community. The highway would remain open throughout construction with either two-way traffic or one-way reversing traffic control. There would be no impact.

b) Less Than Significant Impact

SR 1 within the Project limits is used as a primary access road to San Mateo County coastal areas, providing access to public parks, beaches, visitor-serving facilities, and coastal residential developments

Land uses near the Project location include the coastline of the San Mateo County, state beaches such as Pescadero State Beach and Bean Hollow State Beach, and agricultural lands. No changes in land use are anticipated for the Project area or the San Mateo Coast located near the Project.

This section of SR 1 is part of the Pacific Coast Bicycle Route and has segments of the California Coastal Trail (CCT) within and nearby the Project limits. Impacts to segments of the CCT are analyzed in more detail below under “Coastal Zone Management Act”.

The highway would remain open during construction with either both lanes of traffic open or one-way reversing traffic control. Potential lane closures and existing pull-out areas would be used for construction parking, staging, and stockpiling of materials. During the construction and operation phase of the Project, there would be no effect on public access, tourism and visitor-serving facilities, or agricultural lands.

Consistency with State, Regional, and Local Plans and Programs

State Scenic Highway Program

From the southern limits of the City of Half Moon Bay to the Santa Cruz County line, SR 1 in San Mateo County is an officially designated State Scenic Highway. This means that the California State Legislature marked the state route as eligible due to its outstanding scenic qualities, and local governments with jurisdiction over the land have adopted a “scenic corridor protection program” that has been approved by Caltrans. The scenic corridor protection program limits adjacent development and other land uses.

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

Coastal Zone Management Act

The Project lies within the California Coastal Zone and resources within this zone are protected by the Coastal Zone Management Act of 1972 (CZMA). States with an approved coastal management plan are able to review federal permits and activities to determine if they are consistent with the state’s management plan.

California has developed a coastal zone management plan and has enacted its own law with the passing of the California Coastal Act of 1976 (CCA), to protect the coastal zone. The policies established by the CCA include the protection and expansion of public access and recreation; the protection of agricultural lands; the protection of scenic beauty; and the protection of property and life from coastal hazards. The CCC is responsible for implementation and oversight under the CCA.

The CCA delegates power to local governments to enact their own local coastal programs (LCPs); in this case, the San Mateo County LCP (San Mateo County 2013; SMLCP). The State-certified LCP includes all LCP policies, with amendments approved through August 8, 2012. The SMLCP requires that planning projects located within the Coastal Zone be designed to comply with these requirements.

The Project is within the permitting jurisdiction of both San Mateo County and the CCC and would require individual permits from San Mateo County and the CCC, or a consolidated CDP with agency approval.

Several different trails that are part of the CCT run through the Project limits or are nearby the Project. The CCT within the Project limits runs from the southern limits of the Project, along SR 1, over the Pescadero Creek Bridge using the five-foot pedestrian path, and then onto the beach using a beach access stairway just north of the bridge. Other segments of the CCT are the nearby North Pond Trail and the Sequoia Audubon trail, which connect to SR 1 north of the Project limits and run east into inland areas of Pescadero State Beach. This Project would not adversely impact the CCT because a five-foot wide pedestrian path along the bridge would be maintained throughout construction. Pedestrians would be free to use this path to access the beach and the remainder of the CCT.

The policies of the CCA (PRC Division 20) give the highest priority to the preservation and protection of prime agricultural land and timber lands. The next highest priorities are public recreation and visitor serving facilities.

Key provisions of the CCA and San Mateo LCP are provided below along with an evaluation of permitting activities of the Project (See Tables 3-1 and 3-2).

Table 3-1 Key Provisions of the California Coastal Act

Policy Number	Subject of Policy	Coastal Zone Assessment
Section 30210	Maximum public access and recreational opportunities shall be provided.	This Project would not affect access to or recreational opportunities involving the coast. The existing five-foot-wide pedestrian path across the bridge would be maintained throughout construction. This path would also allow cyclists to dismount and walk across the bridge.
Section 30211	Development shall not interfere with public access to the sea.	Development would not interfere with the public's access to the coast. In addition, Caltrans would preserve the public's access to coastal resources by restoring and maintaining the structural integrity of SR 1.
Section 30212	New development Projects shall provide for public access to the shoreline and along the coast.	Access to the coast already exists near the Project, and this Project would not affect this access.
Section 30252	Public Access	The public's access to coastal resources would be preserved as described above. The CCT would not be affected by the Project.
Section 30231	Biological activity; water quality	With the proposed Project Features and avoidance and minimization measures combined with the implementation of the containment platform, this Project would not have any impact on biological activity. Caltrans would implement Project Feature WQ-1 to reduce any potential impact to water quality from the Project.
Section 30233	Diking, filling, dredging of wetlands	Caltrans would conduct the Project entirely from the highway prism and bridge deck. No wetlands would be impacted.
Section 30235	Construction altering natural shoreline	There would be no alterations to the natural shoreline as part of this Project, the work would be confined to the highway prism and bridge deck.
Section 30240	Environmentally Sensitive Habitat Areas	There would be no impact to ESHAs because the Project would be confined to paved and highly compacted surfaces.
Section 30241-30242	Agricultural land	No Prime Farmland or lands under a Williamson Act contract are present within the Project footprint.
Section 30244	Archaeological/Paleontological resources	There would be no impact to any archaeological or paleontological resources as part of the Project.

Policy Number	Subject of Policy	Coastal Zone Assessment
Section 30251	Scenic and visual qualities	During construction, activities would have a temporary negative impact on scenic and visual qualities within the Project area. However, the new bridge railings are designed to be more transparent than the existing railings. This would allow for motorists, cyclists, and pedestrians to have more ocean and coastal views once the Project is completed. Therefore, this Project would improve the visual and scenic qualities of the corridor. The highway's status as a Designated State Scenic Highway would not be affected by the Project. There would be a less than significant impact from temporary visual impacts during construction.
Section 30254	Public works facilities	This Project would not change the character of SR 1, and it would remain a scenic two-lane highway.
Section 30604	Coastal Development permits shall include a finding that the development is in conformity with public access and public recreation policies; housing opportunities for low and moderate income persons	Caltrans would be in conformity with public access and public recreation policies. Creating housing opportunities for low and moderate income persons is outside of the scope of this Project.
Section 30609.5	State lands between the first public road and the sea; sale or transfer	No state lands would be sold to a private entity as part of the Project.

San Mateo County General Plan 2013

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

- Goal and Objective (GO) 12.6: Plan for a transportation system that provides for the safe, efficient, and convenient movement of people and goods in and through San Mateo County.
- GO 12.11: Balance and attempt to minimize adverse environmental impacts resulting from transportation system improvements in the County.
- GO 4.1 Protection of Shorelines:
 - Protect and enhance the visual quality of and from shorelines of bodies of water including lakes, reservoirs, streams, bays, ocean, sloughs.

- Maximize the preservation of significant public ocean views.
- GO 4.3 Protection of Vegetation:
 - Minimize the removal of visually significant trees and vegetation to accommodate structural development.

There would be no impact from the Project due to inconsistencies with the San Mateo County General Plan.

Table 3-2 Key Components of the San Mateo County Local Coastal Program

Component Subject	San Mateo County Local Coastal Program Assessment
Locating and Planning New Development	The Project would be considered new development under the definition within the SMLCP. This Project would not have any effect on growth, sensitive archaeological or paleontological resources, or require the development of public services and infrastructure as a result of the Project. Caltrans would implement BMPs to minimize the Project's effect on water quality in the Project area.
Public Works	This Project involves repair of a bridge on SR 1, which is an existing public transportation facility. Highway capacity would not be increased as specified in Section 2.44b in the SMLCP. SR 1 would remain a scenic two-lane road after construction. The existing five-foot pedestrian walkway would be maintained throughout construction which would minimize any impact to the CCT. Cyclists would be allowed to dismount and cross the bridge with pedestrians or utilize a marked detour around the Project area. The new bridge rails would be designed in accordance with Caltrans standards to provide additional safety for cyclists travelling across the bridge.
Housing	The Project is located in a rural area of the SRT 1 corridor and would have no impacts to housing.
Energy	The Project does not include the construction of any oil or gas wells, onshore oil facilities, pipelines or transmission lines, or alternative energy facilities. The Project area has no public utilities.
Agriculture	The Project would be constructed within Caltrans' right of way and would not impact agricultural land or land zoned for timber harvest. This Project would not conflict with the Agriculture Component in the SMLCP.
Aquaculture	The Project would not affect aquaculture facilities or construct any new aquaculture facilities.
Sensitive habitats	There are sensitive habitats within the BSA. However, Project activities would be confined to paved or highly compacted surfaces and would not result in impacts to these habitats.
Visual Resources	This Project would result in temporary impacts to visual resources during construction. The Project is likely to enhance the view from the highway after the Project is complete, because the new railings will be more transparent than the existing railings.
Hazards	The Project is not located in a high-risk fire area or in an area that is at risk for liquefaction and severe seismic impacts. The Project is in an area that could experience tsunamis or flooding. This Project would not create features that would worsen impacts on the surrounding areas from such hazards. This Project would be consistent with this component of the San Mateo LCP.

Component Subject	San Mateo County Local Coastal Program Assessment
Shoreline Access	The Pescadero Creek Bridge is crossed frequently by pedestrians seeking shoreline access. The existing structure has a five-foot-wide pedestrian path that would be maintained throughout construction. Therefore, this Project is not anticipated to impact shoreline access.
Recreation/Visitor Serving Facilities	Adjacent to the Project area on the southwest corner of the bridge is a parking lot that is within Caltrans' right of way. This parking lot also has vault toilets that are used by visitors of Pescadero State Beach. There would be no impact to these recreation/visitor serving facilities.
Commercial Fishing/Recreational Boating	This Project would have no impact on commercial fishing or recreational boating.

Mineral Resources

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				X
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				X

a) and b) No Impact

The Project does not occur in a known mineral resource zone. Therefore, no impacts on mineral resources would result from the proposed Project.

Noise

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

a), b), and c) No Impact

The Project does not include the addition of a new traffic lane or substantially alter the alignments or increase ambient noise levels greater than established standards. Construction noise would be temporary and would be within acceptable levels for construction activity. There would be no generation of excessive ground borne vibration or ground borne noise levels. This Project is not located within the vicinity of a private airstrip or an airport land use plan. There would be no impact.

Population and Housing

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

a) and b) No Impact

This Project would not induce population growth as a result of this Project because it would not increase the capacity of SR 1, remove barriers to future growth, or increase population or housing growth (or demand for new housing, utilities, or public services). This Project would not induce substantial population growth, displace housing, or displace people; therefore, there would be no impact to population and housing.

Public Services

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

a) No Impact

The Project would not result in the substantial alteration of government facilities in the Project area, such as fire and police protection, schools, parks or other public facilities, nor trigger the need for new government facilities or alter the demand for public services. A TMP would be prepared (see AMM TRANS-1 in the Transportation Section) during the Project’s design phase. Thus police, fire, and medical services would not be affected by the Project. There would be no impact.

Recreation

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Would the Project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				X
b) Does the Project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				X

Pescadero Beach State Park and Pescadero Marsh Nature Preserve are located near the Project, both are owned and operated by the California Department of Parks and Recreation. Pescadero Beach State Park is approximately one mile of coastline along SR 1 that offers fishing, picnicking, and tidepools. Pescadero Marsh Nature Preserve is on the East side of SR 1 and is a popular spot for bird watchers and other naturalists. The Reserve is a refuge for wildlife such as: blue herons, kites, and deer.

a) No Impact

This Project would not directly or indirectly increase the use of existing recreational facilities such that substantial deterioration of the facilities would occur as a result of the Project. There would be no impact.

b) No Impact

The Project does not include recreational facilities and would not require the construction or expansion of recreational facilities. There would be no impact.

Transportation

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

On the Pescadero Creek Bridge, SR 1 consists of two, twelve-foot-wide lanes, eight-foot-wide shoulders in both directions, and a five-foot-wide pedestrian path on the west side of the highway. As described in Section 2.5.4 Bicycle and Pedestrian Access Options, a five-foot-wide pedestrian and bicycle access path would be maintained on the bridge during construction. The circulation system would not be permanently impacted or altered as a result of the Project. Additionally, the Project would have no impact on vehicle miles traveled.

Reversing one-way traffic control would be necessary during construction, and the Project would cause short-term localized traffic congestion and delays. One-way traffic control would consist of flaggers to regulate traffic and K-rail barriers to separate the lane open to traffic from the lane under construction.

a) Less Than Significant Impact

This Project would not conflict with policies, goals, or objectives regarding the circulation system, public transit, bicycle, or pedestrian facilities within the *San Mateo General Plan Policies* (San Mateo 2013), nor would it affect the CCT (California Coastal Conservancy 2019).

There are limited bus services on this portion of SR 1 that are operated on weekdays by SamTrans (No. 17) through the Project limits. In addition, the Project corridor is part of the Pacific Coast Bicycle Route.

As discussed below in AMM TRANS-1, a TMP would be developed with input from the local community during the design phase. The TMP would detail how pedestrian and cyclist access would be maintained during construction. Construction phasing would be used to reduce impacts to local residents and maintain access to destinations along SR 1. As part of the TMP, SamTrans would be notified prior to construction to minimize service disruption. Impacts would be less than significant.

b) Less Than Significant Impact

This Project is consistent with CEQA Guidelines section 15064.3, subdivision (b) which relates to induced demand and vehicle miles traveled. The Project would have no impact on vehicle miles traveled since it is not a capacity increasing Project. Under section 15064.3, subdivision (b) transportation projects that have no impact on vehicle miles traveled should be presumed to cause less than significant transportation impacts.

c) No Impact

This Project would not substantially increase hazards due to a geometric design feature or incompatible uses as a result of the Project. The existing geometrical alignment of the bridge would be maintained while replacing and upgrading safety equipment such as bridge railing and guardrail. There would be no impact.

d) Less Than Significant Impact

Under the TMP (see AMM TRANS-1), medical and emergency vehicles would be able to continue to use routes in the local area to serve fire, medical, and law enforcement purposes. During one-way reversing traffic control, flaggers would give priority to emergency vehicles. The impact would be less than significant.

Avoidance and Minimization Measure

AMM TRANS-1: Develop a Traffic Management Plan: To offset temporary disruption during construction, a TMP would be developed by Caltrans with input from the local community during the design phase. The TMP would include one-way traffic controls, flaggers, and construction phasing to reduce impacts to local residents and maintain access for emergency services. The TMP would also include coordination with San

Mateo County and public notification in the event of an emergency. The TMP would also ensure access to residential driveways that are near construction activities. The TMP would have the added benefit of reducing construction GHG emissions by limiting traffic delays.

Tribal Cultural Resources

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
<p>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:</p> <p>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</p>				X
<p>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.</p>				X

a) and b) No Impact

No tribal cultural resources were reported in record searches or attempts to consult with Native groups and individuals. There would be no impact to tribal cultural resources.

Utilities and Service Systems

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?				X
b) Have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry and multiple dry years?				X
c) Result in a determination by the wastewater treatment provider which serves or may serve the Project that it has adequate capacity to serve the Project's Projected demand in addition to the provider's existing commitments?				X
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?				X
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?				X

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

There are no utilities within the Project area. No new water supplies would be required as part of the Project. Solid waste would not be generated in excess of State or local standards or capacity of local infrastructure. If solid waste is generated, Caltrans would comply with all federal, state, and local management and reduction statutes and regulations related to solid waste disposal. There would be no impact.

Wildfire

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the Project: a) Substantially impair an adopted emergency response plan or emergency evacuation plan?				X
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose Project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?				X
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?				X
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?				X

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

The Project work area is entirely within local responsibility areas and is not located in lands classified as very high fire severity (CAL FIRE 2007). There would be no impact to the risk of wildfires or wildfire related flooding or landslides as a result of this Project.

Mandatory Findings of Significance

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Does the Project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?				X
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)?				X
c) Does the Project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?				X

a) No Impact

There would be no impact to biological resources as a result of the Project with the implementation of Project Features, avoidance and minimization measures, and the containment platform to keep debris from Pescadero Creek. There would be no impact.

b) No Impact

This Project would be constructed in the vicinity of a few other past and planned Caltrans projects.

Table 3-1 Past and Planned Projects

Project Number and Title	Project Location	Project Type	Construction Year
04-0J210 Elliot Creek Storm Damage	SR-1 PMs 0.3-0.6	Storm damage repair	2018-2019
04-0C930 SM-1 CAPM	SR-1 PMs 0.0-10.0	Pavement overlay, maintenance, guardrail upgrades	2020
04-0K570 Soldier Pile Wall	SR-1 PM 1.120	Construct a soldier pile wall	2022
04-2K880 Install Travel Time Elements Along SM-1	SR1 PMs 26.0-47.8	Install elements that will provide drivers with travel time information	2022

The Project would not have any impacts that, when considered with these other nearby projects, would be considered cumulative. In addition, there are no other development projects planned in the vicinity of this Project that could potentially act in concert with Caltrans projects to result in cumulative impacts on the environment. There would be no impact.

c) No Impact

This Project would not result in environmental effects that would substantially or adversely affect human beings. There would be no impact.

Chapter 4 List of Preparers

The primary persons responsible for contributing to, preparing, and reviewing this report are listed in Table 4-1.

Table 4-1 List of Preparers and Reviewers

Organization	Name	Role
Caltrans	Lindsay Vivian	Office Chief, Office of Environmental Analysis
Caltrans	Helen Blackmore	Senior Environmental Planner – Architectural History Branch
Caltrans	Gregory Pera	Branch Chief, Biology
Caltrans	Nandini Shridhar	Project Manager
Caltrans	Sara Dabilly	Office of Water Quality
Caltrans	Abdol Dehghani	Senior Project Engineer
Caltrans	Lindsay Busse	Associate Environmental Planner – Archaeology
Caltrans	Jeng Tsai	Transportation Engineer
Caltrans	Kevin Krewson	Branch Chief, Air Quality and Noise
Caltrans	Kimberly White	Branch Chief, Landscape Architecture
Caltrans	Arnica MacCarthy	Branch Chief, Office of Environmental Analysis
Caltrans	Maxwell Lammert	Associate Environmental Planner
Caltrans	Kamran Nakhjiri	Branch Chief, Storm Water Design B
Caltrans	Chris Padick	Landscape Associate
Caltrans	Khai Leong	Office of Hydraulic Engineering
Caltrans	Christopher Ridsen	Senior Engineering Geologist, Office of Geotechnical Design West
Caltrans	Kathryn Rose	Senior Environmental Planner – Archaeology Branch
Caltrans	Hardeep Takhar	Water Quality Program Manager
Caltrans	Jesse Han	Environmental Engineer
Caltrans	Christopher Wilson	District Branch Chief, Hazardous Waste

Chapter 5 Distribution List

The Initial Study with Proposed Negative Declaration will be circulated by September 2, 2020, to the following agencies and government officials:

Agencies

U.S. Fish and Wildlife Service

U.S. Army Corps of Engineers

San Francisco Bay Regional Water Quality Control Board

California Department of Fish and Wildlife

California Department of Parks and Recreation

California Coastal Commission

Governor's Office of Planning and Research

San Mateo County Clerk

Elected Officials

U.S. Senator Dianne Feinstein

U.S. Senator Kamala D. Harris

California Senator Jerry Hill

U.S. Congresswoman Anna Eshoo

Assembly Member Marc Berman

San Mateo County Supervisor Don Horsley

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*Making Conservation
a California Way of Life.*

November 2019

NON-DISCRIMINATION POLICY STATEMENT

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

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

For information or guidance on how to file a complaint, or obtain more information regarding Title VI, please contact the Title VI Branch Manager at (916) 324-8379 or visit the following web page:
<https://dot.ca.gov/programs/business-and-economic-opportunity/title-vi>.

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

A handwritten signature in blue ink, appearing to read 'Toks Omishakin'.

Toks Omishakin
Director

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

Summary of Project Features and Avoidance and Minimization Measures

Project Features

Project Feature AQ-1: Control Measures for Construction Emissions of Fugitive Dust.

Dust control measures would be implemented to minimize airborne dust and soil particles generated from graded areas. For disturbed soil areas, the use of an organic tackifier to control dust emissions would be included in the construction contract. Watering guidelines would be established by the contractor and approved by the Caltrans resident engineer. Any material stockpiles would be watered, sprayed with tackifier, or covered to minimize dust production and wind erosion.

Project Feature AQ-2: Air Pollution Control. Caltrans Standard Specifications Section 14-9.02, Air Pollution Control, requires contractors to follow all air pollution control rules, regulations, ordinances, and statutes.

Project Feature BIO-1: Worker Awareness Training. Construction personnel will attend a mandatory environmental education program delivered by a qualified Caltrans biologist prior to taking part in site construction. The program will focus on the conservation measures that are relevant to an employee's personal responsibility and will include an explanation as how to best avoid take of California red-legged frog and San Francisco garter snake. At a minimum, the training will include a description of species; how they might be encountered within the project area; their status and protection. A fact sheet conveying this information will be prepared and distributed to all construction and project personnel. Distributed materials will include cards with distinctive photographs of California red-legged frog and San Francisco garter snake, compliance reminders, and relevant contact information. Documentation of the training, including sign-in sheets, will be kept on file and made available to regulatory agencies upon request.

Project Feature BIO-2: Proper Use of Erosion Control Devices. To avoid entanglement or injury of susceptible, protected biological resources, erosion control materials that use plastic or synthetic monofilament netting will not be used during the Project's construction.

Project Feature BIO-3: Bird Protection Measures. To avoid take of migratory birds during the bird nesting season (February 1 to September 30): Agency approved biologists would conduct preconstruction nesting bird surveys no more than three days prior to construction. If an active nest is discovered, the biologists would establish an appropriate exclusion buffer around the nest. The area within the buffer would be avoided until the young are no longer dependent on the adults or the nest is no longer active. If a nesting special-status bird species is discovered, an agency approved biologist would notify the USFWS and/or CDFW for further guidance. Partially constructed and inactive nests would be removed to prevent occupation.

Project Feature BIO-4: Vegetation Removal. Vegetation removal of any kind is prohibited from any Project-related activities.

Project Feature BIO-5: Night Lighting. Artificial lighting during nighttime hours will be minimized to the maximum extent practicable. Lighting must be directed to illuminate the immediate work area only, while minimizing spillage into adjacent areas.

Project Feature BIO-6: Trash Control. Food and food related trash items would be secured in sealed trash containers and removed from the site at the end of each day.

Project Feature BIO-7: Pets. Pets would be prohibited from entering the Project limits.

Project Feature BIO-8: Firearms. Firearms would be prohibited within the Project limits except for those carried by authorized security personnel or local, state, or federal law enforcement.

Project Feature CULT-1: Stop Work Upon Discovery of Cultural Materials. If cultural materials are discovered during construction, all earth-moving activity within a sixty-foot radius would be halted until a Caltrans Professionally Qualified Staff (PQS) can assess the nature and significance of the find.

Project Feature CULT-2: Additional Actions if Cultural Materials Contain Human Remains. If Caltrans PQS determines that cultural materials contain human remains, State Health and Safety Code Section 7050.5 states that further disturbances and activities shall stop in any area or nearby area suspected to overlie remains. Caltrans' OCRS would contact the San Mateo County Coroner. Pursuant to PRC Section 5097.98, if the remains are thought by the coroner to be Native American, the coroner would notify the Native American Heritage Commission, which would then notify the Most Likely Descendent. The Caltrans OCRS would work with the Most Likely

Descendent on the respectful treatment and disposition of the remains. Further provisions of PRC 5097.98 are to be followed as applicable.

Project Feature GHG-1: Emissions Reduction. Caltrans Standard Specifications Section 7-1.02A and 7-1.02C, Emissions Reduction, require contractors to comply with all laws applicable to the Project and to certify they are aware of and would comply with all ARB emission reduction regulations.

Project Feature WQ-1: Water Quality BMPs: The potential for adverse effects to water quality will be avoided by implementing temporary and permanent BMPs outlined in Section 7-1.01 G of the Caltrans Standard Specifications. Caltrans erosion control BMPs will be used to minimize any wind or water related erosion. 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 Water Pollution Control Plan would be developed for the Project, as one is required for all projects that have less than one acre of soil disturbance.

Protective measures will be included in the contract, including, at a minimum:

- No discharge of pollutants from vehicle and equipment cleaning are allowed into the storm drain or water courses.
- Vehicle and equipment fueling and maintenance operations must be 50 feet away from water courses.
- Concrete wastes are collected in washouts and water from curing operations is collected and disposed of and not allowed into water courses.
- Dust control will be implemented, including use of water trucks and tackifiers to control dust in excavation and fill areas, rocking temporary access roads entrances and exits, and covering temporary stockpiles when weather conditions require.

Project Feature TRIBE-1: Protect Discovered Tribal Cultural Resources with Temporary Fencing: If any tribal cultural resources are found during construction, a Caltrans PQS archaeologist shall determine whether the resources can be avoided by the Project. If the resources can be avoided, the resources would be delineated on the ground with temporary fencing and avoided by construction. No construction-related activities or staging would be permitted within these areas.

Avoidance and Minimization Measures

AMM AES-1: Transparent Railing: Aesthetically pleasing high transparent bridge rails would be incorporated into the design of the Project, and this would be instrumental in minimizing visual impacts.

AMM AES-2: Erosion Control: All disturbed ground surfaces would be restored and treated with erosion control.

AMM BIO-1: Pre-construction Survey: Pre-construction surveys for special-status species will be conducted by a qualified Caltrans biologist(s) no more than 20 calendar days prior to any ground disturbance. These efforts will consist of walking surveys of the project limits and, if possible, accessible adjacent areas within at least 50 feet of the project limits. The biologist(s) will investigate potential cover sites when it is feasible and safe to do so.

AMM BIO-2: Special-Status Species on Site: If a special-status species is observed within a construction zone, construction activities within a 50-foot radius of the animal will be suspended until the animal leaves the site voluntarily or an agency-approved protocol for removal has been established.

AMM TRANS-1: Develop a Traffic Management Plan: To offset temporary disruption during construction, a TMP would be developed by Caltrans with input from the local community during the design phase. The TMP would include one-way traffic controls, flaggers, and construction phasing to reduce impacts to residents and maintain access for emergency services. Thus, police, fire, and medical services would not be adversely affected by the proposed Project. The TMP would also include coordination with San Mateo County and public notification in the event of an emergency. The TMP would also ensure access to residential driveways that are near construction activities. The TMP would have the added benefit of reducing construction GHG emissions by limiting traffic delays.

Appendix C List of Abbreviations

ADA	Americans with Disabilities Act
AMM	avoidance and minimization measure
BMP	best management practice
BSA	Biological Study Area
Caltrans	California Department of Transportation
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CNDDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CO ₂	carbon dioxide
CTS	California tiger salamander
ESA	environmentally sensitive area
FHWA	Federal Highway Administration
GHG	greenhouse gas
IS	Initial Study
MBGR	metal beam guardrail
MGS	Midwest guardrail system
ND	Negative Declaration

NES	Natural Environment Study
NHPA	National Historic Preservation Act
NPDES	National Pollution Discharge Elimination System
PG&E	Pacific Gas and Electric Company
PM	post mile
PRC	Public Resources Code
Programmatic Agreement	<i>First Amended Programmatic Agreement Among the Federal Highway Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and Caltrans regarding compliance with Section 106 of the NHPA, as it pertains to the Administration of the Federal Aid Highway Program in California</i>
Project	Pescadero Creek Bridge Rails Project
ROW	right of way
RWQCB	Regional Water Quality Control Board
SR	State Route
SRA	State Responsibility Area
SSC	California species of special concern
ST	state listed as threatened
TMP	Traffic Management Plan
USFWS	United States Fish and Wildlife Service
WPCP	Water Pollution Control Plan

Appendix D List of Technical Studies and References

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Caltrans 2019a. Water Quality Study. Technical Memorandum. File 04-SM-1. EA 04-4J870. Office of Water Quality. Stormwater Coordination Branch. Oakland, CA. 2019

Caltrans 2019b. Floodplain Encroachment Review. Technical Memorandum. File 04-SM-1. EA 04-4J870. Office of Hydraulic Engineering. Oakland, CA. 2019.

Caltrans 2019c. Office of Cultural Resource Studies (OCRS) Section 106 Review of Pescadero Creek Bridge Rails Project at Postmiles in San Mateo County, California. File 04-SM-1 EA 04.4J870. Office of Cultural Resource Studies, District 4. 2019

Caltrans. 2019d. Comments from the Office of Environmental Engineering Technical Memorandum. File 04-SM-1 EA 04.4J870. Office of Environmental Engineering District 4, October 2019

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California Native Plant Society (CNPS), Rare Plant Program. 2019. Inventory of Rare and Endangered Plants (Online Edition, v8-03 0.39). [Link to Inventory of Rare and Endangered Plants](#). Accessed May 8, 2020.

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San Mateo County. 2001. Local Coastal Program. Adopted 1980. Amended 2013.

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USFWS 2020a. Information for Planning and Consultation (IPaC) System. [Link to the IPaC System](#). Accessed May 8, 2020.

USFWS 2020b. National Wetlands Inventory Map. [Link to National Wetlands Inventory Map](#)

Appendix E

Potential for Special-Status Species to Occur Within BSA

Plant Species

Common Name, Scientific Name	FESA/CESA /CNPS	Habitat	Blooming Period	Habitat Present ? (Y/N)	Potential to Occur
Marsh microseris (marsh silverpuffs), <i>Microseris paludosa</i>	-/ -/ 1B.2	Grassy, often moist to wet, areas, usually on slopes; also, in wooded, often open wood, areas and on the edge of brush. Rarely found in vernal pool or dune areas. Found within northern coastal scrub, closed-cone pine forest, valley and foothill grassland, and cismontane woodland communities. 0-984 feet.	Apr-Jun/Jul	N	No potential to occur. Taxon has been extirpated from the area per CNDDDB.
Perennial goldfields, <i>Lasthenia californica</i> (= <i>macrantha</i>) ssp. <i>macrantha</i>	-/ -/ 1B.2	Coastal bluff scrub, coastal dunes, coastal scrub. < 1640 feet.	Jan-Nov	Y	Potential to occur. Suitable habitat is present in BSA; rare plant surveys will ensure no effects from project activities. Most recent occurrences in the vicinity < 5 years.
Coastal marsh milkvetch, <i>Astragalus pycnostachyus</i> var. <i>pycnostachyus</i>	-/ -/ 1B.2	Coastal dunes (mesic), coastal scrub, marshes and swamps (coastal salt, streamsides)	(Apr) Jun- Oct	Y	Potential to occur. Suitable habitat is present in BSA; rare plant surveys will ensure no effects from project activities. Most recent occurrences in the vicinity < 5 years.

Common Name, <i>Scientific Name</i>	FESA/CESA /CNPS	Habitat	Blooming Period	Habitat Present ? (Y/N)	Potential to Occur
Choris' popcornflower, <i>Plagiobothrys chorisianus</i> var. <i>chorisianus</i>	-/ -/ 1B.2	Grassy, mesic environments, ephemeral drainages, coastal scrub, chaparral; elevation < 2132 feet.	Mar-Jun	N	No potential to occur. No suitable habitat is present within BSA.
Rose leptosiphon, <i>Linanthus rosaceus</i>	-/ -/ 1B.1	Coastal bluff scrub. < 328 feet elevation.	Apr-Jul	Y	Limited potential to occur. Habitat is present within BSA; although most recent observation in the vicinity is over 70 years old.

California Native Plant Society (CNPS) California Rare Plant Rank:

(1A) Presumed extinct in California, (1B) Rare, threatened, or endangered in California and elsewhere; (2) Rare, threatened, or endangered in California, but more common elsewhere; (3) More information is needed; (4) Limited distribution, watch list

Threat Rank:

0.1 Seriously threatened in California (more than 80% of occurrences threatened / high degree of immediacy of threat)
0.2 Fairly threatened in California (20% to 80% occurrences threatened / moderate degree of immediacy of threat)
0.3 Not very threatened in California (less than 20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

Wildlife Species

Common Name, Scientific Name	FESA/ CESA	Habitat	Habitat Present? (Y/N)	Phenology	Potential to Occur
American Badger, <i>Taxidea taxus</i>	- /SSC	Terrestrial habitats include: desert, cropland, grassland, savanna, and shrubland. Prefers open areas with little groundcover, when inactive will favor underground burrow.	N	Usually active day/ night but reported as chiefly nocturnal.	No potential to occur, Suitable habitat is absent from BSA.
Guadalupe fur seal, <i>Arctocephalus townsendi</i>	FT/ ST	Near shore and pelagic marine environments. Occurs on island shores with solid rock and large lava blocks, usually at the base of tall cliffs. Young are born on rocky shore or in coastal caves. Shelter from direct sunlight and access to water for cooling may be important factors in selection of breeding/ birthing sites.	N	-	No potential to occur. Coastal waters do not overlap BSA.
Southern sea otter, <i>Enhydra lutris</i> (ssp. <i>neréis</i>)	FT/ FP	Coastal waters within 2 km of shore, especially shallows with kelp beds and abundant shellfish. Juvenile males spend little time in near-shore kelp beds; often remain far offshore. Young are born in the water or on land.	N	Circadian at all life stages.	No potential to occur. Coastal waters do not overlap with BSA.

Common Name, Scientific Name	FESA/ CESA	Habitat	Habitat Present? (Y/N)	Phenology	Potential to Occur
Blue whale, <i>Balaenoptera musculus</i>	FE/ -	Mainly pelagic; generally prefers cold waters and open seas, but young are born in warmer waters of lower latitudes.	N	Circadian. Active day and night.	No potential to occur. Coastal waters do not overlap with BSA.
Fin whale, <i>Balaenoptera physalus</i>	FE/ -	Pelagic; usually found in largest numbers > 25 miles from shore.	N	Circadian. Active day and night. In Gulf of California, feeds throughout the day.	No potential to occur. Coastal waters do not overlap with BSA.
Humpback whale, <i>Megaptera novaeangliae</i>	FE/ -	Near shore and pelagic marine ecosystems. Summer distribution is in temperate and subpolar waters. In winter, most humpbacks are in tropical/ subtropical waters near islands or coasts.	N	Circadian. Active day and night.	No potential to occur. Coastal waters do not overlap with BSA.
Killer whale [Southern Resident DPS], <i>Orcinus orca</i>	FE/ -	Mainly in coastal waters, but may occur anywhere in all oceans and major seas at any time of year.	N	Circadian. Active day and night.	No potential to occur. Coastal waters do not overlap with BSA.
North Pacific right whale, <i>Eubalaena japonica</i>	FE/ -	Near shore and pelagic marine environments.	N	-	No potential to occur. Coastal waters do not overlap with BSA.

Common Name, Scientific Name	FESA/ CESA	Habitat	Habitat Present? (Y/N)	Phenology	Potential to Occur
Sei whale, <i>Balaenoptera borealis</i>	FE/ -	Pelagic. Generally in deep water, along edge of continental shelf and in open ocean. Migrates between lower-latitude wintering grounds and higher-latitude feeding grounds.	N	-	No potential to occur. Coastal waters do not overlap with BSA.
Sperm whale, <i>Physeter catodon</i>	FE/ -	Abyssal and Pelagic marine environments. Prefers deep water, sometimes around islands or in shallow shelf waters. Ten to occur in highest densities near productive waters, and often near steep drop-offs or strong oceanographic features, e.g. edges of continental shelves, large islands and submarine trenches and canyons.	N	Circadian. Active day and night.	No potential to occur. Coastal waters do not overlap with BSA.
Coho salmon [CCC ESU], <i>Oncorhynchus kisutch</i> [pop. 4]	FE/ SE	Near shore and pelagic in marine environments; rivers and creeks in freshwater. Range extends from Humboldt County to Santa Cruz County.	Y	-	Potential to aquatically disperse through footprint with negligible effects. Containment platform eliminates impacts to waterways.
Delta smelt, <i>Hypomesus transpacificus</i>	FT/ SE	Aquatic ecosystems. Inhabits open waters of bays, tidal rivers, channels, and sloughs. Present in potentially all Bay Area counties.	Y	-	Potential to aquatically disperse through footprint with negligible effects. Containment platform eliminates impacts to waterways.

Common Name, Scientific Name	FESA/ CESA	Habitat	Habitat Present? (Y/N)	Phenology	Potential to Occur
Green sturgeon [sDPS], <i>Acipenser medirostris</i>	FT/ -	Majority of lives spent in marine waters, estuaries, and the lower reaches of large rivers. Reproductive strategy is anadromous, but specifics are poorly understood by modern science.	Y	-	Potential to aquatically disperse through footprint with negligible effects. Containment platform eliminates impacts to waterways.
Longfin smelt, <i>Spirinchus thaleichthys</i>	FC/ ST	Habitat includes a wide range of temperature and salinity conditions in coastal waters near shore, bays, estuaries, and rivers; some populations are landlocked in lakes.	Y	-	Potential to aquatically disperse through footprint with negligible effects. Containment platform eliminates impacts to waterways.
Tidewater goby, <i>Eucyclogobius newberryi</i>	FE/ SSC	Fresh and Brackish water ecosystems. It is most abundant in the upper ends of lagoons created by small coastal streams. Occurs in several Bay Area counties from Sonoma in the north to Santa Cruz to the south.	Y	-	Potential to aquatically disperse through footprint with negligible effects. Containment platform eliminates impacts to waterways.
Steelhead [CCC DPS], <i>Oncorhynchus mykiss irideus</i> (pop. 9)	FT/ -	Aquatic ecosystems. Typically spend two years in freshwater, migrate to marine waters, where they spend 2-3 years, then return to natal stream to spawn. Ranges north to Mendocino County and south to Santa Cruz County.	Y	-	Potential to aquatically disperse through footprint with negligible effects. Containment platform eliminates impacts to waterways.

Common Name, Scientific Name	FESA/ CESA	Habitat	Habitat Present? (Y/N)	Phenology	Potential to Occur
California red-legged frog, <i>Rana draytonii</i>	FT/ -	Aquatically associated environments especially those in or near quiet permanent water of streams, marshes, ponds, and lakes. Occurs in most counties of the Bay Area.	Y	Inactive in cold temp. and hot, dry weather. May be active all year in coastal zones, inactive late summer to early winter elsewhere. Adults and subadults mainly nocturnal; juveniles day and night.	Potential to occur. Suitable habitat is present in the BSA. Distance from suitable niche renders its dispersal through footprint unlikely. Post-rain event surveys will ensure negligible effects.
California least tern, <i>Sterna antillarum</i> (ssp. <i>browni</i>)	FE/ SE	Coastal/ Marine environments. All California coastal counties south of [and including] Contra Costa and San Francisco County.	Y	Diurnal at all life stages.	Potential to occur. Suitable habitat is present in the BSA. Potential to aerially disperse through footprint with negligible effects.
Marbled murrelet, <i>Brachyramphus marmoratus</i>	FT/ SE	Aquatic and terrestrial ecosystems especially those containing old-growth coniferous forests.	N	Crepuscular. Varies by region but in CA activity levels were greatest 30 mins before to 30 mins after sunrise.	No potential to occur. Suitable habitat is absent from BSA.
Western snowy plover, <i>Charadrius alexandrinus</i> (= <i>nivosus</i>) (ssp. <i>nivosus</i>)	FT/ SSC	Beaches, dry mud or salt flats, sandy shores of rivers, lakes, and ponds. Distributed sporadically from San Diego to Siskiyou counties.	Y	-	Potential to occur. Suitable habitat is present in the BSA. Pre-nesting surveys will ensure no effect. Potential to aerially disperse through footprint with negligible effects.

Common Name, Scientific Name	FESA/ CESA	Habitat	Habitat Present? (Y/N)	Phenology	Potential to Occur
Bank swallow, <i>Riparia riparia</i>	-/ ST	Open and partly open situations, often near flowing water. Nests built in steep sand, dirt, or gravel banks, in burrows dug near the top of the bank, along the edge of inland water, or along the coast, or in gravel pits, road embankments. Mated pairs known to dig new burrow each year.	Y	Diurnal at all life stages.	Potential to occur based on taxon's ecology; yet taxon has likely been extirpated from vicinity due to development and increase in human presence; last CNDDDB occurrence predates 20th century. No effect.
Saltmarsh common yellowthroat, <i>Geothlypis trichas</i> (ssp. <i>sinuosa</i>)	- /SSC	Salt marshes. Nests just above ground or over water, in thick herbaceous vegetation, often at base of shrub or sapling. Occurs in all Bay Area counties.	Y	Diurnal at all life stages.	Potential to occur. Suitable habitat is present within the BSA; although most recent CNDDDB occurrence exceeds 30 years. Limited potential to aerially disperse over footprint but, no suitable nesting habitat within it. No effect.
Short-tailed albatross, <i>Phoebastria (=Diomedea) albatrus</i>	FE/ -	Pelagic settings where high marine productivity exists. It nests on the ground on small oceanic islands; on volcanic ash slopes with sparse vegetation.	N	Circadian. Often feeds nocturnally when squid are at top of water column.	No potential to occur. Suitable habitat is not present in the BSA.
Black abalone, <i>Haliotis cracherodii</i>	FE/ -	Benthic and near shore marine environments. Specifically, from the high intertidal to 6 m depth, can withstand extreme environmental stochasticity. Known to occupy a variety of rock/ surface types.	N	-	No potential to occur. There is no suitable habitat present in BSA.

Common Name, Scientific Name	FESA/ CESA	Habitat	Habitat Present? (Y/N)	Phenology	Potential to Occur
Western bumble bee, <i>Bombus occidentalis</i>	-/ CE	Rangewide, habitats include coniferous, deciduous and mixed-wood forest, wet and dry meadows, montane meadows and prairie grasslands, meadows bordering riparian zones and along roadside in taiga adjacent to wooded areas, urban parks, gardens and agricultural areas, subalpine habitats and more isolated natural areas. Food plants include: Ceanothus, Centaurea, Chrysothamnus, Cirsium, Geranium, Grindellia, Lupinus, Melilotus, Monardella, Rubus, Solidago, and Trifolium spp.	Y	-	Potential to occur. Suitable habitat is present within the BSA. Project activities relegated to paved surfaces; No effect.
Myrtle's silverspot butterfly, <i>Speyeria zerene</i> (ssp. <i>myrtleae</i>)	FE/ -	Found where larval foodplant, <i>Viola adunca</i> , is abundant.	N	-	No potential to occur. Taxon has been functionally extirpated from vicinity for over 75 years.
San Bruno Elfin Butterfly, <i>Callophrys mossii</i> (ssp. <i>bayensis</i>)	FE/ -	Solely inhabits rocky outcrops and cliffs in coastal scrub. Found only in Contra Costa, Marin, and San Mateo counties.	N	-	No potential to occur. Suitable habitat is absent from BSA.

Common Name, Scientific Name	FESA/ CESA	Habitat	Habitat Present? (Y/N)	Phenology	Potential to Occur
San Francisco garter snake, <i>Thamnophis sirtalis</i> (ssp. <i>tetrataenia</i>)	FE/ SE	Terrestrial ecosystems especially those adjacent to marshes, ponds, or other similar aquatic features. San Mateo and Santa Cruz Counties.	Y	-	Potential to occur. Suitable habitat is present within the BSA. Footprint's distance from where CRLF are extant make it unlikely to disperse through construction site.
Green sea turtle [East Pacific DPS], <i>Chelonia mydas</i>	FT/ -	Marine environments. Adults known to migrate > 1800 miles between nesting and feeding grounds.	N	Individuals in Gulf of California overwinter in a dormant condition. Nesting occurs generally at night.	No potential to occur. Suitable habitat is absent within BSA.
Western pond turtle, <i>Actinemys marmorata</i>	- /SSC	Permanent and intermittent waters of rivers, creeks, small lakes and ponds (including artificial stock and sewage treatment ponds). Some individuals seek upland refuge from Oct-Feb. Distributed sporadically from SD to Siskiyou counties.	Y	Hibernates/ aestivates. Most active when water temps. Above 59°F, or during April to October. Foraging begins around sunrise; basking begins when sun first falls on basking sites and peaks during midmorning hours	Potential to occur within BSA. Ambient salinity levels overlapping footprint will likely deter its dispersal in or around it.

California Department of Fish and Wildlife (CDFW) Listed Plant Designations:

(SE) State Listed - Endangered, (ST) State Listed - Threatened, (SR) State Listed - Rare, (SC) State Candidate for Listing, (SSC) Species of Special Concern

United States Fish and Wildlife Service (USFWS) Listed Plant Designations:

(FE) Federally Listed - Endangered, (FT) Federally Listed - Threatened, (FPE) Federally Proposed - Endangered, (FPT) Federally Proposed - Threatened, (FC) Federal Candidate for Listing