Interstate 680 Alameda Creek Bridge Scour Repair Project

ALAMEDA COUNTY, CALIFORNIA
04 – ALA – 680 (PM R10.15-R10.16)
EA 04-0P910/ Project ID 0418000025

Initial Study with Proposed Mitigated Negative Declaration

Prepared by the
State of California, Department of Transportation

Caltrans

August 2022

Errata Sheet

Interstate 680 Alameda Creek Bridge Scour Repair Project

EA: 04-0P910; Project ID 0418000025

Initial Study with Proposed Mitigated Negative Declaration

October 5, 2022

Page	*Reads Now*	*Should Read*
i	We would like to hear what you think. If you have comments regarding the proposed project, please send your written comments, including requesting that Caltrans hold a public meeting, to Caltrans by October 25, 2022.	We would like to hear what you think. If you have comments regarding the proposed project, please send your written comments, including requesting that Caltrans hold a public meeting, to Caltrans by November 4, 2022.

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General Information about this Document

What's in this document:
The California Department of Transportation (Caltrans) has prepared this Initial Study with Proposed Mitigated Negative Declaration (IS/MND) which examines the potential environmental impacts of the proposed Interstate 680 Alameda Creek Bridge Scour Repair Project (project) located near the town of Sunol in Alameda County. This document explains why the project is being proposed, the existing environment that could be affected by the project, potential impacts of each of the alternatives, and the proposed avoidance and minimization measures, and/or mitigation measures.

What you should do:

- Please read this document.
- Additional copies of this document and related technical studies are available by request from Caltrans at the same contact for comments shown below.
  This document can be accessed electronically at the following website:
  https://dot.ca.gov/caltrans-near-me/district-4/d4-popular-links/d4-environmental-docs
- We would like to hear what you think. If you have comments regarding the proposed project, please send your written comments, including requesting that Caltrans hold a public meeting, to Caltrans by November 4, 2022.
- Send comments via U.S. mail to:
  Caltrans, District 4 – Office of Environmental Analysis
  ATTN: Juliane Smith, Associate Environmental Planner
  P.O. Box 23660, MS-8B, Oakland, CA 94623-0660
- Send comments via email to: Juliane.Smith@dot.ca.gov.

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

Alternate formats:
For individuals with sensory disabilities, this document can be made available in Braille, in large print, or digital audio. To obtain a copy in one of these alternate formats, please call or write to the California Department of Transportation, District 4, Attn: Juliane Smith, Associate Environmental Planner, P.O. Box 23660, Oakland, CA 94623-0660; (510) 506-0372 (Voice), or use the California Relay Service 1 (800) 735-2929 (TTY), 1 (800) 735-2929 (Voice) or 711.

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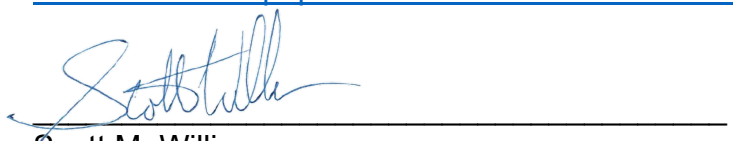
Initial Study with Proposed Mitigated Negative Declaration

04-ALA-680	10.15-10.16	04-0P910
Dist. – Co. – Rte.	PM	E.A.

Project title:	I-680 Alameda Creek Bridge Scour Repair Project
Lead agency name and address:	California Department of Transportation 111 Grand Avenue, Oakland, CA 94612
Contact person and phone number:	Brian Gassner, Senior Environmental Planner (510) 506-0372
Project location:	Alameda County, California
General plan description:	Highway
Zoning:	Transportation Corridor
Other public agencies whose approval is required (e.g., permits, financial approval, or participation agreements)	• U.S. Fish and Wildlife Service • National Marine Fisheries Service • U.S. Army Corps of Engineers • California Department of Fish and Wildlife • San Francisco Regional Water Quality Control Board

The document, maps and Project information 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).



Scott M. Williams
Acting Chief, Office of Environmental Analysis
District 4, California Department of Transportation

9/15/2022
Date

To obtain a copy of Braille, in large print, on computer disk, or an audiocassette, please contact: Department of Transportation, Attn: Brian Gassner, Senior Environmental Planner, Office of Environmental Analysis, 111 Grand Avenue, MS 8-B, Oakland, CA 94612: (510) 506-0372 (Voice) or use the California Relay Service 1 (800) 735-2929 (TTY), 1 (800) 735-2929 (Voice) or 711.

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Proposed Mitigated Negative Declaration

Pursuant to: Division 13, Public Resources Code

Project Description

The California Department of Transportation (Caltrans) proposes scour repair at the Alameda Creek Bridge (Br. No. 33-0047) on Interstate (I-) 680 in Alameda County, near the town of Sunol, from Post Mile (PM) R10.15 to R10.16. The project also proposes to reconstruct the median barrier on the approach slab, rehabilitate the bridge deck with polyester concrete in both directions, and reconstruct bridge joint seals.

Determination

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

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

The proposed project would have no effect on aesthetics, agricultural lands and forest resources, air quality, cultural resources, geology and soils, greenhouse gas emissions, hazards and hazardous materials, land use and planning, mineral resources, noise, population and housing, public services, recreation, transportation and traffic, tribal cultural resources, utilities and service systems, and wildfire.

The proposed project would have less than significant effects to hydrology/water quality, and less than significant effects with mitigation incorporated to biological resources, specifically the California tiger salamander (*Ambysoma californiense;* CTS), California red-legged frog (*Rana draytonii;* CRLF), and central California coast steelhead (*Oncorhynchus mykiss*; CCC steelhead).

_____ _____

Melanie Brent
Deputy District Director
Office of Environmental Analysis
California Department of Transportation
District 4

Date of Approval

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Chapter 1 Proposed Project

1.1 Introduction

The California Department of Transportation (Caltrans) proposes to address structural deficiencies in the Alameda Creek Bridge (Br. No. 33-0047) through scour repair, bridge deck rehabilitation, joint seals replacement, and approach slabs replacement. The project is located on Interstate (I-) 680 from post mile (PM) R10.15 to R10.16, in unincorporated Alameda County, near the town of Sunol. The project vicinity map is shown below in Figure 1.

Figure 1. Project Vicinity Map

1.3 Location and Background

I-680 extends from the I-280/United States Highway (US-) 101 interchange in the south to the I-80/State Route (SR-) 12 interchange in the north. I-680 is a major north-south transportation corridor connecting Contra Costa, Alameda and Santa Clara Counties. It

serves as a major commute route, as well as an interstate route connecting the South and East Bay Areas with the rest of the Bay Area and beyond.

In the project area, I-680 contains three general-purpose lanes and an Express Lane in each direction. General-purpose lanes have no vehicle type or occupancy restrictions. The Express Lanes are open to high-occupancy vehicles (HOV) only (carpools with 2 or more persons; motorcycles, transit vehicles, and eligible clean air vehicles) during operating hours (Monday through Friday, 5 a.m. – 8 p.m.). Outside of operating hours, the Express Lanes are open to all traffic. The posted speed limit is 65 miles per hour (mph).

1.4 Purpose and Need

1.4.1 Purpose

The purpose of this project is to maintain connectivity and provide an improved highway facility for the traveling public along I-680 by addressing structural deficiencies in the Alameda Creek Bridge (Br. No. 33-0047) and scour in the creek.

1.4.2 Need

The *Bridge Needs/Bridge Inspection Report* dated May 7, 2020 recorded the need for deck rehabilitation, joint seals replacement, and scour repair. Due to the gravel mining operation adjacent to the project site, concentrated flows have created scouring in the creek channel. Under the scour conditions, the steel piles of the bridge would have inadequate bearing capacity.

1.5 Project Description

The Project proposes to address the scour and structural deficiencies of the Alameda Creek Bridge on I-680 by installing Rock Slope Protection (RSP) in the scoured area at pier 8, realigning the creek in the center of piers 8 and 9, rehabilitating the bridge deck, and replacing joint seals. Scour occurs when concentrated flows of water erode the creek bed adjacent to a bridge foundation. Deep scour holes expose the bridge foundation, potentially decreasing the structure's ability to support weight as it was designed. The scour hole this project addresses is located at pier 8 of the bridge and is approximately 40 feet wide, up to 20 feet deep, and 27 feet long.

<u>Temporary Creek Diversion/Dewatering</u>

A temporary creek diversion is proposed to dewater the work area within the creek bed during one annual construction window (generally June 1 to October 15), creating a dry work environment for construction access and the placement of RSP thereby preventing increased turbidity in Alameda Creek. The temporary creek diversion involves the installation of two coffer dams, one approximately 50 feet upstream of the work area to prevent inflow, and one approximately 50 feet downstream.

The means and methods of the installation may include installation of temporary berms (plastic-wrapped gravel bags, aquadams, Super Sacks, or cofferdams) to create a dewatered work area. A cutoff wall may be necessary to reduce the flow of water through the substrate under the upstream dams.

The cutoff wall would consist of a two-foot-deep by two-foot wide trench spanning the width of the creek with impenetrable material placed below grade to reduce seepage under the dam into the work area.

The temporary dams would be constructed approximately 30 feet wide at the base and approximately six feet tall. Prior to placement of the dam, sharp objects, boulders, and cobbles would be removed from the dam area to create a smooth surface which would prevent channels through which water could pass beneath the dam. Almeda Creek would flow by gravity around the active construction site in an appropriately-sized pipe. Following implementation of the creek diversion, any ponded water remaining in the work area would be pumped out to ensure a dry work environment.

Approximately 7 feet upstream from the upstream base of the dam and 7 feet downstream from the downstream base of the dam, is proposed to construct the temporary dam, and will be temporarily impacted.

All construction materials would be removed from the creek by the end of the construction season. The construction areas would be restored and, as appropriate, hydroseeded at the end of each construction season. Willow cuttings would be planted along the banks to encourage regrowth comparable to the existing conditions.

Scour Repair

The eroded area, around and between piers 8 and 9, is approximately 40 feet wide, up to 20 feet deep, and 27 feet long. The project would repair the scour at piers 8 and 9 to restore structural stability. After the creek channel is diverted, the scour area will be excavated by no more than 5.25 feet; excavated materials will be saved and protected for reuse. A gravel filter system would be installed before placing approximately 3 feet of granular filter material and backfilling with 2.25 feet of RSP. The Alameda Creek channel would be regraded and shaped to resemble upstream channel conditions. A slight centerline depression in the channel would allow for a low-flow channel to form.

Bridge Structure

The project would cold plane the bridge deck by removing 1.5-inch asphalt and repaving with 0.75-inch polymer concrete in both directions. The approach slabs at the north and south end of the bridge will be reconstructed. Construction would not extend beyond the limits of the existing paved roadway. To construct the approach slabs, the existing

approach slabs will be demolished and removed. As part of the roadway reconstruction, the existing median barrier would be replaced.

Creek Realignment

To encourage the longevity of the scour repair, Caltrans is proposing to realign Alameda Creek to the center of bridge piers 8 and 9. The creek bed between piers 8 and 9 will be excavated to a depth of approximately 5.25 feet. A one-to-two-foot layer of clean river cobble would be placed in the excavation to create a new low-flow channel. The new low-flow channel would be approximately 950 square feet and would be designed specifically to improve fish spawning habitat, including deeper pools where feasible. All work in the creek will be completed in one construction season.

Staging Area and Access Road

The staging area would be under the bridge deck, between Bent 5 and Bent 7. The bridge deck or mainline shoulder would not be used for storing equipment or materials for work in the creek. Preparation of the area would include clearing and grubbing. Gravel would then be placed on top of a filter fabric on the unpaved portions of the construction staging area. Heavy equipment, such as excavators or bobcats, could enter the staging area. Staging areas would be considered a temporary impact since they would be restored within one year. The staging area would be restored to existing conditions upon completion of the Project. Impacts due to staging would occur to grassland/ruderal land cover types.

A temporary access road has been proposed for Project construction on established roads in the Lehigh Hanson Aggregates. The access route would begin on an existing dirt path and extend approximately 100 feet over grassland/ruderal habitat to the staging area. Clean gravel fill may be required to even out the ground in sections of the access road. Gravel and any additional fill would be removed from the staging areas prior to October 15. After Project construction, appropriate erosion control measures would be implemented. No fill would be left in place outside of the creek work window. Heavy equipment, trucks, and other construction equipment would use the access road while working in the creek area.

Revegetation and Channel Restoration

Within the Project area, tree and vegetation removal would be minimized to the extent feasible. Trees and vegetation outside of clearing and grubbing limits would be protected from the contractor’s operations, equipment, and materials storage.

In areas of temporary construction impact, appropriate replacement native vegetation would be planted within Caltrans right-of-way (ROW). Where feasible, areas within the Project area would be replanted with native vegetation and trees. Specifications

regarding vegetation and tree replacement will be provided during the design phase of the Project. The temporarily impacted creek channel profile would be restored to match existing and adjacent conditions prior to removal of the creek diversion. The draft vegetation restoration plan will be submitted to U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW) for review and approval prior to the start of construction.

Temporary Construction Easements

A Temporary Construction Easement (TCE) from the San Francisco Public Utilities Commission (SFPUC) may be needed to conduct the scour repair work under the bridge. A TCE from Lehigh Hanson Aggregates will also be needed to access the project site. Access to the project site is through the quarry from Athenour Way adjacent to I-680.

Construction Impacts

The estimated duration of construction is 369 working days. While work in Alameda Creek would occur over one season, the overall duration of construction would occur over two seasons. Work in the creek channel will take place during daylight hours and will be subject to seasonal restrictions. Some work on the bridge deck will be conducted during nighttime construction windows. The Traffic Management Plan (TMP) and details of the construction staging for the project will be developed and refined during the next phase of design. TMP development will be supported by detailed traffic studies to evaluate traffic operations. The need for lane closures during off-peak hours or at night, or short-term detour routes, will be identified, as required. The TMP will include press releases to notify and inform motorists, businesses, community groups, local entities, and emergency services of upcoming closures or detours. Various TMP elements such as portable Changeable Message Signs and Construction Zone Enhanced Enforcement Program may be utilized to minimize delay to the traveling public.

1.6 Project Features

As part of the project, Caltrans would implement standard conservation measures, avoidance and minimization measures (AMMs), and standard best management practices (BMPs) as outlined in the Caltrans' 2018 Standard Specifications and the Caltrans Construction Site Best Management Practices Manual. Measures include minimizing the area of impact, conducting preconstruction surveys for biological resources, and implementing water quality BMPs and other construction-site BMPs.

1.7 Permits and Approvals Needed

Table 1, below, provides a summary of the environmental permits, authorizations, or agreements required for project construction.

Table 1-1. Required Permits and Approvals

Agency	Permit/Approval	Status
United States Fish and Wildlife Service (USFWS)	Endangered Species Act Section 7 consultation for threatened and endangered species (terrestrial)	Caltrans would initiate Section 7 consultation with submittal of a biological assessment to USFWS after environmental document certification. USFWS would issue either a letter of concurrence with the findings of effect in the biological assessment, or a biological opinion which may authorize take of federally listed species to Caltrans.
United States Army Corps of Engineers (USACE)	Section 404 Water Quality Certification under CWA	Caltrans will submit a Section 404 application following environmental document certification.
National Marine fisheries Service (NMFS)	Endangered Species Act Section 7 consultation for threatened and endangered species (fish)	Caltrans would initiate consultation with submittal of a biological assessment to NMFS after project approval. NMFS would issue either a letter of concurrence with the findings of effect in the biological assessment, or a biological opinion authorizing take of federally listed species to Caltrans.
California Department of Fish and Wildlife (CDFW)	California Fish and Game Code 1602 Lake and Streambed Alteration Agreement and Incidental Take Permit (ITP) for California red-legged frog, California tiger salamander, and central California coast steelhead	Caltrans will submit 1602 Agreement and Incidental Take Permit applications following project approval.

San Francisco Regional Water Quality Control Board (RWQCB)	Section 401 Water Quality Certification under CWA	Caltrans will submit a Section 401 application following project approval.

Chapter 2 Affected Environment; Environmental Consequences; and AMMs and/or Mitigation Measures

The following discussions evaluate potential environmental impacts of the proposed Project as described in Chapter 1 as they relate to the CEQA checklist to comply with State CEQA Guidelines (Title 14 California Code of Regulations, Division 6, Chapter 3, Section 15091).

2.1 Environmental Factors Potentially Affected

As part of the scoping and environmental analysis carried out for the proposed Project, the following environmental issues were considered, but no adverse impacts were identified. As a result, there is limited discussion in this document on the following resources: agriculture and forestry, energy, geology and soils, land use and planning, mineral resources, population and housing, and recreation.

The environmental factors checked in Table 2-1 would be potentially affected by the proposed Project. Further analyses of these environmental factors are included in the following sections.

Table 2-1. Environmental Factors Potentially Affected

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

2.2 Determination

On the basis of this initial evaluation:

	I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
X	I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect on this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGETIVE 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, included revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature: **Date:**

Printed Name: Scott M. Williams **For:**

2.3 CEQA Environmental Checklist

This checklist (presented at the beginning of each resource section in the form of a table listing the pertinent questions applicable to the resource and a single column where the degree of impact is indicated) identifies physical, biological, social, and economic factors that might be affected by the proposed 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.

Project features, which can include both design elements of the project, and standardized measures that are applied to all or most Caltrans projects, such as BMPs and measures included in the standard plans and specifications or as standard special provisions, are considered to be an integral part of the Project and have been considered prior to any significance determinations documented below; a full list of the proposed Project’s project features, AMMs, and mitigation measures (MMs) can be reviewed in Appendix B.

Section 2.1.1 through Section 2.1.21 of this chapter presents the CEQA determinations under Appendix G of the CEQA Guidelines. The CEQA determinations depend on the level of potential environmental impact that would result from the Project. The level of significance determinations is defined as follows:

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

2.1.1 Aesthetics

Except as provided in Public Resources Code Section 21099, would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?	-	-	-	X
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	-	-	-	X
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning or 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

CEQA Significance Determinations for Aesthetics

This section is summarized from the *Visual Impact Analysis* for the proposed project, which was completed in September 2021.

The portion of I-680 within the project limits is an Officially Designated State Scenic Highway. Land use within the project area is mostly semi-rural in character, being surrounded by mostly rolling hills with clusters of mature trees and shrubs and ruderal grass groundcover on each side of the freeway.

a) <u>No Impact</u>

No scenic vistas were identified within the project area. The project would not impact scenic vistas.

b) <u>No Impact</u>

All project work is expected to occur within Caltrans Right-of-Way (ROW) or in temporary construction easements. It is not anticipated that the project would adversely affect any designated scenic resource, such as a rock outcropping, tree grouping, or historic property, etc., as defined by CEQA statutes or guidelines, or by Caltrans' policy.

c) No Impact

The proposed project would not conflict with any applicable zoning or regulations governing scenic quality. Views of the roadway would remain similar to existing conditions and there are no residential views of the proposed project, as it is located between grassy rolling hills and lacks development within the project limits.

The primary visual concerns associated with the proposed project involve the preservation and maintenance of the current level of visual quality within the corridor of this Officially Designated State Scenic Highway. As trees and shrubs within the project area help to beautify and screen the freeway, they should be protected to the maximum extent possible in order to maintain the overall visual quality. Impacts to existing trees, large shrubs and associated root zones should be kept to a minimum to avoid harm. Mature trees and shrubs within the project area act as a screen for both highway users and neighbors, as well as improve aesthetics.

d) No Impact

The project will not install any new permanent lighting. Lighting for possible night work shall be directional and/or use shielding to reduce light spillage affecting motorists and highway neighbors. The proposed project will not result in any permanent new light or glare that would adversely affect day or nighttime views of the area.

Standard Conservation Measures:

AES-1: Protect mature vegetation to the maximum extent feasible in order to preserve the scenic quality of the existing landscape.

AES-2: Plan contractor staging and operations to protect and preserve naturalized annual grassland and sporadic shrubs to the maximum extent feasible.

AES-3: After construction, treat areas cleared for contractor access and trenching operations with appropriate erosion control measures where required.

AES-4: Provide replacement highway planting, if warranted, in all areas of highway planting removal where ROW allows. Where replacement planting is not possible at the removal location, provide replacement in adjacent planting areas along the project corridor.

AMMs and/or MMs:

No impacts are anticipated; therefore, no measures are proposed.

2.1.2 Agriculture and Forest Resources

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

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

CEQA Significance Determinations for Agriculture and Forest Resources

a) No Impact

There is no prime farmland, unique farmland, or farmland of statewide importance within the project limits. All work is expected to occur within Caltrans ROW or in temporary construction easements. The land adjacent to the project limits is predominantly low density rural and classified as “Grazing Land” and “Other Land” by the Department of Conservation. This project does not propose changes in the use of the current roadway and would not require or cause changes in the use of adjacent properties. There are no changes anticipated to prime farmland, unique farmland, or farmland or statewide importance.

b) No Impact

There are no parcels under a Williamson Act contract within the project limits.

c, d) No Impact

There are no forest or timberlands within the project limits. No conflicts are anticipated with areas zoned as forest land or timberland

e) No Impact

There are no parcels under a Williamson Act contract and no forest or timberlands within the project limits. No conversion of agricultural land to non-agricultural use or conversion of forest land to non-forest use is anticipated as a result of this project.

AMMs and/or MMs:

No impacts are anticipated; therefore, no measures are proposed.

2.1.3 Air Quality

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

CEQA Significance Determinations for Air Quality

a, b, c, and d) <u>No Impact</u>

The proposed project is exempt from the requirement to determine conformity per 40 Code of Federal Regulation (CFR) 93.126: Table 2 – Exempt Projects: Widening narrow pavements or reconstructing bridges (no additional travel lanes). The project would not conflict with or obstruct implementation of the air quality plan in the area. The project will not add travel lanes to I-680. The project would not substantially increase any criteria pollutant that the area is in non-attainment for.

AMMs and/or MMs:

No impacts are anticipated; therefore, no measures are proposed.

2.1.4 Biological Resources

Would the project:	Significant and Unavoidable	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife, 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, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	-	X	-	-
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	-	X	-	-
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	-	-	X	-
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	-	-	-	X

Would the project:	Significant and Unavoidable	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	-	-	-	X

Caltrans Office of Biological Sciences and Permits prepared a Natural Environment Study (NES) for the proposed project in June 2022. The NES documented the potential effects of the proposed project on nearby biological resources. This section is summarized from the NES, which is incorporated into this IS MND by reference.

Caltrans established a biological study area (BSA) to evaluate the effects of the proposed project on natural communities and other biological resources. The BSA encompasses the project footprint along with a buffer to include areas that project construction activities may directly or indirectly impact (Figure 2).

For the proposed project, the BSA consists of approximately 4.77 acres. The Project Construction Area (PCA) is the area that includes the permanent and temporary impact areas associated with construction (the entire crosshatched section in Figure 2). This does not include the use of existing roads but includes all areas with expected ground disturbance due to staging, construction activities, and on-site restoration activities. For this project, the BSA was expanded beyond the PCA approximately 300 feet upstream and downstream of the existing bridge and the adjacent surrounding riparian areas. Additionally, access to the PCA requires driving across grassland between Lehigh Hanson Aggregates and the staging area at piers 5-7; the BSA includes the area of the driving pathway needed for access.

Caltrans conducted a reconnaissance bat survey, wildlife habitat assessment, fish habitat survey, and bat roosting habitat survey in December 2021 and January 2022. Based on literature and database searches, past wildlife studies, and familiarity with the region, a total of 31 wildlife species were initially considered to have potential to occur within the BSA. Following the wildlife studies, desktop review, and literature studies, fifteen of these species were dropped from consideration based on a lack of suitable habitat. The following special-status species were determined to have a low to high potential to occur within the BSA:

- California tiger salamander (*Ambystoma californiense*), federally threatened, state threatened

- California red-legged frog (*Rana draytonii*), federally threatened, state species of special concern
- Steelhead (Central California Coast DPS) (*Oncorhynchus mykiss irideus*), federally threatened, state special animal
- Alameda whipsnake (*Masticophis lateralis euryxanthus*), federally threatened, state threatened
- Foothill yellow-legged frog (*Rana boylii*) (West / Central Coast clade), state endangered
- American Peregrine Falcon (*Falco peregrinus*)
- Cooper's Hawk (*Accipiter cooperii*)
- Golden Eagle (*Aquila chrysaetos*)
- Great Blue Heron Rookery (*Ardea Herodias*)
- Pallid bat (*Antrozous pallidus*), state species of special concern
- Prairie falcon (*Falco mexicanus*)
- San Francisco dusky-footed woodrat (*Neotoma fuscipes annectens*), state species of special concern
- Townsend's big-eared bat (*Corynorhinus townsendii*), state species of special concern
- Tricolored blackbird (*Agelaius tricolor*), state threatened
- Western pond turtle (*Emys marmorata*), state species of special concern
- Yuma myotis (*Myotis yumanensis*), state special animal

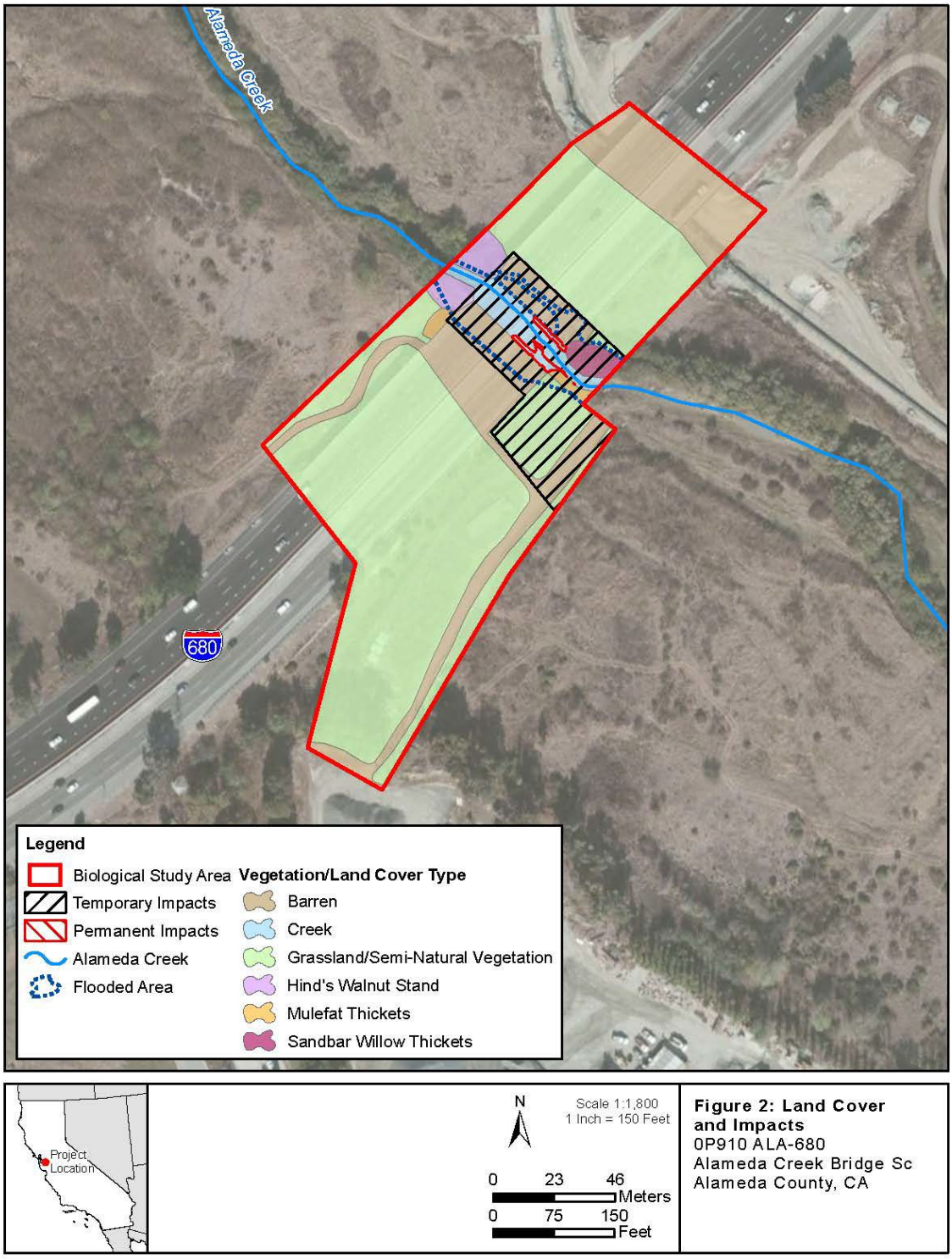

Figure 2. Land Cover and Impacts

CEQA Significance Determinations for Biological Resources

a) Less than Significant with Mitigation Incorporated

Special-Status Plant Species

A total of 16 plant species were initially evaluated for potential presence in the BSA; four species were determined to have a low potential to occur. A survey was conducted on December 30, 2021, to assess the habitat within the BSA and locate any special-status plant populations that were identifiable. No special-status plant species were observed, and the survey concluded there is a low potential for rare plants within the BSA. If protected species are discovered during construction, appropriate agency coordination and protective measures would be established.

Special-Status Animal Species

Caltrans conducted a reconnaissance bat survey, wildlife habitat assessment, fish survey, and bat roosting habitat survey in December 2021 and January 2022. Based on literature and database searches, past wildlife studies, and familiarity with the region, a total of 31 wildlife species were initially considered to have potential to occur within the BSA. Following the wildlife studies, fifteen of these species were dropped from consideration based on a lack of suitable habitat. Sixteen federal and/or state-listed species and state species of special concern were considered to have at least some potential to occur in the BSA and are summarized below.

California Species of Special Concern & CDFW Special Animals List
Eleven state species of special concern and/or species listed on CDFW's Special Animals List were considered to have a moderate to high potential to occur in the project area.

Three bat species have suitable foraging and/or roosting habitat in the project area. Project related construction work within riparian woodland habitats would likely have temporary effects on roosting bats. Ground disturbing activities and the operation of equipment near known roost sites have the potential to harass individual bats. Harassment of these individuals may result in the temporary avoidance of roost sites during project activities. Additionally, cleaning and resealing the bridge expansion joints may displace roosting bats. Caltrans does not anticipate long-term impacts to bat species.

Riparian habitats within the BSA provide habitat for woodrats. Middens located in permanent impact areas will have to be removed and/or relocated. If any middens are located in the temporary impact zone, they may not need to be removed depending on the type of project activities that will occur, but construction could disturb the woodrats enough to cause midden abandonment.

The proposed Project could result in temporary loss or disturbance of habitats that are used by nesting migratory birds. During construction, common migratory birds may be

temporarily displaced by habitat alteration or noise from construction equipment. However, implementation of the proposed AMMs is anticipated to prevent direct mortality of migratory birds. The proposed Project may potentially disturb a small amount of unoccupied habitat used by nesting or foraging migratory birds. This impact would be temporary in nature and limited to a relatively small area.

Direct effects to Western Pond Turtle (WPT) may result from relocation efforts and earth-moving activities in potential habitat. Indirect effects may result from habitat exclusion, water quality degradation from erosion or sediment loading due to construction activities, and temporary removal of potential cover or basking habitat. The water quality impacts are unlikely, given the proposed AMMs and Caltrans BMPs.

AMMs BIO-1 through BIO-30 would minimize the potential impacts to state species of special concern and species listed on CDFW's Special Animals List.

Federally and/or State Listed Species

Five species with moderate to high likelihood of presence in the project area are federally and/or state listed: California Red-legged Frog (CRLF), Alameda Whipsnake (AWS), California Tiger Salamander (CTS), Foothill Yellow-legged Frog (FYLF), Western Pond Turtle (WPT), and Central California Coast DPS Steelhead. Natural history and occurrence information for each is detailed below.

California Red-legged Frog
Direct effects to individual CRLF may occur throughout the PCA as a result of construction activities, including site preparation, use of heavy equipment, and the placement of temporary and permanent fills within dispersal and foraging habitat. Activities during construction could result in injury or death to individual frogs in the construction area. All efforts to minimize direct effects would be made with the implementation of AMMs. Due to the cryptic nature of the species, detection of individuals may not always occur. While there is potential for direct mortality due to excavation and grading activities, the potential is low as this species is not expected to occur in high densities in the PCA.

Indirect impacts may result from habitat exclusion, and construction activities could result in water quality degradation from erosion or sediment loading. The water quality impacts are unlikely, given the proposed AMMs and Caltrans BMPs. AMMs would be implemented to schedule work outside of typical breeding and dispersal times and to prevent individuals from entering the BSA. Filling the scour hole with RSP will permanently eliminate the potentially low-quality breeding habitat and/or plunge pool.

The impacts to CRLF habitat include 0.430 acre of temporary impacts to grassland, riverine, riparian habitats, and no permanent impacts to habitat. The project would not create permanent barriers to wildlife movement or cause increased roadside mortality. Construction activities would be conducted during the dry season, when adult frogs are

not expected to be dispersing through the project area. Caltrans has determined that the project may affect and is likely to adversely affect CRLF.

To reduce impacts to CRLF, Caltrans would restore impacted habitat on-site and provide compensation for temporary and permanent impacts to the species through off-site compensatory mitigation (MM BIO-X). To mitigate for the elimination of potential breeding habitat within the filled scour hole, a low-elevation depression will be created in the new creek alignment between piers 8 and 9. The location and depth of the pool will be determined during the design phase.

Alameda Whipsnake
Project impacts to AWS are unlikely given their low potential to occur within the BSA. Alameda Creek is a perennial creek that could support AWS dispersal. However, there are no CNDDB occurrences within four miles of the BSA. Therefore, there is a low potential for this section of Alameda Creek to be used by AWS for dispersal and/or foraging activities. No suitable breeding habitat is present in or near the BSA. The project would not create any new barriers to dispersal for the species. AMMs would be implemented to prevent individuals from entering the BSA. As a result, this Project may affect but is not likely to adversely affect AWS.

California Tiger Salamander
The BSA is located within an incorporated part of Alameda County near the town of Sunol and is mostly surrounded by quarries. The hillsides surrounding Sunol include stock ponds and seasonal depressions that support populations of CTS. There are known CNDDB occurrences within the surrounding hillsides, and CTS are known to use localities within 1.3 miles of suitable breeding habitat. Given that Alameda Creek, within the BSA, appears to be the main corridor between upland and wetland habitats, the BSA has a high potential to be used by CTS for dispersal and/or foraging activities. The project would not create any new or permanent barriers to dispersal for the species. AMMs would be implemented to schedule work outside of typical breeding and dispersal times and to prevent individuals from entering the BSA.

The impacts to CTS habitat include 0.310 acre of temporary impacts to grassland and riparian habitats, and no permanent impacts. Caltrans has determined that this project may affect and is likely to adversely affect CTS.

Foothill Yellow-Legged Frog
The BSA is mostly surrounded by quarries. There is a low potential for this section of Alameda Creek to be used by FYLF for dispersal and/or foraging activities. However, due to the dense vegetation and deep shade under the center span of the bridge, there is no open, sunlit breeding habitat present in or near the BSA. Additionally, FYLF are an easily disturbed species that are not likely to breed near the activity of the gravel mine (Pacheco et al. 2021). The Project would not create any new barriers to dispersal for the

species. AMMs would be implemented to prevent individuals from entering the PCA. As a result, this Project is expected to have no measurable impact on FYLF.

Steelhead – Central California Coast DPS
Direct effects to protected steelhead in the form of fish handling may occur during the stream realignment process. Indirect effects may include habitat exclusion and construction activities could result in water quality degradation from erosion or sediment loading. The water quality impacts are unlikely, given the proposed AMMs and Caltrans BMPs.

Permanent effects to habitat in the PCA for protected steelhead may result from installation of rock slope protection (RSP). Temporary impacts would affect 0.120 acre of steelhead habitat, and permanent impacts would affect 0.021 acre. Caltrans has determined that steelhead will be affected and may be adversely affected by the project.

b) Less than Significant with Mitigation Incorporated

Habitats and Natural Communities of Special Concern

Hind's Walnut Riparian Forest
Riparian canopy height is approximately 100 feet in a mature riparian forest, with a canopy cover of 20 to 80 percent. Most trees are winter deciduous. There is generally a subcanopy tree layer and an understory shrub layer. Dominant over-story species include California sycamore (*Platanus racemose*), Fremont's cottonwood (*Populus fremontii*), big leaf maple (*Acer macrophyllum*), and white alder (*Alnus rhombifolia*). Sub-canopy species include arroyo willow (*Salix lasiolepis*), red willow (*Salix laevigata*), and sandbar willow (*Salix exigua*). Understory species include poison oak (*Toxicodendron diversilobum*), California blackberry (*Rubus ursinus*), Himalayan blackberry (*Rubus armeniacus*), and mugwort (*Artemisia californica*).

Riparian forest is the dominant natural habitat along the banks of Alameda Creek throughout the BSA. West of the bridge is a stand of Hind's walnut, or riparian forest, along with related riparian vegetation.

Sandbar Willow and Mulefat Thicket Riparian Scrub-Shrub
Scrub-shrub were identified on the south side of Alameda Creek. The riparian scrub-shrub habitats are relatively small and adjacent to the edge of the creek. The dominant vegetation for the scrub-shrub was mulefat thickets. Mulefat (*Baccharis salicoifolia*) is an evergreen shrub that occurs in both seasonally or intermittently flooded habitats, and stands are inherently variable depending on the amount of inundation and scouring. Sandbar willow and its related shrub alliance grows along the banks of Alameda Creek east of the bridge.

Alameda Creek Riverine
The riverine community (0.220 acres total) is typically characterized by intermittent or continually running water. The riverine community within the BSA is the active floodplain

of Alameda Creek, including the cobble and boulder margins and islands within the creek. Riverine habitat contains vegetation such as torrent sedge (*Carex nudata*) shadowed by over-story trees, including white alder, black walnut, Fremont cottonwood, and western sycamore. Tules (*Schoenoplectus* spp.), rushes (*Juncus* spp.), and a variety of strictly hydrophytic vegetation may also occur within this habitat.

The proposed project would have direct impacts to the vegetation communities, including removal of trees and vegetation, ground disturbance, and pruning. Indirect impacts include disturbance cause by heavy equipment and construction. The acreages of the sensitive natural communities that would be impacted by the project are summarized in Table 2 Upon project completion, all temporarily disturbed vegetated areas will be contoured to preconstruction grades, where appropriate, and replanted with appropriate native vegetation.

Table 2-2. Landcover Types and Impacts within the PCA

Land Cover Type	Total Present within the BSA (Acres)	Temporary Impacts (Acres)	*Permanent Impacts (Acres)	Total Impacts (Acres)
Creek	0.158	0.120	0.021	**0.241**
Hind's Walnut	0.097	0.000	0.000	**0.000**
Mulefat Thicket	0.035	0.018	0.000	**0.018**
Sandbar Willow	0.051	0.051	0.000	**0.051**

*Permanent impacts are associated with the placement of rock to fill the scour holes. Although classified as permanent, the area will continue to be part of the "creek" post construction. There is no net loss of creek associated with the project.

Implementation of AMMs would mitigate any potential impacts to habitat and natural communities of special concern to less than significant.

Trees

A tree survey was conducted on April 4, 2022. Approximately 45 trees were identified within the BSA. The area immediately surrounding Alameda Creek contains a mixture of native and non-native trees that are mostly riparian. Dense thickets of sandbar willows (*Salix exigua*) dominate the wetland and floodplain areas both upstream and downstream. A strand of Hind's walnut (*Juglans hindsii*) exists on the bank of the creek immediately north of I-680. Other native riparian trees include Fremont cottonwood (*Populus fremontii*) and western sycamore (*Platanus racemose*). Coast live oak (*Quercus agrifolia*), and bay laurel (*Umbellularia californica*) are present in upland areas. Non-native trees within the BSA include olive (*Olea europaea*), eucalyptus (*Eucalyptus* spp.) and tree tobacco (*Nicotiana glauca*). Additionally, there are six trees at the southwestern end of the BSA that are unidentifiable due to death or bareness of foliage. These trees may need to be removed or trimmed for equipment access. It is

important to note that the above represents the number of trees within the BSA, and not the number of trees that may be affected.

The estimated number of trees located within temporary or permanent impact areas are presented in Table 3. Trees located in permanent impact areas are likely to be removed during Project activities. Some trees located in temporary impact areas may be preserved depending on the specific activity occurring near them. To be conservative, Caltrans is accounting for removal of all trees in temporary impact areas. During construction, Caltrans would try to reduce impacts to trees in temporary impact areas to the greatest extent possible.

Table 2-3. Trees within Estimated Impact Areas

Species	Number of Trees within Impact Area
CA bay laurel tree	3
Coast live oak	1
Eucalyptus species*	7
Fremont cottonwood	3
Hind's walnut	7
Olive species*	1
Tobacco tree*	4
Western sycamore	1
Total	**27**

*Denotes non-native species

Caltrans would provide tree replacement on-site to the maximum extent possible and an off-site planting strategy would be developed in coordination with CDFW and RWQCB during the permitting process to address the balance of the tree mitigation needed. Trees removed from the riparian zone will be included in the CDFW 1602 Lake and Streambed Alteration Agreement (LSAA) application. Trees in the upland areas would be compensated for under CEQA on-site and off-site as described above.

c) Less than Significant with Mitigation Incorporated

Alameda Creek is the third largest tributary to the San Francisco Bay. The main stem of Alameda Creek flows for over 40 miles, originating in the hills northeast of Mount Hamilton. Alameda Creek flows north through Niles Canyon to the 12-mile long Alameda Creek Flood Control Channel before reaching the San Francisco Bay.

Within the BSA, there are approximately 0.22 acre of perennial creek and wetlands. Of this acreage, the Project would result in 0.171 acre of temporary impacts and 0.021 acre of permanent impacts. Permanent impacts are associated with the placement of rock to fill the scour holes. Although classified as permanent, the area will continue to be part of the "creek" post construction. There is no net loss of creek associated with the project.

Implementing the Project will result in the realignment of the creek channel. The realignment would not prevent the creek from naturally changing topography over time. Careful attention to details of RSP installation may benefit Alameda Creek by improving fish passage and spawning habitat and reducing the maintenance needs of the bridge.

No mitigation is expected because there is no net loss of wetlands and waters. Final mitigation requirements would be established with USACE during the permitting phase of the project.

With the use of Caltrans standard BMPs and AMMs, and the proposed mitigation, the project is expected to have a less than significant impact on protected wetlands and waters.

d) Less than Significant Impact

As discussed above, several species of animals, including state and federally listed species, are expected to have a moderate to high chance of occurring in the project area.

Construction of the Project would include installation of a creek diversion and dewatering structures and creek realignment that would result in temporary direct and indirect effects to California Central Coast DPS steelhead, which may use the project area as a migratory corridor.

The implementation of AMMs, including wildlife exclusion fencing and seasonal work restrictions, would minimize project impacts to species by allowing for their safe passage outside the proposed construction area and limiting construction to seasons when species are least likely to move through the project area. The project would have a less than significant impact to migratory wildlife corridors.

e) No Impact

Trees within Caltrans ROW are under state control and are not subject to Alameda County Tree Ordinance, Ordinance No. 0-2003-23. Caltrans will coordinate with local agencies in a good faith effort to address tree ordinances.

f) No Impact

This project will not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

AMMs and/or MMs:

> **AMM BIO-1: Permits.** Caltrans would include a copy of all relevant permits within the construction bid package of the proposed project. The Resident Engineer or their designee would be responsible for implementing the Conservation Measures and Terms and Conditions of all relevant permits.

AMM BIO-2: Biological Monitor Approval. Caltrans would submit the names and qualifications of the biological monitor(s) for CDFW and USFWS approval prior to initiating construction activities for the proposed project. Only agency-approved biological monitors will implement the monitoring duties outlined in the USFWS BO and CDFW ITP including delivery of the Worker Environmental Awareness Training Program.

AMM BIO-3: Biological Monitoring. The agency-approved biologist(s) would be on-site during initial ground-disturbing activities, the installation and removal of creek diversion, and thereafter as needed to fulfill the role of the approved biologist as specified in project permits. The biologist(s) would keep copies of applicable permits in their possession when on-site. Through the RE or their designee, the agency-approved biologist(s) would be given the authority to communicate either verbally, by telephone, email or hard copy with all project personnel to ensure that take of listed species is minimized and permit requirements are fully implemented. Through the RE or their designee, the agency-approved biologist(s) would have the authority to stop project activities to minimize take of listed species or if they determine that any permit requirements are not fully implemented. If the agency-approved biologist(s) exercises this authority, the agencies must be notified by telephone and email within 48 hours.

AMM BIO-4: Worker Environmental Awareness Training. All construction personnel would attend a mandatory environmental education program delivered by an agency-approved biologist prior to working on the project. The program will focus on the conservation measures that are relevant to employee's personal responsibility and will include an explanation as how to best avoid take of sensitive species. Disturbed materials will include a pamphlet with distinguishing photographs of sensitive species, species' habitat requirements, compliance reminders, and relevant contact information. Documentation of the training, including sign-in sheets, will be kept on file and will be available on request.

AMM BIO-5: Preconstruction Surveys. Prior to any ground disturbance, preconstruction surveys would be conducted by an agency-approved biologist for listed species. These surveys would 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) would investigate all potential cover sites. This includes thorough investigation of mammal burrows, rocky outcrops, appropriately sized soil cracks, tree cavities, and debris. Native vertebrates found in the cover sites within the project limits would be documented and relocated to an adequate cover site in the vicinity.

AMM BIO-6: Prevention of Wildlife Entrapment. To prevent inadvertent entrapment of listed species during construction, excavated holes or trenches more than one foot deep with walls steeper than 30 degrees would be covered at

the close of each working day by plywood or similar materials. Alternatively, an additional four-foot-high vertical barrier, independent of exclusionary fences, would be used to further prevent the inadvertent entrapment of listed species. If it is not feasible to cover an excavation or provide an additional four-foot-high vertical barrier, independent of exclusionary fences, one or more escape ramps constructed of earth fill or wooden planks would be installed. Before such holes or trenches are filled, they would be thoroughly inspected for trapped animals. If at any time a trapped listed animal is discovered, the on-site biologist will relocate the animal outside the limits of construction in accordance with agency established protocol. Special-status species that do not have formal USFWS take covered cannot be relocated. In such cases, CDFW or USFWS would be contacted by telephone for guidance. CDFW or USFWS would be notified of the incident by telephone and electronic mail within 48 hours.

AMM BIO-7: Environmentally Sensitive Area Fencing. The limits of construction zones within suitable habitat for listed species would be delineated with high visibility environmentally sensitive areas (ESA) fencing at least four feet in height to prevent wildlife from accessing the construction footprint. The fencing would be removed only when all construction equipment is removed from the site. No project activities would occur outside the delineated PCA. ESA fencing is not required for construction activities occurring outside of suitable habitat for listed species.

AMM BIO-8: Special-Status Species On-Site. The Resident Engineer would immediately contact the agency-approved project biologist(s) if a special-status species is observed within a construction zone. The Resident Engineer would suspend construction activities within a 50-foot radius of the animal until the animal leaves the site voluntarily or an agency-approved protocol for removal has been established.

AMM BIO-9: Work Window. All work within suitable aquatic habitat for steelhead, California red-legged frog (CRLF) and California tiger salamander (CTS) would occur between June 1 and October 15, when there is less potential for an individual to enter the work area. During this time, California red-legged frog and California tiger salamander would have a lower potential for movements across upland habitat.

AMM BIO-10: Work Windows for Nesting Birds. To the extent practicable, clearing and grubbing activities should not occur within the bird nesting season (February 1 to September 30). When it is necessary to conduct clearing during the nesting season, preconstruction surveys will be conducted within the BSA prior to clearing and grubbing of vegetation.

AMM BIO-11: Preconstruction Surveys for Nesting Birds. Preconstruction surveys for nesting birds would be conducted by a qualified biologist no more than 72 hours prior to the start of construction for activities occurring during the breeding season (February 1 to September 30). If preconstruction surveys indicate the presence of nests of any special-status species, USFWS will be consulted to determine the appropriate buffer area to be established around the nesting site for the duration of the breeding season.

AMM BIO-12: Non-Disturbance Buffer for Nesting Birds. If work is to occur within 300 feet of active raptor nests or 50 feet of active passerine nests, a non-disturbance buffer would be established at a distance sufficient to minimize disturbance based on the nest location, topography, cover, the species' sensitivity to disturbance, and the intensity/type of potential disturbance.

AMM BIO-13: Preconstruction survey for Nesting Birds. Preconstruction surveys for roosting bats would be conducted by a qualified biologist no more than 72 hours prior to the start of construction.

AMM BIO-14: Exclusion of Bats from Existing Bridge. If bats are detected prior to the start of construction, a roosting bat exclusion plan would be developed and implemented. At a minimum, this plan should address how one-way exclusion devices would be used to allow bats to safely exit the current bridge prior to joint cleaning and sealing. Specific night bat roost AMMs would be developed through technical assistance with CDFW and bat specialists. Exclusion of bats would only occur between March 1 to April 15 and August 31 to October 15 to avoid sensitive periods.

AMM BIO-15: Material Storage. All construction pipes, culverts, or similar structures, construction equipment or construction debris left overnight within the work area will be inspected by the agency-approved biological monitor prior to being moved.

AMM BIO-16: Water Diversion Structures. Water diversion would be designed to exclude construction activities from adversely impacting the water quality of Alameda Creek while maintaining flow through the project area. The contractor would be required to submit a Water Diversion Plan to appropriate regulatory agencies for approval prior to construction.

AMM BIO-17: Water Quality Inspection. Water quality inspector(s) would inspect the site after a rain event to ensure that the stormwater best management practices (BMPs) are adequate.

AMM BIO-18: Vehicle Use. Project employees would be required to comply with guidance governing vehicle use, speed limits on unpaved roads, fire prevention, and other hazards.

AMM BIO-19: Night Work. To the extent practicable, nighttime work within Alameda Creek would be minimized.

AMM BIO-20: Night Lighting. Artificial lighting of the proposed BSA during nighttime hours would be minimized to the maximum extent practicable and would be pointed away from sensitive resources.

AMM BIO-21: Trash Control. All food-related trash items such as wrappers, cans, bottles, and food scraps would be disposed of in closed containers and removed at least once a day from the work area.

AMM BIO-22: Firearms. No firearms would be allowed in the PCA except for those carried by authorized security personnel, or local, state, or federal law enforcement officials.

AMM BIO-23: Pets. To prevent harassment, injury, or mortality of sensitive species, no pets would be permitted on the project site.

AMM BIO-24: Caltrans Standard Best Management Practices (BMPs). The potential for adverse effects to water quality would be avoided by implementing temporary and permanent BMPs outlined in Section 13.2 of the 2019 Caltrans Standard Specifications. Caltrans erosion control BMPs would 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 Stormwater Pollution Prevention Plan (SWPPP) would be developed for the project, as one is required for all projects that have at least one acre of soil disturbance. The SWPPP complies with the Caltrans Storm Water Management Plan (SWMP). The SWMP includes guidance for design staff to include provisions in construction contracts to include measures to protect sensitive areas and to prevent and minimize storm water and non-storm water discharges.

The SWPPP would reference the Caltrans Construction Site BMPs Manual. This manual is comprehensive and includes many other protective measures and guidance to prevent and minimize pollutant discharges, and can be found at the following website: https://dot.ca.gov/programs/construction/storm-water-and-water-pollution-control/manuals-and-handbooks.

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

a. No discharge of pollutants from vehicle and equipment cleaning are allowed into the storm drain or water courses.
b. Vehicle and equipment fueling, and maintenance operations must be at least 50 feet away from water courses.

c. Concrete wastes are collected in washouts and water from curing operations is collected and disposed of and not allowed into water courses.
d. Dust control will be implemented, including use of water trucks and tackifiers to control dust in excavation and fill areas, rocky temporary access road entrances and exits, and covering temporary stockpiles when weather conditions require.
e. Coir rolls will be installed along or at the base of slopes during construction to capture sediment and temporary organic hydro-mulching will be applied to all unfinished disturbed and graded areas.
f. Work areas where temporary disturbance has removed the pre-existing vegetation will be restored and re-seeded with a native mix.
g. Graded areas will be protected from erosion using a combination of silt fences, fiber rolls along toe of slopes or along edges of designated staging areas, and erosion-control netting (such as jute or coir) as appropriate.
h. A Revegetation Plan will be prepared for restoration of temporary work areas. Pavement and base will be removed; topography blended with the surrounding area; and topsoil will be salvaged from the new alignment area to be placed over the restored area, which will then be revegetated with native grassland species.

AMM BIO-25: Prohibition of Monofilament Erosion Control. Plastic mono-filament netting (erosion control matting) or similar material would not be used for the project because California red-legged frog and California tiger salamander may become entangled or trapped in it. Acceptable substitutes include coconut coir matting or tackified hydroseeding compounds.

AMM BIO-26: Concrete Waste and Stockpiles. All grindings and asphaltic-concrete waste would be stored within previously disturbed areas absent of habitat and at a minimum of 150 feet from any aquatic habitat, culvert, or drainage feature.

AMM BIO-27: Revegetation Following Construction. All areas that are temporarily affected during construction would be revegetated with an assemblage of native grass, shrub, and trees as appropriate. Invasive, exotic plants would be controlled within the PCA to the maximum extent practicable, pursuant to Executive Order 13112.

AMM BIO-28: Upland and Riparian Trees. During the design phase of the project, Caltrans Office of Biological Science and Permitting would work with the Caltrans design team to avoid and minimize project impacts to upland and riparian trees. Efforts to preserve trees in place, by designating trees on plan sheets and marking trees with ESA fencing, would be made to avoid or minimize project impacts to trees located in temporary impact areas.

AMM BIO-29: Rock Slope Protection Size and Placement. RSP shall be of an adequate size to create cover and refuge for juvenile salmonids and gravel shall be placed in interstitial areas to create spawning habitat.

AMM BIO-30: Fish Relocation Plan. A fish removal and relocation plan will be prepared and submitted to the regulatory agencies for review and approval at least 60 days prior to the installation of the dewatering system. The plan will include the methodology of capturing and relocating the fish.

2.1.5 Cultural Resources

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

CEQA Significance Determinations for Cultural Resources

This section is summarized from the Caltrans District 4 Office of Cultural Resource Studies (OCRS) Completion of Section 106 Compliance memorandum that was prepared for this project, dated August 9, 2021.

No significant historical resources are within the project area.

a) No Impact

Background research and identification efforts did not reveal any recorded historical resources in the area that will be affected by the proposed project.

b) No Impact

Background research and identification efforts did not reveal any recorded archaeological resources in the area that will be affected by the proposed project. A survey for archaeological resources was completed in August 2021.

c) No Impact

There are no known interred human remains within the project vicinity.

Standard Conservation Measures:

> **CULT-1:** If remains are discovered during excavation, all work within 60 feet of the discovery will halt and Caltrans' OCRS will be called. A Caltrans OCRS qualified archaeologist will assess the remains and, if determined human, will contact the County Coroner as per Public Resources Code (PRC) Sections

5097.98, 5097.99, and 7050.5 of the California Health and Safety Code. If the Coroner determines the remains to be Native American, the Coroner will contact the Native American Heritage Commission (NAHC) who will assign a Most Likely Descendant. Caltrans will consult with the Most Likely Descendant on treatment and reburial of the remains. Further provisions of PRC 5097.98 are to be followed as applicable.

AMMs and/or MMs:

No impacts are anticipated; therefore, no measures are proposed.

2.1.6 Energy

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

CEQA Significance Determinations for Energy

a) <u>No Impact</u>

The proposed project would not add travel lanes to I-680 that would increase roadway capacity or build structures that would require substantial direct or indirect energy use. The project would result in direct energy use during construction for the operation of on-site construction equipment. The project would not introduce any new activities that would significantly impact or increase energy use.

b) <u>No Impact</u>

The proposed project will not add travel lanes to I-680 that would increase roadway capacity. The project will result in direct energy use during construction for the operation of on-site construction equipment. The project would not conflict with or obstruct any state or local plans for renewable energy or energy efficiency.

AMMs and/or MMs:

No Impacts are anticipated; therefore, no measures are proposed.

2.1.7 Geology and Soils

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Directly, or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:	-	-	-	X
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?	-	-	-	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

CEQA Significance Determinations for Geology and Soils

This section summarizes the Geologic and Paleontological Environmental Study/Memorandum prepared for this project, which is dated September 7, 2021.

a) No Impact

The proposed work would not further expose the public to adverse effects from earthquakes, liquefaction, landslides, or other geologic hazards.

b) No Impact

The work activities are not expected to impact soil conditions. There would be no disturbance to the native ground or native subsurface from this project.

c) No Impact

The project is not located on a geologic unit or soil that is unstable, nor is it located on an expansive soil.

d) No Impact

The project is not located on a geologic unit or soil that is unstable, nor is it located on an expansive soil.

e) No Impact

There are no nearby residences and the project does not propose to install sewers or wastewater treatment systems.

f) No Impact

The Geologic and Paleontological Environmental Study/Memorandum prepared for this project on September 7, 2021 determined that the excavations for the proposed project will be shallow and superficial. There would be no impacts to sensitive paleontological resources or unique geologic features within the project limits.

AMMs and/or MMs:

No impacts are anticipated; therefore, no measures are proposed.

2.1.8 Greenhouse Gas Emissions

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

CEQA Significance Determinations for Greenhouse Gas Emissions

a) Less Than Significant Impact

Section 2.2.3 provides an analysis of construction-related and operational greenhouse gas (GHG) emissions. Construction-related GHG emissions were calculated using the Road Construction Emissions Model (RCEM), version 9.0.0, provided by the Sacramento Metropolitan Air Quality Management District. Construction duration would total eighteen (18) months, the total amount of Carbon Dioxide (CO_2) produced during construction of the project would be 589.16 tons. While the project would result in GHG emissions during construction, no increase in vehicle miles traveled (VMT) would occur because the project would not increase the number of travel lanes on I-680. Therefore, the project is not anticipated to result in an increase in operational GHG emissions. With implementation of construction emissions reduction measures, construction-related impacts would be less than significant.

b) Less Than Significant Impact

During construction of the proposed project, Caltrans would require compliance with all local climate action plans, and State and federal regulations, ordinances, and statutes that apply to GHG emissions. The project is not anticipated to result in an increase in operational GHG emissions, and construction GHG emissions would be minimized. Accordingly, the project would not conflict with plans, policies, or regulations aimed at reducing GHG emissions.

2.1.9 Hazards and Hazardous Materials

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	-	-	-	X
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	-	-	-	X
c) Emit hazardous emissions or handle hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	-	-	-	X
d) Be located on a site which is include 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 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

CEQA Significance Determinations for Hazards and Hazardous Materials

a) No Impact

The scoured-soil removal and RSP placement under the bridge will not involve soils expected to be affected by surface-deposited contaminants, such as aerially deposited lead (ADL). Project construction would not result in hazards to the public or the environment through the transport, use, or disposal of hazardous materials.

b) No Impact

Based on preliminary investigations, there is no potential for release of hazardous materials into the environment.

c) No Impact

Based on preliminary investigations, there is no potential for release of hazardous materials into the environment. The project is not located within 0.25 mile of a school.

d) No Impact

The project is not located on a site included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5.

e) No Impact

The project is not located within an airport land use plan or within two miles of a public airport or public use airport. Nor is the project located in the vicinity of a private airstrip.

f) No Impact

The project would not impair the implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

g) No Impact

The project is primarily surrounded by grazing lands, rural dwellings, and generally undeveloped, grassy areas. Urbanized areas adjacent to the project are commercial and industrial. The project would take place in existing Caltrans ROW and would not change existing land use. The project will apply standard specifications 7.1.02M(2) for fire prevention during construction. The project would not increase or contribute to new risks of exposure to fire hazards for the surrounding community.

Standard Conservation Measures:

HAZ-1: Caltrans Standards will be followed for the proper handling and disposal of any unanticipated hazardous waste discovered during construction.

HAZ-2: The project will implement BMPs according to special provision 12-11.09 “Minimal Disturbance of Regulated Material Containing ADL.”

AMMs and/or MMs:

No impacts are anticipated; therefore, no measures are proposed.

2.1.10 Hydrology and Water Quality

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	-	-	X	
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede substantial groundwater management of the basin?	-	-	X	-
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:	-	-	X	-
i) Result in 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

CEQA Significance Determinations for Hydrology and Water Quality

This section summarizes the Water Quality Study that was prepared for this project, which is dated September 2021.

This project is under jurisdiction of the San Francisco Bay Regional Water Quality Control Board (RWQCB; Region 2). This project would result in more than an acre of disturbed soil area (DSA) and will require a Storm Water Pollution Prevention Plan (SWPPP). The project lies in Hydrological Sub Area 204.30 in the South Bay hydrologic unit. Runoff drains into Alameda Creek.

a) Less Than Significant Impact

Project construction would result in temporary impacts to water quality from installation and removal of the temporary creek diversion system. The project's total DSA is estimated at 1.89 acres. The project would not result in new impervious area. Construction site BMPs for erosion and sediment control and material management, as specified in the required SWPPP, would be used during construction to avoid or reduce impacts. These measures are consistent with the practices required under the Construction General Permit and Caltrans' existing MS4 permit and are intended to achieve compliance with the requirements of the permits. With implementation of short-term and long-term BMPs, effects to surface and ground water quality would be less than significant.

b) Less Than Significant Impact

The project is located within the Sunol Valley Basin (Sunol Valley Unit). There are limited data with respect to the number and yield wells in the Sunol Valley Basin. The groundwater levels within the project area can be assumed to be at creek level.

The project would require a temporary creek diversion to perform the scour repair work. With the diversion in place, water would not flow over a small portion of the channel, and groundwater levels may be temporarily affected. Groundwater from dewatering of excavations would be stored in Baker tanks during construction and discharged and/or disposed of in accordance with provisions in the project's NPDES permit.

Changes to groundwater occurrence and levels due to project construction, if groundwater levels are affected at all, would not detrimentally affect regional groundwater production or change the existing water quality.

The project is not expected to significantly impact groundwater supplies.

c) Less than Significant Impact

i. Less Than Significant Impact

Construction of the Build Alternative would result in soil erosion from grading and earthmoving activities. With implementation of standard Caltrans BMPs and AMMs in

accordance with the Section 401 and 404 permits, potential impacts related to erosion or siltation on- or off-site during and after construction would be less than significant.

ii, iii, iv. No Impact

The scour repair within the creek would not change the 100-year storm event elevations. Related roadway work, which would not impact the creek, would also have no impact to the base floodplain elevation. In addition, the project proposes no changes to existing drainage systems. With implementation of permanent BMPs and permitted AMMs, the project would not substantially increase the amount of runoff on- or off-site or contribute to runoff that would exceed the capacity of existing drainage systems.

The project would not impede or redirect flood flows.

The impacts of the Build Alternative would be less then significant.

d) No Impact

The proposed project is not located in an area that would be subject to inundation by seiche, tsunami, or mudflow.

e) No Impact

The proposed project would require a Section 404 permit issued by USACE and a CWA 401 Water Quality Certification from the San Francisco RWQCB. Permits would require project implementation of measures in accordance with applicable water quality control plans. The project is not expected to impact groundwater supplies.

The proposed project would not conflict with or obstruct the implementation of a water quality control plan or sustainable groundwater management plan.

Standard Conservation Measures:

HYDRO-1: Standard BMPs. The potential for adverse effects to water quality will be avoided by implementing temporary and permanent BMPs outlined in Section 7-1.01G of the Caltrans Standard Specifications. Caltrans erosion control BMPs will be used to minimize any wind- or water-related erosion. BMPs to be implemented within the project area will include, at a minimum:

a. No discharge of pollutants from vehicle and equipment cleaning will be allowed into storm drains or water courses.
b. Vehicle and equipment fueling, and maintenance operations must be at least 50 feet away from water courses.
c. Concrete wastes will be collected in washouts, and water from curing operations will be collected, disposed of, and not allowed into water courses.
d. Dust control will be implemented, including use of water trucks and tackifiers to control dust in excavation and fill areas, rocking temporary

access road entrances and exits, and covering temporary stockpiles when weather conditions require.

e. Coir rolls will be installed along or at the base of slopes during constructions to capture sediment, and temporary organic hydro-mulching would be applied to all unfinished disturbed and graded areas.
f. Work areas where temporary disturbance has removed the pre-existing vegetation will be restored and reseeded with a native seed mix.
g. Graded areas will be protected from erosion using a combination of silt fences, fiber rolls along toe of slopes or along edges of designated staging areas, and erosion-control netting (such as jute or coir) as appropriate.
h. A Revegetation Plan will be prepared for restoration of temporary work areas.

HYDRO-2: During construction, a silt fence will be used to intercept and slow the flow of sediment-laden sheet flow runoff. A silt fence is a temporary linear sediment barrier of permeable fabric.

HYDRO-3: Prior to commencement of construction activities, a SWPPP will be prepared by the Contractor and approved by Caltrans, in compliance with the requirements of the Regional Water Quality Control Board (RWQCB) as well as the 2018 Caltrans Standard Specifications, Section 13. The SWPPP will provide water pollution control practices to limit storm water and non- storm water discharges; temporary construction BMPs will be used to the maximum extent practicable.

HYDRO-4: A temporary creek diversion system will be implemented, and water quality monitoring will be provided when working in the creek.

AMMs and/or MMs:

No adverse temporary or permanent impacts are anticipated; therefore, no measures are proposed.

2.1.11 Land Use and Planning

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant	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

CEQA Significance Determinations for Land Use and Planning

a) <u>No Impact</u>

The land immediately adjacent to the project is zoned agriculture. The project is situated in a predominantly rural area of unincorporated Alameda County and features a couple commercial and industrial businesses adjacent to the interstate. The project would not physically divide an established community.

b) <u>No Impact</u>

The proposed project would not cause a significant environmental impact that would conflict with an applicable land use plan, policy, or regulation.

AMMs and/or MMs:

No impacts are anticipated; therefore, no measures are proposed.

2.1.12 Mineral Resources

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

CEQA Significance Determinations for Mineral Resources

a, b) <u>No Impact</u>

The project area is immediately adjacent to the Mission Valley Rock Quarry, a 139-acre permitted gravel pit. However, the project area is not mapped by the state geologist in accordance with the state mineral land classification system (California Department of Conservation, Division of Mines and Geology 1996). The project would not involve mining or require the acquisition of land where active mining operations are occurring. The project would not result in the loss of availability of a known mineral resource or mineral recovery site.

AMMs and/or MMs:

No impacts are anticipated; therefore, no measures are proposed.

2.1.13 Noise

Would the project result in:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Generation of a substantial temporary or permanent increase in ambient noise levels in 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 of 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 exposure people residing or working in the project area to excessive noise levels?	-	-	-	X

CEQA Significance Determinations for Noise

The Project was determined not to be a Type I project per 23 CFR 772 because the Project would not increase highway capacity or modify the horizontal or vertical alignment of the highway; therefore, a traffic noise study is not required, and noise abatement need not be considered. There are no residences located near the project area. Noise generated by the project will be temporary construction noise, and standard Caltrans noise abatement measures will be applied to reduce noise. Work in the creek channel will be confined to daytime hours. Some work on the bridge deck will be done during a nighttime construction window.

a) No Impact

Anticipated noise impacts from the proposed project would be temporary and periodic, associated with construction. Noise associated with construction is controlled by Caltrans Standard Specifications, Section 14-8.02, Noise Control. The proposed project would not introduce a permanent increase in noise levels.

b) No Impact

The project does not include features or construction activities that would result in excessive groundborne vibration or groundborne noise for nearby receptors.

c) No Impact

The project is not located within the vicinity of a private airstrip, an airport land use plan, or within two miles of a public airport or public use airport. Therefore, the project would not expose people residing or working in the project area to excessive aviation noise.

AMMs and/or MMs:

No impacts are anticipated; therefore, no measures are proposed.

2.1.14 Population and Housing

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

CEQA Significance Determinations for Population and Housing

a) <u>No Impact</u>

The project will not induce growth. No new commercial or residential establishments will be built, and the project will not add travel lanes to I-680; therefore, the project will not increase roadway capacity.

b) <u>No Impact</u>

The project will not displace any housing units or people. There are no houses within the project construction area and no ROW will be acquired.

AMMs and/or MMs:

No impacts are anticipated; therefore, no measures are proposed.

2.1.15 Public Services

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:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Fire protection?	-	-	-	X
Police protection?	-	-	-	X
Schools?	-	-	-	X
Parks?	-	-	-	X
Other public facilities?	-	-	-	X

CEQA Significance Determinations for Public Services

a) <u>No Impact</u>

The proposed project would not result in the provision of new or physically altered government facilities. Furthermore, the project would not result in a need for new or physically altered government facilities in order to maintain acceptable service ratios or response times for fire protection, police protection, schools, parks, or other public facilities.

AMMs and/or MMs:

No impacts are anticipated; therefore, no measures are proposed.

2.1.16 Recreation

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

CEQA Significance Determinations for Recreation

a, b) <u>No Impact</u>

There are no neighborhood or regional parks or other recreational facilities within 0.5 mile of the project work area. The described project work activities would not result in the construction of new recreational facilities.

AMMs and/or MMs:

No impacts are anticipated; therefore, no measures are proposed.

2.1.17 Transportation and Traffic

The Traffic Management Plan (TMP) for the project will be developed in the next stage of project development. The TMP will be supported by detailed traffic studies to evaluate traffic operations. The need for necessary lane closures during off-peak hours or at night, or for short-term detour routes will be identified as required.

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	-	-	-	X
b) 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

CEQA Significance Determinations for Transportation/Traffic

a) <u>No Impact</u>

The proposed project is consistent with the California Transportation Plan 2040 and the Alameda Countywide Transportation Plan.

b) <u>No Impact</u>

The project would not conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b). The project would not result in an increase in VMT as there would be no change to the number of travel lanes on I-680 within the project limits.

c) <u>No Impact</u>

The project will not substantially increase hazards due to a design feature or incompatible uses.

d) <u>No Impact</u>

This project does not include changes in the use of the current roadway and would not require or cause changes in the use of adjacent properties. Full closures of I-680 will not be necessary. Prior to construction, Caltrans would develop a TMP to minimize delays during both day and nighttime construction. The project would not result in inadequate emergency access.

AMMs and/or MMs:

No impacts are anticipated; therefore, no measures are proposed.

2.1.18 Tribal Cultural Resources

Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	-	-	-	X
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.	-	-	-	X

CEQA Significance Determinations for Tribal Cultural Resources

a) <u>No Impact</u>

To date, Caltrans cultural staff has determined that the proposed project is not located within or adjacent to any site listed or eligible for listing in a local register or historical resources as defined in PRC section 5020.1(k).

b) <u>No Impact</u>

No previously known tribal resources have been identified within the project area and there are no known concerns associated with the proposed project impacting such resources. Caltrans OCRS sent Assembly Bill (AB) 52 letters on April 1, 2021 to California Native American tribes identified by the NAHC as requesting consultation. Caltrans received two responses from tribal groups, both of which raised concerns of

potential sensitivity for cultural resources. Caltrans Professionally Qualified Staff (PQS) provided design and a thorough review of recorded resources in the project area. Upon clarification, no other comments were received.

AMMs and/or MMs:

No impacts are anticipated; therefore, no measures are proposed.

2.1.19 Utilities and Service Systems

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which would 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

CEQA Significance Determinations for Utilities and Service Systems

a) <u>No Impact</u>

The project would not require or result in the relocation or construction of new water or wastewater treatment facilities, storm water drainage, electric power, natural gas, or telecommunications facilities. Neither would the project result in the expansion of existing facilities.

The project is not expected to exceed wastewater treatment requirements of the San Francisco Bay RWQCB (Region 2).

b) No Impact

The project does not require water supplies and would not impact current or future water supply.

c) No Impact

The project does not require the services of a wastewater treatment provider where the project would impact the capacity of the provider.

d) No Impact

The project would not require the services of a solid waste facility where the project would impact the capacity of local infrastructure or impair the attainment of solid waste reduction goals.

e) No Impact

The project is anticipated to comply with federal, state, and local statutes and regulations related to solid waste.

AMMs and/or MMs:

No impacts are anticipated; therefore, no measures are proposed.

2.1.20 Wildfire

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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

CEQA Significance Determinations for Wildfire

a) <u>No Impact</u>

All project work is expected to occur within Caltrans ROW or in temporary construction easements. This project does not propose changes in the use of the current roadway and would not require or cause changes in the use of adjacent properties. The proposed project would not substantially impair an adopted emergency response or evacuation plan.

b) <u>No Impact</u>

All project work is expected to occur within Caltrans ROW or in temporary construction easements. This project does not propose changes in the use of the current roadway and would not require or cause changes in the use of adjacent properties. The project

will apply standard specifications 7.1.02M(2) for fire prevention during construction. The proposed project would not exacerbate wildfire risks.

c) No Impact

All project work is expected to occur within Caltrans ROW or in temporary construction easements. This project does not propose changes in the use of the current roadway and would not require or cause changes in the use of adjacent properties. The proposed project would not exacerbate fire risk.

d) No Impact

All project work is expected to occur within Caltrans ROW or in temporary construction easements. This project does not propose changes in the use of the current roadway and would not require or cause changes in the use of adjacent properties. Existing drainage patterns will not be substantially altered and would not result in substantial erosion or siltation on- or off-site. The project will apply standard specifications 7.1.02M(2) for fire prevention during construction. After construction, areas cleared for contractor access and trenching operations will be treated with appropriate erosion control measures. The proposed project would not expose people or structures to significant risks.

AMMs and/or MMs:

No impacts are anticipated; therefore, no measures are proposed.

2.1.21 Mandatory Findings of Significance

	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	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 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 considered when viewed in connection with 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

CEQA Significance Determinations for Mandatory Findings of Significance

a) <u>Less Than Significant Impact</u>

The project would have significant impacts to biological resources and natural communities.

Direct effects to CRLF, CTS, and central California coast DPS steelhead are anticipated through construction of the Project. Construction activities would result in placement of temporary and permanent fills in dispersal and foraging habitat for the species. A total of approximately 0.310 acre of CTS habitat, 0.451 acre of CRLF habitat, and 0.141 acre of central California coast DPS Steelhead habitat would be temporarily and permanently affected by construction activities.

The Project would also impact as many as 27 trees. The estimate assume that all trees within the impact areas would be removed.

With implementation of mitigation measures for these resources, which include on- and of-site compensation for impacted species habitat, and tree replacement ratios in accordance with the project permitting, project impacts would be reduced to less than significant levels.

b) No Impact

All past, present, and future projects have gone through or are required to undergo an environmental review to identify, account for, and mitigate for potential significant impacts. All projects have or will incorporate standard conservation measures, including standard Caltrans BMPs, which will protect surrounding habitat and water quality. Therefore, Caltrans does not anticipate any cumulative effects as a result of the proposed project.

c) No Impact

The project does not have environmental effects which would cause substantial adverse effects on human beings.

2.2 Climate Change

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

While climate change has been a concern for several decades, the establishment of the Intergovernmental Panel on Climate Change (IPCC) by the United Nations and World Meteorological Organization in 1988 led to increased efforts devoted to GHG emissions reduction and climate change research and policy. These efforts are primarily concerned with the emissions of GHGs generated by human activity, including carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), tetrafluoromethane, hexafluoroethane, sulfur hexafluoride (SF_6), and various hydrofluorocarbons (HFCs). CO_2 is the most abundant GHG; while it is naturally occurring component of Earth's atmosphere, fossil-fuel combustion is the main source of additional, human-generated CO_2.

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

2.2.1 Regulatory Setting

This section outlines State efforts to comprehensively reduce GHG emissions from transportation sources.

State

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

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

AB 32, Chapter 488, 2006. Núñez and Pavley, The Global Warming Solutions Act of 2006: AB 32 codified the 2020 GHG emissions reduction goals outlined in EO S-3-05, while further mandating that the California Air Resources Board (ARB) create a scoping plan and implement rules to achieve "real, quantifiable, cost-effective reductions of

greenhouse gases." The Legislature also intended that the statewide GHG emissions limit continue in existence and be used to maintain and continue reductions in emissions of GHGs beyond 2020 (Health and Safety Code [H&SC] Section 38551(b)). The law requires ARB to adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective GHG reductions.

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

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

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

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

EO B-30-15 (April 2015): This EO establishes an interim statewide GHG emission reduction target of 40 percent below 1990 levels by 2030 to ensure California meets its target of reducing GHG emissions to 80 percent below 1990 levels by 2050. It further orders all state agencies with jurisdiction over sources of GHG emissions to implement measures, pursuant to statutory authority, to achieve reductions of GHG emissions to meet the 2030 and 2050 GHG emissions reductions targets. It also directs ARB to update the Climate Change Scoping Plan to express the 2030 target in terms of million metric tons of carbon dioxide equivalent ($MMTCO_2e$)[1]. The "carbon dioxide equivalent" (CO_2e) is a metric used to express amounts of other gases relative to CO_2, which is the most important GHG. Since GHGs differ in how much heat they each trap in the atmosphere (known as global warming potential, or GWP), CO_2 is used as a base for

[1] GHGs differ in how much heat each trap in the atmosphere (global warming potential, or GWP). CO_2 is the most important GHG, so amounts of other gases are expressed relative to CO_2, using a metric called "carbon dioxide equivalent" (CO_2e). The global warming potential of CO_2 is assigned a value of 1, and the GWP of other gases is assessed as multiples of CO_2.

measurement. The global warming potential of CO_2 is assigned a value of 1, and the GWP of other gases is assessed as multiples of CO_2. Finally, the EO requires the Natural Resources Agency to update the state's climate adaptation strategy, *Safeguarding California*, every 3 years, and to ensure that its provisions are fully implemented.

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

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

AB 134, Chapter 254, 2017: This bill allocates Greenhouse Gas Reduction Funds and other sources to various clean vehicle programs, demonstration/pilot projects, clean vehicle rebates and projects, and other emissions programs statewide.

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

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

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

EO N-19-19 (September 2019) advances California's climate goals in part by directing the California State Transportation Agency to leverage annual transportation spending to reverse the trend of increased fuel consumption and reduce GHG emissions from the transportation sector. It orders a focus on transportation investments near housing, managing congestion, and encouraging alternatives to driving. This EO also directs ARB to encourage automakers to produce more clean vehicles, formulate ways to help Californians purchase them, and propose strategies to increase demand for zero-emission vehicles.

2.2.2 Environmental Setting

The proposed project is in a rural area, with a primarily natural-resources based agricultural and industrial economy. I-680 is the main transportation route to and through the area for both passenger and commercial vehicles. The nearest route that connects to this stretch of roadway is SR-84, 3 miles to the north. Traffic counters are moderate to high and this segment of I-680 is intermittently congested. The Metropolitan Transportation Commission (MTC) is the regional transportation agency that guides transportation development in the project area. The Alameda County General Plan: Community Climate Action Plan Element addresses GHGs in the project area.

A GHG emissions inventory estimates the amount of GHGs discharged into the atmosphere by specific sources over a period of time, such as a calendar year. Tracking annual GHG emissions allows countries, states, and smaller jurisdictions to understand how emissions are changing and what actions may be needed to attain emission reduction goals. U.S. EPA is responsible for documenting GHG emissions nationwide, and the ARB does so for the state, as required by H&SC Section 39607.4.

State GHG Inventory

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

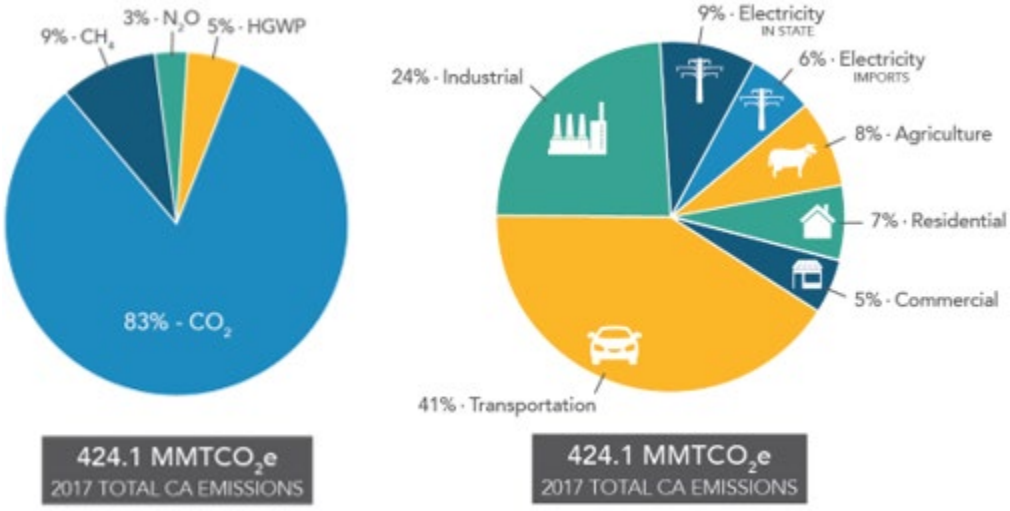

Figure 3. California 2017 Greenhouse Gas Emissions

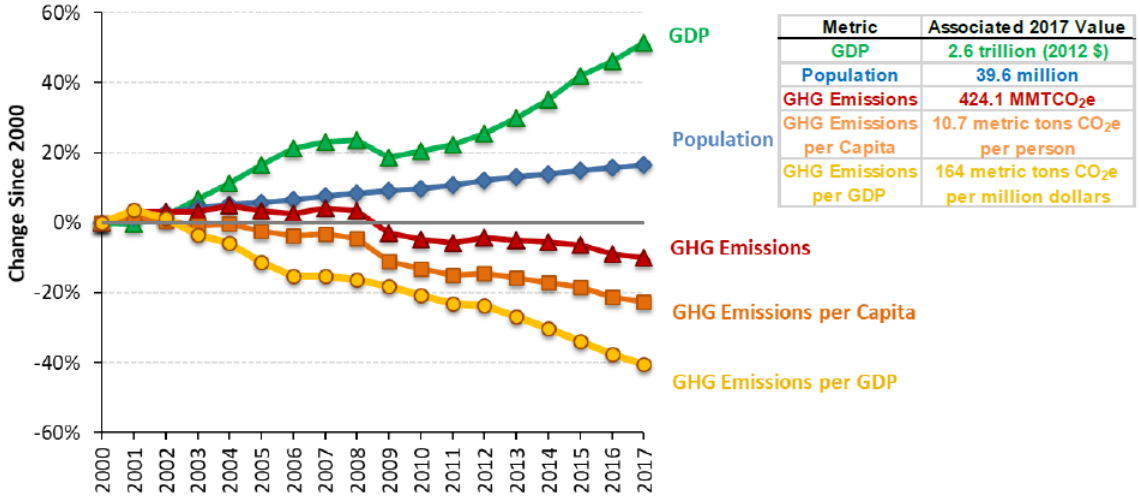

Figure 4. Change in California GDP, Population and GHG Emissions since 2000 (Source: ARB 2019a)

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

Regional Plans

ARB sets regional targets for California's 18 MPOs to achieve through planning future projects that will cumulatively achieve those goals, and reporting how they will be met in the Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). Targets are set at a percent reduction of passenger vehicle GHG emissions per person from 2005 levels. The proposed project is included in the MTC's RTP/SCS, Plan Bay Area 2050. The regional reduction target for MTC is 19% by 2035 (ARB 2021b).

The 2017 clean air plan, *Spare the Air, Cool the Climate* (BAAQMD 2017), defines strategies for climate protection in the Bay Area that support goals laid out in *Plan Bay Area 2040* (MTC and ABAG 2017). Those goals include transforming the transportation sector to reduce motor vehicle travel, promote zero-emissions vehicles and renewable fuels, adopt fixed- and flexible-route transit services, and support infrastructure and planning that enables a large share of trips by bicycling, walking, and transit.

2.2.3 Project Analysis

GHG emissions from transportation projects can be divided into those produced during operation of the SHS and those produced during construction. The primary GHGs

produced by the transportation sector are CO_2, CH_4, N_2O, and HFCs. CO_2 emissions are a product of the combustion of petroleum-based products, like gasoline, in internal combustion engines. Relatively small amounts of CH_4 and N_2O are emitted during fuel combustion. In addition, a small amount of HFC emissions are included in the transportation sector.

The CEQA Guidelines generally address greenhouse gas emissions as a cumulative impact dur to the global nature of climate change (Pub. Resources Code, § 21083(b)(2)). As the California Supreme Court explained, “because of the global scale of climate change, any one project’s contribution is unlikely to be significant by itself.” (Cleveland National Forest Foundation v. San Diego Assn. of Governments (2017) 3 Cal.5th 497, 512.) In assessing cumulative impacts, it must be determined if a project’s incremental effect is “cumulatively considerable” (CEQA Guidelines Sections 15064(h)(1) and 15130).

To make this determination, the incremental impacts of the project must be compared with the effects of past, current, and probable future projects. Although climate change is ultimately a cumulative impact, not every individual project that emits greenhouse gases must necessarily be found to contribute to a significant cumulative impact on the environment.

Operational Emissions

The purpose of the project is to address structural deficiencies in the Alameda Creek Bridge (#33-0047) on I-680. The proposed project would not increase the number of travel lanes and would result in no increase in VMT. Although some GHG emissions during the construction period would be unavoidable, no significant increase in operational GHG emissions is expected because the proposed project would not increase roadway capacity or VMT.

Construction Emissions

Construction GHG emissions would result from material processing, on-site construction equipment, workers commuting to and from the project site, and traffic delays due to construction. These emissions will be produced at different levels throughout the construction phase; their frequency and occurrence can be reduced through innovations in plans and specifications and by implementing better traffic management during construction phases.

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

Based on project information available for environmental studies, the construction-related GHG emissions were calculated using the Road Construction Emissions Model

(RCEM), version 9.0.0, provided by the Sacramento Metropolitan Air Quality Management District. It was estimated that for projected construction duration of eighteen (18) months, the total amount of CO_2 produced due to construction would be 589.06 tons (Table 3).

Table 2-4. Summary of Construction-related GHG Emission Estimates

	PARAMETERS			PROJECT TOTAL
Project Location: Alameda County, I-680 Alameda Creek Bridge (Br. No. 33 0047)	CO_2 (tons)	CH_4 (tons)	N_2O (tons)	CO_2e (metric tons)
TOTAL EMISSIONS	589.16	0.15	0.01	541.06

[1]Gases are converted to CO_{2e} by multiplying by their global warming potential (GWP). Specifically, GWP is a measure of how much energy the emissions of 1 ton of a gas will absorb over a given period of time, relative to the emissions of 1 ton of carbon dioxide (CO_2).

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 will comply with all ARB emission reduction regulations and Section 14-9.02, Air Pollution Control, which requires contractors to comply with all air pollution control rules, regulations, ordinances, and statutes. Certain common regulations, such as equipment idling restrictions, that reduce construction vehicle emissions also help reduce GHG emissions.

CEQA Conclusion

While the proposed project will result in GHG emissions during construction, it is anticipated that the project will not result in any increase in operational GHG emissions. The proposed 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 construction GHG-reduction measures, the impact would be less than significant.

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

2.2.4 Greenhouse Gas Reduction Strategies

Statewide Efforts

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

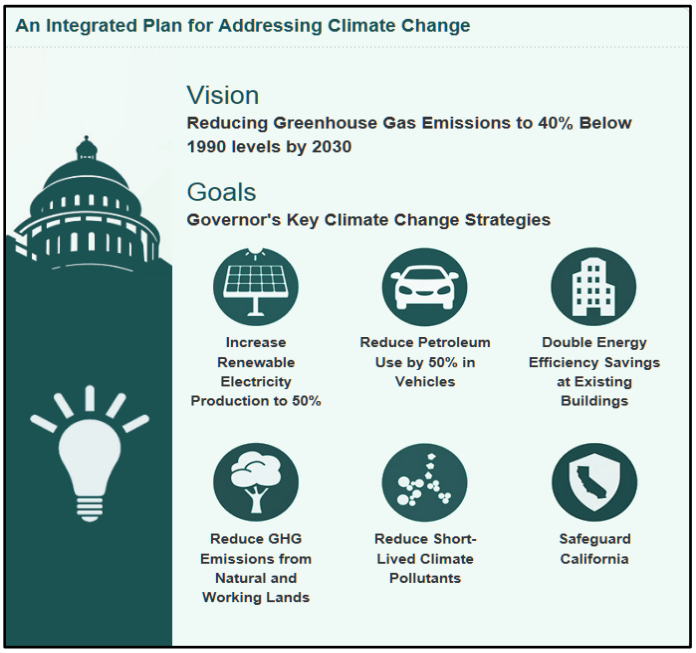

Figure 5: California Climate Strategy

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

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

Caltrans Activities

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

CALIFORNIA TRANSPORTATION PLAN (CTP 2040)

The California Transportation Plan (CTP) is a statewide, long-range transportation plan to meet our future mobility needs and reduce GHG emissions. In 2016, Caltrans completed the *California Transportation Plan 2040*, which establishes a new model for developing ground transportation systems, consistent with CO_2 reduction goals. It serves as an umbrella document for all the other statewide transportation planning documents. Over the next 25 years, California will be working to improve transit and reduce long-run repair and maintenance costs of roadways and developing a comprehensive assessment of climate-related transportation demand management and new technologies rather than continuing to expand capacity on existing roadways.

SB 391 (Liu 2009) requires the CTP to meet California's climate change goals under SB 32. Accordingly, the CTP 2040 identifies the statewide transportation system needed to achieve maximum feasible GHG emission reductions while meeting the state's transportation needs. While MPOs have primary responsibility for identifying land use patterns to help reduce GHG emissions, CTP 2040 identifies additional strategies in Pricing, Transportation Alternatives, Mode Shift, and Operational Efficiency.

CALTRANS STRATEGIC MANAGEMENT PLAN

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

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

FUNDING AND TECHNICAL ASSISTANCE PROGRAMS

In addition to developing plans and performance targets to reduce GHG emissions, Caltrans also administers several sustainable transportation planning grants. These grants encourage local and regional multimodal transportation, housing, and land use planning that furthers the region's RTP/SCS; contribute to the State's GHG reduction targets and advance transportation-related GHG emission reduction project

types/strategies; and, support other climate adaptation goals (e.g., *Safeguarding California*).

CALTRANS POLICY DIRECTIVES AND OTHER INITIATIVES

Caltrans Director's Policy 30 (DP-30) Climate Change (June 22, 2012) is intended to establish a Department policy that will ensure coordinated efforts to incorporate climate change into Departmental decisions and activities. *Caltrans Activities to Address Climate Change* (April 2013) provides a comprehensive overview of Caltrans' statewide activities to reduce GHG emissions resulting from agency operations.

Project-Level GHG Reduction Strategies

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

- Construction contractors will comply with Caltrans Standard Specifications to comply with all federal, state, and local air quality requirements, such as proper construction vehicle maintenance and idling instructions. Measures that reduce vehicle emissions also help reduce GHGs.
- During construction, if feasible, the project will use solar-powered signal boards, which have reduced GHG emissions from energy consumption.
- A TMP will be developed to alleviate and minimize delays to the traveling public and potential emissions from idling traffic.

2.2.5 Adaptation

Adaptation

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

State Efforts

Climate change adaptation for transportation infrastructure involves long-term planning and risk management to address vulnerabilities in the transportation system. California's

Fourth Climate Change Assessment (2018) is the state's effort to "translate the state of climate science into useful information for action" in a variety of sectors at both statewide and local scales. It adopts the following key terms used widely in climate change analysis and policy documents:

- Adaptation to climate change refers to adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities.
- Adaptive capacity is the "combination of the strengths, attributes, and resources available to an individual, community, society, or organization that can be used to prepare for and undertake actions to reduce adverse impacts, moderate harm, or exploit beneficial opportunities."
- Exposure is the presence of people, infrastructure, natural systems, and economic, cultural, and social resources in areas that are subject to harm.
- Resilience is the "capacity of any entity – an individual, a community, an organization, or a natural system – to prepare for disruptions, to recover from shocks and stresses, and to adapt and grow from a disruptive experience". Adaptation actions contribute to increasing resilience, which is a desired outcome or state of being.
- Sensitivity is the level to which a species, natural system, or community, government, etc., would be affected by changing climate conditions.
- Vulnerability is the "susceptibility to harm from exposure to stresses associated with environmental and social change and from the absence of capacity to adapt." Vulnerability can increase because of physical (built and environmental), social, political, and/or economic factor(s). These factors include, but are not limited to: ethnicity, class, sexual orientation and identification, national origin, and income inequality. Vulnerability is often defined as the combination of sensitivity and adaptive capacity as affected by the level of exposure to changing climate.

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

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

EO S-13-08 also led to the publication of a series of sea-level rise assessment reports and associated guidance and policies. These reports formed the foundation of an interim State of California Sea-Level Rise Interim Guidance Document (SLR Guidance)

in 2010, with instructions for how state agencies could incorporate “sea-level rise (SLR) projections into planning and decision making for projects in California” in a consistent way across agencies. The guidance was revised and augmented in 2013. Rising Seas in California – An Update on Sea-Level Rise Science was published in 2017 and its updated projections of sea-level rise and new understanding of processes and potential impacts in California were incorporated into the State of California Sea-Level Rise Guidance Update in 2018.

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

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

Caltrans Adaptation Efforts

CALTRANS VULNERABILITY ASSESSMENTS

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

- *Exposure* – Identify Caltrans assets exposed to damage or reduced service life from expected future conditions.
- *Consequence* – Determine what might occur to system assets in terms of loss of use or costs of repair.
- *Prioritization* – Develop a method for making capital programming decisions to address identified risks, including considerations of system use and/or timing of expected exposure.

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

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

Project Adaptation Analysis

SEA LEVEL RISE ANALYSIS

The proposed project is outside the coastal zone and not in an area subject to sea-level rise. Accordingly, direct impacts to transportation facilities due to projected sea-level rise are not expected.

FLOODPLAINS

Reference was made to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) number 06001C0460G dated August 3, 2009, that encompasses the project. Based on this FIRM, the proposed project work is within a base floodplain.

At Alameda Creek Bridge, the creek overtops its banks and floods in the vicinity of the bridge. The floodplain is identified as zone AE which denotes a base floodplain with elevations determined. The base flood elevation is 247 feet.

The proposed work does not increase impervious areas nor place additional fill in the identified floodplain. The proposed work, therefore, is not expected to result in any negative impacts to this floodplain.

WILDFIRE

The project area traverses low Fire Hazard Severity Zones in a State Responsibility Area (SRA), as designated by the California Department of Forestry and Fire Protection. The project will apply standard specifications 7.1.02M(2) for fire prevention during construction.

Chapter 3 Comments and Coordination

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

3.0 Agency Coordination

3.0.1 California Department of Fish and Wildlife

Caltrans initiated technical assistance with CDFW on ___. An Incidental Take Permit will be required for Alameda whipsnake, CTS, and CCC steelhead. The ITP will be submitted to CDFW following environmental document certification.

Coordination with CDFW for the 1602 Lake and Streambed Alteration Agreement will begin after environmental document certification.

3.0.2 Native American Heritage Commission

The Native American Heritage Commission (NAHC) was contacted on February 4, 2021 by email requesting a search of the Sacred Lands File for any Native American cultural resources within the project area. The NAHC responded on February 23, 2021, stating no sacred sites were identified within the project area and providing a list of interested individuals and groups.

Formal notification under Section 106 and AB 52 began with Native American consultation initiation letters sent to individuals on February 24, 2021. Letters were sent by email, to Chairperson Irene Zwierlein of the Amah Mutsun Tribal Band of Mission San Juan Bautista; Chairperson Tony Cerda of the Costanoan Rumsen Carmel Tribe; Chairperson Ann Marie Sayers of the Indian Canyon Mutsun Band of Costanoan; Kanyon Sayers-Roods of the Indian Canyon Mutsun Band of Costanoan; Vice Chairwoman Monica Arellano of the Muwekma Ohlone Indian Tribe of the SF Bay Area; Chairperson Katherine Perez of the North Valley Yokuts Tribe; Andrew Galvan of the Ohlone Indian Tribe; Chairperson Corinna Gould of the Confederated Villages of Lisjan; and Chairperson Dee Dee Ybarra of the Rumsen Am:a Tur:ataj Ohlone.

Chairperson Cerda responded by email on March 9, 2021 and stated they received our email. Chairperson Gould responded by email on March 3, 2021 and stated they wished to be contacted if there were any cultural resources found at the project area. Ms. Sayers-Roods responded by email on March 2, 2021 and stated the area was sensitive

and requested a monitor be on site. Ms. Sayers-Roods was responded to about the concerns for the area.

3.0.3 National Marine Fisheries Service

Caltrans initiated technical assistance/consultation with NMFS on ____. Caltrans will submit a Biological Assessment to NMFS after environmental document circulation.

3.0.4 San Francisco Bay Regional Water Quality Control Board

Caltrans Water Quality started informal consultation with the San Francisco Bay RWQCB on/in ____. Consultation is ongoing, and a permit application will be submitted to the RWQCB during the detailed design phase.

3.0.5 U.S. Army Corps of Engineers

The proposed project will affect waters of the United States as defined in Section 404 of the CWA. A permit application will be submitted to USACE during the detailed design phase.

3.0.6 U.S. Fish and Wildlife Service

The Information for Planning and Conservation online tool was used to generate a species list from the Sacramento Office of the USFWS for the project area on ___. Caltrans initiated technical assistance with USFWS on ____. Caltrans will submit a Biological Assessment to USFWS after environmental document circulation.

3.1 Circulation, Review, and Comment on the Draft Environmental Document

Public input on the project will be solicited during the review period for this IS (MND), which will last a minimum of 30 days. The public will be notified of the availability of the IS (MND) by several methods, including postings on the Caltrans website and notifications to interested agencies and individuals. A Notice of Completion will be filed with the State Clearinghouse. The review period and instructions for submitting comments are included on the first page of this document. All formal comments will be addressed, and responses published in the Final IS (MND).

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Chapter 4 List of Preparers

This document was prepared by the following Caltrans staff and consultants:

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Chapter 5 Distribution List

Federal Agencies

Environmental Protection Agency,
Region 9 (Pacific Southwest)
Public Affairs Office
75 Hawthorne Street
San Francisco, CA 94105

National Marine Fisheries Service
North Central Coast Office
777 Sonoma Avenue, Room 325
Santa Rose, CA 95404

U.S. Army Corps of Engineers
San Francisco District
450 Golden Gate Avenue, 4th Floor
San Francisco, CA 94102

U.S. Fish and Wildlife Service
2800 Cottage Way, Room W-2605
Sacramento, CA 95825

State Agencies

California Air Resources Board
1001 I Street
P.O. Box 2815
Sacramento, CA 95812

California Department of Conservation
801 K Street, MS 24-01
Sacramento, CA 95814

California Department of Fish & Wildlife,
Region 3
1416 9th Street, 12th Floor
Sacramento, CA 95814

California Department of Parks and
Recreation
Natural Resources Division
P.O. Box 942836
Sacramento, CA 94296

California Department of Water
Resources
P.O. Box 942836
Sacramento, CA 94236-0001

California Highway Patrol
Attn: Special Projects Section
4999 Gleason Drive
Dublin, CA 94568

California Office of Emergency Services
Public Safety Communications Office
601 & 630 Sequoia Pacific Boulevard
Sacramento, CA 95811

California Office of Historic Preservation
1416 Ninth Street, Room 1442
Sacramento, CA 95814

State Agencies – continued

California Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102

California State Lands Commission
1550 Harbor Blvd, Suite 100
West Sacramento, CA 95691

California Transportation Commission
1120 N Street, Room 2221, MS-52
Sacramento, CA 9581

Department of Toxic Substances Control
P.O. Box 806
1001 I Street
Sacramento, CA 95814-2828

Native American Heritage Commission
1550 Harbor Blvd., Suite 100
West Sacramento, CA 95814

State Clearinghouse
1400 Tenth Street
Sacramento, CA 95814

State Historic Preservation Officer
California Office of Historic Preservation
1725 23rd Street, Suite 100
Sacramento, CA 9581

Regional Agencies

Association of Bay Area Governments
P.O. Box 2050
Oakland, CA 94604

Bay Area Air Quality Management District
375 Beale Street Suite 600
San Francisco, CA 94105

East Bay Regional Parks District
2950 Peralta Oaks Court
P.O. Box 5381
Oakland, CA 94605

Metropolitan Transportation Commission
375 Beale Street, Suite 700
San Francisco, CA 94105

San Francisco Public Utilities Commission
525 Golden Gate Avenue
San Francisco, CA 94102

San Francisco Regional Water Quality Control Board, Region 2
1515 Clay St., Suite 1400
Oakland, CA 94612

Local Agencies

Alameda County Planning Commission
224 W. Winton Avenue, Room 111
Hayward, CA 94542

Alameda County Department of Public Works
399 Elmhurst Street
Hayward, CA 94545

Alameda County Transportation Commission
1111 Broadway Ave., Suite 800
Oakland, CA 94607

Sunol Citizens' Advisory Council
County of Alameda Administration Building
1221 Oak Street, #536
Oakland, CA 94612

Federal Elected Officials

The Honorable Dianne Feinstein
United States Senate
One Post Street
Suite 2450
San Francisco, CA 94104

The Honorable Alex Padilla
United States Senate
333 Bush Street, Suite 3225
San Francisco, CA 94104

The Honorable Eric Swalwell
United States House of Representatives (CA-15
3615 Castro Valley Boulevard
Castro Valley, CA 94546

State Elected Officials

The Honorable Steven M. Glazer
California State Senate District 7
420 West Third Street
Antioch, CA 94509

The Honorable Bill Quirk
California State Assembly District 20
22320 Foothill Boulevard, Suite 540
Hayward, CA 94541

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Appendix A. Title VI Policy Statement

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

DEPARTMENT OF TRANSPORTATION
OFFICE OF THE DIRECTOR
P.O. BOX 942873, MS-49
SACRAMENTO, CA 94273-0001
PHONE (916) 654-6130
FAX (916) 653-5776
TTY 711
www.dot.ca.gov

Making Conservation a California Way of Life.

September 2021

NON-DISCRIMINATION POLICY STATEMENT

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

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

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

For information or guidance on how to file a complaint, or obtain more information regarding Title VI, please contact the Title VI Branch Manager at (916) 324-8379 or visit the following web page: https://dot.ca.gov/programs/civil-rights/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 Civil Rights, at 1823 14th Street, MS-79, Sacramento, CA 95811; PO Box 942874, MS-79, Sacramento, CA 94274-0001; (916) 324-8379 (TTY 711); or at Title.VI@dot.ca.gov.

Toks Omishakin
Director

"Provide a safe and reliable transportation network that serves all people and respects the environment."

Appendix B. Avoidance and Minimization Measures and/or Mitigation Measures

Avoidance and minimization measures (AMMs) and proposed compensatory mitigation measures (MMs) for biological resources for the project are listed below. For detailed descriptions of the following measures, refer to the appropriate topic section in Chapter 2.

In order to be sure that all of the environmental measures identified in this document are executed at the appropriate time, the following mitigation program would be implemented: During project design, avoidance, minimization, and/or mitigation measures will be incorporated into the project's final plans, specifications, and cost estimates, as appropriate. All permits will be obtained prior to implementation of the project. During construction, environmental and construction/engineering staff will ensure that the commitments are fulfilled. Following construction and appropriate phases of project delivery, long-term mitigation maintenance and monitoring will take place, as applicable. Some measures may apply to more than one resource area. Duplicative or redundant measures have not been listed.

Avoidance, Minimization, and/or Mitigation Measures

Biological Resources

AMM BIO-1: Permits. Caltrans would include a copy of all relevant permits within the construction bid package of the proposed project. The Resident Engineer or their designee would be responsible for implementing the Conservation Measures and Terms and Conditions of all relevant permits.

AMM BIO-2: Biological Monitor Approval. Caltrans would submit the names and qualifications of the biological monitor(s) for CDFW and USFWS approval prior to initiating construction activities for the proposed project. Only agency-approved biological monitors will implement the monitoring duties outlined in the USFWS BO and CDFW ITP including delivery of the Worker Environmental Awareness Training Program.

AMM BIO-3: Biological Monitoring. The agency-approved biologist(s) would be on-site during initial ground-disturbing activities, the installation and removal of creek diversion, and thereafter as needed to fulfill the role of the approved biologist as specified in project permits. The biologist(s) would keep copies of applicable permits in their possession when on-site. Through the RE or their designee, the agency-approved biologist(s) would be given the authority to communicate either verbally, by telephone, email or hard copy with all project personnel to ensure that take of listed species is minimized and permit requirements are fully implemented. Through the RE or their designee, the

agency-approved biologist(s) would have the authority to stop project activities to minimize take of listed species or if they determine that any permit requirements are not fully implemented. If the agency-approved biologist(s) exercises this authority, the agencies must be notified by telephone and email within 48 hours.

AMM BIO-4: Worker Environmental Awareness Training. All construction personnel would attend a mandatory environmental education program delivered by an agency-approved biologist prior to working on the project. The program will focus on the conservation measures that are relevant to employee's personal responsibility and will include an explanation as how to best avoid take of sensitive species. Disturbed materials will include a pamphlet with distinguishing photographs of sensitive species, species' habitat requirements, compliance reminders, and relevant contact information. Documentation of the training, including sign-in sheets, will be kept on file and will be available on request.

AMM BIO-5: Preconstruction Surveys. Prior to any ground disturbance, preconstruction surveys would be conducted by an agency-approved biologist for listed species. These surveys would 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) would investigate all potential cover sites. This includes thorough investigation of mammal burrows, rocky outcrops, appropriately sized soil cracks, tree cavities, and debris. Native vertebrates found in the cover sites within the project limits would be documented and relocated to an adequate cover site in the vicinity.

AMM BIO-6: Prevention of Wildlife Entrapment. To prevent inadvertent entrapment of listed species during construction, excavated holes or trenches more than one foot deep with walls steeper than 30 degrees would be covered at the close of each working day by plywood or similar materials. Alternatively, an additional four-foot-high vertical barrier, independent of exclusionary fences, would be used to further prevent the inadvertent entrapment of listed species. If it is not feasible to cover an excavation or provide an additional four-foot-high vertical barrier, independent of exclusionary fences, one or more escape ramps constructed of earth fill or wooden planks would be installed. Before such holes or trenches are filled, they would be thoroughly inspected for trapped animals. If at any time a trapped listed animal is discovered, the on-site biologist will relocate the animal outside the limits of construction in accordance with the agency established protocol. Special-status species that do not have formal USFWS take covered cannot be relocated. In such cases CDFW or USFWS would be contacted by telephone for guidance. CDFW or USFWS would be notified of the incident by telephone and electronic mail within 48 hours.

AMM BIO-7: Environmentally Sensitive Area Fencing. The limits of construction zones within suitable habitat for listed species would be delineated

with high visibility environmentally sensitive areas (ESA) fencing at least four feet in height to prevent wildlife from accessing the construction footprint. The fencing would be removed only when all construction equipment is removed from the site. No project activities would occur outside the delineated PCA. ESA fencing is not required for construction activities occurring outside of suitable habitat for listed species.

AMM BIO-8: Special-Status Species On-Site. The Resident Engineer would immediately contact the agency-approved project biologist(s) if a special-status species is observed within a construction zone. The Resident Engineer would suspend construction activities within a 50-foot radius of the animal until the animal leaves the site voluntarily or an agency-approved protocol for removal has been established.

AMM BIO-9: Work Window. All work within suitable aquatic habitat for steelhead, California red-legged frog (CRLF) and California tiger salamander (CTS) would occur between June 1 and October 15, when there is less potential for an individual to enter the work area. During this time, California red-legged frog and California tiger salamander would have a lower potential for movements across upland habitat.

AMM BIO-10: Work Windows for Nesting Birds. To the extent practicable, clearing and grubbing activities should not occur within the bird nesting season (February 1 to September 30). When it is necessary to conduct clearing during the nesting season, preconstruction surveys will be conducted within the BSA prior to clearing and grubbing of vegetation.

AMM BIO-11: Preconstruction Surveys for Nesting Birds. Preconstruction surveys for nesting birds would be conducted by a qualified biologist no more than 72 hours prior to the start of construction for activities occurring during the breeding season (February 1 to September 30). If preconstruction surveys indicate the presence of nests of any special-status species, USFWS will be consulted to determine the appropriate buffer area to be established around the nesting site for the duration of the breeding season.

AMM BIO-12: Non-Disturbance Buffer for Nesting Birds. If work is to occur within 300 feet of active raptor nests or 50 feet of active passerine nests, a non-disturbance buffer would be established at a distance sufficient to minimize disturbance based on the nest location, topography, cover, the species' sensitivity to disturbance, and the intensity/type of potential disturbance.

AMM BIO-13: Preconstruction Survey for Nesting Birds. Preconstruction surveys for roosting bats would be conducted by a qualified biologist no more than 72 hours prior to the start of construction.

AMM BIO-14: Exclusion of Bats from Existing Bridge. If bats are detected prior to the start of construction, a roosting bat exclusion plan would be developed and implemented. At a minimum, this plan should address how one-way exclusion devices would be used to allow bats to safely exit the current bridge prior to joint cleaning and sealing. Specific night bat roost AMMs would be developed through technical assistance with CDFW and bat specialists. Exclusion of bats would only occur between March 1 to April 15 and August 31 to October 15 to avoid sensitive periods.

AMM BIO-15: Material Storage. All construction pipes, culverts, or similar structures, construction equipment or construction debris left overnight within the work area will be inspected by the agency-approved biological monitor prior to being moved.

AMM BIO-16: Water Diversion Structures. Water diversion would be designed to exclude construction activities from adversely impacting the water quality of Alameda Creek while maintaining flow through the project area. The contractor would be required to submit a Water Diversion Plan to appropriate regulatory agencies for approval prior to construction.

AMM BIO-17: Water Quality Inspection. Water quality inspector(s) would inspect the site after a rain event to ensure that the stormwater best management practices (BMPs) are adequate.

AMM BIO-18: Vehicle Use. Project employees would be required to comply with guidance governing vehicle use, speed limits on unpaved roads, fire prevention, and other hazards.

AMM BIO-19: Night Work. To the extent practicable, nighttime work within Alameda Creek would be minimized.

AMM BIO-20: Night Lighting. Artificial lighting of the proposed BSA during nighttime hours would be minimized to the maximum extent practicable and would be pointed away from sensitive resources.

AMM BIO-21: Trash Control. All food-related trash items such as wrappers, cans, bottles, and food scraps would be disposed of in closed containers and removed at least once a day from the work area.

AMM BIO-22: Firearms. No firearms would be allowed in the PCA except for those carried by authorized security personnel, or local, state, or federal law enforcement officials.

AMM BIO-23: Pets. To prevent harassment, injury, or mortality of sensitive species, no pets would be permitted on the project site.

AMM BIO-24: Caltrans Standard Best Management Practices (BMPs). The potential for adverse effects to water quality would be avoided by implementing temporary and permanent BMPs outlined in Section 13.2 of the 2019 Caltrans Standard Specifications. Caltrans erosion control BMPs would 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 Stormwater Pollution Prevention Plan (SWPPP) would be developed for the project, as one is required for all projects that have at least one acre of soil disturbance. The SWPPP complies with the Caltrans Storm Water Management Plan (SWMP). The SWMP includes guidance for design staff to include provisions in construction contracts to include measures to protect sensitive areas and to prevent and minimize storm water and non-storm water discharges.

The SWPPP would reference the Caltrans Construction Site BMPs Manual. This manual is comprehensive and includes many other protective measures and guidance to prevent and minimize pollutant discharges, and can be found at the following website: https://dot.ca.gov/programs/construction/storm-water-and-water-pollution-control/manuals-and-handbooks.

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

i. No discharge of pollutants from vehicle and equipment cleaning are allowed into the storm drain or water courses.
j. Vehicle and equipment fueling, and maintenance operations must be at least 50 feet away from water courses.
k. Concrete wastes are collected in washouts and water from curing operations is collected and disposed of and not allowed into water courses.
l. Dust control will be implemented, including use of water trucks and tackifiers to control dust in excavation and fill areas, rocky temporary access road entrances and exits, and covering temporary stockpiles when weather conditions require.
m. Coir rolls will be installed along or at the base of slopes during construction to capture sediment and temporary organic hydro-mulching will be applied to all unfinished disturbed and graded areas.
n. Work areas where temporary disturbance has removed the pre-existing vegetation will be restored and re-seeded with a native mix.
o. Graded areas will be protected from erosion using a combination of silt fences, fiber rolls along toe of slopes or along edges of designated staging areas, and erosion-control netting (such as jute or coir) as appropriate.
p. A Revegetation Plan will be prepared for restoration of temporary work areas. Pavement and base will be removed; topography blended with the surrounding area; and topsoil will be salvaged from the new alignment area to

be placed over the restored area, which will then be revegetated with native grassland species.

AMM BIO-25: Prohibition of Monofilament Erosion Control. Plastic mono-filament netting (erosion control matting) or similar material would not be used for the project because California red-legged frog and California tiger salamander may become entangled or trapped in it. Acceptable substitutes include coconut coir matting or tackified hydroseeding compounds.

AMM BIO-26: Concrete Waste and Stockpiles. All grindings and asphaltic-concrete waste would be stored within previously disturbed areas absent of habitat and at a minimum of 150 feet from any aquatic habitat, culvert, or drainage feature.

AMM BIO-27: Revegetation Following Construction. All areas that are temporarily affected during construction would be revegetated with an assemblage of native grass, shrub, and trees as appropriate. Invasive, exotic plants would be controlled within the PCA to the maximum extent practicable, pursuant to Executive Order 13112.

AMM BIO-28: Upland and Riparian Trees. During the design phase of the project, Caltrans Office of Biological Science and Permitting would work with the Caltrans design team to avoid and minimize project impacts to upland and riparian trees. Efforts to preserve trees in place, by designating trees on plan sheets and marking trees with ESA fencing, would be made to avoid or minimize project impacts to trees located in temporary impact areas.

AMM BIO-29: Rock Slope Protection Size and Placement. RSP shall be of an adequate size to create cover and refuge for juvenile salmonids and gravel shall be placed in interstitial areas to create spawning habitat.

AMM BIO-30: Fish Relocation Plan. A fish removal and relocation plan will be prepared and submitted to the regulatory agencies for review and approval at least 60 days prior to the installation of the dewatering system. The plan will include the methodology of capturing and relocating the fish.

Mitigation Measures (MMs)

Caltrans proposed to include compensatory mitigation for potential impacts to species listed under FESA and CESA. To develop an appropriate mitigation proposal that meets the regulatory requirements of CEQA and FGC 2081, Caltrans proposes that compensatory mitigation in the form of habitat restoration and preservation will be provided on-site for temporary habitat impacts at a 1:1 ratio, and off-site at a 3:1 ratio for permanent habitat impacts.

MM BIO-1: Caltrans will compensate for impacts to CRLF habitat through on-site restoration of temporarily affected areas at a 1:1 ratio.

MM BIO-2: To mitigate for the elimination of potential breeding habitat within the filled scour hole, a low-elevation depression will be created in the new creek alignment between piers 8 and 9. The location and depth of the pool will be determined during the design phase.

MM BIO-3: Caltrans will compensate for impacts to CTS habitat through on-site restoration of temporarily affected areas (at a 1:1 ratio). To meet the "fully mitigated" requirements of the CESA, Caltrans will purchase mitigation credits at a 1:1 ratio for temporary impacts to CTS and CRLF habitat. Multi-species credits may be purchased at an agency-approved conservation bank.

Appendix C. List of Acronyms and Abbreviations

Abbreviation	Definition
AB	Assembly Bill
ABAG	Association of Bay Area Governments
ADL	Aerially Deposited Lead
AMM	Avoidance and Minimization Measure
ARB	Air Resources Board
AWS	Alameda Whipsnake
BA	Biological Assessment
BAAQMD	Bay Area Air Quality Management District
BMP	Best Management Practice
BO	Biological Opinion
BSA	Biological Study Area
CAFE	Corporate Average Fuel Economy
Caltrans	California Department of Transportation
CCC	central California coast
CDFW	California Department of Fish and Wildlife
CE	Categorical Exclusion
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CH_4	methane
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
CRLF	California red-legged frog
CTP	California Transportation Plan
CTS	California tiger salamander
CWA	Clean Water Act
DP-	Director’s Policy
DSA	Disturbed soil area
ESA	Environmentally Sensitive Area
EO	Executive Order
FED	Final Environmental Document
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
FYLF	Foothill yellow-legged frog
GHG	Greenhouse Gas
GWP	Global Warming Potential

HFCs	Hydrofluorocarbons
HOV	High Occupancy Vehicle
I-	Interstate
IPCC	Intergovernmental Panel on Climate Change
IS	Initial Study
ITP	Incidental Take Permit
LOC	Letter of Concurrence
MM	Mitigation measure
$MMTCO_2e$	Million metric tons of carbon dioxide equivalent
MND	Mitigated Negative Declaration
MOU	Memorandum of Understanding
mph	Miles per hour
MPO	Metropolitan Planning Organization
MTC	Metropolitan Transportation Commission
N_2O	Nitrous oxide
NAHC	Native American Heritage Commission
ND	Negative Declaration
NEPA	National Environmental Policy Act
NES	Natural Environment Study
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
OCRS	Office of Cultural Resource Studies
PCA	Project Construction Area
PCE	Primary Constituent Elements
PM	Post mile
PQS	Professionally Qualified Staff
PRC	Public Resources Code
RCEM	Road Construction Emissions Model
ROW	Right-of-way
RSP	Rock Slope Protection
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCS	Sustainable Communities Strategy
SF_6	Sulfur hexafluoride
SFPUC	San Francisco Public Utilities Commission
SHPO	State Historic Preservation Officer
SLR	Sea-level rise
SR-	State Route
SRA	State Responsibility Area
SWPPP	Stormwater Pollution Prevention Plan

TCE	Temporary Construction Easement
TMP	Traffic Management Plan
US-	United States Highway
USACE	United States Army Corps of Engineers
USC	United States Code
USDOT	U.S. Department of Transportation
U.S. EPA	U.S. Environmental Protection Agency
USGCRP	U.S Global Change Research Program
USFWS	U.S. Fish and Wildlife Service
VMT	Vehicle miles traveled
WPT	Western Pond Turtle

Appendix D. U.S. Fish and Wildlife Species List

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
Phone: (916) 414-6600 Fax: (916) 414-6713

In Reply Refer To:
Project Code: 2022-0026827
Project Name: 0P910 Alameda Creek Bridge Scour

March 31, 2022

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)

(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see https://www.fws.gov/birds/policies-and-regulations.php.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/birds/policies-and-regulations/executive-orders/e0-13186.php.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- **Official Species List**

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
(916) 414-6600

Project Summary

Project Code: 2022-0026827
Event Code: None
Project Name: 0P910 Alameda Creek Bridge Scour
Project Type: Bridge - Maintenance
Project Description: The California Department of Transportation (Caltrans) proposes the Interstate 680 (I-680) Alameda Creek Bridge Scour Mitigation Project (Project) to rehabilitate the bridge deck and mitigate scour on the Alameda Creek Bridge (Bridge No. 33-0047). The Project is located from post mile (PM) R10.15 through R10.16 in the city of Sunol in Alameda County. The Project will include replacing existing asphalt concrete (AC) with polyester concrete, cleaning and replacing existing joint seals, and mitigating scour by placing rip rap around piers 8 and 9 of the bridge. The project also proposes to replace the structure approach slabs and their median barriers in both directions. The proposed project would result in impacts to Alameda Creek and natural habitat located along I-680 and would require the use of a creek diversion to provide a dry working environment in the creek.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@37.577639649999995,-121.87798429315336,14z

Counties: Alameda County, California

Endangered Species Act Species

There is a total of 12 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Salt Marsh Harvest Mouse *Reithrodontomys raviventris* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/613	Endangered
San Joaquin Kit Fox *Vulpes macrotis mutica* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2873	Endangered

Birds

NAME	STATUS
California Least Tern *Sterna antillarum browni* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8104	Endangered

Reptiles

NAME	STATUS
Alameda Whipsnake (=striped Racer) *Masticophis lateralis euryxanthus* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/5524	Threatened

Amphibians

NAME	STATUS
California Red-legged Frog *Rana draytonii* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/2891	Threatened
California Tiger Salamander *Ambystoma californiense* Population: U.S.A. (Central CA DPS) There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/2076	Threatened

Fishes

NAME	STATUS
Delta Smelt *Hypomesus transpacificus* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/321	Threatened

Insects

NAME	STATUS
Monarch Butterfly *Danaus plexippus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

Crustaceans

NAME	STATUS
Conservancy Fairy Shrimp *Branchinecta conservatio* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/8246	Endangered
Vernal Pool Fairy Shrimp *Branchinecta lynchi* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/498	Threatened
Vernal Pool Tadpole Shrimp *Lepidurus packardi* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/2246	Endangered

Flowering Plants

NAME	STATUS
Contra Costa Goldfields *Lasthenia conjugens* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/7058	Endangered

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

IPaC User Contact Information

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Appendix E. National Marine Fisheries Service Species List

Project Name: I-680 Alameda Creek Bridge Scour Repair Project

Project EA: 04-0P910

Agency: California Department of Transportation111 Grand Avenue Oakland, California 94612

Contact: Nicole, 805-704-4272

Email: Nicole.Christie@dot.ca.gov

Date: December 2, 2021

Quad Name **Niles**
Quad Number **37121-E8**

ESA Anadromous Fish

SONCC Coho ESU (T) -
CCC Coho ESU (E) -
CC Chinook Salmon ESU (T) -
CVSR Chinook Salmon ESU (T) -
SRWR Chinook Salmon ESU (E) -
NC Steelhead DPS (T) -
CCC Steelhead DPS (T) - **X**
SCCC Steelhead DPS (T) -
SC Steelhead DPS (E) -
CCV Steelhead DPS (T) -
Eulachon (T) -
sDPS Green Sturgeon (T) -

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat -
CCC Coho Critical Habitat -
CC Chinook Salmon Critical Habitat -
CVSR Chinook Salmon Critical Habitat -
SRWR Chinook Salmon Critical Habitat -
NC Steelhead Critical Habitat -
CCC Steelhead Critical Habitat -
SCCC Steelhead Critical Habitat -
SC Steelhead Critical Habitat -
CCV Steelhead Critical Habitat -
Eulachon Critical Habitat -
sDPS Green Sturgeon Critical Habitat -

ESA Marine Invertebrates

Range Black Abalone (E) -

Range White Abalone (E) -

ESA Marine Invertebrates Critical Habitat

Black Abalone Critical Habitat -

ESA Sea Turtles

East Pacific Green Sea Turtle (T) -

Olive Ridley Sea Turtle (T/E) -

Leatherback Sea Turtle (E) -

North Pacific Loggerhead Sea Turtle (E) -

ESA Whales

Blue Whale (E) -

Fin Whale (E) -

Humpback Whale (E) -

Southern Resident Killer Whale (E) -

North Pacific Right Whale (E) -

Sei Whale (E) -

Sperm Whale (E) -

ESA Pinnipeds

Guadalupe Fur Seal (T) -

Steller Sea Lion Critical Habitat -

Essential Fish Habitat

Coho EFH - X

Chinook Salmon EFH - X

Groundfish EFH -

Coastal Pelagics EFH -

Highly Migratory Species EFH -

MMPA Species (See list at left)

ESA and MMPA Cetaceans/Pinnipeds

See list at left and consult the NMFS Long Beach office 562-980-4000

MMPA Cetaceans -

MMPA Pinnipeds -

Appendix F. List of Technical Studies

Biological Assessment: Interstate 680 Alameda Creek Bridge Scour Repair… Date.

Comments from the Hazardous Waste Branch. January 12, 2021.

Construction Greenhouse Gas (GHG) Emissions Analysis Memorandum. February 2, 2021.

Energy Analysis Report. May 19, 2021.

Floodplain Encroachment Review. July 23, 2021.

Geologic and Paleontologic Analysis for Bridge Rehabilitation. September 7, 2021.

Natural Environmental Study: Interstate 680… Date.

Office of Cultural Resource Studies (OCRS) Section 106 Screening Memo for the Bridge Scour Repair Project between Postmiles (PM) R10.15 and R10.16, on Interstate 680, in Alameda County, California. August 9. 2021.

Section 4(f) Evaluation for the Scour Repair and Deck Rehabilitation of the I-680 Alameda creek Bridge in the Town of Sunol. November 10, 2021.

Visual Impact and Landscape Analysis Memorandum. September 1, 2021.

Water Quality Study. September 2021.

Appendix G. References

California Air Resources Board (ARB). 2019a. *California Greenhouse Gas Emissions Inventory–2019 Edition*. https://ww3.arb.ca.gov/cc/inventory/data/data.htm. Accessed: August 21, 2019.

California Air Resources Board (ARB). 2019b. *California Greenhouse Gas Emissions for 2000 to 2017. Trends of Emissions and Other Indicators.* https://ww3.arb.ca.gov/cc/inventory/pubs/reports/2000_2017/ghg_inventory_trends_00-17.pdf. Accessed: August 21, 2019.

California Air Resources Board (ARB). 2019c. *SB 375 Regional Plan Climate Targets*. https://ww2.arb.ca.gov/our-work/programs/sustainable-communities-program/regional-plan-targets. Accessed: August 21, 2019.

California Department of Transportation. 2018. *Caltrans Climate Change Vulnerability Assessments. District # Technical Report*. December. Prepared by WSP. [Revise publication year and month and District number as needed. Only include if you have referenced this report. Modify as necessary for your District.]

Federal Highway Administration (FHWA). 2019. *Sustainability.* https://www.fhwa.dot.gov/environment/sustainability/resilience/. Last updated February 7, 2019. Accessed: August 21, 2019.

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Meckler-Pacheco, A., Ron, L.N., Puliatti, S. and Webster, Z. 2021 Anthropogenic effects on abiotic factors affecting the success of the threatened Rana boylii. California Ecology and Conservation Research. 5:3.

State of California. 2018. *California's Fourth Climate Change Assessment*. http://www.climateassessment.ca.gov/. Accessed: August 21, 2019.

State of California. 2019. *California Climate Strategy*. https://www.climatechange.ca.gov/. Accessed: August 21, 2019.

U.S. Department of Transportation (U.S. DOT). 2011. *Policy Statement on Climate Change Adaptation*. June. https://www.fhwa.dot.gov/environment/sustainability/resilience/policy_and_guidance/usdot.cfm. Accessed: August 21, 2019.

U.S. Environmental Protection Agency (U.S. EPA). 2009. *Endangerment and Cause or Contribute Findings for Greenhouse Gases under the Section 202(a) of the Clean Air Act*. https://www.epa.gov/ghgemissions/endangerment-and-cause-or-contribute-findings-greenhouse-gases-under-section-202a-clean. Accessed: August 21, 2019.

U.S. Environmental Protection Agency (U.S. EPA). 2018. *Inventory of U.S. Greenhouse Gas Emissions and Sinks.* https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks. Accessed: August 21, 2019.

U.S. Global Change Research Program (USGCRP). 2018. *Fourth National Climate Assessment*. https://nca2018.globalchange.gov/. Accessed: August 21, 2019.