San Jose Creek Bridge Replacement

City of Goleta, Santa Barbara County
05-SB-101-PM 21.3/PM 21.9
Project EA: 05-1H430
Project ID: 0516000073

Initial Study with Proposed Mitigated Negative Declaration/ Environmental Assessment

Prepared by the

State of California Department of Transportation

The environmental review, consultation, and any other actions required by applicable federal environmental laws for this project are being, or have been, carried out by Caltrans pursuant to 23 United States Code 327 and the Memorandum of Understanding dated December 23, 2016, and executed by Federal Highway Administration and Caltrans.

October 2019

Caltrans

General Information about This Document

What's in this document:

The California Department of Transportation (Caltrans), as assigned by the Federal Highway Administration, has prepared this Initial Study/Environmental Assessment, which examines the potential environmental impacts of alternatives being considered for the proposed project in Santa Barbara County in California. The document explains why the project is being proposed, the alternatives being considered for the project, the existing environment that could be affected by the project, the potential impacts of each of the alternatives, and proposed avoidance, minimization, and/or mitigation measures.

What you should do:

- Please read this document.
- Additional copies of this document and the related technical studies are available for review at the Caltrans District 5 office at 50 Higuera Street, San Luis Obispo, CA 93401; Goleta Branch Library, 500 North Fairview Avenue, Goleta, CA 93117; and Santa Barbara Public Library, 40 East Anapamu Street, Santa Barbara, CA 93101.
- This document can be accessed electronically and downloaded at the following website: https://dot.ca.gov/caltrans-near-me/district-5
- Please contact Caltrans if you would like a public hearing for this project.
- Tell us what you think. If you have any comments regarding the proposed project, please send Caltrans your written comments by the deadline.
    - Send comments by U.S. mail to:
      Environmental Branch Chief, Attention: Matthew Fowler
      California Department of Transportation, Environmental Planning
      50 Higuera Street
      San Luis Obispo, CA 93401
    - Send comments by email to: matt.c.fowler@dot.ca.gov
- Be sure to send comments by the deadline: ***January 17, 2020***

What happens next:

After comments are received from the public and reviewing agencies, Caltrans, as assigned by the Federal Highway Administration, 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.

Alternative formats:

For individuals with sensory disabilities, this document can be made available in Braille, in large print, on audiocassette, or on computer disk. To obtain a copy in one of these alternate formats, please write to the California Department of Transportation, Attention: Matt Fowler, Environmental Planning, 50 Higuera Street, San Luis Obispo, CA 93401; call (805) 542-4603 (voice); or use the California Relay Service, 1 (800) 735-2929 (TTY), 1 (800) 735-2929 (voice), or 711.

05-SB-101-PM 21.3/21.9
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Replace the existing San Jose Creek Bridge
on Route 101 at post mile 21.6 in Santa Barbara County

INITIAL STUDY
with Proposed Mitigated Negative Declaration/
Environmental Assessment

Submitted Pursuant to:
(State) Division 13, California Public Resources Code
(Federal) 42 USC 4332(2)(C)

THE STATE OF CALIFORNIA
Department of Transportation

John Luchetta
Office Chief, Central Region
Environmental Central Coast Office
California Department of Transportation
CEQA and NEPA Lead Agency

10-23-19
Date

The following individual may be contacted for more information about this document:
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DRAFT
Proposed Mitigated Negative Declaration

Pursuant to: Division 13, Public Resources Code

Project Description

The California Department of Transportation (Caltrans) proposes to replace the existing northbound and southbound San Jose Creek bridges (Bridge Number 51-0163 R/L), which are in Santa Barbara County on U.S. 101 (Route 101) at post mile 21.6. The new bridge design would be a single-span bridge. For the new bridge construction, the following would occur: existing bridge abutments and piers would be removed; the existing slope pavement on the creek banks would be removed; new abutments and rock slope protection would be installed; traffic barriers would be replaced to meet current safety standards; and adjacent vegetation and minor earthworks would be affected.

Route 101 is a major north-south highway that serves the states of California, Oregon, and Washington. Within the project limits, Route 101 consists of a six-lane freeway, with three lanes in each direction. The proposed project is in an urban setting. Land uses are mostly residential, with some commercial and industrial uses.

Determination

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

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

The project would have no effect on existing and future land use, coastal resources, wild and scenic rivers, parks and recreational facilities, farmland, timberland, growth, community character and cohesion, environmental justice, utilities, cultural resources, paleontological resources, and mineral resources.

In addition, the project would have no significant effect on visual/aesthetics, emergency systems/services, traffic and transportation, wildfire hazards, hydrology and floodplains, geology and soils, hazardous materials, air quality, or noise levels.

The project would have no significantly adverse effect on water quality or biological resources because the following measures would reduce potential effects to insignificance:

Water Quality Measures

- Project-related work in the creek will not be conducted during the wet season.
- A water diversion/dewatering management plan will be implemented to allow for work in the wetted channel.
- Appropriate Best Management Practices for water pollution control, erosion control and stormwater management will be implemented during project construction.

Biological Resource Measures

- Preconstruction surveys will be conducted for special-status species and prior to vegetation removal.
- Vegetation and tree removal will be kept to the minimum required for project completion.
- Prior to project construction, Environmental Sensitive Area fencing will be installed within the project site to keep construction activities out of those areas.
- Biological monitoring will be conducted during various stages of project construction.
- Invasive, non-native species will be controlled to the maximum extent possible.
- Areas disturbed by project construction will be restored to conditions that would allow them to function as potential habitat for species.
- On-site compensatory mitigation will be required for the project. Temporary impacts to wetlands and jurisdictional areas will require a replacement ratio of 1:1. Native plant replacement will require a ratio of 1:1. It is anticipated that a 3:1 replacement ratio would be required for impacts to riparian trees.

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John Luchetta
Office Chief, Central Region
Environmental Central Coast Office
California Department of Transportation
District 5, San Luis Obispo

_____

Date

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Chapter 1 Proposed Project

1.1 Introduction

The California Department of Transportation (known as Caltrans), as assigned by the Federal Highway Administration (known as FHWA), is the lead agency under the National Environmental Policy Act (known as NEPA). Caltrans is the lead agency under the California Environmental Quality Act (known as CEQA).

NEPA Assignment

California participated in the "Surface Transportation Project Delivery Pilot Program" (Pilot Program) pursuant to 23 USC 327, for more than five years, beginning July 1, 2007, and ending September 30, 2012. The Moving Ahead for Progress in the 21st Century Act (P.L. 112-141), signed by President Barack Obama on July 6, 2012, amended 23 USC 327 to establish a permanent Surface Transportation Project Delivery Program. As a result, Caltrans entered into a Memorandum of Understanding (known as MOU) pursuant to 23 USC 327 (NEPA Assignment Memoranda of Understanding) with FHWA. The NEPA Assignment MOU became effective October 1, 2012 and was renewed on December 23, 2016 for a term of five years. In summary, Caltrans continues to assume FHWA responsibilities under NEPA and other federal environmental laws in the same manner as was assigned under the Pilot Program, with minor changes. With NEPA Assignment the FHWA assigned, Caltrans assumed all of the U.S. Department of Transportation Secretary's responsibilities under NEPA. This assignment includes projects on the State Highway System and Local Assistance Projects off of the State Highway System within the State of California, except for certain categorical exclusions that FHWA assigned to Caltrans under the 23 USC 326 CE Assignment MOU, projects excluded by definition, and specific project exclusions.

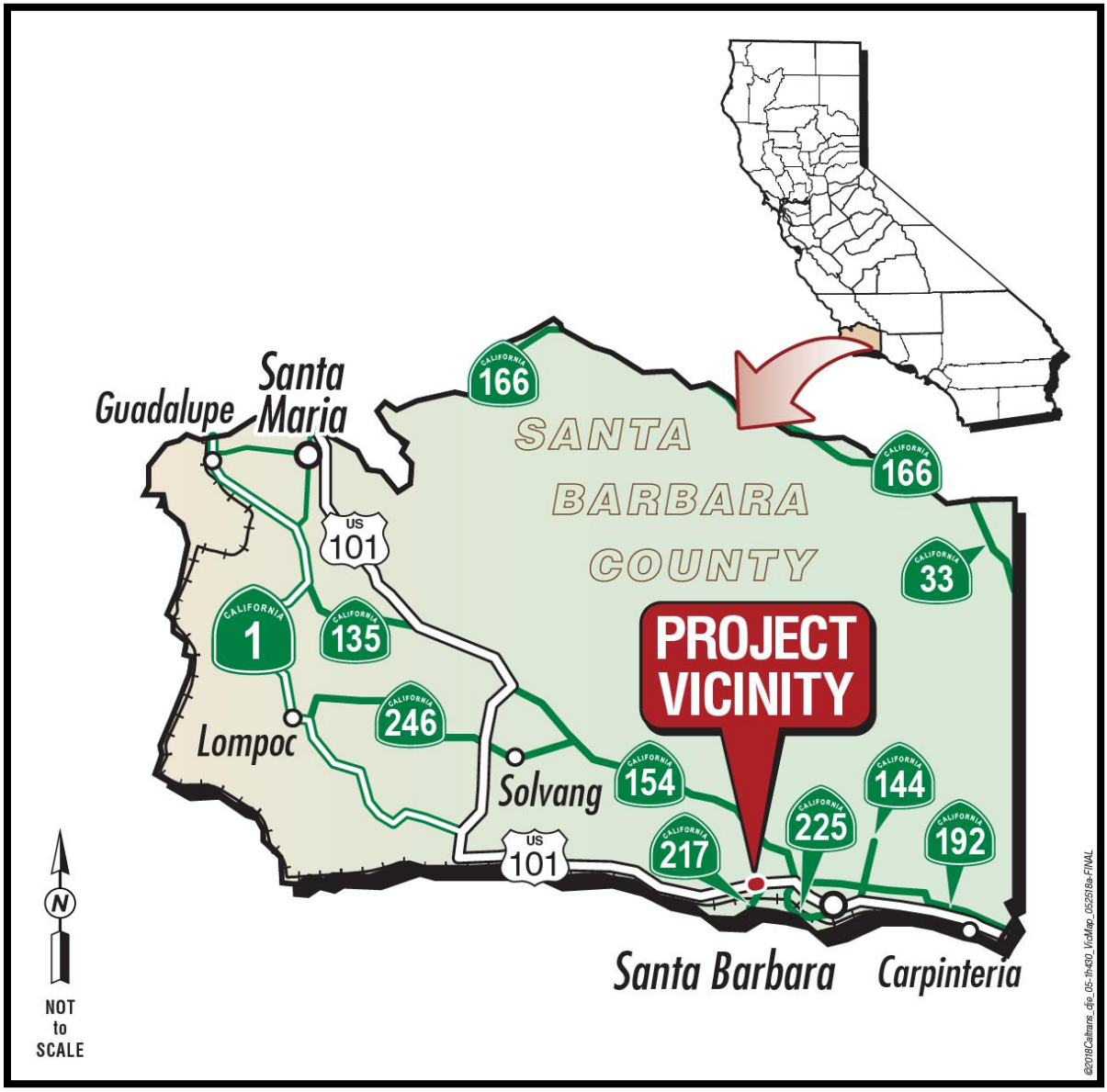
For this project, Caltrans proposes to replace the existing northbound and southbound San Jose Creek bridges, which are in the city of Goleta in Santa Barbara County on U.S. 101 (Route 101) at post mile 21.6. Within the project limits, Route 101 consists of a six-lane freeway, with three lanes in each direction. The proposed project is located in an urban environment, which consists of residential, commercial and industrial land uses.

Figures 1.1 and 1.2 display project vicinity and location maps, respectively.

Appendix A provides a preliminary layout for the proposed project.

The existing northbound and southbound bridges have been found to contain reactive aggregate in the concrete of the superstructures, which may compromise the structural integrity of the bridges. In addition, structural deficiencies have been identified on both bridges.

Figure 1.1: Project Vicinity

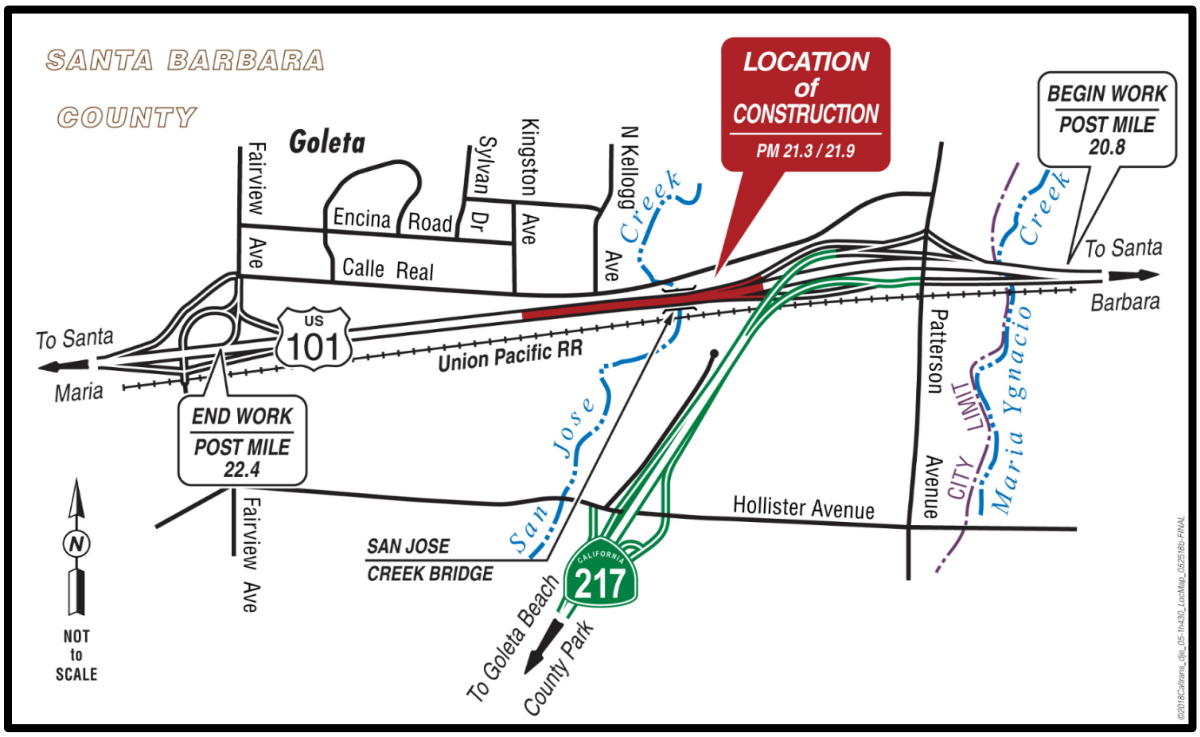


The project would be paid for with 2018 State Highway Operation and Protection Program funds. The project was included in the Santa Barbara Association of Governments' approved 2019 Federal Transportation Improvement Program under the State Highway Operation and Protection Program Grouped Project Listing – Bridge Rehabilitation and Reconstruction.

The proposed project was included in the Santa Barbara Association of Governments approved 2040 Regional Transportation Plan (2013) under the Project # GO-202.

The total cost estimate for project construction is approximately $9,240,000 with an estimated escalated cost of approximately $19,900,000. Project construction is anticipated to begin in the 2021/2022 fiscal year. Construction completion is anticipated for the 2024/2025 fiscal year. Project construction process is anticipated to take approximately 300 working days, or 14 working months, spread between two construction seasons (typically June to October).

Figure 1.2: Project Location



1.2 Purpose and Need

1.2.1 Purpose

The purpose of the project is to address the structural deficiencies of the northbound and southbound San Jose Creek bridges to ensure the function and reliability of Route 101.

1.2.2 Need

Based on recommendations detailed in the Structure Replacement and Improvement Needs Report, Bridge Maintenance Strategy Fact Sheet, and Bridge Inspection Reports, replacement of the northbound and southbound San Jose Creek bridges (Bridge Number 51-0163 L/R) is required. The Structure Replacement and

Improvement Needs Report identified a need that requires replacing both the substructure and superstructure of the bridges to remedy the issue of reactive aggregate in the concrete and to ensure the function and reliability of this link in the California transportation system.

1.3 Project Description

The existing San Jose Creek bridge consist of two structures, but is treated as a single structure for further discussions in this document because the new bridge will be designed as a single structure.

Caltrans proposes to replace the existing San Jose Creek bridge because of the presence of an alkali-silica reaction in the concrete, which could negatively affect the structural integrity of the bridge.

The existing bridge was built in 1946 and widened in 1989. The existing structure is approximately 100 feet long and 114 feet wide, consisting of three spans, with 52 columns placed in the creek channel. The existing bridge has six 12-foot-wide lanes, two 8-foot-wide inside shoulders, two 8-foot-wide outside shoulders and a 6-foot-wide center median. The new bridge structure would be located at the same location as the existing bridge. The new structure would be designed as a single-span bridge with dimensions and features similar to the existing bridge. The new bridge, however, would not require columns or foundations in the creek and would incorporate multiple Caltrans design standards to meet current requirements.

The project would require temporary creek access during the bridge demolition and construction process. The majority of permanent and temporary construction impacts associated with the project are anticipated to occur within the existing state right-of-way. However, the project will require temporary construction easements and permanent drainage easement for installation of rock slope protection just downstream of the bridge. The project would also involve drainage work, roadway repaving, sign relocation, along with vegetation and tree removal. The project would limit the amount of disturbance to the creek, the surrounding vegetation and existing landscape. No utility-related work is anticipated for this project.

1.4 Project Alternatives

Two alternatives are under consideration: a Build Alternative and a No-Build Alternative.

The alternatives that are under consideration were developed by an interdisciplinary team. Several criteria were taken into consideration when evaluating the various alternatives for the proposed project, including the purpose and need, cost, and environmental impacts.

1.4.1 Build Alternative

The Build Alternative would replace the existing bridge with a new single-span bridge structure. The new bridge would be approximately 100 feet long and approximately 129 feet wide, with six 12-foot-wide lanes, a 10-foot-wide inside shoulder, and a 10-foot-wide outside shoulder. The new bridge would remain on the existing horizontal alignment, and the new southbound lanes will be on a higher profile to match the northbound lane elevation. The structural depth of the new bridge would be 3 feet 11 inches. The new bridge structure would be designed to meet current Caltrans standards that includes, but not limited to: highway design, seismic, safety and hydraulic standards. In addition, the new bridge would meet Federal Emergency Management Agency (known as FEMA) floodway requirements and would not encroach on the base floodplain. The bottom of the new bridge would be higher, increasing its freeboard clearance, which lowers the risk of flooding on the bridge.

The new bridge would include new barriers that will meet current design standards and include aesthetic treatments. The existing landscaping and irrigation within the median barrier would be replaced in kind. Roadway work would be required to match the existing road grade with the new bridge. A section of an existing retaining wall west of the bridge and along the southbound shoulder would be modified as part of the road grade adjustment. As part of the retaining wall work, the existing metal beam guardrails would be removed and replaced with concrete barriers.

New abutments would be constructed to accommodate the new wider bridge and would involve the installation of cast-in-drilled-hole piles. The new bridge would incorporate precast/prestressed concrete girders, and the new deck would be poured in place. As part of the new bridge construction, the existing concrete columns in the creek channel would be removed. In addition, the existing concrete lining on the embankment of the creek would be removed and replaced with rock slope protection, which would protect the creek banks and bridge abutments from erosion. Rock slope protection would be installed up to the existing state right-of-way north of the bridge and extend approximately 60 feet south of the bridge. The Build Alternative would also involve work on a drainage ditch that is northeast of the bridge.

The anticipated cost of the new bridge structure is approximately $4,175,000 and construction of the bridge is anticipated to take approximately 187 working days. Bridge construction would require two construction seasons to complete, between June to October.

1.4.2 No-Build (No-Action) Alternative

Under the No-Build Alternative, the existing San Jose Creek bridge would not be replaced. No modifications would be made to the existing bridge structure. No other improvements would be conducted as part of this project under the No-Build Alternative.

This alternative would not address the reactive aggregate found in the substructure and superstructure of the existing bridge. The presence of alkali-silica reactions would continue to negatively affect the structural integrity of the bridge and could potentially reduce the function and reliability of Route 101.

1.5 Comparison of Alternatives

When alternatives are evaluated, the purpose and need of the project, as well as the locations where environmental impacts could occur, need to be considered.

The Build Alternative would satisfy the purpose of the project because it would address the structural concerns on the existing San Jose Creek bridge by replacing the existing bridge with a new bridge structure. The Build Alternative would satisfy the need of the project because it would remedy the issue of reactive aggregate in the concrete of the superstructure and ensure the function and reliability of Route 101 in that vicinity. The Build Alternative would result in temporary and permanent impacts to environmental resources. Construction activity would be required within San Jose Creek, with the potential to affect biological resources and water quality. Although the Build Alternative would result in changes to existing conditions, the results of analysis indicate that these changes would not be substantial. Chapter 2 of this environmental document provides discussions regarding the proposed project's potential environmental impacts.

The No-Build Alternative would not satisfy the purpose or need of the proposed project because it would not address the structural deficiencies on the existing San Jose Creek bridge, remedy the issue of reactive aggregate in the concrete of the superstructure, or ensure the function and reliability of this link in the California transportation system. The No-Build Alternative would not result in any construction or changes to existing conditions. Therefore, it would not result in any temporary or permanent impacts to environmental resources.

1.6 Alternatives Considered but Eliminated from Further Discussion

Three build alternatives (Alternatives 1, 2 and 3) were considered during the project development process, but Alternatives 1 and 2 were eliminated before preparation of the draft environmental document. The Build Alternative was originally identified as Alternative 3. A description of each alternative and the reason for elimination from consideration are provided below.

1.6.1 Alternative 1

Alternative 1 would replace the existing northbound and southbound bridges with a new single bridge structure that would be approximately 100 feet long, with three 12-foot-wide lanes, an 8-foot-wide inside shoulder, and 10-foot-wide outside shoulders.

The new bridge would be a simple span structure with precast/prestressed concrete components. Alternative 1 would use Accelerated Bridge Construction methods. The anticipated cost of the bridge structure was approximately $3,275,000 and construction of the bridge was anticipated to take approximately 200 working days. Bridge construction would to require two construction seasons to complete.

Under Alternative 1, the new bridge would use wide-flange girders, which would make the structural depth of the new structure approximately 4 feet 9 inches, making the bridge deck thicker and lowering the elevation of the bridge soffit.

Alternative 1 was considered but rejected because the new bridge soffit elevation would encroach on the base flood elevation at that location as defined by the San Jose Creek's FEMA floodway maps. It was anticipated that the new structure would put the bridge soffit several inches below the flood water surface and could potentially expose the bridge deck to flood waters. In order for this alternative to not encroach on the base flood elevation, the entire bridge structure would need to be raised. Raising the entire structure was found not to be feasible as it would affect the adjacent northbound on-ramp and the southbound off-ramp. It was anticipated that this alternative would result in the substantial increase of the project scope and cost. Due to the anticipated multiple project related issues, Alternative 1 was rejected.

1.6.2 Alternative 2

Alternative 2 would replace the existing northbound and southbound bridges with a new single bridge structure that would be approximately 100 feet long, with three 12-foot-wide lanes, an 8-foot-wide inside shoulder, and 10-foot-wide outside shoulders. The new bridge would be a two-span structure with a precast/prestressed voided concrete slab and would require the installation of support columns in the creek. Alternative 2 would use Accelerated Bridge Construction methods. The anticipated cost of the bridge structure was approximately $4,875,000 and construction of the bridge was anticipated to take approximately 174 working days. Bridge construction would to require two construction seasons to complete.

Under Alternative 2, the new single two-span bridge structure would have a structural depth of 2 feet 2 inches, making the bridge deck and the bridge soffit elevation similar to existing. In addition, Alternative 2 would require the placement of support columns in the middle of the creek and require falsework to construct.

Alternative 2 was considered but rejected because it was anticipated that placing the support columns in the middle of the creek would result in severe environmental impacts to the creek, which would have required extensive mitigation efforts. In addition, requiring false work to construct the bridge would potentially result in additional impacts to environmental resources and/or additional limitations to the construction schedule. Due to the anticipated impacts to environmental resources, Alternative 2 was rejected.

1.7 Permits and Approvals Needed

The following permits, licenses, agreements, certifications, and/or approvals, are expected to be required for this project prior to construction:

- U.S. Army Corps of Engineers – Section 404 Nationwide Permit for Impacts to Waters of the U.S.
- U.S. Fish and Wildlife Service – Section 7 consultation for threatened and endangered species review
- National Marine Fisheries Service – Section 7 consultation for threatened and endangered species review
- Regional Water Quality Control Board – Section 401 Certification for impacts to Waters of the U.S.
- California Department of Fish and Wildlife – Section 1602 Streambed Alteration Agreement for impacts to streams under jurisdiction

Chapter 2 Affected Environment, Environmental Consequences, and Avoidance, Minimization, and/or Mitigation Measures

As part of the scoping and environmental analysis for the project, the following environmental issues were considered, but no adverse impacts were identified. There is no further discussion of these issues in this document.

- **Land Use:** The proposed project will require temporary construction easement and permanent drainage easement as part of the installation for rock slope protection. All other project related work is anticipated to occur within existing state right-of-way. The proposed bridge replacement is not anticipated to change or affect existing or future land use in the area. The project would be consistent with state, regional, and local plans and programs. See Appendix A.
- **Coastal Zone:** Based on the Santa Barbara County Coastal Zone map, the project is located outside the Coastal Zone. Therefore, impacts to coastal resources are not anticipated as a result of the project.
- **Wild and Scenic Rivers:** There are no wild and scenic rivers in or adjacent to the project area, according to the Wild and Scenic River System list maintained by the National Park Service. Therefore, no impacts to wild and scenic rivers would occur.
- **Parks, Recreational Facilities and Section 4(f) resources:** The project would not result in impacts to parks, recreational facilities, or Section 4(f) resources (See Appendix A). The project does not involve work on an existing park or recreational facility. There are no Section 4(f) resources within the project area. However, temporary impacts as a result of construction-related activities could occur and are discussed in Section 2.4, Construction Impact.
- **Farmland/Timberland:** According to the California Department of Conservation's Farmland Mapping and Monitoring Program, no farmlands or vacant lands that have been mapped as Prime Farmlands, Unique Farmlands, Farmlands of Statewide Importance, or Farmlands of Local Importance occur within the vicinity of the project. In addition, there are no timberlands within the study area. Therefore, the project would have no effect on farmland or timberlands.
- **Growth:** The project would not alter existing roadway capacity and is limited to replacing the existing San Jose Creek bridge and roadway repaving (see Chapter 1). The project would not change existing accessibility, so the project would not result in direct or indirect impacts to growth in the area.

- **Community Impacts:** Project construction is not anticipated to impact the surrounding community. Permanent drainage easement would be required from adjacent property owned by Schwan Brothers Excavating Contractors, Inc. for installation of rock slope protection. The project would neither increase nor decrease public access. The project would not affect the community character of the surrounding area because the new bridge structure would be similar in design and appearance to the existing structure. The project is not anticipated to result in any direct or indirect impacts to the community. See Appendix A.
- **Utilities:** During construction of the project, existing utilities within the project footprint would be avoided and protected in place. No utility-related work is anticipated at this time.
- **Emergency Services:** The project would replace the existing bridge with a new bridge of similar design at the existing location (see Chapter 1). The new bridge would not alter planned routes for emergency responses or evacuations. Therefore, no permanent impacts would occur. However, temporary impacts during the construction period could occur, as discussed in Section 2.4, Construction Impact.
- **Visual/Aesthetics:** The project would replace an existing bridge with a new structure of similar design and would not alter the existing visual quality. The project is anticipated to have minimal effects on the scenic quality of the area. As seen from Route 101, the primary public viewpoint, the new bridge would be noticeable for a relatively short duration after construction is complete. The creek and distant hills would remain visible and continue to contribute to the scenic vista of the area. In addition, the visual character of the surrounding setting would not be substantially reduced by the proposed changes. The project location is not classified as an Officially Designated State Scenic Highway. Also, the project would not add any new lighting or new sources of glare, and landscaping would restore areas disturbed by the project. Therefore, no visual impacts are anticipated for this project (Visual Impact Assessment, February 12, 2019).
- **Traffic and Transportation:** The project would replace the existing bridge with a new bridge of similar design at an existing location (see Chapter 1). The new bridge would not alter existing traffic or transportation patterns in the region. Therefore, no permanent impacts would occur. However, temporary impacts during the construction period could occur, as discussed in Section 2.4, Construction Impact.
- **Pedestrian and Bicycle Facilities:** Based on investigations of the project location, there are no pedestrian or bicycle facilities on the existing bridge and Route 101 is restricted to motor vehicle traffic only. In addition, there are no existing pedestrian or bicycle facilities within the project area. Therefore, the project is not anticipated to impact pedestrian and bicycle facilities.

- **Cultural Resources:** The field survey conducted as part of the Cultural Resources Review did not detect the presence of any archaeological or cultural resources on the surface. In addition, the survey confirmed a substantial level of disturbance at the project site from past construction activities, suggesting a low probability for intact subsurface archaeological deposits. Also, the San Jose Creek bridge was determined to be a Category 5 bridge in the Caltrans Statewide Historic Bridge Inventory; therefore, the bridge is not eligible for listing in the National Register of Historic Places or the California Register of Historical Resources. The existing bridge is not considered a historic resource. Therefore, the project does not have the potential to affect cultural resources (Cultural Resources Review, September 10, 2018).
- **Paleontology:** The probability of the project encountering paleontological resources is low because all work would take place on or near a bridge site where previous disturbance has taken place (Paleontology Assessment, July 6, 2018).
- **Hazardous Waste and Materials:** The project has a very low potential of encountering or disturbing hazardous materials. The project is not located near any known hazardous site. Project activities may disturb potentially hazardous materials typically found within the existing bridge or roadway area. The project would incorporate Caltrans standard practices to test for and control potentially hazardous materials that may be encountered during the project construction process. The project is not expected to result in adverse effects as a result of encountering, disturbing or transporting hazardous materials (Hazardous Waste Technical Memo, February 14, 2018).
- **Air Quality:** The project would replace the existing bridge with a structure of similar design at an existing location. Based on the Air Quality review conducted for the project, the new bridge would not alter current vehicle travel patterns or alter current air quality trends in the region. However, temporary impacts to air quality are anticipated during the construction period, as discussed in Section 2.4, Construction Impact (Air Quality, Noise, and Greenhouse Gas Memo, June 5, 2018).
- **Noise:** The project would replace the existing bridge with a structure of similar design at an existing location and repave the roadway. Because the project would not alter the capacity of the highway, it is expected that the local noise levels would remain the same after project completion. No permanent noise-related impacts are anticipated as a result of the project. However, temporary impacts during the construction period could occur, as discussed in Section 2.4, Construction Impact (Air Quality, Noise, and Greenhouse Gas Memo, June 5, 2018).

- **Wildfire:** Based on Santa Barbara County Fire Hazard Severity Zone maps, the project sits within an urban area and is not within a wildfire hazard zone. The new bridge structure is not anticipated to alter existing conditions that could have an effect on wildfire occurrence or have an effect during wildfire incidents. The project would incorporate precautions to prevent fire incidents during construction as part of the code of safe practices in accordance with California Division of Occupational Safety and Health – Fire Protection and Prevention guidance.

2.1 Physical Environment

2.1.1 Hydrology and Floodplain

Regulatory Setting

Executive Order 11988 (Floodplain Management) directs all federal agencies to refrain from conducting, supporting, or allowing actions in floodplains, unless it is the only practicable alternative. Federal Highway Administration requirements for compliance are outlined in 23 Code of Federal Regulations 650, Subpart A.

To comply, the following must be analyzed:

- Practicability of alternatives to any longitudinal encroachments.
- Risks of the action.
- Impacts on natural and beneficial floodplain values.
- Support of incompatible floodplain development.
- Measures to minimize floodplain impacts and preserve/restore any beneficial floodplain values affected by the project.

The base floodplain is defined as “the area subject to flooding by a flood or tide having a 1 percent chance of being exceeded in any given year.” An encroachment is defined as “an action within the limits of the base floodplain.”

Affected Environment

A location hydraulic study was completed for the project on November 6, 2018.

The San Jose Creek floodplain stretches from the foothills north of Route 101 to State Route 217, the area where San Jose Creek joins San Pedro Creek. The confluence of San Jose Creek and San Pedro Creek is about 1.7 miles downstream from the project location.

San Jose Creek is designated by FEMA as a floodway, which means that the channel’s capacity to discharge floodwaters must be preserved and ensure that

there are no developments on the floodway that could increase upstream flood elevations. The San Jose Creek floodway designation ends just downstream of the State Route 217 bridge. Based on the FEMA Flood Insurance Study dated November 4, 2015, the 100-year peak flood discharge is 5,400 cubic feet per second at the San Jose Creek bridge.

The FEMA Flood Insurance Rate Map (Appendix B) indicates that the San Jose Creek bridge is within "Zone AE," which indicates that the project location is at high risk for flooding. Based on the mapping, the flood elevation is indicated to be 56 feet at the bridge location. In addition, the project sits in an area that is designated by the FEMA as a Special Flood Hazard Area, where floodplain management regulations must be enforced.

Environmental Consequences

The project would replace the existing multi-span bridge and replace it with a single-span bridge at the existing location. The existing bridge columns in the channel along with the concrete paving on the channel banks would be removed. Rock slope protection would be installed in place of the concrete paving to protect the creek banks from erosion.

The project would improve the floodway because it would include the following design features:

- The new bridge would have a thinner bridge deck, which would increase the distance between the bottom of the deck and the channel bottom.
- The new rock slope protection would be installed at a shallower slope, which would extend the creek banks and increase the cross-sectional area of the channel.
- Removal of the existing columns would reduce impediments in the channel and improve flow.

These design features are anticipated to reduce the flood elevation at the bridge location and reduce the chances of the bridge becoming inundated in a flood event.

The project would not result in encroachment into the base floodplain and is anticipated to have no significant impact on the existing floodplain or floodway.

Avoidance, Minimization, and/or Mitigation Measures

There would be no adverse effects related to hydrology and floodplains. Therefore, no avoidance, minimization, or mitigation measures are required.

2.1.2 Water Quality and Stormwater Runoff

Regulatory Setting

Federal Requirements: Clean Water Act

In 1972, Congress amended the Federal Water Pollution Control Act, making the addition of pollutants to waters of the U.S. from any point source (any discrete conveyance such as a pipe or a human-made ditch) unlawful, unless the discharge complies with a National Pollutant Discharge Elimination System permit. This act and its amendments are known today as the Clean Water Act. Congress has amended the act several times. In the 1987 amendments, Congress directed dischargers of stormwater from municipal and industrial/construction point sources to comply with the National Pollutant Discharge Elimination System permit scheme.

The following are important Clean Water Act sections:

- Sections 303 and 304 require states to issue water quality standards, criteria, and guidelines.
- Section 401 requires an applicant for a federal license or permit to conduct any activity that may result in a discharge to waters of the U.S. to obtain certification from the state, confirming that the discharge will comply with other provisions of the act. This is most frequently required in tandem with a Section 404 permit request (see below).
- Section 402 establishes National Pollution Discharge Elimination System, a permitting system for discharges of any pollutant into waters of the U.S., except dredged or fill material. Regional Water Quality Control Boards administer this permitting program in California. Section 402(p) requires permits for discharges of stormwater from industrial/construction sites and municipal separate storm sewer systems.
- Section 404 establishes a permit program for the discharge of dredged or fill material into waters of the U.S. This permit program is administered by the U.S. Army Corps of Engineers.

The goal of the Clean Water Act is “to restore and maintain the chemical, physical, and biological integrity of the nation’s waters.”

The U.S. Army Corps of Engineers issues two types of 404 permits: General and Individual. There are two types of General permits: Regional and Nationwide. Regional permits are issued for a general category of activities that are similar in nature and cause minimal environmental effect. Nationwide permits allow a variety of minor project activities, with no more than minimal effects.

Ordinarily, projects that do not meet the criteria for Regional and Nationwide permits may be permitted under one of the U.S. Army Corps of Engineers’ Individual permits. There are two types of Individual permits: Standard permits and Letters of Permission. For Individual permits, the U.S. Army Corps of Engineers’ decision to

approve is based on compliance with the U.S. Environmental Protection Agency's Section 404 (b)(1) Guidelines (40 Code of Federal Regulations 230) and whether permit approval is in the public interest.

The Section 404(b)(1) Guidelines, which were developed by the U.S. Environmental Protection Agency in conjunction with the U.S. Army Corps of Engineers, allow the discharge of dredged or fill material into the aquatic system (i.e., waters of the U.S.) only if there is no practicable alternative with less adverse effects. The Section 404(b)(1) Guidelines state that the U.S. Army Corps of Engineers may not issue a permit if a "least environmentally damaging practicable alternative" to the proposed discharge is available that would have lesser effects on waters of the U.S. and no other significant adverse environmental consequences. According to the Section 404(b)(1) Guidelines, documentation is needed to confirm that a sequence of avoidance, minimization, and compensation measures has been followed, in that order.

The Section 404(b)(1) Guidelines also restrict permitting activities that violate water quality or toxic effluent standards, jeopardize the continued existence of listed species, violate marine sanctuary protections, or cause "significant degradation" to waters of the U.S. (The U.S. EPA defines "effluent" as "wastewater, treated or untreated, that flows out of a treatment plant, sewer, or industrial outfall.")

In addition, every permit from the U.S. Army Corps of Engineers, even if not subject to the Section 404(b)(1) Guidelines, must meet general requirements (see 33 Code of Federal Regulations 320.4). A discussion of the "least environmentally damaging practicable alternative," if any, is included in the Wetlands and Other Waters section.

State Requirements: Porter-Cologne Water Quality Control Act

California's Porter-Cologne Water Quality Control Act (known as the Porter-Cologne Act), enacted in 1969, provides the legal basis for water quality regulation within California. This act requires a "report of waste discharge" for any discharge of waste (liquid, solid, or gaseous) to land or surface waters that may impair the beneficial uses of surface and/or groundwater in the state. It predates the Clean Water Act and regulates discharges to waters of the state. Waters of the state include more than just waters of the U.S., such as groundwater and surface waters that are not considered waters of the U.S. In addition, it prohibits discharges of "waste," as defined; this definition is broader than the Clean Water Act definition of "pollutant." Discharges under the Porter-Cologne Act are permitted by waste discharge requirements and may be required even when the discharge is already permitted or exempt under the Clean Water Act.

The State Water Resources Control Board and Regional Water Quality Control Boards are responsible for establishing the water quality standards (objectives and beneficial uses) required by the Clean Water Act and regulating discharges to ensure compliance with the standards. Details about water quality standards in a project area are included in the applicable Regional Water Quality Control Board

Basin Plan. In California, Regional Water Quality Control Boards designate beneficial uses for all water body segments in their jurisdictions, then set the criteria necessary to protect those uses. As a result, the water quality standards developed for particular water segments are based on the designated use and vary, depending on that use.

In addition, the State Water Resources Control Board identifies waters that failed to meet standards for specific pollutants. These waters are then state listed in accordance with Clean Water Act Section 303(d). If the state determines that waters are impaired for one or more constituents and the standards cannot be met through point-source or non-point-source controls (National Pollutant Discharge Elimination System permits or Waste Discharge Requirements), the Clean Water Act requires establishment of total maximum daily loads. Total Maximum Daily Loads specify allowable pollutant loads from all sources (point, non-point, and natural) for a given watershed.

State Water Resources Control Board and Regional Water Quality Control Boards

The State Water Resources Control Board administers water rights, sets water pollution control policy, issues water board orders on matters of statewide application, and oversees water quality functions throughout the state by approving Basin Plans, Total Maximum Daily Loads, and National Pollutant Discharge Elimination System permits. Regional Water Quality Control Boards are responsible for protecting the beneficial uses of water resources within their jurisdiction by using their planning, permitting, and enforcement authorities to meet this responsibility.

National Pollutant Discharge Elimination System Program

Municipal Separate Storm Sewer Systems

Section 402(p) of the Clean Water Act requires the issuance of National Pollutant Discharge Elimination System permits for five categories of stormwater discharges, including discharges from municipal separate storm sewer systems. A municipal separate storm sewer system is defined as “any conveyance or system of conveyances (roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, human-made channels, and storm drains), owned or operated by a state, city, town, county, or other public body having jurisdiction over stormwater, that is designed or used for collecting or conveying stormwater.” The State Water Resources Control Board has identified Caltrans as an owner/operator of a municipal separate storm sewer system under federal regulations. Caltrans’ municipal separate storm sewer system permit covers all Caltrans rights-of-way, properties, facilities, and activities in the state. The State Water Resources Control Board or the Regional Water Quality Control Board issues National Pollutant Discharge Elimination System permits for 5 years, and permit requirements remain active until a new permit has been adopted.

Caltrans’ municipal separate storm sewer system permit, Order No. 2012-0011-DWQ (adopted on September 19, 2012, and effective on July 1, 2013), as amended

by Order No. 2014-0006-EXEC (effective January 17, 2014), Order No. 2014-0077-DWQ (effective May 20, 2014), and Order No. 2015-0036-EXEC (confirmed and effective April 7, 2015), has three basic requirements:

1. Caltrans must comply with the requirements of the Construction General Permit (see below),
2. Caltrans must implement a year-round program in all parts of the state to effectively control stormwater and non-stormwater discharges, and
3. Caltrans stormwater discharges must meet water quality standards through implementation of permanent and temporary (construction) best management practices, to the maximum extent practicable, and other measures the State Water Resources Control Board determines to be necessary to meet the water quality standards.

To comply with the permit, Caltrans developed the Stormwater Management Plan to establish stormwater pollution controls related to highway planning, design, construction, and maintenance throughout California. The Storm Water Management Plan assigns responsibilities within Caltrans for implementing stormwater management procedures and practices as well as training, public education and participation, monitoring and research, program evaluation, and reporting. The Storm Water Management Plan describes the procedures and practices Caltrans uses to reduce pollutants in stormwater and non-stormwater discharges. It also outlines procedures and responsibilities for protecting water quality, including through the selection and implementation of Best Management Practices. The proposed project would be programmed to follow the guidelines and procedures outlined in the latest Storm Water Management Plan to control stormwater runoff.

Construction General Permit

The Construction General Permit, Order No. 2009-0009-DWQ (adopted on September 2, 2009, and effective on July 1, 2010), as amended by Order No. 2010-0014-DWQ (effective February 14, 2011) and Order No. 2012-0006-DWQ (effective on July 17, 2012), regulates stormwater discharges from construction sites with a disturbed soil area of 1 acre or more as well as smaller sites that are part of a larger common plan of development. By law, all stormwater discharges associated with construction activities, such as clearing, grading, and excavation, that result in soil disturbance totaling at least 1 acre must comply with the provisions of the General Construction Permit. Construction activity that results in soil disturbances of less than 1 acre is subject to the Construction General Permit if there is potential for significant water quality impairment resulting from the activity, as determined by the Regional Water Quality Control Board. Operators of regulated construction sites are required to develop Stormwater Pollution Prevention Plans; implement sediment, erosion, and pollution prevention control measures; and obtain coverage under the Construction General Permit.

The Construction General Permit separates projects into Risk Levels 1, 2, and 3. Risk levels are determined during the planning and design phases and based on the potential for erosion and subsequent transport to receiving waters. Requirements are based on the determined risk level. For example, a Risk Level 3 project (highest risk) would require pH and turbidity monitoring for stormwater runoff as well as aquatic biological assessments during specified seasonal windows before construction and after construction.

For all projects that are subject to the permit, applicants are required to develop and implement an effective Stormwater Pollution Prevention Plan. In accordance with Caltrans' Storm Water Management Plan and standard specifications, a Water Pollution Control Program is necessary for projects with a disturbed soil area of less than 1 acre.

Section 401 Permitting

Under Section 401 of the Clean Water Act, any project requiring a federal license or permit that may result in a discharge to waters of the U.S. must obtain Section 401 certification, which certifies that the project complies with state water quality standards. The most common federal permits that trigger Section 401 certification are the Clean Water Act Section 404 permits issued by the U.S. Army Corps of Engineers. Section 401 permit certifications are obtained from the appropriate Regional Water Quality Control Board, depending on the project location, and required before the U.S. Army Corps of Engineers issues a Section 404 permit.

In some cases, the Regional Water Quality Control Board may have specific concerns about discharges associated with a project. As a result, the Regional Water Quality Control Board may issue a set of requirements, known as Waste Discharge Requirements, under the State Water Code (Porter-Cologne Act) to define activities (such as the inclusion of specific features, effluent limitations, monitoring, and plan submittals) that are to be implemented to protect or benefit water quality. Waste Discharge Requirements can be issued to address both the permanent and temporary discharges of a project.

Affected Environment

A water quality assessment was completed for the project on July 6, 2018.

The proposed project would occur in the City of Goleta in Santa Barbara County. San Jose Creek flows from north to south and originates within the Santa Ynez Mountains. In the project area, it travels under Calle Real and Route 101. South of the project site, it parallels State Route 217 on the west until it merges with San Pedro Creek and Atascadero Creek, eventually flowing to the Pacific Ocean.

The portion of San Jose Creek within the project footprint is regulated by the Central Coast Regional Water Quality Control Board and the Central Coast Basin Plan. The San Jose Creek watershed is identified on the 2008 Central Coast Regional Water

Quality Control Board 303(d) list for Total Maximum Daily Loads (priority schedule of impaired waters).

Environmental Consequences

The project would involve the demolition and new construction of the San Jose Creek bridge on Route 101 and installation of rock slope protection in the creek channel.

During demolition and construction, various project activities would occur above, next to and within the creek bed. It is anticipated that construction-related activities would result in temporary and intermittent impacts on water quality as fugitive dust and materials may enter the creek.

The project is not anticipated to result in long-term impacts to water quality because the project would incorporate permanent and temporary Best Management Practices in the project as part of Caltrans' standard practice. The project also plans to conduct all work in the creek when the channel is dry, when feasible, to avoid impacts to water quality. The installation of rock slope protection would prevent erosion during high-flow storms and provide a benefit to water quality.

The project is not expected to alter the existing water discharge rates and patterns along San Jose Creek because the new bridge design would be similar to the existing bridge. Also, the creek alignment would not be altered at the completion of the project.

Project construction is anticipated to result in approximately 0.92 acre of disturbed soil, which takes into consideration construction access routes, bridge demolition and construction areas, excavation areas, and potential contractor storage/staging areas. Based on the quantity of disturbed soil, the project may be required to incorporate permanent treatment or structural Best Management Practices. Any potential impacts on water quality would be addressed, eliminated, or minimized to the maximum extent possible by incorporating the appropriate permanent and temporary Best Management Practices into the project.

Avoidance, Minimization, and/or Mitigation Measures

To minimize impacts on water quality and stormwater runoff, the following measures would be implemented:

1. The project would implement the following Best Management Practices:
    a. Job site management
    b. Preparation of a Water Pollution Control Program to determine the feasibility of incorporating permanent treatment or structural Best Management Practices into the final project design

c. Temporary Best Management Practices that include, but are not limited to, the following:
    i. Hydraulic mulch
    ii. Check dams
    iii. Drainage inlet protection
    iv. Fiber rolls
    v. Stabilized construction entrance
    vi. Designated concrete washout
    vii. Environmentally Sensitive Area fencing

2. The project will implement appropriate Caltrans Standard Specifications pertaining to water quality and water pollution control.

2.1.3 Geology, Soils, Seismicity and Topography

Regulatory Setting

For geologic and topographic features, the key federal law is the Historic Sites Act of 1935, which establishes a national registry of natural landmarks and protects "outstanding examples of major geological features." Topographic and geologic features are also protected under CEQA.

This section discusses geology, soils, and seismic concerns as they relate to public safety and project design. Earthquakes are prime considerations in the design and retrofit of structures. Structures are designed using Caltrans' Seismic Design Criteria. The Seismic Design Criteria provide the minimum seismic requirements for highway bridges designed in California. A bridge's category and classification determine its seismic performance level and the methods used for estimating seismic demands and structural capabilities. For more information, please see Caltrans' Division of Engineering Services, Office of Earthquake Engineering, Seismic Design Criteria.

Affected Environment

A preliminary geotechnical report was prepared for the project on August 19, 2016.

Regional Geology and Seismicity

The project area is on the Goleta coastal alluvial plain and within the contiguous Dos Pueblos Canyon, Goleta, and Santa Barbara plains. The Goleta plain is in the western Transverse Ranges, along an east/west-trending segment of the Southern California coastline. The coastal plain, which has a relatively low elevation, slopes gently seaward from the Santa Ynez Mountains (to the north) to Santa Barbara Channel to the south.

The Santa Barbara coastal plain area is dominated by the Santa Barbara fold and fault belt and the overlapping Santa Ynez Mountain uplift. The Santa Barbara belt is an east/west-trending zone of potentially active folds and faults that spans the entire coastal plain, then widens to the northwest as it continues into the lower southern part of the Santa Ynez Mountains. The coastal plain includes several mesas and hills with potentially active folds and partially buried faults from the Santa Barbara fold and fault belt.

The project is not located on a known fault line. However, there are multiple known faults found in the region. The project site is about 1.3 miles south-southwest of the San Jose fault, 1.4 miles north of the More Ranch fault, 2.1 miles northwest of the Mission Ridge-Arroyo Parida-Santa Ana fault, 3.6 miles north-northeast of the Pita Point fault, and 3.7 miles north of the Red Mountain fault.

Site Conditions

The project area is entirely covered by Holocene and upper Pleistocene alluvium and colluvium. The Holocene and upper Pleistocene alluvium and colluvium consist mostly of a mix of silt, sand, and gravel deposits as result of drainage, alluvial fans and floodplains. The deposits are believed to be found under much of the Goleta and Santa Barbara areas. Geomorphic surfaces underlain by alluvium and colluvium commonly contain soil profiles that have weak to moderate erosion potential. The thickness of alluvial and colluvium deposits is generally up to 35 feet.

The project site is covered by two soil units, 21.2 percent Elder sandy loam and 78.8 percent Elder-Soboba complex. The Elder sandy loam soils are alluvial fan deposits. These soils are well drained and have low runoff, high permeability, and a slight erosion hazard. The Elder-Soboba complex consists of two components: Elder sandy loam soil and Soboba soil. The Soboba soil consists of valley deposits, with coarse stony and gravelly alluvium from sandstone. These soils contain stony loam sand and very gravelly sand. These well-drained soils have medium runoff, high permeability, and a slight erosion hazard.

The groundwater elevation within the project area is between 29.9 and 38.8 feet. The ground shaking potential of the project area is classified as “strong.” Due to the soil composition and shallow groundwater elevation within the project area, the potential for liquefaction is minimal.

Past investigations have determined that the subsurface materials within the project site contain loose sand and are considered a corrosive material. Further investigations will be conducted to better determine the presence of corrosive subsurface materials prior to project construction. The project would adopt appropriate design elements that would protect the new bridge structure from corrosive materials.

Environmental Consequences

Although the project area would experience strong seismic ground shaking in the event of a large earthquake, the project would be designed according to Caltrans' seismic standards, as provided in the Highway Design Manual, that would minimize the potential risk to construction workers and the traveling public in the event of such an earthquake.

There is a low risk for landslides due to the relatively flat topography of the project area and because the project would not involve large cuts and fill, or steep excavation work. It is anticipated that earth-retaining and shoring systems would be used during earthwork to minimize unstable soils as a result of excavations.

Ground-disturbing earthwork associated with construction could increase soil erosion rates and the loss of topsoil. However, the potential for erosion would be minimal because of the types of soil in the project area. The Best Management Practices described in Section 2.2.2, Water Quality and Stormwater Runoff, would further minimize erosion and the loss of topsoil.

The project would limit the amount of earthwork necessary to complete the project.

Avoidance, Minimization, and/or Mitigation Measures

The following measures would be implemented for the project:

1. The project would minimize the amount of soil disturbance necessary to complete the project.

2. Additional subsurface investigation would be conducted prior to project construction to identify subsurface conditions and help determine appropriate final design elements required to protect the new bridge from potential geologic hazards.

2.2 Biological Environment

2.2.1 Natural Communities

Regulatory Setting

This section of the document discusses natural communities of concern. The focus of this section is on biological communities, not individual plant or animal species. This section also includes information on wildlife corridors, fish passage, and habitat fragmentation. Wildlife corridors are areas of habitat used by wildlife for seasonal or daily migration. Habitat fragmentation involves the potential for dividing sensitive habitat and thereby lessening its biological value.

Habitat areas that have been designated as critical habitat under the federal Endangered Species Act are discussed in Section 2.2.5, Threatened and Endangered Species. Wetlands and other waters are discussed in Section 2.2.2.

Affected Environment

The information and analysis contained in this section are based on the *San Jose Creek Bridge Replacement Project Natural Environment Study* prepared in March 2019.

The biological study area for the project is defined as the area that may be directly, indirectly, temporarily, or permanently affected by construction and construction-related activities. The biological study area for the project occurs along Route 101 and San Jose Creek and is approximately 23 acres.

The biological study area occurs on a coastal plain at the base of the Santa Ynez Mountains, within the city of Goleta and just west of Santa Barbara. The Pacific Ocean is 1.6 miles south of the biological study area. The San Jose Creek watershed originates in the Santa Ynez Mountains. The upper source of the creek starts near San Marcos Pass and flows down the west side of the mountains; several small ephemeral streams merge into San Jose Creek along the way. The creek consolidates into a single main channel as it enters the coastal plain, about 1 mile upstream of the biological study area.

Within the biological study area are several natural communities mixed together. Major natural community types found within the biological study area are described individually below.

Coast Live Oak Woodland (Quercus agrifolia Woodland Alliance)

This community contains coast live oak for more than 50 percent of the tree canopy. Within the biological study area, coast live oak woodland can be found in various locations along the Route 101 right-of-way. Approximately 0.7 acre of this community occurs in the biological study area.

Black Cottonwood Forest (Populus trichocarpa Forest Alliance)

The community contains black cottonwood for more than 50 percent relative cover in the tree layer. This community can be found in the biological study area in San Jose Creek south of Route 101. Associated species include arroyo willow (*Salix lasiolepis*) and Southern California black walnut (*Juglans californica*). This community supports high-quality habitat for various raptors. Approximately 0.14 acre of this community occurs in the biological study area.

Arroyo Willow Thickets (Salix lasiolepis Shrubland Alliance)

This community is characterized as arroyo willow with more than 50 percent relative cover in the shrub or tree canopy. In this community, arroyo willow is the dominant

species in the overstory. The community can be found in the riparian corridor of San Jose Creek, both upstream and downstream of the existing Route 101 bridge. Associated species include western sycamore (*Plantanus racemosa*) and tall flat-sedge (*Cyperus eragrostis*). This community supports high-quality habitat for various nesting birds and other species that frequent riparian habitats, such as raccoon (*Procyon lotor*), striped skunk (*Mephitis mephitis*), and Virginia opossum (*Didelphis virginiana*). Approximately 0.1 acre of this community occurs in the biological study area.

Sandbar Willow Thickets (Salix exigua Shrubland Alliance)

This community is characterized as sandbar willow with more than 50 percent relative cover. This community can be found on the northwest side of San Jose Creek, next to the Route 101 northbound bridge. This community supports high-quality habitat for various nesting birds and other species that frequent riparian habitats. Approximately 0.02 acre of this community occurs in the biological study area.

California Sycamore Woodland (Platanus racemosa Woodland Alliance)

This community is described as California sycamore with more than 30 percent relative cover in the tree canopy. This community can be found in the biological study area in San Jose Creek, both north and south of Route 101. Associated species include arroyo willow and Douglas nightshade (*Solanum douglasii*). This community supports high-quality habitat for various raptors. Approximately 0.3 acre of this community occurs in the biological study area.

Eucalyptus Groves (Eucalyptus ssp. Woodland Semi-Natural Alliance)

This community contains eucalyptus with more than 80 percent relative cover in the tree layer. Species found on-site include blue gum (*Eucalyptus globulus*) and lemon gum (*Eucalyptus citriodora*). Within the biological study area, these trees occur on the shoulders of Route 101 and have very large, extensive canopies, often covering the vegetation below. Eucalyptus groves may provide perching and nesting habitat for various bird species. Approximately 1.56 acres of eucalyptus groves occur in the biological study area.

Giant Reed Series (Arundo donax Herbaceous Semi-Natural Alliance)

The giant reed series is described as having more than 60 percent relative cover in the herbaceous and shrub layers. This community is typically found in riparian areas, along low-gradient streams and ditches, or in marshes. This reed is considered an invasive species by the California Invasive Plant Council. Within the biological study area, this community is found on the south side of Route 101, along the margins of San Jose Creek; this dense, tall stand is approximately 5 to 9 feet high and almost completey composed of giant reed, which might support foraging habitat for various bird species and wildlife. Approximately 0.27 acre of giant reed occurs in the biological study area.

Ruderal/Disturbed Vegetation

Ruderal/disturbed vegetation occurs in areas that are subjected to frequent disturbance. For example, it occurs at the edges of pavement where vehicle impacts have compacted the soil. It also occurs in the mowed and maintained portions of the Caltrans right-of-way where small amounts of annual non-native grassland are interspersed with roadside plantings. Ruderal/disturbed vegetation in the biological study area is dominated by weedy species such as Canadian horseweed (*Erigeron canadensis*), rip-gut brome (*Bromus diandrus*), slender wild oat (*Avena barbata*), and wild radish (*Raphanus sativus*). These areas are subjected to routine disturbance from vehicles and mowing. They typically do not support habitat for sensitive species. Approximately 2.47 acres of ruderal/disturbed vegetation occur in the biological study area.

Ornamental Vegetation

These mostly exotic landscape plantings consist of trees and shrubs that would not occur naturally. However, ornamental vegetation occurs along Route 101and within the biological study area. The species include silk oak (*Grevillea robusta*), spider gum (*Eucalyptus conferruminate*), Chinese elm (*Ulmus parvifolia*), toyon (*Heteromeles arbutifolia*), Santa Cruz Island ironwood (*Lyonothamnus floribundus* ssp*. aspleniifolius*), silverleaf cotoneaster (*Cotoneaster pannosus*), and oleander (*Nerium oleander*). Ornamental vegetation may support nesting opportunities for birds and roosting opportunities for bats but typically does not support habitat for other sensitive species. Santa Cruz Island ironwood and Toyon are native species. Silk oak and cotoneaster are considered invasive species by the California Invasive Plant Council. Approximately 4.44 acres of ornamental vegetation occur in the biological study area.

Intermittent Stream

The intermittent stream channel in San Jose Creek is a habitat feature, defined as the area of the creek contained by the ordinary high-water mark within the biological study area. From approximately 229 feet upstream of the Route 101 northbound bridge to just a few feet past the southbound Route 101 bridge, the banks of San Jose Creek are lined with concrete paving; the center is an incised stream channel. This incised center channel is filled with course sand and, seasonally, with sparse vegetation. Sand bar willow (*Salix exigua* var*. hindsiana*), tall flatsedge (*Cyperus eragrostis),* and willow herb (*Epilobium ciliatum* ssp. *ciliatum*) grow here during summer and fall and when the creek has no surface water. Short-duration high-velocity flows in the winter tend to clear the incised channel of vegetation. The intermittent stream channel in the biological study area supports migration habitat for steelhead trout when the creek is flowing and provides a migration corridor for urban wildlife. Approximately 0.3 acre of intermittent stream occurs in the biological study area.

Habitat Connectivity and Migration

Native terrestrial wildlife may use San Jose Creek as a highway undercrossing. Passerine birds use the riparian corridor of San Jose Creek for migration, foraging, and nesting. However, no birds were observed nesting in trees or under the Route 101 bridge within the biological study area.

Fish migration may be possible along San Jose Creek from the Pacific Ocean all the way up to the bedrock waterfall approximately 3.70 miles upstream from the Route 101 bridge. This waterfall is approximately 30 feet high and a natural barrier to fish. As with most creeks in the region, passage quality for fish in San Jose Creek is most likely at its highest during the wet season, when there are potential outflows to the Pacific Ocean that allow for fish in-migration and out-migration.

Within the project limits, the California Fish Passage Assessment Database identifies the San Jose Creek channel below the Route 101 bridge as “Not a Barrier.” Caltrans Hydraulics completed a fish passage analysis for the project and determined that the existing Route 101 bridge does not negatively affect fish passage conditions along San Jose Creek and is not considered a fish barrier.

Environmental Consequences

The project would result in temporary and permanent impacts to natural communities identified in the project area. During project construction, vegetation removal and tree trimming would be required to provide access and clearance for equipment and personnel. Most of the vegetation removal would occur in areas next to the existing bridge and creek, in areas used for construction storage and staging, as well as along the roadway shoulders. The project would also remove the median planters just east and west of the bridge. The project would limit the level of disturbance to natural communities by limiting the number of access routes and staging/storage areas required for project completion.

The project is estimated to result in temporary impacts on the following communities: 0.21 acre of coast live oak woodland, 0.10 acre of black cottonwood forest, 0.03 acre of arroyo willow thickets, 0.17 acre of California sycamore woodland, 0.02 acre of sandbar willow thickets, 0.15 acre of eucalyptus groves, and 0.79 acre of ornamental vegetation. These temporary impacts would mostly be the result of temporary access routes and staging/storage sites.

The project would result in permanent impacts to the following communities: 0.003 acre of California sycamore woodland, 0.27 acre of giant reeds and 0.63 acre of ruderal/disturbed vegetation. Permanent impacts to California sycamore and giant reeds would result from the installation of rock slope protection in the creek channel. Permanent impacts to ruderal/disturbed vegetation would result from retaining wall work and roadway repaving. Although the project would result in permanent impacts, these impacts would be perceived as a benefit because they would result in the removal of invasive and weedy species.

The project would result in temporary and permanent impacts to the creek channel. Temporary impacts would result from the removal of the existing bridge abutments and columns, along with the removal of concrete paving found on the embankments and in the creek. Permanent impacts would result from the installation of the new bridge abutments and rocks slope protection. However, project impacts to the creek channel are anticipated to result in a net benefit. The removal of the existing bridge columns would improve channel flow and remove impediments to fish passage. The installation of rock slope protection would directly replace the concrete paving, and rock slope protection is anticipated to provide more benefit to the creek than concrete paving because it improves permeability and potential for revegetation.

Migration and Travel Corridors

The passage of native terrestrial wildlife could be temporarily affected by the project. In the daytime, when construction activity and noise are present, most wildlife species would be deterred from entering the area under the bridge. Although many of these species are nocturnal, and no night work is anticipated for the project, construction debris, equipment, or other project-related items could impede wildlife passage at night as well.

The project would maintain the existing fish passage characteristics of the channel below Route 101 and the natural bottom along the streambed. The existing and post construction conditions meet both the high- and low-flow fish passage criteria for juvenile salmonids and favorable conditions for adult salmonids at high flows; however, the depth is slightly below the recommended 1 foot for low-flow conditions. According to the Caltrans fish passage analysis, the un-grouted rock slope protection proposed for the channel banks would not affect fish passage because the water surface elevations would not rise high enough to contact these surfaces during fish passage.

Avoidance, Minimization, and/or Mitigation Measures

The following measure would be implemented to reduce impacts on natural communities:

1. Environmentally Sensitive Area fencing will be installed along the maximum disturbance limits to minimize disturbances to habitats/vegetation. Special provisions for the installation of Environmentally Sensitive Area fencing will be included in the construction contract and identified on project plans. Prior to the start of construction activities, Environmentally Sensitive Areas will be delineated in the field and approved by Caltrans' environmental division.
2. Impacts to native species will require the project to conducted restoration plantings onsite and consisting of native species appropriate for the project area.

2.2.2 Wetlands and Other Waters

Regulatory Setting

Wetlands and other waters are protected under a number of laws and regulations. At the federal level, the Federal Water Pollution Control Act, more commonly referred to as the Clean Water Act (33 U.S. Code 1344), is the main law that regulates wetlands and surface waters. One purpose of the Clean Water Act is to regulate the discharge of dredged or fill material into waters of the U.S., including wetlands. Waters of the U.S. include navigable waters, interstate waters, territorial seas, and other waters that may be used in interstate or foreign commerce. The lateral limits of jurisdiction over non-tidal water bodies extend to the ordinary high-water mark, in the absence of adjacent wetlands. When adjacent wetlands are present, Clean Water Act jurisdiction extends beyond the ordinary high-water mark to the limits of the adjacent wetlands. To classify wetlands for the purposes of the Clean Water Act, a three-parameter approach is used that includes the presence of hydrophytic (water-loving) vegetation, wetland hydrology, and hydric soils (soils formed during saturation/inundation). All three parameters must be present, under normal circumstances, for an area to be designated as a jurisdictional wetland under the Clean Water Act.

Section 404 of the Clean Water Act establishes a regulatory program that provides that a discharge of dredged or fill material cannot be permitted if a practicable alternative exists that would be less damaging to the aquatic environment or if the nation's waters would be significantly degraded. The Section 404 permit program is run by the U.S. Army Corps of Engineers, with oversight by the U.S. Environmental Protection Agency.

The U.S. Army Corps of Engineers issues two types of 404 permits: General and Individual. There are two types of General permits: Regional and Nationwide. Regional permits are issued for a general category of activities that are similar in nature and cause minimal environmental effect. Nationwide permits allow a variety of minor project activities, with no more than minimal effects.

Ordinarily, projects that do not meet the criteria for a Regional or Nationwide Permit may be permitted under one of the U.S. Army Corps of Engineer's Individual permits. There are two types of Individual permits: Standard permits and Letters of Permission. For Individual permits, the U.S. Army Corps of Engineers' decision to approve is based on compliance with the U.S. Environmental Protection Agency's Section 404(b)(1) Guidelines (40 Code of Federal Regulations 230) and whether permit approval is in the public interest. The Section 404 (b)(1) Guidelines, which were developed by the U.S. Environmental Protection Agency in conjunction with the U.S. Army Corps of Engineers, allow the discharge of dredged or fill material into the aquatic system (waters of the U.S.) only if there is no practicable alternative with less adverse effects. The Section 404(b)(1) Guidelines state that the U.S. Army Corps of Engineers may not issue a permit if a "least environmentally damaging practicable alternative" to the proposed discharge is available that would have lesser

effects on waters of the U.S. and no other significant adverse environmental consequences.

The Executive Order for the Protection of Wetlands (Executive Order 11990) also regulates the activities of federal agencies with regard to wetlands. Essentially, Executive Order 11990 states that a federal agency, such as the Federal Highway Administration and/or Caltrans, as assigned, cannot undertake or provide assistance for new construction located in wetlands unless the head of the agency finds: (1) that there is no practicable alternative to the construction and (2) the proposed project includes all practicable measures to minimize harm. A Wetlands Only Practicable Alternative Finding must be made.

At the state level, wetlands and waters are regulated mostly by the State Water Resources Control Board, the Regional Water Quality Control Boards, and the California Department of Fish and Wildlife. In certain circumstances, the California Coastal Commission (or the Bay Conservation and Development Commission or the Tahoe Regional Planning Agency) may also be involved. Sections 1600–1607 of the California Fish and Game Code require any agency that proposes a project that will substantially divert or obstruct the natural flow of a river, stream, or lake or substantially change the bed or bank of a river, stream, or lake to notify the California Department of Fish and Wildlife before beginning construction. If the California Department of Fish and Wildlife determines that the project may substantially and adversely affect fish or wildlife resources, a Lake or Streambed Alteration Agreement will be required. The California Department of Fish and Wildlife jurisdictional limits are usually defined by the top of the stream or lake bank or the outer edge of riparian vegetation, whichever is wider. Wetlands under U.S. Army Corps of Engineers jurisdiction may or may not be included in the area covered by the Lake or Streambed Alteration Agreement obtained from the California Department of Fish and Wildlife.

The Regional Water Quality Control Boards were established under the Porter-Cologne Act to oversee water quality. Discharges under the Porter-Cologne Act are permitted by Waste Discharge Requirements and may be required even when the discharge is already permitted or exempt under the Clean Water Act. In compliance with Section 401 of the Clean Water Act, the Regional Water Quality Control Boards also issue water quality certifications for activities that may result in a discharge to waters of the U.S. This is most frequently required in tandem with a Section 404 permit request. See the Water Quality section for more details.

Affected Environment

The information and analysis contained in this section are based on the *San Jose Creek Bridge Replacement Project Natural Environment Study* prepared by Caltrans in March 2019.

A Jurisdictional Waters Assessment was done as part of the Natural Environment Study and is based on the review of pertinent literature and a thorough on-site

investigation to determine the presence of three parameters within the study area: aquatic vegetation, saturated soil, and wetland hydrology. The delineation method used was conducted in accordance with the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual for the Arid West Region* (U.S. Army Corps of Engineers 2008).

A delineation of the ordinary high-water mark was made in the biological study area on July 11, 2018. Potential jurisdictional areas identified in the biological study area included San Jose Creek and a concrete-lined perennial drainage that runs from Calle Real to San Jose Creek. A total of 0.369 acre of potential Clean Water Act "other waters" was delineated within the biological study area. Three-parameter Clean Water Act wetlands do not occur in the biological study area. A total of 1.400 acres fall within Regional Water Quality Control Board and California Department of Fish and Wildlife jurisdiction. A map of jurisdictional water areas within the project vicinity is shown in Appendix C.

The biological study area is outside the coastal zone and not under the jurisdiction of the California Coastal Commission.

Environmental Consequences

The project would result in temporary impacts on jurisdictional U.S. Army Corps of Engineers "other waters." The project would result in temporary and permanent impacts on California Department of Fish and Wildlife and Regional Water Quality Control Board jurisdictional areas.

The project would temporarily affect the following: 0.182 acre of U.S. Army Corps of Engineers Clean Water Act "other waters"; 0.742 acre of Regional Water Quality Control Board jurisdiction; and 0.742 acre of California Department of Fish and Wildlife jurisdiction. These impacts are anticipated as a result of direct and indirect effects from project activities that would occur within the project site.

The project would permanently affect the following: 0.042 acre of Regional Water Quality Control Board jurisdiction and 0.042 acre of California Department of Fish and Wildlife jurisdiction. Permanent impacts would result from the addition of rock slope protection to a small portion of the creek bank downstream of the new bridge. These permanent impacts would occur only in areas with mostly exotic and invasive species and a very small area of California sycamore woodland.

Avoidance, Minimization, and/or Mitigation Measures

The following measures would be implemented to reduce potential impacts on jurisdictional and wetland areas resulting from the project:

1. Prior to any ground-disturbing activities, Environmentally Sensitive Area fencing will be installed around jurisdictional waters as well as the dripline of any trees that are to be protected within the project limits. Caltrans-defined

Environmentally Sensitive Areas will be noted on design plans and delineated in the field prior to the start of construction activities.

2. During construction, all project-related hazardous materials spills within the project site will be cleaned up immediately. Readily accessible spill prevention and cleanup materials will be kept on-site by the contractor at all times during construction.
3. During construction, erosion control measures will be implemented. Appropriate Best Management Practices will be installed as needed between the project site and jurisdictional "other waters" and riparian habitat. At a minimum, erosion controls will be maintained by the contractor daily throughout the construction period.
4. During construction, cleaning and refueling of equipment and vehicles will occur only within a designated staging area. This area will either be a minimum of 100 feet from aquatic areas or, if the area is less than 100 feet from aquatic areas, surrounded by barriers or secondary containment items (e.g., fiber rolls or equivalent). The staging areas will conform to the Best Management Practice applicable to attaining zero discharge of stormwater runoff. At a minimum, all equipment and vehicles will be checked and maintained by the contractor daily to ensure proper operation and avoid potential leaks or spills.
5. Habitat restoration and native re-plantings will be required for the project. It is anticipated that compensatory mitigation can occur entirely within the project site, consisting of native plants appropriate to the project area. Plant restoration is proposed at a 1:1 ratio for acreage of temporary and permanent impacts. It is anticipated that a 3:1 replacement ratio would be required for impacts to riparian trees. A plant establishment period will be required as part of the replanting process.

2.2.3 Plant Species

Regulatory Setting

The U.S. Fish and Wildlife Service and California Department of Fish and Wildlife have regulatory responsibility for the protection of special-status plant species. "Special-status" species are selected for protection because they are rare and/or subject to population and habitat declines. *Special-status* is a general term for species that are provided varying levels of regulatory protection. The highest level of protection is given to threatened and endangered species; these are species that are formally listed or proposed for listing as endangered or threatened under the Federal Endangered Species Act and/or the California Endangered Species Act. See Section 2.2.5, Threatened and Endangered Species, for detailed information about those species.

This section of the document discusses all other special-status plant species, including California Department of Fish and Wildlife species of special concern, U.S.

Fish and Wildlife Service candidate species, and California Native Plant Society rare and endangered plants.

The regulatory requirements for the Federal Endangered Species Act can be found at 16 U.S. Code 1531, et seq. (see also 50 Code of Federal Regulations 402). The regulatory requirements for the California Endangered Species Act can be found at California Fish and Game Code Section 2050, et seq. Caltrans projects are also subject to the Native Plant Protection Act, found in California Fish and Game Code Sections 1900–1913, and the California Environmental Quality Act, found in California Public Resources Code Sections 21000–21177.

Affected Environment

The information and analysis contained in this section are based on the *San Jose Creek Bridge Replacement Project Natural Environment Study* prepared by Caltrans in March 2019.

Floristic botanical surveys were done in the biological study area on April 20, June 18, July 11, and September 11, 2018. The surveys consisted of walking a meandering strip of land within the project limits where all areas could be visually inspected.

Potential habitat occurs within the biological study area for the following special-status plant species: marsh sandwort (*Arenaria paludicola*), Santa Barbara morning-glory (*Calystegia sepium* ssp*. binghamiae)*, southern tarplant *(Centromadia parryi ssp. Australis)*, Gambel's watercress (*Nasturtium gambelii)*, and Hoffmann's bitter gooseberry (*Ribes amarum var. hoffmannii).* However, no special-status plant species were observed during the surveys.

The Southern California black walnut (*Juglans californica*) is identified as a species of interest and was found in the biological study area. The Southern California black walnut was often used in the early 1900s as a disease-resistant rootstock for commercial farming of the Persian walnut (*Juglans regia*). Goleta once had a thriving walnut industry and was the walnut capital of the U.S. It is common to find the Southern California black walnut along the banks of creeks throughout the central coast and parts of Santa Barbara County. The Southern California black walnut found in San Jose Creek is likely an escaped migrant and should not be considered native to the biological study area.

Environmental Consequences

Although potential habitat occurs within the biological study area for several special-status plant species, the habitat areas are marginal. No actual plants were observed during field surveys, and none are anticipated to occur within the project area. Therefore, the project is not anticipated to affect any special-status plant species.

Avoidance, Minimization, and/or Mitigation Measures

No avoidance, minimization, and/or mitigation measures are proposed.

2.2.4 Animal Species

Regulatory Setting

Many state and federal laws regulate impacts on wildlife. The U.S. Fish and Wildlife Service, the National Oceanic and Atmospheric Administration's National Marine Fisheries Service and the California Department of Fish and Wildlife are responsible for implementing these laws. This section discusses potential impacts and permit requirements associated with animals that are not listed or proposed for listing under the Federal Endangered Species Act or the California Endangered Species Act. Species that are listed or proposed for listing as threatened or endangered are discussed in Section 2.2.5, Threatened and Endangered Species. All other special-status animal species are discussed here, including California Department of Fish and Wildlife fully protected species and species of special concern and U.S. Fish and Wildlife Service or National Oceanic and Atmospheric Administration Fisheries Service candidate species.

Federal laws and regulations relevant to wildlife include the following:

- National Environmental Policy Act
- Migratory Bird Treaty Act
- Fish and Wildlife Coordination Act

State laws and regulations relevant to wildlife include the following:

- California Environmental Quality Act
- Sections 1600–1603 of the California Fish and Game Code
- Sections 4150 and 4152 of the California Fish and Game Code

Affected Environment

The information and analysis contained in this section are based on the *San Jose Creek Bridge Replacement Project Natural Environment Study* prepared by Caltrans in March 2019.

The biological study area includes potential habitat for several special-status animal species that include the following: monarch butterfly (*Danaus plexippus)*, Southern California steelhead (*Oncorhynchus mykiss irideus*), California red-legged frog (*Rana draytonii*), Coast Range newt (*Taricha torosa*), Northern California legless lizard (*Anniella pulchra*), western pond turtle (*Emys marmorata*), coast horned lizard (*Phrynosoma blainvillii*), two-striped garter snake (*Thamnophis hammondii*), Cooper's hawk (*Accipiter cooperii*), southwestern willow flycatcher (*Empidonax traillii*

extimus), least Bell's vireo (*Vireo bellii pusillus*), other nesting birds (class Aves), pallid bat (*Antrozous pallidus*), western mastiff bat (*Eumops perotis californicus*), western red bat (*Lasiurus blossevillii*), Yuma myotis (*Myotis yumanensis*), and San Diego desert wood rat (*Neotoma lepida intermedia*).

Although there are suitable and marginal habitats for special-status animal species within the biological study area, none were observed in the biological study area during field surveys. However, special-status animal species have the potential to occur in the biological study area during construction, given the presence of potential habitat. The following discussions are limited to those species that could potentially be present in the biological study area and/or have the potential to be affected by the proposed project.

Because of their threatened and/or endangered status, the following animal species are discussed in Section 2.2.5, Threatened and Endangered Species: Southern California steelhead, California red-legged frog, southwestern willow flycatcher and least Bell's vireo.

Coast Range Newt

The Coast Range newt is known to occur along coastal drainages, from Mendocino County to San Diego County. The portion of San Jose Creek that occurs in the biological study area is unlikely to provide surface water that lasts long enough for the aquatic life cycle of this species, and upland areas in the vicinity are highly developed. However, there are California Natural Diversity Database records of the species in the upper watershed and adjacent creeks; therefore, presence cannot be ruled out.

Northern California Legless Lizard

The Northern California legless lizard occurs in moist, warm loose soil with plant cover; sparsely vegetated areas in beach dunes; chaparral; pine-oak woodlands; desert scrub; and stream terraces with native tree cover. Potentially suitable habitat was found in the biological study area.

Western Pond Turtle

The western pond turtle occurs in quiet waters, including ponds, lakes, streams, and marshes. It is typically found near the deepest parts. The portion of San Jose Creek within the project limit does not provides a deep pool. Also, surface water in the creek may not last long enough to support this species. However, the species has been recorded in adjacent creeks and cannot be ruled out as absent.

Coast Horned Lizard

The coast horned lizard occurs in a variety of habitats but is most commonly found in lowlands along sandy washes with scattered low bushes. Potentially suitable habitat is present in the biological study area.

Two-Striped Garter Snake

The two-striped garter snake occurs in coastal California, from Salinas to Baja California, at elevations up to 7,000 feet. It is found along streams with rocky beds and a permanent source of fresh water. Within the biological study area, permanent aquatic habitat is present in the concrete perennial drainage ditch.

Cooper's Hawk

Cooper's hawk occurs in mostly open, interrupted, or marginal woodlands. It nests in riparian growths of deciduous trees and live oaks as well as canyon bottoms and river floodplains. Trees in the biological study area are potential suitable nesting habitat.

Other Nesting Birds

In addition to the individually described bird species, the biological study area contains many trees that are suitable for various bird species. No nesting birds were observed in the biological study area during surveys but there is potential for future nesting.

Pallid Bat

The pallid bat occurs on rocky outcrops, cliffs, and crevices with access to open habitats for foraging. It is also found near water and often associated with open, sparsely vegetated grasslands. Although the bridges at the project site do not have crevices or protected acute angles, the weep holes on the bridges may provide roosting locations for this species. No evidence of roosting was seen during the daytime surveys.

Western Mastiff Bat

The western mastiff bat is found in many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, and chaparral. It roosts in crevices in cliff faces, high buildings, trees, and tunnels. Although the bridges at the project site do not have crevices, trees in the biological study area could provide roosting locations for this species. No evidence of roosting was seen during daytime surveys.

Western Red Bat

The western red bat roosts mostly in trees, often in edge habitats next to streams, fields, or urban areas. Trees in the biological study area could provide roosting locations for this species. No evidence of roosting was seen during daytime surveys.

Yuma Myotis

The Yuma myotis occurs in a variety of habitats but is usually found close to standing water such as lakes and ponds. It roosts in caves, attics, buildings, and

mines and under bridges. Weep holes in the bridges of the project may provide roosting locations for this species. No evidence of roosting was seen during daytime surveys.

San Diego Desert Woodrat

The San Diego desert woodrat occurs from Baja California northward to northern San Luis Obispo County. It is typically found in woodlands and coastal scrub habitats. Woodrats in general build nests in a wide variety of locations. The San Diego desert woodrat is known to adapt to its local habitat. Rock piles are not always used for nesting. Although no woodrat nests were found in the biological study area, the species could nest in the biological study area prior to construction.

Environmental Consequences

Special-status species that have the potential to be present during construction and may be affected by the project are discussed below.

Coast Range Newt, Western Pond Turtle, and Two-Striped Garter Snake

Coast Range newt, western pond turtle, and two-striped garter snake are addressed together because they have similar habitat requirements, potential project-related impacts, and avoidance and minimization measures.

Construction of the project could result in the injury or mortality for the Coast Range newt, western pond turtle, or two-striped garter snake if these animals are present during construction, including dewatering of San Jose Creek. If capture and relocation of these animals is required, they could be subjected to stresses that would result in adverse effects. Injury or mortality could occur through accidental crushing by workers or construction equipment. Erosion and sedimentation could also occur, which could directly or indirectly affect water quality. The potential for impacts on these species is anticipated to be low because they were not found within the biological study area during surveys; however, this could change over time as each species expands its population and/or migrates through or colonizes the creek corridor.

Northern California Legless Lizard and Coast Horned Lizard

These reptile species are addressed together because they have similar habitat requirements, project-related impacts, and avoidance and minimization measures.

The project could result in injury or mortality for the Northern California legless lizard and coast horned lizard if the species are present during construction. If capture and relocation of these animals is required, they could be subjected to stresses that would result in adverse effects. Injury or mortality could occur through accidental crushing by construction equipment or workers. With use of avoidance and minimization measures, the project is not anticipated to affect these species.

Cooper's Hawk and Other Nesting Birds Species

Special-status bird species and nesting bird species are addressed as a group because they have similar habitat requirements, project-related impacts, and avoidance and minimization measures.

The removal and trimming of vegetation and/or the demolition of the existing bridge could directly impact active bird nests and any eggs or young residing in the nests. Indirect impacts could also result from noise and disturbance associated with construction, which could alter perching, foraging, and/or nesting behaviors. While temporary loss of vegetation that supports potential nesting habitat could occur, this would be mitigated by habitat restoration. With use of avoidance and minimization measures, the project is not anticipated to affect bird species.

Pallid Bat, Western Red Bat, Yuma Myotis, and Other Bat Species

Roosting bat species are addressed as a group because they have similar habitat requirements, project-related impacts, and avoidance and minimization measures.

Direct impacts on bats could result from the project if bats are found to be roosting on the bridge prior to construction. These direct effects could result in injury or mortality for bats or harassment that could alter roosting behaviors. Indirect impacts could also result from noise and disturbances associated with construction, which could also alter roosting behaviors. Implementation of pre-activity surveys and exclusion measures would reduce the potential for adverse effects.

Although the project would require night work, night work would occur only after trees near the Route 101 bridges are removed and bats are excluded from the human-made bat box under the bridge on Calle Real. Any bats that roost in the trees that remain (i.e., farther from the Route 101 bridges) are unlikely to experience light and noise effects greater than those from normal traffic on this part of Route 101 or in the surrounding urban area. Although there would be a temporary loss of service for bats that use the bat box under the bridge on Calle Real, nearby bridges would be able to provide alternative roosting opportunities.

As some trees are removed and the bridges are replaced, there may be a temporarily loss of roosting habitat if bats are present prior to construction; however, the bridges will be replaced, and new trees will be planted. Implementation of bat exclusion netting may also temporarily remove roosting habitat until the new bridges are constructed.

San Diego Desert Woodrat

Although it is not anticipated that the project would have a direct or indirect impact on the San Diego desert woodrat, construction activities have the potential to kill, injure, or disrupt woodrats. Implementation of avoidance and minimization measures would reduce the potential for impacts.

Avoidance, Minimization, and/or Mitigation Measures

The following avoidance, minimization, and mitigation measures would be implemented for the special-status animal species.

Coast Range Newt, Western Pond Turtle, and Two-Striped Garter Snake

1. Prior to initiation of stream dewatering, Caltrans will conduct a worker environmental training program, including a description of the Coast Range newt, western pond turtle, and two-striped garter snake; their legal/protected status; their proximity to the project site; and avoidance/minimization measures to be implemented during the project.
2. Prior to construction, a biologist, determined qualified by Caltrans, will survey the biological study area and capture and relocate Coast Range newts, two-striped garter snakes, and western pond turtles, if present, to suitable habitat upstream within the biological study area. Observations of species of special concern or other special-status species will be documented on California Natural Diversity Database forms and submitted to the California Department of Fish and Wildlife upon project completion. If these species or other aquatic species of special concern are observed during construction, they will likewise be relocated by a qualified biologist to suitable habitat outside the impact area.

Northern California Legless Lizard and Coast Horned Lizard

3. All excavation and vegetation removal within suitable habitat will be monitored by a qualified biologist. The qualified biologist will be on-site and monitoring during all new excavations and vegetation removal within suitable habitat.
4. Northern California legless lizards, coast horned lizards, or any species discovered during monitoring, excluding state or federal listed species, will be captured and relocated by the qualified biologist to suitable habitat outside the biological study area. Observations of species of special concern or other special-status species will be documented on California Natural Diversity Database forms and submitted to the California Department of Fish and Wildlife upon project completion.

Cooper's Hawk and Other Nesting Bird Species

5. If feasible, tree removal and trimming will be scheduled to occur from October 1 to January 31, outside of the typical nesting bird season, to avoid potential impacts to nesting birds. If it is not feasible to conduct this work outside of the nesting bird season, a nesting bird survey will be conducted by a qualified biologist no more than 14 days prior to the start of construction. If an active nest is found, a qualified biologist will determine an appropriate buffer, or a monitoring strategy based on the habits and needs of the species. The buffer area will be avoided, or the monitoring strategy implemented until a qualified biologist has determined that the nest is no longer active.

6. It is recommended that bird nests be excluded from the existing bridge. Nesting bird exclusion methods may include, installation of thick plastic sheeting, one-way exclusion devices over drain holes, removing/knocking down nests before they contain eggs or nestlings, or other methods approved by California Department of Fish and Wildlife. The required time for installation of bird exclusion devices is outside of the nesting season (i.e., implement exclusion methods from October 1 to January 31).
7. During construction, active bird nests will not be disturbed and eggs or young of birds protected by the Migratory Bird Treaty Act and California Fish and Game Code will not be killed, destroyed, injured, or harassed at any time. If an active nest is found, a qualified biologist will determine an appropriate buffer using Environmentally Sensitive Area fencing or a monitoring strategy based on the habits and needs of the species. The buffer area will be avoided, or the monitoring strategy implemented until a qualified biologist has determined that the nest is no longer active.

Pallid Bat, Western Red Bat, Yuma Myotis, and Other Bat Species

8. A qualified biologist will conduct a preconstruction survey of the Route 101 and Calle Real bridges for bat activity at least 14 days prior to construction. If any roosting bats or evidence of roosting is observed, exclusion devices will be installed over the roosting habitat when bats are not present.
9. At least 14 days prior to construction, the human-made bat box under the bridge on Calle Real will be covered with an exclusion device when bats are not present. The exclusion device will be removed at the completion of construction.
10. If tree removal is required during the bat maternity roosting season (February 15 to September 1), a bat roost survey will be conducted by a qualified biologist within 7 days prior to removal. If an active bat roost is found, Caltrans will coordinate with the California Department of Fish and Wildlife to determine an appropriate buffer, based on the habits and needs of the species. Readily visible exclusion zones will be established in areas where roosts must be avoided, using Environmentally Sensitive Area fencing. Work in the buffer area will be avoided until a qualified biologist has determined that roosting activity has ceased. Active bat maternity roosts will not be disturbed or destroyed at any time.
11. Compensatory Mitigation: The existing Route 101 bridges showed no signs that they supported roosting bats. Only a single nest for a cliff swallow was found; the nest could have been used by bats for roosting (although it was broken). No bat roosting habitat is anticipated to be permanently lost as a result of the project. Impacts on vegetation would be offset by replacement plantings within the project limits, which would also replace potential roosting habitat. No additional compensatory mitigation is proposed for bats.

San Diego Desert Woodrat

12. No more than 14 days prior to construction activities, a pre-construction survey will be conducted within the biological study area by a qualified biologist to determine the presence or absence of woodrat middens.

13. If woodrat middens are located during this survey, the qualified biologist will establish an Environmentally Sensitive Area with a 25-foot buffer around each midden. No project activities requiring grading, mechanized equipment or vehicles, or large crews will be allowed within the 25-foot protective buffer.

14. If project activities cannot avoid affecting the middens, then a qualified biologist will dismantle the middens by hand prior to grading or vegetation removal activities. The midden dismantling will be conducted such that the midden material is removed slowly while personnel look for young woodrats. The material will be placed in a pile at the closest undisturbed adjacent habitat but more than 50 feet from construction activities.

15. If young are encountered during midden dismantling, the dismantling activity will be stopped, and the material replaced back on the nest. The nest will be left alone, then rechecked in 2 to 3 weeks to see if the young are out of the nest or capable of being out on their own (as determined by a qualified biologist); once the young can fend for themselves, the nest dismantling can continue.

2.2.5 Threatened and Endangered Species

Regulatory Setting

The main federal law protecting threatened and endangered species is the Federal Endangered Species Act, found at 16 U.S. Code 1531, et seq. (see also 50 Code of Federal Regulations 402). This act, and later amendments, provides for the conservation of endangered and threatened species as well as the ecosystems upon which they depend. Under Section 7 of this act, agencies such as the Federal Highway Administration and Caltrans, as assigned, are required to consult with the U.S. Fish and Wildlife Service and the National Oceanic and Atmospheric Administration Fisheries Service to ensure that they are not undertaking, funding, permitting, or authorizing actions that are likely to jeopardize the continued existence of listed species or destroy or adversely modify designated critical habitat. Critical habitat is defined as geographic locations that are critical to the existence of a threatened or endangered species. The outcome of consultation under Section 7 may include a biological opinion, with an incidental take statement or a letter of concurrence. Section 3 of the Federal Endangered Species Act says that *take* means to “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect” or initiate any attempt at such conduct.

California has enacted a similar law at the state level, the California Endangered Species Act, found at California Fish and Game Code Section 2050, et seq. The California Endangered Species Act emphasizes early consultation to avoid potential impacts on rare, endangered, and threatened species and develop appropriate planning to offset project-caused losses of listed species and their essential habitats. The California Department of Fish and Wildlife is the agency responsible for implementing the California Endangered Species Act. Section 2080 of the California Fish and Game Code prohibits take of any species that has been determined to be an endangered species or a threatened species. Section 86 of the California Fish and Game Code says that *take* means to "hunt, pursue, catch, capture, or kill or attempt to hunt, pursue, catch, capture, or kill."

The California Endangered Species Act allows for take that is incidental to otherwise lawful development projects; for these actions, an incidental take permit is issued by the California Department of Fish and Wildlife. For species listed under both the Federal Endangered Species Act and the California Endangered Species Act and requiring a biological opinion under Section 7 of the Federal Endangered Species Act, the California Department of Fish and Wildlife may also authorize impacts on California Endangered Species Act species by issuing a consistency determination under Section 2080.1 of the California Fish and Game Code.

Another federal law—the Magnuson-Stevens Fishery Conservation and Management Act of 1976—was established to conserve and manage fishery resources found off the coast, as well as anadromous species and continental shelf fishery resources of the United States, by exercising (A) sovereign rights for the purposes of exploring, exploiting, conserving, and managing all fish within the exclusive economic zone established by Presidential Proclamation 5030, dated March 10, 1983, and (B) exclusive fishery management authority beyond the exclusive economic zone over such anadromous species, continental shelf fishery resources, and fishery resources in special areas.

Affected Environment

The information and analysis contained in this section are based on the *San Jose Creek Bridge Replacement Project Natural Environment Study* prepared by Caltrans in March 2019.

No federally designated critical habitat for federally listed plant species occurs within the biological study area.

No Essential Fish Habitat for federally managed species was identified within the project limits.

Federal Endangered Species Act Section 7 consultation with the National Marine Fisheries Service will be necessary for potential impacts to Southern California steelhead and associated critical habitat.

Federal Endangered Species Act Section 7 consultation with the U.S. Fish and Wildlife Service will be necessary for potential impacts to the California red-legged frog and its associated habitat, southern willow flycatcher and least Bell's vireo. It is anticipated that a Programmatic Biological Opinion for potential impacts to the California red-legged frog would be applicable for this project.

Southern California Steelhead and Critical Habitat

The Southern California steelhead is federally designated as an endangered species. The species is known to occur in cold-water anadromous streams and coastal lagoons. The federal distinct population segment listing refers to runs in coastal basins from the Santa Maria River to the U.S./Mexico border.

Suitable habitat that satisfies steelhead occurs in San Jose Creek within the biological study area. Also, the creek is known to support steelhead. However, no steelhead were observed during the surveys along San Jose Creek. No surface water was present in the biological study area during the multiple surveys from April 20 to October 25 in 2018; surface water was present during one survey conducted on January 10, 2019.

Though San Jose Creek is known to be used by steelhead, only a small amount of information on presence is available. The habitat quality of the creek channel in the biological study area can be characterized as low, and the occurrence of surface water is seasonally limited. However, taking a conservative approach, based on the best available information, the presence of juvenile steelhead in the biological study area cannot be ruled out should water be present during construction. Steelhead presence is therefore inferred within the biological study area but with an estimated low likelihood for presence.

San Jose Creek also occurs within federally designated steelhead critical habitat, South Coast Hydrologic Unit 3315. Within the biological study area, San Jose Creek was determined to support the Southern California steelhead, primary constituent element 3 (i.e., freshwater migration corridors free of obstruction). The concrete-lined slopes of San Jose Creek under the Route 101 bridges are not a barrier to fish passage.

California Red-legged Frog

The California red-legged frog is a federally threatened species. It is known to occur within aquatic habitats with little or no flow or surface water until early June. Within the biological study area and areas within dispersal distance to the biological study area, there is potentially suitable aquatic breeding and non-breeding habitat, dispersal habitat, and upland habitat. However, the biological study area is not close to known breeding habitats. Although the species was not observed during surveys, its presence cannot be completely ruled out.

Southwestern Willow Flycatcher

The southwestern willow flycatcher is a federal and state endangered species. It is known to inhabit woodlands in Southern California. For nesting, it requires dense riparian habitats. Habitat that is not suitable for nesting may be used for migration and foraging. Marginal foraging and migration habitat may occur in the willow and cottonwood trees within the biological study area. However, these riparian trees are not suitable for nesting because of a lack of density and disturbances from the freeway. No critical habitat for this species occurs within the biological study area. The nearest record of a southern willow flycatcher is more than 24 miles away near the town of Buellton, near the Santa Ynez River.

Least Bell's Vireo

Least Bell's vireo is a federal and state endangered species. It is known to occur within Southern California during the summer. It occurs in dense, low shrubby vegetation in riparian areas near water or in dry river bottoms below 2,000 feet. It nests along the margins of bushes or twigs of willow or mesquite. Marginal foraging and migration habitat may occur in the willow trees upstream of the Route 101 bridges. However, these riparian trees are not suitable for nesting because they lack density and are exposed to loud noises from the freeway. No critical habitat for this species occurs within the biological study area. The nearest record of a least Bell's vireo is more than 24 miles away near the town of Buellton, near the Santa Ynez River.

Environmental Consequences

Southern California Steelhead and Critical Habitat

Construction activities for the project could result in impacts to steelhead. Implementation of a dewatering plan could result in take of individual steelhead or create temporary disruption for steelhead within the biological study area. The project would schedule all work in the creek channel during the dry season (typically June to October) when water is not expected to be present in the creek. However, water may still be present in the creek channel during the dry season, which would require the implementation of a dewatering plan to allow for work in the creek. Therefore, impacts to steelhead cannot be ruled out.

The Federal Endangered Species Act Section 7 effects determination is that the project may affect and is likely to adversely affect the federally endangered Southern California steelhead. The basis for this determination is the inferred presence of steelhead, based on best available information. The potential would exist for take of the species during dewatering, capture, and relocation activities. An unknown number of steelheads could be subjected to take, but the potential is anticipated to be low because of seasonally low flow rates and low-quality habitat within the project limits.

For federally designated Southern California steelhead critical habitat, the Federal Endangered Species Act Section 7 effects determination found that the proposed project may affect and is likely to adversely affect federally designated Southern California steelhead critical habitat. It is anticipated that 0.16 acre of Southern California steelhead critical habitat would be temporarily affected. The basis for this determination is that dewatering activities could result in temporary disruption of steelhead dispersal and work in the creek bed could cause temporary impact to steelhead critical habitat. The extent of potential effects is estimated to be minor and restricted to the dry season. However, no permanent impacts on steelhead critical habitat would occur in San Jose Creek. There are no fish passage barriers currently at the project site and the proposed project would maintain the existing fish passage characteristics and natural streambed.

California Red-legged Frog

The project could result in the injury or mortality of California red-legged frogs, if present, during construction or dewatering within San Jose Creek. Capturing and relocating could subject these animals to stresses that could result in adverse effects. Injury or mortality could occur through accidental crushing by construction equipment or workers. In addition, erosion and sedimentation could occur, which could directly or indirectly affect water quality. Pre-construction surveys, construction monitoring, and capture and relocation would reduce any chance of take.

Permanent aquatic habitat in the perennial drainage that runs from Calle Real to San Jose Creek would be affected by the project and could result in take and/or loss of service for the animals (if present). Although the placement of a check dam and diversion pipe within a portion of San Jose Creek could result in a temporary loss of aquatic habitat for the animals, such effects are estimated to be minor.

The Federal Endangered Species Act Section 7 effects determination found that the project may affect, and is likely to adversely affect the California red-legged frog because the presence of the species cannot be ruled out. There would a low, but possible potential for take of the species during dewatering activities and construction would be low but possible. The Federal Endangered Species Act Section 7 affects determination is that the proposed project will have no effect on California red-legged frog critical habitat, as none occurs within the biological study area.

Southwestern Willow Flycatcher and Least Bell's Vireo

Caltrans typically anticipates the bird nesting season to occur from February 1 to September 30. During construction, the removal of vegetation and demolition of the existing bridges could directly affect active bird nests and any eggs or young in nests if avoidance and minimization measures are not implemented. Indirect impacts could also result from noise and disturbances associated with construction, which could alter perching, foraging, and/or nesting behaviors. Although the temporary loss of vegetation that supports potential nesting habitat could occur, this would be mitigated as part of the projects re-planting effort in response to impacts to natural

communities (Section 2.2). Implementation of avoidance and minimization measures, such as appropriate timing for vegetation removal, pre-activity surveys, and exclusion zones, would reduce the potential for adverse effects on nesting bird species.

The Federal Endangered Species Act Section 7 effects determination found that the project may affect but is not likely to adversely affect the least Bell's vireo and southwestern willow flycatcher because the riparian vegetation within the biological study area is unlikely to be suitable nesting habitat. However, it cannot be ruled out as marginally suitable foraging habitat is present within the project area for these species. In addition, the project is not likely to adversely affect these species because avoidance and minimization measures would be used to protect all nesting bird species protected by the Federal Endangered Species Act, the California Endangered Species Act, the Migratory Bird Treaty Act, and the California Fish and Game Code, making the potential for effects insignificant (under the Federal Endangered Species Act Section 7 definitions) and discountable in that adverse effects would have a very low chance of occurrence. There would be no effect on the least Bell's vireo or southwestern willow flycatcher critical habitat because none occurs in or near the biological study area. No take is anticipated to occur, and a California Department of Fish and Wildlife 2081 permit would not be required.

The southwestern willow flycatcher and least Bell's vireo are also state-listed taxa under the California Endangered Species Act; however, because these taxa are not expected to be encountered during construction and measures would be implemented to avoid impacts on nesting birds, California Endangered Species Act compliance would not be required.

Avoidance, Minimization, and/or Mitigation Measures

Southern California Steelhead and Critical Habitat

The avoidance, minimization, and/or mitigation measures listed throughout Section 2.2 would reduce impacts on steelhead critical habitat.

The measures listed below would reduce impacts on the Southern California steelhead:

1. Prior to initiation of stream dewatering, a qualified biologist will conduct a worker environmental training program, including a description of steelhead, its legal/protected status, proximity to the project site, avoidance/minimization measures to be implemented during the project, and the implications of violating the Federal Endangered Species Act and permit conditions.

2. During construction, pile driving, and instream work will be limited to the low-flow period, from June 1 and October 31, in any given year when surface water is likely to be at the seasonal minimum to avoid adult steelhead spawning migration and peak smolt migration. Deviations from this work

window will be made only with permission from Caltrans and the relevant regulatory agencies.

3. A qualified biologist will be retained with experience in steelhead biology and ecology; aquatic habitats; biological monitoring, including dewatering; and capturing, handling, and relocating fish species. The biological monitor(s) will continuously monitor the placement and removal of any creek diversion and dewatering system to capture steelhead and other native fish species and relocate them to suitable habitat as appropriate. The monitor(s) will capture steelhead in the biological study area just prior to dewatering and any remaining stranded steelhead immediately after dewatering. Steelhead will be relocated to suitable habitat upstream of the work area, using methods approved by the appropriate regulatory agencies. This may include, but not necessarily be limited to, seine-netting, dip-netting, providing aerated water in buckets for transport, and ensuring adequate water temperatures during transport. The biologist will note the number of steelheads observed in the affected area, the number of steelheads captured and relocated, and the date and time of the collection and relocation.

4. During instream work, if pumps are incorporated to assist in temporarily dewatering the site, intakes will be completely screened with no larger than $^{3}/_{32}$-inch (2.38-millimeter) wire mesh to prevent steelhead and other sensitive aquatic species from entering the pump system. Pumped water will be directed through a silt filtration bag and/or into a settling basin, allowing the suspended sediment to settle out prior to re-entering the stream(s) outside of the isolated area.

5. When the biological monitors are on-site, they will monitor erosion and sediment controls to identify and correct any conditions that could adversely affect steelhead or steelhead habitat. The biological monitors will be granted the authority to halt work activity as necessary and recommend measures to avoid/minimize adverse effects on steelhead and steelhead habitat.

6. Sound-attenuating devices will be used during pile driving, if any feasible method is available for dry pile driving.

7. Vibration and oscillation of piles will be used to the greatest extent feasible to install piles and reduce the need for hammer driving.

California Red-legged Frog

8. Only U.S. Fish and Wildlife Service-approved biologists will participate in activities associated with the capture, handling, and monitoring of California red-legged frogs.

9. Ground disturbance will not begin until written approval is received from the U.S. Fish and Wildlife Service that the biologist is qualified to conduct the work.

10. A U.S. Fish and Wildlife Service-approved biologist will survey the project area no more than 48 hours before the onset of work activities. If any life stage of the California red-legged frog is found and the individuals are likely to be killed or injured by work activities, the approved biologist will be allowed sufficient time to move them from the site before work begins. The U.S. Fish and Wildlife Service-approved biologist will relocate the California red-legged frogs the shortest distance possible to a location that contains suitable habitat and will not be affected by the activities associated with the project. The relocation site will be in the same drainage to the extent practicable. Caltrans will coordinate with U.S. Fish and Wildlife Service on the relocation site prior to the capture of any California red-legged frogs.

11. Before any activities begin on a project, a U.S. Fish and Wildlife Service-approved biologist will conduct a training session for all construction personnel. At a minimum, the training will include a description of the California red-legged frog and its habitat, the specific measures that are being implemented to conserve the California red-legged frog for the current project, and the boundaries within which the project may be accomplished. Brochures, books, and briefings may be used in the training session, with a qualified person on hand to answer any questions.

12. A U.S. Fish and Wildlife Service-approved biologist will be present at the work site until all California red-legged frogs have been removed, workers have been instructed, and disturbance of habitat has been completed. After this time, Caltrans will designate a person to monitor on-site compliance with all minimization measures. The U.S. Fish and Wildlife Service-approved biologist will ensure this monitor receives the training outlined above regarding the identification of California red-legged frogs. If the monitor or the U.S. Fish and Wildlife Service-approved biologist recommends that work be stopped because California red-legged frogs would be affected in a manner not anticipated by Caltrans and U.S. Fish and Wildlife Service during review of the proposed action, that person will notify the resident engineer immediately. The resident engineer will resolve the situation by requiring that all actions that are causing the effects be halted. When work is stopped, the U.S. Fish and Wildlife Service will be notified as soon as possible.

13. During project activities, all trash that may attract predators or scavengers will be properly contained, removed from the work site, and disposed of regularly. Following construction, all trash and debris will be removed from work areas.

14. All refueling, maintenance, and staging of equipment and vehicles will occur at least 60 feet from riparian habitat or water bodies and not in a location from where a spill would drain directly toward aquatic habitat, unless otherwise

preapproved by the necessary agencies. The monitor will ensure that habitat contamination does not occur during operations. Prior to the onset of work, Caltrans will ensure that a plan is in place for a prompt and effective response to any accidental spills. All workers will be informed of the importance of preventing spills and appropriate measures to take should a spill occur.

15. Habitat contours will be returned to a natural configuration at the end of the project activities. This measure will be implemented in all areas disturbed by activities associated with the project, unless the U.S. Fish and Wildlife Service and Caltrans determine that it is not feasible, or modification of original contours would benefit the California red-legged frog.

16. The number of access routes, size of staging areas, and the total area of activity will be limited to the minimum necessary to complete the project. Environmentally Sensitive Areas will be established to confine access routes and construction areas to the minimum area necessary to complete construction and minimize the impact on California red-legged frog habitat; this goal includes locating access routes and construction areas outside of wetlands and riparian areas to the maximum extent practicable.

17. Caltrans will attempt to schedule work at times of the year when impacts to the California red-legged frog would be minimal. For example, work that would create large pools that support breeding would be avoided, to the maximum degree practicable, during the breeding season (November through May). Isolated pools, which are important to maintaining California red-legged frog populations through the driest portions of the year, would be avoided, to the maximum degree practicable, during late summer and early fall. Habitat assessments, surveys, and technical assistance between Caltrans and the U.S. Fish and Wildlife Service during project planning will be used to assist in scheduling work activities and avoiding sensitive habitats during key times of year.

18. To control sedimentation during and after project completion, Caltrans will implement the Best Management Practices outlined in any authorizations or permits issued under the authorities of the Clean Water Act. If Best Management Practices are ineffective, Caltrans will attempt to remedy the situation immediately, in coordination with the U.S. Fish and Wildlife Service.

19. If a work site is to be temporarily dewatered by pumping, intakes will be completely screened with wire mesh not larger than 0.2 inch to prevent California red-legged frogs from entering the pump system. Water will be released or pumped downstream at an appropriate rate to maintain downstream flows during construction. Upon completion of construction activities, any diversions or barriers to flow will be removed in a manner that allows the flow to resume with the least disturbance to the substrate. Alteration of the streambed will be minimized to the maximum extent possible;

any imported material will be removed from the streambed upon completion of the project.

20. Unless approved by the U.S. Fish and Wildlife Service, water will not be impounded in a manner that attracts California red-legged frogs.

21. A U.S. Fish and Wildlife Service-approved biologist will permanently remove any exotic species, such as bullfrogs (*Rana catesbeiana*), signal and red swamp crayfish (*Pacifasticus leniusculus*; *Procambarus clarkii*), and centrarchid fishes from the project area, to the maximum extent possible. The U.S. Fish and Wildlife Service-approved biologist will be responsible for ensuring that his or her activities comply with the California Fish and Game Code.

22. If Caltrans demonstrates that disturbed areas have been restored to conditions that allow them to function as habitat for California red-legged frog, these areas will not be included in the amount of total habitat permanently disturbed.

23. To ensure that diseases are not conveyed between work sites by the U.S. Fish and Wildlife Service-approved biologist, the fieldwork code of practice developed by the Declining Amphibian Task Force will be followed at all times.

24. Project sites will be revegetated with an assemblage of native riparian, wetland, and upland vegetation suitable for the area. Locally collected plant materials will be used to the extent practicable. Invasive exotic plants will be controlled to the maximum extent practicable. This measure will be implemented in all areas disturbed by activities associated with the project, unless the U.S. Fish and Wildlife Service and Caltrans determine that it is not feasible or practical.

25. Caltrans will not use herbicides as the primary method for controlling invasive exotic plants. However, if it is determined that the use of herbicides is the only feasible method for controlling invasive plants at a specific project site, the following additional protective measures for the California red-legged frog will be implemented:

    a. Caltrans will not use herbicides during the breeding season for the California red-legged frog.

    b. Caltrans will conduct surveys for the California red-legged frog immediately prior to the start of herbicide use. If found, California red-legged frogs will be relocated to suitable habitat far enough from the project area that no direct contact with herbicide would occur.

    c. Giant reed and other invasive plants will be cut and hauled out by hand and painted with glyphosate-based products, such as Aquamaster® or Rodeo®.

d. Licensed and experienced Caltrans personnel or a licensed and experienced contractor will use a hand-held sprayer for foliar application of Aquamaster® or Rodeo® where large monoculture stands occur at an individual project site.

e. All precautions will be taken to ensure that no herbicide is applied to native vegetation.

f. Herbicides will not be applied on or near open water surfaces (no closer than 60 feet from open water).

g. Foliar applications of herbicide will not occur when wind speeds are more than 3 miles per hour.

h. No herbicides will be applied within 24 hours of forecast rain.

i. Applications of herbicides will be done by qualified Caltrans personnel or contractors to ensure that overspray is minimized, and all applications are in accordance with label recommendations; all required and reasonable safety measures will be implemented. A safe dye will be added to the mixture to visually denote treated sites. Application of herbicides will be consistent with the U.S. Environmental Protection Agency's Office of Pesticide Programs, Endangered Species Protection Program, county bulletins.

j. All herbicides, fuels, lubricants, and equipment will be stored, poured, or refilled at least 60 feet from riparian habitat or water bodies in a location where a spill would not drain directly toward aquatic habitat, unless otherwise preapproved by the necessary agencies. Prior to the onset of work, Caltrans will ensure that a plan is in place for a prompt and effective response to accidental spills. All workers will be informed of the importance of preventing spills and taking the appropriate measures should a spill occur.

Southwestern Willow Flycatcher and Least Bell's Vireo

26. If feasible and regulatory approvals allow, tree removal and trimming will be scheduled to occur from October 1 and January 31, outside of the typical nesting bird season, to avoid potential impacts on nesting birds. If it is not feasible to conduct this work outside the nesting bird season, nesting bird surveys should be conducted by a qualified biologist no more than 14 days prior to the start of construction. If an active nest is found, a qualified biologist will determine an appropriate buffer or a monitoring strategy, based on the habits and needs of the species. The buffer area will be avoided, or the monitoring strategy will be implemented until a qualified biologist has determined that the nest is no longer active.

27. If the least Bell's vireo and/or southwestern willow flycatcher is observed within 100 feet of the biological study area during construction, a qualified biologist will implement an exclusion zone. Work will be avoided within the

exclusion zone until the least Bell's vireo and/or southwestern willow flycatcher is located more than 100 feet from project-related disturbance. If an active least Bell's vireo and/or southwestern willow flycatcher nest is observed within 100 feet of the biological study area, all project activities will immediately cease, and Caltrans will contact the U.S. Fish and Wildlife Service and California Department of Fish and Wildlife within 48 hours. If required, Caltrans will then initiate formal Federal Endangered Species Act Section 7 consultation with the U.S. Fish and Wildlife Service, as well as California Endangered Species Act coordination for least Bell's vireo and/or southwestern willow flycatcher, and implement additional measures as necessary.

28. It is recommended that bird nests be excluded from the existing bridge. Nesting bird exclusion methods may include installing thick plastic sheeting, placing one-way exclusion devices over drain holes, removing/knocking down nests before they contain eggs or nestlings, or using other methods approved by the California Department of Fish and Wildlife. The required time for installation of bird exclusion devices is outside the nesting season (i.e., implement exclusion methods from October 1 to January 31).

29. During construction, active bird nests will not be disturbed, and the eggs or young of birds that are protected by the Migratory Bird Treaty Act and California Fish and Game Code will not be killed, destroyed, injured, or harassed at any time. If an active nest is found, a qualified biologist will determine an appropriate buffer, using Environmentally Sensitive Area fencing or a monitoring strategy, based on the habits and needs of the species. The buffer area will be avoided, or the monitoring strategy will be implemented until a qualified biologist has determined that the nest is no longer active.

30. Temporary impacts on potential nesting habitat would be offset by replacement plantings within the project limits (Section 2.2.2).

2.2.6 Invasive Species

Regulatory Setting

On February 3, 1999, President William J. Clinton signed Executive Order 13112, requiring federal agencies to combat the introduction or spread of invasive species in the United States. The order defines invasive species as "any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that ecosystem whose introduction does or is likely to cause economic or environmental harm or harm to human health." The Federal Highway Administration guidance issued August 10, 1999 directs use of the state's invasive species list, maintained by the California Invasive Species Council, to define the invasive species that must be considered as part of the National Environmental Policy Act analysis for a proposed project.

Affected Environment

The information and analysis contained in this section are based on the *San Jose Creek Bridge Replacement Project Natural Environment Study* prepared by Caltrans in March 2019.

Invasive plant species from the online California Invasive Plant Council database that were observed within the biological study area include the following: giant reed (*Arundo donax*), Hottentot fig (*Carpobrotus edulis*), red brome (*Bromus madritensis ssp. rubens*), slender wild oat (*Avena barbata*), black mustard (*Brassica nigra*), ripgut brome (*Bromus diandrus*), silverleaf cotoneaster (*Cotoneaster pannosus*), foxtail barley (*Hordeum murinum*), Bermuda buttercup (*Oxalis pes-caprae*), soft chess brome (*Bromus hordeaceous*), rabbitsfoot grass (*Polypogon monspeliensis*), wild radish (*Raphanus sativus*), castor bean (*Ricinus communis*), Russian thistle (*Salsola tragus*), Smilo grass (*Stipa miliacea var. miliacea*), and silk oak (*Grevillea robusta*).

Three exotic plant species with a “high” invasiveness rating were observed in the biological study area: giant reed, Hottentot fig, and red brome.

Environmental Consequences

It is anticipated that invasive plants within the project area would be removed as part of construction-related vegetation removal. However, ground disturbance and other activities related to construction could introduce or help propagate invasive species within the project area. In addition, the project would involve replanting using native vegetation and would discourage invasive species from establishing as part of the replanting efforts.

Avoidance, Minimization, and/or Mitigation Measures

1. During construction, Caltrans will ensure that the spread or introduction of invasive exotic plant species will be avoided to the maximum extent possible.

2. Only clean fill will be imported. When practicable, invasive exotic plants in the project site will be removed and properly disposed of. All vegetation removed from the construction site will be taken to a landfill to prevent the spread of invasive species. If soil from weedy areas must be removed off-site, the top 6 inches containing the seed layer in areas with weedy species will be disposed of at a landfill as well. Landscape plantings and the erosion-control seed mix will not include any species from the California Invasive Plant Council Invasive Plant Inventory (California Invasive Plant Council 2017).

3. Construction equipment will be free of excessive dirt that may contain weed seed before entering the construction site. If necessary, wash stations, either on-site or off-site, will be established for construction equipment under the

guidance of Caltrans to avoid or minimize the spread of invasive plants and/or seed within the construction area.

4. All giant reed within the project limits will be removed mechanically, removing as much root and rhizome material as possible.

5. The appropriate herbicide selected, and its application will follow these guidelines:

    a. Chemical treatments for giant reed will be a glyphosate-based herbicide approved by the U.S. Fish and Wildlife Service for use near wetlands, such as Aquamaster® or Rodeo®.

    b. All precautions will be taken to ensure that no herbicide is applied to native vegetation.

    c. Herbicides will not be applied on or near open water (no closer than 60 feet from open water).

    d. Foliar applications of herbicide will not occur when wind speeds exceed 3 miles per hour.

    e. No herbicides will be applied within 24 hours of forecast rain.

    f. Application of all herbicides will be done by qualified Caltrans personnel or contractors to ensure that overspray is minimized, all applications are made in accordance with label recommendations, and all required and reasonable safety measures are implemented. A safe dye will be added to the mixture to visually denote treated sites. Application of herbicides will be consistent with the U.S. Environmental Protection Agency's Office of Pesticide Programs, Endangered Species Protection Program, county bulletins.

    g. All herbicides, fuels, lubricants, and equipment will be stored, poured, or refilled at least 60 feet from riparian habitat or water bodies in a location where a spill would not drain directly toward aquatic habitat. Prior to the onset of work, Caltrans will ensure that a plan is in place for a prompt and effective response to accidental spills. All workers will be informed of the importance of preventing spills and taking the appropriate measures should a spill occur.

6. A follow-up control strategy involving foliar spraying of an appropriate herbicide over the leaves of any re-sprouting giant reed will occur no sooner than 21 days in the excavated areas and no later than 42 days. Additional follow-up spraying of any regrowth will be conducted in the next growing season. Licensed and experienced Caltrans personnel or a licensed and experienced contractor will use a hand-held sprayer for follow-up foliar applications of herbicide.

7. On-site mitigation replacement plantings will include native plant species. The erosion-control seed mix will include California native plants that are suitable for the vicinity.

2.3 Construction Impacts

Project construction is anticipated to begin in the 2021/2022 fiscal year. Project completion is anticipated for the 2024/2025 fiscal year.

For the proposed Build Alternative, construction of the new bridge structure is anticipated to take approximately 187 working days, spread between two construction seasons to avoid construction during the rainy season (typically November to May). Project non-bridge related work may continue throughout the anticipated project duration.

The Build Alternative will require a two-stage construction process. There are currently two strategies that could be adopted to conduct the two-stage construction process. Both strategies would use appropriate traffic management plans according to Caltrans standard requirements.

For the first strategy, stage one would involve construction on half of the northbound lanes and half of the southbound lanes simultaneously, while maintaining the other half of both lanes for traffic use. Stage two would then involve construction on the opposite half of both the northbound and southbound lanes simultaneously, while traffic is redirected to the completed half that was constructed during stage one. At the completion of stage two, all northbound and southbound lanes would be reopened to traffic.

For the second strategy, stage one would involve construction of all the northbound lanes at one time and require all traffic to be redirected to the southbound lanes. The redirection of traffic would require construction of a temporary median crossover on the east and west sides of the bridge. Stage two would then involve redirecting traffic to the newly constructed northbound lanes so construction could begin on the southbound lanes. At the end of stage two, all northbound and southbound lanes would be reopened to traffic, and the temporary median crossover would be removed.

As part of the project, temporary construction easements and access areas would be required. Temporary construction easements would be required to allow work in areas surrounding the creek. Temporary access routes would be required to access areas under the bridge. It is anticipated that these temporary access routes would be located off the roadway shoulder. Temporary on-ramp/off-ramp detours for traffic would be required during project construction to accommodate temporary access routes. During construction, temporary Environmentally Sensitive Area fencing would be installed on-site to prevent disturbances in areas of environmental concern. Project staging and storage would be located within the Caltrans right-of-way and may use the center median.

Earthwork would be required for the improvements associated with this project, including removal of the existing sack-crete bank protection, placement of scour

mitigation (rock slope protection), removal and replacement of existing retaining walls, drainage work, and other miscellaneous activities.

In addition, the project would require roadway paving work. During project construction, Route 101 will remain open to traffic.

Affected Environment

Parks and Recreational Facilities

There are two publicly owned lands that contain parks within 0.5 mile of the project. Armitos Park sits about 0.2 mile from the project. Armitos Park is a 0.9-acre park containing an open field and playground area. Old Town Park sits about 0.3 mile from the project. Old Town Park is a 4-acre park that contains a multi-purpose field, numerous courts, skateboard plaza, splash pad, walking paths and picnic areas.

Emergency Services

Route 101 provides access to State Route 217 and local roadways along the Route 101 alignment. The northbound and southbound San Jose Creek bridge provides critical access to surrounding areas near the project site. During project construction, emergency services may require access to the San Jose Creek bridge and the project site.

Emergency services in the project area are provided by the Santa Barbara Fire Department, the Goleta Police Department, the Santa Barbara County Sheriff's Office, and the California Highway Patrol. Fire Station No. 12 at 5330 Calle Real is the only Santa Barbara Fire Department within 0.5 mile of the project area. The next-nearest station is about 2 miles west of the project area.

There are no police stations within 0.5 mile of the project area. The nearest police station is about 2 miles east of the project area at 4434 Calle Real. The nearest California Highway Patrol office is about 2 miles west of the project area.

Traffic and Transportation

Project construction would require temporary lane closures for approximately 650 working days. These closures have the potential to result in increased congestion and delays. Detours would not be required under the project because full closure of Route 101 would not occur, and the project area would remain accessible to regular traffic.

The Santa Barbara Metropolitan Transit District is the public transit agency serving Santa Barbara County. Routes 12X – Goleta Express and 15X – Santa Barbara Community College/University of California, Santa Barbara Express travel along Route 101 and run through the project area.

The project would not affect existing or future local road designs and configurations including existing and planned pedestrian routes, bicycle routes, and public transit routes.

Air Quality

Certain construction activities can be the source of temporary impacts on air quality. These potential impacts include dust-producing activities that occur during demolition, grading, and paving. Standard provisions included for all Caltrans projects would address potential emissions generated by construction equipment, grading activities, and various construction materials.

Noise

The project sits in a mostly urban section of Santa Barbara County in the city of Goleta. There are scattered residences near the highway within the project limits.

Environmental Consequences

Parks and Recreational Facilities

Construction activity would produce noise that could be audible to users of Armitos Park and Old Town Park. Although the noise may be audible, the noise would be temporary and intermittent and would not prevent use of the parks. In addition, construction activity required for the project would generate dust. However, given the distance of the parks from the project area, dust generated during construction activity is not expected to prevent use of the parks.

Emergency Services

During project construction, access for emergency services would be maintained. Traffic control would be required during project construction and would include temporary lane closures, which may delay response time of emergency services. A Transportation Management Plan would be implemented according to Caltrans guidelines to inform and assist emergency service providers and to minimize delays in emergency response time. In addition, access to all interconnecting roadways and routes within the project area would be maintained during construction.

Traffic and Transportation

During construction, temporary closure of lanes along Route 101 would result in temporary delays and intermittent traffic for travelers in the project area. However, effects would be minor because Route 101 would remain open throughout project construction with the implementation of the Transportation Management Plan.

Air Quality

During construction, the project would generate temporary air pollutants. Exhaust from construction equipment contains hydrocarbons, oxides of nitrogen, carbon

monoxide, suspended particulate matter, and odors. The use of heavy equipment during project construction could generate fugitive dust that would cause temporary impacts to local air quality if large amounts of excavation, soil transport, and subsequent fill operations are necessary. The effects of construction equipment on air quality can vary substantially from day to day, depending on the level of activity, the specific type of operation, and the prevailing weather conditions.

Noise

Noise levels in the project vicinity would experience a short-term increase due to construction activities. The level of construction noise would vary, based on the construction activity type, the location of construction and the type of construction equipment used by the contractor. Pile driving is not anticipated for this project. Nighttime construction is not anticipated, so impacts associated with nighttime construction are not anticipated.

Avoidance, Minimization, and/or Mitigation Measures

The project would incorporate the measures listed below to address the potential temporary impacts associated with construction activities.

1. *Parks and Recreational Facilities*

   It is anticipated that temporary impacts on parks and recreational facilities would result from construction activities that generate noise and dust. Measures to address construction-generated noise and dust are discussed in the Noise and Air Quality portions of this section.

2. *Emergency Services*

   Temporary construction impacts on emergency services would be minimized with implementation of the project's required Transportation Management Plan during construction. The Transportation Management Plan would address issues related to traffic delays, traffic flow in the Route 101 corridor, temporary lane closures, and detours. It would provide ongoing information to the public regarding construction activities and help Caltrans maintain a safe environment for construction workers and travelers.

3. *Traffic and Transportation*

   Any effects related to transportation/traffic would be addressed with implementation of the Transportation Management Plan, as described above under Emergency Services.

4. *Air Quality*

   Caltrans standard specifications pertaining to dust control and dust palliative application are required for all construction contracts to effectively reduce and control impacts related to construction emissions. The provisions of Caltrans Standard Specification Section 10-5, Dust Control, and Section 14-9, Air

Pollution Control, require the contractor to comply with all California Air Resources Board and Santa Barbara County Air Pollution Control District rules, ordinances, and regulations. In addition, the project-level Stormwater Pollution Prevention Plan would provide water pollution control measures that would cross-correlate with standard dust emission minimization measures, such as covering soil stockpiles, watering haul roads, watering excavation and grading areas, and so on. Furthermore, a Debris Containment and Collection Plan would need to be included in the project's special provisions, as approved by the resident engineer, to effectively capture and collect all demolition debris and waste materials, thereby preventing any material from entering the creek channel or migrating off-site during windy conditions. All stockpiled construction debris should, at a minimum, be covered daily or be off-hauled as soon as possible.

5. *Noise*

Along with Caltrans Standard Specification Section 14-8, Noise and Vibration, the following control measures would be implemented to minimize noise and vibration during periods of construction:

a. Use equipment with manufacturer's recommended noise abatement measures, such as mufflers, engine enclosures and engine vibration isolators intact and operational. All construction equipment should be inspected at periodic intervals to ensure proper maintenance and presence of noise control devices.
b. Notify surrounding residences in advance of the construction schedule when unavoidable construction noise and upcoming construction activities are anticipated to produce an adverse noise environment above the local ambient noise. This notice will be given 2 weeks in advance. Notices should be published in local news media with the dates and duration of proposed construction activity. The District 5 Public Information Office posts notices of proposed construction and potential community impacts after receiving notice from the resident engineer.
c. Include the following general measures in the resident engineer folder and implement as appropriate to further minimize temporary construction noise impacts:
    i. Whenever possible, limit all phases of construction to acceptable hours, Monday through Friday.
    ii. Shield especially loud pieces of stationary construction equipment.
    iii. Locate portable generators, air compressors, etc., away from sensitive noise receptors.

iv. Limit the grouping of major pieces of equipment that operate in one area to the greatest extent feasible.

v. Place heavily trafficked areas, such as the maintenance yard, as well as equipment, tools, and construction-oriented operations, in locations that would be least disruptive to surrounding sensitive noise receptors.

vi. Consult the district's noise staff if complaints are received during the construction process.

2.4 Cumulative Impacts

Regulatory Setting

Cumulative impacts are those that result from past, present, and reasonably foreseeable future actions, combined with the potential impacts of the proposed project. A cumulative effects assessment looks at the collective impacts posed by individual land use plans and projects. Cumulative impacts can result from individually minor but collectively substantial impacts taking place over a period of time.

Cumulative impacts on resources in the project area may result from residential, commercial, industrial, or highway development as well as agricultural development, including a conversion to more intensive agricultural cultivation. These land use activities can degrade habitat and species diversity through consequences such as displacement and fragmentation of habitats and populations, alteration of hydrology, contamination, erosion, sedimentation, disruption of migration corridors, changes in water quality, and the introduction or promotion of predators. They can also contribute to potential community impacts identified for a project, such as changes in community character, traffic patterns, housing availability, and employment.

California Environmental Quality Act Guidelines Section 15130 describes when a cumulative impact analysis is necessary and what elements are necessary for an adequate discussion of cumulative impacts. The definition of cumulative impacts under the California Environmental Quality Act can be found in Section 15355 of the California Environmental Quality Act Guidelines. A definition of cumulative impacts under the National Environmental Policy Act can be found in 40 Code of Federal Regulations 1508.7.

Affected Environment

The information and analysis contained in this section are based on the San Jose Creek Bridge Replacement Project Natural Environment Study prepared by Caltrans in March 2019.

Identification of the resources to consider is the first step in preparing a cumulative impact analysis and the proposed project may have an effect on wetlands and other

waters, California red-legged frog species, southern California steelhead species and California Steelhead critical habitat.

The Resource Study Area was identified by considering the effects that past, present and current reasonably foreseeable future projects may have or could have on local wetlands and other waters and the population of southern California steelhead and their associated habitat. Resource Study Areas for analysis of cumulative impacts are typically broader that project study areas in order to get a better perspective of the cumulative impacts on a resource.

The Resource Study Area identified for this analysis is the San Jose Creek watershed, as areas within the greater watershed share a common drainage. The San Jose Creek watershed is approximately 8.81 square miles, flowing from the Santa Ynez Ridge south to San Jose Creek's confluence with San Pedro Creek near the ocean (Appendix D).

Historical land uses in the Resource Study Area include agriculture (orchards) and oil drilling. Modern changes to the area have included filling in the Goleta Slough to build an airport, construction of State Route 217 and the University of California, Santa Barbara campus, along with numerous commercial and residential developments. All of these have had an impact on the ecology of the vicinity and health of riparian habitats along San Jose Creek, though the number of new developments has slowed during recent years.

Since the first wells were drilled in the Goleta area, dependence on groundwater has likely affected the frequency and quantity of surface water conditions in San Jose Creek. The continuing effects of present land uses such as agriculture in the upper watershed continues to draw water from the local aquifer.

During field visits to the project area, trash, graffiti, and homeless encampments have been observed under the existing San Jose Creek bridge. No information could be found on how long this activity has been occurring, but it most likely has had a negative effect on San Jose Creek.

Wetlands and Other Waters

Wetland and riparian resources have been heavily affected over the history of settlement in the western United States, mainly due to agriculture and other alternative land uses (i.e., urban and commercial development, infrastructure, etc.). Regulatory agencies have sought to offset the additional loss of wetlands and riparian habitat with restoration and revegetation requirements for projects within their respective jurisdictions.

The current health of wetlands and other waters is considered to be moderate to poor. The trend for wetland and riparian habitats along San Jose Creek is considered stable or slightly improving, but invasive species continue to degrade the habitat value for wildlife.

Southern California Steelhead and Associated Habitat

Detailed information on the current and historical population of San Jose Creek steelhead is sparse. While it is unknown what, if any, aquatic surveys have been conducted recently, no observation records of steelhead could be found for San Jose Creek since 2002. No steelhead were observed during the project's biological surveys.

Considering the historical abundance of steelhead in the region and that steelhead can populate creeks by straying into non-natal waters, San Jose Creek likely supported a population of steelhead in the past. In 1942, the Goleta Slough was mostly filled-in for a World War II air station (now the Santa Barbara Airport) and the lower San Jose Creek was realigned for this project. Later in 1975, about 1.15 miles of the lower section of San Jose Creek was realigned again and channelized into a flood control channel for the construction of State Route 217. This may have been the single largest effect on the San Jose Creek steelhead population as the concrete channel was considered to be a total fish passage barrier. In addition, channelization of the creek removed potential suitable steelhead habitat. In 2012, the lower creek was remediated as part of Phase 1 of the City of Goleta's San Jose Creek Flood Control and Fish Passage project.

It is estimated that the Southern California steelhead federal distinct population segment has declined dramatically from 32,000-46,000 returning adults historically, to currently fewer than 500 returning adults. Population levels and available spawning habitat for the Southern California steelhead federal distinct population segment began trending substantially downward in the early 20th century, eventually leading to the original listing of the Southern California steelhead evolutionary significant unit (the predecessor to the federal distinct population segment) as federally endangered under the Federal Endangered Species Act in 1997. Given the historical context and the likelihood that Southern California steelhead have been substantially impacted over time, this species has been subjected to cumulative impacts. According to the latest available status review (National Marine Fisheries Service 2016), there is little new evidence to suggest that the status of the Southern California steelhead federal distinct population segment has changed appreciably in either direction since the last status review was completed in 2011. New information available on anadromous runs since the 2011 review remains limited but does not appear to suggest a change in extinction risk (National Marine Fisheries Service 2011). The San Jose Creek steelhead population has been heavily impacted over the last 200 years, with the current health of the steelhead population in decline, but the trend is considered to be stable.

Critical habitat for steelhead was designated in 2005. Along the West Coast of California, the health of critical habitat for steelhead is currently diminishing, with ongoing and future threats that may include coastal development projects, highway construction, water diversions, flood control maintenance activities, overgrazing of riparian habitats, competition and/or predation from non-native species, non-native plant introduction, habitat disturbance, disease, and climate change. While there has

been a decline in quality along the San Jose Creek watershed for steelhead critical habitat within the Resource Study Area, there is no evidence of increased degradation of this habitat in recent years. The current health of steelhead critical habitat in the Resource Study Area is assessed as being very poor, but the trend is considered stable.

California Red-Legged Frog

No detailed historical data for the California red-legged frog specific to the Resource Study Area could be found during the literature review for the Natural Environment Study. It is likely that the species may have historically occurred in the Resource Study Area based on the historical abundance of California red-legged frogs in the region and nearby populations. It is estimated that this species has been eliminated from about 70% of its historic range due to habitat loss and destruction and possibly due to the introduction of predatory species such as the American bullfrog. A Final Recovery Plan for this species was approved in 2002. In areas that have been designated critical habitat, some form of management will need to take place to address current and future threats to the species and maintain the physical and biological features necessary for conservation of the species. According to the Recovery Plan for the California red-legged frog, delisting the species could occur by 2025 if recovery criteria are met (U.S. Fish and Wildlife Service, 2002, Recovery Plan for the California red-legged frog). No California red-legged frogs were observed during biological surveys for this project and no California Natural Diversity Database records for California red-legged frog occur in the Resource Study Area. The current health of California red-legged frog species is considered poor, and the overall trend for California red-legged frog species is considered stable or slightly improving, but invasive predators continue to threaten individual species.

The Resource Study Area does not occur within California red-legged frog critical habitat. Commercial and residential development may have resulted in unsuitable habitat conditions that led to the extirpation of the species from the watershed. Thus, the current health of California red-legged frog habitat is considered to be poor. However, current threats to potential California red-legged frog habitat within the Resource Study Area are low, and the trend of suitable habitat in the is considered stable.

Environmental Consequences

Information on current and probable future projects was obtained from Caltrans Planning, City of Goleta Planning and City of Santa Barbara Planning. For this analysis, projects within the Resource Study Area that are in proximity of San Jose Creek and having the potential to affect the resources identified were prioritized. The following reasonably foreseeable projects have been identified:

Caltrans Project

San Jose Creek Bridge Replacement Project, State Route 217 (EA: 05-1C360) – Caltrans proposes to replace the existing San Jose Creek bridge in Santa Barbara County on State Route 217 from post miles 0.9 to 1.4. The project is currently in the Project Approval and Environmental Document phase. This project is included in the 2019 Federal Statewide Transportation Improvement Program for Santa Barbara County (prepared by the Santa Barbara County Association Governments) and is proposed for funding from the State Highway Operation and Protection Program.

The project would replace the existing bridge over San Jose Creek that was originally constructed with reactive aggregates. The bridge would be replaced with a wider structure to provide standard lane and shoulder widths and a standard bike/pedestrian path along the outside shoulder of the eastbound lane. The replacement bridge would include features that would allow the structure to be raised to accommodate future sea-level rise.

No additional rights-of-way would be required as all permanent and temporary construction impacts would occur within the existing right-of-way. The project is currently anticipated to begin construction in 2022 and would be completed by 2025.

City of Goleta Projects

- San Jose Creek Bike Path – The bike path is part of the 1999 Goleta Transportation Improvement Plan. When completed, the path will be approximately 3 miles long, running alongside San Jose Creek. The bike path will stretch from Cathedral Oaks Road in the north, to the Atascadero Creek Bikeway/Obern Trail in the south.

  The project is being developed in two portions: the middle extent and the southern extent. The middle extent extends from Calle Real to Hollister Avenue. The middle extent currently proposes to cross beneath the San Jose Creek Bridge on Route 101, and the Union Pacific Rail Road. Portions of the middle extent are currently under construction. The southern extent extends from Hollister Avenue to the existing Class 1 Atascadero Creek/Obern Trail. The southern extent currently proposes a pedestrian/bicycle bridge over San Jose Creek near Kellogg Way along with an undercrossing beneath Highway 217 near San Pedro Creek. The southern extent is currently undergoing preliminary design.

- Hollister Avenue Bridge Replacement Project – The City of Goleta proposes to replace the existing Hollister Avenue Bridge, which has been deemed functionally obsolete. The bridge was constructed using reactive aggregate and is not capable of accommodating 100-year storm/flood conditions. The project will replace the existing bridge with one that is up to current design standards

and could convey 100-year storm flows. The new bridge will be located on the same location.

The project will widen the San Jose Creek channel immediately downstream from the new bridge so that the channel could accommodate 100-year flood flows and conform to the San Jose Creek Capacity Improvement and Fish Passage project that has been completed downstream. The project is part of the City of Goleta's San Jose Creek Flood Control and Fish Passage project to provide fish passage improvements along the creek channel. The project would construct a low-flow fish passage channel and weirs. The project would also improve the channel upstream from the bridge.

A Final Initial Study with Mitigated Negative Declaration was completed in August 18, 2015. The project is anticipated to begin construction in the 2019/2020 fiscal year.

- Old Town Village Mixed-Use Project – In 2015, the City of Goleta approved a new mixed-use development near the corner of South Kellogg Avenue and Kellogg Way. The project would construct 113 town homes, 34 live-work units and 28 shopkeeper units on a 12-acre lot that was previously used for agriculture. A Final Initial Study with Mitigated Negative Declaration was completed in May 2015 and included an addendum to the Goleta General Plan/Coastal Land Use Plan Final Environmental Impact Report. The project is currently under construction and is identified as the Winslowe in Goleta by City Ventures Development.

Wetlands and Other Waters

The proposed project on Route 101 would result in impacts to jurisdictional waters and/or riparian habitat that would be relatively small in scale, and on-site compensatory mitigation would be implemented. Impacts to water quality are not anticipated. The removal of invasive giant reed and the subsequent replanting of native arroyo willow trees and other native plants would be beneficial to the ecology of the project area. The project would also incorporate appropriate measures to reduce temporary and permanent impacts to riparian areas.

In regard to the other proposed projects in the Resource Study Area:

- The San Jose Creek Bridge Replacement Project on State Route 217 is anticipated to result in temporary and permanent impacts to riparian and wetlands areas as work would be located along San Jose Creek. Impacts on water quality are not anticipated. It is anticipated that the project would adopt measures to avoid, minimize and mitigate for impacts to wetlands and other waters, along with potentially adopting additional conditions to comply with project permitting requirements. It is anticipated that replanting native plants would be required as part of the project. Also, Caltrans standard practices would remove any invasive species found within the project site as part of project construction.

- The San Jose Creek Bike Path project is anticipated to impact jurisdictional and/or riparian habitat because it would construct bridges and undercrossings that will require work along the creek banks. It is anticipated that the project would implement compensatory mitigation and replanting of native plants to mitigate for any disturbance to the creek channel.
- Based on the Final Mitigated Negative Declaration, the Hollister Bridge Replacement project would result in minimal impacts to riparian or wetland resources. The project would use measures to offset project impacts through restoration of riparian and wetland resources.
- The Old Town Village Mixed-Use project sits on a lot that was previously used for agriculture. The Final Initial Study with Mitigated Negative Declaration does not have a discussion on wetlands. It is anticipated that the project would not impact wetlands or riparian areas.

Based on the analysis of cumulative impacts to wetlands and other waters in the Resource Study Area, while there has been and continues to be a significant cumulative impact to wetland and other waters, the proposed project would not result in a significant contribution to the cumulative impact on wetlands and other waters within the Resource Study Area. The project is expected to result in a cumulative benefit by removal of invasive plant species within the riparian areas, removal of human-made structures from the creek channel and replanting the project site with appropriate native vegetation.

Southern California Steelhead and Associated Habitat

The proposed project on Route 101 would result in temporary impacts to steelhead critical habitat. Temporary impacts would be the result of the overall project activities associated with the construction of the project. However, the project would have measures in place to reduce the potential for temporary impacts to steelhead and steelhead habitat. It is anticipated that in-stream construction would occur during the dry season to avoid impacting steelhead, and restoration of the creek area would help offset impacts to steelhead habitats. The impacts to steelhead and steelhead habitat would be relatively small in scale, and the project is not anticipated to substantially contribute to cumulative steelhead impacts. Onsite mitigation and revegetation, along with removal of invasive species associated with the project may have a long-term benefit for steelhead and steelhead habitat.

In regard to the other proposed projects in the Resource Study Area:

- The San Jose Creek Bridge Replacement Project on State Route 217 is anticipated to result in potential impacts to steelhead and steelhead habitats as the project would involve work in and/or around the creek channel. It is anticipated that the project would include measures to avoid, minimize and/or mitigate for potential impacts to steelhead and steelhead habitat as part of the project.

- The San Jose Creek Bike Path project may temporarily affect steelhead habitat with the construction of the pedestrian/bicycle bridges and undercrossing. It is anticipated that impacts to steelhead habitat would be mitigated with on-site restoration. The project may not result in potential impacts to steelhead if construction of the bridge and undercrossing are conducted when the creek is dry.
- Based on the Final Mitigated Negative Declaration, the Hollister Bridge Replacement project is not expected to potentially impact steelhead because the project would be constructed during the dry season when there is no water in the creek. It is anticipated that the completion of the project would result in improved passage and habitat conditions for steelhead.
- The Old Town Village Mixed-Use project is on a lot that was previously used for agriculture. The project would not involve work in San Jose Creek. It is anticipated that the project will have no potential to impact steelhead.

Based on the analysis of potentially cumulative impacts to steelhead trout in the Resource Study Area, although there has been and continues to be a significant cumulative impact to steelhead trout, the proposed project would not result in a significant contribution to cumulative impacts on steelhead or steelhead critical habitat within the Resource Study Area. The proposed San Jose Creek Bridge Replacement project is not anticipated to contribute to a substantial adverse cumulative impact to steelhead trout. The proposed project is however expected to result in a cumulative benefit to steelhead habitat by removal of invasive species and reducing the number of human-made structures within the creek channel, which would help improve creek conditions for steelhead species and habitat.

California Red-Legged Frog

The proposed project on Route 101 would result in potential impacts to the California red-legged frog. Project construction could potentially result in take and/or loss of California red-legged frogs if the frogs are found within the project site. The project would use appropriate measures to avoid impacting the California red-legged frog during project construction. It is anticipated that avoiding construction in the wet season along with pre-construction surveys would reduce the potential impacts to individual California red-legged frogs.

With current project design and measures in place, it is anticipated that the project would result in minimal impacts to California red-legged frog and have the potential to restore habitat for California red-legged frogs.

- The San Jose Creek Bridge Replacement Project on State Route 217 is anticipated to result in temporary impacts to California red-legged frog habitat. The creek channel would be disturbed during project construction. The project would avoid impacts to California red-legged frogs and its associated habitat by limiting the construction disturbance area and avoiding work in the creek during the wet season. Temporary impacts to California red-legged frog habitat would

be mitigated, and measures would be included to avoid impacting individual California red-legged frogs.

- The San Jose Creek Bike Path project may temporarily affect California red-legged frog species and potential habitat with the construction of the pedestrian/bicycle bridges and undercrossing. It is anticipated that the project would implement measures to address temporary and permanent impacts to California red-legged frog habitat. The project has the potential to impact individual California red-legged frogs as project construction would most likely involve disturbance to the creek banks and channel. It is anticipated that the project would adopt measures to reduce the potential for impacts to individual California red-legged frogs.
- Based on the Final Mitigated Negative Declaration, the Hollister Bridge Replacement project is not expected to impact the California red-legged frog because the species is unlikely to occur in the project area. The project site is also not within critical habitat for California red-legged frog. In addition, project construction is anticipated to occur during the dry season, when there is no water in the creek.
- Based on the Final Mitigated Negative Declaration, the Old Town Village Mixed-Use project would result in temporary impacts to riparian areas and the disturbance to riparian areas would not create new significant impacts beyond those identified in the Goleta General Plan/Coastal Land Use Plan Final Environmental Impact Report. Disturbance of riparian areas may include potential habitat for the California red-legged frog. Measures identified in the Goleta General Plan/Coastal Land Use Plan Final Environmental Impact Report would be applied to protect riparian areas.

Based on the analysis of cumulative impacts to California red-legged frogs in the Resource Study Area, there has been continued and significant cumulative impact to California red-legged frog and their critical habitat. However, the proposed project would not result in a significant cumulative impact on California red-legged frogs or their critical habitat within the Resource Study Area. The proposed San Jose Creek Bridge Replacement project, when considered in a cumulative effects context, is not anticipated to result in substantially significant impacts to the California red-legged frog. The proposed project have the potential to result in a cumulative benefit to California red-legged frog habitat by removal of invasive species and reducing the number of human-made elements in the creek channel., which would improve overall creek conditions for the species.

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Chapter 3 CEQA Evaluation

3.1 Determining Significance under CEQA

The project is a joint project by Caltrans and the Federal Highway Administration and subject to state and federal environmental review requirements. Project documentation, therefore, has been prepared in compliance with both CEQA and NEPA. The Federal Highway Administration's responsibilities for environmental review, consultation, and any other actions required by applicable federal environmental laws for this project are being, or have been, carried out by Caltrans pursuant to 23 U.S. Code 327 and the Memorandum of Understanding dated December 23, 2016, and executed by the Federal Highway Administration and Caltrans. Caltrans is the lead agency under CEQA and NEPA.

One of the main differences between NEPA and CEQA is the way significance is determined. Under NEPA, significance is used to determine whether an environmental impact statement, or a lower level of documentation, will be required. NEPA requires that an environmental impact statement be prepared when the proposed federal action (project) as a whole has the potential to "significantly affect the quality of the human environment." The determination of significance is based on context and intensity. Some impacts determined to be significant under CEQA may not be of sufficient magnitude to be determined significant under NEPA. Under NEPA, once a decision is made regarding the need for an environmental impact statement, it is the magnitude of the impact that is evaluated, and no judgment of its individual significance is deemed important for the text. NEPA does not require that a determination of significant impacts be stated in the environmental documents.

CEQA, on the other hand, does require Caltrans to identify each "significant effect on the environment" resulting from the project and ways to mitigate each significant effect. If the project may have a significant effect on any environmental resource, then an environmental impact report must be prepared. Each and every significant effect on the environment must be disclosed in the environmental impact report and mitigated if feasible. In addition, the CEQA Guidelines list a number of "mandatory findings of significance," which also require the preparation of an environmental impact report. There are no types of actions under NEPA that parallel the findings of mandatory significance of CEQA. This chapter discusses the effects of this project and CEQA significance.

3.2 CEQA Environmental Checklist

This checklist identifies physical, biological, social, and economic factors that might be affected by the proposed project. Potential impact determinations include Significant and Unavoidable Impact, Less Than Significant With Mitigation Incorporated, Less Than Significant Impact, and No Impact. In many cases,

background studies performed in connection with a project will indicate that there are no impacts to a particular resource. A No Impact answer reflects this determination. The words “significant” and “significance” used throughout the following checklist are related to CEQA, not NEPA, impacts. The questions in this checklist are intended to encourage the thoughtful assessment of impacts and do not represent thresholds of significance.

Project features, which can include both design elements of the project, and standardized measures that are applied to all or most Caltrans projects such as Best Management Practices 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; see Chapters 1 and 2 for a detailed discussion of these features. The annotations to this checklist are summaries of information contained in Chapter 2 to provide you with the rationale for significance determinations; for a more detailed discussion of the nature and extent of impacts, please see Chapter 2. This checklist incorporates by reference all the information contained in Chapters 1 and 2.

3.2.1 Aesthetics

CEQA Significance Determinations for Aesthetics

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

a) Have a substantial adverse effect on a scenic vista?

Less Than Significant:

The proposed bridge would result in a minimal effect on scenic vistas in the area. As seen from Route 101, the main public viewpoint, the project would affect views for a relatively short duration. The creek and distant hills would remain visible and would continue to contribute to the scenic vista. The bridge would be constructed with minor modifications to the alignment and deck profiles. However, these changes would not reduce or block views of the surrounding scenic vistas. As a result, the project would have little to no adverse effect on the existing scenic vistas, including, but not limited to, views of the creek and views of the inland mountains. (Visual Impact Assessment, February 12, 2019)

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

Less Than Significant:

The project is not in an area that has been classified as an Officially Designated State Scenic Highway. Project construction will require the removal of vegetation and trees, which would be replaced at the end of construction. (Visual Impact Assessment, February 12, 2019)

c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

Less Than Significant:

Although the existing San Jose Creek bridge is visible in the immediate project vicinity, it is not architecturally unique and does not establish a particularly memorable style in support of a high-quality visual setting. Project elements above the bridge deck, such as the roadside railing and median barrier, would be visible; however, these types of elements are already seen from the existing bridge structures and adjacent roadside. Their replacement would not add new or unexpected visual elements. This minor visual change would not be unexpected in the immediate highway context, which includes bridge structures and other utilitarian elements. Any vegetation removal associated with the project would be fully replanted. As a result, any work area in or near the creek would, over time, be fully revegetated, resulting in a natural visual condition. The relatively intact visual character of the setting would not be substantially reduced by the proposed changes. (Visual Impact Assessment, February 12, 2019)

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

No Impact:

The project proposes no new lighting or sources of glare and therefore would have no effect related to daytime or nighttime views. (Visual Impact Assessment, February 12, 2019)

3.2.2 Agriculture and Forest Resources

CEQA Significance Determinations for 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 Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.

Would the project:

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

No Impact:

Based on the City of Goleta online land use map (https://www.cityofgoleta.org/city-hall/planning-and-environmental-review/general-plan), the project is not located within Prime Farmland, Unique Farmland or Farmland of Statewide Importance. Therefore, the project would not convert these farmland types to non-agricultural use.

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

No Impact:

Based on the City of Goleta online zoning map (http://www.goletazoning.com/), the project is not in an area zoned for agricultural use. Therefore, the project would not conflict with existing zoning for agricultural use or a Williamson Act contract.

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

No Impact:

Based on the City of Goleta online zoning map (http://www.goletazoning.com/), the project is not in an area zoned for forestland, timberland or timberland production. Therefore, the project would not conflict with existing zoning for forest land, timberland or timberland production.

d) Result in the loss of forest land or conversion of forest land to non-forest use?

No Impact:

Based on the City of Goleta online land use map (https://www.cityofgoleta.org/city-hall/planning-and-environmental-review/general-plan), the project is not within forest land. Therefore, the project would not result in the loss or conversion of forestland.

e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

No Impact:

Based on the City of Goleta online land use map (https://www.cityofgoleta.org/city-hall/planning-and-environmental-review/general-plan), the project is not within or adjacent to agricultural lands or forest lands. The proposed project would not potentially affect agricultural lands or forest lands in the vicinity of the project.

3.2.3 Air Quality

CEQA Significance Determinations for Air Quality

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

Would the project:

a) Conflict with or obstruct implementation of the applicable air quality plan?

No Impact:

The Santa Barbara County Air Pollution Control District regulates air quality in Santa Barbara County. Santa Barbara County is considered non-attainment with respect to state ambient air quality standards for Ozone (1-hour and 8-hour) and for airborne particulate less than 10 microns in diameter.

The project would not increase roadway capacity and there will be no difference in long term air emissions with or without the project. In addition, projects that do not further degrade air quality in the basin are consistent with the Santa Barbara County Air Pollution Control District state air quality attainment goals as stated in their State Implementation Plan. Therefore, the project would not conflict with or obstruct implementation of applicable air quality plan. (Air Quality, Noise and Greenhouse Gas Memo, June 5, 2018)

b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

No Impact:

Santa Barbara County is considered non-attainment with respect to state ambient air quality standards for Ozone (1-hour and 8-hour) and for airborne particulate less than 10 microns in diameter. Santa Barbara County is in attainment for federal air quality conformity requirements. The project would involve the reconstruction of an existing bridge without adding additional travel lanes in Santa Barbara County. Since no additional lanes or capacity is being added to the roadway, there will be no difference in long-term air emissions with or without the proposed project and the project is not anticipated to degrade air

quality. Therefore, the project would not result in cumulatively considerable net increase in any criteria pollutant. (Air Quality, Noise and Greenhouse Gas Memo, June 5, 2018)

c) Expose sensitive receptors to substantial pollutant concentrations?

Less Than Significant:

The project site is surrounded by a mix of residential, commercial and industrial land uses. Due to the relatively small scale and scope of the project, there is minimal potential for the project to expose sensitive receptors to substantial concentrations of inhalable pollutants that would be considered significant.

It is anticipated that during project construction, the project would generate air pollutants in the form of exhaust from construction equipment, which could contain hydrocarbons, oxides of nitrogen, carbon monoxide, suspended particulate matter and creation of odors. Equipment operation would generate fugitive dust that may temporary effect local air quality. However, Caltrans Standard Specification sections pertaining to air pollution control, emission reduction, dust control and dust palliative would be implemented for all construction activities, which would effectively reduce and control potential impacts to air quality. (Air Quality, Noise and Greenhouse Gas Memo, June 5, 2018)

d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Less Than Significant:

Operation of construction equipment and the use of construction materials during the project has the potential to emit other emissions and odors that may be experience by nearby business and residents. Construction activities are anticipated to occur during a typical 8-hour working day, which would limit the daily generation of emissions or odors. Odors and other emissions as a result of construction activities are not anticipated to adversely affect a substantial number of people due to the relatively small scale and scope of the project.

In addition, Caltrans Standard Specification sections pertaining to air pollution control, emission reduction, dust control and dust palliative would be implemented for all construction activities, which would effectively reduce and control potential impacts to air quality. (Air Quality, Noise and Greenhouse Gas Memo, June 5, 2018)

3.2.4 Biological Resources

CEQA Significance Determinations for Biological Resources

Would the project:

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

Less Than Significant with Mitigation Incorporated:

Within the biological study area, marginal and suitable habitats for special-status species are present. During appropriately timed environmental surveys of the biological study area, no special-status species were observed. Due to the presence of marginal and suitable habitats for specials status-species within the biological study area, the project has the potential to effect special-status species within the project limits. The project will implement avoidance, minimization and mitigation measures to avoid potentially significant impacts to special-status species and their associated habitats, as discussed in Sections 2.2.3, 2.2.4 and 2.2.5. (Natural Environment Study, March 2019)

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Less Than Significant with Mitigation Incorporated:

Within the biological study area, various natural communities were identified. The biological study area also contain riparian and wetland habitats. In addition, San Jose Creek occurs within a federally designated steelhead critical habitat. The proposed project would result in a combination of temporary and permanent impacts to natural communities, riparian habitats, wetland habitats and steelhead critical habitats. However, the project impacts would be reduced to less than significant through the implementation of avoidance, minimization and mitigation measures as discussed in Sections 2.2.1, 2.2.2 and 2.2.5. (Natural Environment Study, March 2019)

c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

Less Than Significant with Mitigation Incorporated:

The project would result in temporary impacts to jurisdictional U.S. Army Corps of Engineers' "other waters. The project would also result in temporary and permanent impacts to California Department of Fish and Wildlife and Regional Water Quality Control Board jurisdictional areas. These temporary impacts to jurisdictional areas would occur as the result of temporary dewatering, vegetation removal, bridge demolition, debris removal, rock slope protection installation, equipment access, and foot traffic. Permanent impacts to Regional Water Quality Control Board and California Department of Fish and Wildlife jurisdictional areas are the result of rock slope protection installation around the new bridge

abutments. Measures along with compensatory mitigation described in Section 2.2.2 would be implemented to minimize impacts on protected wetlands.

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?

Less Than Significant:

The biological study area contain locations and conditions that could provide opportunities for bird nesting and bat roosting during their migration. The San Jose Creek also provides fish passage. The project will require the removal of trees that could have been utilized for bird nesting, but the project would replant any trees lost with native trees as part of revegetation efforts. The removal of the existing bridge would remove potential roosting location for bats, but the project would install a new bridge in its place. The project will involve construction activities in the creek, but these activities would be scheduled in the dry season when there is little to no flow in the creek. Project impacts to resident or migratory species is anticipated to be temporary. Based on hydraulic study conducted for the project (November 6, 2018), the new bridge design would not affect the current fish passage as it would maintain the existing fish passage characteristics and the natural stream bed bottom. In addition, the project would implement avoidance and minimization measures to avoid potential significant impacts to migratory species as described in Sections 2.2.4 and 2.2.5. There are no native wildlife nursery sites within the project limits. (Natural Environment Study, March 2019)

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Less Than Significant:

Based on the City of Goleta General Plan, the project is in the vicinity of riparian zones, and raptor roosting habitats. The city of Goleta has policies in their General Plan to protect these resources.

Project activities would require the removal of riparian vegetation and could potentially disrupt raptor roosting habitats. However, the project would revegetate disturbed riparian zones and limit the potential disturbance to nesting birds as discussed in Sections 2.2.1 and 2.2.4. The project is anticipated to result in temporary impacts to riparian zones and raptor roosting habitats which would result in less than significant impact. (Natural Environment Study, March 2019)

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

No Impact:

Based on available city and county mapping data, the project is not within the jurisdiction of a habitat conservation plan or a natural communities plan; therefore, it would not conflict with any such plan. As a result, the project would result in no impact.

3.2.5 Cultural Resources

CEQA Significance Determinations for Cultural Resources

Would the project:

a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?

No Impact:

The San Jose Creek bridge was determined to be a Category 5 bridge in the Caltrans Statewide Historic Bridge Inventory; therefore, it is not eligible for listing in the National Register of Historic Places or the California Register of Historical Resources. Both existing bridge structure are not considered historic resources for the purposes of CEQA. Therefore, the project would not cause a substantial adverse change in the significance of a historical resource. (Cultural Resources Review, September 10, 2018)

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

No Impact:

The field survey did not detect the presence of any visible archaeological resources on the surface. In addition, the survey confirmed the substantial level of disturbance the project site has witnessed from past construction activities, suggesting a low probability for intact subsurface archaeological deposits. Therefore, the project would not cause a substantial adverse change in the significance of an archaeological resource. (Cultural Resources Review, September 10, 2018)

c) Disturb any human remains, including those interred outside of dedicated cemeteries?

No Impact:

Because of the high level of ground disturbance around the project site, the probability of encountering human remains during construction would be low. Therefore, the project is not anticipated to not disturb human remains. If the project encounters human remains, California Health and Safety Code Section 7050.5 states that further disturbances and activities shall stop in any area or nearby area suspected to overlie remains, and the County Coroner contacted. If

the remains are thought by the coroner to be Native American, the coroner will notify the Native American Heritage Commission, who, pursuant to Public Resources Code Section 5097.98, will then notify the Most Likely Descendant. The person who discovers the remains will contact the District 5 Environmental Branch, so that they may work with the Most Likely Descendant on the respectful treatment and disposition of the remains. Further provisions of Public Resources Code 5097.98 are to be followed as applicable. (Cultural Resources Review, September 10, 2018)

3.2.6 Energy

CEQA Significance Determinations for Energy

Would the project:

a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Less Than Significant:

The project will include standard Caltrans practices that would reduce and limit consumption of energy resources during project construction (i.e., turning off idling equipment, limiting materials transport, limiting night work, etc.). The project would not require excessive consumption of energy resources for operation once it is completed.

b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

No Impact:

The project will not conflict with or obstruct the state or local energy plans (see Section 3.3, Climate Change).

3.2.7 Geology and Soils

CEQA Significance Determinations for Geology and Soils

Would the project:

a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

Less Than Significant:

The potential for fault rupture is minimal at the project site. The project is not located on any known fault, but the regional geology is dominated by the Santa Barbara fold and fault belt and overlapping Santa Ynez Mountain uplift, with several known faults in the vicinity of the project. The project site is located approximately; 1.27 miles south/southwest of the San Jose Fault, 2.1 miles northwest of the Mission Ridge-Arroyo Parida-Santa Annie Fault, 1.44 miles north of the More Ranch Fault, 3.7 miles north of the Red Mountain Fault., and 3.56 miles north/northeast of the Pita Point Fault. (Structures Preliminary Geotechnical Report, August 19, 2016)

ii) Strong seismic ground shaking?

Less Than Significant:

It is anticipated that the project would experience strong seismic ground shaking in the event of a large earthquake. However, the project would be designed according to Caltrans seismic standards, as provided in the Highway Design Manual, minimizing the risk from strong seismic ground shaking.

iii) Seismic-related ground failure, including liquefaction?

Less than Significant:

The potential for ground failure or liquefaction is minimal at the project site. (Structures Preliminary Geotechnical Report, August 19, 2016)

iv) Landslides?

Less Than Significant:

Based on available topographic map of the project area, the project site is located in a relative flat area and away from any steep slopes. Although landslides are not anticipated to occur within the project area, landslides that may occur upstream on San Jose Creek could have the potential to affect the project site.

b) Result in substantial soil erosion or the loss of topsoil?

Less Than Significant:

Ground-disturbing earthwork associated with construction could increase soil erosion rates and loss of topsoil. The potential for erosion would be minimal because of the types of soil in the project area. The Best Management Practices described in Section 2.2.2, would further minimize erosion and the loss of topsoil.

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

Less Than Significant:

The project region is an alluvial plain that contains geological folds and faults. The region has been classified as “Strong” for ground shaking intensity by the California Geological Survey. The project site has minimal potential for unstable soils and the project is not anticipated to create unstable soil conditions on- or off-site. (Structures Preliminary Geotechnical Report, August 19, 2016)

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?

Less Than Significant:

Expansive soils are not expected to be found within the project site. Geotechnical investigation would be conducted prior to project construction to determine soil conditions within the project site. If expansive soils are identified, appropriate Caltrans design standards would be incorporated into the project to address potential issues associated with expansive soils. (Structures Preliminary Geotechnical Report, August 19, 2016)

e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

No Impact:

The project would not involve septic system or alternative waste water disposal system; therefore, there would be no impact.

f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

No Impact:

The project would not directly or indirectly destroy paleontological resources because none are anticipated to be found within the project limits. There are no geologic features within the project limits.

3.2.8 Greenhouse Gas Emissions

CEQA Significance Determinations for Greenhouse Gas Emissions

Would the project:

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Less Than Significant:

The project would not generate enough greenhouse gas emissions to significantly impact the environment. Construction-related greenhouse gas emissions would be unavoidable due to material processing, delivery, on-site construction equipment, and potential traffic delays. Emissions would be produced at different levels throughout the construction phase. Frequency and occurrence can be reduced through innovations in plans and specifications and by implementing better traffic management during construction phases.

The greenhouse gas emission discussion is based on Climate Change guidance provided by the Caltrans Division of Environmental Analysis. According to the guidance, there are several categories of projects that most likely will have minimal or no increase in operational greenhouse gas emissions, including roadway improvement projects such as the proposed project. Further greenhouse gas emission discussion is found in Section 3.4, Climate Change.

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

No Impact:

The project would not conflict with plans, policies or regulations for reducing emission greenhouse gases. All construction contracts would include all Caltrans Standard Specifications that require compliance with all Air Resources Board's and local air district rules, regulations, ordinances and statutes, some of which can contribute to reducing construction greenhouse gas emissions (i.e., idling equipment restrictions, appropriate source point, etc.).

3.2.9 Hazards and Hazardous Materials

CEQA Significance Determinations for Hazards and Hazardous Materials

Would the project:

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Less Than Significant:

During project construction, the project may use and/or encounter potentially hazardous substances (i.e., petroleum derived products, industrial chemicals, compounds, and materials, etc.). These materials would be transported into and out of the project site as needed.

Any potentially hazardous substance used and/or encountered during construction would be regulated and controlled to ensure that their potential for affecting the public or the environment would be avoided and/or minimized as required under Caltrans standards specification and to comply with State and Federal requirements. If project construction encounters a substance that is not

known whether it is hazardous or not, appropriate testing will be conducted. If the substance is identified as a hazardous substance, it will be treated and handled appropriately as required under Caltrans standard specifications and to comply with State and Federal requirements. The project will incorporate Caltrans standard specifications and measures to ensure that potentially hazardous substances would not significantly affect the public or the environment. (Hazardous Waste Technical Memo, February 14, 2018)

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Less Than Significant:

The project has the potential to result in spills and/or release of potentially hazardous substances as a result of construction activities. The project will incorporate appropriate Caltrans standard specification for the prevention and control of spills and releases that would reduce the potential for hazardous substances to significantly affect the public or the environment.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Less Than Significant:

Based on available online mapping for the City of Goleta, the project is approximately 0.25 miles northwest from St. Raphael Catholic School.

The project would produce emissions and air pollutants as a result of equipment operation, but the concentrations of emissions and air pollutants are not anticipated to reach levels considered to be hazardous (see Section 3.2.8). In addition, the project will incorporate Caltrans standard specifications for the minimization and reduction of potential emissions and air pollutants generated as a result of equipment operations. During project construction, the project may use and/or encounter potentially hazardous substances (i.e., petroleum derived products, industrial chemicals, compounds, and materials, etc.). Any potentially hazardous substance used and/or encountered during construction would be regulated and controlled to ensure that their potential for affecting the public or the environment would be avoided and/or minimized as required under Caltrans standards specification and to comply with State and Federal requirements. The project will incorporate Caltrans standard specifications and measures to ensure that potentially hazardous substances would not significantly affect the public or the environment. (Hazardous Waste Technical Memo, February 14, 2018)

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

No Impact:

The project site is not included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would not create a significant hazard for the public or the environment. (Hazardous Waste Technical Memo, February 14, 2018)

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

No Impact:

Based on available online mapping for the City of Goleta, the project is approximately 1.2 miles northeast from the Santa Barbara Airport. No private airstrip is within 2.0 miles of the project site. The project would not expose workers or residents within the project area to safety hazards or excessive noise associated with airport operations.

f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Less Than Significant:

The northbound bridge would be inaccessible during project construction and all traffic on Route 101 would be redirected to the southbound bridge. Although access on Route 101 would be maintained during project construction, the roadway capacity would be temporarily reduced, which could result in additional traffic congestion. Increase in traffic congestion could potentially delay emergency response time or emergency evacuation in the vicinity.

The project will implement a Transportation Management Plan according to Caltrans guidelines which will include communications and assistance to emergency service providers to reduce delays in emergency response times. In addition, emergency responders would still have access to all interconnecting roadways and routes within the project area that could be utilized to bypass the project site.

g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

No Impact:

Based on available Fire Hazard Severity Map for Santa Barbara County, the project site is not immediately surrounded by wildlands or in an area that is at considerable risk of wildland fires. The project site is an urban setting, surrounded by a mix of residential, commercial and industrial land uses.

3.2.10 Hydrology and Water Quality

CEQA Significance Determinations for Hydrology and Water Quality

Would the project:

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Less Than Significant:

During project construction, a variety of activities will occur adjacent to, above and within San Jose Creek. It is anticipated that construction-related activities could result in temporary and intermittent impacts on water quality as fugitive dust and materials may enter the creek. The project plans to conduct all work in the creek during the dry season, when the creek is most likely to be dry, to avoid and minimize potential impacts to water quality. If water is present during the dry season, appropriate temporary avoidance and minimization measures will be employed to ensure construction activities would not significantly affect the creek or water quality. In addition, the project will incorporate appropriate permanent and temporary Best Management Practices and all required Caltrans standard specifications to prevent and reduce potential impacts to water quality during construction to less than significant.

The project would not involve the discharge of waste water. It is anticipated that portable toilets would be placed within the project site and located at a considerable distance away from the creek channel. Any liquid waste generated by project activities would be collected, contained and disposed of in a manner that is appropriate to the substance. (Water Quality Assessment, July 6, 2018)

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

No Impact:

Project would not involve activities that would require excessive volumes of water that would substantially decrease local groundwater supplies. The project would not involve activities that would interfere with groundwater recharge or impede on the sustainable groundwater management of the local basin.

The project will involve replanting as part of measures for biological resources. Caltrans complies with water conservation requirements by Executive Orders issued during Governor Brown’s term and maintains a goal of reducing water consumption by 50% comparing 2013 baseline usage. Caltrans often plants California native plant species and designs temporary irrigation systems to minimize water consumption.

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

i) Result in substantial erosion or siltation on- or off-site;

Less Than Significant:

The project would involve earth work, removal of existing paved surfaces and installation of rock slope protection. However, the project would incorporate appropriate erosion control measures along with permanent and temporary Best Management Practices and Caltrans standard specifications to minimize the potential for erosion or siltation on- or off-site. (Water Quality Assessment, July 6, 2018)

ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;

No Impact:

The project would involve the removal of existing pave surfaces, reducing the presence of impermeable surfaces and decreasing the amount of surface runoffs. The new bridge structure would be of similar in dimension and design, and would not substantially alter the existing surface runoff from the bridge surface. Installation of rock slope protection would reduce the existing presence of impermeable surface. Therefore, the project would not substantially increase the rate or amount of surface runoff. (Location Hydraulic Study, November 6, 2018)

iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or

No Impact:

The project would remove existing paved surfaces which would reduce water runoff. The project would not create additional impervious surfaces that would substantially create or contribute to water runoff that would exceed the capacity of existing drainage systems or introduce additional sources of polluted runoff.

iv) Impede or redirect flood flows?

No Impact:

The project is located within a FEMA designated floodway. The project would replace an existing bridge with a new single span bridge structure at existing location. The existing bridge has 52 columns located within the floodway and the new bridge will have zero columns in the floodway. The project would remove the 52 columns and associated elements from the floodway, reducing impedimens to flood flow and improving flood flows at the bridge location. The project would also

remove concrete slope paving beneath the bridge and replace them with rock slope protection. Installation of the rock slope protection would increase the crossectional area beneath the bridge and would reduce the flood water elevation at project location. The project would not impede or redirect of flood flow. (Location Hydraulic Study, November 6, 2018).

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

No Impact:

The project is not within a designated flood hazard zone or within the reach of a tsunami. (Location Hydraulic Study, November 6, 2018)

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

No Impact:

The project region is regulated by the Central Coast Regions Water Quality Control Board and the Central Coast Basin Plan. The project will comply with applicable regulations and policies pertaining to the protection of water resources in the region.

The project will coordinate and be required to comply with, but not limited to: California Fish and Game Code 5650, California Department of Fish and Wildlife Section 1601, Army Corps of Engineers 404 permit, and Regional Water Quality Control Board 401 certifications. (Water Quality Assessment, July 6, 2018)

3.2.11 Land Use and Planning

CEQA Significance Determinations for Land Use and Planning

Would the project:

a) Physically divide an established community?

No Impact:

The project would replace an existing bridge with a new bridge structure at existing location on Route 101. The project would not result in a new division in an established community.

b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

No Impact:

The majority of project activities will occur within existing State right-of-way. The project will require temporary construction easements and permanent drainage easement for installation of rock slope protection. However, the temporary and permanent easement associated with the project is not anticipated to conflict with any existing land use plan, policy or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

3.2.12 Mineral Resources

CEQA Significance Determination

Would the project:

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

No Impact:

Based on mapping provided by the California Department of Conservation, there are no mineral resources that would be of value to the region and the residents of the state within the project area.

b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

No Impact:

Based on the General Plan for the City of Goleta, there are no existing or planned resource recovery sites within the project area.

3.2.13 Noise

CEQA Significance Determinations for Noise

Would the project result in:

a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Less Than Significant:

The project would not add capacity to the highway and the new bridge structure would be located at existing location. The long-term ambient noise levels in the project vicinity is not anticipated to change at project completion.

The project would generate short-term increase in ambient noise a result of construction activities. The amount of construction related noise will vary with the

activity and their proximity to nearby receptors. Noise generated during project construction would be temporary and intermittent, which is not anticipated to generate adverse noise impacts in the project area. The project will include Caltrans standard specifications pertaining to noise control and minimization measures to reduce the project's potential for noise impacts. Caltrans policy states that normal construction equipment should not emit noise levels greater than 86 A-weighted decibels at 50 feet from the source during nighttime operations. In addition, project will comply with all applicable sound control and noise levels rules, regulations and ordinances. (Air Quality, Noise and Greenhouse Gas Memo, June 5, 2018)

b) Generation of excessive groundborne vibration or groundborne noise levels?

Less Than Significant:

The project will require the installation of piles as part of the construction for the new bridge abutments. Piles may be driven, drilled, or vibrated in place, all of which would generate temporary groundborne vibrations. Typical pile installation last a few days and is not anticipated to result in excessive groundborne vibration or noise levels. (Air Quality, Noise and Greenhouse Gas Memo, June 5, 2018)

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

No Impact:

Based on available online mapping for the City of Goleta, the project is approximately 1.2 miles northeast from the Santa Barbara Airport. No private airstrip is within 2.0 miles of the project site. The project would not expose people residing or working in the project area to excessive noise levels because it is outside the range of airport traffic or other airport operations.

3.2.14 Population and Housing

CEQA Significance and Determinations for Population and Housing

Would the project:

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

No Impact:

The project would replace an existing bridge on an existing highway without altering current highway capacity. It would not change accessibility or influence growth. No direct or indirect impacts on growth would occur.

b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

No Impact:

The project would replace an existing bridge on an existing highway. The project will require minor permanent drainage easements. However, it is not anticipated that the required drainage easement would result in property acquisition or the displacement of any existing residences or businesses and would have no effect on existing properties.

3.2.15 Public Services

CEQA Significance Determinations for 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:

Fire protection?

No Impact:

The project would replace an existing bridge with a new bridge structure at existing location on Route 101. The project would not require the alteration or creation facilities related to fire protection.

Police protection?

No Impact:

The project would replace an existing bridge with a new bridge structure at existing location on Route 101. The project would not require the alteration or creation of facilities related to police protection.

Schools?

No Impact:

The project would replace an existing bridge with a new bridge structure at existing location on Route 101. The project would not require the alteration or creation of facilities related to schools.

Parks?

No Impact:

The project would replace an existing bridge with a new bridge structure at existing location on Route 101. The project would not require the alteration or creation of facilities related to parks.

Other public facilities?

No Impact:

The project would replace an existing bridge with a new bridge structure at existing location on Route 101. The project would not require the alteration or creation of facilities related to other public facilities.

3.2.16 Recreation

CEQA Significance Determination for Recreation

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

No Impact:

The project would replace an existing bridge with a new bridge structure at existing location on Route 101. The project would not increase demand or use at existing neighborhood and regional parks. Therefore, the project would have no impact.

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

No Impact:

The project would replace an existing bridge with a new bridge structure at existing location on Route 101. It does not include construction of new or expansion of existing recreational facilities. The project would have no impact.

3.2.17 Transportation

CEQA Significance Determinations for Transportation

a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

Less Than Significant:

During construction, temporary closure of lanes along Route 101 would result in traffic delays in the project area. These effects would be temporary and minor as

Route 101 would remain open throughout construction. The project would not conflict with any applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation, including mass transit and non-motorized travel, and relevant components of the circulation system, including, but not limited to, intersections, streets, highways and freeways, pedestrian and bicycle paths, or mass transit. Rather, replacement of the bridge would ensure continued operation of the highway system at this location. The project would not preclude a bike path being planned by the City of Goleta that would pass beneath Route 101 at San Jose Creek bridge.

b) Conflict with or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

Less Than Significant:

The project proposes to replace an existing bridge structure on a high transit corridor (Route 101) and is not anticipated to significantly alter vehicle miles traveled once project construction is complete. The project may result in temporary traffic delays during project construction.

c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

No Impact:

The project will comply with current highway design manual standards.

d) Result in inadequate emergency access?

Less Than Significant:

Construction activities would result in temporary lane closures. Although these closures could result in delays for emergency service providers that use Route 101, the delays would be temporary and minor. Access to all interconnecting roadways would be maintained. The need for temporary lane closures would be communicated to the appropriate fire, law enforcement, and other emergency service agencies to ensure continuation of adequate service. In addition, a Transportation Management Plan would be used to address potential access issues in the event of an emergency.

3.2.18 Tribal Cultural Resources

CEQA Significance Determinations for 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:

a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or

No Impact:

A review of available cultural resource documentation reveals that the entire project area has been previously surveyed with negative results for cultural resources. In addition, field survey of the project site confirmed substantial level of disturbance as a result of past construction activities which suggest a low probability for presence of intact archaeological deposits of cultural importance. The project does not have the potential to affect cultural related resources. (Cultural Resources Review, September 10, 2018)

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 will consider the significance of the resource to a California Native American tribe.

No Impact:

Consultation with the Native American Heritage Commission and various Native American tribes were conducted for this project. As part of consultation, letters describing the project and a request for comment and information on Native American concerns was sent on September 7, 2018. No responses have been received to date. In addition, no tribal cultural resources have been identified in the project area. Therefore, the project would not cause a substantial adverse change in the significance of a tribal cultural resource. (Cultural Resources Review, September 10, 2018)

3.2.19 Utilities and Service Systems

CEQA Significance Determination for Utilities and Service Systems

Would the project:

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

No Impact:

The project would not construct new water or wastewater treatment facilities and would not require expansion of existing facilities. The project is replacing an existing bridge over San Jose Creek on Route 101.

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

Less Than Significant:

The project would use minimal water during construction and would not require water to be supplied once operational.

The project will involve replanting as part of measures for biological resources. Caltrans complies with water conservation requirements by Executive Orders issued during Governor Brown's term and maintains a goal of reducing water consumption by 50% comparing 2013 baseline usage. Caltrans often plants California native plant species and designs temporary irrigation systems to minimize water consumption.

c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

No Impact:

The project would replace an existing bridge over San Jose Creek on Route 101 and it would not generate wastewater. Portable restrooms would be used during project construction.

d) Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

No Impact:

The project would not generate excessive waste. Solid waste generated by the project would be transported to a disposal site with appropriate facilities to accommodate waste materials.

e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

No Impact:

The project will comply with federal, state, and local statutes and regulations related to solid waste. The project would not generate substantial amounts of solid waste during construction and would not generate any solid waste during long-term operation of the replaced bridge.

3.2.20 Wildfire

CEQA Significance Determinations for Wildfire

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

a) Substantially impair an adopted emergency response plan or emergency evacuation plan?

Less Than Significant:

During project construction, emergency response or evacuation plans requiring access to the project site may encounter delays. It is normal project practice to coordinate with local emergency agencies and implement a Transportation Management Plan to minimize potential delays to emergency services during project construction. At project completion, any existing emergency response plans or emergency evacuation plans are not anticipated to change.

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?

Less Than Significant:

The project is not within an area identified as a high fire hazard severity zone (Santa Barbara County - Fire Hazard Severity Zone Map), and the surrounding area is defined as urban land use. The project would not expose workers to known fire risk and hazards during construction. There is the potential that project activities could create an unintended fire. However, the project would incorporate precautions to prevent fire incidents during construction as part of the code of safe practices in accordance with California Division of Occupational Safety and Health – Fire Protection and Prevention guidance.

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?

Less Than Significant:

As part of the project, a nearby overhead sign would need to be shifted to accommodate repaving. The propose relocation would not exacerbate fire risk or result in ongoing impacts to the environment. There is the potential that project activities could create an unintended fire. However, the project would incorporate precautions to prevent fire incidents during construction as part of the code of safe practices in accordance with California Division of Occupational Safety and Health – Fire Protection and Prevention guidance.

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?

Less Than Significant:

The region farther upstream from the project is identified as a high fire hazard severity zone (Santa Barbara County – Fire Hazard Severity Zone Map), and the San Jose Creek is identified as a floodway channel. There is the potential for post-fire debris, material and runoff to enter San Jose Creek and pass through the project site. In the event of an emergency, it is anticipated that the project site would be evacuated as part of the code of safe practices.

3.2.21 Mandatory Findings of Significance

CEQA Significance Determinations for Mandatory Findings of Significance

a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

Less Than Significant with Mitigation Incorporated:

The project has the potential to affect several species and their associated habitat within the project area. In addition, the project would result in temporary and permanent impacts to existing plant communities, wetlands and riparian zones. However, the project has incorporated multiple avoidance, minimization and/or mitigation measures that would reduce the potential for impacts or offset any anticipated impacts. See Chapter 2 for additional details.

b) Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)

Less Than Significant with Mitigation Incorporated:

The project would remove an existing bridge structure and then construct a new bridge structure at the same location. The new bridge structure would be of similar design and appearance to the original bridge structure. As part of the project, rock slope protection would be installed in the creek to protect the new bridge abutments from erosion. The project sits in a developed urban environment, so the presence of species or habitats that are of considerable

value is low. Disturbance to environmental resources as a result of the project is anticipated to be relatively minor.

The project does have the potential to contribute to cumulative impacts to biological species and habitats. The project would result in the permanent loss of riparian habitat and could result in the mortality of individual special-status species during project construction. However, due to the marginal quality of existing habitats and the low potential for special-status species to occur within the project area, the project is not anticipated to result in substantial impacts to biological species or habitats (see Section 2.4). In addition, the project would remove non-native invasive species and restore disturbed sites with native vegetation, potentially improving existing habitats.

The project would also incorporate avoidance, minimization and mitigation measures that would reduce and/or offset impacts to environmental resources (see Chapter 2). Therefore, the project is not anticipated to substantially contribute to cumulative impacts to biological species or habitats.

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

Less Than Significant:

During project construction, the project has the potential to effect human beings due to temporary increases in noise and air pollution (see Section 2.3). However, avoidance, and minimization measures would be implemented, which would reduce these potential effects.

Project construction is also anticipated to result in temporary and minor traffic delays that could potentially affect response time of emergency services or affect evacuation time in emergency situations. However, these effects would be minimized with implementation of the project’s Transportation Management Plan, per Caltrans guidelines.

3.3 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 greenhouse gas (known as 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 by the United Nations and World Meteorological Organization in 1988 led to increased efforts devoted to greenhouse gas emissions reduction and climate change research and policy. These efforts are primarily concerned with the emissions of greenhouse gases generated by human

activity, including carbon dioxide (known as CO_2), methane (known as CH_4), nitrous oxide (known as N_2O), tetrafluoromethane, hexafluoroethane, sulfur hexafluoride (known as SF_6), and various hydrofluorocarbons (known as HFCs). Carbon dioxide is the most abundant greenhouse gas; while it is a 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 greenhouse gas emissions to limit or "mitigate" the impacts of climate change. Adaptation, on the other hand, is concerned with planning for and responding to impacts resulting from climate change (such as adjusting transportation design standards to withstand more intense storms and higher sea levels). This analysis will include a discussion of both.

Regulatory Setting

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

Federal

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

National Environmental Protection Act (42 United States Code [USC] Part 4332) requires federal agencies to assess the environmental effects of their proposed actions prior to making a decision on the action or project.

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

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

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

The U.S. Environmental Protection Agency (known as EPA) in conjunction with the National Highway Traffic Safety Administration (known as NHTSA) is responsible for setting greenhouse gas emission standards for new cars and light-duty vehicles to significantly increase the fuel economy of all new passenger cars and light trucks sold in the United States (available at: https://www.epa.gov/ghgemissions/endangerment-and-cause-or-contribute-findings-greenhouse-gases-under-section-202a-clean). The current standards require vehicles to meet an average fuel economy of 34.1 miles per gallon by 2016. The EPA and NHTSA are currently considering appropriate mileage and greenhouse gas emissions standards for 2022–2025 light-duty vehicles for future rulemaking.

The EPA and NHTSA issued a Final Rule for "Phase 2" for medium- and heavy-duty vehicles to improve fuel efficiency and cut carbon pollution in October 2016. The agencies estimate that the standards will save up to 2 billion barrels of oil and reduce CO_2 emissions by up to 1.1 billion metric tons over the lifetimes of model year 2018–2027 vehicles.

State

California has been innovative and proactive in addressing greenhouse gas emissions and climate change by passing multiple Senate Bills (known as SB), Assembly Bills (known as AB) and executive orders (known as EO) including, but not limited to, the following:

- EO S-3-05 (June 1, 2005): The goal of this EO is to reduce California's greenhouse gas 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 AB 32 in 2006 and SB 32 in 2016.

- AB 32, Chapter 488, 2006, Núñez and Pavley, The Global Warming Solutions Act of 2006: AB 32 codified the 2020 greenhouse gas emissions reduction goals outlined in EO S-3-05, while further mandating that the California Air Resources Board (known as 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 greenhouse gas emissions limit continue in existence and be used to maintain and continue reductions in emissions of greenhouse gases beyond 2020 (Health and Safety Code [known as 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 greenhouse gas 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 greenhouse gas 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 (known as MPO) for each region must then develop a "Sustainable Communities Strategy" (known as SCS) that integrates transportation, land-use, and housing policies to plan how it will achieve the emissions target for its region.
- SB 391, Chapter 585, 2009, California Transportation Plan: This bill requires the State's long-range transportation plan to identify strategies to address California's climate change goals under AB 32.
- EO B-16-12 (March 2012) orders State entities under the direction of the Governor, including ARB, the California Energy Commission, and the Public Utilities Commission, to support the rapid commercialization of zero-emission vehicles. It directs these entities to achieve various benchmarks related to zero-emission vehicles.
- EO B-30-15 (April 2015) establishes an interim statewide GHG emission reduction target of 40 percent below 1990 levels by 2030 to ensure California meets its target of reducing greenhouse gas emissions to 80 percent below 1990 levels by 2050. It further orders all state agencies with jurisdiction over sources of greenhouse gas emissions to implement measures, pursuant to statutory authority, to achieve reductions of greenhouse gas emissions to meet the 2030 and 2050 greenhouse gas 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 (known as $MMTCO_2e$). Finally, it requires the Natural Resources Agency to update the state's climate adaptation strategy, Safeguarding California, every 3 years, and to ensure that its provisions are fully implemented.

- SB 32, Chapter 249, 2016, codifies the greenhouse gas reduction targets established in EO B-30-15 to achieve a mid-range goal of 40 percent below 1990 levels by 2030.
- SB 1386, Chapter 545, 2016, declared "it to be the policy of the state that the protection and management of natural and working lands … is an important strategy in meeting the state's 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, allocates Greenhouse Gas Reduction Funds and other sources to various clean vehicle programs, demonstration/pilot projects, clean vehicle rebates and projects, and other emissions-reduction programs statewide.
- SB 743, Chapter 386 (September 2013): This bill changes the metric of consideration for transportation impacts pursuant to CEQA from a focus on automobile delay to alternative methods focused on vehicle miles traveled, to promote the state's goals of reducing greenhouse gas emissions and traffic related air pollution and promoting multimodal transportation while balancing the needs of congestion management and safety.
- SB 150, Chapter 150, 2017, Regional Transportation Plans (known as RTP): This bill requires ARB to prepare a report that assesses progress made by each metropolitan planning organization in meeting their established regional greenhouse gas emission reduction targets.
- EO B-55-18, (September 2018) sets a new statewide goal to achieve and maintain carbon neutrality no later than 2045. This goal is in addition to existing statewide targets of reducing greenhouse gas emissions.

Environmental Setting

The proposed project is in the city of Goleta in Santa Barbara County. Goleta experiences significant traffic and congestion exacerbated by limited north-south crossing of Route 101 and lack of a street grid system (available at: https://www.cityofgoleta.org/city-hall/planning-and-environmental-review/general-plan). Route 101 is a major north-south highway that serves the states of California, Oregon, and Washington. The area surrounding the proposed project is primarily urban, consisting a mix of residential, commercial and industrial uses. Santa Barbara County Association of Governments (known as SBCAG) regional transportation plan/sustainable communities strategy guides transportation and housing development in the project area.

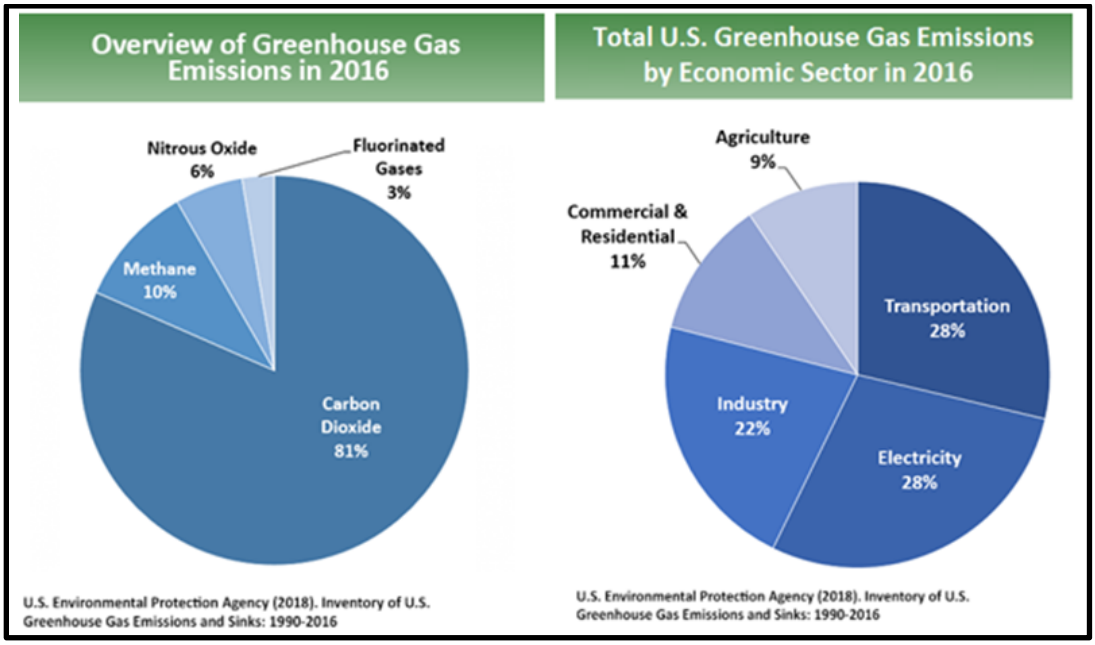
A greenhouse gas emissions inventory estimates the amount of greenhouse gases discharged into the atmosphere by specific sources over a period of time, such as a calendar year. Tracking annual greenhouse gas emissions allows countries, states, and smaller jurisdictions to understand how emissions are changing and what

actions may be needed to attain emission reduction goals. U.S. EPA is responsible for documenting greenhouse gas emissions nationwide, and the ARB does so for the state, as required by H&SC Section 39607.4.

National Greenhouse Gas Inventory

The U.S. EPA prepares a national greenhouse gas inventory every year and submits it to the United Nations in accordance with the Framework Convention on Climate Change. The inventory provides a comprehensive accounting of all human-produced sources of greenhouse gases in the United States, reporting emissions of CO_2, CH_4, N_2O, HFCs, perfluorocarbons, SF_6, and nitrogen trifluoride. It also accounts for emissions of CO_2 that are removed from the atmosphere by "sinks" such as forests, vegetation, and soils that uptake and store CO_2 (carbon sequestration). The 1990–2016 inventory found that of 6,511 $MMTCO_2e$ greenhouse gas emissions in 2016, 81% consist of CO_2, 10% are CH_4, and 6% are N_2O; the balance consists of fluorinated gases (available at: https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks). In 2016, greenhouse gas emissions from the transportation sector accounted for nearly 28.5% of U.S. greenhouse gas emissions (see Figure 3.1).

Figure 3.1: U.S. 2016 Greenhouse Gas Emissions



State Greenhouse Gas Inventory

The ARB collects greenhouse gas emissions data for transportation, electricity, commercial/residential, industrial, agricultural, and waste management sectors each year (see Figure 3.2). It then summarizes and highlights major annual changes and trends to demonstrate the state's progress in meeting its greenhouse gas reduction goals (see Figure 3.3). The 2019 edition of the greenhouse gas emissions inventory

found total California emissions of 424.1 $MMTCO_2e$ for 2017, with the transportation sector responsible for 41% of total greenhouse gases. It also found that overall statewide greenhouse gas emissions declined from 2000 to 2017 despite growth in population and state economic output (available at: https://ww3.arb.ca.gov/cc/inventory/data/data.htm).

Assembly Bill 32 required ARB to develop a Scoping Plan that describes the approach California will take to achieve the goal of reducing greenhouse gas emissions to 1990 levels by 2020, and to update it every 5 years. The 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 greenhouse gas emissions.

Figure 3.2: California 2017 Greenhouse Gas Emission

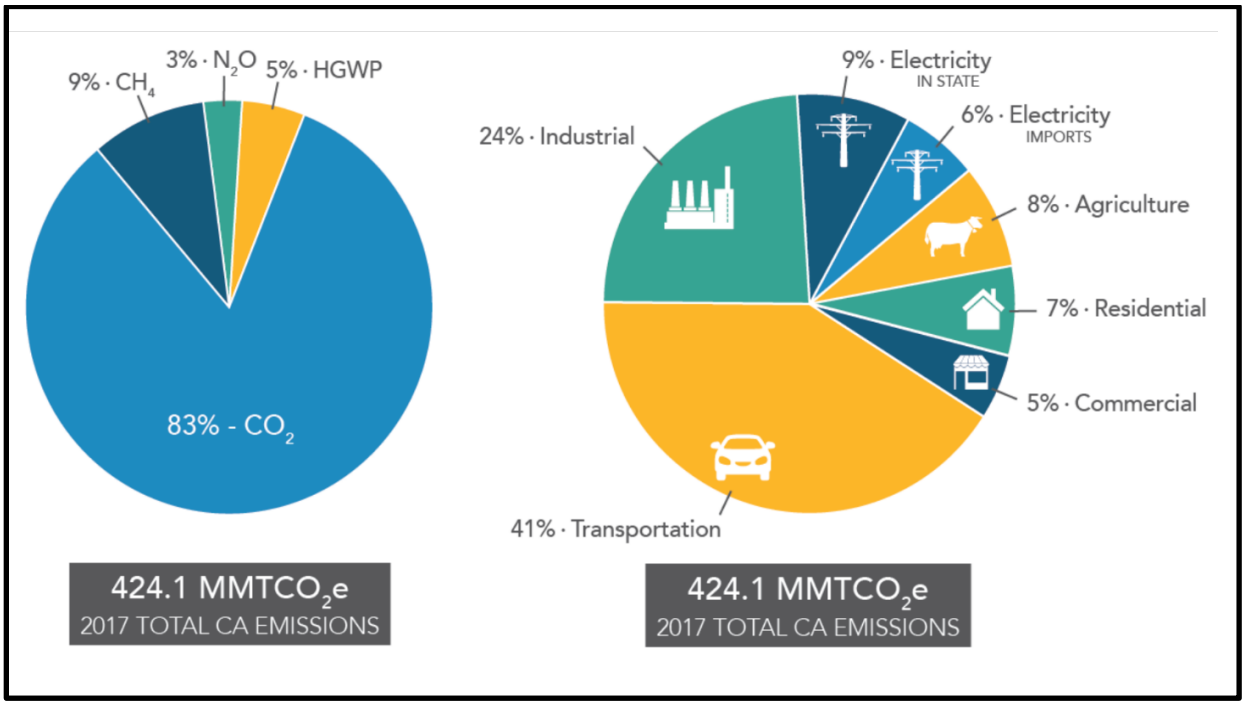
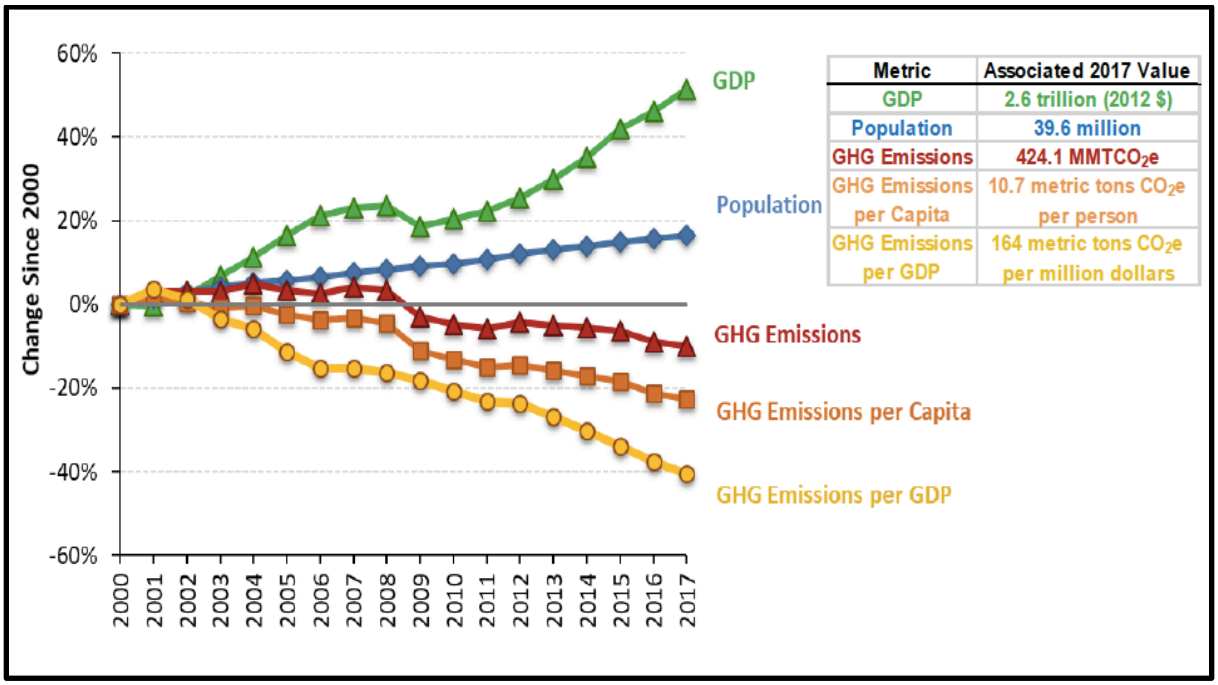


Figure 3.3: Change in California GDP, Population and Greenhouse Gas Emissions Since 2000



Regional Plans

The ARB sets regional targets for California's 18 MPOs to use in their RTP/SCSs to plan future projects that will cumulatively achieve greenhouse gas reduction goals. Targets are set at a percent reduction of passenger vehicle greenhouse gas emissions per person from 2005 levels. The proposed project was included in the Santa Barbara Association of Governments approved 2040 Regional Transportation Plan (2013) under the Project # Go-202. The regional reduction target for SBCAG is 13 percent by 2020 and 17 percent by 2035 (available at: https://ww2.arb.ca.gov/our-work/programs/sustainable-communities-program/regional-plan-targets). The Santa Barbara County Comprehensive Plan, Energy Element, Goal 8.3, instructs the County to implement the Energy and Climate Action Plan (known as ECAP) to reduce greenhouse gas emissions from community-wide sources by a minimum of 15 percent from 2007 baseline emissions by 2020 (available at the following link: https://cosantabarbara.app.box.com/s/mihghnn9kxxv7v60gtopyjeng1o998gc). The ECAP includes greenhouse gas reduction measures such as T4, enhance alternative and active transportation; T5, complete an integrated bikeway system; and BE10, implement best management practices for construction equipment operation (available at: https://www.countyofsb.org/plndev/projects/ecap.sbc). Santa Barbara County Multi-Modal Transportation Network Vulnerability Assessment identifies portions of the U.S. 101 corridor in the project vicinity as vulnerable to climate change hazards such as flooding, wildfire, and landslide, and anticipates the

County will produce a regional climate adaptation strategy (available at: http://www.sbcag.org/tnra.html).

The City of Goleta's General Plan/Coastal Land Use Plan Conservation Element (available at: https://www.cityofgoleta.org/city-hall/planning-and-environmental-review/general-plan) directs the city to produce a greenhouse gas inventory and greenhouse gas reduction plan. Goleta's Climate Action Plan, published in July 2014, fulfilled that directive. Goleta established a greenhouse gas reduction goal of 11 percent below its 2007 emissions by 2020 and a preliminary target of 26 percent below 2020 emissions by 2030. Implementing a bikeways plan is among Goleta's Climate Action Plan strategies for achieving these goals (available at: https://www.cityofgoleta.org/city-hall/planning-and-environmental-review/advance-planning-division/climate-action-plan). The General Plan Safety Element addresses flood risk (available at: https://www.cityofgoleta.org/city-hall/planning-and-environmental-review/general-plan).

Project Analysis

The greenhouse gas emissions from transportation projects can be divided into those produced during operation of the SHS and those produced during construction. The primary greenhouse gases 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 due to the global nature of climate change (Pub. Resources Code, § 21083(b)(2)). As the California Supreme Court explained, "because of the global scale of climate change, any one project's contribution is unlikely to be significant by itself." (Cleveland National Forest Foundation v. San Diego Assn. of Governments (2017) 3 Cal.5th 497, 512.) In assessing cumulative impacts, it must be determined if a project's incremental effect is "cumulatively considerable" (CEQA Guidelines Sections 15064(h)(1) and 15130)).

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

Operational Emissions

The purpose of the proposed project is to address the structural deficiencies of the San Jose Creek bridges to ensure the function and reliability of Route 101. The project would not add travel lanes, increase the vehicle capacity of the roadway, or increase in vehicle miles traveled (knowns as VMT). Completing the proposed

project would not preclude construction of the bikeway proposed by the City of Goleta. While some greenhouse gas emissions during the construction period would be unavoidable, no increase in operational greenhouse gas emissions is expected.

Construction Emissions

Construction greenhouse gas emissions would result from material processing, on-site construction equipment, and traffic delays due to construction. These emissions will be produced at different levels throughout the construction phase; their frequency and occurrence can be reduced through innovations in plans and specifications and by implementing better traffic management during construction phases. In addition, with innovations such as longer pavement lives, improved traffic management plans, and changes in materials, the greenhouse gas emissions produced during construction can be offset to some degree by longer intervals between maintenance and rehabilitation activities.

Construction Climate Change emissions were estimated using the CAL-CET modeling tool using default settings for a bridge replacement project. The estimated average CO_2 emissions total is 124 tons per year or a total of 310 tons generated over a construction period of approximately 30 months.

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 greenhouse gas emissions. A Traffic Management Plan would be carried out during project construction to minimize construction-period traffic delays and emissions.

CEQA Conclusion

Although the project would result in a slight increase in greenhouse gas emissions during construction, the project would not result in any increase in operational greenhouse gas emissions. As discussed above, the project would comply with all applicable requirements, such as restriction on idling equipment, and Santa Barbara Air Pollution Control District rules for the South Central Coast Air Basin. In addition, a Traffic Management Plan would be implemented, which would minimize construction-period traffic delays and related greenhouse gas emissions. No increase in operational greenhouse gas emissions would occur at project completion and construction-period emissions would be limited through compliance with state and air district requirements and traffic management efforts. 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 greenhouse gas-reduction measures, the impact would be less than significant.

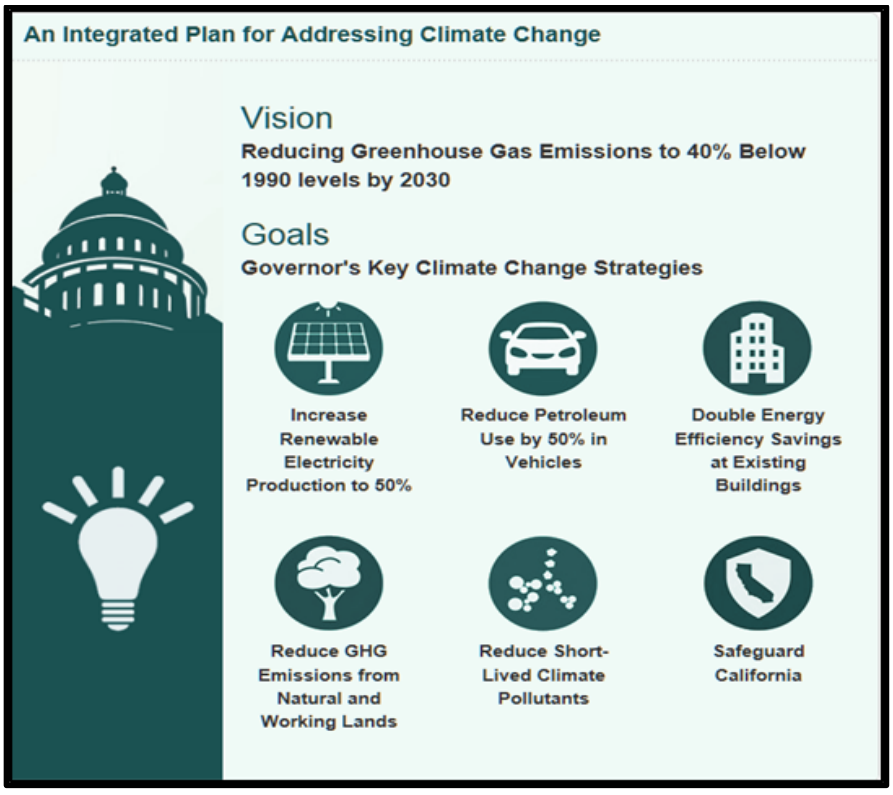
Caltrans is firmly committed to implementing measures to help reduce greenhouse gas emissions. These measures are outlined in the following section.

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 greenhouse gas emissions targets. Former Governor Edmund G. Brown promoted greenhouse gas reduction goals (see Figure 3.4) 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 3.4: California Climate Strategy



The transportation sector is integral to the people and economy of California. To achieve greenhouse gas 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. Greenhouse gas emission reductions will come from cleaner vehicle technologies, lower-carbon fuels, and reduction of vehicle miles traveled. A key state goal for reducing greenhouse gas emissions is to reduce today's petroleum use in cars and trucks by up to 50 percent by 2030 (Available at: https://www.climatechange.ca.gov/).

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. Both EO B-30-15, (2015), and SB 32 (2016), set an interim target to cut greenhouse gas 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 (known as CTP) is a statewide, long-range transportation plan to meet our future mobility needs and reduce greenhouse gas 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.

Senate Bill 391 (Liu 2009) requires the CTP to meet California's climate change goals under AB 32. Accordingly, the CTP 2040 identifies the statewide transportation system needed to achieve maximum feasible greenhouse gas emission reductions while meeting the state's transportation needs. While MPOs have primary responsibility for identifying land use patterns to help reduce greenhouse gas 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 greenhouse gas emissions, among other goals. Specific performance targets in the plan that will help to reduce greenhouse gas emissions include:

- Increasing percentage of non-auto mode share
- Reducing vehicle miles traveled
- Reducing Caltrans' internal operational (buildings, facilities, and fuel) greenhouse gas emissions

Funding and Technical Assistance Programs

In addition to developing plans and performance targets to reduce greenhouse gas 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 greenhouse gas reduction targets and advance transportation-related greenhouse gas 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 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 greenhouse gas emissions resulting from agency operations.

Project-Level Greenhouse Gas Reduction Strategies

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

- The proposed project would include a TMP that would reduce delays and related short-term increases in greenhouse gas emissions from disruptions in traffic flow. Also, in the event that portable changeable message signs are required as part of the TMP, message signs would be solar powered when possible and would not result in greenhouse gas emissions during use.
- Caltrans Standard Specifications Section 14-9, Air Quality, a part of all construction contracts, requires contractors to comply with all federal, state, regional, and local rules, regulations, and ordinances related to air quality. Requirements of the Santa Barbara Air Pollution Control District will apply to this project. Requirements that reduce vehicle emissions, such as limits on idling time, may help reduce greenhouse gas emissions.
- The project proposes to revegetate previously undisturbed areas, where applicable, following construction completion. Landscaping reduces surface warming and, through photosynthesis, removes CO_2 from the atmosphere.

Adaptation

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

Federal Efforts

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

The U.S. Global Change Research Program delivers a report to Congress and the president every 4 years, in accordance with the Global Change Research Act of 1990 (15 U.S.C. Ch. 56A § 2921 et seq). The Fourth National Climate Assessment, published in 2018, presents the foundational science and the "human welfare, societal, and environmental elements of climate change and variability for 10 regions and 18 national topics, with particular attention paid to observed and projected risks, impacts, consideration of risk reduction, and implications under different mitigation pathways." Chapter 12, "Transportation," presents a key discussion of vulnerability assessments. It notes that "asset owners and operators have increasingly conducted more focused studies of particular assets that consider multiple climate hazards and scenarios in the context of asset-specific information, such as design lifetime" (Available at: https://nca2018.globalchange.gov/.).

The U.S. Department of Transportation (known as USDOT) Policy Statement on Climate Adaptation in June 2011 committed the USDOT to "integrate consideration of climate change impacts and adaptation into the planning, operations, policies, and programs of USDOT in order to ensure that taxpayer resources are invested wisely, and that transportation infrastructure, services and operations remain effective in current and future climate conditions" (Available at: https://www.fhwa.dot.gov/environment/sustainability/resilience/policy_and_guidance/usdot.cfm).

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

and sustainability at the federal, state, and local levels (Available at: https://www.fhwa.dot.gov/environment/sustainability/resilience/).

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 (Available at: http://www.climateassessment.ca.gov/.) 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.2 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 Assessment

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

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

The proposed project site is adjacent to a FEMA designated Zone AE floodplain with a base flood elevation of 56 feet at the San Jose Creek bridge at Route 101. The location is designated as a FEMA Special Flood Hazard Area. As described in Section 2.1.1, Hydrology and Floodplain, the proposed new bridge design would remove the existing bridge columns in the creek, remove concrete paving on the bank, reduce the bank slopes and install rock slope protection, which would result in a greater cross-sectional area underneath the bridge. These features would decrease the water surface elevation, providing a margin of resilience to potential future higher flood flows if future precipitation events become more intense, as anticipated under climate change conditions in Santa Barbara County (Available at: http://www.countyofsb.org/plndev/projects/safetyelementupdate.sbc).

Chapter 4 Comments and Coordination

Early and continuing coordination with the general public and public agencies is an essential part of the environmental process to determine the scope of environmental documentation, the level of analysis required, potential impacts and avoidance, minimization and/or mitigation measures and related environmental requirements. Agency consultation for this project has been accomplished through a variety of formal and informal methods, including Project Development Team meetings, interagency coordination meetings, and so on. Public participation will be sought through the release and review of this Initial Study with Proposed Mitigated Negative Declaration and Environmental Assessment. This chapter summarizes the results of Caltrans' efforts to identify, address, and resolve project-related issues through early and continuing coordination.

Biological Coordination

April 19, 2018: Biologist John Moule submitted a request online through the U.S. Fish and Wildlife Service Information for Planning and Consulting website for an official U.S. Fish and Wildlife Service species list for the proposed project. The online tool *Information for Planning and Consulting* generated a list the same day.

April 19, 2018: John Moule generated an official National Marine Fisheries Service species list from the National Oceanic and Atmospheric Administration California Species List Tool for the project area. The official National Marine Fisheries Service species list was received via email the same day.

September 20, 2018: John Moule contacted Jessica Adams (National Marine Fisheries Service) via email to inquire about suitable dates for dewatering.

November 11, 2018: John Moule updated the official U.S. Fish and Wildlife Service species list through the U.S. Fish and Wildlife Service *Information for Planning and Consulting* website for the proposed project. The *Information for Planning and Consulting* website generated a list the same day.

November 11, 2018: John Moule updated the official National Marine Fisheries Service species list from the National Oceanic and Atmospheric Administration California Species List Tool for the project area.

February 27, 2019: John Moule updated the official U.S. Fish and Wildlife Service species list through the U.S. Fish and Wildlife Service *Information for Planning and Consulting* website for the proposed project. The *Information for Planning and Consulting* website generated a list the same day.

February 27, 2019: John Moule updated the official National Marine Fisheries Service species list from the National Oceanic and Atmospheric Administration California Species List Tool for the project area.

August 2, 2019: Biologist Connor Ritchie obtained an updated official U.S. Fish and Wildlife Service species list through the U.S. Fish and Wildlife *Service Information for Planning and Consulting* website for the proposed project.

August 2, 2019: Connor Ritchie obtained an updated official National Marine Fisheries Service species list from the National Oceanic and Atmospheric Administration California Species List Tool for the project area.

October 22, 2019: Connor Ritchie prepared an addendum to the Natural Environment Study originally prepared on March 4, 2019 to address proposed changes to rock slope protection placement and installation.

Hydrology Coordination

February 28,2019: Transportation Engineer Kristen Inkrott notified the City of Goleta's floodplain administrator that project staff would be preparing a floodplain study and will likely prepare a Conditional Letter of Map Revision and submit the Federal Emergency Management Agency "M.T.-2" floodplain application to the City prior to project completion.

Cultural Resources Coordination

December 19, 2018: Damon Haydu sent out letters to regional Native American tribal groups as part of Section 106 consultation and formal notification required under AB-52. Invitation for consultation was offered and no formal consultation was requested by recipients.

Chapter 5 List of Preparers

This chapter lists the Caltrans and consultant staff members who were responsible for preparing and reviewing this document and the supporting technical studies for this project.

Caltrans Staff

Carr, Robert. Associate Landscape Architect. B.S., Landscape Architecture, California Polytechnic University, San Luis Obispo; over 20 years of experience preparing Visual Impact Assessments. Contribution: Visual Impact Assessment.

Fowler, Matt. Senior Environmental Planner. B.A., Geographic Analysis, San Diego State University; 18 years of experience in environmental planning. Contribution: Oversight of the Initial Study.

Geramaldi. Associate Environmental Planner (Generalist). B.S., Environmental Geography, California Polytechnic State University, Pomona; 3 years of environmental planning experience. Contribution: Coordinated the environmental process; oversight of the Initial Study, preparation of the Initial Study.

Haydu, Damon M. Associate Environmental Planner (Archaeology). M.A., Cultural Resources Management, Sonoma State University, Rohnert Park; over 20 years of experience in all phases of cultural resource management. Contribution: Cultural resource review.

Inkrott, Kristen. P.E., Transportation Engineer (Civil). B.S., Environmental Engineering from California Polytechnic University, San Luis Obispo; over 25 years of experience in Water Resources and Hydraulic Engineering. Contribution: Hydraulic recommendations.

Kloth, Joel. Engineering Geologist. B.S., Geology, California Lutheran University; over 30 years of experience in petroleum geology, geotechnical geology, and environmental engineering/geology-hazardous waste. Contribution: Initial Site Assessment.

Kozub, Lindsay. Associate Environmental Planner (Architectural Historian). M.A., History/Cultural Resource Management, Colorado State University; B.A., History; B.S., Business; 8 years of experience in historical research and analysis, historic preservation, and cultural resource management. Contribution: Cultural resource review.

Leyva, Isaac. Engineering Geologist. B.S., Geology, California State University, Bakersfield; A.S., Cuesta College, San Luis Obispo; over 20 years of experience in petroleum geology, environmental, geotechnical engineering. Contribution: Initial Site Assessment, Paleontology Technical Report, Water Quality Assessment.

Mikel, Karl J. Senior Transportation Engineer. B.S., Environmental Engineering, California Polytechnic State University, San Luis Obispo; M.S., Civil/Environmental Engineering, California Polytechnic State University, San Luis Obispo; 17 years of professional experience in air quality and noise assessment. Contribution: Air Quality, Noise and Greenhouse Gas Memo.

Moule, John. Consultant Associate Biologist/Environmental Planner. B.S., Biology, Humboldt State University; over 20 years of natural resource and biology experience. Contribution: Natural Environment Study.

Ritchie, Connor. Biologist/Environmental Planner (Natural Science). B.S., Biological Science, California Polytechnic State University, San Luis Obispo; 4 years of natural resource and biology experience. Contribution: Natural Environment Study.

ICF Staff

Mario Anaya, Senior Environmental Planner. MPA, Urban Planning, California State University, Northridge. B.A., Global Studies, University of California, Los Angeles; 10 years of experience in environmental planning. Contribution: Preparation of the Initial Study.

Jennifer Andersen, AICP, Senior Associate. B.A., International Relations, University of Southern California; 7 years of experience in environmental planning. Contribution: preparation of the Initial Study.

Will Herron, Environmental Planner. B.A., International Relations, University of Southern California; 2 years of experience in environmental planning. Contribution: preparation of the Initial Study.

Andrew Johnson, Environmental Planner. M.A., Public Policy, University of Southern California. B.A., Business Administration, Pepperdine University. Contribution: preparation of the Initial Study.

Chapter 6 Distribution List

City of Goleta Planning Office
130 Cremona Drive, Suite B
Goleta, CA 93117

County of Santa Barbara Planning Office
123 East Anapamu Street, 2nd Floor
Santa Barbara, CA 93101

Goleta Valley Library
500 North Fairview Avenue
Goleta, CA 93117

Santa Barbara Public Library
40 East Anapamu Street
Santa Barbara, CA 93101

U.S. Fish and Wildlife Service – Ventura Office
2493 Portola Road, Suite B
Ventura, CA 93003

U.S. Army Corps of Engineers, Los Angeles District
911 Wilshire Boulevard
Los Angeles, CA 90017

California Department of Fish and Wildlife – South Coast Region
3883 Ruffin Road
San Diego, CA 92123

Central Coast Regional Water Quality Control Board
895 Aerovista Place, Suite 101
San Luis Obispo, CA 93401

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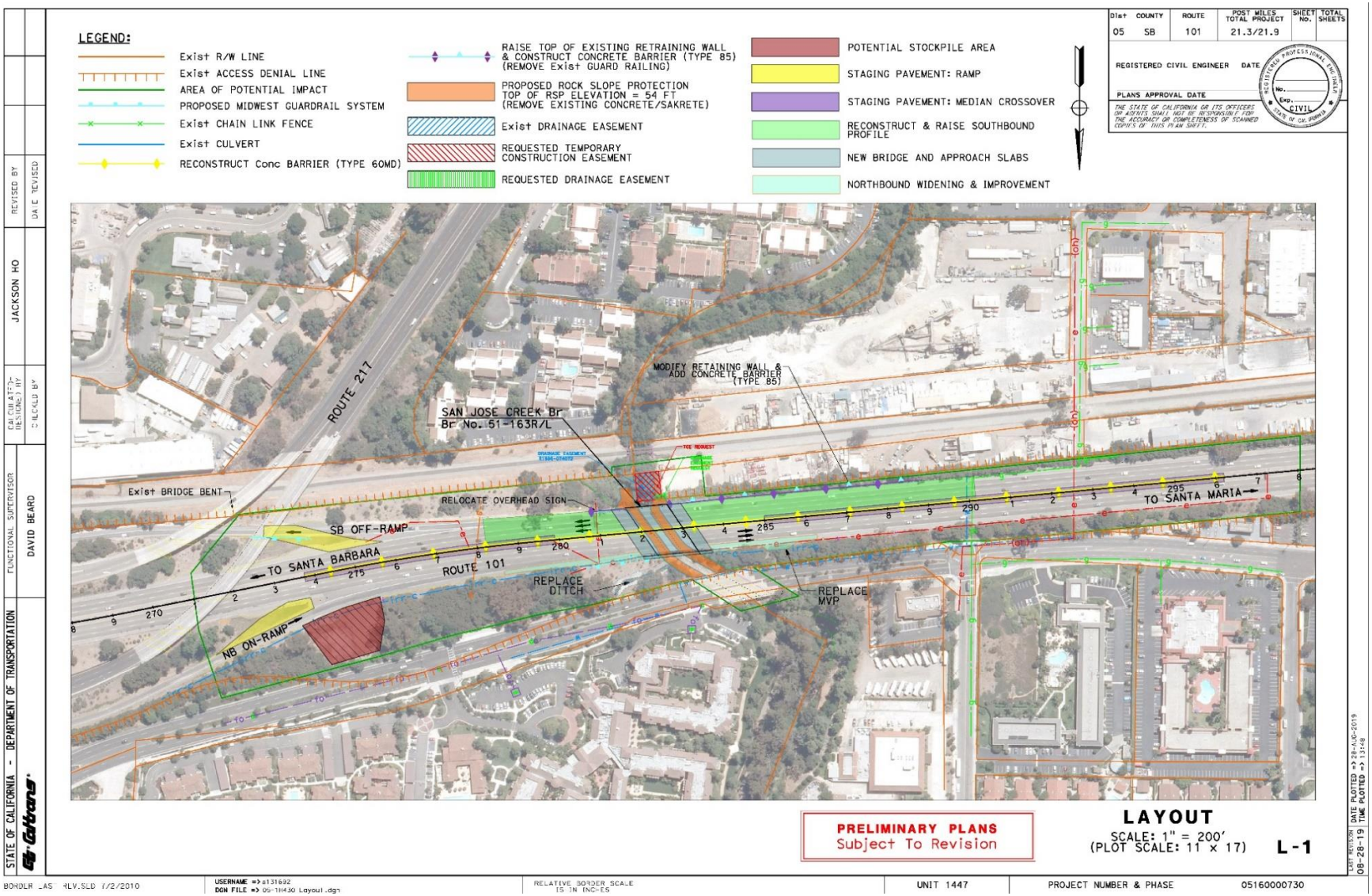
Appendix A Preliminary Project Layout



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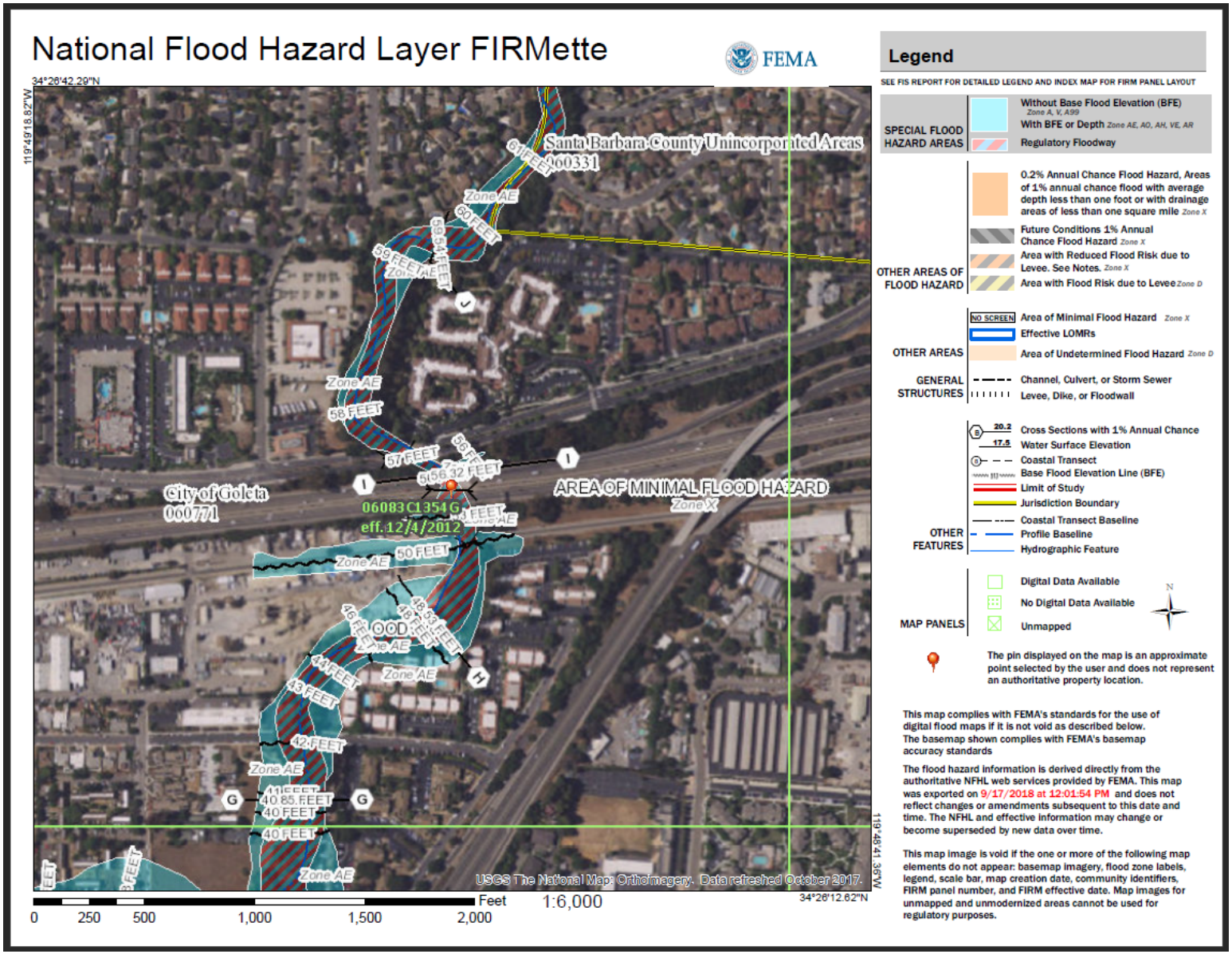
Appendix B FEMA Flood Insurance Rate Map



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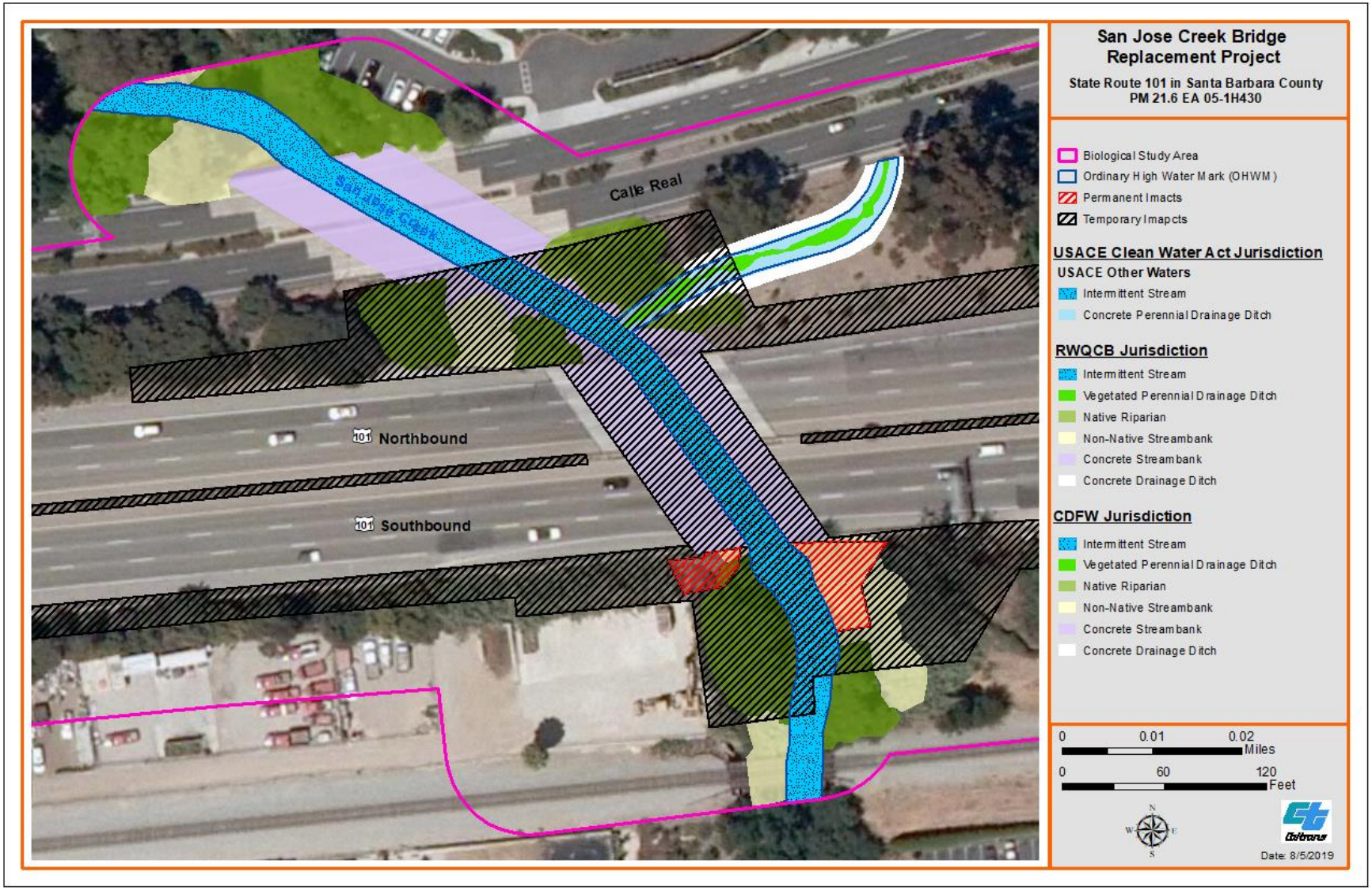
Appendix C Jurisdictional Waters Area Map



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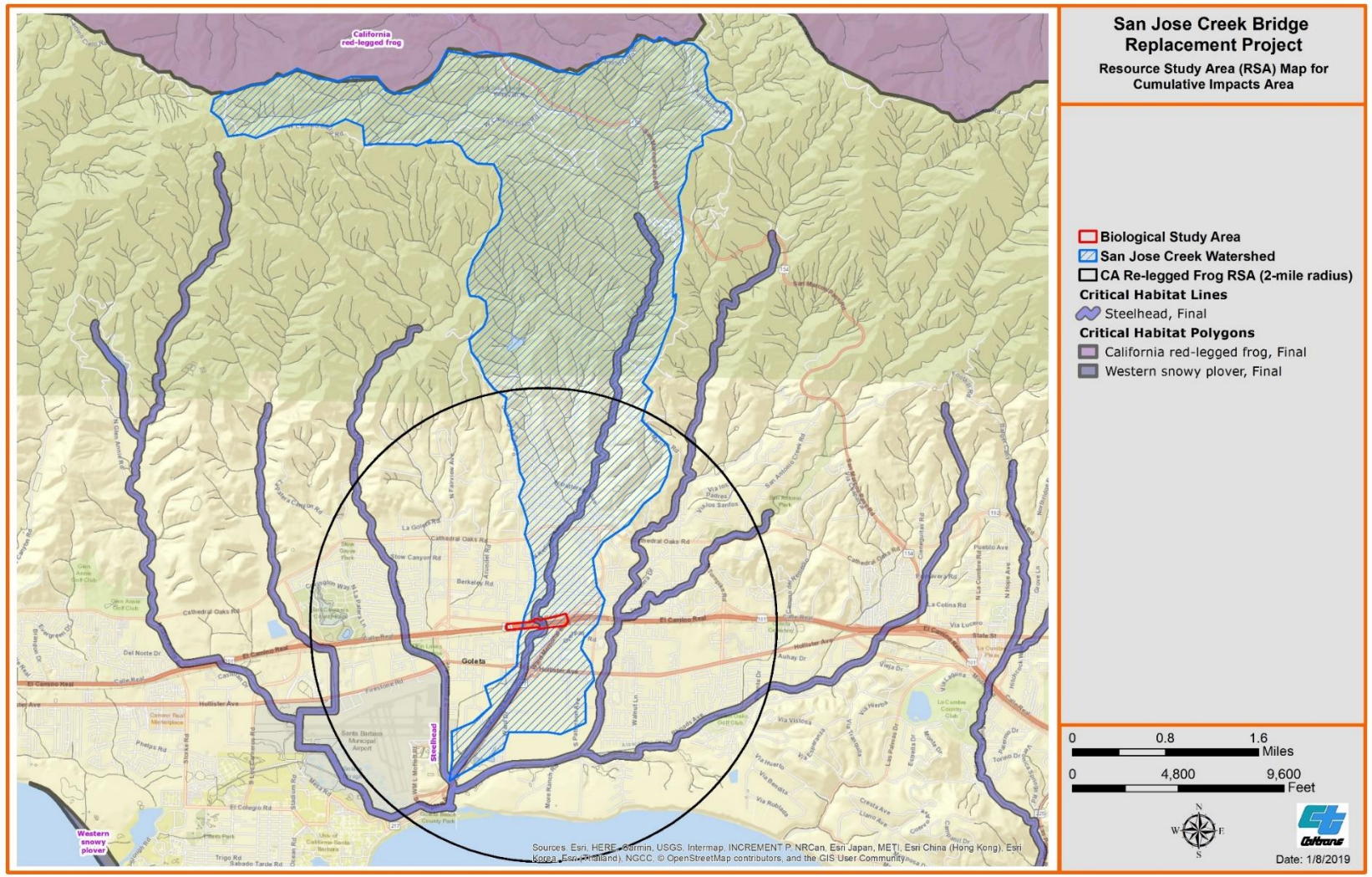
Appendix D Resource Study Area Map



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Appendix E Title VI Policy Statement

STATE OF CALIFORNIA—CALIFORNIA STATE TRANSPORTATION AGENCY EDMUND G. BROWN Jr., Governor

DEPARTMENT OF TRANSPORTATION
OFFICE OF THE DIRECTOR
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SACRAMENTO, CA 94273-0001
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Making Conservation a California Way of Life.

April 2018

NON-DISCRIMINATION POLICY STATEMENT

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

Related federal statutes 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, please visit the following web page: http://www.dot.ca.gov/hq/bep/title_vi/t6_violated.htm.

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

LAURIE BERMAN
Director

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

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Appendix F Avoidance, Minimization and/or Mitigation Summary

To be sure that all of the environmental measures identified in this document are executed at the appropriate times, the following mitigation program (as articulated on the proposed Environmental Commitments Record that follows) 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 members will ensure that the commitments contained in the Environmental Commitments Record are fulfilled. Following construction and appropriate phases of project delivery, long-term mitigation maintenance and monitoring will take place, as applicable.

Water Quality and Stormwater Runoff (Section 2.1.2)

The following measures would be implemented to reduce impacts to less than significant.

1. The project would implement the following Best Management Practices:
    a. Job site management
    b. Preparation of a Water Pollution Control Program to determine the feasibility of incorporating permanent treatment or structural Best Management Practices into the final project design.
    c. Temporary Best Management Practices that include, but are not limited to:
        i. hydraulic mulch
        ii. check dams
        iii. drainage inlet protection
        iv. fiber rolls
        v. stabilized construction entrance
        vi. designated concrete washout
        vii. Environmentally Sensitive Area fencing
2. The project will implement appropriate Caltrans Standard Specifications pertaining to water quality and water pollution control.

Geology, Soils, Seismicity and Topography (Section 2.1.3)

The following measures would be implemented to avoid and/or minimize impacts to less than significant.

1. The project would minimize the amount of soil disturbance necessary to complete the project.
2. Additional subsurface investigation would be conducted prior to project construction to identify subsurface conditions and help determine appropriate final design elements required to protect the new bridge from potential geologic hazards.

Natural Communities (Section 2.2.1)

The following measures would be implemented to avoid and/or minimize impacts to less than significant.

1. Environmentally Sensitive Area fencing will be installed along the maximum disturbance limits to minimize disturbances to habitats/vegetation. Special provisions for the installation of Environmentally Sensitive Area fencing will be included in the construction contract and identified on project plans. Prior to the start of construction activities, Environmentally Sensitive Areas will be delineated in the field and approved by Caltrans' Environmental division.
2. Impacts to native species will require the project to conduct restoration plantings onsite and consisting of the native species appropriate for the project area.

Wetlands and Other Waters (Section 2.2.2)

The following measures would be implemented to reduce potentially significant impacts to less than significant.

1. Prior to any ground-disturbing activities, Environmentally Sensitive Area fencing will be installed around jurisdictional waters as well as the dripline of any trees that are to be protected within the project limits. Caltrans-defined Environmentally Sensitive Areas will be noted on design plans and delineated in the field prior to the start of construction activities.
2. During construction, all project-related hazardous materials spills within the project site will be cleaned up immediately. Readily accessible spill prevention and cleanup materials will be kept on-site by the contractor at all times during construction.
3. During construction, erosion control measures will be implemented. Appropriate Best Management Practices will be installed as needed between the project site and jurisdictional "other waters" and riparian habitat. At a minimum, erosion controls will be maintained by the contractor daily throughout the construction period.
4. During construction, cleaning and refueling of equipment and vehicles will occur only within a designated staging area. This area will either be a

minimum of 100 feet from aquatic areas or, if the area is less than 100 feet from aquatic areas, surrounded by barriers or secondary containment items (e.g., fiber rolls or equivalent). The staging areas will conform to the Best Management Practices applicable to attaining zero discharge of stormwater runoff. At a minimum, all equipment and vehicles will be checked and maintained by the contractor daily to ensure proper operation and avoid potential leaks or spills.

5. Habitat restoration and native re-plantings will be required for the project. It is anticipated that compensatory mitigation can occur entirely within the project site, consisting of native plants appropriate to the project area. Plant restoration is proposed at a 1:1 ratio for acreage of temporary and permanent impacts. It is anticipated that a 3:1 replacement ratio would be required for impacts to riparian trees. A plant establishment period will be required as part of the replanting process.

Animal Species (Section 2.2.4)

The following measures would be implemented to reduce potentially significant impacts to less than significant.

Coast Range Newt, Western Pond Turtle, and Two-Striped Garter Snake

1. Prior to initiation of stream dewatering, Caltrans will conduct a worker environmental training program, including a description of Coast Range newt, western pond turtle, and two-striped garter snake; their legal/protected status; their proximity to the project site; and avoidance/minimization measures to be implemented during the project.
2. Prior to construction, a biologist, determined qualified by Caltrans, will survey the biological study area and capture and relocate Coast Range newts, two-striped garter snakes, and western pond turtles, if present, to suitable habitat upstream within the biological study area. Observations of species of special concern or other special-status species will be documented on California Natural Diversity Database forms and submitted to the California Department of Fish and Wildlife upon project completion. If these species or other aquatic species of special concern are observed during construction, they will likewise be relocated by a qualified biologist to suitable habitat outside the impact area.

Northern California Legless Lizard and Coast Horned Lizard

3. All excavation and vegetation removal within suitable habitat will be monitored by a qualified biologist. The qualified biologist will be on-site and monitoring during all new excavations and vegetation removal within suitable habitat.
4. Northern California legless lizards, coast horned lizards, or any species discovered during monitoring, excluding state or federal listed species, will be captured and relocated by the qualified biologist to suitable habitat outside the biological study area. Observations of species of special concern or other

special-status species will be documented on California Natural Diversity Database forms and submitted to the California Department of Fish and Wildlife upon project completion.

Cooper's Hawk and Other Nesting Bird Species

5. If feasible, tree removal and trimming will be scheduled to occur from October 1 and January 31, outside of the typical nesting bird season, to avoid potential impacts to nesting birds. If it is not feasible to conduct this work outside of the nesting bird season, nesting bird surveys will be conducted by a qualified biologist no more than 14 days prior to the start of construction. If an active nest is found, a qualified biologist will determine an appropriate buffer, or a monitoring strategy based on the habits and needs of the species. The buffer area will be avoided, or the monitoring strategy implemented until a qualified biologist has determined that the nest is no longer active.
6. It is recommended that bird nests be excluded from the existing bridge. Nesting bird exclusion methods may include installation of thick plastic sheeting, one-way exclusion devices over drain holes, removing/knocking down nests before they contain eggs or nestlings, or other methods approved by the California Department of Fish and Wildlife. The required time for installation of bird exclusion devices is outside of the nesting season (i.e., implement exclusion methods from October 1 to January 31).
7. During construction, active bird nests will not be disturbed, and eggs or young of birds protected by the Migratory Bird Treaty Act and California Fish and Game Code will not be killed, destroyed, injured, or harassed at any time. If an active nest is found, a qualified biologist will determine an appropriate buffer using Environmentally Sensitive Area fencing or a monitoring strategy based on the habits and needs of the species. The buffer area will be avoided, or the monitoring strategy implemented until a qualified biologist has determined that the nest is no longer active.

Pallid Bat, Western Red Bat, Yuma Myotis, and Other Bat Species

8. A qualified biologist will conduct a preconstruction survey of the Route 101 and Calle Real bridges for bat activity at least 14 days prior to construction. If any roosting bats or evidence of roosting is observed, exclusion devices will be installed over the roosting habitat when bats are not present.
9. At least 14 days prior to construction, the human-made bat box under the bridge on Calle Real will be covered with an exclusion device when bats are not present. The exclusion device will be removed at the completion of construction.
10. If tree removal is required during the bat maternity roosting season (February 15 to September 1), a bat roost survey will be conducted by a qualified biologist within 7 days prior to removal. If an active bat roost is found, Caltrans will coordinate with the California Department of Fish and Wildlife to determine an appropriate buffer, based on the habits and needs of the

species. Readily visible exclusion zones will be established in areas where roosts must be avoided, using Environmentally Sensitive Area fencing. Work in the buffer area will be avoided until a qualified biologist has determined that roosting activity has stopped. Active bat maternity roosts will not be disturbed or destroyed at any time.

11. Compensatory Mitigation: The existing Route 101 bridges showed no signs that they supported roosting bats. Only a single nest for a cliff swallow was found; the nest could have been used by bats for roosting (although it was broken). No bat roosting habitat is anticipated to be permanently lost as a result of the project. Impacts on vegetation would be offset by replacement plantings within the project limits, which would also replace potential roosting habitat. No additional compensatory mitigation is proposed for bats.

San Diego Desert Woodrat

12. No more than 14 days prior to construction activities, a pre-construction survey will be conducted within the biological study area by a qualified biologist to determine the presence or absence of woodrat middens.

13. If woodrat middens are located during this survey, the qualified biologist will establish an Environmentally Sensitive Area with a 25-foot buffer around each midden. No project activities requiring grading, mechanized equipment or vehicles, or large crews will be allowed within the 25-foot protective buffer.

14. If project activities cannot avoid affecting the middens, then a qualified biologist will dismantle the middens by hand prior to grading or vegetation removal activities. The midden dismantling will be conducted such that the midden material is removed slowly while personnel look for young woodrats. The material will be placed in a pile at the closest undisturbed adjacent habitat but more than 50 feet from construction activities.

15. If young are encountered during midden dismantling, the dismantling activity will be stopped, and the material replaced back on the nest. The nest will be left alone, then rechecked in 2 to 3 weeks to see if the young are out of the nest or capable of being out on their own (as determined by a qualified biologist); once the young can fend for themselves, the nest dismantling can continue.

Threatened and Endangered Species (Section 2.2.5)

The following measures would be implemented to reduce potentially significant impacts to less than significant.

Southern California Steelhead and Critical Habitat

The avoidance, minimization, and/or mitigation measures listed throughout Section 2.2 would reduce impacts on steelhead critical habitat.

The measures listed below would reduce impacts on Southern California steelhead species:

1. Prior to initiation of stream dewatering, a qualified biologist will conduct a worker environmental training program, including a description of steelhead, its legal/protected status, proximity to the project site, avoidance/minimization measures to be implemented during the project, and the implications of violating the Federal Endangered Species Act and permit conditions.
2. During construction, pile driving, and instream work will be limited to the low-flow period, from June 1 and October 31, in any given year when surface water is likely to be at the seasonal minimum to avoid adult steelhead spawning migration and peak smolt migration. Deviations from this work window will be made only with permission from Caltrans and the relevant regulatory agencies.
3. A qualified biologist will be retained with experience in steelhead biology and ecology; aquatic habitats; biological monitoring, including dewatering; and capturing, handling, and relocating fish species. The biological monitor(s) will continuously monitor the placement and removal of any creek diversion and dewatering system to capture steelhead and other native fish species and relocate them to suitable habitat as appropriate. The monitor(s) will capture steelhead in the biological study area just prior to dewatering and any remaining stranded steelhead immediately after dewatering. Steelhead will be relocated to suitable habitat upstream of the work area, using methods approved by the appropriate regulatory agencies. This may include, but not necessarily be limited to, seine-netting, dip-netting, providing aerated water in buckets for transport, and ensuring adequate water temperatures during transport. The biologist will note the number of steelheads observed in the affected area, the number of steelheads captured and relocated, and the date and time of the collection and relocation.
4. During instream work, if pumps are incorporated to assist in temporarily dewatering the site, intakes will be completely screened with no larger than 3/32-inch (2.38-millimeter) wire mesh to prevent steelhead and other sensitive aquatic species from entering the pump system. Pumped water will be directed through a silt filtration bag and/or into a settling basin, allowing the suspended sediment to settle out prior to re-entering the stream(s) outside of the isolated area.
5. When the biological monitors are on-site, they will monitor erosion and sediment controls to identify and correct any conditions that could adversely affect steelhead or steelhead habitat. The biological monitors will be granted the authority to halt work activity as necessary and recommend measures to avoid/minimize adverse effects on steelhead and steelhead habitat.
6. Sound-attenuating devices will be used during pile driving, if any feasible method is available for dry pile driving.

7. Vibration and oscillation of piles will be used to the greatest extent feasible to install piles and reduce the need for hammer driving.

California Red-Legged Frog

8. Only U.S. Fish and Wildlife Service-approved biologists will participate in activities associated with the capture, handling, and monitoring of California red-legged frogs.
9. Ground disturbance will not begin until written approval is received from the U.S. Fish and Wildlife Service that the biologist is qualified to conduct the work.
10. A U.S. Fish and Wildlife Service-approved biologist will survey the project area no more than 48 hours before the onset of work activities. If any life stage of the California red-legged frog is found and the individuals are likely to be killed or injured by work activities, the approved biologist will be allowed sufficient time to move them from the site before work begins. The U.S. Fish and Wildlife Service-approved biologist will relocate the California red-legged frogs the shortest distance possible to a location that contains suitable habitat where they will not be affected by the activities associated with the project. The relocation site will be in the same drainage to the extent practicable. Caltrans will coordinate with the U.S. Fish and Wildlife Service on the relocation site prior to the capture of any California red-legged frogs.
11. Before any activities begin on a project, a U.S. Fish and Wildlife Service-approved biologist will conduct a training session for all construction personnel. At a minimum, the training will include a description of the California red-legged frog and its habitat, the specific measures that are being implemented to conserve the California red-legged frog for the current project, and the boundaries within which the project may be accomplished. Brochures, books, and briefings may be used in the training session, with a qualified person on hand to answer any questions.
12. A U.S. Fish and Wildlife Service-approved biologist will be present at the work site until all California red-legged frogs have been removed, workers have been instructed, and disturbance of habitat has been completed. After this time, Caltrans will designate a person to monitor on-site compliance with all minimization measures. The U.S. Fish and Wildlife Service-approved biologist will ensure this monitor receives the training outlined above regarding the identification of California red-legged frogs. If the monitor or the U.S. Fish and Wildlife Service-approved biologist recommends that work be stopped because California red-legged frogs would be affected in a manner not anticipated by Caltrans and the U.S. Fish and Wildlife Service during review of the proposed action, that person will notify the resident engineer immediately. The resident engineer will resolve the situation by requiring that all actions that are causing the effects be halted. When work is stopped, the U.S. Fish and Wildlife Service will be notified as soon as possible.

13. During project activities, all trash that may attract predators or scavengers will be properly contained, removed from the work site, and disposed of regularly. Following construction, all trash and debris will be removed from work areas.
14. All refueling, maintenance, and staging of equipment and vehicles will occur at least 60 feet from riparian habitat or water bodies and not in a location from where a spill would drain directly toward aquatic habitat, unless otherwise preapproved by the necessary agencies. The monitor will ensure that habitat contamination does not occur during operations. Prior to the onset of work, Caltrans will ensure that a plan is in place for a prompt and effective response to any accidental spills. All workers will be informed of the importance of preventing spills and appropriate measures to take should a spill occur.
15. Habitat contours will be returned to a natural configuration at the end of the project activities. This measure will be implemented in all areas disturbed by activities associated with the project, unless the U.S. Fish and Wildlife Service and Caltrans determine that it is not feasible, or modification of original contours would benefit the California red-legged frog.
16. The number of access routes, size of staging areas, and the total area of activity will be limited to the minimum necessary to complete the project. Environmentally Sensitive Areas will be established to confine access routes and construction areas to the minimum area necessary to complete construction and minimize the impact on California red-legged frog habitat; this goal includes locating access routes and construction areas outside of wetlands and riparian areas to the maximum extent practicable.
17. Caltrans will attempt to schedule work at times of the year when impacts on the California red-legged frog would be minimal. For example, work that would create large pools that support breeding would be avoided, to the maximum degree practicable, during the breeding season (November through May). Isolated pools, which are important to maintaining California red-legged frog populations through the driest portions of the year, would be avoided, to the maximum degree practicable, during late summer and early fall. Habitat assessments, surveys, and technical assistance between Caltrans and the U.S. Fish and Wildlife Service during project planning will be used to assist in scheduling work activities and avoiding sensitive habitats during key times of the year.
18. To control sedimentation during and after project completion, Caltrans will implement the Best Management Practices outlined in any authorizations or permits issued under the authorities of the Clean Water Act. If Best Management Practices are ineffective, Caltrans will attempt to remedy the situation immediately, in coordination with the U.S. Fish and Wildlife Service.
19. If a work site is to be temporarily dewatered by pumping, intakes will be completely screened with wire mesh not larger than 0.2 inch to prevent California red-legged frogs from entering the pump system. Water will be released or pumped downstream at an appropriate rate to maintain downstream flows during construction. Upon completion of construction

activities, any diversions or barriers to flow will be removed in a manner that allows the flow to resume with the least disturbance to the substrate. Alteration of the streambed will be minimized to the maximum extent possible; any imported material will be removed from the streambed upon completion of the project.

20. Unless approved by the U.S. Fish and Wildlife Service, water will not be impounded in a manner that attracts California red-legged frogs.
21. A U.S. Fish and Wildlife Service-approved biologist will permanently remove any exotic species, such as bullfrogs (*Rana catesbeiana*), signal and red swamp crayfish (*Pacifasticus leniusculus*; *Procambarus clarkii*), and centrarchid fishes from the project area, to the maximum extent possible. The U.S. Fish and Wildlife Service-approved biologist will be responsible for ensuring that his or her activities comply with the California Fish and Game Code.
22. If Caltrans demonstrates that disturbed areas have been restored to conditions that allow them to function as habitat for the California red-legged frog, these areas will not be included in the amount of total habitat permanently disturbed.
23. To ensure that diseases are not conveyed between work sites by the U.S. Fish and Wildlife Service-approved biologist, the fieldwork code of practice developed by the Declining Amphibian Task Force will be followed at all times.
24. Project sites will be revegetated with an assemblage of native riparian, wetland, and upland vegetation suitable for the area. Locally collected plant materials will be used to the extent practicable. Invasive exotic plants will be controlled to the maximum extent practicable. This measure will be implemented in all areas disturbed by activities associated with the project, unless the U.S. Fish and Wildlife Service and Caltrans determine that it is not feasible or practical.
25. Caltrans will not use herbicides as the primary method for controlling invasive exotic plants. However, if it is determined that the use of herbicides is the only feasible method for controlling invasive plants at a specific project site, the following additional protective measures for the California red-legged frog will be implemented:
    a. Caltrans will not use herbicides during the breeding season for the California red-legged frog.
    b. Caltrans will conduct surveys for the California red-legged frog immediately prior to the start of herbicide use. If found, California red-legged frogs will be relocated to suitable habitat far enough from the project area that no direct contact with herbicide would occur.
    c. Giant reed and other invasive plants will be cut and hauled out by hand and painted with glyphosate-based products, such as Aquamaster® or Rodeo®.

d. Licensed and experienced Caltrans personnel or a licensed and experienced contractor will use a hand-held sprayer for foliar application of Aquamaster® or Rodeo® where large monoculture stands occur at an individual project site.

e. All precautions will be taken to ensure that no herbicide is applied to native vegetation.

f. Herbicides will not be applied on or near open water surfaces (no closer than 60 feet from open water).

g. Foliar applications of herbicide will not occur when wind speeds are more than 3 miles per hour.

h. No herbicides will be applied within 24 hours of forecast rain.

i. Applications of herbicides will be done by qualified Caltrans personnel or contractors to ensure that overspray is minimized, and all applications are in accordance with label recommendations; all required and reasonable safety measures will be implemented. A safe dye will be added to the mixture to visually denote treated sites. Application of herbicides will be consistent with the U.S. Environmental Protection Agency's Office of Pesticide Programs, Endangered Species Protection Program, county bulletins.

j. All herbicides, fuels, lubricants, and equipment will be stored, poured, or refilled at least 60 feet from riparian habitat or water bodies in a location where a spill would not drain directly toward aquatic habitat, unless otherwise preapproved by the necessary agencies. Prior to the onset of work, Caltrans will ensure that a plan is in place for a prompt and effective response to accidental spills. All workers will be informed of the importance of preventing spills and taking the appropriate measures should a spill occur.

Southwestern Willow Flycatcher and Least Bell's Vireo

26. If feasible and regulatory approvals allow, tree removal and trimming will be scheduled to occur from October 1 and January 31, outside of the typical nesting bird season, to avoid potential impacts on nesting birds. If it is not feasible to conduct this work outside the nesting bird season, nesting bird surveys should be conducted by a qualified biologist no more than 14 days prior to the start of construction. If an active nest is found, a qualified biologist will determine an appropriate buffer or a monitoring strategy, based on the habits and needs of the species. The buffer area will be avoided, or the monitoring strategy will be implemented until a qualified biologist has determined that the nest is no longer active.

27. If the least Bell's vireo and/or southwestern willow flycatcher is observed within 100 feet of the biological study area during construction, a qualified biologist will implement an exclusion zone. Work will be avoided within the exclusion zone until the least Bell's vireo and/or southwestern willow

flycatcher is located more than 100 feet from project-related disturbance. If an active least Bell's vireo and/or southwestern willow flycatcher nest is observed within 100 feet of the biological study area, all project activities will immediately stop, and Caltrans will contact the U.S. Fish and Wildlife Service and California Department of Fish and Wildlife within 48 hours. If required, Caltrans will then initiate formal Federal Endangered Species Act Section 7 consultation with the U.S. Fish and Wildlife Service, as well as California Endangered Species Act coordination for the least Bell's vireo and/or southwestern willow flycatcher, and implement additional measures as necessary.

28. It is recommended that bird nests be excluded from the existing bridge. Nesting bird exclusion methods may include installing thick plastic sheeting, placing one-way exclusion devices over drain holes, removing/knocking down nests before they contain eggs or nestlings, or using other methods approved by the California Department of Fish and Wildlife. The required time for installation of bird exclusion devices is outside the nesting season (implement exclusion methods from October 1 to January 31).
29. During construction, active bird nests will not be disturbed, and the eggs or young of birds that are protected by the Migratory Bird Treaty Act and California Fish and Game Code will not be killed, destroyed, injured, or harassed at any time. If an active nest is found, a qualified biologist will determine an appropriate buffer, using Environmentally Sensitive Area fencing or a monitoring strategy, based on the habits and needs of the species. The buffer area will be avoided, or the monitoring strategy will be implemented until a qualified biologist has determined that the nest is no longer active.
30. Temporary impacts on potential nesting habitat would be offset by replacement plantings within the project limits (Section 2.2.2).

Invasive Species (Section 2.2.6)

The following measures would be implemented to avoid and/or minimize potential impacts to less than significant.

1. During construction, Caltrans will ensure that the spread or introduction of invasive exotic plant species will be avoided to the maximum extent possible.
2. Only clean fill will be imported. When practicable, invasive exotic plants in the project site will be removed and properly disposed of. All vegetation removed from the construction site will be taken to a landfill to prevent the spread of invasive species. If soil from weedy areas must be removed off-site, the top 6 inches containing the seed layer in areas with weedy species will be disposed of at a landfill as well. Landscape plantings and the erosion-control seed mix will not include any species from the California Invasive Plant Council Invasive Plant Inventory (California Invasive Plant Council 2017).
3. Construction equipment will be free of excessive dirt that may contain weed seed before entering the construction site. If necessary, wash stations, either

on-site or off-site, will be established for construction equipment under the guidance of Caltrans to avoid or minimize the spread of invasive plants and/or seed within the construction area.

4. All giant reed within the project limits will be removed mechanically, removing as much root and rhizome material as possible.
5. The appropriate herbicide selected, and its application will follow these guidelines:
    a. Chemical treatments for giant reed will be a glyphosate-based herbicide approved by the U.S. Fish and Wildlife Service for use near wetlands, such as Aquamaster® or Rodeo®.
    b. All precautions will be taken to ensure that no herbicide is applied to native vegetation.
    c. Herbicides will not be applied on or near open water (no closer than 60 feet from open water).
    d. Foliar applications of herbicide will not occur when wind speeds exceed 3 miles per hour.
    e. No herbicides will be applied within 24 hours of forecast rain.
    f. Application of all herbicides will be done by qualified Caltrans personnel or contractors to ensure that overspray is minimized, all applications are made in accordance with label recommendations, and all required and reasonable safety measures are implemented. A safe dye will be added to the mixture to visually denote treated sites. Application of herbicides will be consistent with the U.S. Environmental Protection Agency's Office of Pesticide Programs, Endangered Species Protection Program, county bulletins.
    g. All herbicides, fuels, lubricants, and equipment will be stored, poured, or refilled at least 60 feet from riparian habitat or water bodies in a location where a spill would not drain directly toward aquatic habitat. Prior to the onset of work, Caltrans will ensure that a plan is in place for a prompt and effective response to accidental spills. All workers will be informed of the importance of preventing spills and taking the appropriate measures should a spill occur.
6. A follow-up control strategy involving foliar spraying of an appropriate herbicide over the leaves of any re-sprouting giant reed will occur no sooner than 21 days in the excavated areas and no later than 42 days. Additional follow-up spraying of any regrowth will be conducted in the next growing season. Licensed and experienced Caltrans personnel or a licensed and experienced contractor will use a hand-held sprayer for follow-up foliar applications of herbicide.
7. On-site replacement plantings will include native vegetation. The erosion-control seed mix will include California native plants that are suitable for the vicinity.

Construction Impacts (Section 2.3)

The following measures would be implemented to avoid and/or minimize potential impacts to less than significant.

1. *Parks and Recreational Facilities*

   It is anticipated that temporary impacts on parks and recreational facilities would result from construction activities that generate noise and dust. Measures to address construction-generated noise and dust are discussed in the Noise and Air Quality portions of this section.

2. *Emergency Services*

   Temporary construction impacts on emergency services would be minimized with implementation of the project's required Transportation Management Plan during construction of the Build Alternative. The Transportation Management Plan would address issues related to traffic delays, traffic flow in the Route 101 corridor, temporary lane closures, and detours. Furthermore, it would provide ongoing information to the public regarding construction activities and help Caltrans maintain a safe environment for construction workers and travelers.

3. *Traffic and Transportation*

   Any effects related to transportation/traffic would be addressed with implementation of the Transportation Management Plan, as described above under Emergency Services.

4. *Air Quality*

   Caltrans standard specifications pertaining to dust control and dust palliative application are required for all construction contracts to effectively reduce and control impacts related to construction emissions. The provisions of Caltrans Standard Specification Section 10-5, Dust Control, and Section 14-9, Air Pollution Control, require the contractor to comply with all California Air Resources Board and Santa Barbara County Air Pollution Control District rules, ordinances, and regulations. In addition, the project-level Stormwater Pollution Prevention Plan would provide water pollution control measures that would cross-correlate with standard dust emission minimization measures, such as covering soil stockpiles, watering haul roads, watering excavation and grading areas, and so on. Furthermore, a Debris Containment and Collection Plan would be included in the project's special provisions, as approved by the resident engineer, to effectively capture and collect all demolition debris and waste materials, thereby preventing any material from entering the creek channel or migrating off-site during windy conditions. All stockpiled construction debris should, at a minimum, be covered daily or be off-hauled as soon as possible.

5. *Noise*

   Along with Caltrans Standard Specification Section 14-8, Noise and Vibration, the following control measures would be implemented to minimize noise and vibration during periods of construction:

   b. Use equipment with manufacturer's recommended noise abatement measures, such as mufflers, engine enclosures and engine vibration isolators intact and operational. All construction equipment should be inspected at periodic intervals to ensure proper maintenance and presence of noise control devices.

   c. Notify surrounding residences in advance of the construction schedule when unavoidable construction noise and upcoming construction activities are anticipated to produce an adverse noise environment above the local ambient noise. This notice will be given 2 weeks in advance. Notices should be published in local news media with the dates and duration of proposed construction activity. The District 5 Public Information Office posts notices of proposed construction and potential community impacts after receiving notice from the resident engineer.

   d. Include the following general measures in the resident engineer folder and implement as appropriate to further minimize temporary construction noise impacts:

      i. Whenever possible, limit all phases of construction to acceptable hours, Monday through Friday.

      ii. Shield especially loud pieces of stationary construction equipment.

      iii. Locate portable generators, air compressors, etc., away from sensitive noise receptors.

      iv. Limit the grouping of major pieces of equipment that operate in one area to the greatest extent feasible.

      v. Place heavily trafficked areas, such as the maintenance yard, as well as equipment, tools, and construction-oriented operations, in locations that would be least disruptive to surrounding sensitive noise receptors.

      vi. Consult the district's noise staff if complaints are received during the construction process.

List of Technical Studies

The following technical studies were used in preparation of this Initial Study/Environmental Assessment:

- Structures Preliminary Geotechnical Report – August 19, 2016
- Hazardous Waste Technical Memo – February 14, 2018
- Air Quality, Noise, and Greenhouse Gas Memo – June 5, 2018
- Water Quality Assessment – July 6, 2018
- Paleontology Assessment – July 6, 2018
- Cultural Resources Review – September 10, 2018
- Location Hydraulic Study – November 6, 2018
- Visual Impact Assessment – February 12, 2019
- Natural Environment Study – March 4, 2019
- Natural Environment Study, Addendum – October 23, 2019

To obtain a copy of one or more of these technical studies/reports or the Initial Study, please send your request to the following email address: info-d5@dot.ca.gov

Please indicate the project name and project identifying code (under the project name on the cover of this document) and specify the technical report or document you would like a copy of. Provide your name and email address or U.S. postal service mailing address (street address, city, state and zip code).

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