

State Route 88 Pavement Anchor Project

State Route 88 from just east of Comstock Road
to just east of the City of Lockeford in San Joaquin County

10-SJ-88-5.1/16.4
10-1M590/1021000012

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 U.S. Code 327 and the Memorandum of Understanding dated December 23, 2016 and executed by the Federal Highway Administration and Caltrans.

April 2022



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 San Joaquin 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, potential impacts of each of the alternatives, and proposed avoidance, minimization, and/or mitigation measures.

What you should do:

- Please read the document. Additional copies of the document and the related technical studies are available for review at the Caltrans District Office at 1976 Dr. Martin Luther King Jr., Boulevard, Stockton, California 95205 from 9:00 a.m. to 5:00 p.m. and the Lodi Public Library at 201 West Locust Street, Lodi, California 95240. The document can also be downloaded at the following website:
<https://dot.ca.gov/caltrans-near-me/district-10/district-10-current-projects/state-route-88-lockeford-updates>.
- Attend the public hearing at the Lockeford Community Center at 19528 N Jack Tone Road, Lockeford, CA 95237 on June 8th, 2022.
- Tell us what you think. If you have any comments regarding the proposed project, please attend the public meeting and/or send your written comments to Caltrans by the deadline. Submit comments via U.S. mail to: John Thomas, District 6 Environmental, California Department of Transportation, 2015 East Shields Avenue, Suite 100, Fresno, California 93726. Submit comments via email to: john.q.thomas.dot.ca.gov.
- Submit comments by the deadline: June 22nd, 2022

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 appropriated, Caltrans could design and construct all or part of the project.

Printing this document: To save paper, this document has been set up for two-sided printing (to print the front and back of a page). Blank pages occur where needed throughout the document to maintain proper layout of the chapters and appendices.

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 or call Caltrans, Attention: John Thomas, District 6 Environmental, 2015 East Shields Avenue, Suite 100, Fresno, California 93726; phone 559-408-4496 (Voice), or use the California Relay Service 1-800-735-2929 (Teletype to Voice), 1-800-735-2922 (Voice to Teletype), 1-800-855-3000 (Spanish Teletype to Voice and Voice to Teletype), 1-800-854-7784 (Spanish and English Speech-to-Speech), or 711.

Improve pavement, bring sidewalks to current Americans with Disabilities Act compliance, and make other improvements along State Route 88 from just east of Comstock Road to just east of the City of Lockeford in San Joaquin County

**INITIAL STUDY
with Proposed Mitigated Negative Declaration
/ENVIRONMENTAL ASSESSMENT**

Submitted Pursuant to: (State) Division 13, California Public Resources Code
(Federal) 42 U.S. Code 4332(2)(C) and 49 U.S. Code 303

THE STATE OF CALIFORNIA
Department of Transportation

Philip Vallejo

Philip Vallejo
Environmental Office Chief, North
California Department of Transportation
CEQA and NEPA Lead Agency

4/15/2022

Date

The following individual can be contacted for more information about this document:

John Thomas, Senior Environmental Planner
California Department of Transportation
2015 East Shields Avenue, Suite 100, Fresno, CA 93726
(559) 408-4496



DRAFT
Proposed Mitigated Negative Declaration

Pursuant to: Division 13, Public Resources Code

State Clearinghouse Number: pending

District-County-Route-Post Mile: 10-SJ-88-5.1/16.4

EA/Project Number: 10-1M590/1021000012

Project Description

The California Department of Transportation (Caltrans) proposes to repair the roadway pavement, comply with Americans with Disabilities Act requirements for pedestrians, improve highway operations and Transportation Management Systems, and replace sign panels on State Route 88 in San Joaquin County from post miles 5.1 to 16.4 to address the deteriorating pavement and other multi-objective assets. The project will also add bike lanes and sidewalks for Complete Streets elements.

Determination

An Initial Study has been prepared by the California Department of Transportation (Caltrans), District 6.

On the basis of this study it is determined that the proposed action with the incorporation of the identified mitigation measures will not have a significant effect on the environment for the following reasons:

- A paleontological mitigation plan would be developed.

Philip Vallejo
Environmental Office Chief, North
California Department of Transportation

Date

Table of Contents

State Route 88 Pavement Anchor Project	a
Chapter 1 Proposed Project	1
1.1 Introduction.....	1
1.2 Purpose and Need.....	1
1.2.1 Purpose.....	1
1.2.2 Need	2
1.3 Project Description.....	2
1.4 Project Alternatives.....	12
1.4.1 Build Alternative	12
1.4.2 No-Build (No-Action) Alternative	13
1.5 Comparison of Alternatives.....	13
1.6 Permits and Approvals Needed	14
Chapter 2 Affected Environment, Environmental Consequences, and Avoidance, Minimization, and/or Mitigation Measures	15
2.1 Human Environment.....	16
2.1.1 Farmland.....	16
2.1.2 Environmental Justice	18
2.1.3 Utilities and Emergency Services.....	20
2.1.4 Cultural Resources.....	21
2.2 Physical Environment	25
2.2.1 Paleontology	25
2.2.2 Hazardous Waste and Materials	27
2.3 Biological Environment	29
2.3.1 Animal Species	29
2.3.2 Threatened and Endangered Species.....	37
Chapter 3 CEQA Evaluation	42
3.1 Determining Significance Under CEQA	42
3.2 CEQA Environmental Checklist	43
3.2.1 Aesthetics	43
3.2.2 Agriculture and Forest Resources.....	44
3.2.3 Air Quality	45
3.2.4 Biological Resources.....	46
3.2.5 Cultural Resources.....	47
3.2.6 Energy.....	48
3.2.7 Geology and Soils	48
3.2.8 Greenhouse Gas Emissions	50
3.2.9 Hazards and Hazardous Materials	50
3.2.10 Hydrology and Water Quality	52
3.2.11 Land Use and Planning.....	53
3.2.12 Mineral Resources	54
3.2.13 Noise.....	54
3.2.14 Population and Housing.....	55
3.2.15 Public Services	55

3.2.16	Recreation.....	56
3.2.17	Transportation.....	56
3.2.18	Tribal Cultural Resources.....	57
3.2.19	Utilities and Service Systems.....	58
3.2.20	Wildfire.....	59
3.2.21	Mandatory Findings of Significance.....	60
3.3	Wildfire.....	60
3.4	Climate Change.....	61
3.4.1	Regulatory Setting.....	62
3.4.2	Environmental Setting.....	65
3.4.3	Project Analysis.....	69
3.4.4	Greenhouse Gas Reduction Strategies.....	71
3.4.5	Adaptation.....	75
Chapter 4	Comments and Coordination.....	82
4.1	Agency Coordination.....	82
4.1.1	Office of Historic Preservation.....	82
4.1.2	U.S. Fish and Wildlife Service.....	82
4.1.3	California Department of Fish and Wildlife.....	82
4.1.4	National Marine Fisheries Service.....	82
4.2	Coordination with Native American Groups.....	82
4.2.1	Buena Vista Rancheria of Me-Wuk Indians.....	83
4.2.2	California Valley Miwok Tribe.....	83
4.2.3	Ione Band of Miwok Indians.....	84
4.2.4	Nashville Enterprise Miwok-Maidu-Nishinam Tribe.....	84
4.2.5	North Valley Yokuts Tribe.....	84
4.2.6	United Auburn Indian Community of the Auburn Rancheria.....	84
4.2.7	Wilton Rancheria.....	85
4.3	Other Cultural Contacts.....	85
Chapter 5	List of Preparers.....	86
Chapter 6	Distribution List.....	88
Appendix A	Title VI Policy Statement.....	90
Appendix B	Avoidance, Minimization and/or Mitigation Summary.....	92
Appendix C	Farmland Conversion Impact Rating Form.....	98

List of Figures

Figure 1-1 Project Vicinity Map.....	3
Figure 1-2 Project Location Map.....	4
Figure 1-3 Location of Proposed Sidewalks Map 1	5
Figure 1-4 Location of Proposed Sidewalks Map 2	6
Figure 1-5 Location of Proposed Sidewalks Map 3	7
Figure 1-6 Location of Proposed Sidewalks Map 4	8
Figure 1-7 Location of Proposed Sidewalks Map 5	9
Figure 1-8 Location of Proposed Sidewalks Map 6	10
Figure 1-9 Location of Proposed Drainage Basin.....	11
Figure 3-1 U.S. 2016 Greenhouse Gas Emissions.....	66
Figure 3-2 California 2017 Greenhouse Gas Emissions.....	67
Figure 3-3 Change in California Gross Domestic Product, Population, and Greenhouse Gas Emissions since 2000.....	67
Figure 3-4 California Climate Strategy.....	72

Chapter 1 Proposed Project

1.1 Introduction

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

California participated in the “Surface Transportation Project Delivery Pilot Program” (Pilot Program) pursuant to 23 U.S. Code 327, for more than five years, beginning July 1, 2007, and ending September 30, 2012. MAP-21 (Public Law 112-141), signed by President Barack Obama on July 6, 2012, amended 23 U.S. Code 327 to establish a permanent Surface Transportation Project Delivery Program. As a result, Caltrans entered into a Memorandum of Understanding pursuant to 23 U.S. Code 327 (NEPA Assignment MOU) with the Federal Highway Administration. The NEPA Assignment MOU became effective October 1, 2012, and was renewed on December 23, 2016, for a term of five years, which was granted an extension on December 8, 2021 until April 29, 2022. In summary, Caltrans continues to assume Federal Highway Administration 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 Federal Highway Administration assigned and Caltrans assumed all of the U.S. Department of Transportation (USDOT) 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 Federal Highway Administration assigned to Caltrans under the 23 USC 326 CE Assignment MOU, projects excluded by definition, and specific project exclusions.

The project proposes to repair the roadway pavement, comply with Americans with Disabilities Act requirements for pedestrians, improve highway operations and Transportation Management Systems, and replace sign panels on State Route 88 in San Joaquin County from post miles 5.1 to 16.4 to address the deteriorating pavement and other multi-objective assets. The project will also add bike lanes and sidewalks for Complete Streets elements. See Figures 1-1 and 1-2 for maps of the project vicinity and project location.

1.2 Purpose and Need

1.2.1 Purpose

The purpose of the project is to:

- Repair the roadway pavement
- Comply with Americans with Disabilities Act requirements
- Address non-standard features

1.2.2 Need

The 2015 Pavement Condition Survey Report (PaveM) identified the need to repair deteriorated pavement along State Route 88 within the project limits. There is also a need to address Americans with Disabilities Act deficiencies along the route in Lockeford; several of the pedestrian crossings do not meet the current standard. There is also a need to address non-standard features within the project limits, such as transportation management systems elements and updated signs that are no longer meet current Caltrans standards.

1.3 Project Description

This section describes the proposed action and the project alternatives developed to meet the purpose and need of the project, while avoiding or minimizing environmental impacts. Under consideration are a Build Alternative and a No-Build Alternative.

The project lies on State Route 88 in San Joaquin County. The project limits run from just east of Comstock Road to just east of the City of Lockeford. Caltrans proposes to repair roadway pavement, comply with Americans with Disabilities Act requirements, and replace sign elements along this stretch of roadway.

Figure 1-1 shows the project vicinity, and Figure 1-2 shows the bridge locations and immediate project surroundings. Figures 1-3 through 1-9 show locations for the proposed sidewalks and stormwater drainage basin.

Figure 1-1 Project Vicinity Map

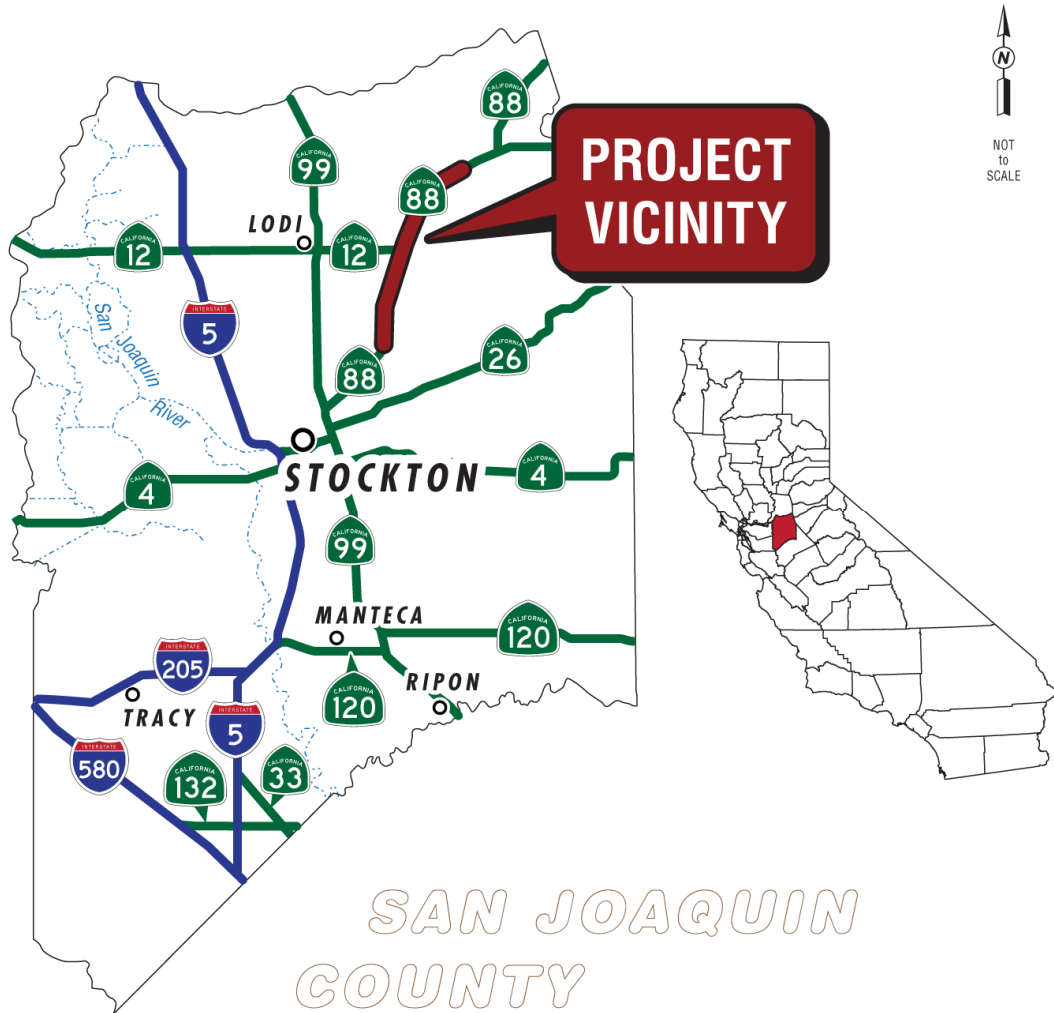


Figure 1-2 Project Location Map

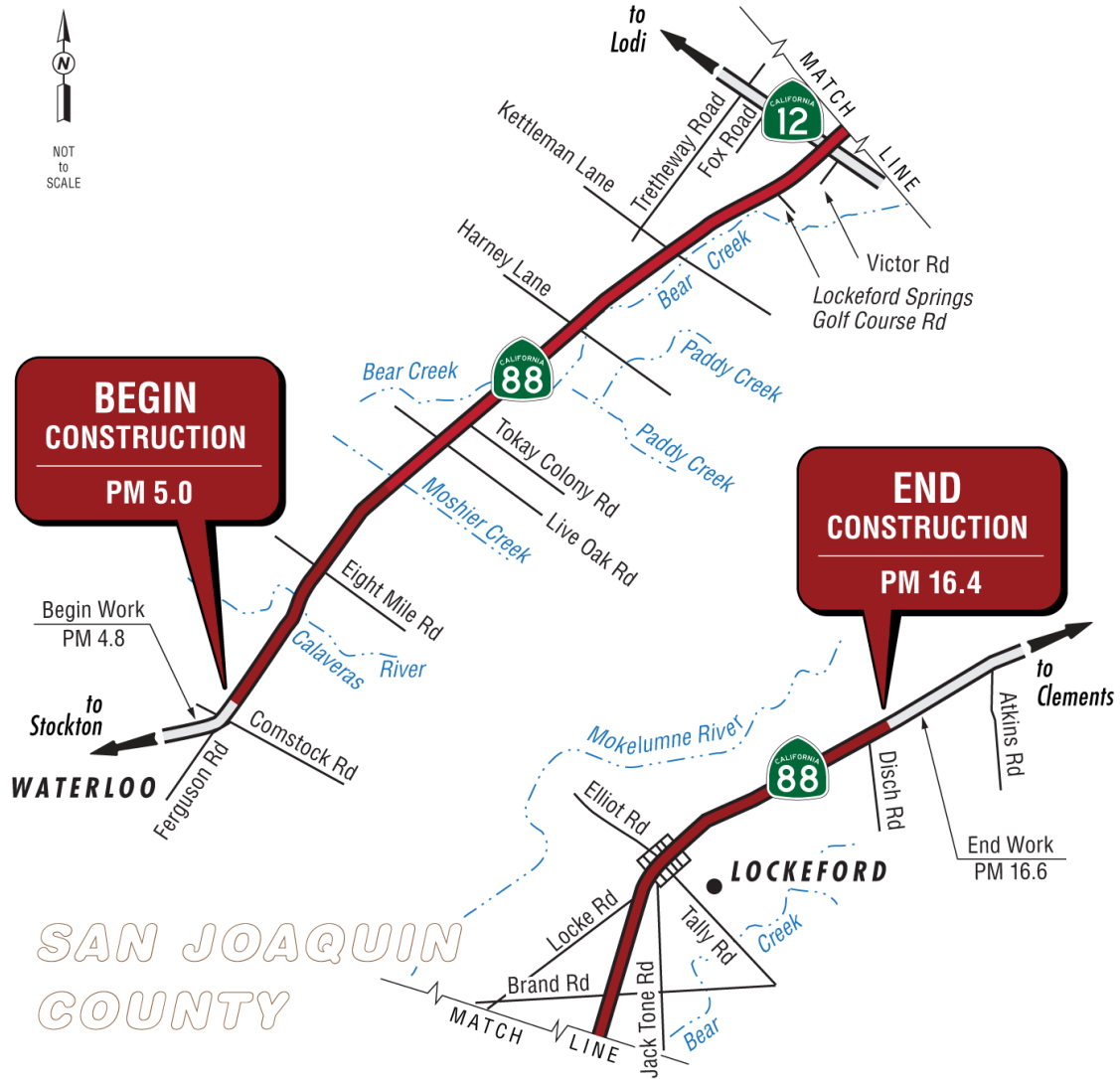


Figure 1-3 Location of Proposed Sidewalks Map 1



Figure 1-4 Location of Proposed Sidewalks Map 2

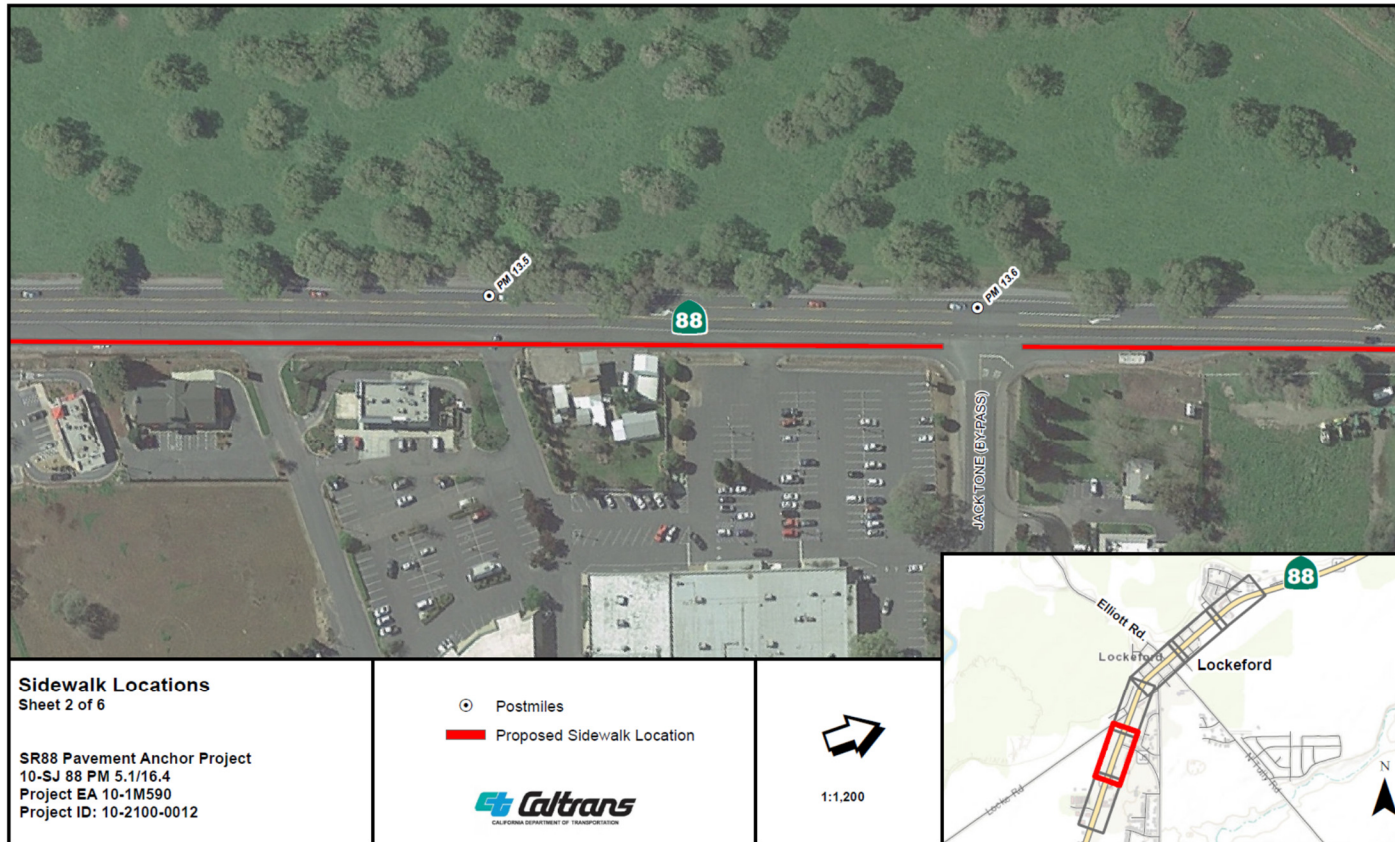


Figure 1-5 Location of Proposed Sidewalks Map 3



Figure 1-6 Location of Proposed Sidewalks Map 4



K. Singh
2/28/2022

Service Layer Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS,

Figure 1-7 Location of Proposed Sidewalks Map 5



Figure 1-9 Location of Proposed Drainage Basin



1.4 Project Alternatives

Under consideration for the project are a Build Alternative and a No-Build Alternative.

1.4.1 Build Alternative

Caltrans proposes to repair roadway pavement, comply with Americans with Disabilities Act requirements, and replace sign elements along State Route 88 in the project limits. The project would do the following:

- Overlay the full width of the roadway from post miles 5.1 to 6.5 and post miles 9.5 to 16.4 with 0.2 foot of rubberized hot mix asphalt.
- Cold-plan (scrape off) 0.2 foot of asphalt from post miles 6.5 to 9.5, and resurface the entire width with 0.2 foot of rubberized hot mix asphalt.
- Widen the intersections at Harney Lane and Kettleman Lane to accommodate turns made by Surface Transportation Assistance Act trucks (very large trucks).
- Increase the length of the acceleration lane at the State Route 12/State Route 88 intersection on the eastbound right merge lane to improve the operation.
- Install a centerline rumble strip from post miles 5.1 to 12.0, and install centerline and edge rumble strips from post miles 15.5 to 16.4.
- Include various Transportation Management System elements and two maintenance vehicle pullouts at post miles 11.3 and 13.45.
- Upgrade roadside signs, and replace dikes.
- Upgrade existing guardrails, and install two new guardrails at post miles 11.3 and 13.45.
- Install or upgrade Americans with Disabilities Act elements in Lockeford including, sidewalks, driveways, curb ramps and detectable plates. See Figures 1-3 and 1-4 for placement.
- Incorporate appropriate hydraulic elements such as drainage inlets, culverts, curbs and gutters.
- Add a drainage basin at the east end of Lockeford on Oak Road.
- Relocate several power and phone pole lines through the project area.
- Acquire approximately 2.97 acres of right-of-way.
- Use a temporary construction easement on properties along sidewalk improvements.

This project contains a number of standardized project measures that are used on most, if not all, Caltrans project and were not developed in response to any specific environmental impact resulting from the proposed project. These measures are addressed in more detail in the Environmental Consequences sections found in Chapter 2.

The following are some of the standardized project measures that are anticipated on this project:

- A Transportation Management Plan would be prepared for the project.
- Standard provisions dealing with the discovery of unanticipated cultural materials or human remains would be included in the project plans and specifications.
- If human remains are discovered on non-federal land, State Health and Safety Code Section 7050.5 states that further disturbances and activities will cease in any area or nearby area suspected to overlie remains, and the County Coroner contacted. The resident engineer would be contacted so that he or she can work with the most likely descendent on the respectful treatment and disposition of remains.
- The construction contractor would comply with construction site Best Management Practices specified in the Storm Water Pollution Prevention Plan and any other permit conditions to minimize the introduction of construction-related contaminants and mobilization of sediment in and adjacent to the project areas at all project locations, as necessary. The Best Management Practices would be selected to achieve maximum sediment removal and represent the best available technology that is economically achievable and are subject to review and approval by Caltrans.

1.4.2 No-Build (No-Action) Alternative

Under the No-Build Alternative, the pavement would continue to deteriorate and the sidewalks within Lockeford would still not meet current Americans with Disabilities Act standards, including those for pedestrian overcrossings. The traffic operations improvements would not occur.

1.5 Comparison of Alternatives

The Build Alternative would acquire up to 2.97 acres of property. It would have no significant impacts to environmental resources. It would meet the purpose and need of the project.

The No-Build Alternative would leave the roadway in its current condition, resulting in further deterioration of the roadway. Various features within the project area, including pedestrian crossings, would remain in noncompliance

with the Americans with Disabilities Act. Operational improvements would not occur. The No-Build Alternative would not meet the purpose and need of the project.

1.6 Permits and Approvals Needed

The following permits, licenses, agreements, and certifications are required for project construction:

Agency	Permit/Approval	Status
United States Department of Fish and Wildlife	Letter of Concurrence	Will be obtained prior the final environmental document

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

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

- Land Use—The project is consistent with the *San Joaquin County General Plan*. (San Joaquin County General Plan)
- Coastal Zone—The project is not in or near a coastal zone and would not affect a coastal zone. (Visit to project site)
- Wild and Scenic Rivers—The project is not next to or within the vicinity of a wild and scenic river and, therefore, would not affect such a resource. (National Wild and Scenic River Website: <http://www.rivers.gov/california.php>)
- Parks and Recreation—There are no parks or recreational areas in or near the project area. (Visit to project site)
- Timberland—No timberlands are within the project vicinity; therefore, the project would not affect timberlands. (Visit to project site)
- Growth—The project would repave the highway and make other minor improvements. It would not indirectly induce growth by providing access to new areas or by altering the nature, location, or timing of planned future development.
- Community Character and Cohesion—The project would repave an existing roadway and add sidewalks. The project does not have the potential to divide a community or affect community character or cohesion.
- Relocations and Real Property Acquisition—There are no business or residential relocations anticipated. (Project Report)
- Traffic and Transportation—The project would have no long-term effects on traffic or transportation. (Project Report)
- Air—The project is exempt from the air quality conformity analysis requirement under 40 Code of Federal Regulations Section 93.126, under the category of Safety Improvement Program. (Air Quality Report, April 2021)

- Noise—The project is not a Type 1 project and will not have permanent noise impacts. (Noise Study Report, September 2021)
- Geology, Soils, Seismic, and Topography—No major geological features are in the project area. No geologic or seismic features would alter the project design or affect public health. (Project Report, April 2022)
- Water Quality—By incorporating proper and accepted engineering practices and Best Management Practices, the project would not have significant impacts to water quality during construction or its operation. (Water Quality Report, July 2021)
- Hydrology and Floodplain—The project does not consist of a longitudinal encroachment or a significant encroachment on the base floodplain. (Location Hydrology Report, January 2022)
- Wildfire—The project site is within a moderate fire hazard area. The project would result in the improvement of an existing roadway and would not increase the chance of wildfire by introducing traffic and human presence to an otherwise unoccupied area. Project design would not increase fire risks or require construction or maintenance of infrastructure that would increase fire risks.
- Visual—The project would not cause substantial adverse impacts to the project area or Lockeford. (Visual Impact Assessment/Scenic Resource Evaluation, October 2021)
- Plant Species—No special-status plants were found within the project study area, and no potential habitat for special-status plant species was found. (Natural Environment Study, January 2022)
- Natural Communities—No habitats or natural communities of special concern are present within the project impact area. (Natural Environment Study, January 2022)
- Wetlands and Other Waters—There are no anticipated impacts to wetlands or other waters. (Natural Environment Study, January 2022)
- Invasive Species—The Caltrans invasive species policy guidelines, Standard Special Provisions, and Best Management Practices would minimize the potential that this project would introduce, transport, or spread invasive species to and/or from the project site. (Natural Environment Study, January 2022)

2.1 Human Environment

2.1.1 Farmland

Regulatory Setting

The National Environmental Policy Act and the Farmland Protection Policy Act (7 U.S. Code 4201-4209; and its regulations, 7 Code of Federal

Regulations Part 658) require federal agencies, such as the Federal Highway Administration, to coordinate with the Natural Resources Conservation Service if their activities may irreversibly convert farmland (directly or indirectly) to nonagricultural use. For purposes of the Farmland Protection Policy Act, farmland includes prime farmland, unique farmland, and land of statewide or local importance.

The California Environmental Quality Act requires the review of projects that would convert Williamson Act contract land to non-agricultural uses. The main purposes of the Williamson Act are to preserve agricultural land and encourage open space preservation and efficient urban growth. The Williamson Act provides incentives to landowners through reduced property taxes to discourage the early conversion of agricultural and open space lands to other uses.

Affected Environment

The Natural Resources Conservation Service Farmland Conversion Impact Rating form was completed for the project on July 9, 2021 (see Appendix C). According to the California Department of Conservation, San Joaquin County has a total of 912,597 acres of important and agricultural land use, in which grazing land makes up 126,902 acres or approximately 14 percent. It is estimated that 0.78 acre would be acquired for the project.

Environmental Consequences

On June 15, 2021, Caltrans initiated consultation with the Natural Resources Conservation Service by completing a Natural Resources Conservation Service CPA-106 Farmland Conversion Impact Rating form for the project. The form was sent to the Stockton Service Center office of the Natural Resources Conservation Service for San Joaquin County. The Farmland Conversion Impact Rating was completed by the field office and returned to Caltrans on July 9, 2021.

The Farmland Conversion Impact Rating determines the relative value of the farmland to be converted by using a formula that weighs farmland classification, soil characteristics, irrigation, acreage, creation of non-farmable land, availability of farm services, and other factors. The Natural Resources Conservation Service uses only prime/unique- and statewide/local importance-classified land on the Farmland Conversion Impact Rating form. According to the U.S. Department of Agriculture, for farmland and other agricultural lands protected or potentially protected under the Farmland Protection Policy Act, if the rating exceeds 160 points, additional alternatives should be considered that would lessen the adverse effects to farmlands. The Farmland Conversion Impact Rating for the Build Alternative is 122, below the 160 threshold. Table 2.1 provides the proposed farmland conversion totals and percentages.

The project would acquire 0.38 acre of Williamson Act properties.

Table 2.1 Farmland Conversion

Alternative	Land Converted (acres)	Prime and Unique Farmland (acres)	Williamson Act Farmland (acres)	Percentage of Farmland in County	Percentage of Farmland in State	Farmland Conversion Impact Rating
Build Alternative	0.78	0.2	0.38	0.0001	Less than 0.000001	122

Source: Natural Resources Conservation Service CPA-106 Farmland Conversion Impact Rating form, July 9, 2021

Avoidance, Minimization, and/or Mitigation Measures

Caltrans would provide relocation advisory assistance to any person, business, farm, or non-profit organization that would be displaced, or have onsite investments, such as wells and irrigation systems, displaced because of acquisition of real property for public use (see Appendix A for the Caltrans Title VI Policy Statement). In addition, any right-of-way acquisition would be purchased at fair market value.

2.1.2 Environmental Justice

Regulatory Setting

All projects involving a federal action (funding, permit, or land) must comply with Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, signed by President William J. Clinton on February 11, 1994. This order directs federal agencies to take the appropriate and necessary steps to identify and address disproportionately high and adverse effects of federal projects on the health or environment of minority and low-income populations to the greatest extent practicable and permitted by law. Low income is defined based on the Department of Health and Human Services poverty guidelines. For 2021, this was \$26,500 for a family of four.

All considerations under Title VI of the Civil Rights Act of 1964, and related statutes, have also been included in this project. Caltrans’ commitment to upholding the mandates of Title VI is demonstrated by its Title VI Policy Statement, signed by the Director, which can be found in Appendix A of this document.

Affected Environment

The environmental justice analysis was conducted using demographic data from the U.S. Census of 2010 (at the tract level), American FactFinder, and general field observations of the community within the project study area. The project area is within two census tracts: census tract 47.04, which covers the southern part of the project, and census tract 47.01, which covers Lockeford. The analysis involved the assessment of two protected categories of populations—minority and low-income—to determine whether they were

present within the project study area and if there would be disproportionately high impacts to either group. The data indicated that census tract 47.01 has a higher proportion of low-income compared to San Joaquin County. Thus, for purposes of this document this area covering Lockeford is being considered a low-income community.

The overall percentage of minorities in the project study area is lower in comparison to the San Joaquin County. Table 2.2 shows the breakdown of minority populations in the project study area.

Table 2.2 Area Population, Race, and Ethnicity Characteristics

Demographic	Census Tract 47.04	Census Tract 47.01	San Joaquin County
Total Individuals	4,621	2,902	762,148
Not Hispanic or Latino	62.2 percent	62.7 percent	30.3
White	74.8 percent	81.5 percent	30.3
Black or African American	1.2 percent	0.1 percent	6.9
American Indian and Alaska Native	0.2 percent	0.6 percent	0.6
Asian	1.1 percent	0.4 percent	16.2
Native Hawaiian and Other Pacific Islander	0 percent	0 percent	0.7
Some other race	7.2 percent	7.3 percent	7.3
Two or more races:	4.5 percent	2.9 percent	11.7
Hispanic or Latino	34.2 percent	34.4 percent	42.0

Source: *Community Impact Assessment (August 2020)*.

Table 2.2 presents census information on population, race, and ethnicity characteristics for the project study area and San Joaquin County. The majority of the residents in the project area that have been identified as Not Hispanic or Latino are white. The number of minority residences is less than the county as a whole. Thus, the project is not considered a minority community.

Environmental Consequences

This project was evaluated in the environmental justice analysis to determine if there is potential for disproportionately high and adverse impacts to minority or low-income populations. In the case of this project, the City of Lockeford was evaluated.

The Federal Highway Administration defines a disproportionate impact as one that is:

- Predominantly borne by a minority and/or low-income population, or
- Suffered by the minority and/or low-income population and is appreciably more severe or greater in magnitude than the adverse effect that would be suffered by the non-minority/non-low-income population.

The project would require no relocations and would include minor permanent and temporary right-of-way acquisitions. It would have only temporary air, noise and water impacts. The project would add new sidewalks and improve existing sidewalks. This would be a benefit to the community by allowing better pedestrian access to the town of Lockeford.. There are no high and adverse impacts to an environmental justice community.

Avoidance, Minimization, and/or Mitigation Measures

Based on the above discussion and analysis, the Build Alternative will not cause disproportionately high and adverse effects on any minority or low-income populations in accordance with the provisions of Executive Order 12898. No further environmental justice analysis is required. No measures are required.

2.1.3 Utilities and Emergency Services

Affected Environment

There are Pacific Gas and Electric and AT&T lines going through the project area.

First responders to emergencies within the project area may include the California Highway Patrol, Mokelumne Fire District, San Joaquin County Sheriff's Department, and private emergency medical transportation.

Environmental Consequences

Several of the poles from the power and phone lines going through the project may need to be relocated. This would be done prior to construction, and minimal disruptions are anticipated.

Emergency services could be affected during construction due to temporarily increased response times for emergency medical and fire services. The project would leave one lane open and provide preferable access to emergency services.

Avoidance, Minimization, and/or Mitigation Measures

The project would require the implementation of a Traffic Management Plan that would identify necessary signage and the locations of potential temporary detours. This plan would help to ensure that local access to homes and businesses, as well as bus and emergency vehicle access, is available during construction of the project. The plan would specify time frames for temporary detours if needed. The plan would also specify the process for notifying

residents, businesses, emergency services, and the traveling public of the construction period and any required detours.

2.1.4 Cultural Resources

Regulatory Setting

The term “cultural resources,” as used in this document, refers to the “built environment” (structures, bridges, railroads, water conveyance systems, etc.), places of traditional or cultural importance, and archaeological sites (both prehistoric and historic), regardless of significance. Under federal and state laws, cultural resources that meet certain criteria of significance are referred to by various terms including “historic properties,” “historic sites,” “historical resources,” and “tribal cultural resources.” Laws and regulations dealing with cultural resources include:

The National Historic Preservation Act of 1966, as amended, sets forth national policy and procedures for historic properties, defined as districts, sites, buildings, structures, and objects included in or eligible for listing in the National Register of Historic Places. Section 106 of the National Historic Preservation Act requires federal agencies to take into account the effects of their undertakings on historic properties and to allow the Advisory Council on Historic Preservation the opportunity to comment on those undertakings, following regulations issued by the Advisory Council on Historic Preservation (36 Code of Federal Regulations 800). On January 1, 2014, the First Amended Section 106 Programmatic Agreement among the Federal Highway Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and Caltrans went into effect for Caltrans projects, both state and local, with Federal Highway Administration involvement. The Programmatic Agreement implements the Advisory Council on Historic Preservation’s regulations, 36 Code of Federal Regulations 800, streamlining the Section 106 process and delegating certain responsibilities to Caltrans. The Federal Highway Administration’s responsibilities under the Programmatic Agreement have been assigned to Caltrans as part of the Surface Transportation Project Delivery Program (23 U.S. Code 327).

The California Environmental Quality Act requires the consideration of cultural resources that are historical resources and tribal cultural resources, as well as “unique” archaeological resources. California Public Resources Code Section 5024.1 established the California Register of Historical Resources and outlined the necessary criteria for a cultural resource to be considered eligible for listing in the California Register of Historical Resources and, therefore, a historical resource. Historical resources are defined in Public Resources Code Section 5020.1(j). In 2014, Assembly Bill 52 (AB 52) added the term “tribal cultural resources” to the California Environmental Quality Act, and AB 52 is commonly referenced instead of the California Environmental Quality Act when discussing the process to identify tribal cultural resources (as well

as identifying measures to avoid, preserve, or mitigate effects to them). Defined in Public Resources Code Section 21074(a), a tribal cultural resource is a California Register of Historical Resources or local register eligible site, feature, place, cultural landscape, or object that has a cultural value to a California Native American tribe. Tribal cultural resources must also meet the definition of a historical resource. Unique archaeological resources are referenced in Public Resources Code Section 21083.2.

Public Resources Code Section 5024 requires state agencies to identify and protect state-owned historical resources that meet the National Register of Historic Places listing criteria. It further requires Caltrans to inventory state-owned structures in its rights-of-way. Sections 5024(f) and 5024.5 require state agencies to provide notice to and consult with the State Historic Preservation Officer before altering, transferring, relocating, or demolishing state-owned historical resources that are listed on or are eligible for inclusion in the National Register of Historic Places or are registered or eligible for registration as California Historical Landmarks. Procedures for compliance with Public Resources Code Section 5024 are outlined in a Memorandum of Understanding (MOU) between Caltrans and the State Historic Preservation Officer, effective January 1, 2015. For most federal-aid projects on the State Highway System, compliance with the Section 106 Programmatic Agreement will satisfy the requirements of Public Resources Code Section 5024.

Affected Environment

A Historic Property Survey Report was completed in September 2021, summarizing the cultural resource identification efforts carried out for the project. An Area of Potential Effects was established to account for both direct and indirect effects from construction activities that may potentially impact cultural resources should any be present. Both archaeological and built environment resources were considered within the Area of Potential Effects for this project.

Archaeology

An Archaeological Survey Report investigation was completed to identify any archaeological sites within the project's Area of Potential Effects. The scope of investigation for this project included a literature and records search, pedestrian (walking the area) field surveys and consultation with Native American groups.

A Caltrans Cultural Resource Database search was conducted to identify known resources within the project area. The record search indicated that there were four known archaeology sites within the Area of Potential Effects..

Identified within the Area of Potential Effects were one archaeological site eligible for the National Register of Historic Places or the California Register

of Historic Resources, one ineligible archaeological resource, and two unevaluated archaeological resources.

Architectural History

An Historic Resource Evaluation Report was developed to determine the eligibility of built environment resources within the project area. The project area was researched and surveyed to determine the eligibility of properties for inclusion on the National Register of Historic Places or the California Register of Historical Resources. The minimum criteria for inclusion on either register are that the resource will be at least 50 years old at the time of project construction and is not exempt from evaluation per Attachment 4 of the Programmatic Agreement. Eight properties were identified as requiring evaluation. Of the eight properties evaluated, six were deemed to be ineligible for either register:

- Office Building at 13463A/13463 B East Highway 88 in Lockeford
- Rock-n-Rollers Salon Boutique at 13461 East Highway 88 in Lockeford
- Miscellaneous properties at 13443/13451 East Highway 88 in Lockeford
- Psychic Shop/Daddy's House of Ribs at 13421/13429 East Highway 88 in Lockeford
- Barber at 13438/13460 East Highway 88 in Lockeford
- Coil's at 13329/13333 East Highway 88 in Lockeford

These properties were determined ineligible because they are not associated with historic events or people, and they do not provide examples of important types of construction or building methods. Nor do they provide important information on history or historical construction methods.

The Historic Resource Evaluation Report concludes that those properties do not appear to meet the criteria for listing in the National Register of Historic Places, either individually or as part of a potential historic district. Similarly, the properties are not historical resources for the purposes of the California Environmental Quality Act. Though there appears to be no potential historic district or historic landscape within the Area of Potential Effects, that does not preclude some of these properties being found as contributing elements to a potential district in the future.

The following locations were deemed eligible for inclusion on the National Register of Historic Places at the local level of significance:

- Ambrose General Store at 13475 East Highway 88 in Lockeford—The Ambrose building is eligible for the National Register of Historic Places under Criterion A and for the California Register of Historic Places under

Criterion 1. This building is significant within the context of economic development in San Joaquin County. It is a link to Lockeford’s growth from the 1880s on from a service center to a regional agricultural and industrial economy. The period of significance is 1880 to 1920. It is also a historical resource for the purposes of the California Environmental Quality Act.

- Independent Order of Odd Fellows building at 13366 East Highway 88 in Lockeford—This building is eligible for the National Register of Historic Places under Criterion A and for the California Register of Historic Places under Criterion 1. It is significant within the context of economic development in San Joaquin County. Its period of significance is 1884 to 1924.

Environmental Consequences

Archaeology

There are four known cultural materials within the project’s Area of Potential Effects. Of the four archaeological resources within the Area of Potential Effects, one was exempted from evaluation under the Section 106 Programmatic Agreement and one was previously determined ineligible for the National Register of Historic Places. The remaining two resources would be protected from adverse effects through installation of Environmental Sensitive Area fencing.

Caltrans has obtained a “No Adverse Effect with Standard Conditions” determination from the Cultural Studies Office on February 1, 2022.

The project would not have an adverse effect on archaeological resources.

Architectural History

It is not anticipated that the project will adversely affect any eligible property within the project area. Caltrans in the process of obtaining a “Finding of No Adverse Effect with Standard Conditions” determination from the State Historic Preservation Officer. This process should be completed by the approval of the final environmental document.

Avoidance, Minimization, and/or Mitigation Measures

Archaeology

The following avoidance and minimization measures would be incorporated into the construction contract to ensure that any impacts caused by the project would have no significant adverse impacts on archaeological resources.

- : Environmentally Sensitive Area Designation: The establishment of environmentally sensitive areas would be designated by environmentally sensitive area fencing within Caltrans’ right-of-way. “Environmentally sensitive area” information would be shown on contract plans and discussed in Section 14-1.02 of the Caltrans 2018

Standard Specifications. “Environmentally sensitive area” provisions may include but are not necessarily limited to the use of temporary orange fencing or other high-visibility marking to identify the proposed limit of work in areas next to sensitive resources or to locate and exclude sensitive resources from potential construction impacts. Contractor encroachment into “environmentally sensitive areas” would be prohibited, and immediate work stoppage and notification to the Caltrans resident engineer are required if an “environmentally sensitive area” is breached. “Environmentally sensitive area” provisions would be implemented as the first order of work and remain in place until all construction activities are complete.

- Caltrans Standard Special Provision Section 14-1.02A would be required to mark over the boundary of the archaeological resource, given the archaeological resource temporary ID Number 2567-1, which would prevent the contractor from disturbing the site during construction.
- Caltrans Standard Special Provision Section 14-1.03B: An Archaeological Monitoring Area would be included in the construction contract. An archaeologist and Native American monitor would be onsite during construction to ensure the integrity of the environmentally sensitive areas and see any unexpected discoveries that might become exposed through construction activities.

Architectural History

Caltrans has obtained a “No Adverse Effect with Standard Conditions” determination from the Cultural Studies Office on February 1, 2022.

The project would not have an adverse effect on archaeological resources.

2.2 Physical Environment

2.2.1 Paleontology

Regulatory Setting

Paleontology is a natural science focused on the study of ancient animal and plant life as it is preserved in the geologic record as fossils. Various federal statutes specifically address paleontological resources, their treatment, and funding for mitigation as a part of federally authorized projects, including:

- 16 U.S. Code 461-467 established the National Natural Landmarks program. Under this program, property owners agree to protect biological and geological resources such as paleontological features. Federal agencies and their agents must consider the existence and location of designated National Natural Landmarks and of areas found to meet the

criteria for national significance, in assessing the effects of their activities on the environment under the National Environmental Policy Act.

- 23 U.S. Code 305 authorizes the appropriation and use of federal highway funds for paleontological salvage as necessary by the highway department of any state, in compliance with 16 U.S. Code 431-433 above and state law.

Under California law, paleontological resources are protected by the California Environmental Quality Act.

Affected Environment

Based on geologic mapping by Marchand and Bartow (1979), sediments underlying the project area consist of Holocene alluvium, the upper and lower members of the Pleistocene Modesto Formation, and the upper members of the Pleistocene Riverbank Formation.

The California State University, Fresno Paleontological Sensitivity Mapping Project database (2000) identifies the paleontological sensitivity for the post mile segment of the project area as both “no” and “low” sensitivity. The database identifies the “no sensitivity” sediments as Holocene alluvium consisting of natural levee and channel deposits. The “low sensitivity” sediments are identified as Quaternary undifferentiated alluvium and the Pleistocene Modesto and Riverbank Formations.

Although the database categorizes the Modesto and Riverbank Formations as “low sensitivity” resources, hundreds of scientifically significant Pleistocene vertebrate fossils have been recovered at locales attributed to these formations since the database was developed in 2000. These localities include the State Route 99 Plainsburg Road/Arboleda Drive Freeway project in Merced County and the ARCO Arena Site in Sacramento County. Consequently, the paleontological sensitivity of the Modesto and Riverbank Formations is now categorized as high.

Environmental Consequences

The “high sensitivity” sediments are equivalent to the “high potential” definition in the tripartite scale used in the *Caltrans Standard Environmental Reference - Chapter 8, Paleontology*. High potential sediments contain or are likely to contain significant vertebrate, significant invertebrate, or significant plant fossils. These units include, but are not limited to, sedimentary formations that contain significant nonrenewable paleontological resources anywhere within their geographical extent, and sedimentary rock units temporally or lithologically suitable for the preservation of fossils. Areas with a high potential for containing significant paleontological resources require monitoring and mitigation.

High potential paleontological resources underly portions of the project. The high potential sediments consist of the Pleistocene Modesto and Riverbank Formations. Excavation extending into undisturbed areas of these formations would impact scientifically significant paleontological resources.

Avoidance, Minimization, and/or Mitigation Measures

Due to the project’s potential to impact scientifically significant paleontological resources, a Paleontology Mitigation Plan would be prepared to mitigate impacts during construction.

2.2.2 Hazardous Waste and Materials

Regulatory Setting

Hazardous materials, including hazardous substances and wastes, are regulated by many state and federal laws. Statutes govern the generation, treatment, storage and disposal of hazardous materials, substances, and waste, and also the investigation and mitigation of waste releases, air and water quality, human health, and land use.

The main federal laws regulating hazardous wastes/materials are the Comprehensive Environmental Response, Compensation and Liability Act of 1980, and the Resource Conservation and Recovery Act of 1976. The purpose of the Comprehensive Environmental Response, Compensation and Liability Act, often referred to as “Superfund,” is to identify and clean up abandoned contaminated sites so that public health and welfare are not compromised. The Resource Conservation and Recovery Act provides for “cradle to grave” regulation of hazardous waste generated by operating entities. Other federal laws include the following:

- Community Environmental Response Facilitation Act of 1992
- Clean Water Act
- Clean Air Act
- Safe Drinking Water Act
- Occupational Safety and Health Act (OSHA)
- Atomic Energy Act
- Toxic Substances Control Act
- Federal Insecticide, Fungicide, and Rodenticide Act

In addition to the acts listed above, Executive Order 12088, *Federal Compliance with Pollution Control Standards*, mandates that necessary actions be taken to prevent and control environmental pollution when federal activities or federal facilities are involved.

California regulates hazardous materials, waste, and substances under the authority of the California Health and Safety Code and is also authorized by the federal government to implement the Resource Conservation and Recovery Act in the state. California law also addresses specific handling, storage, transportation, disposal, treatment, reduction, cleanup, and emergency planning of hazardous waste. The Porter-Cologne Water Quality Control Act also restricts disposal of wastes and requires cleanup of wastes that are below hazardous waste concentrations but could impact groundwater and surface water quality. California regulations that address waste management and prevention and cleanup of contamination include Title 22 Division 4.5 Environmental Health Standards for the Management of Hazardous Waste, Title 23 Waters, and Title 27 Environmental Protection.

Worker and public health and safety are key issues when addressing hazardous materials that may affect human health and the environment. Proper management and disposal of hazardous material are vital if such material is found, disturbed, or generated during project construction.

Affected Environment

An Initial Site Assessment/Hazardous Waste Compliance Memo, completed in October 2021, consisted of a Phase I Environmental Site Assessment, a site visit, and a database records search. The following five Cal/EPA Data Resources, commonly referred to as the “Cortese List,” were searched for this review:

- Envirostor database, List of Hazardous Waste and Substances sites, Department of Toxic Substances Control
- Geotracker database, List of Leaking Underground Storage Tank sites, State Water Resources Control Board
- Sites identified with waste constituents above hazardous waste levels outside the waste management unit, State Water Resources Control Board
- List of active Cease and Desist Orders and Cleanup and Abatement Orders, State Water Resources Control Board
- Department of Toxic Substances Control list of hazardous waste facilities subject to corrective action

Also, the Solid Waste Information System database from the Department of Resources Recycling and Recovery was reviewed. The records and review did not identify any hazardous waste sites near the project limits.

An aerially deposited lead study was completed in February 2022. The study tested 20 soil samples, of which 14 were at above the aerially deposited lead threshold of 80 mg/kg. None of the samples were above the California Total Threshold Concentration of 1,000 mg/kg.

Environmental Consequences

Aerially Deposited Lead

Aerially deposited lead from the historical use of leaded gasoline exists along roadways throughout California. If encountered, soil with elevated concentrations of lead will be managed under the July 1, 2016 Aerially Deposited Lead Agreement between Caltrans and the California Department of Toxic Substances Control. The Aerially Deposited Lead Agreement allows such soils to be safely reused within the project limits as long as all requirements of the Aerially Deposited Lead Agreement are met.

Avoidance, Minimization, and/or Mitigation Measures

With the avoidance and minimization measures mentioned above, no further measures are needed. No mitigation is required.

2.3 Biological Environment

2.3.1 Animal Species

Regulatory Setting

Many state and federal laws regulate impacts to wildlife. The U.S. Fish and Wildlife Service, the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (also known as NOAA Fisheries), 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 not listed or proposed for listing under the federal or state Endangered Species Act. Species listed or proposed for listing as threatened or endangered are discussed in the Threatened and Endangered Species Section 2.3.2. 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 NOAA Fisheries 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

A Natural Environment Study was completed for the project in February 2022. See the Natural Environment Study for the official species lists for state and federal species potentially in the project area.

Swainson's Hawk and Migratory Birds

The Swainson's hawk (*Buteo swainsoni*) is listed as state threatened and is protected under the Migratory Bird Treaty Act. This raptor is unique in that it has variable coloration. Some hawks have dark flight feathers and a brown upper breast, banded tail and white shoulders, while others range from reddish brown to dark brown but usually have a banded tail, and lighter shoulders and undertail. They measure 19 to 22 inches long, with a wingspan of 4 to 4.5 feet. Their diet includes mice, gophers, ground squirrels, rabbits, amphibians, reptiles, insects, and fish.

No Swainson's hawk nests or individuals were seen within the project area. There have been observations of the Swainson's hawk within 10 miles of the project. The most recent, from 2016, was 5 miles away. Observations closer than 5 miles from the project are mostly from 2003 or earlier, with one being from 2009.

Potential habitat includes fallow fields, roadside ruderal, oak woodlands, and agricultural fields. These habitats may provide adequate foraging habitat; however, foraging is likely available only for a short time due to regular disturbances of these habitat. Potential nesting trees are present within the biological study area, but many are short and close to the road, so if Swainson's hawks did use these trees, they likely would be used to nearby disturbance.

White-tailed Kite

The white-tailed kite is designated as a fully protected species by the State of California. Foraging habitat for this bird includes undisturbed open grasslands, meadows, farmland, and emergent wetlands. This species hunts small rodents that are active during the day, such as voles and house mice, as well as pocket gophers, harvest mice, rats, shrews, young rabbits, and sometimes birds, snakes, lizards, frogs, and large insects. No white-tailed kites or their nests were found during surveys. The California Natural Diversity Database reported only one observation of this species, dated from 2000, 9 miles southwest.

Riparian habitat is low quality, with patchy trees. Potential nesting trees within the biological study area are within 0.9 mile of water, but are all close to the road. Trees will need to be removed in the oak woodland, but these trees are along the road and slightly over 0.9 mile from water, so they are not likely to be used for nesting. Foraging habitat is low quality due to ruderal, disturbed,

or landscaped landscapes. A fallow field near the northern end of the project may provide foraging habitat.

Western Pond Turtle

The western pond turtle is a state species of concern. This species inhabits vegetated ponds, lakes, and watercourses, including rivers, streams, creeks, and canals with basking areas such as logs, rocks, and exposed banks. It prefers habitats of calm waters with vegetated banks and large numbers of emergent logs or boulders, where it can bask. Upland habitats are important to western pond turtles as wet season refuge and as nesting sites.

Western pond turtles were not found during surveys, only non-native red-eared sliders were seen. Habitat that this species could use does exist within the biological study area, but the invasion of red-eared sliders makes this potential habitat of poor quality. Potential habitat consists of ephemeral streams and canals.

Yellow-breasted Chat

The yellow-breasted chat is a species of special concern and is protected under the Migratory Bird Treaty Act. Habitat for the yellow-breasted chat consists of dense shrubbery. This includes farm fields, clear-cuts, powerline corridors, fencerows, forest edges, and openings. Habitat often includes blackberry bushes, especially along rivers. The yellow-breasted chat nests in these habitats as well.

The yellow-breasted chat was not seen or heard during surveys. Potential habitat containing dense thickets and blackberries was seen along the Calaveras River within the biological study area. A single yellow-breasted chat observation was reported by the California Natural Diversity Database in 1995 along the Mokelumne River 4.6 miles away. The habitat at this observation appears much more extensive and is likely much more suitable habitat than the Calaveras River habitat within the biological study area.

Song Sparrow

The song sparrow (Modesto population) is a species of special concern and is protected under the Migratory Bird Treaty Act. The Modesto population is a regional subspecies of the song sparrow that resides in the northern Central Valley from Colusa County in the Sacramento Valley south through the Sacramento San Joaquin River Delta to the northern San Joaquin Valley of Stanislaus County.

The Modesto song sparrow was not seen or heard during surveys. Potential habitat containing dense thickets and blackberries was seen along the Calaveras River within the biological study area. There is a single California Natural Diversity Database observation from 2012 at the Mokelumne River about 10 miles away.

Yellow Warbler

The yellow warbler is a species of special concern and is protected under the Migratory Bird Treaty Act. Yellow warblers spend the breeding season in thickets and other disturbed or regrowing habitat, especially along streams and wetlands. They eat mostly insects that they pick from foliage or capture while flying or hovering. Yellow warblers build their nests in the vertical fork of bushes or small trees.

No yellow warblers were found or heard during surveys. Potential habitat is present along the Calaveras River where there is thicket habitat along a waterway. A single California Natural Diversity Database observation from 1995 is along the Mokelumne River, 0.7 mile away from the project.

Western Spadefoot Toad

The western spadefoot toad is a state species of special concern. It is a medium-sized toad. Its head is as wide as its body, with a rounded snout with upward tilt and large eyes. Its feet have well-developed webbing between the toes. The main distinguishing features are the single semicircular “spade” on each heel.

Outside of the mating season, the western spadefoot toad spends most of its time underground in burrows. This species occurs mostly in grasslands but occasionally occurs in valley-foothill hardwood woodlands. Some populations can persist for a few years in orchards or vineyards.

Breeding and egg laying occur almost only in shallow temporary pools formed by heavy winter rains. Breeding pools must hold water for at least 30 days for tadpoles to transform into land animals.

No western spadefoot toads were found in the project area. Potential upland habitat is present at an oak woodland and roadside ruderal habitat. The roadside ruderal location is next to an old golf course that has been converted to agricultural use, but still appears to have ponds present on it. Both upland habitat locations are of low quality due to being surrounded by agriculture and residences. There are also potential barriers of roads, neighborhoods, and agriculture between these sites and potential breeding sites. There are temporary pools outside of the biological study area within the migration distance of spadefoot toads near both of the impact sites. The nearest and most recent western spadefoot toad observation reported in the California Natural Diversity Database was from 2020, about 1.7 miles from the biological study. There are two other observations from 2020 within 10 miles of the project. There are another 11 observations recorded in the last 20 years within 10 miles of the project.

Environmental Consequences

Swainson's Hawk and Migratory Birds

With implementation of avoidance and minimization measures, impacts to the species will be reduced and no take is anticipated.

Temporary impacts to marginal and fragmented foraging habitat are anticipated; however, no permanent impacts to foraging or nesting habitat are anticipated. Prey base and potential nesting trees are of poor quality where construction will occur off-pavement because the potential habitat is fragmented and small. Take of the Swainson's hawk is not anticipated because the existing environment of the project impact area is regularly disturbed by traffic, agricultural operations, and residential activity.

Temporary impacts will encompass up to 2.97 acres. The impact areas are mostly along the road and in agricultural areas, but a 2.34-acre drainage basin will be placed in a fallow field. The basin is designed to percolate water into the groundwater and would often be dry, which would provide foraging habitat for Swainson's hawks most of the time. No nesting was observed near the oak woodland where trees will be removed.

White-tailed Kite

With implementation of avoidance and minimization measures, impacts to the species will be reduced and no take is anticipated.

Temporary impacts to marginal and fragmented foraging habitat are anticipated; however, no permanent impacts to foraging or nesting habitat are anticipated. Prey base and potential nesting trees are of poor quality where construction will occur off-pavement because the potential habitat is small and highly fragmented. Temporary impacts will encompass 2.97 acres, of which 2.34 acres is a drainage basin. These impact areas are mostly along the road and in agricultural areas, except for a fallow field where the drainage basin will be placed.

Western Pond Turtle

No potential aquatic habitat for the western pond turtle will be impacted. Permanent and temporary impacts will occur to potential upland habitat located at the oak woodland and golf course. It is estimated that up to 0.248 acre of permanent impacts and 0.583 acre of temporary impacts to potential upland habitat will occur. These locations are considered low quality potential habitat because of the small amount of upland habitat, being surrounded by agricultural and residential areas, presence of red-eared sliders, and extensive habitat fragmentation.

Yellow-breasted Chat

Potential habitat or nests of the yellow-breasted chat are not anticipated to be directly impacted because no construction activities will occur within potential

habitat along the Calaveras River. Indirect impacts to potential yellow-breasted chats may occur during construction due to proximity of the Calaveras River to construction activities.

Song Sparrow

Habitat or nests of the Modesto song sparrow are not anticipated to be directly impacted because no construction activities will occur within potential habitat along the Calaveras River. Indirect impacts to potential Modesto song sparrows may occur during construction due to proximity of the Calaveras River to construction activities.

Yellow Warbler

Habitat or nests of the yellow warbler are not anticipated to be directly impacted because no construction activities will occur within potential habitat along the Calaveras River. Indirect impacts to potential yellow warblers may occur during construction due to proximity of the Calaveras River to construction activities.

Western Spadefoot Toad

Permanent impacts to upland habitat will encompass up to 0.249 acre in roadside ruderal habitat by the old golf course and the oak woodland. Temporary impacts will encompass up to 3.98 acres, primarily from the construction of a drainage basin. No direct impacts to the western spadefoot toad are anticipated because of the low quality of the potential habitat.

Avoidance, Minimization, and/or Mitigation Measures

Swainson's Hawk and Migratory Birds

Avoidance and Minimization Efforts

- If construction is to occur during the period from February 1 to September 30, a qualified wildlife biologist shall conduct surveys for nesting or foraging Swainson's hawks following the "Recommended Timing and Methodology For Swainson's Hawk Nesting Surveys In California's Central Valley" protocol within half of the Project Impact Area.
- If a Swainson's hawk is identified to be nesting onsite, a no-disturbance buffer of 500 feet will be established until it has been determined by a qualified biologist that the young have fledged.
- A Worker Environmental Awareness Training will be provided for all construction personnel prior to the start of any ground-breaking activities and for all new construction personnel.

Compensatory Mitigation

No impacts are anticipated for the Swainson's hawk; therefore, no compensatory mitigation is proposed.

White-tailed Kite

Avoidance and minimization measures discussed for the Swainson's hawk are considered sufficient for this species. Based on the results of recent surveys, project sites conditions, and the literature review, the project activities are not anticipated to result in the potential take of individual white-tailed kite nests. Also, no nesting white-tailed kites were found onsite during surveys and, although some oak trees will be removed, these trees are not within a riparian corridor where white-tailed kites typically nest. Because no impacts for white-tailed kites are anticipated, no compensatory mitigation is proposed.

Western Pond Turtle

Avoidance and Minimization Efforts

- Pre-construction surveys for western pond turtles will be conducted prior to ground-disturbing activities.
- A Worker Environmental Awareness Training will be provided for all construction personnel prior to the start of any ground-breaking activities and for all new construction personnel.
- If western pond turtles are observed nearby the potential impact area, construction will be monitored for initial ground disturbance.

Compensatory Mitigation

No impacts to the western pond turtle are anticipated; therefore, no mitigation is being proposed.

Yellow-breasted Chat

Avoidance and Minimization Efforts

- If construction is to occur during the nesting season of February 1 to September 30, then pre-construction surveys for the yellow-breasted chat will be conducted prior to ground-disturbing activities.
- A Worker Environmental Awareness Training will be provided for all construction personnel prior to the start of any ground-breaking activities and for all new construction personnel.
- If yellow-breasted chats are observed to be nesting near the project footprint, then initial ground disturbance will be monitored and an appropriate no-disturbance buffer will be established around the nest until it has been determined by a qualified biologist that the young have fledged.

Compensatory Mitigation

No impacts to the yellow-breasted chat are anticipated; therefore, no mitigation is being proposed.

Song Sparrow

Avoidance and Minimization Efforts

- If construction is to occur during the nesting season of February 1 to September 30, pre-construction surveys for Modesto song sparrows will be conducted prior to ground-disturbing activities.
- A Worker Environmental Awareness Training will be provided for all construction personnel prior to the start of any ground-breaking activities and for all new construction personnel.
- If Modesto song sparrows are observed to be nesting near the project footprint, then initial ground disturbance will be monitored and an appropriate no-disturbance buffer will be established around the nest until it has been determined by a qualified biologist that the young have fledged.

Compensatory Mitigation

No impacts to the Modesto song sparrow are anticipated; therefore, no mitigation is being proposed.

Yellow Warbler

Avoidance and Minimization Efforts

- If construction is to occur during the nesting season of February 1 to September 30, pre-construction surveys for yellow warblers will be conducted prior to ground-disturbing activities.
- A Worker Environmental Awareness Training will be provided for all construction personnel prior to the start of any ground-breaking activities and for all new construction personnel.
- If yellow warblers are observed to be nesting near the project footprint, then initial ground disturbance will be monitored and an appropriate no-disturbance buffer will be established around the nest until it has been determined by a qualified biologist that the young have fledged.

Compensatory Mitigation

No impacts to yellow warblers are anticipated; therefore, no mitigation is being proposed.

Western Spadefoot Toad

Avoidance and Minimization Efforts

- Pre-construction surveys for western spadefoot toads will be conducted.
- A Worker Environmental Awareness Training will be completed for all employees that enter the job site.

- If western spadefoot toads are observed nearby the potential impact area, construction will be monitored for initial ground disturbance at the areas of potential habitat.

Compensatory Mitigation

No impacts to the western spadefoot toad are anticipated; therefore, no mitigation is being proposed.

2.3.2 Threatened and Endangered Species

Regulatory Setting

The main federal law protecting threatened and endangered species is the Federal Endangered Species Act (also known as FESA): 16 U.S. Code Section 1531, et seq. See also 50 Code of Federal Regulations Part 402. This act and later amendments provide for the conservation of endangered and threatened species and the ecosystems upon which they depend. Under Section 7 of this act, federal 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's National Marine Fisheries Service (NOAA Fisheries) to ensure that they are not undertaking, funding, permitting, or authorizing actions likely to jeopardize the continued existence of listed species or destroy or adversely modify designated critical habitat. Critical habitat is defined as geographic locations 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 defines take as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect or any attempt at such conduct."

California has enacted a similar law at the state level, the California Endangered Species Act (also known as CESA), California Fish and Game Code Section 2050, et seq. The California Endangered Species Act emphasizes early consultation to avoid potential impacts to rare, endangered, and threatened species and to develop appropriate planning to offset project-caused losses of listed species populations and their essential habitats. The California Department of Fish and Wildlife (CDFW) 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 determined to be an endangered species or a threatened species. Take is defined in Section 86 of the California Fish and Game Code as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." The California Endangered Species Act allows for take 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 requiring a Biological Opinion under Section 7 of the Federal Endangered Species Act, the California Department of Fish and Wildlife may also authorize impacts to 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

A Natural Environment Study was completed for the project in February 2022. See the Natural Environment Study for the official species lists for state and federal species potentially in the project area.

Tri-colored Blackbird

The tri-colored blackbird is a state threatened species. Tri-colored blackbirds are found in marshes, grasslands, and wetlands, always near water, and require foraging grounds and nesting substrate, typically foraging in grasslands or agricultural pastures, and using emergent aquatic plants for nesting.

No tri-colored blackbirds or nests were observed within the biological study area during nesting bird surveys. There is potential habitat at the Calaveras River and Bear Creek overflow within the biological study area. This potential habitat is no more than 150 feet wide. It is considered of low quality due to the proximity to the road and lack of visual barriers that would minimize disturbance to nesting activities. Agricultural operations also are directly adjacent to both waters and surround them. No agriculture that requires regular flooding, which could be potential habitat, was observed within the biological study area. Most of the agriculture in the area consist of vineyards.

For the tri-colored blackbird, there are 16 California Natural Diversity Database records within 10 miles of the biological study area. All of these records are older than 20 years old, except for one record from 2015. The 2015 record intersects the biological study area. According to the information provided with the record, this record was in the vicinity of State Route 88 and State Route 12, but the exact location is uncertain. The record also states that there is no visible pond at the intersection of State Route 88 and State Route 12. The possible location was estimated with a 1.25-mile-wide circle, which

means the record could possibly not be near the road. The most likely location seems to be the old golf course ponds but, since the record date, the golf course has been converted to tree row agriculture and does not appear suitable due to lack of tall nesting vegetation.

California Tiger Salamander

The California tiger salamander (*Ambystoma californiense*) is listed as federally threatened and state threatened. It is also on the California Department of Fish and Wildlife watch list. The California tiger salamander California Central Valley distinct population is federally threatened; populations in Sonoma and Santa Barbara County are federally endangered.

California tiger salamanders inhabit annual grasslands and open woodlands with burrows typically created by California ground squirrels (*Otospermophilus beecheyi*) and pocket gophers. They use vernal pools or ponds for breeding. The burrow systems are used by the salamanders year-round but mainly during the dry months when the salamanders enter estivation (dormant state). Areas surrounding the breeding pools are usually dominated by grassland, oak savanna, or oak woodland.

During rainy months, typically between November and April, California tiger salamanders leave their summer burrows to migrate to nearby fishless pools or ponds to breed. The females lay their eggs in water and use vegetation to attach the egg cluster to. The amount of time needed for hatching is related to the water temperature. California tiger salamanders breed only once or twice in their lifetime, and their success rate is relatively low. Breeding can begin between two and five years of age.

The current distribution replicates the historical range of low-elevation grassland-oak woodland plant communities of the valley and foothills. California tiger salamanders can range from the Central Valley floor to the coast ranges to the Sierra Nevada foothills.

During field surveys, it was found that there are many potential breeding ponds within 1.2 miles of the project impact area (migration distance of California tiger salamanders). No barriers were found to prevent California tiger salamanders from entering the project. During the surveys, biologists found that the biological study area contains some annual grassland upland habitat at an inactive portion of a golf course and adjacent to a vineyard. During the later habitat assessment for California tiger salamander, it was found that the inactive portion of the golf course was converted to agriculture and that the upland habitat adjacent to a vineyard was disked several times and overtaken by dense non-native or invasive herbaceous plants. Therefore, upland habitat is no longer present within the biological study area, except at the oak woodland near the town of Lockeford. However, there is potential aquatic habitat within 1.2 miles of the project impact area, so California tiger salamanders could temporarily migrate into the project impact area.

The nearest California Natural Diversity Database sighting is from 2002 and is about 1,300 feet away. Habitat there appears to be regularly disturbed from mowing, and the habitat appears to have deteriorated. The next nearest California Natural Diversity Database sighting with a verified date is from 1999. The most recent observation within 10 miles is from 2019 and is 9.3 miles away.

Environmental Consequences

Tri-colored Blackbird

Given the survey results, it is unlikely that tri-colored blackbirds would nest in the biological study area and, if they did, it is likely they would be used to the disturbance of vehicular traffic and agricultural operations. The roadwork at these locations is not anticipated to be more disturbance than the existing environment.

California Tiger Salamander

The project will permanently impact up to 0.208 acre of potential California tiger salamander upland habitat at an isolated patch of oak woodland. There will also be 0.32 acre of temporary impacts at the oak woodland location. The remainder of the project does not contain suitable upland habitat due to development, agricultural presence, and regular disturbances. No permanent or temporary impacts to breeding habitat are anticipated.

While upland habitat is sparse and low quality, it appears it could have been viable in the last 15 years and, given that California tiger salamanders can live up to 15 years, adults could still be present in the uplands. Therefore, Caltrans cannot completely rule out the presence of California tiger salamanders within the biological study area and project footprint. Due to the low quality, fragmentation, and small amount of potential upland habitat, an incidental take permit for this species is not anticipated.

Based on the current site conditions Caltrans has determined that the project is not likely to adversely affect the California tiger salamander. Consultation under Section 7 of the Federal Endangered Species Act will be initiated, and a Letter of Concurrence is anticipated.

Avoidance, Minimization, and/or Mitigation Measures

Avoidance and Minimization Efforts

- A qualified biologist(s) will conduct a pre-construction survey of the project site no more than 14 days prior to the beginning of ground disturbance or other general construction actions that could affect the California tiger salamander or tri-colored blackbirds.
- A Worker Environmental Awareness Training will be provided for all construction personnel prior to the start of any ground-breaking activities and for all new construction personnel.

- Any pipes or culverts stored onsite must be capped to prevent any entry by a California tiger salamander. Pipes must be inspected before installation to ensure that salamanders have not taken cover inside. If any California tiger salamanders are found in pipes or culverts, the assigned Caltrans biologist will be notified.
- In the unlikely event that evidence of California tiger salamander occupancy or use is detected during pre-construction surveys, or during construction, Caltrans will coordinate with the California Department of Fish and Wildlife and the U.S. Fish and Wildlife Service on appropriate measures to avoid take.
- No construction activities will be conducted in potential habitat where California tiger salamanders may occur if 1) it is raining, 2) there is a greater than 70 percent chance of rained based on the National Oceanic and Atmospheric Administration National Weather Service forecast on any given work day, or 3) within 48 hours following a rain event greater than 0.25 inch.
- Basins or trenches greater than 6 inches deep will be covered or have an escape ramp present. These will be checked daily for trapped California tiger salamanders and other wildlife. Before they are filled, they will be thoroughly inspected for trapped wildlife.
- Vehicle travel will be limited to established roadways unless otherwise designated. Any travel beyond the paved highway will adhere to a 20-mile-per-hour daytime speed limit.

Compensatory Mitigation

With implementation of avoidance and minimization efforts, no compensatory mitigation is anticipated.

Chapter 3 CEQA Evaluation

3.1 **Determining Significance Under CEQA**

The project is a joint project by Caltrans and the Federal Highway Administration and is subject to state and federal environmental review requirements. Project documentation, therefore, has been prepared in compliance with both the National Environmental Policy Act (known as NEPA) and the California Environmental Quality Act (known as CEQA). 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 Section 327 (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 NEPA and CEQA.

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 (the 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 document.

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. 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 project. Potential impact determinations include Significant and Unavoidable Impact, Less Than Significant Impact 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 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.

“No Impact” determinations in each section are based on the scope, description, and location of the project as well as the appropriate technical report (bound separately in Volume 2), and no further discussion is included in this document.

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?

No Impact—A Visual Impact Assessment determined there would be no substantial visual impacts to the project area or the City of Lockeford.

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

No Impact—A Visual Impact Assessment determined there would be no substantial visual impacts to the project area or the City of Lockeford.

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

No Impact—A Visual Impact Assessment determined there would be no substantial visual impacts to the project area or the City of Lockeford.

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

No Impact—A Visual Impact Assessment determined there would be no substantial visual impacts to the project area or the City of Lockeford.

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?

Less Than Significant Impact—The project would convert 0.2 acre of Prime and Unique Farmland.

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

Less Than Significant Impact—Other than the direct conversion of 0.34 acre of Williamson Act property, there is no conflict with the existing zoning.

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—There are no forests or timberlands within the project area.

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

No Impact—There is no forest land within the project area.

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—The project is a highway project that upgrades pavement, adds sidewalks, and makes other upgrades. Other than direct transfer into highway right-of-way, the project would not change the environment in such a way that would cause conversion for farmland or timberland.

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 project lies in the San Joaquin Valley Air Basin and is within the jurisdiction of the San Joaquin Valley Air Pollution Control District and the California Air Resources Board. The San Joaquin Valley Air Pollution Control District is the main agency responsible for writing the Air Quality Management Plan in cooperation with the San Joaquin County Association of Governments, local governments, and the private sector. The Air Quality Management Plan provides the blueprint for meeting state and federal ambient air quality standards. This project is classified as a pavement improvement and rehabilitation project and is exempt from conformity determinations. There would be no impact.

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

No Impact—No long-term operational emissions would occur as a result of the project. The project would not result in a cumulatively considerable net increase of any criteria pollutants. There would be no impact.

c) Expose sensitive receptors to substantial pollutant concentrations?

No Impact—The project is not anticipated to expose sensitive receptors to pollutant concentrations.

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

No Impact—No generation of noticeable offensive odors is associated with the proposed actions. There would be no impact.

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 Impact—The project will permanently impact up to 0.208 acre of potential California tiger salamander upland habitat at an isolated patch of oak woodland. There will also be 0.32 acre of temporary impacts at the oak woodland location. The remainder of the project does not contain suitable upland habitat due to development, agricultural presence, and regular disturbances. No permanent or temporary impacts to breeding habitat are anticipated. With avoidance and minimization efforts in place, less than significant impacts are expected.

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

No Impact—The project site does not have any riparian habitat or other sensitive natural communities within the project area. There would be no impact.

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

No Impact—The project site does not have any wetlands within the project area. There would be no impact.

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

No Impact—The project area is not within any identified corridor or core population area for any native resident or migratory fish or wildlife species. The project would not impede the use of native wildlife nursery sites. There would be no impact.

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

No Impact—The project site would not conflict with any local policies or ordinances protecting biological resources. There would be no impact.

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

No Impact—The project will not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. There would be 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 Section 15064.5?

No Impact—It is not anticipated that the project will adversely affect any eligible property within the project area.

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

No Impact—No archaeological resources were uncovered inside the project's Area of Potential Effects. There would be no impact.

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

No Impact—No formal cemeteries or other places of human internment are known to exist at the site. In the event human remains are encountered during construction activities, all work within the vicinity of the remains would halt in accordance with Health and Safety Code Section 7050.5, California Public Resources Code Section 5097.5, and Section 15064.5 of the CEQA Guidelines, and the San Joaquin County Coroner's office would be contacted.

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?

No Impact—The actions associated with the project would not result in wasteful, inefficient, or unnecessary consumption of energy resources. There would be no impact.

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

No Impact—The actions associated with the project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. There would be no impact.

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.

No Impact—According to the State of California Department of Conservation's Alquist-Priolo Earthquake Fault Zoning Map, there are no faults located on the project site. There would be no impact.

ii) Strong seismic ground shaking?

No Impact—According to the State of California Department of Conservation's Alquist-Priolo Earthquake Fault Zoning Map, there are no faults located on the project site. There would be no impact.

iii) Seismic-related ground failure, including liquefaction?

No Impact—According to the State of California Department of Conservation's Alquist-Priolo Earthquake Fault Zoning Map, there are no faults located on the project site. There would be no impact.

iv) Landslides?

No Impact—There is no risk of landslides in the project area because of the flat nature of the landscape. Best management practices and soil erosion controls will be implemented as part of the project design that would reduce the loss of topsoil. Therefore, there will be no impact.

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

Less Than Significant Impact—The project will have very little potential to be susceptible to erosion or loss of topsoil because of the project area's generally gentle slope. Vegetation and use of other best management practices will greatly reduce the risk of erosion and topsoil loss. Therefore, this impact will be less than significant.

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 onsite or offsite landslide, lateral spreading, subsidence, liquefaction or collapse?

No Impact—The project is not located on a geologic unit or soil that is unstable or that would become unstable as a result of project activities. There would be no impact.

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

No Impact—The project is not located on expansive soil. There would be no impact.

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

No Impact—Not applicable. No septic tanks or other wastewater disposal systems are involved in the project; therefore, the soils' ability to support such systems is not relevant.

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

Less Than Significant Impact With Mitigation Incorporated—High potential paleontological resources underlie portions of the project area. The high potential sediments consist of the Pleistocene Modesto and Riverbank Formations. Excavation extending into undisturbed areas of these formations will impact scientifically significant paleontological resources. Due to the project's potential to impact scientifically significant paleontological resources, a Paleontological Evaluation Report and Paleontology Mitigation Plan will be

prepared. With the implementation of these measures, the impact would be less than significant.

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?

and

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

Less than Significant Impact—Although the project will result in greenhouse gas emissions during construction, it is expected that the project will not result in any increase in operational greenhouse emissions. Vehicle miles traveled are projected to increase as a result of growth from ongoing and planned development; however, as mitigation for the planned development, the proposed project is intended to improve operations and traffic flow, which will reduce greenhouse gas emissions. The project will not add travel lanes or result in new vehicle trips. Operational greenhouse gas emissions are projected to be the same under both future Build and No-Build alternatives, and less than existing (2017) emissions under both scenarios. The project does not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases. With implementation of construction greenhouse gas-reduction measures, the impact will be less than significant.

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 Impact—Aerially deposited lead from the historical use of leaded gasoline exists along roadways throughout California. If encountered, soil with elevated concentrations of lead will be managed under the July 1, 2016 Aerially Deposited Lead Agreement between Caltrans and the California Department of Toxic Substances Control. The Aerially Deposited Lead Agreement allows such soils to be safely reused within the project limits as long as all requirements of the Aerially Deposited Lead Agreement are met. The impacts would be less than significant.

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

No Impact—The records and review of the project area did not identify any hazardous waste sites or issues in the project vicinity. The project would not 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. There would be no impacts.

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

No Impact—The project would not emit hazardous emissions or handle hazardous or acutely hazardous materials or substances. There would be no impacts.

d) Be located on a site that 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 is not located on a site listed on a list of hazardous materials sites. There would be no impacts.

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—The project is not located within an airport land use plan nor within 2 miles of a public airport or public use airport. There would be no impacts.

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

No Impact—The project would have no impact on an adopted emergency response or evacuation plan. There would be no impacts.

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

No Impact—The project will not expose people or structures to a significant risk of loss, injury, or death involving wildland fires. There would be no impacts.

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 water or groundwater quality?

No Impacts—All project activities will be subject to existing regulatory requirements. During project operation, the project would be required to meet all applicable water quality objectives for surface waters and groundwater contained in the Central Valley Water Board's Basin Plan, would act in accordance with related regulatory agencies guidelines, and meet the goals and objectives of the *San Joaquin County General Plan*. Discharge of pollutants from urban runoff will be minimized with implementation of practices required by the municipal stormwater management programs for San Joaquin County, and Caltrans, and other California Environmental Quality Act, federal, and state requirements. Therefore, construction and operation activities will not violate water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality. Impacts on water quality will be less than significant. There are no impacts on water quality.

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—Groundwater dewatering will not be necessary for project operation and maintenance activities, and groundwater dewatering is not anticipated during construction. In the event that groundwater is encountered during construction, dewatering will be conducted on a one-time, temporary basis during the construction phase and would not deplete groundwater supplies. The project will only minimally affect groundwater resources because the required excavations will occur on a temporary, short-term basis during the construction period. Construction activities will use commercially available water. No groundwater sources would be used as water supply for construction or operation of the project, and no groundwater pumping is required.

There will be minimal areas of additional impervious surface added, compared to the overall size of the groundwater basin. Recharge in the area will continue to occur through infiltration of precipitation. Therefore, the project will not affect groundwater levels or the capability for groundwater recharge within the localized groundwater aquifer area. The project's minimal use of water will not deplete or interfere with groundwater supply or recharge or impede sustainable groundwater management of the basin. Therefore, there will be no impact on groundwater supplies or recharge.

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 onsite or offsite;

No Impact—The project would not result in substantial erosion or siltation onsite or offsite. There would be no impact.

ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding onsite or offsite;

No Impact—The project and construction-related activities would not create or contribute to surface runoff water. There would be no impact.

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

No Impact—The project and construction-related activities would not create or contribute to runoff water. There would be no impact.

iv) Impede or redirect flood flows?

No Impact—The project and construction-related activities would not impede or redirect flood flows. There would be no impact.

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

No Impact—The project site is not in a flood hazard, tsunami, or seiche zone. There would be no impact.

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

No Impact—The project and construction-related activities would not conflict with or obstruct the implementation of a water quality control plan or sustainable groundwater management plan. There would be no impact.

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 occur on an existing highway and would not significantly expand the highway. State Route 88 already divides the City of Lockeford. There would be no impact.

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

No Impact—The project is consistent with the zoning and general plan for the project site, and other plans adopted for the purpose of avoiding or mitigating an environmental effect. There would be no impact.

3.2.12 Mineral Resources

CEQA Significance Determinations for Mineral Resources

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—The project would not result in the loss of a known mineral resource, as none are known to be located on the project site. There would be no impact.

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

No Impact—The project would not result in the loss of availability of a locally important mineral resource; the project area is not designated in the San Joaquin County General Plan as a mineral recovery site. There would be no impact.

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?

No Impact—The project would not permanently increase noise levels in the project area. There would be some noise increase during construction. Any increase would not be substantial with incorporation of Caltrans Standard Specifications. There would be no impact.

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

No Impact—The project would not generate groundborne vibration or groundborne noise levels. There would be no impact.

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

No Impact—The project is not located within an airport land use plan or within 2 miles of an airport, and there are no private airstrips in the project vicinity. The project would not expose people in the project area to excessive noise levels. There would be no impact.

3.2.14 Population and Housing

CEQA Significance 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 improve pavement and upgrade sidewalks to current standards. The project would not induce growth. There would be no impact.

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

No Impact—The project would not displace people or housing. There would be no impact.

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 not require new or physically alter governmental facilities. There would be no impact.

Police protection?

No Impact—The project would not require new or physically alter governmental facilities. There would be no impact.

Schools?

No Impact—The project would not require new or physically alter governmental facilities. There would be no impact.

Parks?

No Impact—The project would not require new or physically alter governmental facilities. There would be no impact.

Other public facilities?

No Impact—The project would not require new or physically alter governmental facilities. There would be no impact.

3.2.16 Recreation

CEQA Significance Determinations 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 not increase the use of parks or recreational facilities. There would be no impact.

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

No Impact—The project does not include recreational facilities. There would be no impact.

3.2.17 Transportation

CEQA Significance Determinations for Transportation

Would the project:

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

No Impact—The project would not conflict with a program plan, ordinance, or policy addressing the circulation system. There would be no impact.

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

No Impact—The project would not conflict with CEQA Guidelines Section 15064.3, subdivision (b) because the project would not add additional lane miles to the state route and therefore would not induce an increase in vehicle miles traveled. There would be no impact.

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

No Impact—The project would not introduce or increase hazards due to a geometric design feature or incompatible uses. There would be no impact.

d) Result in inadequate emergency access?

No Impact—During construction, emergency access would not be affected because a project-specific Transportation Management Plan would be developed and implemented before and during construction. The Transportation Management Plan includes a public information program and coordination with emergency service providers. The project would have no impact on emergency access.

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—Tribal discussions determined that the project would not affect any tribal cultural resources within the project area. There would be no impact.

b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the

criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

No Impact—Tribal discussions determined that the project would not affect any tribal cultural resources within the project area. There would be no impact.

3.2.19 Utilities and Service Systems

CEQA Significance Determinations 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 stormwater 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 relocate or construct new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas or telecommunications facilities. There would be no impact.

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

No Impact—The project will have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years. There would be no impact.

c) Result in a determination by the wastewater treatment provider that 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 not change a determination by the wastewater treatment provider that 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. There would be no impact.

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

No Impact—The project would not 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. There would be no impact.

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

No Impact—The project would comply with federal, state, and local management and reduction statutes and regulations related to solid waste. There would be no impact.

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?

No Impact—The project is not located in or near state responsibility areas or lands classified as very high fire hazard severity zones. The project would maintain an existing facility and would not impair existing emergency response or evacuation plans. There would be no impact.

b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

No Impact—The project is not located in or near state responsibility areas or lands classified as very high fire hazard severity zones. The project would not expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. There would be no impact.

c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

No Impact—The project is not located in or near state responsibility areas or lands classified as very high fire hazard severity zones. The project would not require the installation or maintenance of associated infrastructure that may exacerbate fire risk or result in temporary or ongoing environmental impacts. There would be no impact.

d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

No Impact—The project is not located in or near state responsibility areas or lands classified as very high fire hazard severity zones. The project would not

expose people or structures to significant risks as a result of runoff, post-fire slope instability, or drainage concerns. There would be no impact.

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 Impact—The project would impact biological resources. Proposed avoidance, minimization, and mitigation measures would reduce the impacts to below a level of significance. Please see Chapter 2, Section 2.1.2 Paleontology and Section 2.3 Biological Resources, for more information.

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

No Impact—The project would not have cumulative impacts, as any potentially significant impacts would be reduced through avoidance, minimization, and mitigation measures.

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

No Impact—The project does not have environmental effects that would cause substantial adverse effects on human beings. There would be no impact.

3.3 Wildfire

Regulatory Setting

Senate Bill 1241 required the Office of Planning and Research, the Natural Resources Agency, and the California Department of Forestry and Fire Protection to develop amendments to the “CEQA Checklist” for the inclusion of questions related to fire hazard impacts for projects located on lands classified as very high fire hazard severity zones. The 2018 updates to the

CEQA Guidelines expanded this to include projects “near” these very high fire hazard severity zones.

Affected Environment

The proposed project is not in a very high fire hazard severity zone (California Department of Forestry and Fire Protection, 2007).

Environmental Consequences

The project is not located in or near state responsibility areas or lands classified as very high fire hazard severity zones. The project would maintain an existing facility and would not impair existing emergency response or evacuation plans. The project would not require the installation or maintenance of associated infrastructure that may exacerbate fire risk or result in temporary or ongoing environmental impacts. The project would not expose people or structures to significant risks as a result of runoff, post-fire slope instability, or drainage concerns. There would be no impact.

Avoidance, Minimization, and/or Mitigation Measures

Because there are no impacts, no measures are required.

3.4 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 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 mostly concerned with the emissions of greenhouse gases generated by human activity, including carbon dioxide, methane, nitrous oxide, tetrafluoromethane, hexafluoroethane, sulfur hexafluoride, and various hydrofluorocarbons. 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 carbon dioxide.

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.

3.4.1 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.

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

The Federal Highway Administration 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 Federal Highway Administration 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 (Federal Highway Administration 2019). This approach encourages planning for sustainable highways by addressing climate risks while balancing environmental, economic, and social values—“the triple bottom line of sustainability” (Federal Highway Administration no date). 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 made 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 U.S. Code Section 6201) and Corporate Average Fuel Economy Standards. This act establishes fuel economy standards for on-road motor vehicles sold in the United States. Compliance with federal fuel economy standards is determined through the Corporate Average Fuel Economy program based on each manufacturer’s average fuel economy for the portion of its vehicles produced for sale in the United States.

Energy Policy Act of 2005, 109th Congress H.R.6 (2005–2006): This act sets forth an energy research and development program covering: (1) energy efficiency; (2) renewable energy; (3) oil and gas; (4) coal; (5) the establishment of the Office of Indian Energy Policy and Programs within the

Department of Energy; (6) nuclear matters and security; (7) vehicles and motor fuels, including ethanol; (8) hydrogen; (9) electricity; (10) energy tax incentives; (11) hydropower and geothermal energy; and (12) climate change technology.

The U.S. Environmental Protection Agency in conjunction with the National Highway Traffic Safety Administration 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. Fuel efficiency standards directly influence greenhouse gas emissions.

State

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

Executive Order S-3-05 (June 1, 2005): The goal of this order 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 Assembly Bill 32 in 2006 and Senate Bill 32 in 2016.

Assembly Bill 32, Chapter 488, 2006, Núñez and Pavley, The Global Warming Solutions Act of 2006: Assembly Bill 32 codified the 2020 greenhouse gas emissions reduction goals outlined in Executive Order S-3-05, while further mandating that the California Air Resources Board 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 Section 38551(b)). The law requires the California Air Resources Board to adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective greenhouse gas reductions.

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

Senate Bill 375, Chapter 728, 2008, Sustainable Communities and Climate Protection: This bill requires the California Air Resources Board to set

regional emissions reduction targets for passenger vehicles. The Metropolitan Planning Organization for each region must then develop a “Sustainable Communities Strategy” that integrates transportation, land-use, and housing policies to plan how it will achieve the emissions target for its region.

Senate Bill 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 Assembly Bill 32.

Executive Order B-16-12 (March 2012): This order requires State entities under the direction of the governor, including the California Air Resources Board, 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.

Executive Order B-30-15 (April 2015): This order establishes an interim statewide greenhouse gas 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 the California Air Resources Board to update the Climate Change Scoping Plan to express the 2030 target in terms of million metric tons of carbon dioxide equivalent. Greenhouse gases differ in how much heat each trap in the atmosphere (global warming potential). Carbon dioxide is the most important greenhouse gas, so amounts of other gases are expressed relative to carbon dioxide, using a metric called “carbon dioxide equivalent.” The global warming potential of carbon dioxide is assigned a value of 1, and the global warming potential of other gases is assessed as multiples of carbon dioxide. Finally, it requires the Natural Resources Agency to update the state’s climate adaptation strategy, *Safeguarding California*, every three years, and to ensure that its provisions are fully implemented.

Senate Bill 32, Chapter 249, 2016: This bill codifies the greenhouse gas reduction targets established in Executive Order B-30-15 to achieve a mid-range goal of 40 percent below 1990 levels by 2030.

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

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

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

Senate Bill 150, Chapter 150, 2017, Regional Transportation Plans: This bill requires the California Air Resources Board to prepare a report that assesses progress made by each metropolitan planning organization in meeting their established regional greenhouse gas emission reduction targets.

Executive Order B-55-18 (September 2018): This order 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.

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

3.4.2 Environmental Setting

The project sits along State Route 88 in San Joaquin County and runs from State Route 88 from just east of Comstock Road to just east of the City of Lockeford. The work would improve pavement, bring sidewalks to current Americans with Disabilities Act compliance, and make other improvements.

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. The U.S. Environmental Protection Agency is responsible for documenting greenhouse gas emissions nationwide, and the California Air

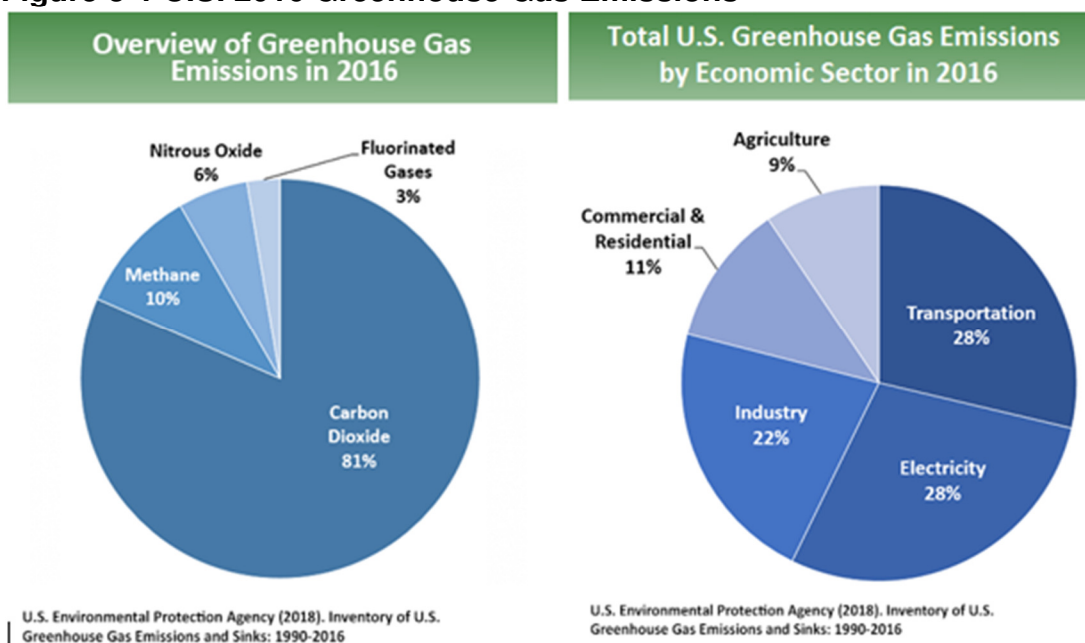
Resources Board does so for the state, as required by Health and Safety Code Section 39607.4.

National Greenhouse Gas Inventory

The U.S. Environmental Protection Agency 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 carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, and nitrogen trifluoride. It also accounts for emissions of carbon dioxide that are removed from the atmosphere by “sinks” such as forests, vegetation, and soils that uptake and store carbon dioxide (carbon sequestration).

The 1990–2016 inventory found that of 6,511 million metric tons of carbon dioxide equivalent greenhouse gas emissions in 2016, 81 percent consist of carbon dioxide, 10 percent are methane, and six percent are nitrous oxide; the balance consists of fluorinated gases (EPA 2018a). In 2016, greenhouse gas emissions from the transportation sector accounted for nearly 28.5 percent of U.S. greenhouse gas emissions. See Figure 3-1.

Figure 3-1 U.S. 2016 Greenhouse Gas Emissions



State Greenhouse Gas Inventory

The California Air Resources Board collects greenhouse gas emissions data for transportation, electricity, commercial/residential, industrial, agricultural, and waste management sectors each year. It then summarizes and highlights

major annual changes and trends to demonstrate the state’s progress in meeting its greenhouse gas reduction goals. The 2019 edition of the greenhouse gas emissions inventory found total California emissions of 424.1 million metric tons of carbon dioxide equivalent for 2017, with the transportation sector responsible for 41 percent 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 (Air Resources Board 2019a). See Figures 3-2 and 3-3.

Figure 3-2 California 2017 Greenhouse Gas Emissions

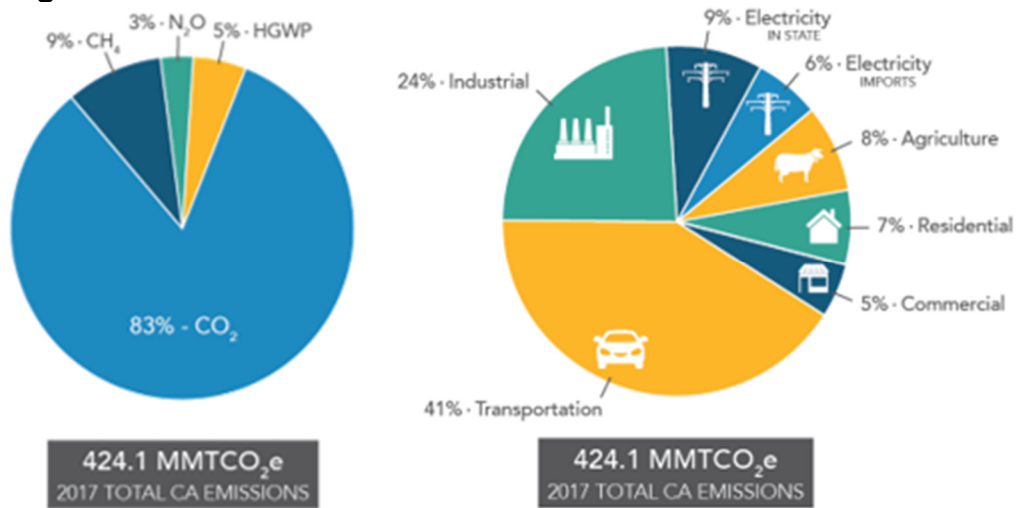
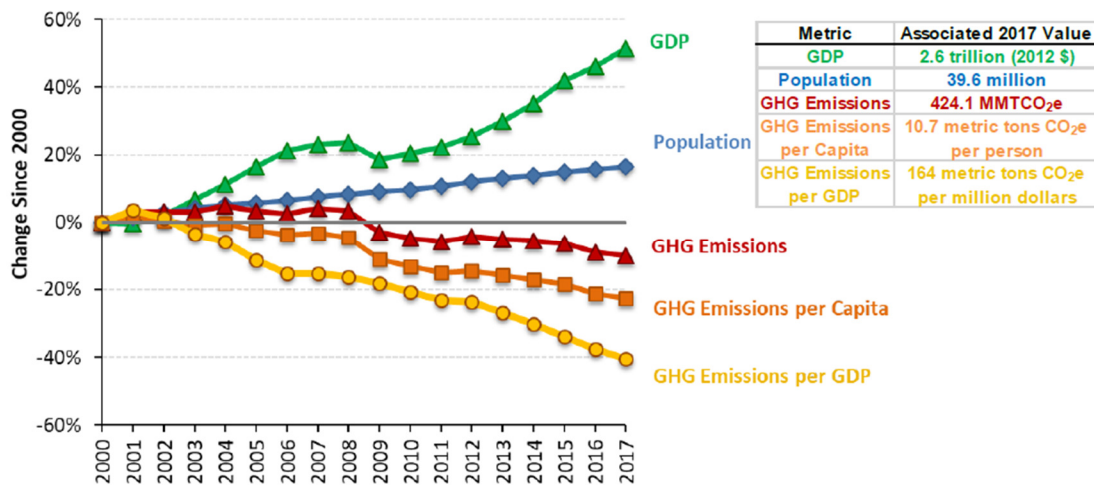


Figure 3-3 Change in California Gross Domestic Product, Population, and Greenhouse Gas Emissions since 2000



Assembly Bill 32 required the California Air Resources Board 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 five years. The California Air Resources Board 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 Executive Order B-30-15 and Senate Bill 32. The Assembly Bill 32 Scoping Plan and the subsequent updates contain the main strategies California will use to reduce greenhouse gas emissions.

Regional Plans

The California Air Resources Board sets regional targets for California's 18 Metropolitan Planning Organizations to use in their Regional Transportation Plan/Sustainable Communities Strategy 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 is included in the Regional Transportation Plan/ Sustainable Communities Strategy for San Joaquin Council of Governments' Regional Transportation Plan/Sustainable Communities Strategy. The regional reduction targets for the San Joaquin Council of Governments are 12 percent by 2020 and 15 percent by 2035 (California Air Resources 2019c).

In addition to the San Joaquin Council of Governments' Regional Transportation Plan/Sustainable Communities Strategy, the San Joaquin County General Plan 2035 contains goals and policies related to greenhouse gases and climate change. These goals are summarized in Table 3.4-1.

Table 3.4-1. Applicable Greenhouse Gas Reduction Policies from Regional Plans

Title	Greenhouse Gas Reduction Policies or Strategies
San Joaquin Council of Governments Regional Transportation Plan/ Sustainable Communities Strategy (San Joaquin Council of Governments 2018)	<ul style="list-style-type: none"> • Policy: Maximize Mobility and Accessibility • Strategy Number 4. Improve Regional Transportation System Efficiency
San Joaquin County General Plan 2035 Policy Document (San Joaquin County 2016)	<ul style="list-style-type: none"> • Public Health and Safety Element • Goal PHS-6. To reduce greenhouse gas emissions as part of the Statewide effort to combat climate change. • Transportation Greenhouse Gas Reduction Strategies: 0.05 percent reduction in vehicle miles traveled based on percentage of streets with planned improvements. • Public Facilities and Services Element—Transportation and Mobility • TM-2.4: Rural Complete Streets. The County shall strive to serve all users on rural roadways in the County and shall design and construct rural roadways to serve safely bicyclists, transit passengers, and agricultural machinery operators. • TM-4.3 Bicycle Safety. The County shall support bicycle safety programs for children and commuters in the County. • TM-4.4 Safe Pedestrian Crossings • TM-4.12 Sidewalk Design

3.4.3 Project Analysis

Greenhouse gas emissions from transportation projects can be divided into those produced during operation of the state highway system and those produced during construction. The main greenhouse gases produced by the transportation sector are carbon dioxide, methane, nitrous oxide, and hydrofluorocarbons. Carbon dioxide emissions are a product of the combustion of petroleum-based products, like gasoline, in internal combustion engines. Relatively small amounts of methane and nitrous oxide are emitted during fuel combustion. In addition, a small amount of hydrofluorocarbon emissions is 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 (Public Resources Code, Section 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 proposed project would generate approximately 940 tons of CO₂ during the 255 working days (less than the 264 working days per 1 year) duration. While some greenhouse gas emissions during the construction period would be unavoidable, the project, once completed, would not lead to an increase in operational greenhouse gas emissions.

Construction Emissions

Construction greenhouse gas emissions would result from material processing, onsite 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.

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 the California Air Resources Board 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.

The project will also implement Caltrans standardized measures (such as construction best management practice) that apply to most or all Caltrans projects. Certain common regulations, such as equipment idling restrictions and development and implementation of a traffic control plan that reduce construction vehicle emissions also help reduce greenhouse gas emissions.

CEQA Conclusion

While the project will result in greenhouse gas emissions during construction, it is expected that the project will not result in any increase in operational greenhouse gas emissions. The project does not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions

of greenhouse gases. With implementation of 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.

3.4.4 Greenhouse Gas Reduction Strategies

Statewide Efforts

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

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 (State of California 2019).

In addition, Senate Bill 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-ground and below-ground matter.

Caltrans Activities

Caltrans continues to be involved on the Governor's Climate Action Team as the California Air Resources Board works to implement Executive Orders S-3-05 and S-01-07 and help achieve the targets set forth in Assembly Bill 32. Executive Order B-30-15, issued in April 2015, and Senate Bill 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 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 carbon dioxide 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 California Transportation Plan to meet California's climate change goals under Assembly Bill 32. Accordingly, the California Transportation Plan 2040 identifies the statewide transportation system needed to achieve maximum feasible greenhouse gas emission reductions while meeting the state's transportation needs. While Metropolitan Planning Organizations have primary responsibility for identifying land use patterns to help reduce greenhouse gas emissions, California Transportation Plan 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 Regional Transportation Plan/Sustainable Communities Strategy; 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 project includes Complete Streets improvements that will support non-motorized transportation modes such as walking and bicycling.
- Caltrans Standard Specifications Sections 7-1.02A and 7-1.02C, Emissions Reduction: Require contractors to comply with all laws applicable to the project and to certify they are aware of and will comply with all the California Air Resources Board emission reduction regulations.
- Section 14-9.02, Air Pollution Control: Requires contractors to comply with all air pollution control rules, regulations, ordinances, and statutes.
- Idling time will be limited to 5 minutes for delivery and dump trucks and other diesel-powered equipment (with some exceptions).
- Truck trips will be scheduled outside of peak morning and evening commute hours.
- Contractors will be instructed to maximize fuel efficiency by:
 - Maintaining equipment in proper tune and working condition.
 - Using right-sized equipment for the job.
 - Using equipment with new technologies.
- Supplement existing construction environmental training with information on methods to reduce greenhouse emissions related to construction.

- Reduce construction waste. Reuse or recycle construction and demolition waste (reduces consumption of raw materials, reducing waste and transportation to landfill; saves costs).

3.4.5 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 Federal Highway Administration NEPA regulations, policies, and guidance.

The U.S. Global Change Research Program delivers a report to Congress and the president every four years, in accordance with the Global Change Research Act of 1990 (15 U.S. Code Chapter 56A Section 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" (U.S. Global Change Research Program 2018).

The U.S. Department of Transportation Policy Statement on Climate Adaptation in June 2011 committed the federal Department of Transportation to "integrate consideration of climate change impacts and adaptation into the planning, operations, policies, and programs of the U.S. Department of Transportation 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” (U.S. Department of Transportation 2011).

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

State Efforts

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

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

often defined as the combination of sensitivity and adaptive capacity as affected by the level of exposure to changing climate.

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

Executive Order 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.

Executive Order 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.

Executive Order B-30-15, signed in April 2015, requires state agencies to factor climate change into all planning and investment decisions. This order recognizes that effects of climate change other than sea-level rise also threaten California’s infrastructure. At the direction of Executive Order 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.

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

Caltrans Adaptation Efforts

Caltrans Vulnerability Assessments

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

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

The climate change data in the assessments were developed in coordination with climate change scientists and experts at federal, state, and regional organizations at the forefront of climate science. The findings of the vulnerability assessments will guide analysis of at-risk assets and development of adaptation plans to reduce the likelihood of damage to the State Highway System, allowing Caltrans to both reduce the costs of storm damage and to provide and maintain transportation that meets the needs of all Californians.

Project Adaptation Analysis

Sea-Level Rise

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 project area does not contain any naturally occurring water bodies. The San Joaquin County flood zone viewer shows that the project area is in a Federal Emergency Management Agency Zone X, an area determined to be outside the 0.2 percent annual chance (500-year) flood. While future climate change is projected to bring less frequent but more intense storms in California, specific projections for the local project area are not available. Nonetheless, the project will incorporate temporary and permanent stormwater best management practices including construction and maintenance of biofiltration strips and biofiltration swales to treat stormwater runoff. Materials and design features would be selected for their resilience to extremes in precipitation and temperature.

Wildfire

The proposed project is not in a very high fire hazard severity zone (California Department of Forestry and Fire Protection, 2007).

Climate Change References

- California Air Resources Board (ARB). 2019a. California Greenhouse Gas Emissions Inventory—2019 Edition. <https://ww3.arb.ca.gov/cc/inventory/data/data.htm>. Accessed: August 21, 2019.
- California Air Resources Board (ARB). 2019b. California Greenhouse Gas Emissions for 2000 to 2017. Trends of Emissions and Other Indicators. https://ww3.arb.ca.gov/cc/inventory/pubs/reports/2000_2017/ghg_inventory_trends_00-17.pdf. Accessed: August 21, 2019.
- California Air Resources Board (ARB). 2019c. SB 375 Regional Plan Climate Targets. <https://ww2.arb.ca.gov/our-work/programs/sustainable-communities-program/regional-plan-targets>. Accessed: August 21, 2019.
- California Department of Transportation. December 2020. Caltrans Climate Change Vulnerability Assessments. District 10 Technical Report. December. Prepared by WSP.
- Federal Highway Administration (FHWA). 2019. Sustainability. <https://www.fhwa.dot.gov/environment/sustainability/resilience/>. Last updated February 7, 2019. Accessed: August 21, 2019.
- Federal Highway Administration (FHWA). No date. Sustainable Highways Initiative. <https://www.sustainablehighways.dot.gov/overview.aspx>. Accessed: August 21, 2019.
- State of California. 2018. California’s Fourth Climate Change Assessment. <http://www.climateassessment.ca.gov/>. Accessed: August 21, 2019.
- State of California. 2019. California Climate Strategy. <https://www.climatechange.ca.gov/>. Accessed: August 21, 2019.
- U.S. Department of Transportation (U.S. DOT). 2011. Policy Statement on Climate Change Adaptation. June. https://www.fhwa.dot.gov/environment/sustainability/resilience/policy_and_guidance/usdot.cfm. Accessed: August 21, 2019.
- U.S. Environmental Protection Agency (U.S. EPA). 2009. Endangerment and Cause or Contribute Findings for Greenhouse Gases under the Section 202(a) of the Clean Air Act.

<https://www.epa.gov/ghgemissions/endorsement-and-cause-or-contribute-findings-greenhouse-gases-under-section-202a-clean>. Accessed: August 21, 2019.

U.S. Environmental Protection Agency (U.S. EPA). 2018. Inventory of U.S. Greenhouse Gas Emissions and Sinks.

<https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks>. Accessed: August 21, 2019.

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

Chapter 4 **Comments and Coordination**

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

4.1 Agency Coordination

4.1.1 Office of Historic Preservation

August 12, 2021: Caltrans submitted the Historic Property Survey Report.

December 8, 2021: The State Historic Preservation Officer concurred with Caltrans' Historic Property Survey Report.

4.1.2 U.S. Fish and Wildlife Service

May 16, 2022: A U.S. Fish and Wildlife Service official species list was obtained.

4.1.3 California Department of Fish and Wildlife

May 16, 2022: A California Department of Fish and Wildlife California Natural Diversity Database species list was obtained.

4.1.4 National Marine Fisheries Service

May 17, 2022: A National Marine Fisheries Service official species list was obtained.

4.2 Coordination with Native American Groups

September 30, 2020: Native American consultation and coordination were initiated with a letter sent to the Native American Commission for a search of its Sacred Lands Inventory File and for a current consultation list.

October 19, 2020: Ms. Nancy Gonzalez-Lopez, Cultural Resources Analyst, sent a response that included a positive record search of the Sacred Lands Inventory File and included a Native American contact list. The letter indicated that the lone Band of Miwok Indians, specifically, should be contacted.

Initial consultation letters with a proposed project description, aerial maps, and project area shown on U.S. Geological Service quadrangles were emailed to the individuals listed in Table 4.1.

Table 4.1 Initial Consultation with Native Groups

Name	Affiliation	Date of Initial Consultation
Rhonda Morningstar Pope	Buena Vista Rancheria of Me-Wuk Indians	9/30/2020
Briana Creekmore	California Valley Miwok Tribe (Wilseyville, CA)	9/30/2020
Randy Yonemura	lone Band of Miwok Indians	9/30/2020
Crystal Martinez	lone Band of Miwok Indians	9/30/2020
Billie Blue	lone Band of Miwok Indians	9/30/2020
Katherine Perez	North Valley Yokuts Tribe	9/30/2020
Raymond Hitchcock	Wilton Rancheria	9/30/2020
Timothy Perez	North Valley Yokuts Tribe	10/25/2020
Chairperson	California Valley Miwok Tribe (La Grange, CA)	10/25/2020
Chairperson	California Valley Miwok Tribe (West Point, CA)	10/25/2020
Sara A. Dutschke (née Setshwaelo)	lone Band of Miwok Indians	10/25/2020
Cosme Valdez	Nashville Enterprise Miwok-Maidu-Nishinam Tribe	10/25/2020
Gene Whitehouse	United Auburn Indian Community of the Auburn Rancheria	10/25/2020
Dahlton Brown	Wilton Rancheria	10/25/2020

4.2.1 Buena Vista Rancheria of Me-Wuk Indians

No documented response from the initial consultation letters dated September 30, 2020 was found. A follow-up email was sent to Ms. Rhonda Morningstar Pope on June 9, 2021 to inform her of the reassignment of the Caltrans archaeologist. No response has been received to date.

4.2.2 California Valley Miwok Tribe

No documented response from the initial consultation letters dated September 30, 2020 was found. Additional letters were sent to the tribe's other addresses in La Grange, California and West Point, California on October 25, 2020. A follow-up email was sent to Mr. Lawrence Wilson and

Mr. Pete Ramirez on June 9, 2021 to inform them of the reassignment of the Caltrans archaeologist. No response has been received to date.

4.2.3 Lone Band of Miwok Indians

No documented response from the initial consultation letters dated September 30, 2020 was found. Additional correspondence was sent on October 25, 2020. A follow-up email was sent to Ms. Sara A. Dutschke on June 9, 2021 to inform her of the reassignment of the Caltrans archaeologist. On July 8, 2021, the tribe's Cultural Committee sent an email indicating committee members had concerns and would like to consult. A response was sent on July 20 with a list of recorded cultural resources within the area. Caltrans staff are proceeding with coordination and setup of a site visit. Consultation is ongoing.

4.2.4 Nashville Enterprise Miwok-Maidu-Nishinam Tribe

No documented response from the initial consultation letters dated September 30, 2020 was found. A follow-up email was sent to Ms. Cosme Valdez on June 9, 2021 to inform her of the reassignment of the Caltrans archaeologist. No response has been received to date.

4.2.5 North Valley Yokuts Tribe

No documented response from the initial consultation letters dated September 30, 2020 was found. A follow-up email was sent on June 9, 2021, to inform the tribe of the reassignment of the Caltrans archaeologist. A field visit was made on July 27, 2021. During the site visit, Ms. Perez indicated that if work is confined to the road and does not veer into areas where there are archaeological sites that there should be no need for site monitors. She said she would like to stay informed of any project changes and if any other tribes are requesting monitors. Consultation is ongoing.

4.2.6 United Auburn Indian Community of the Auburn Rancheria

No documented response from the initial consultation letters dated October 25, 2020 was found. A follow-up email was sent to Mr. Whitehouse on June 9, 2021 to inform him of the reassignment of the Caltrans archaeologist. Anna Starkey, the Cultural Regulatory Specialist for the tribe, responded on June 24, 2021 and requested shapefiles of the project area. On July 6, 2021, Ms. Starkey mentioned that the tribe requested to consult previously. Ms. Starkey was informed that the previous archaeologist had retired and there was no record of any further correspondence after the initial contact letters. Shapefiles were forwarded to Ms. Starkey on July 7, 2021. Consultation is ongoing.

4.2.7 Wilton Rancheria

No documented response from the initial consultation letters dated October 25, 2020 was found. A follow-up email was sent to Mr. Jesus Tarango on June 9, 2021 to inform him of the reassignment of the Caltrans archaeologist. No response has been received to date.

4.3 Other Cultural Contacts

The Caltrans archaeologist sent letters to local agencies to solicit information regarding cultural resources within the Area of Potential Effects, and the Caltrans Architectural Historian sent consultation letters to local historical societies, as follows:

- San Joaquin County Department of Public Works
- San Joaquin Historical Society
- Lockeford Historical Society

Chapter 5 List of Preparers

This document was prepared by the following Caltrans Central Region staff:

- Allam Alhabaly, Transportation Engineer. B.S., California State University, Fresno, School of Engineering; 18 years of experience in environmental technical studies, with emphasis on noise studies. Contribution: Noise Study Report.
- Juliana Bartel, Environmental Planner (Archaeology). B.A., University of California, Davis; 4 years of cultural resource management experience. Contribution: Archaeology Specialist.
- Benjamin Broyles, Senior Environmental Planner. B.A., Anthropology, University of California, Santa Cruz; 19 years of cultural resources management experience. Contribution: Archaeology Senior.
- Antonio Del Pozo, Landscape Architect. B.S., Landscape Architecture, Cal Poly Pomona; 15 years of Landscape Architecture experience. Contribution: Visual Impact Assessment/Scenic Resource Evaluation
- David Farris, Associate Environmental Planner. B.S., Environmental Biology and Management, University of California, Davis; 3 years of preliminary environmental analysis experience; 17 years of environmental planning experience. Contribution: Environmental Generalist.
- Maya Hildebrand, Associate Environmental Planner (Air Quality Coordinator). B.S., Geology, Utah State University; 6 years of air quality analysis and 5 years of combined geological/environmental hazards experience. Contribution: Air Study Report.
- David Johnson, Senior Environmental Planner (Natural Sciences). M.S., Public Administration, Central Michigan University; B.S., Environmental Science and Biology, Central Michigan University; 8 years of combined experience in environmental and biological studies. Contribution: Biology Senior.
- Rogerio Leong, Engineering Geologist. B.S., Geology, University of Sao Paulo, Brazil; 18 years of environmental site assessment and investigation experience. Contribution: Authored and co-authored several Remedial Investigation/Feasibility Study Reports for Superfund contaminated sites.
- Mike Leongson, Senior Transportation Engineer. B.S., Civil Engineering, California State University, Fresno; over 15 years of engineering experience with 1 year of environmental technical studies experience.

Contribution: Worked with Hazardous Waste at headquarters in procuring XRF scanner to implement in the Central Region aerially deposited lead studies.

Shawn Ogletree, Engineering Geologist. B.S., Environmental Conservation of Natural Resources, Texas Tech University; B.S., Wildlife/Fisheries Management, Texas Tech University; M.P.H., California State University, Fresno; 14 years of environmental health, environmental technical studies experience; 10 years of biology experience. Contribution: Hazardous Waste Specialist.

Ken J. Romero, Senior Transportation Engineer. B.S., Civil Engineering, California State University, Fresno; 14 years of environmental technical studies experience. Contribution: Senior over the Air, Noise and Water Specialists.

Richard C. Stewart, Engineering Geologist, P.G. B.S., Geology, California State University, Fresno; more than 30 years of hazardous waste and water quality experience; 18 years of paleontology/geology experience. Contribution: Paleontology Report.

John Thomas, Senior Environmental Planner. B.A., Geography, California State University, Fresno; 20 years of environmental planning experience. Contribution: Environmental Generalist Senior.

Patrick Walker, Environmental Planner (Natural Sciences). B.S., Fisheries and Wildlife, Michigan State University; 2.5 years of environmental planning and an additional 5 years of wildlife biology experience. Contribution: Biology Specialist.

Chapter 6 Distribution List

San Joaquin County Community Development Department
1810 Hazelton Avenue
Stockton, California 95205

USDA (Natural Resources Conservation Service) Stockton Office
7585 South Longe Street
Stockton, California 95206

USDA-Natural Resources Conservation Service
744 La Guardia Street, Building A
Salinas, California 93905-3354

Lodi Public Library
201 West Locust Street
Lodi, California 95240

California Highway Patrol—Stockton
2720 Wilcox Road
Stockton, California 95215

San Joaquin County Sheriff's Department
7000 Michael Canlis Boulevard
French Camp, California 95231

San Joaquin County Public Works Department
1810 East Hazelton Avenue
Stockton, California 95205

Mokelumne Fire District
13157 East Brandt Road
Lockeford, California 95237

Lodi Unified School District
1305 East Vine Street
Lodi, California 95240

San Joaquin County Board of Supervisors, District 4
44 North San Joaquin Street
Sixth Floor, Suite 627
Stockton, California 95202.

The Honorable Susan Eggman, California State Senate District 5
31 East Channel, Suite 440
Stockton, California 95202

The Honorable Heath Flora, California State Assembly District 12
578 North Wilma Avenue, Suite B
Ripon, California 95366

The Honorable Jerry McNerney, United States House of Representatives,
District 9
2222 Grand Canal Boulevard #17
Stockton, California 95207

San Joaquin County Historical Society and Museum
11793 Micke Grove Road
Lodi, California 95240

Lockeford Historical Society
19456 North Jack Tone Road
Lockeford, California 95237

Appendix A Title VI Policy Statement

STATE OF CALIFORNIA—CALIFORNIA STATE TRANSPORTATION AGENCY

Gavin Newsom, Governor

DEPARTMENT OF TRANSPORTATION

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



Making Conservation
a California Way of Life.

September 2021

NON-DISCRIMINATION POLICY STATEMENT

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

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

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

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

To obtain this information in an alternate format such as Braille or in a language other than English, please contact the California Department of Transportation, Office of Civil Rights, at 1823 14th Street, MS-79, Sacramento, CA 95811; PO Box 942874, MS-79, Sacramento, CA 94274-0001; (916) 324-8379 (TTY 711); or at Title.VI@dot.ca.gov.

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

Toks Omishakin
Director

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

Appendix B Avoidance, Minimization and/or Mitigation Summary

To ensure 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 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. Because the following Environmental Commitments Record is a draft, some fields have not been completed; they will be filled out as each of the measures is implemented.

Note: Some measures may apply to more than one resource area. Duplicated or redundant measures have not been included in this Environmental Commitments Record.

Utilities and Emergency Services

The project would require implementation of a Traffic Management Plan that would identify necessary signage and the locations of potential temporary detours. This plan would help to ensure that local access to homes and businesses, as well as bus and emergency vehicle access, is available during construction of the project. The plan would specify time frames for temporary detours if needed. The plan would also specify the process for notifying residents, businesses, emergency services, and the traveling public of the construction period and any required detours.

Cultural Resources

Archaeology

The following avoidance and minimization measures would be incorporated into the construction contract to ensure that the impacts caused by the project would have no significant adverse impact on the one identified archaeological site.

ESA-1: Environmentally Sensitive Area Designation: The establishment of environmentally sensitive areas would be designated by environmentally sensitive area fencing within Caltrans' right-of-way. "Environmentally sensitive area" information would be shown on contract plans and discussed in Section 14-1.02 of the Caltrans 2018 Standard Specifications. "Environmentally

sensitive area” provisions may include but are not necessarily limited to the use of temporary orange fencing or other high-visibility marking to identify the proposed limit of work in areas next to sensitive resources or to locate and exclude sensitive resources from potential construction impacts. Contractor encroachment into “environmentally sensitive areas” would be prohibited, and immediate work stoppage and notification to the Caltrans resident engineer is required if an “environmentally sensitive area” is breached. “Environmentally sensitive area” provisions would be implemented as the first order of work and remain in place until all construction activities are complete.

CULT-1: Caltrans Standard Special Provision Section 14-1.02A would be required to mark over the boundary of the archaeological resource, given the archaeological resource temporary ID Number 2567-1, which would prevent the contractor from disturbing the site during construction.

CULT-2: Caltrans Standard Special Provision Section 14-1.03B: An Archaeological Monitoring Area would be included in the construction contract. An archaeologist and Native American monitor would be onsite during construction to ensure the integrity of the environmentally sensitive areas and see any unexpected discoveries that might become exposed through construction activities.

Architectural History

Caltrans has obtained a “No Adverse Effect with Standard Conditions” determination from the Cultural Studies Office on February 1, 2022.. T

The project would not have an adverse effect on archaeological resources.

Paleontology

Due to the project’s potential to impact scientifically significant paleontological resources, a Paleontology Mitigation Plan would be prepared to mitigate impacts during construction.

Biology

Animal Species

Swainson’s Hawk and Migratory Birds

Avoidance and Minimization Efforts

- If construction is to occur during the period from February 1 to September 30, a qualified wildlife biologist shall conduct surveys for nesting or foraging Swainson’s hawks following the “Recommended Timing And

Methodology For Swainson's Hawk Nesting Surveys In California's Central Valley" protocol within half a mile of the Project Impact Area.

- If a Swainson's hawk is identified to be nesting onsite, a no-disturbance buffer of 500 feet will be established until it has been determined by a qualified biologist that the young have fledged.
- A Worker Environmental Awareness Training will be provided for all construction personnel prior to the start of any ground-breaking activities and for all new construction personnel.

Compensatory Mitigation

No impacts are anticipated for the Swainson's hawk; therefore, no compensatory mitigation is proposed.

White-tailed Kite

Avoidance and minimization measures discussed for the Swainson's hawk are considered sufficient for this species. Based on the results of recent surveys, project sites conditions, and the literature review, the project activities are not anticipated to result in the potential take of individual white-tailed kite nests. Also, no nesting white-tailed kites were found onsite during surveys and, although some oak trees will be removed, these trees are not within a riparian corridor where white-tailed kites typically nest. Because no impacts for white-tailed kites are anticipated, no compensatory mitigation is proposed.

Western Pond Turtle

Avoidance and Minimization Efforts

- Pre-construction surveys for western pond turtles will be conducted prior to ground-disturbing activities.
- A Worker Environmental Awareness Training will be provided for all construction personnel prior to the start of any ground-breaking activities and for all new construction personnel.
- If western pond turtles are observed nearby the potential impact area, construction will be monitored for initial ground disturbance.

Compensatory Mitigation

No impacts to the western pond turtle are anticipated; therefore, no mitigation is being proposed.

Yellow-breasted Chat

Avoidance and Minimization Efforts

- If construction is to occur during the nesting season of February 1 to September 30, then pre-construction surveys for the yellow-breasted chat

will be conducted prior to ground-disturbing activities within one-half mile of project impact area.

- A Worker Environmental Awareness Training will be provided for all construction personnel prior to the start of any ground-breaking activities and for all new construction personnel.
- If yellow-breasted chats are observed to be nesting near the project footprint, then initial ground disturbance will be monitored and an appropriate no-disturbance buffer will be established around the nest until it has been determined by a qualified biologist that the young have fledged.

Compensatory Mitigation

No impacts to the yellow-breasted chat are anticipated; therefore, no mitigation is being proposed.

Song Sparrow

Avoidance and Minimization Efforts

- If construction is to occur during the nesting season of February 1 to September 30, pre-construction surveys for Modesto song sparrows will be conducted prior to ground-disturbing activities.
- A Worker Environmental Awareness Training will be provided for all construction personnel prior to the start of any ground-breaking activities and for all new construction personnel.
- If Modesto song sparrows are observed to be nesting near the project footprint, then initial ground disturbance will be monitored and an appropriate no-disturbance buffer will be established around the nest until it has been determined by a qualified biologist that the young have fledged.

Compensatory Mitigation

No impacts to the Modesto song sparrow are anticipated; therefore, no mitigation is being proposed.

Yellow Warbler

Avoidance and Minimization Efforts

- If construction is to occur during the nesting season of February 1 to September 30, pre-construction surveys for yellow warblers will be conducted prior to ground-disturbing activities.
- A Worker Environmental Awareness Training will be provided for all construction personnel prior to the start of any ground-breaking activities and for all new construction personnel.

- If yellow warblers are observed to be nesting near the project footprint, then initial ground disturbance will be monitored and an appropriate no-disturbance buffer will be established around the nest until it has been determined by a qualified biologist that the young have fledged.

Compensatory Mitigation

No impacts to yellow warblers are anticipated; therefore, no mitigation is being proposed.

Western Spadefoot Toad

Avoidance and Minimization Efforts

- Pre-construction surveys for western spadefoot toads will be conducted.
- A Worker Environmental Awareness Training will be completed for all employees that enter the job site.
- If western spadefoot toads are observed nearby the potential impact area, construction will be monitored for initial ground disturbance at the areas of potential habitat.

Compensatory Mitigation

No impacts to the western spadefoot toad are anticipated; therefore, no mitigation is being proposed.

Threatened and Endangered Species

Avoidance and Minimization Efforts

- A qualified biologist(s) will conduct a pre-construction survey of the project site no more than 14 days prior to the beginning of ground disturbance or other general construction actions that could affect the California tiger salamander or tri-colored blackbirds.
- A Worker Environmental Awareness Training will be provided for all construction personnel prior to the start of any ground-breaking activities and for all new construction personnel.
- Any pipes or culverts stored onsite must be capped to prevent any entry by a California tiger salamander. Pipes must be inspected before installation to ensure that salamanders have not taken cover inside. If any California tiger salamanders are found in pipes or culverts, the assigned Caltrans biologist will be notified.
- In the unlikely event that evidence of California tiger salamander occupancy or use is detected during pre-construction surveys, or during construction, Caltrans will coordinate with the California Department of Fish and Wildlife and the U.S. Fish and Wildlife Service on appropriate measures to avoid take.

- No construction activities will be conducted in potential habitat where California tiger salamanders may occur if 1) it is raining, 2) there is a greater than 70 percent chance of rained based on the National Oceanic and Atmospheric Administration National Weather Service forecast on any given work day, or 3) within 48 hours following a rain event greater than 0.25 inch.
- Basins or trenches greater than 6 inches deep will be covered or have an escape ramp present. These will be checked daily for trapped California tiger salamanders and other wildlife. Before they are filled, they will be thoroughly inspected for trapped wildlife.
- Vehicle travel will be limited to established roadways unless otherwise designated. Any travel beyond the paved highway will adhere to a 20-mile-per-hour daytime speed limit.

Compensatory Mitigation

With implementation of avoidance and minimization efforts, no compensatory mitigation is anticipated.

Appendix C Farmland Conversion Impact Rating Form

U.S. DEPARTMENT OF AGRICULTURE Natural Resources Conservation Service		NRCS-CPA-106 (Rev. 1-91)	
FARMLAND CONVERSION IMPACT RATING FOR CORRIDOR TYPE PROJECTS			
PART I (To be completed by Federal Agency)		3. Date of Land Evaluation Request 5/10/21	4. Sheet 1 of _____
1. Name of Project State Route 88 Pavement Anchor Project		5. Federal Agency Involved FHWA	
2. Type of Project Roadway Pavement Project		6. County and State San Joaquin, CA	
PART II (To be completed by NRCS)		1. Date Request Received by NRCS 6/14/21	2. Person Completing Form Philip Smith
3. Does the corridor contain prime, unique statewide or local important farmland? (If no, the FPPA does not apply - Do not complete additional parts of this form.)		YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	4. Acres Irrigated 487,147 Average Farm Size 225
5. Major Crop(s) Apiary Products, Nursery Products and See	6. Farmable Land in Government Jurisdiction Acres: 721,377 % 79.1	7. Amount of Farmland As Defined in FPPA Acres: 614,129 % 67.3	
8. Name Of Land Evaluation System Used CA Storie Index	9. Name of Local Site Assessment System None	10. Date Land Evaluation Returned by NRCS 7/9/21	
PART III (To be completed by Federal Agency)		Alternative Corridor For Segment	
		Corridor A	Corridor B
A. Total Acres To Be Converted Directly		0.78	
B. Total Acres To Be Converted Indirectly, Or To Receive Services			
C. Total Acres In Corridor			
PART IV (To be completed by NRCS) Land Evaluation Information			
A. Total Acres Prime And Unique Farmland		.2	
B. Total Acres Statewide And Local Important Farmland		.2	
C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted		0.0001	
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value		60.1	
PART V (To be completed by NRCS) Land Evaluation Information Criterion Relative Value of Farmland to Be Serviced or Converted (Scale of 0 - 100 Points)		44	
PART VI (To be completed by Federal Agency) Corridor Assessment Criteria (These criteria are explained in 7 CFR 658.5(c))		Maximum Points	
1. Area in Nonurban Use	15	8	
2. Perimeter in Nonurban Use	10	10	
3. Percent Of Corridor Being Farmed	20	15	
4. Protection Provided By State And Local Government	20	20	
5. Size of Present Farm Unit Compared To Average	10	0	
6. Creation Of Nonfarmable Farmland	25	0	
7. Availability Of Farm Support Services	5	5	
8. On-Farm Investments	20	20	
9. Effects Of Conversion On Farm Support Services	25	0	
10. Compatibility With Existing Agricultural Use	10		
TOTAL CORRIDOR ASSESSMENT POINTS	160	78	0
PART VII (To be completed by Federal Agency)			
Relative Value Of Farmland (From Part V)	100	44	0
Total Corridor Assessment (From Part VI above or a local site assessment)	160	78	0
TOTAL POINTS (Total of above 2 lines)	260	122	0
1. Corridor Selected:	2. Total Acres of Farmlands to be Converted by Project:	3. Date Of Selection:	4. Was A Local Site Assessment Used? YES <input type="checkbox"/> NO <input type="checkbox"/>
5. Reason For Selection:			
Signature of Person Completing this Part: _____		DATE _____	
NOTE: Complete a form for each segment with more than one Alternate Corridor			

Clear Form

List of Technical Studies Bound Separately

Air Quality Report

Noise Study Report

Water Quality Report

Natural Environment Study

Location Hydraulic Study

Historical Property Survey Report

- Historic Resource Evaluation Report
- Historic Architectural Survey Report
- Archaeological Survey Report

Hazardous Waste Reports

- Initial Site Assessment
- Preliminary Site Investigation (Geophysical Survey)

Scenic Resource Evaluation/Visual Assessment

Initial Paleontology Study

To obtain a copy of one or more of these technical studies/reports or the Initial Study/Environmental Assessment, please send your request to the following email address: john.q.thomas@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).