San Joaquin State Route 4 Capital Maintenance

On State Route 4, from the State Route 99/State Route 4 interchange in San Joaquin County to 1.6 miles west of the Stanislaus/Calaveras County line in Stanislaus County

10-SJ/STA-4-19.44/38.06 0.0/7.2

10-1C050/1017000178

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 May 27, 2022 and executed by the Federal Highway Administration and Caltrans.

November 2022

Caltrans

General Information About This Document

What's in this document:

The California Department of Transportation (Caltrans), as assigned by the Federal Highway Administration, has prepared this Initial Study/Environmental Assessment, which examines the potential environmental impacts of alternatives being considered for the proposed project in San Joaquin and Stanislaus counties in California. The document explains why the project is being proposed, the alternatives being considered for the project, the existing environment that could be affected by the project, 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 Doctor Martin Luther King Junior Boulevard, Stockton, California 95205 from 9:00 a.m. to 5:00 p.m. and the Linden Public Library at 19059 East Main Street, Linden, California 95236. The document can also be downloaded at the following website: https://dot.ca.gov/caltrans-near-me/district-10.
- Attend the public hearing at Farmington Elementary School at 25233 CA-4, Farmington, CA 95230 on December 13, 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: Haesun Lim, District 6 Environmental, California Department of Transportation, 2015 East Shields Avenue, Suite 100, Fresno, California 93726. Submit comments via email to: haesun.a.lim@dot.ca.gov.
- Submit comments by the deadline: December 31, 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: Haesun Lim, District 6 Environmental, 2015 East Shields Avenue, Suite 100, Fresno, California 93726; phone 559-970-2348 (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.

10-SJ/STA-4-19.44/38.60 0.0/7.2
10-1C050/1017000178

Upgrade and repair pavement, culverts, bridge rails and guardrails on State Route 4, from the State Route 99/State Route 4 interchange in San Joaquin County to 1.6 miles west of the Stanislaus/Calaveras County line in Stanislaus 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)

THE STATE OF CALIFORNIA
Department of Transportation

for, Haesun Lim
Phil Vallejo
Deputy District Director, Environmental
District 06
California Department of Transportation
CEQA and NEPA Lead Agency

11/17/2022
Date

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DRAFT
Proposed Mitigated Negative Declaration

Pursuant to: Division 13, Public Resources Code

State Clearinghouse Number: pending

District-County-Route-Post Mile: 10-SJ/STA-4-19.4438.60 0.0/7.2

EA/Project Number: 10-1C050/1017000178

Project Description

The California Department of Transportation (Caltrans) proposes to upgrade and repair pavement, culverts, bridge rails and guardrails on State Route 4, from the State Route 99/State Route 4 interchange in San Joaquin County to 1.6 miles west of the Stanislaus/Calaveras County line in Stanislaus County.

Determination

An Initial Study has been prepared by Caltrans, District 10. 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:

The proposed project would have no effect on aesthetics, air quality, energy, hydrology and water quality, land use and planning, mineral resources, noise, population and housing, public services, recreation, transportation, utility and service systems and wildfire.

In addition, the proposed project would have less than significant effects to agricultural resources, geology and soils, greenhouse gas emissions, and hazardous materials.

With the following mitigation measures incorporated, the proposed project would have less than significant effects to biological and cultural resources:

- Compensatory mitigation for wetlands, vernal pool fairy shrimp, vernal pool tadpole shrimp and California tiger salamander
- Environmental sensitive area fencing around biology and cultural resources
- Worker training and biological monitoring

_____

Philip Vallejo
Deputy District Director, Environmental
District 6
California Department of Transportation

_____

Date

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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 5 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 May 27, 2022, for a term of 10 years. 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 Department of Transportation (Department) proposes to upgrade and repair pavement, culverts and guardrails improve the pavement on State Route 4, from the State Route 99/State Route 4 interchange in San Joaquin County to 1.6 miles west of the Stanislaus/Calaveras County line in Stanislaus County.

The project was initiated through a Conceptual Report, which was sponsored by the District 10 Maintenance and District 10 Asset Management. The project was programed in the 2020 State Highway Operations and Protection Program.

1.2 Purpose and Need

1.2.1 Purpose

The purpose of the project is to:

- Repair the roadway pavement
- Rehabilitate culverts
- Comply with Americans with Disabilities Act requirements
- Address non-standard features within the project limits, such as bridge rails and signs

1.2.2 Need

The pavement has deteriorated along State Route 4 within the project limits and needs repair. Also, Americans with Disabilities Act deficiencies along the route in Farmington need upgrading. Non-standard features within the project limits, such as bridge rails and updated signs that no longer meet current Caltrans standards, need updating.

Repair Pavement

The project would repair deteriorated pavement. Currently, there are 48.79 lane miles in fair condition and 1.86 lane miles in poor condition within the project area.

Rehabilitate Culverts

The project area has 1,400 linear feet of culverts in poor condition that need repair or replacement.

Americans with Disabilities Act Requirements

A Complete Streets element was evaluated and considered for the project. In Farmington, State Route 4 serves as the community's main street. But the community lacks sidewalks and curb ramps along State Route 4.

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.

The project is on State Route 4 in San Joaquin and Stanislaus counties. The project limits run from the State Route 99/State Route 4 interchange in San Joaquin County to about 1.6 miles west of the Stanislaus/Calaveras County line in Stanislaus County. Within the project limits the project is two-lane

undivided conventional highway. The project would repair pavement, culverts, bridge rails and guardrails

Figure 1-1 shows the project vicinity on State Route 4, and Figure 1-2 shows the project location and the construction limits.

Figure 1-1 Project Vicinity Map

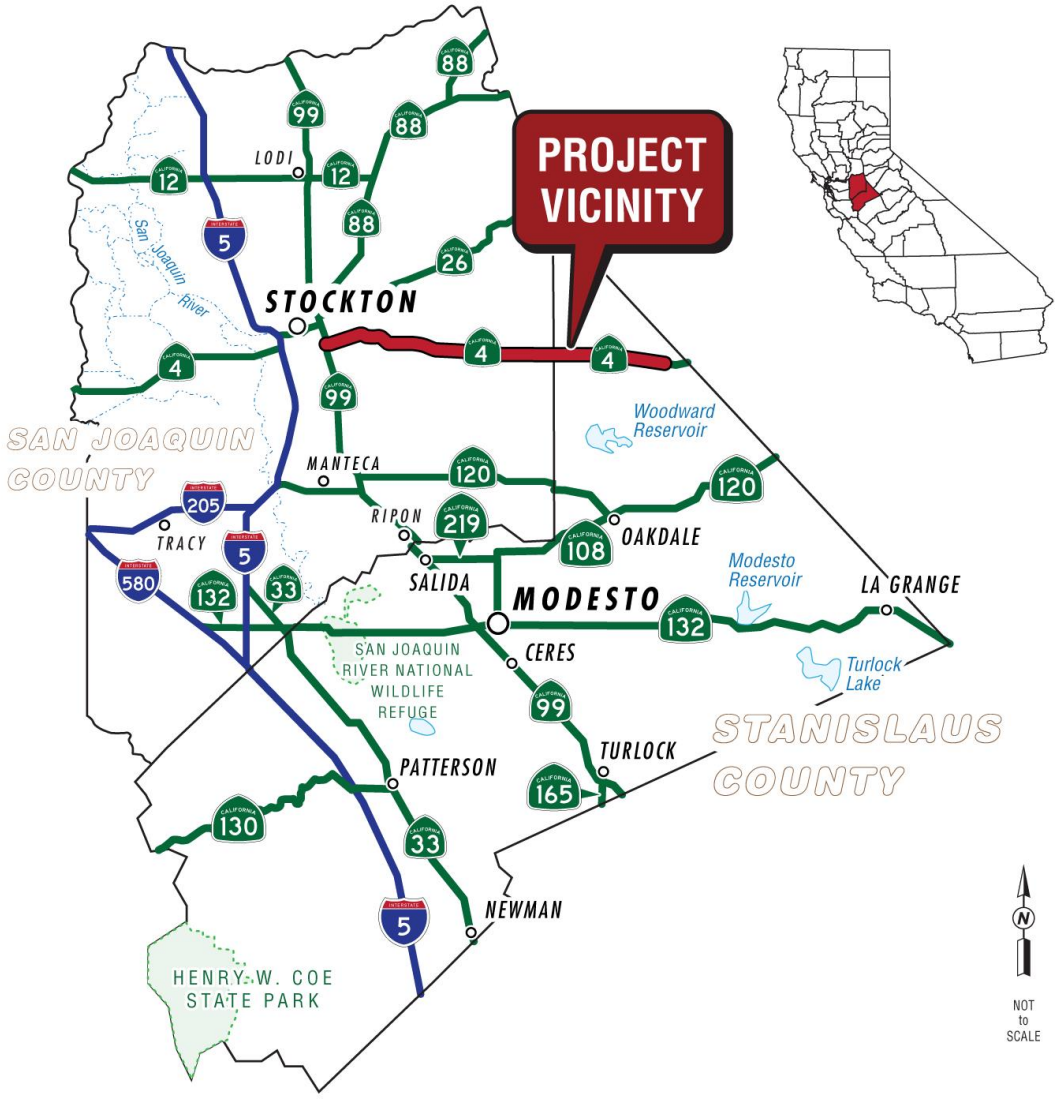
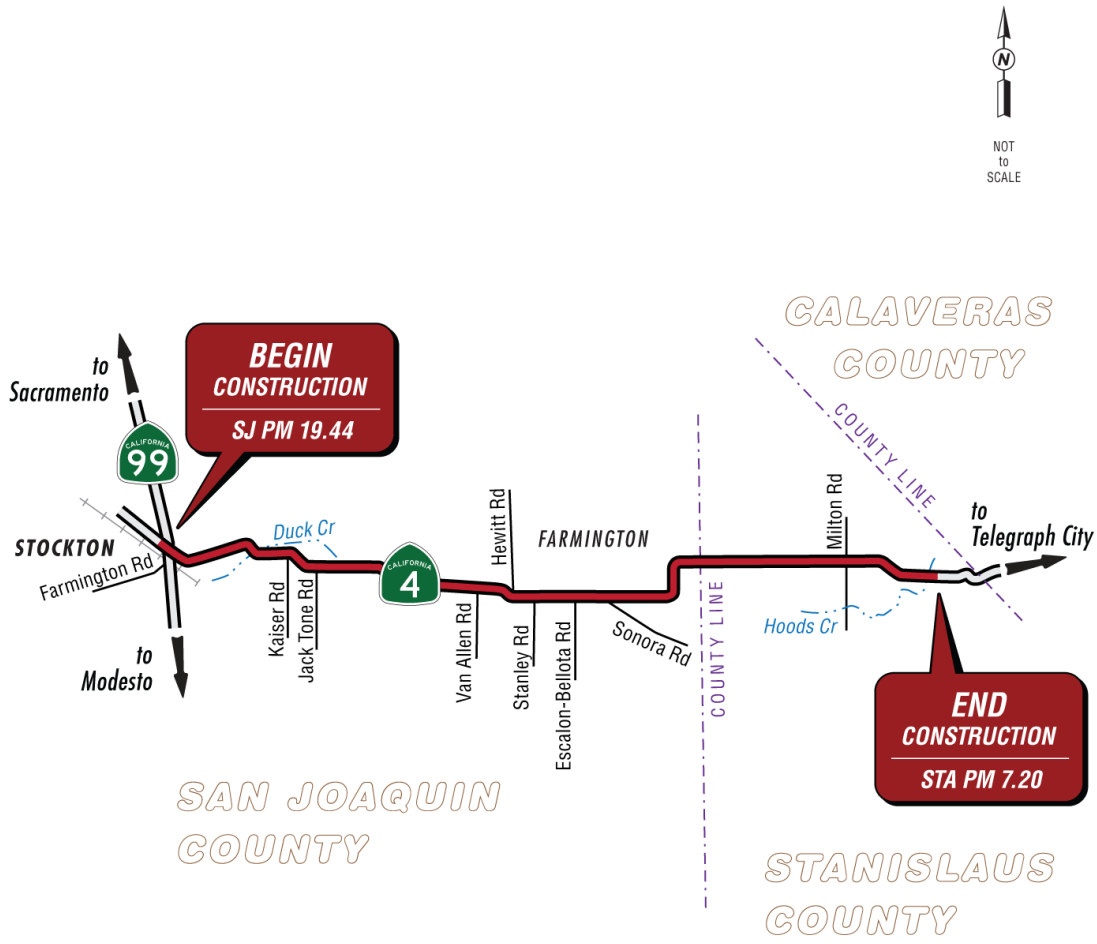


Figure 1-2 Project Location Map



1.4 Project Alternatives

The project is located in San Joaquin County and Stanislaus County on State Route 4 from the State Route 99/State Route 4 interchange in San Joaquin County to 1.6 miles west of the Stanislaus/Calaveras County line in Stanislaus County. The total length of the project is 25.8 miles.

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

1.4.1 Build Alternative

State Route 4 within the project areas is two-lane conventional highway with 12-foot lanes and zero to 4-foot outside shoulders.

The Build Alternative would do the following work along State Route 4: pavement overlay, culvert rehabilitation, bridge rail and guardrail upgrades, sidewalk modifications and shoulder backing.

The Build Alternative would include the following work:

- Dig out and repair localized areas of severe pavement deterioration and place a rubberized hot mix asphalt overlay in San Joaquin County and hot mix asphalt in Stanislaus County on the roadway surface throughout the project limits
- Replace various culverts within the project limits
- Replace concrete barrier transitions at Duck Creek Bridge (29-0053). Little John Creek (Bridge Number 29-0055), Duck Creek Bridge (38-0056) Duck Creek Bridge (38-0039), Rockaway Creek Bridge (Bridge Number 38-0017), Rock Creek Bridge (38-0040) and Far Rockaway Creek Bridge (Bridge Number 38-0026).
- Upgrade and install traffic warning signs
- Remove and upgrade existing guardrails and dikes
- Construct a new sidewalk and Americans with Disabilities Act ramps within Farmington along the north side of State Route 4
- Place shoulder backing and rumble strips throughout the project area
- Update and/or install Traffic Management System elements

This project contains a number of standardized project measures that are used on most, if not all, Caltrans projects 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 not be improved from its fair and poor conditions and would continue to deteriorate. This deterioration would mean a decrease in ride quality over time and could require more significant repairs in the future. The culverts would stay in poor condition, decreasing their function and increasing the risk of failure. The roadway elements through Farmington would still not meet current Americans with Disabilities Act standards. The traffic operations improvements would not occur.

1.5 Comparison of Alternatives

The Build Alternative would permanently impact up to 0.03 acre of wetlands and special-status species habitat. It would have no significant impacts to environmental resources once measures were implemented and replacement habitat were purchased. 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. Culvert improvements would not occur. he 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
California Department of Fish and Wildlife	Streambed 1600 Permit	Caltrans will obtain permit prior to construction
California Department of Fish and Wildlife	2081-Incidental Take Permit	Caltrans will obtain permit prior to construction
Regional Water Quality Control Board	Clean Water Act 401 Permit	Caltrans will obtain permit prior to construction
U.S. Army Corps of Engineers	Clean Water Act 404 Permit	Caltrans will obtain permit prior to construction
U.S. Fish and Wildlife Service	Biological Opinion	Caltrans will obtain prior to the final environmental document
San Joaquin Valley Air Pollution Control District	National Emission Standards for Hazardous Air Pollutants	Notification prior to bridge modifications
Central Valley Flood Protection Board	Central Valley Flood Protection Board Permit	Caltrans will obtain prior to construction

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 n ext 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 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, though the addition of sidewalks would provide a benefit by improving the walkability of those areas.
- Environmental Justice—No minority or low-income populations would be adversely affected by the project. Therefore, this project is not subject to provisions of Executive Order 12898.
- Traffic and Transportation—The project would have no long-term effects on traffic or transportation. (Project Report)
- Air Quality—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, October 2022)

- Noise—The project is not a Type 1 project and will not have permanent noise impacts. (Noise Study Report, October 2022)
- 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, October 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, October, 2022)
- Paleontology—Due to the extent and intensity of the proposed ground disturbance, it is not anticipated the project will encounter scientifically significant fossils. (Paleontology Identification Report, October 2022)
- Energy—The project would not add roadway capacity. Therefore, the project is not likely to increase direct energy consumption. (Project Report)
- 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 of Farmington. (Visual Impact Assessment/Scenic Resource Evaluation, October 2022)
- Natural Communities—No natural communities, except for wetlands and other waters, were identified within the project area. Wetlands and other waters are discussed in section 2.3.1.
- Section 4(f)—There are no Section 4(f) properties impacted by the project.
- Plant species—The project would not impact special-status plants except for those discussed in section 2.3.3 Threatened and Endangered Species.

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 to 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

Natural Resources Conservation Service Farmland Conversion Impact Rating forms were completed for the project on June 3, 2022 (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 2.8 acres would be acquired for the project at the 22 culvert locations.

Environmental Consequences

On May 13, 2022, Caltrans initiated consultation with the Natural Resources Conservation Service by completing Natural Resources Conservation Service CPA-106 Farmland Conversion Impact Rating forms for the project. The forms were 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 June 3, 2022.

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.

Because the project is in two counties, two separate farmland forms would have been issued by the Natural Resources Conservation Service. But Stanislaus County has no prime or unique farmland in the project area, so no impact rating was issued for the Stanislaus County portion. For San Joaquin County, the Farmland Conversion Impact Rating for the Build Alternative was determined to be 157, 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 (San Joaquin County)	0.27	0.27	0.2	0.00003	Less than 0.000001	157
Build Alternative (Stanislaus County)	1.0	0.0	1.0	NA	NA	NA

Source: Natural Resources Conservation Service CPA-106 Farmland Conversion Impact Rating form, June 3, 2022

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 Relocation and Real Property

Regulatory Setting

The Caltrans Relocation Assistance Program is based on the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, and Title 49 Code of Federal Regulations Part 24. The purpose of the Relocation Assistance Program is to ensure that persons displaced as a result of a transportation project are treated fairly, consistently, and equitably so that such persons will not suffer disproportionate injuries as a result of projects designed for the benefit of the public as a whole.

All relocation services and benefits are administered without regard to race, color, national origin, persons with disabilities, religion, age, or sex. Please see Appendix A for a copy of the Caltrans Title VI Policy Statement.

Affected Environment

Three distinct areas sit within the project area. Most of the project area is rural farmland, except for Stockton in the east and Farmington at the corner of

State Route 4 and Escalon-Bellota Road. Those locations are a mix of residential and commercial properties.

Environmental Consequences

No relocations are required for the project. The project would acquire small pieces of farmland around the culverts that are being improved. Table 2.2 shows the anticipated acquisitions.

Table 2.2 Anticipated Acquisitions

Assessor's Parcel Number	Grantor	Acquisition in Acres
0183-280-050	Long Ranch Management Company	0.0289
0183-330-080	Chiappe Farm Inc	0.1
183-330-240	Janssen and Sons LLC	0.0739
183-330-050	Anthony A Chiappe and Carrie J Chiappe	0.0231
187-060-010	Anthony A Chiappe and Carrie J Chiappe	0.0510
001-008-011	John W Robie and Kathryn W Robie	0.1
001-010-001	Michael Robie and Kristen Robie	0.1
001-008-013	Harold V Hatler and Geraldine A Hatler	0.1
001-010-002	Catherine M Bagley and Jane W Hunter Trust	0.1
001-008-024	Orvis and Snow LP	0.0459
001-010-017	James L Orvis and Marianne S Orvis	0.0459
001-014-015	James L Orvis and Marianne S Orvis	0.15
001-014-005	James L Orvis and Marianne S Orvis	0.0459
001-014-019	James T Echandi	0.1

Avoidance, Minimization, and/or Mitigation Measures

For any person(s) whose real property interests would be impacted by the proposed project, the acquisition of those property interests would comply fully with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended. The act is a federally mandated program that applies to all acquisitions of real property or displacements of persons resulting from federally assisted programs or projects. It was created to provide for and ensure the fair and equitable treatment of all such persons.

Also, the Fifth Amendment of the U.S Constitution provides that private property may not be taken for public use without payment of "just compensation." All impacted owners would be provided with notification of the acquiring agency's intent to acquire an interest in their property, including a

written offer letter of just compensation specifically describing those property interests. A right-of-way specialist would be assigned to each property owner to assist with this process.

2.1.3 Emergency Services

Affected Environment

Pacific Gas and Electric and AT&T lines run through the project area.

First responders to emergencies within the project area may include the following:

- California Highway Patrol
- Eastside Fire District
- Boggs-Tract Fire District
- Collegeville Fire District
- Farmington Fire District
- Oakdale Rural Fire District
- San Joaquin County Sheriff's Department
- Stanislaus County Sherriff's Department
- Private emergency medical transportation

Environmental Consequences

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 Pedestrian and Bicycle Facilities

Regulatory Setting

Caltrans, as assigned by the Federal Highway Administration, directs that full consideration should be given to the safe accommodation of pedestrians and

bicyclists during the development of federal-aid highway projects (23 Code of Federal Regulations 652). It further directs that the special needs of the elderly and the disabled must be considered in all federal-aid projects that include pedestrian facilities. When current or anticipated pedestrian and/or bicycle traffic presents a potential conflict with motor vehicle traffic, every effort must be made to minimize the detrimental effects on all highway users who share the facility.

In July 1999, the U.S. Department of Transportation issued an Accessibility Policy Statement pledging a fully accessible multimodal transportation system. Accessibility in federally assisted programs is governed by the U.S. Department of Transportation regulations (49 Code of Federal Regulations 27) implementing Section 504 of the Rehabilitation Act (29 U.S. Code 794). The Federal Highway Administration has enacted regulations for the implementation of the 1990 Americans with Disabilities Act, including a commitment to build transportation facilities that provide equal access for all persons. These regulations require application of the Americans with Disabilities Act requirements to federal-aid projects, including Transportation Enhancement Activities.

Affected Environment

State Route 4 within the project area is a two-lane conventional highway with zero to 4-foot outside shoulders. Bicycles are allowed on State Route 4 within the project, but the route is not a designated bike path according to the San Joaquin Bike Plan and the Stanislaus Non-Motorized Transportation Plan. The project area has no designated bike lanes.

Environmental Consequences

The project has no planned additional bike lanes proposed. New 6-foot sidewalks would be constructed on the north side of State Route 4 throughout the community of Farmington.

Avoidance, Minimization, and/or Mitigation Measures

No measures are necessary.

2.1.5 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 following:

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 (also known as 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 August 2022, 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 was finalized in July 2022. Professionally Qualified Staff archaeologists identified and reviewed archaeological resources within the project's Area of Potential Effects, which was determined by the preliminary project plans.

Identification efforts included a record search at the Central California Information Center, review of the Caltrans Cultural Resources Database and literature review of previously recorded cultural resources identified within the project's Area of Potential Effects, archival historical research, examination of Caltrans bridge as-builts, consultation with the Native American Heritage Commission and local Native American groups and individuals, and a field review of the project's archaeological survey area. The field review included all unpaved areas within the Area of Potential Effects. A total of 27.64 acres were surveyed for this report.

As a result of the study, one previously unidentified archaeological item and six previously recorded archaeological resources were identified within the project's Area of Potential Effects.

Architectural History

An Historic Resource Evaluation Report was finalized in July 2022. A Professionally Qualified Staff architectural historian identified and reviewed built environment resources within the project's Area of Potential Effects, which was determined by the preliminary project plans.

Archival research and a walk-by survey of Caltrans' existing right-of-way along with the proposed right-of-way and land acquisition for the project were

done to identify historic-era (50 years or older) buildings and structures within the study area. These efforts identified one unrecorded built environment resource.

Within the Architectural Area of Potential Effects, one built environment resource was formally evaluated under the criteria of the National Register of Historic Places. The property was also evaluated in accordance with Section 15064.5 (a) (2)-(3) of the California Environmental Quality Act Guidelines, using the criteria outlined in Section 5024.1 of the California Public Resources Code.

The building at 25520 East Highway 4 was found to be eligible for inclusion in the National Register of Historic Places and the California Register of Historical Resources. The property is a historical resource for the purposes of the California Environmental Quality Act. The building is identified as follows:

- The Farmington Hall/Association Building has been deemed eligible for the National Register of Historic Places. It is eligible due to its importance in the local development of the area from 1881 to 1902.

Environmental Consequences

Archaeology

There are seven known cultural materials within the project's Area of Potential Effects.

Caltrans has obtained concurrence of a "No Adverse Effect" determination from the State Historic Preservation Officer on November 1, 2022.

These resources would be protected from adverse effects, or effects would be minimized through installation of environmentally sensitive area fencing and implementation of archaeological monitoring areas.

Architectural History

Impacts to historic properties are not anticipated because the project is staying within the Caltrans right-of-way at that location. It is not anticipated that the project would adversely affect any eligible property within the project area.

Avoidance, Minimization, and/or Mitigation Measures

Archaeology

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

- Environmentally Sensitive Area Designation: The establishment of environmentally sensitive areas will be designated by environmentally sensitive area fencing within Caltrans' right-of-way. "Environmentally

sensitive area" information will 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" will 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 will 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 will be required to mark over the boundary of the archaeological resource, given the archaeological resource temporary ID Number 2567-1, which will prevent the contractor from disturbing the site during construction.
- Caltrans Standard Special Provision Section 14-1.03B: Archaeological Monitoring Areas will be included in the construction contract. An archaeologist and Native American monitor will 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

No mitigation measures are anticipated.

2.2 Physical Environment

2.2.1 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 August 2021, consisted of 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.

Environmental Consequences

Asbestos-Containing Material and Lead-Based Paint

Asbestos-containing materials and/or lead-based paint may be present in the existing structures within the project area. The railing at the Duck Creek Bridge (Bridge Number 29-0053) will be removed/replaced. The San Joaquin Valley Air Pollution Control District requires an asbestos survey prior to demolition or modification. A Preliminary Site Investigation addressing the asbestos and lead-based paint on the structure would need to be conducted before construction.

Aerially Deposited Lead

Aerially deposited lead from the historical use of leaded gasoline exists in surface soils along roadways throughout California. There will be soil disturbance. However, excess soil requiring offsite disposal or relinquishment is not anticipated for the project.

Avoidance, Minimization, and/or Mitigation Measures

Pending the Preliminary Site Investigation results, any asbestos-containing material and/or lead-based paint exceeding regulatory levels will be disposed of appropriately.

2.2.2 Hydrology and Floodplain

Regulatory Setting

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

To comply, the following must be analyzed:

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

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

Affected Environment

A location hydrology report was completed in June 2022.

There are numerous creeks within San Joaquin and Stanislaus counties. Duck Creek and Little John Creek are the regulated streams in the floodways within the project limits. The project structure work includes bridge deck overlay and end block transitions on Hood Creek Bridge (Bridge Number 38-0041), Little John Creek Bridge (Bridge Number 29-0055), Duck Creek Bridge (Bridge Number 38-0039), Rockaway Creek Bridge (Bridge Number 38-0017) and Far Rockaway Creek Bridge (Bridge Number 38-0026); end block transitions on Duck Creek Bridge (Bridge Number 29-0056) and Rock Creek Bridge (Bridge Number 38-0040); and replacement of the existing metal beam guardrail with either concrete barriers or new Midwest guardrail system on Duck Creek Bridge (Bridge Number 290053). The aforementioned project work at the bridge structures has Regulated Stream and Non-Federal Levee Centerline. A Central Valley Flood Protection Board permit needs to be applied during the Plans, Specifications and Estimate phase of the project.

Flood Insurance Rate Maps (FIRM) indicate that most of the project area including most of the bridges is outside the 100-year floodplain, except at the following locations:

- Duck Creek Bridge (Bridge Number 29-0053) at post mile 22.72. This location is within the 100-year floodplain Zone AE, which represents a 1 percent chance of flooding annually, with the base flood elevations known.
- State Route 4 and Bellota Road Intersection. This location is within the 100-year floodplain Zone AO, which represents a 1 percent chance of flooding annually, with flood depths of 1 to 3 feet.

Environmental Consequences

At the Duck Creek Bridge, the metal beam guardrail would be removed and replaced, and the bridge and approach rails would be upgraded. So only temporary encroachment into the floodplain is anticipated. Best Management Practices will be implemented thus making it not a significant encroachment.

At the intersection of State Route 4 and Escalon-Bellota Road, the project would construct a sidewalk along the north side of State Route 4. This would not constitute a significant encroachment into the floodplain.

Avoidance, Minimization, and/or Mitigation Measures

With best management practices, no significant encroachment to the floodplain will occur, so no measures are required.

2.3 Biological Environment

2.3.1 Wetlands and Other Waters

Regulatory Setting

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

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

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

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

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

At the state level, wetlands and waters are regulated mostly by the State Water Resources Control Board, the Regional Water Quality Control Boards and the California Department of Fish and Wildlife. In certain circumstances, the Coastal Commission (or Bay Conservation and Development Commission or the Tahoe Regional Planning Agency) may also be involved. Sections 1600-1607 of the California Fish and Game Code require any agency that proposes a project that will substantially divert or obstruct the natural flow of or substantially change the bed or bank of a river, stream, or lake to notify the California Department of Fish and Wildlife before beginning construction. If the California Department of Fish and Wildlife determines that the project may substantially and adversely affect fish or wildlife resources, a Lake or Streambed Alteration Agreement will be required.

California Department of Fish and Wildlife jurisdictional limits are usually defined by the tops of the stream or lake banks, or the outer edge of riparian vegetation, whichever is wider. Wetlands under jurisdiction of the U.S. Army Corps of Engineers may or may not be included in the area covered by a Streambed Alteration Agreement obtained from the California Department of Fish and Wildlife.

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

Affected Environment

A Natural Environment Study was completed in October 2022.

The project is in a mostly agricultural area, except for the eastern portion of the project area, which is in the city of Stockton. Most of the project activity would be on the highway or immediately next to the highway. Potential waters occur mostly around the culverts through the project area.

Caltrans surveyed the biological study area and identified potential wetlands in the area, as shown in Table 2.3.

Table 2.3 Potential Wetlands within the Biological Study Area

Project Location	Area (Square Feet)
STA-4 Post mile 3.09	540.64
STA-4 Post mile 3.09 (Location 2)	351.63
STA-4 Post mile 3.09 (Location 3)	69.55
STA-4 Post mile 3.25(Location 1)	640.48
STA-4 Post mile 3.25 (Location 2)	535.16
STA-4 Post mile 4.02(Location 1)	387.31
STA-4 Post mile 4.02 (Location 2)	164.94
STA-4 Post mile 4.23 (Location 1)	684.43
STA-4 Post mile 4.23 (Location 2)	304.38
STA-4 Post mile 5.44 (Location 1)	651.83
STA-4 Post mile 5.44 (Location 2)	290.93
STA-4 Post mile 6.36 (Location1)	669.67
STA-4 Post mile 6.36 (Location 2)	460.23

A total of 0.13 acre of wetlands potentially qualifying as waters of the United States and/or waters of the State of California were delineated within the biological study area. Caltrans surveyed the project area to identify potential jurisdictional waters of the United States and of the State.

Environmental Consequences

Project drainage work affecting potential waters of the United States and/or waters of the State of California includes the replacement or installation of highway drainage culverts, using cut-and-cover to install culvert end treatments of flared end sections.

For the purposes of replacing culverts by "cut-and-cover," a temporary disturbance area of up to 20 feet by 20 feet would be assumed at each culvert end (inlet and outfall), as well as along the centerline of the culvert along the roadway and adjacent shoulders and embankments where trenching would occur. In some cases, hand crew access to culvert inlet and outfall areas may require shrubby vegetation clearing and/or vegetation trimming.

Approximately 2,411.81 square feet (0.055 acre) of potentially jurisdictional "other waters" of the waters of the United States would be temporarily disturbed by contractor access to culvert inlets and outfalls. Installation of expanded culverts is expected to result in permanent fills totaling 141.12 square feet (0.003 acre). See Table 2.4.

Table 2.4 Impacts to Potential Jurisdictional Waters of the U.S. and Waters of the State within Project Area

Location	Permanent Impacts Area (square feet)	Temporary Impacts Area (square feet)
STA-4 Post mile 3.09	20.16	143.55
STA-4 Post mile 3.25	20.16	96.46
STA-4 Post mile 4.02	20.16	170.97
STA-4 Post mile 4.23	20.16	794.17
STA-4 Post mile 5.44	40.32	830.03
STA-4 Post mile 6.36	20.16	376.63
All Locations Total	114.12 (0.003 acres)	2,411.81 (0.055 acres)

Avoidance, Minimization, and/or Mitigation Measures

Avoidance and Minimization Measures

Environmentally Sensitive Area Designation: Additional direct and indirect impacts to sensitive biological resources throughout the project area would be avoided or minimized by designating "environmentally sensitive areas." All areas outside of the proposed construction footprint shall be considered an environmentally sensitive area; in addition, included is any area determined by a qualified biologist during project planning or during pre-construction surveys to qualify for environmentally sensitive area designation.

Designated Biologist: A Designated Biologist or biologists shall be onsite during any activities that have the potential to affect sensitive biological

resources. The Designated Biologist will monitor regulated species and habitats; ensure that construction activities do not result in the unintended take of regulated species or disturbances to regulated habitats; ensure that construction activities comply with any permits, licenses, agreements, or contracts; immediately notify the Caltrans Resident Engineer of any take of regulated species, disturbances to regulated habitats, or breaches of environmentally sensitive areas; and prepare, submit, and sign notifications and reports. A Designated Biologist who performs specialized activities must have demonstrated field experience working with the regulated species or performing the specialized task, and regulatory agency approval will be required prior to Caltrans' acceptance of the Designated Biologist.

Containment Measures/Construction Site Best Management Practices: To contain construction-related material and prevent debris and pollutants from entering receiving waters and to reduce the potential for discharge to receiving waters, the contractor shall follow all applicable guidelines and requirements in Section 13 of the Caltrans 2018 Standard Specifications or any Special Provisions in Section 13 regarding water pollution control and general specifications for preventing, controlling, and abating water pollution in streams, waterways, and other bodies of water.

Worker Environmental Awareness Training for Construction Personnel: Before any work occurs in the project area, a qualified Designated Biologist (Designated Biologist; familiar with the resources to be protected) will conduct a mandatory "Worker Environmental Awareness Training" for construction personnel. The awareness training will be provided to all construction personnel (contractors and subcontractors) to brief them on the need to avoid and minimize effects to sensitive biological resources (e.g., jurisdictional wetlands and other waters, threatened and endangered species, other special-status species, roosting bats, nesting birds, etc.) within and adjacent to construction areas and the penalties for not complying with applicable state and federal laws and permit requirements. The Designated Biologist will inform all construction personnel about the life history and habitat requirements of special-status habitats and species known to occur or with potential for occurrence onsite, the importance of maintaining habitat, and the terms and conditions of regulatory requirements.

Restore and Revegetate Temporarily Disturbed Areas Onsite: Disturbed areas within the construction limits will be graded to minimize surface erosion and siltation into receiving waters. Disturbed areas will be re-contoured to as close to pre-project condition as possible and will be stabilized as soon as feasible (and no later than October 15 of each construction season) to avoid erosion during subsequent storms and runoff. Permanent erosion control seeding will be performed at all disturbed sites by hydro-seeding over the course of construction as each site is completed, with all sites seeded by the completion of construction activities.

Compensatory Mitigation

Permanent losses of waters of the United States would be compensated by participation in the Nation Wildlife Federation's Sacramento District California In-Lieu Fee Program.

2.3.2 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 later in the Threatened and Endangered Species section (Section 2.3.3). 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 October 2022. See the Natural Environment Study for the official species lists for state and federal species potentially in the project area.

Western Burrowing Owl

The western burrowing owl (*Athene cunicularia*) is considered a bird species of special concern by the California Department of Fish and Wildlife. It is a year-round resident throughout much of the state. Seasonal status varies regionally, with birds retreating from higher elevations such as the Modoc Plateau in winter. The owls have been found year-round in the Central Valley,

San Francisco Bay region, Carrizo Plain, and Imperial Valley. Migrants from other parts of western North America join the local lowland populations in winter. The breeding season in California is March to August but can begin as early as February and extend into December.

There are three California Natural Diversity Database records for occurrences of the burrowing owl within 5 miles of the biological study area. All three records are from 1987.

Although wildlife surveys in October 2021 did not detect the presence of burrowing owls or sign (tracks, scat, etc. at potential burrows) of this species within the study area, numerous burrows that could serve as potential nesting habitat for this species, including burrows excavated by California ground squirrels, were found next to State Route 4 throughout the study area during wildlife surveys.

Swainson's Hawk and Other Migratory Birds

The Swainson's hawk (*Buteo swainsoni*) is a California Endangered Species Act-listed threatened species. The hawk occurs as a breeding species in open habitats throughout much of the western United States and Canada, and in northern Mexico. In California, breeding populations of Swainson's hawks occur in desert, shrub-steppe, grassland and agricultural habitats, but most of the state's breeding sites are found in two populations in the Great Basin and Central Valley: in the Central Valley between Sacramento and Modesto, and in the northern San Joaquin Valley.

Numerous recorded occurrences of the Swainson's hawk are within 5 miles of the biological study area. The closest occurrence was recorded in 1990, about one-tenth of a mile southwest of the biological study area near eastern Stockton near State Route 99.

The western portion of the biological study area is within a mostly urban setting with many large mature trees able to provide suitable habitat. Also, remnant patches of eucalyptus woodland and annual grassland habitat within the eastern portion of the biological study area may serve as marginal quality nesting and foraging habitat for the Swainson's hawk.

There are no known nest locations within the biological study area.

Suitable nesting habitat for other migratory birds and raptors is present within grassland habitats within and adjacent to the biological study area.

Western Spadefoot Toad

The western spadefoot toad is a California species of special concern. The species' range is the Central Valley and adjacent foothills and the Coast Ranges from south of Monterey County to western Baja California. More than 80 percent of previously occupied habitat in Southern California is no longer

suitable because of habitat conversion. The western spadefoot toad has been almost completely eliminated from the Sacramento Valley, and populations in the eastern San Joaquin Valley have decreased. Western spadefoot toads can be found at elevations over 4,000 feet but most are found below 3,000 feet.

Two California Natural Diversity Database records for occurrences of western spadefoot toad are within 5 miles of the biological study area. Both occurrences are non-specific records from 1978 and 1981 and identify potentially occupied habitat as streams like North Fork Duck Creek that cross State Route 4.

Annual grassland habitat within the biological study area along State Route 4 in Stanislaus County represents potential upland habitat for the western spadefoot toad. Aquatic breeding habitat is also present in the biological study area within nearby vernal pools at locations STA-4-3.09, STA-4-3.25, STA-4-4.02, STA-4-4.23, and STA-4-5.44. The western spadefoot toad was found in a vernal pool at location STA-4-4.23 during the January 2022 survey.

Environmental Consequences

Western Burrowing Owl

Project construction activities, specifically culvert replacement activities, could result in the destruction of one or more existing mammal burrows. With the implementation of avoidance measures outlined below, construction activities are not expected to result in the “take” of burrowing owls.

Swainson’s Hawk and Other Migratory Birds

Noise associated with construction activities involving heavy equipment operation that occurs during the breeding season (generally between February 1 and August 31) could disturb nesting Swainson’s hawks if an active nest is near these activities. Potential impacts could include abandonment of nest sites and the death of young. Indirect impacts to nesting birds during construction could extend up to 250 feet from the limits of construction. Any disturbance that causes Swainson’s hawk nest abandonment and subsequent loss of eggs or developing young at active nests near the project area would violate the California Endangered Species Act and the Migratory Bird Treaty Act.

The project could affect other nesting migratory birds and raptors, either through direct injury or death during ground-disturbing activities or by disrupting normal behaviors, including nesting.

Western Spadefoot Toad

Construction activities would occur within suitable aquatic breeding habitat for the western spadefoot toad, and toads could disperse through the work area if they occupy adjacent habitats and are active above ground during construction. The project therefore has the potential to result in the perusal,

capture, or intentional or accidental killing of western spadefoot toads. Therefore, construction activities within the biological study area could result in the "take" (as defined by California Fish and Game Code Section 86) of western spadefoot toads. To minimize potential for spadefoot toads to be directly impacted during construction, avoidance and minimization efforts (see next section below) will be implemented. The measures include restricting the timing of construction in the vicinity of vernal pool grasslands to dry periods when spadefoot toads are less likely to be dispersing, and installing exclusion fencing to prevent spadefoot toads from entering the work area.

Indirect impacts on the western spadefoot toad could also occur if construction activities near suitable aquatic habitat results in sediment and/or contaminant movement into the aquatic habitat so that the debris degrades the physical and/or chemical properties of the habitat (sedimentation and/or affected water quality). Implementation of construction Best Management Practices and avoidance and minimization measures (see next section below) would avoid impacts on water quality within adjacent aquatic resources, reducing the potential impact of chemical contaminants on the western spadefoot toad.

Direct permanent impacts to spadefoot toad breeding habitat may result from partial excavation or filling during construction. The total acreage of permanent western spadefoot toad breeding (aquatic) habitat is estimated to be 0.003 acre. The total acreage of permanent western spadefoot toad upland habitat is estimated to be 0 acres.

The total acreage of temporary western spadefoot toad breeding (aquatic) habitat is estimated to be 0.047 acre and 0.10 acre for temporary western spadefoot toad upland habitat.

Avoidance, Minimization, and/or Mitigation Measures

Western Burrowing Owl

Avoidance and Minimization Efforts

- Nesting Bird Avoidance–Limited Operation Period—If possible, construction activities within the nesting bird habitat should occur during the non-nesting season (between October 1 and January 31). If not feasible, then pre-construction surveys or nesting bird avoidance measures would be required.
- Nesting Bird Avoidance–Pre-Construction Surveys During Nesting Season—If ground-disturbance, vegetation removal, or other construction activities are scheduled during the nesting season of protected raptors and migratory birds (February 1 to September 30), a focused survey for active nests of such birds shall be conducted by a qualified biologist within 15 days prior to the beginning of project-related activities. If a lapse in project-related work of 15 days or longer occurs, another survey and, if required, consultation with the U.S. Fish and Wildlife Service and

California Department of Fish and Wildlife will be required before the work can be reinitiated. Pre-construction surveys for nesting migratory birds and raptors shall be specified under Caltrans 2018 Standard Specification and/or Standard Special Provision 14-6.03A (Species Protection) and/or 14-6.03(B) (Bird Protection).

- Nesting Bird Avoidance–Avoid Active Nests—If active nests are found, a protective no-work buffer will be established, and Caltrans shall consult with the U.S. Fish and Wildlife Service regarding appropriate action to comply with the Migratory Bird Treaty Act of 1918 and with the California Department of Fish and Wildlife to comply with provisions of the Fish and Game Code of California. The no-work buffer for burrowing owl would be 655 feet from April 1 to October 15 and 165 feet from October 16 to March 31.

Compensatory Mitigation

Compensatory mitigation is not required for the burrowing owl.

Swainson's Hawk and Other Migratory Birds

Avoidance and Minimization Efforts

To the maximum extent feasible, the project has been designed, modified, and amended to avoid and minimize potential project-related impacts to the Swainson's hawk. However, if this species is present within the biological study area during implementation of the project, individual birds and their habitat could be impacted. The following measures will be implemented to avoid and minimize potential impacts to the Swainson's hawk:

- Worker Environmental Awareness—Training for Construction Personnel—Before any work occurs in the project area, a qualified Designated Biologist (Designated Biologist; familiar with the resources to be protected) will conduct a mandatory "Worker Environmental Awareness Training" for construction personnel. The awareness training will be provided to all construction personnel (contractors and subcontractors) to brief them on the need to avoid and minimize effects to sensitive biological resources (e.g., jurisdictional wetlands and other waters, threatened and endangered species, other special-status species, roosting bats, nesting birds, etc.) within and adjacent to construction areas and the penalties for not complying with applicable state and federal laws and permit requirements. The Designated Biologist will inform all construction personnel about the life history and habitat requirements of special-status habitats and species known to occur or with potential for occurrence onsite, the importance of maintaining habitat, and the terms and conditions of regulatory requirements.
- Designated Biologist—A Designated Biologist or biologists shall be onsite during any activities that have the potential to affect sensitive biological resources. The Designated Biologist will monitor regulated species and habitats; ensure that construction activities do not result in the unintended take of regulated species or disturbances to regulated habitats; ensure

that construction activities comply with any permits, licenses, agreements, or contracts; immediately notify the Caltrans Resident Engineer or of any take of regulated species, disturbances to regulated habitats, or breaches of environmentally sensitive areas; and prepare, submit, and sign notifications and reports. A Designated Biologist who performs specialized activities must have demonstrated field experience working with the regulated species or performing the specialized task, and regulatory agency approval will be required prior to Caltrans' acceptance of the Designated Biologist.

- Conduct Pre-construction Surveys for Nesting Migratory Birds and Raptors, including Special-Status Species, and Establish Protective Buffers—A qualified wildlife biologist will conduct nesting bird surveys if construction occurs between February 1 and September 30. These nesting bird surveys will include a minimum of two separate surveys to look for active nests of migratory birds, including raptors. Surveys will include a search of all trees and shrubs, and ruderal areas that provide suitable nesting habitat for birds within 100 feet of construction disturbance. In addition, a 0.5-mile area from the biological study will be surveyed for nesting raptors to identify raptors that might be affected by construction disturbances, particularly special-status raptors (i.e., northern goshawk, great gray owl, and California spotted owl). The biologists conducting the surveys should have experience with all special-status birds that could potentially nest within the survey area. In areas where access is not permitted, the surveyors will use binoculars and spotting scopes to inspect any potential nest trees, particularly large trees and snags. Surveys should occur during the height of the breeding season (March 1 to June 1), with one survey occurring within 1 week prior to the start of construction.

  If no special-status raptor species or active nests are detected during these surveys, no additional measures are required. If an active nest is found in the survey area, a no-disturbance buffer will be established to avoid disturbance or destruction of the nest site until the end of the breeding season (September 30) or until after a qualified wildlife biologist determines that the young have fledged and moved out of the construction area (this date varies by species). The extent of these buffers will be determined by the Caltrans Designated Biologist in coordination with any applicable agencies (as determined by species) and will depend on the level of noise or construction disturbance taking place, line-of-sight between the nest and the disturbance, ambient levels of noise and other non-project disturbances, and other topographical or artificial barriers. Suitable buffer distances may vary between species; however, a minimum of 50 feet for songbirds and 300 feet for raptors is typical.

See also the measures listed under western spadefoot toad below for measures that may affect more than one species.

Compensatory Mitigation

Compensatory mitigation is not required for the burrowing owl.

Western Spadefoot Toad

Avoidance and Minimization Efforts

The following measures would be included:

- Worker Environmental Awareness Training for Construction Personnel—Before any work occurs in the project area, a qualified biologist will conduct mandatory worker education training to all construction personnel.
- Environmentally Sensitive Area Designation—All areas outside the proposed construction footprint and designated sensitive areas shall be considered an environmentally sensitive area. These areas will be designated on the construction plans and may be marked off by temporary orange fencing or other high visibility markings. Work inside these areas is forbidden.
- The Designated Biologist shall be onsite for work at culvert locations STA-4-3.09, STA-4-3.25, STA-4-4.02, STA-4-4.23, and STA-4-5.44. The Designated Biologist shall monitor regulated species and habitats, and ensure construction activities comply with permits, licenses, agreements and contracts. The Designated Biologist will notify the Caltrans Resident Engineer of any take of regulated species or disturbances to regulated habitats, or any break of environmentally sensitive areas. The Designated Biologist will prepare, submit and sign notifications and reports.
- Construction best management practices will be in place during construction.
- Retain a Qualified Biologist to conduct pre-construction surveys for the western spadefoot toad.
- All areas disturbed during construction would be re-contoured if necessary and stabilized as soon as possible following completion of construction. Roadside areas would be re-vegetated with Caltrans-approved weed-free and non-invasive plant seed mixture.
- Install Exclusion Fencing Between the Work Area and Suitable Habitat for Western Spadefoot Toad—To prevent western spadefoot toads from entering the active work area during construction at culvert locations STA-4-3.09, STA-4-3.25, STA-4-4.02, STA-4-4.23, and STA-4-5.44, Caltrans shall install wildlife exclusion fencing between the designated work limits and adjacent suitable habitat (open grasslands). Exclusion fencing will be at least 3 feet high, and the lower 6 inches of the fence will be buried in the ground to prevent animals from crawling under. The remaining 2.5 feet will be left above ground to serve as a barrier for animals moving on the ground surface. The fence will be pulled taut at each support to prevent folds or snags. Fencing shall be installed and maintained in good condition

during all construction activities. Such fencing shall be inspected and maintained daily until completion of the work at that site.

- Check for Animals under Construction Equipment and Vehicles Prior to Moving—Prior to being moved, vehicles and equipment will be checked for any sensitive wildlife sheltering underneath them. If an animal is observed, the vehicles/equipment will not be moved until the individual has vacated the area of its own accord.
- Install Escape Ramps in Holes or Trenches Measuring more than 6 Feet Deep—To prevent the inadvertent entrapment of the western spadefoot toad or other animals during construction, any excavated, steep-walled holes or trenches measuring more than 6 inches deep either will be covered at the close of each working day using plywood or similar materials (without openings) or will be provided with one or more escape ramps constructed of earth fill or wooden planks in the event that the holes/trenches cannot be fully covered. All holes or trenches will be checked daily for trapped wildlife; they also will be thoroughly inspected before being filled. If at any time a trapped animal is discovered, the Service-approved biologist(s) will install escape ramps or other appropriate structures (if not already in place) to enable the individual the opportunity to escape on its own.
- Limit the Use of Artificial Lighting—The use of temporary artificial lighting onsite will be limited, except when necessary for construction, or for driver and pedestrian safety. Any artificial lighting used during construction will be confined to areas within the construction footprint and directed away from surrounding habitat.
- Properly Dispose of Food-Related Trash and Remove from Project Site Daily—All food-related trash items such as wrappers, cans, bottles, and food scraps generated by project-related activities and personnel will be disposed of in closed containers and removed daily from the project site to reduce the potential for attracting predator species.
- Prohibit Pets and Firearms from Being Brought to the Project Site—To eliminate the potential for disturbance or injury to, or death of, any species resulting from the presence of pets and firearms, neither (with the exception of firearms carried by authorized law enforcement officials) will be allowed on the project site.

Compensatory Mitigation

Compensatory mitigation is not required for the western spadefoot toad.

2.3.3 Threatened and Endangered Species

Regulatory Setting

The main federal law protecting threatened and endangered species is the Federal Endangered Species Act: 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 (known as 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, 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 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 the 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 October 2022. See the Natural Environment Study for the official species lists for state and federal species potentially in the project area.

Greene's Tuctoria

Greene's tuctoria is an annual grass-like herb that is endemic to freshwater wetlands, valley grasslands, wetland-riparian, and vernal pools in California. The species is from the Poaceae family and has a blooming period from May to July, sometimes extending out to September. Greene's tuctoria is a 1B.1 listed rare plant in the state of California and is considered a federally endangered species.

This species has been recorded by the California Natural Diversity Database within the biological study area within the town of Farmington from a collection made in 1987.

This species has been recorded in the vicinity of Farmington and may occur in vernal pool and grassland habitats. Many vernal pools occur adjacent to the eastern portion of the biological study area on State Route 4 in Stanislaus County. This species was not detected during botanical surveys conducted within the biological study area.

Vernal Pool Fairy Shrimp

The vernal pool fairy shrimp is listed as a threatened species under the Endangered Species Act. The species is found from Shasta County in the north, throughout the Central Valley, and west to the central Coast Ranges, at elevations of 30 to 4,000 feet. Additional populations have been reported in the Agate Desert region of Oregon near Medford. Populations occur in San Luis Obispo, Santa Barbara, and Riverside counties. However, most known locations are in the Sacramento and San Joaquin valleys and along the eastern margin of the central Coast Ranges.

The vernal pool fairy shrimp inhabits vernal pools that form in depressions, usually in grassland habitats. Pools must remain inundated long enough for the species to complete its life cycle; the vernal pool fairy shrimp reaches sexual maturity in a minimum of 18 days. The vernal pool fairy shrimp also occurs in other wetlands that provide habitat similar to vernal pools, such as alkaline rain pools, pools within ephemeral drainages, rock outcrop pools, ditches, stream oxbows, stock ponds, vernal swales, and some seasonal wetlands. Occupied wetlands range in size from as small as several square feet to more than 10 acres.

Vernal pool fairy shrimp and other fairy shrimp have been found in artificial depressions and drainages where water ponds for a sufficient duration, including roadside ditches and ruts left behind by off-road vehicles or heavy

equipment. Soil compaction from construction activity can sometimes create an artificial hardpan, or restrictive layer, which allows water to pond and form suitable habitat for the vernal pool fairy shrimp.

Vernal pool fairy shrimp were documented in 2011 within vernal pools and seasonally ponded areas along East Milton Road, 4 miles north of the project biological study area. Potential aquatic habitat for vernal pool fairy shrimp occurs at all the culvert locations except for location STA-4-post mile 6.36. Branchiopod species were seen within the vernal pool next to the culvert outlet at location STA-4-post mile 3.09 during the January 2022 surveys.

Vernal Pool Tadpole Shrimp

The vernal pool tadpole shrimp is listed as endangered under the Endangered Species Act. The vernal pool tadpole shrimp is a California Central Valley endemic species, with most populations in the Sacramento Valley. This species has also been reported in the Sacramento–San Joaquin River Delta east of San Francisco Bay and in scattered spots in the San Joaquin Valley from San Joaquin to Madera counties.

The vernal pool tadpole shrimp takes about 38 days to mature and reproduces in about 54 days. It occurs in a wide variety of seasonal habitats, including vernal pools, ponded clay flats, alkaline pools, stock tanks, and roadside ditches. This species is found at the highest concentrations in playa pools, large deep vernal pools, and winter lakes (larger than 100 acres) but has also been found in very small short-lived pools (smaller than 25 square feet). The vernal pool tadpole shrimp has been found in a variety of habitats ranging from clear, vegetated vernal pools to highly turbid (murky) alkali scalds with variable depths and volumes of water during the wet cycle. The vernal pool tadpole shrimp is uncommon even where suitable habitats occur. During surveys conducted in 95 areas across 27 counties within Northern and Central California, the vernal pool tadpole shrimp was detected in only 17 percent of more than 5,000 wetlands sampled.

The biological study area potentially supports vernal pool tadpole shrimp and lies within the San Joaquin Valley vernal pool region. There are no known vernal pool tadpole shrimp occurrences near the biological study area. Vernal pool fairy shrimp were documented in 2011 within vernal pools and seasonally ponded areas along East Milton Road, 4 miles north of the biological study area. Potential aquatic habitat for the vernal pool fairy shrimp within the biological study area is located within 10 vernal pools (two at each of the five locations) at the following culvert locations:

- Stanislaus 4 post mile 3.09
- Stanislaus 4 post mile 3.25
- Stanislaus 4 post mile 4.02

- Stanislaus 4 post mile 4.23
- Stanislaus 4 post mile 5.44

Branchiopod species were seen in the vernal pool next to the culvert outlet at location Stanislaus 4 post mile 3.09 during the January 2022 surveys.

California Tiger Salamander

The central population of the California tiger salamander is federally listed as threatened and state listed as threatened. This salamander is endemic to the San Joaquin–Sacramento River valleys, bordering foothills, and coastal valleys of Central California. The species' range is from Sonoma County and the Colusa–Yolo County line south to Santa Barbara County in the Coast Ranges and from southern Sacramento County south to Tulare County in the Central Valley. California tiger salamanders occur at elevations from sea level to about 3,600 feet.

Environmental Consequences

Greene's Tuctoria

Botanical surveys were conducted outside of the blooming period for this species, so it is unknown whether the project would result in adverse impacts to Greene's tuctoria. Pre-construction surveys will be conducted prior to construction.

Vernal Pool Fairy Shrimp/Vernal Pool Tadpole Shrimp

Direct permanent impacts to the vernal pool fairy shrimp and vernal pool tadpole shrimp may result from partial excavation or filling during construction. The total acreage of permanent vernal pool fairy shrimp habitat is estimated to be 0.003 acre. The total acreage of temporary vernal pool fairy shrimp and tadpole shrimp habitat is estimated to be 0.047 acre. See Table 2.5.

Ground-disturbing activities would occur within suitable vernal pool brachiopod habitat. Direct impacts on vernal pool fairy shrimp habitat are anticipated. Impacts from the project could adversely affect vernal pool fairy shrimp due to destruction of vernal pool habitats. Indirect effects associated with potential runoff of hazardous materials into suitable nearby aquatic habitat are also expected. Exposure of vernal pool fairy shrimp to chemical contaminants that result from construction runoff into occupied aquatic habitat could be harmful to the species, resulting in death or reduced reproductive success. Implementation of construction Best Management Practices and avoidance and minimization efforts (see the next section below) would avoid some impacts on vernal pool fairy shrimp by limiting the work area to existing disturbed areas adjacent to the roadway and preventing discharge of hazardous materials into adjacent aquatic habitats.

Project activities could result in permanent and temporary fills in vernal pool habitat and could result in take of this Federal Endangered Species Act-

threatened species due to harassment, harm, pursuit, entrapment, capture, injury, or death. Therefore, it is Caltrans' determination that the project "may affect and is likely to adversely affect" the vernal pool fairy shrimp and vernal pool tadpole shrimp.

Consultation with the U.S. Fish and Wildlife Service under Section 7 of the Federal Endangered Species Act will be required for take of Federal Endangered Species Act-listed species.

Table 2.5 Potential Impacts to Vernal Pool Fairy Shrimp and Vernal Pool Tadpole Shrimp Within the Biological Study Area

Location (Culverts)	Permanent Area (square feet)	Temporary Area (square feet)
STA-4 Post mile 3.09	20.16	143.55
STA-4 Post mile 3.25	20.16	96.46
STA-4 Post mile 4.02	20.16	170.97
STA-4 Post mile 4.23	20.16	794.17
STA-4 Post mile 5.44	40.32	830.03
All Locations Total	120.96 (0.003 acre)	2,035.18 (0.047 acre)

California Tiger Salamander

Direct permanent impacts to California tiger salamander breeding habitat may result from partial excavation or filling during construction. The total acreage of permanent California tiger salamander breeding (aquatic) habitat is estimated to be 0.003 acre. The total acreage of permanent California tiger salamander upland habitat is estimated to be 0 acres. See Table 2.6.

The total acreage of temporary California tiger salamander breeding (aquatic) habitat is estimated to be 0.047 acre and 0.10 acre for temporary upland habitat. See Table 2.6.

Table 2.6 Potential Impacts to California Tiger Salamander and Western Spadefoot Toad Within the Biological Study Area

Location	Permanent Aquatic Habitat Area (square feet)	Temporary Aquatic Habitat Area (square feet)	Permanent Upland Habitat Area (square feet)	Temporary Upland Habitat Area (square feet)
STA-4 Post mile 3.09	20.16	143.55	0	400.39
STA-4 Post mile 3.25	20.16	96.46	0	390.95
STA-4 Post mile 4.02	20.16	170.97	0	375.55
STA-4 Post mile 4.23	20.16	794.17	0	1,230.74

Location	Permanent Aquatic Habitat Area (square feet)	Temporary Aquatic Habitat Area (square feet)	Permanent Upland Habitat Area (square feet)	Temporary Upland Habitat Area (square feet)
STA-4 Post mile 5.44	40.32	830.03	0	2,048.36
All Locations Total	120.96 (0.003 acre)	2,035.18 (0.047 acre)	0	4,445.99 (0.10 acre)

Federal Endangered Species Act (FESA) Determination

Project activities have the potential to result in permanent and temporary fills in vernal pool aquatic and upland California tiger salamander habitat and may therefore result in take of this species under the Federal Endangered Species Act. Therefore, it is Caltrans' determination that the project "may affect and is likely to adversely affect" the California tiger salamander.

Consultation with the U.S. Fish and Wildlife Service under Section 7 of the Federal Endangered Species Act will be required for take of Federal Endangered Species Act-listed species.

California Endangered Species Act (CESA) Determination

The project may result in adverse effects to aquatic and upland habitat that may be occupied by the California tiger salamander. The project is expected to result in the perusal, capture, or intentional or accidental killing of the California tiger salamander. Therefore, the construction activities within the biological study area are expected to result in the take (as defined by California Fish and Game Code Section 86) of the California tiger salamander. The project will implement avoidance measures (see the next section below).

The project is expected to require an Incidental Take Permit under Section 2081 of the California Fish and Game Code. Coordination with the California Department of Fish and Wildlife per California Fish and Game Code Section 1600 will be required.

Avoidance, Minimization, and/or Mitigation Measures

Greene's Tuctoria

Avoidance and Minimization Efforts

Pre-Construction Surveys—Special-Status Plants:

- The qualifications of any proposed biological monitor(s) will be presented to the U.S. Fish and Wildlife Service and California Department of Fish and Wildlife for review and written approval at least 2 weeks prior to conducting project activities at the project site.
- No more than 24 hours prior to any ground disturbance in a given location, pre-construction surveys will be conducted by a California Department of

Fish and Wildlife-approved biologist for sensitive plant species using California Department of Fish and Wildlife-approved survey protocols.

- If sensitive plant species are detected within areas that will be disturbed by construction activities, then no work will take place at these locations until Caltrans has consulted with the California Department of Fish and Wildlife.
- New sightings of sensitive plant species shall be reported to the California Natural Diversity Database. A copy of the reporting form and a topographic map clearly marked with the location of where the sensitive plant species were observed should also be provided to the California Department of Fish and Wildlife.

Compensatory Mitigation

Compensatory mitigation is not required for Green's tuctoria.

Vernal Pool Fairy Shrimp/Vernal Pool Tadpole Shrimp

Avoidance and Minimization Efforts

Implementation of the following measures would ensure that construction activities avoid and minimize impacts to the vernal pool fairy shrimp during construction.

- Worker Environmental Awareness Training for Construction Personnel—Before any work occurs in the project area, a qualified designated biologist (Designated Biologist; familiar with the resources to be protected) will conduct a mandatory "Worker Environmental Awareness Training" for construction personnel. The awareness training will be provided to all construction personnel (contractors and subcontractors) to brief them on the need to avoid and minimize effects to sensitive biological resources (e.g., jurisdictional wetlands and other waters, threatened and endangered species, other special-status species, roosting bats, nesting birds, etc.) within and adjacent to construction areas and the penalties for not complying with applicable state and federal laws and permit requirements. The Designated Biologist will inform all construction personnel about the life history and habitat requirements of special-status habitats and species known to occur or with potential for occurrence onsite, the importance of maintaining habitat, and the terms and conditions of regulatory requirements.
- Environmentally Sensitive Area Designation—Additional direct and indirect impacts to sensitive biological resources throughout the project area would be avoided or minimized by designating "environmentally sensitive areas." All areas outside of the proposed construction footprint shall be considered as environmentally sensitive areas, as well as any areas determined by a qualified biologist during project planning or during pre-construction surveys to qualify for environmentally sensitive area designation.

- Designated Biologist—A Designated Biologist or biologists shall be onsite during any activities that have the potential to affect sensitive biological resources. The Designated Biologist will monitor regulated species and habitats; ensure that construction activities do not result in the unintended take of regulated species or disturbances to regulated habitats; ensure that construction activities comply with any permits, licenses, agreements, or contracts; immediately notify the Caltrans Resident Engineer of any take of regulated species, disturbances to regulated habitats, or breaches of environmentally sensitive areas; and prepare, submit, and sign notifications and reports. A Designated Biologist who performs specialized activities must have demonstrated field experience working with the regulated species or performing the specialized task, and regulatory agency approval will be required prior to Caltrans' acceptance of the Designated Biologist.
- Work Windows—Construction activities within 250 feet of suitable vernal pool habitat (locations STA-4-post mile 3.09, STA-4 post mile 3.25, STA-4 post mile 4.02, STA-4 post mile 4.23, and STA-4 post mile 5.44) will be avoided from the first day of the first significant rain (1 inch or greater) until June 1, or until suitable wetlands remain dry for 72 hours and no significant rain is forecast on the day construction is proposed.
- Pre-construction Surveys—Prior to the start of work at culvert locations STA-4-3.09, STA-4-3.25, STA-4-4.02, STA-4-4.23, and STA-4-5.44, a qualified biologist will inspect the work areas to ensure that the work areas are dry, that environmentally sensitive area fencing is installed at the limits of the temporary work area around the inlet structures, and that erosion control materials (such as burlap-wrapped fiber rolls) are installed between the work areas.
- Herbicide Restrictions—No herbicide will be applied within 100 feet of aquatic habitat.

Compensatory Mitigation

Compensatory mitigation is proposed through the purchase of mitigation credits. Credits will be purchased through an approved mitigation bank that has vernal pool fairy shrimp credits.

California Tiger Salamander

Avoidance and Minimization Efforts

Implementation of the following measures would ensure that construction activities avoid and minimize impacts on the California tiger salamander during construction.

- Worker Environmental Awareness Training for Construction Personnel—Before any work occurs in the project area, a qualified designated biologist (Designated Biologist; familiar with the resources to be protected) will conduct a mandatory "Worker Environmental Awareness Training" for

construction personnel. The awareness training will be provided to all construction personnel (contractors and subcontractors) to brief them on the need to avoid and minimize effects to sensitive biological resources (e.g., jurisdictional wetlands and other waters, threatened and endangered species, other special-status species, roosting bats, nesting birds, etc.) within and adjacent to construction areas and the penalties for not complying with applicable state and federal laws and permit requirements. The Designated Biologist will inform all construction personnel about the life history and habitat requirements of special-status habitats and species known to occur or with potential for occurrence onsite, the importance of maintaining habitat, and the terms and conditions of regulatory requirements.

- Environmentally Sensitive Area Designation—Additional direct and indirect impacts to sensitive biological resources throughout the project area would be avoided or minimized by designating "environmentally sensitive areas." All areas outside of the proposed construction footprint shall be considered as environmentally sensitive areas, as well as any areas determined by a qualified biologist during project planning or during pre-construction surveys to qualify for environmentally sensitive area designation.
- Work Windows—Construction activities within 250 feet of suitable vernal pool habitat (locations STA-4 post mile 3.09, STA-4 post mile 3.25, STA-4 post mile 4.02, STA-4 post mile 4.23, and STA-4 post mile 5.44) will be avoided from November 1 to May 1.
- Construction Best Management Practices—Construction best management practices (best practices) that are consistent with the most recent Caltrans manuals (including the Construction Site Best Management Practices Manual and the Stormwater Pollution Prevention Plan and Water Pollution Control Program Manuals) will be developed for the project and will be implemented throughout the course of construction to avoid or reduce adverse effects to water quality. Best practices associated with an erosion control plan will be prepared for avoiding discharge of pollutants from vehicle/equipment cleaning into aquatic and other sensitive habitats. Caltrans personnel and the contractor will perform routine inspections of the construction areas to verify that the best practices are being properly implemented and maintained and are operating effectively as designed. A water quality inspector will inspect sites before and after a rain event to ensure that stormwater best practices are adequate.
- Re-contour and Revegetate Disturbed Areas—To control erosion and restore habitat value, all areas within the work areas that are disturbed during construction will be re-contoured if necessary and stabilized as soon as possible following the completion of construction. Roadside areas will be revegetated with a Caltrans-approved, appropriate weed-free and non-invasive plant seed mixture.

- Retain a Qualified Biologist to Conduct Pre-construction Surveys for California Tiger Salamander—No more than 14 days prior to the start of ground-disturbing activities (including vegetation removal and equipment staging) within suitable habitat for the California tiger salamander and western spadefoot toad at culvert locations STA-4-3.09, STA-4-3.25, STA-4-4.02, STA-4-4.23, and STA-4-5.44, a qualified biologist(s) will conduct visual encounter pre-construction surveys of each site. The survey will pay particular attention to detecting any burrows, crevices, and other cover sites that could be used as refugia by the species. If any burrows are discovered, they will be flagged or otherwise marked, and avoided. Any sightings of a California tiger salamander and/or western spadefoot toad will be immediately reported to Caltrans, and construction will not commence at that location until the species has moved out of the work area on its own accord and the appropriate agencies are consulted on the need for additional protection measures.
- Install Exclusion Fencing Between the Work Area and Suitable Habitat for California Tiger Salamander—To prevent the California tiger salamander from entering the active work area during construction at culvert locations STA-4-3.09, STA-4-3.25, STA-4-4.02, STA-4-4.23, and STA-4-5.44, Caltrans shall install wildlife exclusion fencing between the designated work limits and adjacent suitable habitat (open grasslands). Exclusion fencing will be at least 3 feet high, and the lower 6 inches of the fence will be buried in the ground to prevent animals from crawling under. The remaining 2.5 feet will be left above ground to serve as a barrier for animals moving on the ground surface. The fence will be pulled taut at each support to prevent folds or snags. Fencing shall be installed and maintained in good condition during all construction activities. Such fencing shall be inspected and maintained daily until completion of the work at that site.
- Check for Animals under Construction Equipment and Vehicles Prior to Moving—Prior to being moved, vehicles and equipment will be checked for any California tiger salamanders, or other sensitive wildlife sheltering underneath them. If an animal is observed, the vehicles/equipment will not be moved until the individual has vacated the area of its own accord.
- Install Escape Ramps in Holes or Trenches Measuring more than 6 Feet Deep—To prevent the inadvertent entrapment of the California tiger salamander or other animals during construction, any excavated, steep-walled holes or trenches measuring more than 6 inches deep either will be covered at the close of each working day using plywood or similar materials (without openings) or will be provided with one or more escape ramps constructed of earth fill or wooden planks in the event that the holes/trenches cannot be fully covered. All holes or trenches will be checked daily for trapped wildlife; they also will be thoroughly inspected before being filled. If at any time a trapped animal is discovered, the Service-approved biologist(s) will install escape ramps or other

appropriate structures (if not already in place) to enable the individual the opportunity to escape on its own.

- Limit the Use of Artificial Lighting—The use of temporary artificial lighting onsite will be limited, except when necessary for construction, or for driver and pedestrian safety. Any artificial lighting used during construction will be confined to areas within the construction footprint and directed away from surrounding habitat.
- Properly Dispose of Food-Related Trash and Remove from Project Site Daily—All food-related trash items such as wrappers, cans, bottles, and food scraps generated by project-related activities and personnel will be disposed of in closed containers and removed daily from the project site to reduce the potential for attracting predator species.
- Prohibit Pets and Firearms from Being Brought to the Project Site—To eliminate the potential for disturbance or injury to, or death of, any species resulting from the presence of pets and firearms, neither (with the exception of firearms carried by authorized law enforcement officials) will be allowed on the project site.

Compensatory Mitigation

Compensatory mitigation is proposed through the purchase of mitigation credits. Credits will be purchased through an approved mitigation bank that has California tiger salamander credits.

2.3.4 Invasive Species

Regulatory Setting

On February 3, 1999, President William J. Clinton signed Executive Order 13112 requiring federal agencies to combat the introduction or spread of invasive species in the United States. The order defines invasive species as "any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that ecosystem whose introduction does or is likely to cause economic or environmental harm or harm to human health."

Federal Highway Administration guidance issued August 10, 1999 directs the use of the State's invasive species list, maintained by the California Invasive Species Council to define the invasive species that must be considered as part of the National Environmental Policy Act analysis for a proposed project.

Affected Environment

Most of the invasive plant species considered in this document are annual grasses and forbs considered as components of the common ruderal

(weedy) vegetation occurring along disturbed roadside and non-landscaped areas in the biological study area and include many species rated by the California Invasive Plant Council as plants of "limited" or "moderate" invasiveness. Because it is infeasible to treat/remove or to exclude these species from construction activities, no attempt was made to map these species.

The California Department of Fish and Wildlife Invasive Species Program website was reviewed for invasive animal species known to occur in the Sierra Nevada foothills. Invasive animal species potentially present within the biological study area may include bullfrogs (*Lithobates catsebiannus*) in aquatic habitat.

Suitable breeding habitat for bullfrogs occurs within the biological study area and was found at Hoods Creek Bridge at post mile 7.28 in Stanislaus County. Bullfrogs require perennial water bodies for successful breeding because bullfrog tadpoles require an over-wintering season prior to metamorphosis. Surface water was found at this perennial stream during all field visits.

Bullfrogs were also seen occupying vernal pools in the biological study area during field surveys in January 2022.

Environmental Consequences

Invasive plants crowd out crops, rangeland forage, or vegetation restoration areas and can be low in nutrition, or even toxic to livestock. Invasive plants can blanket waterways, trails, and scenic landscapes and can significantly degrade wildlife habitat.

Nationally, invasive species are the second-greatest threat to endangered species, after habitat destruction. Invasive ornamentals increase fire fuel loads and are dangerous near homes, and some invasive plants consume enormous quantities of water. Federal Executive Order 13117 requires a noxious weed risk assessment for any ground-disturbing activities to prevent the spread of the weeds into the surrounding area.

Adverse impacts to terrestrial native vegetation or vegetation communities within the project area due to an increase in noxious weed spread as a result of the project are possible. But such impacts are not likely because project construction activities will take place mainly in open, disturbed areas and within the disturbed roadway zone, including roadway shoulders and embankments and roadway drainage system features that currently promote the growth of non-native species.

Although existing roadside areas will be temporarily disturbed, the project will not break "new ground" potentially available for new infestations. It is also possible that weed propagules originating from within the biological study

area could be transported to uninfested areas within the biological study area or to outside of the project vicinity. It is also recognized that disturbed roadside areas are significant sources of noxious and invasive weed material. The potential for the project to cause an increase in adverse impacts to upland native vegetation or vegetation communities, or urban landscape vegetation within the project will be further reduced by implementing avoidance strategies and design features for reducing the spread of invasive and noxious weeds as described in the next section below.

The project would not result in the increase of aquatic or terrestrial habitat available for potential colonization by invasive animal species. Adverse impacts to aquatic habitat and native aquatic plant and animal species within the project area due to an introduction or spread of invasive animal species as a result of the project would be avoided or minimized with the following measures for reducing the spread of invasive animal species.

Avoidance, Minimization, and/or Mitigation Measures

Implementation of the following measures will ensure that the project minimizes effects on riparian habitat adjacent to the project construction area. Additional avoidance and minimization measures may be agreed upon during the project permitting process.

- Weed-Free Construction Equipment and Vehicles—To minimize the potential for the transport of weed propagules to the Action Area from sources outside of the project area, construction equipment and vehicles are recommended to be cleaned and washed at the contractor's facilities prior to arrival to the construction site. Any vehicle or equipment cleaning that occurs onsite during construction activities shall conform with Caltrans 2018 Standard Specifications or any Special Conditions under Section 13-4.03E(3) and Section NS-08 (Vehicle and Equipment Cleaning) of the Caltrans 2017 Construction Site Best Management Practices Manual, which require the contractor to contain and dispose of any waste resulting from vehicle or equipment cleaning.

- Weed Control During Construction—To minimize the potential for spreading weed propagules originating from within the project Environmental Study Limits during the course of construction activities, including initial vegetation clearing and at onsite revegetation areas, weed control would be accomplished in accordance with Caltrans 2018 Standard Specifications or Special Provisions under Section 20-1.03C(3). The use of herbicides for weed control activities would be discouraged but may be considered on a case-by-case basis depending upon the weed species, the extent of infestation, or any regulatory restrictions.

- Weed-Free Erosion Control and Revegetation Treatments—To minimize the risk of introducing weed propagules to the Action Area

from sources outside of the project area, only locally adapted plant species appropriate for the project area will be used in any erosion control or revegetation seed mix or stock. The Caltrans Biologist will consult with the Caltrans Landscape Architect to develop appropriate seed and planting palettes for use in revegetation and/or erosion control applications. Any compost, mulch, tackifier, fiber, straw, duff, topsoil, erosion control products, or seed must meet Caltrans 2018 Standard Specification or any Special Provisions under Section 21-2.02 for these materials. Any hydro-seed used for revegetation activities must also be certified weed-free per Caltrans 2018 Standard Specifications Section 21-2.02F.

Chapter 3 CEQA Evaluation

3.1 Determining Significance Under CEQA

The proposed project is a joint project by Caltrans and the Federal Highway Administration and is subject to federal and state environmental review requirements. Project documentation, therefore, has been prepared in compliance with both the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (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 May 27, 2022 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 proposed 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 proposed 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 Scenic Resource Evaluation determined there are no scenic vistas within the project area.

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.

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.

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.

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 1 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 1.2 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 With Mitigation Incorporated—The project will permanently impact up to 0.003 acre of California tiger salamander, vernal pool fairy shrimp and tad pool shrimp habitat. There will also be 0.047 acre of temporary impacts to California tiger salamander and vernal pool species habitat. 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?

Less Than Significant Impact With Mitigation Incorporated—The project will permanently impact up to 0.003 acre of wetlands. There will also be 0.047 acre of temporary impacts to wetlands. With avoidance and minimization efforts in place, less than significant impacts are expected. (Full evaluation can be found in Section 2.3.1 Wetlands and Other Waters)

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?

Less Than Significant Impact with Mitigation Incorporated—The project would have no adverse impact to historic resources with the incorporation of standard practices such as environmentally sensitive area fencing.

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

Less Than Significant Impact with Mitigation Incorporated—The project would have no adverse impact to archaeological resources with the incorporation of standard practices such as environmentally sensitive area fencing.

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 known faults at 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 known faults at 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 known faults at 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 to 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—The project area is underlain by Quaternary/Pleistocene deposits and surficial sediments of high paleontological potential. Grading and excavation work in the project area will impact the resource(s); however, based on the project description and the extent and intensity of excavation, scientifically significant fossils are unlikely to be encountered and mitigation is not required. Therefore, this impact will 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, with 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—Asbestos-containing materials and/or lead-based paint may be present in the existing structures within the project area. The railing at the Duck Creek Bridge (Bridge Number 29-0053) will be removed/replaced. A Preliminary Site Investigation addressing the asbestos and lead-based paint on the structure would need to be conducted before construction.

Aerially deposited lead from the historical use of leaded gasoline exists in surface soils along roadways throughout California. The project will disturb the soil. However, excess soil requiring offsite disposal or relinquishment is not anticipated for the project. 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 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 which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

No Impact—The project 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 would 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 would meet the goals and objectives of the *San Joaquin County General Plan*. Discharge of pollutants from urban runoff would 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 would not violate water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality. Impacts on water quality would be less than significant. There would be 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 would 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 would be conducted on a one-time, temporary basis during the construction phase and would not deplete groundwater supplies. The project would only minimally affect groundwater resources because the required excavations would occur on a temporary, short-term basis during the construction period. Construction activities would 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 would be minimal areas of additional impervious surface added, compared to the overall size of the groundwater basin. Recharge in the area would continue to occur through infiltration of precipitation. Therefore, the project would not affect groundwater levels or the capability for groundwater recharge within the localized groundwater aquifer area. The project's minimal use of water would not deplete or interfere with the groundwater supply or recharge or impede sustainable groundwater management of the basin. Therefore, there would 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 4 already divides Farmington. 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 because 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)?

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 would 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 With Mitigation Incorporated—The project would impact biological and cultural resources. Proposed avoidance, minimization, and mitigation measures would reduce the impacts to below a level of significance. Please see Section 2.3 Biological Environment and Section 2.1.5 Cultural 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 because 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 project is not in a very high fire hazard severity zone (California Department of Forestry and Fire Protection, 2007 and Climate Change Memo 2022).

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

Human activities generate greenhouse gases consisting primarily of carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), tetrafluoromethane,

hexafluoroethane, sulfur hexafluoride (SF_6), and various hydrofluorocarbons (HFCs). CO_2 is the most abundant greenhouse gas; while it is a naturally occurring and necessary component of Earth's atmosphere, fossil-fuel combustion is the main source of additional, human-generated CO_2 that is the main driver of climate change. In the U.S. and in California, transportation is the largest source of greenhouse gas emissions, mostly CO_2.

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

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 (also known by the acronym FHWA) 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 (FHWA 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" (FHWA 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.

The federal government has taken steps 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) as amended by the Energy Independence and Security Act of 2007, and Corporate Average Fuel Economy (known as CAFE) standards. This act established fuel economy standards for on-road motor vehicles sold in the United States.

The U.S. Department of Transportation's National Highway Traffic and Safety Administration sets and enforces the Corporate Average Fuel Economy standards based on each manufacturer's average fuel economy for the portion of its vehicles produced for sale in the United States. The Environmental Protection Agency (U.S. EPA) calculates average fuel economy levels for manufacturers and also sets related greenhouse gas emissions standards under the Clean Air Act. Raising Corporate Average Fuel Economy standards leads automakers to create a more fuel-efficient fleet, which improves our nation's energy security, saves consumers money at the pump, and reduces greenhouse gas emissions (U.S. DOT 2014).

The U.S. Environmental Protection Agency published a final rulemaking on December 30, 2021, that raised federal greenhouse gas emissions standards for passenger cars and light trucks for model years 2023 through 2026, increasing in stringency each year. This rulemaking revised lower emissions standards that had been previously established for model years 2021 through 2026 in the Safer Affordable Fuel-Efficient Vehicles Rule Part Two in June 2020. The updated standards will result in avoiding more than 3 billion tons of greenhouse gas emissions through 2050 (U.S. EPA 2021a).

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: This bill 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 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 (also known by the acronym LCFS) 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 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 Air Resources Board to set regional emissions reduction targets for passenger vehicles. The Metropolitan Planning Organization (MPO) for each region must then develop a "Sustainable Communities Strategy" (SCS) that integrates transportation, land-use, and housing policies to plan how it will achieve the emissions target for its region.

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 mandates State entities under the direction of the governor, including the 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 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 ($MMTCO_2e$). [Greenhouse gases differ in how much heat each traps in the atmosphere, called global warming potential. CO_2 is the most important

greenhouse gas, so amounts of other gases are expressed relative to CO_2, using a metric called "carbon dioxide equivalent," or CO_2e. The global warming potential of CO_2 is assigned a value of 1, and the global warming potential of other gases is assessed as multiples of CO_2.] Finally, it requires the Natural Resources Agency to update the state's climate adaptation strategy, *Safeguarding California*, every 3 years, and to ensure that its provisions are fully implemented.

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."

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 traveled, to promote the state's goals of reducing greenhouse gas emissions and traffic-related air pollution and promoting multimodal transportation while balancing the needs of congestion management and safety.

Senate Bill 150**,** Chapter 150, 2017, Regional Transportation Plans: This bill requires the Air Resources Board to prepare a report that assesses progress made by each Metropolitan Planning Organization in meeting its 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 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 is on State Route 4 in San Joaquin and Stanislaus counties. The proposed project is in a rural area, with a mainly natural resources based agricultural and tourism economy. State Route 4 is a main connector from Stockton to Angel's Camp and a major connector to State Route 49 for both passenger and commercial vehicles. It is also the main connector to the community of Farmington, and Copperopolis. Three distinct areas sit within the project area. Most of the project area is rural farmland, except for Stockton in the east and Farmington at the corner of State Route 4 and Escalon-Bellota Road. Those locations are a mix of residential and commercial properties. The project goes through areas governed by the San Joaquin County Council of Governments and the Stanislaus County Council of Governments, which guide transportation development in the project aera. The San Joaquin County and Stanislaus County General Plan: Circulation, Safety and Traffic elements address greenhouse gas in the project area.

Greenhouse Gas Inventories

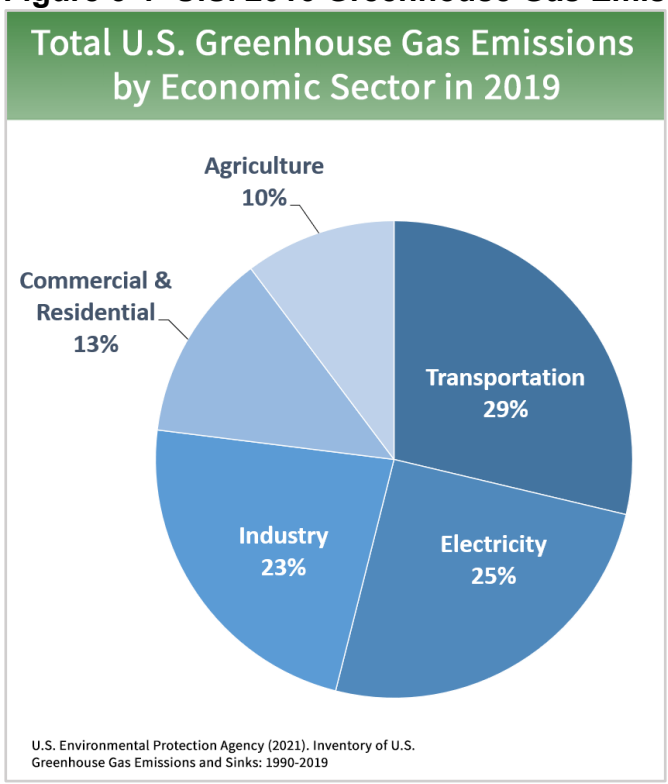
A greenhouse gas emissions inventory estimates the amount of greenhouse gases discharged into the atmosphere by specific sources over a period of time, such as a calendar year. Tracking annual greenhouse gas emissions allows countries, states, and smaller jurisdictions to understand how emissions are 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 Air Resources Board does so for the state, as required by Health and Safety Code Section 39607.4. Cities and other local jurisdictions may also conduct local greenhouse gas inventories to inform their greenhouse reduction or climate action plans.

National Greenhouse Gas Inventory

The annual greenhouse gas inventory submitted by the U.S. Environmental Protection Agency to the United Nations provides a comprehensive accounting of all human-produced sources of greenhouse gases in the United States. The 1990-2019 inventory found that overall greenhouse gas emissions were 6,558 million metric tons (MMT) in 2019, down 1.7 percent from 2018 but up 1.8 percent from 1990 levels. Of these, 80 percent were CO_2, 10 percent were CH_4, and 7 percent were N_2O; the balance consisted of fluorinated gases. CO_2 emissions in 2019 were 2.2 percent less than in 2018, but 2.8 percent more than in 1990.

As shown on **Error! Not a valid bookmark self-reference.**, the transportation sector accounted for 29 percent of U.S. greenhouse gas emissions in 2019 (U.S. EPA 2021b, 2021c).

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



State Greenhouse Gas Inventory

The 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 2021 edition of the greenhouse gas emissions inventory reported emissions trends from 2000 to 2019. It found total California emissions were 418.2 $MMTCO_2e$ in 2019, a reduction of 7.2 $MMTCO_2e$ since 2018 and almost 13 $MMTCO_2e$ below the statewide 2020 limit of 431 $MMTCO_2e$. The transportation sector (including intrastate aviation and off road sources) was responsible for about 40 percent of direct greenhouse gas emissions, a 3.5 $MMTCO_2e$ decrease from 2018 (Figure 3-2). Overall, statewide greenhouse gas emissions declined from 2000 to 2019 despite growth in population and state economic output (see Figure 3-3) (source Air Resources Board 2021a).

Figure 3-2 California 2019 Greenhouse Gas Emissions by Economic Sector

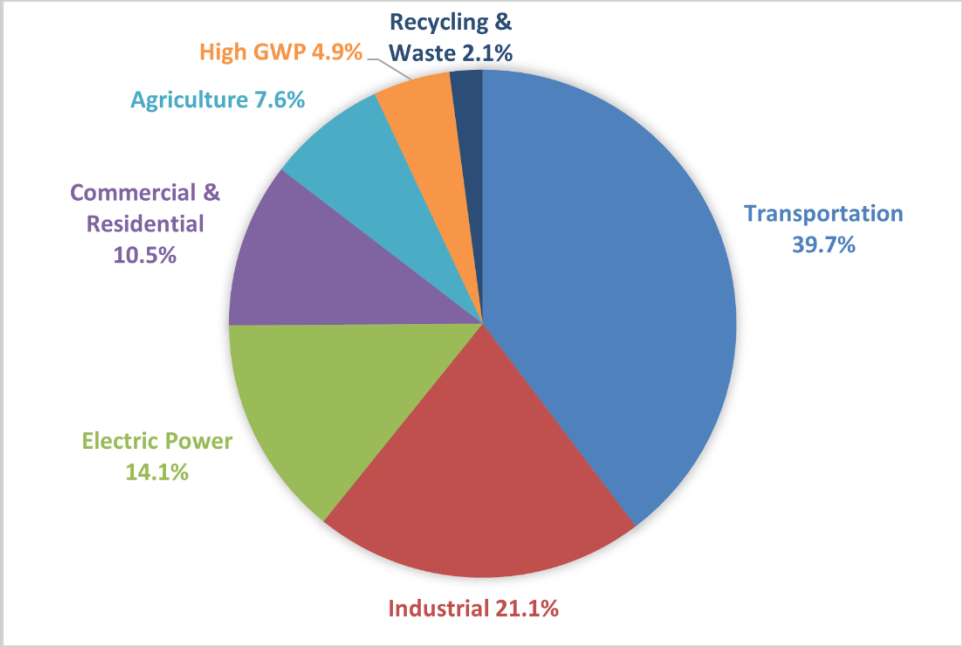
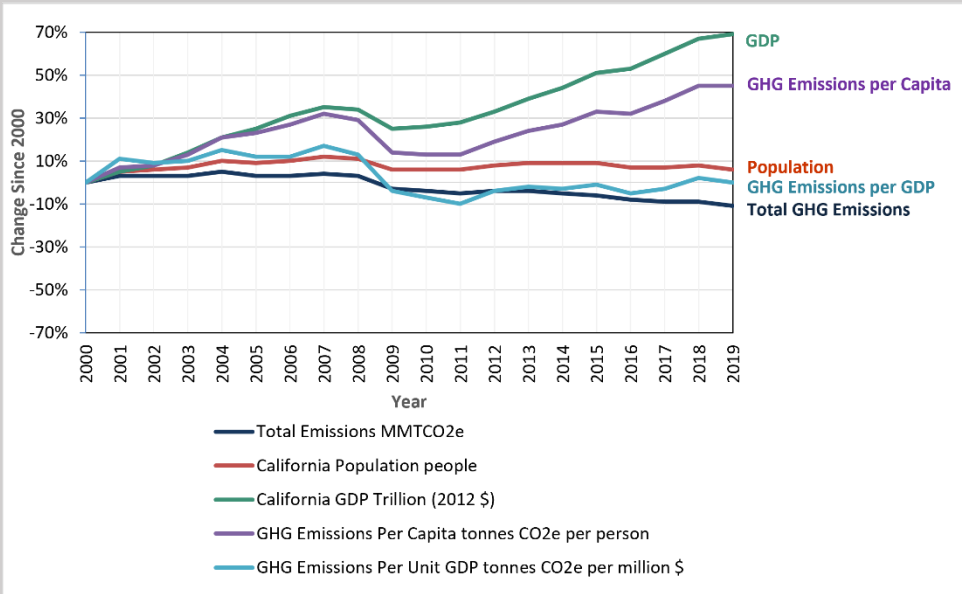


Figure 3-3 Change in California Gross Domestic Product, Population, and Greenhouse Gas Emissions since 2000



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 5 years. The 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 set 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 on State Route 4 is included in the Regional Transportation Plan/Sustainable Communities Strategy for San Joaquin Council of Governments' Regional Transportation Plan/Sustainable Communities Strategy and the Stanislaus County Sustainable Community and Climate Change Program. The regional reduction targets for the San Joaquin Council of Governments and the Stanislaus County Council of Governments are 12 percent by 2020 and 16 percent by 2035 (California Air Resources 2019c)

3.4.3 Project Analysis

Greenhouse gas emissions from transportation projects can be divided into those produced during operation of the State Highway System (operational emissions) and those produced during construction. The main greenhouse gases produced by the transportation sector are CO_2, CH_4, N_2O, and HFCs (various hydrofluorocarbons). CO_2 emissions are a product of burning gasoline or diesel fuel in internal combustion engines, along with relatively small amounts of CH_4 and N_2O. A small amount of hydrofluorocarbon emissions related to refrigeration is also 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 versus San Diego Association of Governments (2017) 3 California 5th 497, 512). In assessing cumulative impacts, it must be determined if a project's incremental effect is "cumulatively considerable" (CEQA Guidelines Sections 15064(h)(1) and 15130).

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

Operational Emissions

The purpose of the proposed project is to repair pavement, construct sidewalks, and repair culverts. It will not increase the vehicle capacity of the roadway. This type of project generally causes minimal or no increase in operational greenhouse gas emissions. Because the project would not increase the number of travel lanes on State Route in San Joaquin and Stanislaus counties, no increase in vehicle miles traveled (referred to as VMT) would occur. While some greenhouse gas emissions during the construction period would be unavoidable, no increase in operational greenhouse gas emissions is expected.

Construction Emissions

Construction greenhouse gas emissions would result from material processing and transportation, 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.

Use of long-life pavement, improved traffic management plans, and changes in materials, can also help offset emissions produced during construction by allowing longer intervals between maintenance and rehabilitation activities.

Construction emissions (CO_2 climate change greenhouse gas) for the project were calculated using the Department of Transportation's Construction Emissions Tool (CALCET v1.0 Beta). The proposed project would generate approximately 1,246 tons of CO_2 during the 300 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.

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, 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 practices) 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.

3.4.4 CEQA Conclusion

While the proposed project will result in greenhouse gas emissions during construction, it is anticipated 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 emission 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 GHG emissions. These measures are outline in the following section.

Greenhouse Gas Reduction Strategies

Statewide Efforts

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

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

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 (VMT). Reducing today's petroleum use in cars and trucks is a key state goal for reducing greenhouse gas emissions by 2030 (California Environmental Protection Agency 2015).

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 within forests, rangelands, farms, and wetlands remove carbon

dioxide from the atmosphere through biological processes and sequester the carbon in above- and below-ground matter.

Subsequently, Governor Gavin Newsom issued Executive Order N-82-20 to combat the crises in climate change and biodiversity. The order instructs state agencies to use existing authorities and resources to identify and implement near- and long-term actions to accelerate natural removal of carbon and build climate resilience in our forests, wetlands, urban greenspaces, agricultural soils, and land conservation activities in ways that serve all communities and in particular low-income, disadvantaged, and vulnerable communities. To support this order, the California Natural Resources Agency released *Natural and Working Lands Climate Smart Strategy Draft* for public comment in October 2021.

Caltrans Activities

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

Climate Action Plan for Transportation Infrastructure

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

California Transportation Plan

The *California Transportation Plan* (also known by the acronym CTP) is a statewide, long-range transportation plan to meet our future mobility needs and reduce greenhouse gas emissions. It serves as an umbrella document for all the other statewide transportation planning documents. The CTP 2050 presents a vision of a safe, resilient, and universally accessible transportation system that supports vibrant communities, advances racial and economic justice, and improves public and environmental health. The plan's climate goal is to achieve statewide greenhouse gas emissions reduction targets and increase resilience to climate change. It demonstrates how greenhouse gas emissions from the transportation sector can be reduced through advancements in clean fuel technologies; continued shifts toward active

travel, transit, and shared mobility; more efficient land use and development practices; and continued shifts to telework (Caltrans 2021a).

Caltrans Strategic Plan

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

Caltrans Policy Directives and Other Initiatives

Caltrans Director's Policy 30 (DP-30) Climate Change (June 22, 2012) established a department policy to ensure coordinated efforts to incorporate climate change into departmental decisions and activities. The *Caltrans Greenhouse Gas Emissions and Mitigation Report* (Caltrans 2020) provides a comprehensive overview of Caltrans' emissions. The report documents and evaluates current Caltrans procedures and activities that track and reduce greenhouse gas emissions and identifies additional opportunities for further reducing greenhouse gas emissions from department-controlled emission sources, in support of departmental and state goals.

Project-Level Greenhouse Gas Reduction Strategies

The following measures will 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.

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 flood highways. Wildfire can directly burn facilities and indirectly cause damage when rain falls on bare 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 *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."

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 Department of Transportation 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. A number of state policies and tools have been developed to guide adaptation efforts.

California's Fourth Climate Change Assessment (Fourth Assessment) (2018) is the state's effort to "translate the state of climate science into useful information for action." It provides information that will help decision makers across sectors and at state, regional, and local scales protect and build the resilience of the state's people, infrastructure, natural systems, working lands, and waters. The State's approach recognizes that the consequences of climate change occur at the intersections of people, nature, and infrastructure. The Fourth Assessment reports that if no measures are taken to reduce greenhouse gas emissions by 2021 or sooner, the state is projected to experience a 2.7 to 8.8 degrees Fahrenheit increase in average annual maximum daily temperatures, with impacts on agriculture, energy demand, natural systems, and public health; a two-thirds decline in water supply from snowpack and water shortages that will impact agricultural production; a 77 percent increase in average area burned by wildfire, with consequences for forest health and communities; and large-scale erosion of up to 67 percent of Southern California beaches and inundation of billions of dollars' worth of residential and commercial buildings due to sea level rise (State of California 2018).

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

In 2008, then-governor Arnold Schwarzenegger recognized the need when he issued Executive Order S-13-08, focused on sea level rise. Technical reports on the latest sea level rise science were first published in 2010 and updated in 2013 and 2017. The 2017 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. The executive order also gave rise to the *California Climate Adaptation Strategy* (2009), updated in 2014 as *Safeguarding California: Reducing Climate Risk* (Safeguarding California Plan), which addressed the full range of climate change impacts and recommended adaptation strategies. The Safeguarding California Plan was updated in 2018 and again in 2021 as the *California Climate Adaptation Strategy*, incorporating key elements of the latest sector-specific plans such as the *Natural and Working Lands Climate Smart Strategy*, *Wildfire and Forest Resilience Action Plan*, *Water Resilience Portfolio,* and the *California Action Plan for Transportation Infrastructure* (described above).

Priorities in the 2021 California Climate Adaptation Strategy include acting in partnership with California Native American Tribes, strengthening protections for climate-vulnerable communities that lack capacity and resources, nature-based climate solutions, use of best available climate science, and partnering and collaboration to best leverage resources (California Natural Resources Agency 2021).

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 in addition to 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.

Assembly Bill 2800 (Quirk 2016) created the multidisciplinary Climate-Safe Infrastructure Working Group to help actors throughout the state address the findings of California's Fourth Climate Change Assessment. It released its report, *Paying it Forward: The Path Toward Climate-Safe Infrastructure in California*, in 2018. 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 (Climate Change Infrastructure Working Group 2018).

Caltrans Adaptation Efforts

Caltrans Vulnerability Assessments

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

The climate change data in the assessments were developed in coordination with climate change scientists and experts at federal, state, and regional organizations at the forefront of climate science. The findings of the vulnerability assessments guide analysis of at-risk assets and development of Adaptation Priority Reports as a method to make capital programming decisions to address identified risks.

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.

Precipitation and Flooding

The Caltrans District 10 Climate Change Vulnerability Assessment mapping for precipitation change indicates a less than 5 percent increase in 100-year storm precipitation through 2085. The project will upgrade culverts and will be constructed to function with the increased precipitation. Given these project features, the proposed project would accommodate precipitation changes due to climate change.

Wildfire

The project is within the eastern portion of San Joaquin County and the northwestern portion of Stanislaus County. This area falls under the jurisdiction of the following fire departments:

- Eastside Fire District
- Boggs-Tract Fire District
- Collegeville Fire District
- Farmington Fire District
- Oakdale Rural Fire District

The proposed project is not in or near state responsibility areas or land classified as very high fire hazard severity zone as listed in the Fire Hazard Severity Zone maps.

The Caltrans District 10 Climate Change Vulnerability Assessment mapping show some minor changes in the wildlife exposure rating up to 2099 for the project area. The changes are not significantly different than the current exposure rating for the area, and the ratings do not reach the very high rating even into the 2099 exposure ratings.

Caltrans' 2018 revised Standard Specification 7-1.02M (2) mandates fire prevention procedures, including a fire prevention plan. The following Construction Site Best Management Practices to prevent wildfire would also be implemented:

- Onsite vehicle and equipment fueling will be used only where it's impractical to send vehicles and equipment offsite for fueling.
- Vehicles and equipment will be inspected on each day of use for leaks. Leaks will be repaired immediately, or problem vehicles or equipment will be removed from the project site.
- Entry and exit areas to construction work areas will be kept clear, with no construction debris, to prevent any spills or accidental human-made sparks.
- Construction materials, equipment storage, and parking areas will be located where they will not cause damage to vegetation, especially during the dry weather when hot exhaust systems can kindle fire in dry grass.

- Local California Department of Forestry and Fire Protection and other local fire departments will be consulted throughout the construction window. Other agencies that may need to be advised include, but are not limited to, the Stanislaus County Sheriff, the California Highway Patrol and the Stanislaus Public Works Department.
- Temporary storage sheds will need to meet building and fire code requirements and will be located away from vehicle traffic.
- Fires will not be permitted within 100 feet of the drip line of any retained trees.
- Portable fuel canisters will be kept in a nonflammable cabinet when not in use.
- Consideration will be given to installing more utility features underground.
- Metal power poles instead of wooden poles will be used.

Temperature

The District Climate Change Vulnerability Assessment shows an average minimum temperature change of 3.9 to 4.4 degrees by 2055, which is within the 20-year life cycle of the project. The temperature changes during the project's design life are within the parameters of the design function and would not require adaptive changes in pavement design or maintenance practices.

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 group 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 State Office of Historic Preservation

July 27, 2022: Caltrans submitted the Historic Property Survey Report.

September 13, 2022: The State Office of Historic Preservation concurred with the Historic Property Survey Report.

November 1, 2022. The State Office of Historic Preservation concurred with the "No Adverse Effect Determination".

4.1.2 U.S. Fish and Wildlife Service

March 23, 2022: A U.S. Fish and Wildlife Service official species list was obtained.

4.1.3 California Department of Fish and Wildlife

March 27, 2022: A California Department of Fish and Wildlife California Natural Diversity Database species list was obtained.

4.2 Coordination with Native American Groups

October 29, 2020: Native American consultation and coordination were initiated with a letter sent to the Native American Heritage Commission for a search of its Sacred Lands Inventory File and for a current consultation list.

November 17, 2020: Ms. Nancy Gonzalez-Lopez, Cultural Resources Analyst, sent a response that included a negative record search of the Sacred Lands Inventory File and included a Native American contact list.

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

Table 4.1 Initial Consultation with Native American Groups

Name	Affiliation	Date of Initial Consultation
Rhonda Morningstar Pope	Buena Vista Rancheria of Me-Wuk Indiana	November 18, 2020
Debra Grimes	Calaveras Band of Mi-Wuk Indians	November 18, 2020
Gloria Grimes	Calaveras Band of Mi-Wuk Indians	November 18, 2020
Lawrence Wilson	California Valley Miwok Tribe (also known as Sheep Rancheria of Me-Wuk Indians)	November 18, 2020
Lloyd Mathiesen	Chicken Ranch Rancheria of Me-Wuk Indians	November 18, 2020
Sara Setchwaelo	Ione Band of Miwok Indians	November 18, 2020
Cosme Valdez	Nashville Enterprise Miwok-Maidu-Nishinam Tribe	November 18, 2020
Katherine Perez	North Valley Yokuts Tribe	November 18, 2020
William Leonard	Southern Sierra Miwuk Nation	November 18, 2020
Neil Peyron	Tule River Indian Tribe	November 18, 2020
Kerri Vera	Tule River Indian Tribe	November 18, 2020
Joey Garfield	Tule River Indian Tribe	November 18, 2020
Steve Hutchason	Wilson Rancheria	November 18, 2020
Dahlton Brown	Wilson Rancheria	November 18, 2020
Jesus Tarango	Wilson Rancheria	November 18, 2020
Corrina Gould	The Confederated Village of Lisjan	November 18, 2020

4.2.1 Buena Vista Rancheria of Me-Wuk Indians

No response was received from the initial consultation letter dated November 18, 2020. A follow-up phone call was made to Ms. Pope on January 27, 2021, with a voicemail message left. No response has been received to date.

4.2.2 Calaveras Band of Mi-Wuk Indians

No response was received from the initial consultation letter dated November 18, 2020. A follow-up phone call was made to Ms. Debra Grimes on January 27, 2021. Ms. Grimes indicated that the project is not within their traditional territory and declined to consult.

4.2.3 California Valley Miwok Tribe (Sheep Rancheria of Me-Wuk Indians)

The California Valley Miwok Tribe is also known as the Sheep Rancheria of Me-Wuk Indians. No response was received from the initial consultation letter dated November 18, 2020. A follow-up phone call was made to Mr. Wilson on January 27, 2021. Mr. Wilson declined to consult but referred Caltrans to Mr. Petee Ramirez. When contacted, Mr. Ramirez requested project information and a field visit. No response has been received following attempts to coordinate a field visit. No further response has been received to date.

4.2.4 Ione Band of Miwok Indians

No response was received from the initial consultation letter dated November 18, 2020. Caltrans made a follow-up phone call to Ms. Setchwaelo on January 27, 2021. Caltrans spoke to Mr. Dutschke who deferred to other tribes in the area.

4.2.5 Nashville Enterprise Miwok-Maidu-Nishinam Tribe

No response was received from the initial consultation letter dated November 18, 2020. Caltrans made a follow-up phone call to Mr. Valdez on January 27, 2021, but there were technical difficulties with the connection and the person on the other end was inaudible. Caltrans sent a follow-up email after a second phone call yielded the same result. No further responses have been received to date.

4.2.6 North Valley Yokuts Tribe

Ms. Perez responded to the initial consultation letter on November 19, 2020 and requested consultation and to be involved in survey and monitoring work. Caltrans reached out to Ms. Perez via phone call before the start of fieldwork and left a message. Several phone calls were made prior to the Extended Phase I (XPI) efforts, but Ms. Perez did not respond. Consultation is ongoing.

4.2.7 Southern Sierra Miwuk Nation

No response was received from the initial consultation letter dated November 18, 2020. Caltrans made a follow-up phone call to Mr. Leonard on January 27, 2021 and left a message. No response has been received to date.

4.2.8 Tule River Indian Tribe

No response was received from the initial consultation letter dated November 18, 2020. Caltrans made a follow-up phone call to Ms. Vera on January 27, 2021. Ms. Vera reviewed the project information and informed Caltrans the tribe would likely defer to local tribes. No further responses have been received.

4.2.9 Wilton Rancheria

On December 2, 2020, Wilton Rancheria responded to the initial consultation letter dated November 18, 2020 and requested consultation. Caltrans reached out to Wilton Rancheria before fieldwork to update them on the status of the project. The Wilton Rancheria was coordinated with to coordinate monitors for the XPI effort. Wilton Rancheria informed the XPI team that a monitor was secured for project work, but the monitor did not report to the site. Both the XPI team and Caltrans called and emailed Wilton Rancheria to find out the status of the monitor but could not reach anyone. Work began, and the XPI team spoke with Wilton Rancheria after completion of the work and supplied them with the final reports. Consultation is ongoing.

4.2.10 The Confederated Villages of Lisjan

No response was received from the initial consultation letter dated November 18, 2020. Caltrans made a follow-up phone call to Ms. Gould on January 27, 2021 and left a voicemail. No response has been received to date.

4.3 Other Cultural Contacts

A Caltrans architectural historian sent letters to the following historical societies and local agencies to solicit any information regarding cultural resources within the Area of Potential Effects.

4.3.1 San Joaquin County Assessor

Caltrans Cultural Resources staff sent a letter to the San Joaquin County Assessor's office on April 8, 2022. Mr. Walker provided project information and requested assessor records. Assessor records were received on April 12, 2022.

4.3.2 San Joaquin County Planning Department

On December 29, 2020, Caltrans Cultural Resources staff sent a letter to the San Joaquin County Planning Department providing project information. No response has been received to date.

4.3.3 San Joaquin Historical Museum

On January 29, 2020, Caltrans Cultural Resources staff sent a letter to Ms. Kristina Swanson of the San Joaquin County Historical Museum informing her of the project and requesting comments or input. No response has been received to date.

4.3.4 Stanislaus County Historical Society

On December 29, 2020, Caltrans Cultural Resources staff sent a letter to Mr. David Seymour of the McHenry Museum providing project information and requesting comments or input. No response has been received to date.

4.3.5 Stanislaus County Planning Department

On December 29, 2020, Caltrans Cultural Resources staff sent a letter to the Stanislaus County Planning Department providing project information. No response has been received to date.

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 Wilder, Associate 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.

Laura Cook, Environmental Scientist (Archaeology). M.A., University of Leicester, UK; B.A. University of California, Davis; 12+ years of cultural resource management experience. Contribution: Archaeology Specialist.

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.

Christopher Jannusch, Senior Environmental Scientist (Supervisor). B.S., Environmental and Resource Sciences, University of California Davis; M.S. Natural Resource and Environmental Sciences; 22 years of environmental science experience. Contribution: Biology Branch Chief.

Rogerio Leong, Engineering Geologist. B.S., Geology, University of Sao Paulo, Brazil; 18 years of environmental site assessment and investigation experience. Contribution: Water Quality Report.

Pedro Moakhar, Environmental Scientist. B.S., Biology with a Concentration in Ecology, Evolution, and Conservation, California State University, Sacramento. 4 years of environmental science experience. Contribution: Environmental Biologist.

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.

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.

Lea Spann, Engineering Geologist. B.A., Environmental Studies, University of California, Santa Barbara; 28 years of hazardous waste/materials experience and 5 years of environmental planning experience. Contribution: Completed the Initial Site Assessment/Hazardous Waste Compliance Memo.

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 Senior.

Matthew Walker, Environmental Planner (Architectural History). M.A., California State University, Sacramento; 3 years of cultural resource management experience. Contribution: Architectural History Specialist.

Chapter 6 Distribution List

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

Stanislaus County Planning and Community Development
1010 10th Street, Suite 3400
Modesto, CA 95343

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

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

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

Stanislaus Sheriff's Department
250 Hackett Rd
Modesto, CA 95358

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

Stanislaus County Public Works Department
1716 Morgan Road
Modesto, California 95358

Escalon Unified School District
1520 Yosemite Avenue
Escalon, California 95320

Oakdale Joint Unified School District
739 West G Street
Oakdale, CA 95361

Stockton Unified School District
56 South Lincoln Street
Stockton, California 95203

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

Stanislaus County Board of Supervisors, District 1
1010 10th Street, Suite 6500
Modesto, CA 95354

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, U.S. 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

Appendix A Title VI Policy Statement

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

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Making Conservation a California Way of Life.

September 2021

NON-DISCRIMINATION POLICY STATEMENT

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

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

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

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

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

Toks Omishakin
Director

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

Appendix B Avoidance, Minimization and/or Mitigation Measures Summary

To ensure that all of the environmental measures identified in this document are executed at the appropriate times, the following mitigation program (as shown in 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.

Farmland

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.

Emergency Services

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.

Relocation and Real Property

For any person(s) whose real property interests would be impacted by the proposed project, the acquisition of those property interests would comply fully with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended. The act is a federally mandated program that applies to all acquisitions of real property or displacements of persons resulting from federally assisted programs or projects. It was created to provide for and ensure the fair and equitable treatment of all such persons.

Also, the Fifth Amendment of the U.S Constitution provides that private property may not be taken for public use without payment of "just compensation." All impacted owners would be provided with notification of the acquiring agency's intent to acquire an interest in their property, including a written offer letter of just compensation specifically describing those property interests. A right-of-way specialist would be assigned to each property owner to assist with this process.

Cultural Resources

Archaeology

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

- Environmentally Sensitive Area Designation: The establishment of environmentally sensitive areas will be designated by environmentally sensitive area fencing within Caltrans' right-of-way. "Environmentally sensitive area" information will 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" will 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 will 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 will be required to mark over the boundary of the archaeological resource, given the archaeological resource temporary ID Number 2567-1, which will prevent the contractor from disturbing the site during construction.

- Caltrans Standard Special Provision Section 14-1.03B: Archaeological Monitoring Areas will be included in the construction contract. An archaeologist and Native American monitor will 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

No mitigation measures are anticipated.

Hazardous Waste

Pending the Preliminary Site Investigation results, any asbestos-containing material and/or lead-based paint exceeding regulatory levels will be disposed of appropriately.

Wetlands and Other Waters

Avoidance and Minimization Measures

Environmentally Sensitive Area Designation: Additional direct and indirect impacts to sensitive biological resources throughout the project area would be avoided or minimized by designating "environmentally sensitive areas." All areas outside of the proposed construction footprint shall be considered an environmentally sensitive area. In addition, included is any area determined by a qualified biologist during project planning or during pre-construction surveys to qualify for environmentally sensitive area designation.

Designated Biologist: A Designated Biologist or biologists shall be onsite during any activities that have the potential to affect sensitive biological resources. The Designated Biologist will monitor regulated species and habitats; ensure that construction activities do not result in the unintended take of regulated species or disturbances to regulated habitats; ensure that construction activities comply with any permits, licenses, agreements, or contracts; immediately notify the Caltrans Resident Engineer of any take of regulated species, disturbances to regulated habitats, or breaches of environmentally sensitive areas; and prepare, submit, and sign notifications and reports. A Designated Biologist who performs specialized activities must have demonstrated field experience working with the regulated species or performing the specialized task, and regulatory agency approval will be required prior to Caltrans' acceptance of the Designated Biologist.

Containment Measures/Construction Site Best Management Practices: To contain construction-related material and prevent debris and pollutants from entering receiving waters and to reduce the potential for discharge to receiving waters, the contractor shall follow all applicable guidelines and requirements in Section 13 of the Caltrans 2018 Standard Specifications or

any Special Provisions in Section 13 regarding water pollution control and general specifications for preventing, controlling, and abating water pollution in streams, waterways, and other bodies of water.

Worker Environmental Awareness Training for Construction Personnel: Before any work occurs in the project area, a qualified Designated Biologist (Designated Biologist; familiar with the resources to be protected) will conduct a mandatory "Worker Environmental Awareness Training" for construction personnel. The awareness training will be provided to all construction personnel (contractors and subcontractors) to brief them on the need to avoid and minimize effects to sensitive biological resources (e.g., jurisdictional wetlands and other waters, threatened and endangered species, other special-status species, roosting bats, nesting birds, etc.) within and adjacent to construction areas and the penalties for not complying with applicable state and federal laws and permit requirements. The Designated Biologist will inform all construction personnel about the life history and habitat requirements of special-status habitats and species known to occur or with potential for occurrence onsite, the importance of maintaining habitat, and the terms and conditions of regulatory requirements.

Restore and Revegetate Temporarily Disturbed Areas Onsite: Disturbed areas within the construction limits will be graded to minimize surface erosion and siltation into receiving waters. Disturbed areas will be re-contoured to as close to pre-project condition as possible and will be stabilized as soon as feasible (and no later than October 15 of each construction season) to avoid erosion during subsequent storms and runoff. Permanent erosion control seeding will be performed at all disturbed sites by hydro-seeding over the course of construction as each site is completed, with all sites seeded by the completion of construction activities.

Compensatory Mitigation

Permanent losses of waters of the United States would be compensated by participation in the Nation Wildlife Federation's Sacramento District California In-Lieu Fee Program.

Animal Species

Western Burrowing Owl

Avoidance and Minimization Efforts

- Nesting Bird Avoidance–Limited Operation Period—If possible, construction activities within the nesting bird habitat should occur during the non-nesting season (between October 1 and January 31). If not feasible, then pre-construction surveys or nesting bird avoidance measures would be required.
- Nesting Bird Avoidance–Pre-Construction Surveys During Nesting Season—If ground-disturbance, vegetation removal, or other construction

activities are scheduled during the nesting season of protected raptors and migratory birds (February 1 to September 30), a focused survey for active nests of such birds shall be conducted by a qualified biologist within 15 days prior to the beginning of project-related activities. If a lapse in project-related work of 15 days or longer occurs, another survey and, if required, consultation with the U.S. Fish and Wildlife Service and California Department of Fish and Wildlife will be required before the work can be reinitiated. Pre-construction surveys for nesting migratory birds and raptors shall be specified under Caltrans 2018 Standard Specification and/or Standard Special Provision 14-6.03A (Species Protection) and/or 14-6.03(B) (Bird Protection).

- Nesting Bird Avoidance–Avoid Active Nests—If active nests are found, a protective no-work buffer will be established, and Caltrans shall consult with the U.S. Fish and Wildlife Service regarding appropriate action to comply with the Migratory Bird Treaty Act of 1918 and with the California Department of Fish and Wildlife to comply with provisions of the Fish and Game Code of California. The no-work buffer for burrowing owls would be 655 feet from April 1 to October 15 and 165 feet from October 16 to March 31.

Compensatory Mitigation

Compensatory mitigation is not required for the burrowing owl.

Swainson's Hawk and Other Migratory Birds

Avoidance and Minimization Efforts

To the maximum extent feasible, the project has been designed, modified, and amended to avoid and minimize potential project-related impacts to the Swainson's hawk. However, if this species is present within the biological study area during implementation of the project, individual birds and their habitat could be impacted. The following measures will be implemented to avoid and minimize potential impacts to the Swainson's hawk:

- Worker Environmental Awareness—Training for Construction Personnel—Before any work occurs in the project area, a qualified Designated Biologist (Designated Biologist; familiar with the resources to be protected) will conduct a mandatory "Worker Environmental Awareness Training" for construction personnel. The awareness training will be provided to all construction personnel (contractors and subcontractors) to brief them on the need to avoid and minimize effects to sensitive biological resources (e.g., jurisdictional wetlands and other waters, threatened and endangered species, other special-status species, roosting bats, nesting birds, etc.) within and adjacent to construction areas and the penalties for not complying with applicable state and federal laws and permit requirements. The Designated Biologist will inform all construction personnel about the life history and habitat requirements of special-status habitats and species known to occur or with potential for occurrence onsite, the importance of maintaining habitat, and the terms and conditions of regulatory requirements.

- Designated Biologist—A Designated Biologist or biologists shall be onsite during any activities that have the potential to affect sensitive biological resources. The Designated Biologist will monitor regulated species and habitats; ensure that construction activities do not result in the unintended take of regulated species or disturbances to regulated habitats; ensure that construction activities comply with any permits, licenses, agreements, or contracts; immediately notify the Caltrans Resident Engineer of any take of regulated species, disturbances to regulated habitats, or breaches of environmentally sensitive areas; and prepare, submit, and sign notifications and reports. A Designated Biologist who performs specialized activities must have demonstrated field experience working with the regulated species or performing the specialized task, and regulatory agency approval will be required prior to Caltrans' acceptance of the Designated Biologist.
- Conduct Pre-construction Surveys for Nesting Migratory Birds and Raptors, including Special-Status Species, and Establish Protective Buffers—A qualified wildlife biologist will conduct nesting bird surveys if construction occurs between February 1 and September 30. These nesting bird surveys will include a minimum of two separate surveys to look for active nests of migratory birds, including raptors. Surveys will include a search of all trees and shrubs, and ruderal areas that provide suitable nesting habitat for birds within 100 feet of construction disturbance. In addition, a 0.5-mile area from the biological study will be surveyed for nesting raptors to identify raptors that might be affected by construction disturbances, particularly special-status raptors (i.e., northern goshawk, great gray owl, and California spotted owl). The biologists conducting the surveys should have experience with all special-status birds that could potentially nest within the survey area. In areas where access is not permitted, the surveyors will use binoculars and spotting scopes to inspect any potential nest trees, particularly large trees and snags. Surveys should occur during the height of the breeding season (March 1 to June 1), with one survey occurring within 1 week prior to the start of construction.

  If no special-status raptor species or active nests are detected during these surveys, no additional measures are required. If an active nest is found in the survey area, a no-disturbance buffer will be established to avoid disturbance or destruction of the nest site until the end of the breeding season (September 30) or until after a qualified wildlife biologist determines that the young have fledged and moved out of the construction area (this date varies by species). The extent of these buffers will be determined by the Caltrans Designated Biologist in coordination with any applicable agencies (as determined by species) and will depend on the level of noise or construction disturbance taking place, line-of-sight between the nest and the disturbance, ambient levels of noise and other non-project disturbances, and other topographical or artificial barriers.

Suitable buffer distances may vary between species; however, a minimum of 50 feet for songbirds and 300 feet for raptors is typical.

See also the measures listed under western spadefoot toad below for measures that may affect more than one species.

Compensatory Mitigation

Compensatory mitigation is not required for the burrowing owl.

Western Spadefoot Toad

Avoidance and Minimization Efforts

The following measures would be included:

- Worker Environmental Awareness Training for Construction Personnel—Before any work occurs in the project area, a qualified biologist will conduct mandatory worker education training to all construction personnel.
- Environmentally Sensitive Area Designation—All areas outside the proposed construction footprint and designated sensitive areas shall be considered an environmentally sensitive area. These areas will be designated on the construction plans and may be marked off by temporary orange fencing or other high visibility markings. Work inside these areas is forbidden.
- The Designated Biologist shall be onsite for work at culvert locations STA-4-3.09, STA-4-3.25, STA-4-4.02, STA-4-4.23, and STA-4-5.44. The Designated Biologist shall monitor regulated species and habitats, and ensure construction activities comply with permits, licenses, agreements and contracts. The Designated Biologist will notify the Caltrans Resident Engineer of any take of regulated species or disturbances to regulated habitats, or any break of environmentally sensitive areas. The Designated Biologist will prepare, submit and sign notifications and reports.
- Construction best management practices will be in place during construction.
- Retain a Qualified Biologist to conduct pre-construction surveys for the western spadefoot toad.
- All areas disturbed during construction would be re-contoured if necessary and stabilized as soon as possible following completion of construction. Roadside areas would be re-vegetated with Caltrans-approved weed-free and non-invasive plant seed mixture.
- Install Exclusion Fencing Between the Work Area and Suitable Habitat for Western Spadefoot Toad—To prevent western spadefoot toads from entering the active work area during construction at culvert locations STA-4-3.09, STA-4-3.25, STA-4-4.02, STA-4-4.23, and STA-4-5.44, Caltrans shall install wildlife exclusion fencing between the designated work limits and adjacent suitable habitat (open grasslands). Exclusion fencing will be

at least 3 feet high, and the lower 6 inches of the fence will be buried in the ground to prevent animals from crawling under. The remaining 2.5 feet will be left above ground to serve as a barrier for animals moving on the ground surface. The fence will be pulled taut at each support to prevent folds or snags. Fencing shall be installed and maintained in good condition during all construction activities. Such fencing shall be inspected and maintained daily until completion of the work at that site.

- Check for Animals under Construction Equipment and Vehicles Prior to Moving—Prior to being moved, vehicles and equipment will be checked for any sensitive wildlife sheltering underneath them. If an animal is observed, the vehicles/equipment will not be moved until the individual has vacated the area of its own accord.
- Install Escape Ramps in Holes or Trenches Measuring more than 6 Feet Deep—To prevent the inadvertent entrapment of the western spadefoot toad or other animals during construction, any excavated, steep-walled holes or trenches measuring more than 6 inches deep either will be covered at the close of each working day using plywood or similar materials (without openings) or will be provided with one or more escape ramps constructed of earth fill or wooden planks in the event that the holes/trenches cannot be fully covered. All holes or trenches will be checked daily for trapped wildlife; they also will be thoroughly inspected before being filled. If at any time a trapped animal is discovered, the Service-approved biologist(s) will install escape ramps or other appropriate structures (if not already in place) to enable the individual the opportunity to escape on its own.
- Limit the Use of Artificial Lighting—The use of temporary artificial lighting onsite will be limited, except when necessary for construction, or for driver and pedestrian safety. Any artificial lighting used during construction will be confined to areas within the construction footprint and directed away from surrounding habitat.
- Properly Dispose of Food-Related Trash and Remove from Project Site Daily—All food-related trash items such as wrappers, cans, bottles, and food scraps generated by project-related activities and personnel will be disposed of in closed containers and removed daily from the project site to reduce the potential for attracting predator species.
- Prohibit Pets and Firearms from Being Brought to the Project Site—To eliminate the potential for disturbance or injury to, or death of, any species resulting from the presence of pets and firearms, neither (with the exception of firearms carried by authorized law enforcement officials) will be allowed on the project site.

Compensatory Mitigation

Compensatory mitigation is not required for the western spadefoot toad.

Threatened and Endangered Species

Greene's Tuctoria

Avoidance and Minimization Efforts

Pre-Construction Surveys-Special-Status Plants:

- The qualifications of any proposed biological monitor(s) will be presented to the U.S. Fish and Wildlife Service and California Department of Fish and Wildlife for review and written approval at least 2 weeks prior to conducting project activities at the project site.
- No more than 24 hours prior to any ground disturbance in a given location, pre-construction surveys will be conducted by a California Department of Fish and Wildlife-approved biologist for sensitive plant species using California Department of Fish and Wildlife-approved survey protocols.
- If sensitive plant species are detected within areas that will be disturbed by construction activities, then no work will take place at these locations until Caltrans has consulted with the California Department of Fish and Wildlife.
- New sightings of sensitive plant species shall be reported to the California Natural Diversity Database. A copy of the reporting form and a topographic map clearly marked with the location of where the sensitive plant species were observed should also be provided to the California Department of Fish and Wildlife.

Compensatory Mitigation

Compensatory mitigation is not required for Green's tuctoria.

Vernal Pool Fairy Shrimp/Vernal Pool Tadpole Shrimp

Avoidance and Minimization Efforts

Implementation of the following measures would ensure that construction activities avoid and minimize impacts to the vernal pool fairy shrimp during construction:

- Worker Environmental Awareness Training for Construction Personnel—Before any work occurs in the project area, a qualified designated biologist (Designated Biologist; familiar with the resources to be protected) will conduct a mandatory "Worker Environmental Awareness Training" for construction personnel. The awareness training will be provided to all construction personnel (contractors and subcontractors) to brief them on the need to avoid and minimize effects to sensitive biological resources (e.g., jurisdictional wetlands and other waters, threatened and endangered species, other special-status species, roosting bats, nesting birds, etc.) within and adjacent to construction areas and the penalties for not

complying with applicable state and federal laws and permit requirements. The Designated Biologist will inform all construction personnel about the life history and habitat requirements of special-status habitats and species known to occur or with potential for occurrence onsite, the importance of maintaining habitat, and the terms and conditions of regulatory requirements.

- Environmentally Sensitive Area Designation—Additional direct and indirect impacts to sensitive biological resources throughout the project area would be avoided or minimized by designating "environmentally sensitive areas." All areas outside of the proposed construction footprint shall be considered as environmentally sensitive areas, as well as any areas determined by a qualified biologist during project planning or during pre-construction surveys to qualify for environmentally sensitive area designation.
- Designated Biologist—A Designated Biologist or biologists shall be onsite during any activities that have the potential to affect sensitive biological resources. The Designated Biologist will monitor regulated species and habitats; ensure that construction activities do not result in the unintended take of regulated species or disturbances to regulated habitats; ensure that construction activities comply with any permits, licenses, agreements, or contracts; immediately notify the Caltrans Resident Engineer of any take of regulated species, disturbances to regulated habitats, or breaches of environmentally sensitive areas; and prepare, submit, and sign notifications and reports. A Designated Biologist who performs specialized activities must have demonstrated field experience working with the regulated species or performing the specialized task, and regulatory agency approval will be required prior to Caltrans' acceptance of the Designated Biologist.
- Work Windows—Construction activities within 250 feet of suitable vernal pool habitat (locations STA-4 post mile 3.09, STA-4 post mile 3.25, STA-4 post mile 4.02, STA-4 post mile 4.23, and STA-4 post mile 5.44) will be avoided from the first day of the first significant rain (1 inch or greater) until June 1, or until suitable wetlands remain dry for 72 hours and no significant rain is forecast on the day construction is proposed.
- Pre-construction Surveys—Prior to the start of work at culvert locations STA-4-3.09, STA-4-3.25, STA-4-4.02, STA-4-4.23, and STA-4-5.44, a qualified biologist will inspect the work areas to ensure that the work areas are dry, that environmentally sensitive area fencing is installed at the limits of the temporary work area around the inlet structures, and that erosion control materials (such as burlap-wrapped fiber rolls) are installed between the work areas.
- Herbicide Restrictions—No herbicide will be applied within 100 feet of aquatic habitat.

Compensatory Mitigation

Compensatory mitigation is proposed through the purchase of mitigation credits. Credits will be purchased through an approved mitigation bank that has vernal pool fairy shrimp credits.

California Tiger Salamander

Avoidance and Minimization Efforts

Implementation of the following measures would ensure that construction activities avoid and minimize impacts to the California tiger salamander during construction:

- Worker Environmental Awareness Training for Construction Personnel—Before any work occurs in the project area, a qualified designated biologist (Designated Biologist; familiar with the resources to be protected) will conduct a mandatory "Worker Environmental Awareness Training" for construction personnel. The awareness training will be provided to all construction personnel (contractors and subcontractors) to brief them on the need to avoid and minimize effects to sensitive biological resources (e.g., jurisdictional wetlands and other waters, threatened and endangered species, other special-status species, roosting bats, nesting birds, etc.) within and adjacent to construction areas and the penalties for not complying with applicable state and federal laws and permit requirements. The Designated Biologist will inform all construction personnel about the life history and habitat requirements of special-status habitats and species known to occur or with potential for occurrence onsite, the importance of maintaining habitat, and the terms and conditions of regulatory requirements.
- Environmentally Sensitive Area Designation—Additional direct and indirect impacts to sensitive biological resources throughout the project area would be avoided or minimized by designating "environmentally sensitive areas." All areas outside of the proposed construction footprint shall be considered as environmentally sensitive areas, as well as any areas determined by a qualified biologist during project planning or during pre-construction surveys to qualify for environmentally sensitive area designation.
- Work Windows—Construction activities within 250 feet of suitable vernal pool habitat (locations STA-4 post mile 3.09, STA-4 post mile 3.25, STA-4 post mile 4.02, STA-4 post mile 4.23, and STA-4 post mile 5.44) will be avoided from November 1 to May 1.
- Construction Best Management Practices—Construction best management practices (best practices) that are consistent with the most recent Caltrans manuals (including the Construction Site Best Management Practices Manual and the Stormwater Pollution Prevention Plan and Water Pollution Control Program Manuals) will be developed for

the project and will be implemented throughout the course of construction to avoid or reduce adverse effects to water quality. Best practices associated with an erosion control plan will be prepared for avoiding discharge of pollutants from vehicle/equipment cleaning into aquatic and other sensitive habitats. Caltrans personnel and the contractor will perform routine inspections of the construction areas to verify that the best practices are being properly implemented and maintained and are operating effectively as designed. A water quality inspector will inspect sites before and after a rain event to ensure that stormwater best practices are adequate.

- Re-contour and Revegetate Disturbed Areas—To control erosion and restore habitat value, all areas within the work areas that are disturbed during construction will be re-contoured if necessary and stabilized as soon as possible following the completion of construction. Roadside areas will be revegetated with a Caltrans-approved, appropriate weed-free and non-invasive plant seed mixture.
- Retain a Qualified Biologist to Conduct Pre-construction Surveys for California Tiger Salamander—No more than 14 days prior to the start of ground-disturbing activities (including vegetation removal and equipment staging) within suitable habitat for the California tiger salamander and western spadefoot toad at culvert locations STA-4-3.09, STA-4-3.25, STA-4-4.02, STA-4-4.23, and STA-4-5.44, a qualified biologist(s) will conduct visual encounter pre-construction surveys of each site. The survey will pay particular attention to detecting any burrows, crevices, and other cover sites that could be used as refugia by the species. If any burrows are discovered, they will be flagged or otherwise marked, and avoided. Any sightings of a California tiger salamander and/or western spadefoot toad will be immediately reported to Caltrans, and construction will not commence at that location until the species has moved out of the work area on its own accord and the appropriate agencies are consulted on the need for additional protection measures.
- Install Exclusion Fencing Between the Work Area and Suitable Habitat for California Tiger Salamander—To prevent the California tiger salamander from entering the active work area during construction at culvert locations STA-4-3.09, STA-4-3.25, STA-4-4.02, STA-4-4.23, and STA-4-5.44, Caltrans shall install wildlife exclusion fencing between the designated work limits and adjacent suitable habitat (open grasslands). Exclusion fencing will be at least 3 feet high, and the lower 6 inches of the fence will be buried in the ground to prevent animals from crawling under. The remaining 2.5 feet will be left above ground to serve as a barrier for animals moving on the ground surface. The fence will be pulled taut at each support to prevent folds or snags. Fencing shall be installed and maintained in good condition during all construction activities. Such fencing shall be inspected and maintained daily until completion of the work at that site.

- Check for Animals under Construction Equipment and Vehicles Prior to Moving—Prior to being moved, vehicles and equipment will be checked for any California tiger salamanders, or other sensitive wildlife sheltering underneath them. If an animal is observed, the vehicles/equipment will not be moved until the individual has vacated the area of its own accord.
- Install Escape Ramps in Holes or Trenches Measuring more than 6 Feet Deep—To prevent the inadvertent entrapment of the California tiger salamander or other animals during construction, any excavated, steep-walled holes or trenches measuring more than 6 inches deep either will be covered at the close of each working day using plywood or similar materials (without openings) or will be provided with one or more escape ramps constructed of earth fill or wooden planks in the event that the holes/trenches cannot be fully covered. All holes or trenches will be checked daily for trapped wildlife; they also will be thoroughly inspected before being filled. If at any time a trapped animal is discovered, the Service-approved biologist(s) will install escape ramps or other appropriate structures (if not already in place) to enable the individual the opportunity to escape on its own.
- Limit the Use of Artificial Lighting—The use of temporary artificial lighting onsite will be limited, except when necessary for construction, or for driver and pedestrian safety. Any artificial lighting used during construction will be confined to areas within the construction footprint and directed away from surrounding habitat.
- Properly Dispose of Food-Related Trash and Remove from Project Site Daily—All food-related trash items such as wrappers, cans, bottles, and food scraps generated by project-related activities and personnel will be disposed of in closed containers and removed daily from the project site to reduce the potential for attracting predator species.
- Prohibit Pets and Firearms from Being Brought to the Project Site—To eliminate the potential for disturbance or injury to, or death of, any species resulting from the presence of pets and firearms, neither (with the exception of firearms carried by authorized law enforcement officials) will be allowed on the project site.

Threatened and Endangered Species

Implementation of the following measures will ensure that the project minimizes effects on riparian habitat adjacent to the project construction area (additional avoidance and minimization measures may be agreed upon during the project permitting process):

- Weed-Free Construction Equipment and Vehicles—To minimize the potential for the transport of weed propagules to the Action Area from sources outside of the project area, construction equipment and vehicles are recommended to be cleaned and washed at the contractor's facilities

prior to arrival to the construction site. Any vehicle or equipment cleaning that occurs onsite during construction activities shall conform with Caltrans 2018 Standard Specifications or any Special Conditions under Section 13-4.03E(3) and Section NS-08 (Vehicle and Equipment Cleaning) of the Caltrans 2017 Construction Site Best Management Practices Manual, which require the contractor to contain and dispose of any waste resulting from vehicle or equipment cleaning.

- Weed Control During Construction—To minimize the potential for spreading weed propagules originating from within the project Environmental Study Limits during the course of construction activities, including initial vegetation clearing and at onsite revegetation areas, weed control would be accomplished in accordance with Caltrans 2018 Standard Specifications or Special Provisions under Section 20-1.03C(3). The use of herbicides for weed control activities would be discouraged but may be considered on a case-by-case basis depending upon the weed species, the extent of infestation, or any regulatory restrictions.
- Weed-Free Erosion Control and Revegetation Treatments—To minimize the risk of introducing weed propagules to the Action Area from sources outside of the project area, only locally adapted plant species appropriate for the project area will be used in any erosion control or revegetation seed mix or stock. The Caltrans Biologist will consult with the Caltrans Landscape Architect to develop appropriate seed and planting palettes for use in revegetation and/or erosion control applications. Any compost, mulch, tackifier, fiber, straw, duff, topsoil, erosion control products, or seed must meet Caltrans 2018 Standard Specification or any Special Provisions under Section 21-2.02 for these materials. Any hydro-seed used for revegetation activities must also be certified weed-free per Caltrans 2018 Standard Specifications Section 21-2.02F.

Appendix C Farmland Ratings Sheets

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	4. Sheet 1 of _____
1. Name of Project **SR 4 CAPM Project**	5. Federal Agency Involved **FHWA**	
2. Type of Project **Highway**	6. County and State **San Joaquin California**	
PART II *(To be completed by NRCS)*	1. Date Request Received by NRCS **5/26/20**	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 ☑ NO ☐		4. Acres Irrigated **487,147** Average Farm Size **225**
5. Major Crop(s) **Apiary Products, Nursery Products, Seed C**	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 Revised Storie Index**	9. Name of Local Site Assessment System **N/A**	10. Date Land Evaluation Returned by NRCS **6/3/20**

PART III *(To be completed by Federal Agency)*		Alternative Corridor For Segment _____			
		Corridor A	Corridor B	Corridor C	Corridor D
A. Total Acres To Be Converted Directly		0.27			
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		0.27			
B. Total Acres Statewide And Local Important Farmland		0			
C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted		0.00000			
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value		20.1			
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)*		77			
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	15			
2. Perimeter in Nonurban Use	10	10			
3. Percent Of Corridor Being Farmed	20	20			
4. Protection Provided By State And Local Government	20	0			
5. Size of Present Farm Unit Compared To Average	10	10			
6. Creation Of Nonfarmable Farmland	25	0			
7. Availablility 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	0			
TOTAL CORRIDOR ASSESSMENT POINTS	160	80	0	0	0
PART VII *(To be completed by Federal Agency)*					
Relative Value Of Farmland (From Part V)	100	77	0	0	0
Total Corridor Assessment (From Part VI above or a local site assessment)	160	80	0	0	0
TOTAL POINTS *(Total of above 2 lines)*	260	157	0	0	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 ☐ NO ☐

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

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	4. Sheet 1 of _____
1. Name of Project **SR 4 CAPM Project**	5. Federal Agency Involved **FHWA**	
2. Type of Project **Highway**	6. County and State **Stanislaus**	
PART II *(To be completed by NRCS)*	1. Date Request Received by NRCS **5/26/20**	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 ☐ NO ☑		4. Acres Irrigated | Average Farm Size
5. Major Crop(s)	6. Farmable Land in Government Jurisdiction Acres: %	7. Amount of Farmland As Defined in FPPA Acres: %
8. Name Of Land Evaluation System Used	9. Name of Local Site Assessment System	10. Date Land Evaluation Returned by NRCS

PART III *(To be completed by Federal Agency)*		Alternative Corridor For Segment _____			
		Corridor A	Corridor B	Corridor C	Corridor D
A. Total Acres To Be Converted Directly		1.0			
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					
B. Total Acres Statewide And Local Important Farmland					
C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted					
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value					
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)*					
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	15			
2. Perimeter in Nonurban Use	10	10			
3. Percent Of Corridor Being Farmed	20	20			
4. Protection Provided By State And Local Government	20	0			
5. Size of Present Farm Unit Compared To Average	10	10			
6. Creation Of Nonfarmable Farmland	25	0			
7. Availablility 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	0			
TOTAL CORRIDOR ASSESSMENT POINTS	160	80	0	0	0
PART VII *(To be completed by Federal Agency)*					
Relative Value Of Farmland (From Part V)	100	0	0	0	0
Total Corridor Assessment (From Part VI above or a local site assessment)	160	80	0	0	0
TOTAL POINTS *(Total of above 2 lines)*	260	80	0	0	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 ☐ NO ☐

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 Memo

Water Compliance Memo

Natural Environment Study

Location Hydraulic Study

Historical Property Survey Report

- Historic Resource Evaluation Report
- Archaeological Survey Report

Hazardous Waste Reports

- Initial Site Assessment

Scenic Resource Evaluation

Paleontology Identification Report

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: haesun.a.lim@dot.ca.gov or via U.S. mail write to Haesun Lim, District 6 Environmental, California Department of Transportation, 2015 East Shields Avenue, Suite 100, Fresno, California 93726 or call (559) 970-2348.

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).