KIN 41 Drainage Restoration

On State Routes 33, 41, 43,198, and 269 in Kings County
06-KIN-33, 41, 43, 198, and 269-PM various
EA: 06-1E950
Project ID Number 0622000122

Initial Study
with Proposed Negative Declaration

Prepared by the
State of California Department of Transportation

January 2026

General Information About This Document

What's in this document:

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

What you should do:

- Please read the document. Additional copies of the document and the related technical studies are available for review at the Caltrans District Office at 1352 West Olive Avenue, Fresno, California 93728, weekdays from 8:00 a.m. to 4:00 p.m., and at the Hanford Branch Library at 110 South 11th Avenue, Hanford, California 93230, Monday through Thursday from 9:00 a.m. to 6:00 p.m., with Friday and Saturday hours from 9:00 a.m. to 1:00 p.m. This document may be downloaded at the following website: https://dot.dot.ca.gov/caltrans-near-me/district-6/district-6-projects/06-1e950

- Tell us what you think. If you have any comments regarding the proposed project, please send your written comments to Caltrans by the deadline. Submit comments via U.S. mail to: Judith Lopez, District 6 Environmental Division, California Department of Transportation, 2015 East Shields Avenue, Suite 100, Fresno, California 93726. Submit comments via email to: judith.lopez@dot.ca.gov.

- Submit comments by the deadline: April 2, 2026.

What happens next:

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

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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: Judith Lopez, District 6 Environmental Division, 2015 East Shields Avenue, Suite 100, Fresno, California 93726; phone number 559-240-5068 (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.

06-KIN-33, 41, 43, 198, and 269-PM various
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Repair and/or replace 49 existing culverts on State
Routes 33, 41, 43, 198, and 269 at various locations in Kings County

INITIAL STUDY
with Proposed Negative Declaration

Submitted Pursuant to: (State) Division 13, California Public Resources Code

THE STATE OF CALIFORNIA
Department of Transportation

David Johnson

David M. Johnson
Acting Environmental Office Chief, District 6
California Department of Transportation
CEQA Lead Agency

01/22/2026

Date

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

Pursuant to: Division 13, Public Resources Code

State Clearinghouse Number: pending
District-County-Route-Post Mile: 06-KIN-33, 41, 43, 198, and 269-PM various
EA/Project Number: EA 06-1E950 and Project ID Number 0622000122

Project Description

The California Department of Transportation (Caltrans) proposes to repair and/or replace 49 existing culverts on State Routes 33, 41, 43, 198, and 269 at various locations in Kings County.

Determination

An Initial Study has been prepared by Caltrans District 6. On the basis of this study, it is determined that the proposed action will not have a significant effect on the environment for the following reasons:

The project would have no effect on aesthetics, agriculture and forestry resources, air quality, energy, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, noise, paleontological resources, population and housing, public services, recreation, transportation, and tribal cultural resources.

The project would have less than significant effects to biological resources, cultural resources, utilities and service systems, greenhouse gas emissions, and wildfires.

_____

David M. Johnson
Acting Environmental Office Chief, District 6
California Department of Transportation
CEQA Lead Agency

_____

Date

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Chapter 1 Proposed Project

1.1 Introduction

The California Department of Transportation (Caltrans) proposes to repair and replace existing drainage culverts in Kings County on State Routes 33, 41, 43, 198, and 269.

State Route 33 crosses the far west side of the San Joaquin Valley in a north-south direction. In Caltrans District 6, the route enters Kern County at the San Luis Obispo County line, goes through Kings County, and ends north of Firebaugh in Fresno County at the Merced County line. It covers 165 miles within District 6. State Route 33 is a north-south alternative to Interstate 5 and State Route 99. It primarily serves oil fields and agricultural industries.

State Route 41 crosses Central California from Morro Bay on the coast to Yosemite National Park in the east. Within District 6, it begins at the San Luis Obispo–Kern County line, goes through Kings, Fresno, and Madera counties, and ends in Mariposa County (Caltrans District 10). The route covers over 138 miles in District 6. State Route 41 is highly used, and most of the route needs to be improved to support heavy traffic.

State Route 43 runs through the Central Valley and is located entirely within District 6. The route begins in Kern County, at State Route 119, and crosses Tulare, Kings, and Fresno counties. The route ends at State Route 99 in Selma, covering 98 miles. State Route 43 mainly serves agricultural communities and farm-to-market services. It may also serve as an alternate north-south route for Interstate 5 and State Route 99. It also serves intermodal services, such as truck-to-rail transport, with the Burlington Northern and Santa Fe Railway running near the route.

State Route 198 crosses 141 miles in Caltrans District 5 (Monterey County) and District 6 (Fresno, Kings, and Tulare counties). In District 6 alone, State Route 198 covers over 115 miles. State Route 198 serves commercial traffic, primarily agriculture-related, and recreational access to Lake Kaweah and Sequoia and Kings Canyon National Parks. It is also a primary commuter route connecting the cities of Coalinga, Lemoore, Huron, Hanford, and Visalia. Additionally, State Route 198 passes through the unincorporated communities of Armona, Lemon Cove, and Three Rivers. State Route 198 provides a link to the Naval Air Station Lemoore, one of the Navy's essential aviation facilities in the western U.S. The Naval Air Station Lemoore is a major strategic military installation, a major employer in the region, and plays a critical role in the nation's defense. State Route 198 is the main transportation or resupply corridor that supports the Naval Air Station

Lemoore's military operations and the military and civilian personnel living or working at the base.

State Route 269 begins at State Route 33 and ends at State Route 145. The route passes through the city of Avenal in Kings County and through the city of Huron and the community of Five Points in Fresno County. State Route 269 mainly serves as a two-lane conventional highway. There are no passing lanes throughout this route.

The project's estimated cost is $19.6 million escalation. The project is to be funded by the 2025 State Highway Operation and Protection Program (20.XX.201.151 Rehabilitate drainage systems) and is scheduled to be delivered in the 2026-2027 fiscal year. In addition, this project is eligible for federal aid funding. Construction is scheduled to begin in April 2028 and would take about 180 working days to complete. Some night work is planned for this project. Some tree removal is anticipated during project construction.

1.2 Purpose and Need

The purpose and need sections discuss the reasons for the project and justify its development.

1.2.1 Purpose

The purpose of this project is to repair and replace existing culverts in Kings County on State Routes 33, 41, 43, 198, and 269 at various post mile locations. This project proposes to restore 49 existing culvert drainage systems to a state of good condition. Replacing and repairing the clogged culverts is necessary to maintain the operational integrity of the drainage systems. Maintaining these systems will extend the life of the culverts, and these elements are crucial for the stability and proper functioning of the roadway.

1.2.2 Need

State Routes 33, 41, 43, 198, and 269 in Kings County contain clogged culverts that require restoration. The identified culverts have perforations, heavy rust, joint separations, damaged end treatments, and/or associated channels clogged with sediment and debris.

1.3 Project Description

The project is on State Routes 33, 41, 43, 198, and 269 at various post mile locations in Kings County.

The project would repair and replace the existing culverts with a cured-in-place liner and add flared end sections at the culvert inlet and outlet to minimize erosion. In addition, improvements would be made to drainage inlets, headwalls, dikes, electrical conduits, concrete joint structures, and dig-outs. See Figure 1-1 for the project vicinity.

Figure 1-1 Project Vicinity Map

1.4 Project Alternatives

A Build Alternative and a No-Build Alternative are being considered for the project.

1.4.1 Build Alternative

The Build Alternative would repair or replace the identified deteriorating culverts within the project limits. This alternative would repair or replace the existing culverts with a cured-in-place liner and would add flared end sections at the culvert inlet and outlet to minimize erosion. In addition, improvements would be made to drainage inlets, headwalls, dikes, electrical conduits, concrete joint structures, and dig-outs.

Table 1.1 lists each culvert location by post mile, the material of the existing culvert, and the proposed improvements to repair or replace each culvert. In columns three and four of the table, the abbreviation CSP stands for "corrugated steel pipe," and RCP stands for "reinforced concrete pipe."

Table 1.1 Culvert Locations

Location	Route	Post Mile	Culvert Material	Proposed Improvement
1	33	2.63	CSP	Liner, Add Inlet/Outlet Flared End Section
2	33	5.30	CSP	Culvert Barrel Lining
3	33	8.65	CSP	Replace 2 feet CSP from Inlet/Outlet, Liner, Add Inlet/Outlet Flared End Section
4	33	8.73	CSP	Replace 2 feet CSP from Inlet/Outlet, Liner, Add Inlet/Outlet Flared End Section
5	33	9.22	CSP	Replace 2 feet CSP from Inlet/Outlet, Liner, Add Inlet/Outlet Flared End Section
6	33	12.24	CSP	Culvert Barrel Lining
7	41	11.93	CSP	Culvert Barrel Lining
8	41	13.03	CSP	Liner, Extend Outlet 30 feet, Add Inlet/Outlet Flared End Section
9	41	14.07	CSP	Culvert Barrel Lining
10	41	14.37	CSP	Replace
11	41	15.85	CSP	Culvert Barrel Lining
12	41	16.53	CSP	Culvert Barrel Lining
13	41	16.73	CSP	Add Outlet Drainage Inlet
14	41	16.86	CSP	Replace
15	41	30.85	Concrete	Replace
16	41	31.07	Concrete	Culvert Barrel Lining
17	41	32.63	Concrete	Culvert Barrel Lining
18	41	33.47	Concrete	Replace 8 feet RCP from Inlet, Replace Inlet Flared End Section
19	41	36.33	CSP	Culvert Barrel Lining

Location	Route	Post Mile	Culvert Material	Proposed Improvement
20	41	42.18	CSP	Replace
21	41	43.50	CSP	Culvert Barrel Lining
22	41	44.41	CSP	Replace
23	41	44.65	CSP	Culvert Barrel Lining
24	41	45.15	CSP	Culvert Barrel Lining
25	43	5.54	CSP	Culvert Barrel Lining
26	43	7.52	CSP	Replace 6 feet CSP from Inlet/Outlet, Add Inlet/Outlet Flared End Section
27	43	7.91	CSP	Culvert Barrel Lining
28	43	7.97	CSP	Culvert Barrel Lining
29	43	8.18	CSP	Replace 12 feet CSP from Outlet, Add Outlet Flared End Section
30	43	8.25	CSP	Replace 12 feet CSP from Outlet, Add Outlet Flared End Section
31	43	9.30	CSP	Replace
32	198	3.96	CSP	Culvert Barrel Lining
33	198	17.19	CSP	Replace
34	198	17.75	CSP	Replace
35	198	17.76	CSP	Replace
36	198	18.37	CSP	Replace
37	198	19.59	CSP	Replace
38	198	21.24	CSP	Replace
39	269	0.18	CSP	Replace
40	269	0.30	CSP	Replace and combine with 2-1 Culvert
41	269	0	CSP	Replace
42	269	0.01	CSP	Replace
43	269	0.04	CSP	Culvert Barrel Lining
44	269	0.18	CSP	Culvert Barrel Lining
45	269	1.51	CSP	Replace
46	269	1.67	CSP	Culvert Barrel Lining
47	269	4.03	CSP	Culvert Barrel Lining
48	269	4.47	CSP	Culvert Barrel Lining
49	269	5.52	CSP	Culvert Barrel Lining

All construction activities would be completed within the existing Caltrans right-of-way. It is anticipated that no Temporary Construction Easements (TCEs) or additional right-of-way would be required for the project. Night work is planned, and some tree removal is anticipated during project construction. Potholing would be required for the project to verify that no utilities, such as telecommunications and natural gas pipes, would be affected within the project's limits.

To minimize delays and disruption to existing traffic patterns, the following steps would be taken during the implementation of construction activities:

- One-way traffic closures with temporary reversing traffic control will be required during the staged construction work.

- Efforts will be made to keep two lanes open during daytime work, but one-lane closures for short periods may be necessary with the use of a portable changeable message sign. Construction staging and a traffic handling plan would be determined during the Project Approval and Environmental Document phase of the project.

1.4.2 No-Build (No-Action) Alternative

The No-Build Alternative would leave the culverts on State Routes 33, 41, 43, 198, and 269 in poor condition. The culverts would continue to deteriorate, causing potential flood damage and pavement failure. As a result, the No-Build Alternative would not meet the purpose and need of the project.

1.5 Standard Measures and Best Management Practices Included in All Build Alternatives

The project may include, but would not be limited to, the following Standard Special Provisions:

- Section 14-9.02 “Air Pollution Control” and Section 10-5 “Dust Control” pertain to dust control and dust palliatives and require the contractor to comply with the air pollution control rules, ordinances, regulations, and statutes that apply to work performed under the contract. Notification must be given a minimum of 10 working days before starting demolition or renovation activities.

- Non-Standard Special Provision: A Dust Control Plan, approved by the San Joaquin Valley Air Pollution Control District, would be needed if at least 2,500 cubic yards of material are moved in a day for at least three days of the project, or 5 or more acres of land will be disturbed during construction.

- Section 13-1 (Water Pollution). If the project disturbs less than 1 acre of soil, a Water Pollution Control Plan would be required for the contractor to address all potential water quality impacts that may occur when performing construction activities. If a project disturbs more than 1 acre of soil, a Notification of Intent is to be submitted to the appropriate Regional Water Quality Control Board at least 30 days before the start of construction.

1. A Stormwater Pollution Prevention Plan is to be prepared and implemented during construction to the satisfaction of the resident engineer.
2. A Notice of Termination shall be submitted to the Regional Water Quality Control Board upon completion of construction and site stabilization. A project will be considered complete when the criteria for final stabilization in the Construction General Permit are met.

- Section 14-7.03 Discovery of Unanticipated Paleontological Resources: If paleontological resources are discovered at the job site, do not disturb the resources and immediately stop all work within a 60-foot radius of the discovery, secure the area, and notify the resident engineer. Do not move paleontological resources or take them from the job site.

- Section 14-8.02 Noise Control: Pertains to controlling and monitoring noise resulting from work activities. Noise levels are not to exceed 86 decibels at 50 feet from the job site from 9:00 p.m. to 6:00 a.m.

- Section 7-1.02K(6)(j)(iii) Earth Material Containing Lead-Lead Compliance Plan.

- Section 14-11.12 Removal of Yellow Traffic Stripes and Pavement Markings with Hazardous Waste Residue: Includes specifications for removing, handling, and disposing of yellow thermoplastic and yellow-painted traffic stripes and pavement markings. The residue from the removal of this material is a generated hazardous waste (lead chromate). Removal of existing yellow thermoplastic and yellow-painted traffic stripes and pavement markings exposes workers to health hazards that must be addressed in a lead compliance plan.

- Section 36-4 and/or Section 84-9.03B for work involving residue from grinding and cold planing that contains lead from paint and thermoplastic.

- Section 14-1.02 Environmentally Sensitive Area: Pertains to environmentally sensitive areas marked on the ground. Do not enter an environmentally sensitive area unless authorized. If breached, notify the resident engineer.

- Section 14-6.03 Species Protection: A 500-foot no-disturbance buffer would be required to protect regulated species and their habitats that occur within or near the job site. Upon discovery of a regulated species, notify the resident engineer.

- Section 14-6.03B Bird Protection-Species Protection: A 500-foot no-disturbance buffer would be required to protect migratory and nongame birds, their occupied nests, and their eggs. Upon discovery of an injured or dead bird or migratory or nongame bird nest that may be adversely affected by construction activities, immediately stop all work and notify the resident engineer. Exclusion devices and nesting-prevention measures may be used, as well as removing constructed and unoccupied nests.

1.6 Discussion of the NEPA Categorical Exclusion

This document contains information regarding compliance with the California Environmental Quality Act (CEQA) and other state laws and regulations. Separate environmental documentation, supporting a Categorical Exclusion determination, has been prepared in accordance with the National Environmental Policy Act. When needed for clarity, or as required by CEQA, this document may contain references to federal laws and/or regulations (CEQA, for example, requires consideration of adverse effects on species identified as a candidate, sensitive, or special-status species by the U.S. National Marine Fisheries Service and the U.S. Fish and Wildlife Service—that is, species protected by the Federal Endangered Species Act).

1.7 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	Section 1600 Lake and Streambed Alteration Agreement	To be obtained before construction starts.
Central Valley Regional Water Quality Control Board	Section 401 Water Quality Certification	To be obtained before construction starts.
U.S. Army Corps of Engineers	Section 404 Nationwide Permit	To be obtained before construction starts.

Chapter 2 CEQA Evaluation

2.1 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.

2.1.1 Aesthetics

Considering the information in the Visual Impact Assessment Memorandum dated November 2025, the following significance determinations have been made:

Except as provided in Public Resources Code Section 21099:

Question—Would the project:	CEQA Significance Determinations for Aesthetics
a) Have a substantial adverse effect on a scenic vista?	**No Impact**
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	**No Impact**

Question—Would the project:	CEQA Significance Determinations for Aesthetics
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**
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	**No Impact**

2.1.2 Agriculture and Forestry 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.

The project would not acquire additional right-of-way; therefore, it would not convert prime farmland, unique farmland, or farmland of statewide importance to nonagricultural use or conflict with existing zoning for agricultural use or a Williamson Act contract. There are no forest lands or timberlands within the project area that could be impacted. Considering the information from the County of Kings Parcel and Service Geographic Information System Map dated 2020, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Agriculture and Forestry Resources
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	**No Impact**
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	**No Impact**
c) Conflict with existing zoning, 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**
d) Result in the loss of forest land or conversion of forest land to non-forest use?	**No Impact**
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**

2.1.3 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.

Considering the information in the Air Quality Compliance Study dated October 2024, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Air Quality
a) Conflict with or obstruct implementation of the applicable air quality plan?	**No Impact**

Question—Would the project:	CEQA Significance Determinations for Air Quality
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**
c) Expose sensitive receptors to substantial pollutant concentrations?	**No Impact**
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	**No Impact**

2.1.4 Biological Resources

Considering the information in the Natural Environment Study dated November 2025, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Biological Resources
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife, U.S. Fish and Wildlife Service, or National Oceanic and Atmospheric Administration Fisheries?	**Less Than Significant Impact**
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**
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	**No Impact**

Question—Would the project:	CEQA Significance Determinations for Biological Resources
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**
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	**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**

Affected Environment

a) The biological study area for the KIN 41 Drainage Restoration project encompasses all areas where project activities could directly or indirectly affect biological resources. This includes the permanent project footprint at each culvert site, staging and access areas, and a 50-foot buffer around each site to account for indirect effects such as noise, lighting, dust, and worker presence during construction. Several culvert outlets show bed-and-bank conditions and may require coordination with the California Department of Fish and Wildlife under California Fish and Game Code Section 1602; however, no wetlands or waters of the U.S. are present. Survey limitations, such as restricted right-of-way access, agricultural disking, and soil disturbance, are noted in the Natural Environment Study but do not affect conclusions regarding species presence or absence.

A list of federally endangered species and critical habitats that may be affected by the project was obtained on November 3, 2025. In-office research (the U.S. Fish and Wildlife Service's Information for Planning and Consultation website, the California Department of Fish and Wildlife's California Natural Diversity Database, and the California Native Plant Society's Inventory of Rare Plants) and field surveys were conducted by Caltrans biologists for the project.

Botanical surveys**,** vegetation classification, and Crotch's Bumblebee Habitat Evaluation were conducted on June 14, 2024; June 18, 2024; June 20, 2024; April 30, 2025; May 1, 2025; and May 2, 2025, across culvert and roadside sites along State Routes 33, 41, 43, 198, and 269. Botanical surveys were conducted during spring flowering periods (April to June 2024 and April to May 2025), when rare plants would be most detectable. The surveys conducted in 2024 and 2025 confirmed the absence of rare, threatened, or

endangered plant species within the biological study area, and all construction activities would occur within previously disturbed Caltrans right-of-way.

Western burrowing owl surveys were conducted between December 18, 2024, and February 4, 2025; Swainson's hawk surveys were conducted on February 19, 2025 (habitat-only nesting-tree assessment by post mile), June 23, 2025, June 30, 2025, and July 14, 2025. General wildlife surveys were conducted from January to February 2022, April 2023, and August to October 2023.

Between June 10, 2025, and July 15, 2025, Caltrans District 6 biologists and qualified surveyors conducted protocol-level presence/absence surveys for the federally and state-listed blunt-nosed leopard lizard within the project footprint and installed a 50-foot buffer along State Routes 33, 41, and 269.

Wetlands and Other Waters

Aquatic resource surveys were conducted on August 12, 2025, by Caltrans biologists at culvert locations along State Routes 33, 41, and 269 to evaluate the presence of potentially jurisdictional drainages and features.

No wetlands were identified at any survey location. All sites lacked hydrophytic vegetation, hydric soils, and wetland hydrology indicators. The features observed consist of ephemeral roadside drainages that convey stormwater only during or immediately after precipitation events. These drainages lack sustained flow, are disconnected from navigable waters, and therefore do not meet the criteria for "waters of the U.S." under Section 404 of the Clean Water Act.

Special-Status Plant Species

Habitat within the biological study area is highly disturbed and does not contain the alkali scrub, chenopod scrub, or open desert grassland communities required by the special-status species identified during desktop review. Eight special-status plant species identified in species queries were found to have historical records of occurrences or potentially suitable habitat within the project corridor: Lost Hills crownscale (*Atriplex coronata var. vallicola*), California jewelflower (*Caulanthus californicus)*, Lemmon's jewelflower (*Caulanthus lemmonii)*, recurved larkspur (*Delphinium recurvatum*), pale-yellow layia (*Layia heterotricha*), showy golden madia (*Madia radiata*), San Joaquin woollythreads (*Monolopia congdonii*), and Kern mallow (*Eremalche parryi ssp. Kernensis).*

No special-status plants were present within the project footprint during botanical surveys in 2024 and 2025. Though habitats within the biological study areas are dominated by non-native grasses and show extensive disturbance, their soil salinity, texture, and open structure are generally consistent with the ecological settings historically occupied by the special-

status species, including alkaline flats, chenopod scrub, and sandy or loamy grasslands within narrow roadside areas of State Routes 33, 41 (South), and 269.

Lost Hills Crownscale

The Lost Hills crownscale is an annual herb in the goosefoot family (*Amaranthaceae*) restricted to alkaline flats and scalds within chenopod scrub and valley grassland habitats. Within the project corridor, alkali-influenced chenopod scrub suitable for this species is largely absent. According to the California Natural Diversity Database, the nearest occurrences of Lost Hills crownscale are located 2 to 5 miles southwest of State Route 33 near Avenal Gap and 4 to 5 miles east of State Route 41 (South) near Kettleman Plain. None occur within or next to Caltrans' right-of-way. Given the disturbance level and lack of intact alkaline soils in the corridor, this species has a low potential to occur within the biological study area.

California Jewelflower

The California jewelflower is listed as endangered under both the Federal Endangered Species Act and the California Endangered Species Act. The California jewelflower is an annual mustard (*Brassicaceae*). It occurs on sandy or loamy non-alkaline soils in open grassland, shadscale scrub, and pinyon-juniper woodland, primarily within the southern San Joaquin Valley and Carrizo Plain. The species flowers from February to May. Within the project area, only limited sandy or loamy roadside soil occurs, primarily along State Route 269, where vegetation is mapped as Ruderal-Agriculture. These disturbed areas support dense invasive grasses and are not representative of the intact open grassland and scrub favored by the species. The nearest mapped occurrences are approximately 2 miles southeast of State Route 269 at post mile 1.5. These populations lie outside the project corridor and are separated by agricultural fields. Given the absence of suitable soil structure and the high degree of disturbance, the species' potential to occur within the biological study area is low.

Lemmon's Jewelflower

Lemmon's jewelflower is an annual herb in the mustard family. It inhabits valley and foothill grassland and open scrub, often on alkaline or sandy soils. Flowering occurs from February to May at elevations of 260 feet to 5,000 feet. Within the project limits, patchy ruderal grassland and disturbed scrub along State Routes 33, 41 (South), and 269 may provide marginal similarities to the alkaline or sandy grasslands preferred by the species; however, these areas are heavily compacted and dominated by non-native vegetation. California Natural Diversity Database records indicate occurrences within 2 to 5 miles of State Routes 33 and 269 and roughly 4 miles east of State Route 41 (South) near Kettleman Plain. No occurrences intersect Caltrans' right-of-way. Given the disturbed conditions and lack of intact habitat, this species is considered to have a low potential for occurrence within the biological study area.

Recurved Larkspur

The recurved larkspur is a perennial herb in the buttercup family (*Ranunculaceae*) that occupies alkaline soils in chenopod scrub and valley grassland habitats throughout the southern San Joaquin Valley. Flowering typically occurs from March to June at elevations of 30 feet to 2,600 feet. Within the project area, the alkaline conditions required by the recurved larkspur are not well developed. Disturbed Ruderal-Agriculture and Non-native Annual Grassland/Ruderal areas along State Routes 33 and 269 provide only marginal similarities of suitable habitat, characterized by compacted soils and dominance by non-native annual grasses. The nearest California Natural Diversity Database record occurs within 2 to 3 miles west of State Route 269 near Avenal, in intact chenopod scrub. No occurrences overlap or approach the project footprint. Given the lack of intact alkaline soils, the potential for this species to occur within the biological study area is low.

Pale-Yellow Layia

The pale-yellow layia is an annual herb in the sunflower family (*Asteraceae*) that inhabits grasslands and open scrub on alkaline or clay soils in the southern San Joaquin Valley. The species typically blooms from March to June and occurs at elevations of 980 feet to 5,500 feet. Within the project limits, this species could potentially occur in disturbed grassland or ruderal margins where compacted or slightly alkaline soils persist, particularly along State Routes 33 and 269. However, such areas lack the open, sparsely vegetated structure typical of this species' preferred habitat. According to the nearest California Natural Diversity Database records, occurrences are mapped 2 to 5 miles from State Routes 33 and 269. Based on site disturbance and vegetative competition, the potential for this species to occur within the biological study area is considered low.

Showy Golden Madia

The showy golden madia is an annual herb in the sunflower family (*Asteraceae*). It occurs in clay or loamy soils within grasslands and open scrub habitats at elevations of 200 feet to 5,300 feet, flowering from March to May. The species historically ranged across the western San Joaquin Valley and nearby foothills. The compacted, fine-textured soils mapped along State Routes 33 and 269 share some physical characteristics with the species' preferred clay-loam substrates; however, roadside disturbance and dense non-native cover render these areas marginally suitable at best. The nearest mapped occurrence is about 3 miles west of State Route 269 near Avenal. No occurrences are documented within or next to the project footprint. Consequently, this species has a low likelihood of occurrence within the biological study area.

San Joaquin Woollythreads

The San Joaquin woolythreads is listed as endangered under both the Federal Endangered Species Act and the California Endangered Species Act. The San Joaquin woollythreads is a small annual herb in the sunflower family (*Asteraceae*). It occurs in sandy or alkaline soils within open grassland and chenopod scrub throughout the southern San Joaquin Valley, blooming from February to May at elevations of 200 feet to 1,960 feet. The species favors areas with sparse vegetation and minimal surface crusting. Within the project area, potential habitat occurs in small, disturbed patches along State Routes 33, 41 (South), and 269, where sandy soils or slightly alkaline soils persist beneath ruderal vegetation. These conditions, however, are heavily degraded. The California Natural Diversity Database has recorded occurrences within 2 to 5 miles of State Routes 33 and 269 and 4 miles east of State Route 41 (South), but none within the existing Caltrans right-of-way. Due to the lack of intact open scrub or native grassland, the species is considered to have a low potential for occurrence within the biological study area.

Kern Mallow

The Kern mallow is listed as endangered under both the Federal Endangered Species Act and the California Endangered Species Act. The Kern mallow is an annual herb in the mallow family. It is widespread in the southern San Joaquin Valley, where it occurs within alkaline scrub and valley grassland habitats, and it blooms from March to May. In the project corridor, alkali-scrub habitat is largely absent, and only a few degraded remnants occur along State Route 269. These areas correspond to Ruderal-Agriculture vegetation and lack the soil structure and community composition necessary for long-term persistence of the Kern mallow. The California Natural Diversity Database has recorded occurrences of this species 2 to 3 miles west of State Route 269, south of Avenal, in intact alkaline flats. No occurrences overlap or approach within 1 mile of the existing Caltrans right-of-way. Accordingly, the potential for the Kern mallow to occur within the biological study area is low.

Special-Status Animal Species

Animals are considered to be of special concern based on (1) federal, state, or local laws regulating their protection; (2) limited geographic distributions; and/or (3) specialized habitat requirements that make them sensitive to environmental change. Field investigations and habitat assessments conducted by Caltrans biologists between 2024 and 2025 identified several wildlife species that are either listed or otherwise recognized as special status under federal or state criteria. Within the project's biological study area, potential habitat may be present for several special-status animal species. One of these, the western burrowing owl, was seen during non-breeding season surveys.

The following discussions include those species that have the potential for presence, have present habitat, and/or have the potential to be impacted by the proposed project: western burrowing owl (*Athene cunicularia*), Swainson's hawk (*Buteo swainsoni*), loggerhead shrike (*Lanius ludovicianus)*, San Joaquin kit fox (*Vulpes macrotis mutica*), San Joaquin antelope squirrel (*Ammospermophilus nelsoni*), American badger (*Taxidea taxus*), short-nosed kangaroo rat (*Dipodomys nitratoides brevinasus*), Tulare grasshopper mouse (*Onychomys torridus tularensis*), San Joaquin pocket mouse (*Perognathus inornatus*), giant kangaroo rat (*Dipodomys ingens*), blunt-nosed leopard lizard(*Gambelia sila*), San Joaquin coachwhip (*Masticophis flagellum ruddocki*), and California glossy snake (*Arizona elegans occidentalis*).

Western Burrowing Owl

The western burrowing owl is recognized by the California Department of Fish and Wildlife as both a California Species of Special Concern and a state candidate. The western burrowing owl is a small, long-legged raptor distinguished by its bright yellow eyes, white eyebrows, and short tail. Unlike most owl species, it nests and roosts underground, commonly occupying burrows excavated by California ground squirrels and other fossorial mammals. Western burrowing owls are primarily active during the day, exhibiting peak activity during daylight and twilight hours. They rely on open landscapes such as grasslands, alkali scrub, and agricultural margins with low vegetation, which afford wide visibility for predator detection and efficient foraging.

Phase 1 habitat assessments also known as reconnaissance surveys were completed from December 18, 2024, through January 2, 2025, across all five highway corridors: State Routes 33, 41, 43, 198, and 269. These reconnaissance surveys focused on identifying potential burrow systems and general habitat suitability. Along State Routes 41 and 269, biologists documented scattered ground-squirrel burrow complexes within disturbed alkali-scrub margins that could function as potential refuge or foraging sites for western burrowing owls. Corridors along State Routes 33, 43, and 198 were dominated by compacted or graded shoulders with dense roadside weeds and very limited burrow availability. No western burrowing owls or signs of the species (whitewash, pellets, or feathers) were detected during Phase 1 surveys.

Phase 2 burrow inspections were carried out on January 22, 2025, along State Routes 33, 41, and 269. Burrow and culvert outlets were examined for evidence of western burrowing owl use. All burrows were open but inactive, and no whitewash, prey remains, or tracks were observed. Several openings were partially collapsed or filled with debris, suggesting disuse or periodic use by small mammals.

Follow-up Phase 3 visual surveys were performed between January 22, 2025, and February 4, 2025, during early morning and late afternoon observation

periods when western burrowing owls are most active. During this phase, a single adult western burrowing owl was seen three times along State Route 41—first on January 22, 2025, again on January 29, 2025, and once more on February 4, 2025. After early February, no western burrowing owls or signs of the species were detected along State Route 41, and none were recorded on State Route 269 or other highway segments during any phase.

Habitat at all culvert locations is considered to be of low suitability for western burrowing owls due to ongoing roadside maintenance, disking, and agricultural disturbance.

Swainson's Hawk

The Swainson's hawk is a federally species of concern and a threatened species under the California Endangered Species Act. Within the San Joaquin Valley, Swainson's hawks commonly nest in remnant riparian or roadside trees and forage over agricultural lands where prey abundance is high during and after harvest. Focused surveys for Swainson's hawks were conducted by Caltrans biologists along State Routes 41, 43, and 198 in 2025 to determine the presence of nesting or foraging individuals and to document habitat conditions within the biological study area on February 19 (habitat-only nesting tree assessment by post mile), June 23, June 30, and July 14, 2025.

According to the California Natural Diversity Database, Swainson's hawk occurrences have been documented within approximately 5 miles of several project corridors. Along State Route 41, occurrences are reported within roughly 5 miles of the corridor near Stratford and Kings River, consistent with the presence of riparian and roadside trees interspersed with cultivated fields. Along State Route 43, mapped occurrences occur near Corcoran, and nearby agricultural parcels provide a mix of mature trees and open fields suitable for nesting and foraging. Along State Route 198, occurrences are documented within 5 miles near Lemoore, reflecting periodic foraging use of the remaining open ground next to developed areas. No mapped occurrences were identified within the immediate vicinity of State Route 33 or State Route 269, where the landscape is characterized by arid rangeland and limited tree cover.

Field observations conducted by Caltrans biologists were consistent with these occurrence patterns:

- State Route 41: Near Stratford, surveys documented a single adult Swainson's hawk exhibiting low-altitude foraging flight over active farmland at about post mile 33.5, and another raptor with similar flight behavior was noted near post mile 32.6. These observations indicate that the corridor may be used intermittently for foraging, with potential nesting habitat present in mature trees along the Kings River corridor outside the biological study area.

- State Route 43: Swainson's hawk activity was recorded between post miles 7.5 and 8.0 near Corcoran, where individuals were observed in flight and perched along field edges and utility lines. The surrounding agricultural landscape, interlaced with canals and scattered trees, may support nesting and foraging use typical of this species. No nests were observed within the Caltrans right-of-way; however, mature trees within approximately 0.5 mile of the alignment could potentially provide suitable nesting structure.

- State Route 198: A Swainson's hawk was observed in June 2025 near post mile 17.8, foraging above an isolated open field near Lemoore. While tall eucalyptus trees are present along this route, surrounding residential development and fragmented foraging patches reduce overall nesting potential. This segment likely provides occasional foraging habitat for birds nesting elsewhere in the region.

There are no active nests within 0.5 mile of any culvert location on State Routes 41, 43, and 198. Orchards and vineyards within the biological study area do not provide suitable nesting substrates for Swainson's hawks.

No Swainson's hawks were seen along State Routes 33 or 269. Habitat along these routes consists predominantly of dry rangeland or narrow agricultural margins that lack the tall tree structure typically used for nesting. The absence of suitable nesting substrate and limited foraging resources make occupancy by this species unlikely.

Loggerhead Shrike

The loggerhead shrike is designated as a California Species of Special Concern due to widespread population declines resulting from habitat conversion, pesticide exposure, and removal of suitable nesting vegetation. The loggerhead shrike is a medium-sized passerine bird that inhabits open scrub, grassland, and agricultural margins where scattered shrubs or fence lines provide foraging perches and nesting structure. Although a songbird, it exhibits predatory behavior, preying on large insects, small mammals, reptiles, and occasionally small birds, which it may impale on thorns or wire.

Caltrans biologists documented loggerhead shrike activity within the southern segment of State Route 41 during 2025 field surveys. One individual was observed on May 21, 2025, perched on a fence line near a culvert between post miles 14.1 and 15.0. The species exhibited foraging behavior, flying repeatedly between roadside perches and the nearby ruderal grassland. No nests were identified within the biological study area, but the observation confirms active use of the corridor.

San Joaquin Kit Fox

The San Joaquin kit fox is listed as endangered under the Federal Endangered Species Act and is an endangered or threatened species under

the California Endangered Species Act. The San Joaquin kit fox, North America's smallest canid, occupied much of the San Joaquin Valley floor and nearby foothills, extending from southern Kern County northward to Tracy and west into the inner Coast Ranges. Despite habitat loss, San Joaquin kit foxes have demonstrated some adaptability, occupying urban and agricultural edges, oil fields, and transportation corridors.

Focused protocol surveys for the San Joaquin kit fox were not conducted for this project. Instead, San Joaquin kit fox presence and habitat suitability were evaluated opportunistically during 2024 and 2025 fieldwork conducted for other special-status species, including botanical surveys, blunt-nosed leopard lizard surveys, Swainson's hawk surveys, and western burrowing owl surveys. During these efforts, biologists documented general habitat conditions, wildlife signs, and any potential den-like features at and near each of the 49 culvert locations along State Routes 33, 41, 43, 198, and 269. According to the California Natural Diversity Database, multiple occurrences of the San Joaquin kit fox have been recorded within 5 miles of the project corridors. Along State Route 33, recent records (less than 20 years old) occur near Lost Hills and western Kern County, with several occurrences extending east toward the Kettleman Hills region. Along State Route 41, occurrences are mapped south of Kettleman City and north of Avenal, within alkali scrub and disturbed grassland habitat. One record occurs within 5 miles of State Route 43 near Wasco. Additional records are documented along State Route 198 near the junction with State Route 41 and within the Naval Air Station Lemoore region. Occurrences are reported along State Route 269 near Avenal and the Kettleman Hills interface.

No San Joaquin kit fox individuals, tracks, scat, or potential dens were observed within the biological study area during Caltrans fieldwork. The biological study area consists primarily of disturbed non-native grassland, ruderal roadside vegetation, and agricultural margins with scattered alkali scrub patches.

San Joaquin Antelope Squirrel

The San Joaquin antelope squirrel is listed as threatened under the California Endangered Species Act. It inhabits arid uplands with sparse vegetation and friable soil that allows for easy burrow excavation. The species is most active during midmorning and late afternoon, retreating to its burrows during periods of high midday heat or cold temperatures. The species relies on shrub and grass cover for predator avoidance and forages on seeds, forbs, and insects. Breeding occurs in late winter to early spring, and young typically emerge above ground by April.

Focused protocol surveys for the San Joaquin antelope squirrel were not conducted for this project. Habitat suitability for this species was evaluated during 2024 and 2025 biological field surveys and habitat assessments for other special-status wildlife species. Fieldwork included visual encounter surveys,

habitat characterization, and incidental wildlife observations at all 49 culvert sites located on State Routes 33, 41, 43, 198, and 269 within Kings County.

According to the California Natural Diversity Database, multiple occurrences of the San Joaquin antelope squirrel have been documented within 5 miles of the project corridors. Along State Route 33, recent records occur near Lost Hills and the western Kern County–Kings County line within alkali scrub and grassland habitat. Along State Route 41, occurrences are recorded south of Kettleman City and north of Avenal, within low-relief alkali scrub and saltbush communities. Additional occurrences are mapped within 5 miles of State Route 269, extending west toward the Kettleman Hills and nearby uplands near Avenal.

No San Joaquin antelope squirrels, their burrows, or any diagnostic signs (tracks, scat, or vocalizations) were detected within the biological study area during any field surveys. The biological study area along State Routes 33, 41, and 269 consists primarily of disturbed non-native grassland, ruderal vegetation, and alkali scrub patches. These areas provide marginal habitat for foraging or movement but lack the intact shrub-grass mosaic typically required to support resident populations.

Given the fragmented and disturbed condition of available habitat, the potential for occupancy within the biological study area is considered low, and any use would likely be limited to transient or dispersing individuals.

American Badger

The American badger is designated as a California Species of Special Concern by the California Department of Fish and Wildlife. The American badger occurs throughout most of California in open grasslands, scrub, and agricultural landscapes. American badgers are solitary, fossorial carnivores that occupy large home ranges and are highly mobile. They dig extensive burrow systems used for resting, rearing young, and pursuing prey. Their diet consists primarily of small mammals such as ground squirrels, pocket gophers, kangaroo rats, and mice, though they also consume reptiles and insects. Breeding typically occurs from July through August, with young born in spring following delayed implantation.

Focused protocol surveys for the American badger were not conducted for this project. Habitat suitability was evaluated during 2024 and 2025 biological field surveys and incidental wildlife observations at all 49 culvert sites. Field evaluations included visual encounter surveys, habitat characterization, and inspection for burrow openings and other signs of medium-sized mammals.

According to the California Natural Diversity Database, American badger occurrences are documented within 5 miles of several project corridors, including records near Lost Hills along State Route 33, south of Kettleman City and north of Avenal along State Route 41, and within the State Route 269 corridor west toward the Kettleman Hills. These records indicate that the

species continues to occupy portions of the western San Joaquin Valley in association with alkali scrub, grassland, and agricultural edge habitats.

No American badgers or active burrows were observed within the biological study area during Caltrans field surveys. The biological study area consists primarily of disturbed non-native grassland, ruderal vegetation, and alkali scrub patches along State Routes 33, 41, and 269. While small-mammal burrows such as those of ground squirrels and kangaroo rats were recorded, no large or characteristic American badger burrows were present. Due to frequent maintenance grading, compacted shoulders, and agricultural disturbance, the biological study area provides low-quality foraging and denning habitat. The potential for American badger occurrence is therefore considered low.

Short-Nosed Kangaroo Rat

The short-nosed kangaroo rat is designated as a California Species of Special Concern by the California Department of Fish and Wildlife. The short-nosed kangaroo rat is a small nocturnal species distinguished by short external cheek pouches and a proportionally shorter tail than other valley kangaroo rats. It inhabits dry grassland and alkali scrub on loose sandy-loam soils, storing seeds in underground caches and occupying shallow burrow systems from western Fresno and Kings counties south to northern Kern County. Habitat within the right-of-way is heavily disturbed by ongoing maintenance activities such as grading and disking, resulting in compacted soils, low burrow density, and fragmented alkali-scrub margins that offer minimal foraging opportunities for small mammals. The potential for short-nosed kangaroo rat occurrence is therefore considered low within the biological study area.

Tulare Grasshopper Mouse

The Tulare grasshopper mouse is designated as a California Species of Special Concern by the California Department of Fish and Wildlife. The Tulare grasshopper mouse is a robust, carnivorous mouse adapted to open desert and scrub habitats of the San Joaquin Valley. It forages at night on insects, scorpions, and small vertebrates and shelters in shallow burrows. Populations persist in saltbush and alkali scrub where prey and open ground are available. Habitat loss and secondary poisoning from rodenticides are principal threats. Habitat within the right-of-way is heavily disturbed by ongoing maintenance activities such as grading and disking, resulting in compacted soils, low burrow density, and fragmented alkali-scrub margins that offer minimal foraging opportunities for small mammals. The potential for Tulare grasshopper mouse occurrence is therefore considered low within the biological study area.

San Joaquin Pocket Mouse

The San Joaquin pocket mouse is designated as a California Species of Special Concern by the California Department of Fish and Wildlife. The San Joaquin pocket mouse is a small rodent with silky fur and external cheek pouches, typically found in friable sandy or loamy soils that support sparse herbaceous vegetation. It co-occurs with kangaroo rats and similar species in valley grassland and scrub habitats. Although historically widespread, it is now patchily distributed due to cultivation and habitat fragmentation. Focused protocol surveys for special-status small mammals were not previously conducted for this project. However, small-mammal trapping was conducted in October 2025 along State Route 269 between post miles 4.00 and 5.49, where the most suitable habitat occurs. These efforts were designed to detect the short-nosed kangaroo rat, Tulare grasshopper mouse, and San Joaquin pocket mouse, following standard California Department of Fish and Wildlife trapping and handling protocols. According to the California Natural Diversity Database, occurrences of small-mammal species associated with the western San Joaquin Valley—including the short-nosed kangaroo rat, Tulare grasshopper mouse, and San Joaquin pocket mouse—have been documented within 5 miles of several project corridors:

- Along State Route 33, records include all three species near Lost Hills and the western Kern County line within alkali scrub and non-native grassland.
- On State Route 41, occurrences of the Tulare grasshopper mouse and San Joaquin pocket mouse are mapped between Kettleman City and Avenal within disturbed alkali scrub mosaics.
- Along State Route 269, all three species have been reported within 5 miles of the corridor extending west toward Kettleman Hills, confirming regional presence near the current trapping area.

Habitat within the right-of-way is heavily disturbed by ongoing maintenance activities such as grading and disking, resulting in compacted soils, low burrow density, and fragmented alkali-scrub margins that offer minimal foraging opportunities for small mammals. The potential for San Joaquin pocket mouse occurrence is therefore considered low within the biological study area.

Giant Kangaroo Rat

The giant kangaroo rat is listed as endangered under both the Federal Endangered Species Act and the California Endangered Species Act. Giant kangaroo rats occur on gently sloping terrain and alluvial fans with friable sandy or silty-loam soils suitable for extensive burrow construction.

Colonies are typically associated with open annual grasslands and alkali scrubs characterized by sparse shrub cover and abundant annual forbs and grasses that provide seeds for foraging. Burrow systems often consist of large,

multi-entrance mounds with nearby runways used for nighttime foraging. They are active year-round but concentrate above-ground activity during mild nights between March and October, becoming less active during periods of extreme temperature and moisture. Breeding typically occurs between January and April, with one litter per year following favorable rainfall conditions.

Focused protocol surveys for giant kangaroo rats were not conducted for this project. Potential habitat and regional occurrence were evaluated during 2024 and 2025 biological field surveys conducted for other special-status wildlife, including the western burrowing owl, Swainson's hawk, San Joaquin kit fox, and blunt-nosed leopard lizard. Fieldwork included visual encounter surveys, habitat characterization, and inspection for diagnostic burrow systems, tracks, and tail-drag marks characteristic of giant kangaroo rats.

According to the California Natural Diversity Database, multiple occurrences of the giant kangaroo rat have been recorded within 5 miles of the project corridors:

- Along State Route 33, occurrences are documented near Lost Hills and the western Kern County line, within alkali scrub and annual grassland habitats.
- Along State Route 269, records occur within 5 miles of the corridor between Avenal and the Kettleman Hills, in gently sloping terrain with sandy loam soils and sparse vegetation typical of the species' preferred habitat.

No recent records occur within the State Route 41 or State Route 43 segments. Remaining habitat suitable for this species is largely restricted to the western Kettleman Hills and nearby foothills beyond the project footprint. Habitat within the right-of-way is heavily disturbed by ongoing maintenance activities such as grading and disking, resulting in compacted soils, low burrow density, and fragmented alkali-scrub margins that offer minimal foraging opportunities for small mammals. The potential for giant kangaroo rat occurrence is therefore considered low within the biological study area.

Blunt-Nosed Leopard Lizard

The blunt-nosed leopard lizard is listed as endangered under both the Federal Endangered Species Act and the California Endangered Species Act. These lizards inhabit open alkali scrub and arid grassland environments, where sparse vegetation and friable soils allow the species to move easily between burrows. These habitats are typically dominated by allscale saltbush and iodine bush. This species is active during the day and is a visual predator, preying on grasshoppers, crickets, and smaller lizards, and inhabiting areas with annual grasses such as red brome and filaree, which provide both cover and foraging structure. The breeding season typically occurs from April to June. Males display prominent body coloration and territorial behavior, while females deposit eggs in shallow soil chambers near burrow entrances.

Caltrans District 6 biologists conducted protocol-level blunt-nosed leopard lizard presence/absence surveys between June 16, 2025, and July 14, 2025, and detected no individuals within or next to the biological study area. Surveys were completed for potentially suitable habitat sites within the project footprint and a 50-foot buffer along State Routes 33, 41, and 269. Each route was surveyed at least once across three rounds separated by seven or more days under suitable temperature conditions (77 to 95 degrees Fahrenheit air, 78 to 95 degrees Fahrenheit soil) and weather conditions.

Two additional juvenile-season surveys were conducted on September 25 and 26, 2025, to ensure detection of late-season hatchlings. No adult blunt-nosed leopard lizards or juveniles were observed during any survey round. However, side-blotched lizards were frequently detected across all survey routes, including hatchlings, juveniles, and adults, confirming that environmental conditions were optimal for detecting surface-active reptiles. Other incidental observations included Pacific rattlesnakes, whiptail lizards, California ground squirrels, black-tailed jackrabbits, and red-tailed hawks. Small-mammal burrows and occasional kangaroo rat signs were noted at several State Route 269 locations between post miles 4.0 and 5.5.

Additional habitat assessments recorded during field surveys indicated variable quality among project corridors:

- On State Route 33 between post miles 2.62 and 12.23, habitat consisted of non-native annual grassland and ruderal vegetation along agricultural margins. Occasional open ground, friable soil, and small burrows provided isolated microhabitats, but frequent disking and mowing limited persistence. Habitat suitability was rated low.

- On State Route 41 between post miles 11.9 and 16.8, on-site vegetation was dominated by weedy roadside strips and compacted soils next to orchards, aqueduct facilities, and disturbed embankments. Habitat was highly fragmented and lacked native shrubs, resulting in low suitability.

- On State Route 269 between post miles 1.5 and 5.5, eroded badland slopes with patchy alkali scrub and dense grass in some locations, and open sandy patches with small-mammal burrows offered low-to-moderate suitability for dispersal.

According to the California Natural Diversity Database, blunt-nosed leopard lizard occurrences are documented near all three survey corridors:

- On State Route 33, records occur approximately 3.7 miles east of Lost Hills in alkali scrub and grassland habitat.

- On State Route 41, occurrences are mapped south of Kettleman City and north of Avenal in low-relief saltbush scrub.

- On State Route 269, records are located within 5 miles of the alignment near the Kettleman Hills and Avenal Ridge.

Habitat within the right-of-way is heavily disturbed by ongoing maintenance activities such as grading and disking, resulting in compacted soils, low burrow density, and fragmented alkali-scrub margins that offer minimal foraging opportunities for small mammals. The potential for blunt-nosed leopard lizard occurrence is therefore considered low within the biological study area.

San Joaquin Coachwhip

The San Joaquin coachwhip is a California Species of Special Concern that inhabits open arid habitats such as alkali scrub, desert grassland, and sparsely vegetated slopes across the southern San Joaquin Valley. This long, slender snake is active during the day. It is an active predator that forages visually for lizards, small mammals, and insects and seeks refuge in mammal burrows or under vegetation. Remaining habitat occurs primarily in fragmented tracts near the Kettleman Hills, Avenal Ridge, and Carrizo Plain.

The biological study area along State Routes 33, 41, and 269 largely consists of ruderal grassland, compacted shoulders, and scattered alkali scrub patches, providing low to moderate habitat suitability for San Joaquin coachwhip movement and foraging. According to the California Natural Diversity Database, occurrences of the San Joaquin coachwhip are documented within 5 miles of State Route 269 near the Kettleman Hills and south of Kettleman City along State Route 41. No individuals were observed during Caltrans surveys.

Habitat within the right-of-way is heavily disturbed by ongoing maintenance activities such as grading and disking, resulting in compacted soils and low burrow density. The potential for San Joaquin coachwhip occurrence is therefore considered low within the biological study area.

California Glossy Snake

The California glossy snake is a California Species of Special Concern that occurs throughout the southern San Joaquin Valley, Carrizo Plain, and foothill margins of the Coast and Sierra Nevada ranges. The species inhabits open arid grasslands, alkali scrubs, and sparsely vegetated slopes with friable soils suitable for burrowing and thermoregulation. It spends much of the day underground or beneath surface cover, emerging at dusk or night to forage. Reproduction occurs in late spring, and eggs are deposited in loose soil or mammal burrows.

Focused surveys for the California glossy snake were not conducted. Potential habitat for this species was evaluated during 2024 and 2025 biological field surveys and habitat assessments that were conducted for other special-status wildlife species. The biological study area along State

Route 41 supports low-quality habitat consisting primarily of ruderal vegetation and compacted soils next to agricultural fields, aqueduct facilities, and roadside shoulders. Sparse open ground and small burrows may provide limited dispersal or foraging opportunities for transient individuals but are insufficient to support long-term occupancy.

According to the California Natural Diversity Database, the nearest occurrence of the California glossy snake is located approximately 5 miles south of Kettleman City, within alkali scrub and grassland habitat similar to the region's preagricultural conditions. No individuals were observed during Caltrans fieldwork, and the species is considered absent from the project limits due to ongoing disturbance and habitat modification.

Environmental Consequences

The following discussion will discuss project impacts on wetlands and other water bodies, as well as federal and state special-status plant and animal species.

Wetlands and Other Waters

A wetland delineation survey was conducted to assess the water distribution of all other aquatic feature areas occurring within the biological study area. No wetlands were identified at any survey location. All sites lacked hydrophytic vegetation, hydric soils, and wetland hydrology indicators.

No standing water, aquatic vegetation, or riparian habitat was present during the survey period on August 12, 2025. While several features on State Route 41 at post mile 13.03 and State Route 269 at post mile 5.49 exhibit bed-and-bank deposits potentially regulated under California Fish and Game Code Section 1602, none meet Clean Water Act 404 criteria. If jurisdictional status is later confirmed, Caltrans may obtain authorization under a Nationwide Permit with a corresponding Section 401 Water Quality Certification from the Central Valley Regional Water Quality Control Board; otherwise, work will be authorized through Waste Discharge Requirements.

Work is planned for dry conditions, when these roadside features are not flowing. As a result, dewatering, pumps, cofferdams, or in-channel diversions are not anticipated. If unexpected rainfall occurs, work will pause, and protection will be installed before resuming. Because construction would occur during the dry season, the potential for indirect effects such as turbidity (murky water) or sediment pulses is low.

Table 2.1 below provides an evaluation of Federal Endangered Species Act Effect Determinations of species that may have suitable habitat within the project limits.

Table 2.1 Summary of Federal Endangered Species Act Effect Determinations

Species	Federal Status	Effect Determination	Rationale
San Joaquin kit fox	Endangered	No Effect	No dens, signs of the species, or individuals were observed. The right-of-way is fully disturbed; night work lighting is shielded; and preconstruction inspections will be implemented.
Blunt-nosed leopard lizard	Endangered	No Effect	No suitable open scrub was detected; soils were compacted and repeatedly graded; none were observed during the 2024 and 2025 surveys.
Giant kangaroo rat	Endangered	No Effect	No burrow systems were present; soils were compacted in the right-of-way; the nearest populations were several miles away in Kettleman Hills.
San Joaquin woollythreads	Endangered	No Effect	The species was absent during botanical surveys. Compacted, disturbed soils are unsuitable.
California jewelflower	Endangered	No Effect	The species was not detected; the disturbed right-of-way lacks the friable, sandy soils required for its establishment.
Kern mallow	Endangered	No Effect	The species was absent; the disturbed right-of-way was unsuitable; there were no seedbank indicators.

The following federally listed species evaluated during biological surveys but considered to have no habitat with the biological study area include: the Buena Vista Lake shrew (*Sorex ornatus relictus),* Fresno kangaroo rat (*Dipodomys nitratoides exilis*), Tipton kangaroo rat (*Dipodomys nitratoides nitratoides*), California condor (*Gymnogyps californianus*), Western snowy plover (*Charadrius nivosus nivosus*), green sea turtle (*Chelonia mydas, East Pacific* DPS), Northwestern pond turtle (*Actinemys marmorata),* Western spadefoot (*Spea hammondii),* monarch butterfly (*Danaus plexippus*), Conservancy fairy shrimp (*Branchinecta conservation),* vernal pool fairy shrimp (*Branchinecta lynchi*), and vernal pool tadpole shrimp (*Lepidurus*

packardi). A “no effect” determination was made for these species. No further discussion or evaluation is required.

Special-Status Plant Species

As shown in Table 2.1, a No Effect determination was made for San Joaquin woolythreads, California jewel-flower, and Kern mallow, under both the Federal and State Endangered Species Acts. The eight special-status plant species—Lost Hills crownscale, California jewelflower, Lemmon’s jewelflower, recurved larkspur, pale-yellow layia, showy golden madia, San Joaquin woollythreads, and Kern mallow—were not seen during surveys and are not expected to occur within the biological study area. No special-status plant species are anticipated to be temporarily or permanently impacted. The project footprint is limited to disturbed vegetation within the Caltrans existing right-of-way, and no intact alkaline scrub, chenopod scrub, or native grassland will be removed.

Potential indirect effects include temporary dust generation, soil compaction, and localized runoff modification during construction. These effects are expected to be minor and short-term because construction will be restricted to delineated work limits and subject to the project’s Stormwater Pollution Prevention Plan and Erosion Control Best Management Practices. Worker Environmental Awareness Training and biological monitoring will ensure that construction personnel do not enter or disturb areas outside the approved footprint. If special-status plant species are discovered, implementing the standardized avoidance and minimization approach for sensitive botanical resources—along with site-specific environmental protection measures tailored to these habitat types—will ensure that no long-term or permanent impacts occur.

Special-Status Animal Species

Western Burrowing Owl

A western burrowing owl burrow was documented approximately 500 feet upslope from State Route 41 at post mile 13.06 at the culvert inlet, outside the Caltrans right-of-way and well beyond the planned disturbance limits. Though this burrow was confirmed as occupied during the non-breeding season, it lies outside the project footprint, and no direct ground disturbance or habitat alteration will occur in its vicinity. During coordination with the California Department of Fish and Wildlife from August to November 2025, the agency indicated that a no-disturbance buffer for western burrowing owls should be applied to all construction activities and if avoidance would not be possible a 2081 incidental take permit may be required.

No take of individual burrowing owls are anticipated as a result of the proposed project. All construction activities will be confined to the previously disturbed Caltrans right-of-way, and no new ground disturbance will occur outside delineated work limits. Work will include culvert replacement,

headwall stabilization, and shoulder grading within areas that are already compacted or unvegetated. Therefore, the project will not result in permanent loss of natural habitat or expansion of the roadway footprint. Because culvert replacements at certain locations will require night work to minimize traffic disruptions, potential nighttime disturbance to wildlife was also considered.

Western burrowing owls are primarily nocturnal foragers, with peak activity typically occurring during twilight and early night hours. Artificial lighting and elevated nighttime noise may therefore influence foraging behavior or temporarily deter individuals from using habitat near active work zones.

Temporary disturbance may occur within narrow work zones where equipment access, grading, or excavation is required. All temporarily disturbed areas will be recontoured and hydroseeded postconstruction using a Caltrans-approved erosion-control seed mix. No permanent alteration of burrow structure or removal of active burrows is anticipated. Potential direct effects could include temporary disturbance or displacement if western burrowing owls occupy nearby burrows during construction. Preconstruction breeding-season surveys will be conducted to ensure that any active burrows identified before work are avoided by establishing appropriate no-disturbance buffers.

Swainson's Hawk

In Kings County, conversion of open cropland to orchard and vineyard production has reduced foraging habitat and restricted remaining nest sites to linear features such as canal banks, roadside trees, and narrow riparian corridors. Overall, surveys indicate that potential habitat for the Swainson's hawk occurs primarily along State Routes 43 and 41, where open agricultural fields and scattered trees may support nesting and foraging activities in the broader landscape. Though no active nests were identified within or immediately next to the Caltrans right-of-way, nearby territories may exist within the surrounding agricultural area. The potential for unrecorded nests within 0.5 mile of suitable habitat cannot be entirely ruled out due to the species' wide foraging range and use of isolated roadside trees for nesting.

All construction activities will be confined to the existing Caltrans right-of-way and previously disturbed ground. Work will include culvert replacement, inlet/outlet repair, and localized shoulder grading within compacted or unvegetated areas. No tree removal or vegetation clearing outside the defined work limits is anticipated. Consequently, the project will not result in permanent loss of nesting trees or substantial alteration of available foraging habitat. Therefore, no impacts on Swainson's hawks are expected with the implementation of avoidance and minimization measures.

Temporary disturbance may occur where construction access or excavation is required near open fields used for hunting. Disturbance would be limited to narrow work zones at each culvert location, with temporary work areas restored

to preconstruction contours and hydroseeded following project completion. Because the total disturbance area is minimal (less than 0.01 acre per site) and occurs within already developed transportation corridors, the effects on Swainson's hawk habitat quantity or quality are expected to be negligible.

Potential direct effects could occur if an active nest were established within 0.5 mile of construction before the start of work. Disturbance from noise, equipment movement, or human presence could result in temporary nest abandonment or reduced productivity if not properly avoided. To prevent such impacts, preconstruction breeding-season surveys will be conducted in accordance with the Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley. If any active nest is identified, an appropriate no-work buffer will be established and maintained until the young have fledged.

Loggerhead Shrike

Loggerhead shrikes were detected foraging but not nesting within the biological study area. Because no nesting habitat would be removed and avoidance measures would be implemented, compensatory mitigation is not anticipated. No impacts on loggerhead shrikes are expected with the implementation of avoidance and minimization measures.

The project is confined to existing disturbed transportation corridors and will not remove nesting shrubs or modify open foraging areas. Temporary construction disturbances will be minor and reversible, and restoration will maintain open ruderal conditions compatible with loggerhead shrike foraging. Night work is unlikely to affect this species, which is most active during the day. Any temporary lighting will be shielded and directed downward in accordance with Caltrans Best Management Practices to avoid unnecessary light spillage into nearby habitat.

If active nests are discovered during construction and avoidance is not feasible, Caltrans will coordinate with the California Department of Fish and Wildlife to determine appropriate site-specific measures, which may include temporary work restrictions or relocation of construction activities.

San Joaquin Kit Fox

As shown in Table 2.1, a No Effect determination was made for San Joaquin kit fox under both the Federal and State Endangered Species Acts. Project activities are limited to culvert rehabilitation and replacement, inlet/outlet stabilization, and minor shoulder grading conducted entirely within the existing disturbed Caltrans right-of-way. No roadway widening, new ground disturbances outside established right-of-way, or removal of native shrubs or trees are proposed. Temporary disturbance areas at individual culvert sites are small, typically less than 0.01 acre per site, and will be restored to pre-project contours and stabilized following construction.

Because no San Joaquin kit fox individuals, their dens, or signs of the species were observed during field surveys, and suitable den structures are absent within the biological study area, direct effects such as injury, mortality, or den loss are not anticipated. Excavation and equipment staging will be confined to previously compacted or graded surfaces that lack burrow complexes or subsurface refugia. The likelihood of encountering a transient individual is extremely low, and the implementation of preconstruction surveys, escape ramps, speed restrictions, and daily inspections of open trenches or pipes will further minimize the risk of accidental entrapment.

Night work is required for this project to maintain traffic flow and worker safety during culvert replacement and liner installation. Construction activities will occur under artificial lighting for up to 63 nights during the work window. The San Joaquin kit fox is primarily active at night and twilight, using nighttime hours for foraging and dispersal. As a result, construction lighting and vehicle movement during night work could temporarily alter foraging patterns or cause localized avoidance of illuminated areas. Potential effects include avoidance of active work zones, reduced foraging activity, or temporary displacement from roadside habitat during nighttime construction.

San Joaquin Antelope Squirrel

No San Joaquin antelope squirrels or burrows were observed within the biological study area, and suitable burrow systems are absent within planned work areas. Therefore, direct effects such as injury, mortality, or loss of burrows are not anticipated. Project activities would be confined to the existing disturbed Caltrans right-of-way that lacks intact native habitat or active burrow systems. No individuals or signs of the species were observed during focused protocol surveys, and no ground disturbance is proposed outside previously compacted or graded areas. Therefore, no impacts on San Joaquin antelope squirrels are expected with the implementation of avoidance and minimization measures.

Implementation of avoidance and minimization measures, including preconstruction surveys, monitoring of open trenches or pipes, speed restrictions, night lighting controls, and Worker Environmental Awareness Training, will ensure compliance with applicable state protections.

Night work is required for this project to maintain traffic flow and worker safety during culvert replacement and liner installation. Construction activities will occur under artificial lighting for up to 63 nights during the work window. The San Joaquin antelope squirrel is active during the daytime, foraging primarily during mid-morning and late afternoon and retreating to burrows at night to avoid predation and temperature extremes. Because of this activity pattern, direct effects from nighttime lighting are not expected.

American Badger

Project activities consist of culvert rehabilitation or replacement, inlet and outlet stabilization, and minor shoulder grading conducted entirely within the existing disturbed Caltrans right-of-way. No widening, vegetation removal, or new ground disturbance beyond the established right-of-way is proposed. Temporary impact areas will be small (less than 0.01 acre per site) and will be restored to preconstruction conditions upon project completion.

Because no American badgers or active burrows were observed within the biological study area, direct impacts such as injury, mortality, or den collapse are not anticipated. Therefore, no permanent impacts on American badgers are expected with the implementation of avoidance and minimization measures.

Because American badgers can occupy burrows seasonally or intermittently, preconstruction surveys will ensure avoidance of any newly established dens before construction. Given the project's small disturbance footprint, absence of active dens, and confinement to disturbed Caltrans right-of-way, impacts to the American badger are expected to be less than significant.

Short-Nosed Kangaroo Rat, Tulare Grasshopper Mouse, San Joaquin Pocket Mouse

Special-status small-mammal data incorporated into this analysis originate primarily from a Catrans project along the State Route 41 corridor, where regional small-mammal trapping was conducted in 2023. Those efforts confirmed the presence of short-nosed kangaroo rats and the Tulare grasshopper mouse within habitat types consistent with the current project area. The San Joaquin pocket mouse was not detected during that effort, but occupies suitable friable-soil habitats documented along State Route 269.

Because several culvert sites were added to the project scope after completion of 2024 field surveys, Caltrans completed supplemental small-mammal trapping from October 27 through 31, 2025, along State Route 269 between post miles 4.00 and 5.49, where the most suitable alkali-scrub and ruderal-grassland habitat occurs. This additional trapping will ensure complete coverage for all sites where habitat is present.

Project activities are limited to culvert rehabilitation and replacement, inlet and outlet stabilization, and minor shoulder grading, all conducted within the existing disturbed Caltrans right-of-way. No widening, new ground disturbance outside the established right-of-way, or removal of native shrubs or trees is proposed. Temporary construction areas at individual culvert sites are small (typically less than 0.01 acre per site) and will be restored to pre-project contours and stabilized following construction. Therefore, no impacts on San Joaquin pocket mice, short-nosed kangaroo rats, or Tulare grasshopper mice are expected with the implementation of avoidance and minimization measures.

Giant Kangaroo Rat

As shown in Table 2.1, a No Effect determination was made for Giant kangaroo rat under both the Federal and State Endangered Species Acts. Project activities are limited to culvert rehabilitation and replacement, inlet and outlet stabilization, and minor shoulder grading, all occurring within the existing, disturbed Caltrans right-of-way. No widening, vegetation clearing, or new ground disturbance beyond the established right-of-way is proposed. Temporary construction areas at individual culvert sites are small (typically less than 0.01 acre per site) and will be restored to preconstruction contours and stabilized following construction.

No potential burrow systems were documented within the project disturbance limits during 2024 or 2025. Soil within the Caltrans right-of-way is compacted and disturbed from long-term maintenance grading, which reduces suitability for burrow establishment. Therefore, no impacts on giant kangaroo rats are expected with the implementation of avoidance and minimization measures.

Blunt-Nosed Leopard Lizard

As shown in Table 2.1, a No Effect determination was made for blunt-nosed leopard lizards under both the Federal and State Endangered Species Acts. No blunt-nosed leopard lizards were observed during the 2025 protocol surveys, and no burrows, tracks, or other diagnostic signs of the species were detected. Habitat within the Caltrans right-of-way is highly disturbed, reducing the likelihood of occupancy. Though isolated patches of friable soil and rodent burrows were documented along State Routes 33 and 269, these areas are too small and disturbed to support resident populations.

Project activities are limited to culvert rehabilitation and replacement, inlet and outlet stabilization, and minor shoulder grading, all confined to the existing disturbed Caltrans right-of-way. No roadway widening, new ground disturbance beyond the established right-of-way, or removal of native shrubs is proposed. Temporary disturbance areas at individual culvert sites are small (typically less than 0.01 acre per site) and will be restored to preconstruction contours and stabilized upon project completion. Given the daytime active behavior of blunt-nosed leopard lizards, the short duration of nighttime work, and the confined, disturbed setting of the project, no measurable long-term impacts to blunt-nosed leopard lizard activity patterns or prey resources are anticipated. Therefore, no impacts on blunt-nosed leopard lizards are expected with the implementation of avoidance and minimization measures.

San Joaquin Coachwhip

Project activities would be confined to existing, disturbed right-of-way and would not remove or modify intact habitat. Temporary construction disturbances are limited to small culvert work areas (less than 0.01 acre each), which will be restored following construction.

Because no San Joaquin coachwhips or suitable refuge areas were detected, and habitat quality is low, direct effects such as mortality or burrow destruction are not anticipated. Temporary construction activities may cause short-term displacement or behavioral avoidance of nearby individuals, but these effects would be localized and fully reversible. Night work is not expected to substantially affect this species because the San Joaquin coachwhip is active in the daytime and inactive at night. Downward-shielded lighting will further minimize indirect illumination effects. The project is expected to result in no measurable impact on San Joaquin coachwhip populations or habitat. Therefore, no impacts on San Joaquin coachwhips are expected with the implementation of avoidance and minimization measures.

California Glossy Snake

All project activities would be confined to the previously disturbed Caltrans right-of-way. No native shrubland or intact grassland will be affected. Temporary construction disturbances at culvert sites (less than 0.01 acre each) will be fully restored following project completion.

Because no individuals or suitable burrows were detected and habitat quality is low, direct impacts, such as mortality or displacement, are not anticipated. Indirect impacts from noise, vibration, or human activity may cause temporary avoidance by transient individuals but will be localized and fully reversible. Because the California glossy snake is nocturnal, limited night work may cause temporary light-related disturbance. All lighting will be directed downward and shielded, and the intensity will be restricted to the minimum necessary for worker safety, minimizing any potential effects on surface-active individuals. Overall, the project is expected to result in no measurable impact on California glossy snake populations or habitat. Therefore, no impacts on California glossy snakes are expected with the implementation of avoidance and minimization measures.

Avoidance, Minimization, and/or Mitigation Measures

Wetlands and Other Waters

No waters are anticipated to be jurisdictional by the U.S. Army Corps of Engineers. It is anticipated that the California Department of Fish and Wildlife and the Regional Water Quality Control Board will take jurisdiction over identified waters. Waters within the project area are isolated and do not flow into any traditionally navigable water; therefore, Caltrans will not require a jurisdictional determination from the U.S. Army Corps of Engineers. A wastewater discharge certification application will be prepared for the Central Valley Regional Water Quality Control Board. A Streambed Alteration Agreement permit application will be prepared for the California Department of Fish and Wildlife. The following permits would be obtained:

- A Section 401 Clean Water Act-Waste Discharge Requirement Permit would be obtained from the Regional Water Quality Control Board.

- A Section 1602 Streambed Alteration Agreement would be obtained from the California Department of Fish and Wildlife.

Special-Status Plant Species

The following avoidance and minimization measures are proposed for the eight special-status plant species. Lost Hills crownscale, California jewelflower, Lemmon's jewelflower, recurved larkspur, pale-yellow layia, showy golden madia, San Joaquin woollythreads, and Kern mallow were not seen during surveys and are not expected to occur within the biological study area.

Caltrans has incorporated avoidance and minimization measures during project development to ensure that potential impacts to botanical resources are avoided or minimized to the greatest extent practicable. These measures are based on the findings of field surveys, agency coordination, and standard environmental protection practices. Because no special-status plants were detected and all work will occur within previously disturbed right-of-way, these measures will primarily ensure that inadvertent disturbance does not occur to nearby vegetation or potential microhabitat features.

- Preconstruction Botanical Verification: Before the start of ground-disturbing activities, a qualified biologist will perform a preconstruction botanical survey of all work areas to confirm the continued absence of special-status plant species. The verification will occur during the typical blooming period (spring/early summer). Results will be documented in the project record.

- Worker Environmental Awareness Training: All construction personnel will receive biologist-led environmental training before beginning work. The training will emphasize recognition of sensitive resources with the potential to be on-site, work-limit boundaries, and environmental compliance obligations. The training will also include instruction on procedures to follow if an unanticipated biological resource is discovered.

- Work Area Delineation and Access Controls: The project biologist will verify that all construction limits are clearly delineated in the field prior to mobilization using flagging, staking, or temporary fencing. All construction activities, vehicle movement, and equipment staging will remain strictly within approved disturbance limits. No personnel or equipment will enter areas outside the designated work boundaries.

- Erosion and Sediment Control: Temporary erosion-control measures and Best Management Practices such as silt fencing, fiber rolls, and straw wattles will be installed where appropriate to prevent sediment transport and protect nearby vegetation. All disturbed soils will be stabilized at the conclusion of work through hydroseeding or erosion-control seeding using sterile or native seed mixes consistent with Caltrans specifications.

- Vegetation Restoration: Areas subject to temporary vegetation disturbance will be recontoured, stabilized, and hydroseeded following construction to promote soil stabilization and natural revegetation. Seeding and erosion-control specifications will be developed in coordination with the District 6 Landscape Architect and environmental staff.

- Construction Compliance Monitoring: A qualified biologist will periodically monitor construction activities to ensure compliance with environmental commitments and delineation boundaries. The project biologist will coordinate with the resident engineer to address any non-compliance or unanticipated environmental issues.

- Environmental Commitment Tracking: All environmental commitments, including the above avoidance and minimization measures, will be tracked and documented through the System for Tracking Environmental Evaluations (STEVE) for compliance verification. Compliance verification will occur at project milestones and at construction closeout to ensure full implementation of avoidance and minimization measures.

Special-Status Animal Species

The following avoidance and minimization measures are proposed for the Western burrowing owl, Swainson's hawk, loggerhead shrike, San Joaquin kit fox, San Joaquin antelope squirrel, American badger, short-nosed kangaroo rat, Tulare grasshopper mouse, San Joaquin pocket mouse, giant kangaroo rat, blunt-nosed leopard lizard, San Joaquin coachwhip, and California glossy snake.

Western Burrowing Owl

Efforts to avoid and minimize potential impacts to the western burrowing owl have been developed to ensure compliance with state and federal wildlife protection laws and to prevent disturbance to individual owls or suitable habitat during project implementation.

No take of individual burrowing owls are anticipated as a result of the proposed project. All construction work would remain within previously disturbed roadway shoulders and embankments, which would ensure that the off-right-of-way burrow and the individual owl are protected from disturbance if they are still present in the area during preconstruction surveys. The following avoidance and minimization measures have been proposed for the western burrowing owl:

1. Worker Environmental Awareness Training: Before the start of construction, all personnel involved in ground-disturbing activities will attend Worker Environmental Awareness Training led by a qualified biologist. The training will cover the identification, habitat requirements, and legal protections of western burrowing owls and other sensitive wildlife. Workers will be

instructed on avoidance procedures, restricted activity zones, and notification protocols if wildlife is encountered during construction.

2. Preconstruction Surveys: A qualified biologist will conduct preconstruction western burrowing-owl surveys within the Project Impact Area and establish a minimum 50-foot buffer around the work area no more than 14 days before any ground disturbance. The surveys will identify any occupied burrows or new signs of owl activity, such as whitewash, pellets, or tracks. If active burrows are detected, the California Department of Fish and Wildlife will be notified, and appropriate no-disturbance buffers will be established.
3. Avoidance Buffers: If occupied burrows are present, a no-disturbance buffer of at least 500 feet during the breeding season (February 1 to August 31) and 150 feet during the non-breeding season will be implemented around each active burrow. The buffer distance may be adjusted in consultation with the California Department of Fish and Wildlife based on site conditions, project activities, and observed owl behavior. Buffers will be clearly marked with temporary fencing or flagging to prevent accidental intrusion.
4. Monitoring During Construction: If western burrowing owls are present or found within the biological study area, or if construction occurs next to established no-disturbance buffers, a qualified biological monitor will be on-site during all initial ground-disturbing activities. The monitor will ensure full compliance with avoidance and minimization measures and will have the authority to stop or modify work if owls exhibit signs of stress, agitation, or displacement. Biological monitoring will continue as needed until construction has progressed beyond all areas of occupancy or the risk of disturbance has been eliminated.
5. Dust, Noise, and Lighting Control: Construction activities will follow project-specific Best Management Practices to reduce dust, noise, and glare. Equipment will be maintained in good condition with functional mufflers, and night work will use downward-shielded lighting to minimize disturbance. These measures will reduce temporary sensory disturbance to owls in nearby habitats.
6. Post-Construction Site Stabilization: Following construction, all temporarily disturbed areas will be recontoured and stabilized with a Caltrans-approved erosion-control seed mix. Restoration will promote re-establishment of open, low-stature vegetation preferred by burrowing owls for foraging and transient use.

Swainson's Hawk

Swainson's hawks were observed foraging along State Routes 41, 43, and 198 during the 2025 breeding-season surveys, but no active nests were identified within or next to the biological study area. All observed activity occurred outside the Caltrans right-of-way and well beyond the planned disturbance limits. Because the project will be confined to previously

disturbed roadway shoulders and embankments, and no tree removal or vegetation clearing is proposed, no direct habitat loss or modification will occur. Therefore, no compensatory mitigation is required for the project.

All construction work will remain within existing disturbed areas, and approved avoidance and minimization measures will ensure that foraging Swainson's hawks or nearby nesting pairs are protected from disturbance during construction. Preconstruction nesting-season surveys and establishment of no-disturbance buffers will be implemented as needed to avoid impacts on any active nests that may occur in the vicinity.

Efforts to avoid and minimize potential impacts to Swainson's hawks have been developed to ensure compliance with state and federal wildlife protection laws and to avoid disturbance to individual hawks, active nests, or suitable nesting and foraging habitat during project implementation.

1. Worker Environmental Awareness Training: Before the start of construction, all personnel involved in construction activities will attend a Worker Environmental Awareness Training led by a qualified biologist. The training will cover identification, ecology, and legal protection of the Swainson's hawk and other sensitive raptors, as well as avoidance procedures, restricted activity zones, and notification protocols if nesting raptors are encountered during construction.
2. Preconstruction Nesting-Season Surveys: If construction is scheduled during the Swainson's hawk breeding season (March 1 to September 15), a qualified biologist will conduct preconstruction nesting surveys following the Swainson's Hawk Technical Advisory protocol. Surveys will include a 0.5-mile radius around all active work areas and will be completed no more than 14 days before the start of construction. All observations of nesting or foraging hawks will be recorded, and any active nests will be mapped and reported to a Caltrans biologist and the California Department of Fish and Wildlife.
3. Avoidance Buffers: If an active Swainson's hawk nest is identified, construction activities will be avoided within a minimum 500-foot buffer during the nesting season. The buffer distance may be modified in coordination with the California Department of Fish and Wildlife based on topography, project activity, and observed hawk behavior. Buffers will be clearly marked in the field with temporary fencing or flagging and maintained until a qualified biologist has confirmed that the young have fledged and the nest is no longer active.
4. Monitoring During Construction: If construction occurs within 0.5 mile of an active nest, a qualified biological monitor will be on-site during all initial ground-disturbing or high-noise activities. The monitor will ensure full compliance with avoidance and minimization measures and will have the authority to stop or modify work if hawks exhibit signs of distress such as alarm calls, defensive flights, or extended absence from the nest.

Monitoring will continue until construction has progressed beyond the potential zone of influence or the risk of disturbance has been eliminated.

5. Timing and Location of Construction Activities: To the extent feasible, the most noise-intensive work, such as jackhammering, concrete saw cutting, or large-equipment operation, will be scheduled outside the nesting season. Equipment staging and laydown areas will be located at least 500 feet from active nests or large trees suitable for nesting to minimize visual and auditory disturbance.
6. Dust, Noise, and Lighting Control: Construction activities will adhere to project-specific Best Management Practices to minimize dust, noise, and glare. Equipment will be maintained in good working order with functional mufflers, and all temporary lighting will be directed downward and shielded to reduce spillover into nearby habitat. These measures will reduce temporary sensory disturbance to nesting or foraging hawks.
7. Tree Removal Restrictions: No removal of mature trees or potential nest structures will occur during the breeding season unless preconstruction surveys confirm that no active nests are present. If tree removal becomes necessary, it will occur between September 16 and February 28, outside the nesting period.
8. Postconstruction Site Stabilization: Following construction, all temporarily disturbed areas will be restored to pre-project contours and stabilized with a Caltrans-approved erosion-control seed mix. Restoration will promote low-profile vegetation compatible with nearby agricultural or roadside habitat while maintaining open visibility suitable for foraging raptors.

Loggerhead Shrike

Loggerhead shrikes were detected foraging but not nesting within the biological study area. Because no nesting habitat will be removed and avoidance measures will be implemented, compensatory mitigation is not anticipated. If active nests are discovered during construction and avoidance is not feasible, Caltrans will coordinate with the California Department of Fish and Wildlife to determine appropriate site-specific measures, which may include temporary work restrictions or relocation of construction activities.

To avoid and minimize potential impacts to the loggerhead shrike and other nesting birds protected under the Migratory Bird Treaty Act and California Fish and Game Code 3503, 3503.5, 3511 and 3513, Caltrans will implement the following measures during construction:

1. Worker Environmental Awareness Training: All construction personnel will receive training from a qualified biologist on the identification and protection of nesting birds, including the loggerhead shrike, and on procedures to follow if active nests are encountered.
2. Preconstruction Nesting Bird Surveys: If vegetation removal or ground-disturbing activities occur between February 1 and August 31, a qualified

biologist will conduct nesting bird surveys within the biological study area and a 250-foot buffer no more than 14 days before construction starts.

3. Establishment of Buffers: If active nests are identified, a 250-foot no-work buffer will be established and maintained until the young have fledged. Buffer distances may be adjusted in coordination with the California Department of Fish and Wildlife based on site conditions and observed bird behavior.
4. Biological Monitoring: A qualified biologist will monitor work that occurs near active nests and will have the authority to stop activities if disturbance is observed.
5. Site Restoration: Temporarily disturbed areas will be recontoured and hydroseeded following construction using a Caltrans-approved seed mix that supports open, low-stature vegetation suitable for foraging shrikes.

San Joaquin Kit Fox

All construction work will remain within previously disturbed areas, and the approved avoidance and minimization measures will ensure that any transient San Joaquin kit foxes potentially foraging or dispersing near work zones are protected from disturbance. Preconstruction surveys, establishment of appropriate no-disturbance buffers, and implementation of nighttime lighting and speed restrictions will further reduce the potential for take or harassment.

The following avoidance and minimization measures will be implemented:

1. Preconstruction Surveys: A qualified biologist will conduct preconstruction surveys for potential or active San Joaquin kit fox dens no more than 30 days before ground disturbance. Surveys will follow U.S. Fish and Wildlife Service Standardized Recommendations and will include an inspection of all proposed work areas, access routes, and staging locations.
2. Delineation of Buffers: If dens are identified, no-work exclusion zones will be established consistent with U.S. Fish and Wildlife Service guidance—250 feet for natal or pupping dens, 150 feet for known dens, and 50 feet for potential dens. Work within these exclusion zones will not resume until cleared by the U.S. Fish and Wildlife Service and/or the California Department of Fish and Wildlife.
3. Worker Environmental Awareness Training: Before construction starts, all personnel will receive environmental training conducted by a qualified biologist. The training will include San Joaquin kit fox identification, species ecology, avoidance procedures, and reporting protocols.
4. Construction Monitoring: A qualified biologist will monitor initial ground-disturbing activities and remain on call throughout construction. If a kit fox is observed within or near the work area, activities will pause until the animal has left the area on its own.

5. Wildlife Entrapment Prevention: All open trenches, pipes, and excavations will be covered or fitted with escape ramps at the end of each workday to prevent wildlife entrapment. Pipes will be capped or securely covered when not in use.
6. Speed Control: Construction vehicle speeds will be limited to 10 miles per hour within active work zones and access routes to minimize the potential for collisions with wildlife.
7. Lighting Restrictions: Temporary lighting used for night work will be directed downward and shielded to avoid light spill into nearby habitat. Lighting will be limited to the minimum intensity required for worker safety.
8. Trash and Food Waste Management: All food waste and refuse will be stored in closed containers and removed regularly to avoid attracting predators such as coyotes, which pose risks to the San Joaquin kit fox.
9. Soil and Vegetation Stabilization: Disturbed areas will be recontoured and stabilized upon completion of construction to prevent erosion and promote natural revegetation, reducing the potential for habitat degradation next to suitable habitat areas.

San Joaquin Antelope Squirrel

Compensatory mitigation is not required because no suitable burrows or individuals were detected, and the project will not result in the loss or degradation of occupied or high-quality habitat. If an active San Joaquin antelope squirrel burrow is discovered during construction and avoidance is not feasible, Caltrans will coordinate with the California Department of Fish and Wildlife to determine appropriate compensatory actions consistent with the California Endangered Species Act and Caltrans mitigation policy. Such measures may include the purchase of conservation bank credits, participation in a regional conservation program, or an in-lieu-fee contribution.

Efforts to avoid and minimize potential impacts to the San Joaquin antelope squirrel listed below have been reviewed and approved by the Project Development Team.

1. Preconstruction Surveys: A qualified biologist will conduct preconstruction surveys for the San Joaquin antelope squirrel no more than 30 days before the start of ground-disturbing activities.
2. Avoidance of Burrows: If potential or active burrows are identified, they will be clearly marked and avoided with a minimum 50-foot buffer until cleared by a qualified biologist.
3. Worker Environmental Awareness Training: All construction personnel will receive environmental training covering species identification, reporting protocols, and required avoidance measures.
4. Speed Control: Vehicle speeds will be limited to 10 miles per hour within active work zones to minimize the risk of wildlife collisions.

5. Lighting and Noise Management: Any night work lighting will be directed downward and shielded to minimize disturbance to wildlife using nearby areas.
6. Soil and Vegetation Stabilization: Disturbed areas will be recontoured and stabilized upon completion of construction to prevent erosion and promote natural revegetation, reducing the potential for habitat degradation next to suitable habitat areas.

American Badger

Compensatory mitigation is not anticipated for the American badger because no active dens or individuals were observed, and all work will occur within the disturbed right-of-way. Implementation of the avoidance and minimization measures described above will fully prevent direct take.

If an active badger den is discovered during construction and avoidance is not feasible, Caltrans will coordinate with the California Department of Fish and Wildlife to determine appropriate compensatory actions consistent with the California Endangered Species Act and Caltrans mitigation policy. Potential measures may include habitat enhancement or participation in regional conservation efforts.

Avoidance and minimization measures have been developed to ensure compliance with California Department of Fish and Wildlife recommendations for the protection of burrowing mammals. All measures listed below have been reviewed and approved by the Project Development Team.

1. Preconstruction Surveys: A qualified biologist will conduct preconstruction surveys for American badger dens within and next to the project footprint no more than 30 days before the start of ground-disturbing activities.
2. Den Avoidance: If any dens are identified, avoidance buffers of at least 100 feet will be established until a biologist confirms the den is inactive or the animal has vacated.
3. Worker Environmental Awareness Training: All construction personnel will receive environmental training that includes information on American badger identification, avoidance procedures, and reporting requirements.
4. Speed Control: Construction vehicle speeds will be limited to 10 miles per hour within active work zones to minimize wildlife collision risk.
5. Lighting Restrictions: Any temporary lighting required for safety will be directed downward and shielded to reduce nighttime disturbance to wildlife.
6. Soil and Vegetation Stabilization: Disturbed areas will be recontoured and stabilized upon completion of construction to prevent erosion and promote natural revegetation, reducing the potential for habitat degradation next to suitable habitat areas.

Short-Nosed Kangaroo Rat, Tulare Grasshopper Mouse, and San Joaquin Pocket Mouse

Compensatory mitigation is not anticipated because the project will not result in the loss or degradation of occupied or high-quality habitat. Though the short-nosed kangaroo rat and Tulare grasshopper mouse have been confirmed in the region through small-mammal trapping surveys conducted under a Caltrans project along the State Route 41 corridor, all work for the Kings 41 Drainage Restoration project will remain within the previously disturbed right-of-way, and suitable burrow habitat within the immediate project footprint is limited or absent.

If an active burrow or occupied habitat for any of the special-status small-mammal species is discovered during preconstruction surveys or construction and avoidance is not feasible, Caltrans will coordinate with the California Department of Fish and Wildlife to determine appropriate compensatory actions consistent with the California Endangered Species Act and Caltrans mitigation policy.

Avoidance and minimization measures have been developed to ensure compliance with California Department of Fish and Wildlife recommendations for the protection of small burrowing mammals. All measures listed below have been reviewed and approved by the Project Development Team.

1. Preconstruction Surveys: A qualified biologist will conduct preconstruction surveys for small burrowing mammals within 30 days before the start of ground-disturbing activities. Surveys will focus on suitable habitat along State Routes 33, 41, and 269, where alkali scrub and friable soils are present.
2. Worker Environmental Awareness Training: All construction personnel will receive environmental training that includes information on the identification and protection of small burrowing mammals, procedures for avoiding burrow disturbance, and contact protocols if wildlife is encountered during construction.
3. Speed Control: Construction vehicle speeds will be limited to 10 miles per hour within active work zones to minimize the potential for wildlife collisions.
4. Lighting Restrictions: Any temporary night-work lighting required for safety will be directed downward and fully shielded to avoid illuminating nearby habitat.
5. Soil and Vegetation Stabilization: Disturbed areas will be recontoured and stabilized upon completion of construction to prevent erosion and promote natural revegetation, reducing the potential for habitat degradation next to suitable habitat areas.

Giant Kangaroo Rat

Compensatory mitigation is not required because no individuals or occupied burrow systems of the giant kangaroo rat were detected within the project footprint, and the project will not result in the loss or degradation of occupied

or high-quality habitat. All construction activities will occur within the previously disturbed Caltrans right-of-way, and the project will avoid impacts to suitable habitat areas next to the roadway.

If an active burrow or occupied habitat is identified during preconstruction surveys or construction and avoidance is not feasible, Caltrans will coordinate with the U.S. Fish and Wildlife Service and the California Department of Fish and Wildlife to determine appropriate compensatory actions consistent with the Federal and California Endangered Species Acts and Caltrans mitigation policy.

Avoidance and minimization measures have been developed to ensure compliance with the Federal Endangered Species Act and with U.S. Fish and Wildlife Service and California Department of Fish and Wildlife guidance for upland species protection.

All measures listed below have been reviewed and approved by the Project Development Team.

1. Preconstruction Surveys: A qualified biologist will conduct preconstruction surveys for potential giant kangaroo rat burrow systems within 30 days before the start of ground-disturbing activities. Surveys will focus on areas of friable soil and alkali scrub along State Route 33 and State Route 269, where potential habitat remains.
2. Burrow Avoidance: If active giant kangaroo rat burrows are identified during preconstruction surveys, they will be flagged and avoided with a minimum 50-foot buffer until a qualified biologist confirms inactivity or natural abandonment.
3. Worker Environmental Awareness Training: All construction personnel will receive environmental awareness training before beginning work. Training will include information on the identification, ecology, and legal protection of the giant kangaroo rat; procedures for avoidance; and required reporting protocols if individuals or burrows are encountered.
4. Vehicle Speed Control: Construction vehicle speeds will be limited to 10 miles per hour within active work zones to minimize the potential for wildlife collisions.
5. Lighting Restrictions: Any temporary lighting required for nighttime work will be directed downward and fully shielded to minimize disturbance to nocturnal wildlife, including giant kangaroo rats and other small mammals.
6. Soil and Vegetation Stabilization: Disturbed areas will be recontoured and stabilized upon completion of construction to prevent erosion and promote natural revegetation, reducing the potential for habitat degradation next to suitable habitat areas.

Blunt-Nosed Leopard Lizard

Compensatory mitigation is not required because no blunt-nosed leopard lizards or diagnostic signs were detected during 2025 protocol-level surveys, and the project will not result in the loss or degradation of occupied or high-quality habitat. All construction activities will occur within the previously disturbed Caltrans right-of-way consisting of compacted shoulders, graded embankments, and roadside margins dominated by ruderal vegetation.

Given the project's limited scope and disturbed setting, the project does not meet the threshold for compensatory mitigation under either the Federal Endangered Species Act or the California Endangered Species Act. Habitat within the biological study area is highly fragmented, subject to frequent maintenance disturbance, and lacks the intact shrub-grassland mosaic required to support resident blunt-nosed leopard lizard populations. If a blunt-nosed leopard lizard individual or active burrow is identified during preconstruction clearance or construction, and avoidance is not feasible, Caltrans will immediately coordinate with the U.S. Fish and Wildlife Service and the California Department of Fish and Wildlife to determine appropriate compensatory actions.

Avoidance and minimization measures have been developed to prevent take of individual lizards, avoid disturbance to potential habitat, and ensure that construction remains confined to the previously disturbed right-of-way. All measures have been reviewed and approved by the Project Development Team.

1. Preconstruction Surveys: A qualified biologist will conduct preconstruction blunt-nosed leopard lizard surveys within all work areas and establish a 50-foot buffer around the work area no more than 30 days before the start of ground disturbance. Surveys will confirm the absence of blunt-nosed leopard lizard individuals and identify any potential burrows or microhabitats suitable for occupancy.
2. Worker Environmental Awareness Training: All construction personnel will attend a Caltrans-approved environmental awareness training course before working on-site. The training course will include the identification of the blunt-nosed leopard lizard, its habitat requirements, legal protections under federal and state laws, and the required response procedures if an individual is observed during construction.
3. Work Area Delineation: All project limits will be clearly delineated with temporary fencing or flagging before the start of construction to ensure that equipment and personnel remain within approved boundaries.
4. Exclusion of Potential Habitat Disturbance: Construction staging, access, and equipment storage will be restricted to existing disturbed surfaces such as paved or compacted shoulders to avoid encroachment into nearby alkali scrub or grassland habitat.

5. Preconstruction Clearance and Stop-Work Procedure: Before the start of initial ground disturbance, a qualified biologist will conduct a final preconstruction clearance inspection to confirm that no wildlife, burrows, or other sensitive resources are present within the work area. If any wildlife is observed, it will be allowed to leave the area voluntarily.

   During construction, if a blunt-nosed leopard lizard is observed on-site, all work will immediately stop within 50 feet of the observation, and Caltrans will coordinate with the U.S. Fish and Wildlife Service and the California Department of Fish and Wildlife to determine appropriate next steps before work resumes.

   This measure ensures compliance with federal and state wildlife protection laws while avoiding the need for continuous biological monitoring, which is not required given the absence of detections and low habitat suitability within the project right-of-way.
6. Lighting and Speed Controls: Temporary construction lighting will be directed downward, fully shielded, and limited to the minimum intensity necessary for worker safety to avoid illuminating nearby habitat. Vehicle speeds within active work zones will be limited to 10 miles per hour to reduce collision risk.
7. Soil Stabilization and Restoration: Upon completion of work, all temporarily disturbed areas will be recontoured and stabilized to match pre-project conditions. Hydroseeding with a Caltrans-approved native or sterile cover mix will be used to prevent erosion and promote vegetation recovery.

San Joaquin Coachwhip

Because no individuals were observed, and no suitable habitat will be permanently affected, compensatory mitigation is not required. If a San Joaquin coachwhip is encountered during construction and avoidance is not feasible, Caltrans will coordinate with the California Department of Fish and Wildlife to determine whether compensatory actions are warranted.

Avoidance and minimization measures have been developed to prevent take of individuals, avoid disturbance to potential habitat, and ensure that construction remains confined to previously disturbed right-of-way. All measures have been reviewed and approved by the Project Development Team.

1. Worker Environmental Awareness Training: Construction personnel will be trained to recognize the San Joaquin coachwhip and follow avoidance and reporting procedures if observed.
2. Confine Work to Disturbed Areas: All equipment and staging will remain within the existing disturbed right-of-way to avoid encroachment into nearby scrub or grassland.

3. Speed and Lighting Controls: Vehicle speeds will be limited to 10 miles per hour in work zones, and temporary lighting will be directed downward and shielded to minimize disturbance to wildlife.
4. Stop-Work Procedure: If a San Joaquin coachwhip is encountered, work will immediately stop within 50 feet of the individual. The biologist will allow it to leave the area voluntarily before work resumes.

California Glossy Snake

Because no individuals were observed, and no suitable habitat will be permanently impacted, compensatory mitigation is not required. If a California glossy snake is encountered and cannot be avoided, Caltrans will coordinate with the California Department of Fish and Wildlife to determine whether additional actions—such as in-lieu-fee contribution or habitat credit purchase—are warranted.

Avoidance and minimization measures have been developed to prevent take of individual snakes, avoid disturbance to potential habitat, and ensure that construction remains confined to the previously disturbed right-of-way. All measures have been reviewed and approved by the Project Development Team.

1. Worker Environmental Awareness Training: Construction personnel will be trained to recognize the California glossy snake and follow avoidance procedures if encountered.
2. Confine Work to Disturbed Areas: All construction access, staging, and equipment operations will remain within the existing disturbed right-of-way.
3. Speed and Lighting Controls: Vehicle speeds will be limited to 10 miles per hour, and temporary lighting will be directed downward and shielded.
4. Stop-Work Procedure: If a California glossy snake is observed, work will stop within 50 feet, and the individual will be allowed to leave the area voluntarily before work resumes.

2.1.5 Cultural Resources

Considering the information in the Historic Property Survey Report dated October 2025, which summarizes the Archaeological Survey Report, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Cultural Resources
a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?	**No Impact**

Question—Would the project:	CEQA Significance Determinations for Cultural Resources
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	**Less Than Significant Impact**
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	**No Impact**

Affected Environment

b) The proposed project is located along State Routes 33, 41, 43, 198, and 269 within Kings County. These are two-lane conventional highways that serve as primary access routes, connecting communities in the rural San Joaquin Valley. Elevations range from 200 feet to 650 feet above sea level. The project area is surrounded by rural areas and scattered with private residences, ranchlands, agricultural parcels, and small communities and cities, including Hanford, Stratford, and Avenal. The archaeological survey area was established as the area that could be directly or indirectly affected by project activities and includes all existing rights-of-way and any known construction staging areas. For this project, excavation is anticipated for culvert replacement. The depth of excavation is estimated at 6 feet and would extend approximately 30 feet wide to either side of each culvert end section.

A cultural resources records search for the project area was conducted through the Southern San Joaquin Valley Information Center. This database includes integrated digital files, which provide historical maps, archaeological site locations, subsurface sensitivity, and ethnographic areas documented during previous studies within and immediately next to all construction locations. This records search focused on examining Caltrans' right-of-way for recorded archeological sites and previous inventory efforts. Because the project could affect historic properties, the National Register of Historic Places, California Historical Landmarks, California Points of Historical Interest, and the California Register of Historical Resources online databases were also consulted in January 2025.

One archaeological survey with negative discovery results was conducted on State Route 41 between post miles 0.0 and 15.50. This survey included the locations of two proposed culverts for the project. No other surveys covering the remaining archaeological survey area locations have been conducted in more than 10 years. A single historic-era site, P-16-000479, is located next to post mile 17.75 on State Route 198. This site is recorded outside of Caltrans' right-of-way on private property and will not be affected by the project. No sites eligible for the National Register of Historic Places or the California Register of Historical Resources are known to exist within or next to the archaeological survey area locations.

No surface archaeological sites were identified during pedestrian surveys in December 2024 and July 2025.

Environmental Consequences

The pedestrian survey for all 49 culvert locations was conducted in December 2024 and July 2025. The survey concluded that no archaeological sites are known to exist within the archaeological survey area, and that no sites eligible for the National Register of Historic Places or the California Register of Historical Resources are known to exist within or next to the archaeological survey area.

As a result, there would not be an adverse impact on any archaeological resources. However, the Caltrans Cultural Resources Database indicates that the subsurface sensitivity of the archaeological survey area is moderate to very high for the presence of buried and surface archaeological deposits. A request for tribal stewardship monitoring by the Santa Rosa Rancheria Tachi Yokut Tribe is based on knowledge of cultural resources within the project area. This is supported by the prehistoric record of Yokuts' use of foothills along elevated landscapes and habitation sites consistent with fluctuations in the Tulare Lake shoreline. There are also tribal records of cultural resources that have been removed or collected from Kettleman City and the surrounding area, as well as documentation of the area’s historical use by tribal communities. The Santa Rosa Rancheria Tachi Yokut Tribe staff are reluctant to identify specific resources due to the history of artifact collecting along the Tulare Lake shoreline and the history of looting in the area.

Construction monitoring by a Caltrans archaeologist and a representative of the tribe will be required at the following locations:

- On State Route 41: Culvert 14 (post mile 16.86), Culvert 10 (post mile 14.28), Culvert 18 (post mile 33.48), Culvert 15 (post mile 30.85), and Culvert 20 (post mile 42.119).
- On State Route 43: Culvert 30 (post mile 8.25), Culvert 29 (post mile 8.17), and Culvert 26 (post mile 7.52).
- On State Route 198: Culvert 38 (post mile 21.24), Culvert 37 (post mile 19.57), Culvert 36 (post mile 18.37), Culvert 35 (post mile 17.75), and Culvert 33 (post mile 17.19).

Avoidance, Minimization, and/or Mitigation Measures

It is Caltrans' policy to avoid cultural resources whenever possible. Further investigations may be needed if the project cannot avoid impacting archaeological sites. If buried cultural materials are encountered during construction, it is Caltrans’ policy to stop work in the affected area until a qualified archaeologist can evaluate the nature and significance of the find.

Additional surveys will be required if the project changes to include areas not previously surveyed.

Caltrans will follow all measures in the Environmentally Sensitive Area Action Plan. Before starting any ground-disturbing activities within the area of potential effects, the resident engineer or a representative, the construction contractor, and a Caltrans archaeologist will meet at site locations in and near the project area to discuss all the environmentally sensitive area boundaries. They will also review the monitoring requirements for the Environmentally Sensitive Areas during construction. To ensure project activities do not result in adverse effects on archaeological sites, Environmentally Sensitive Areas will be mapped in the construction contract plans, and these areas will be protected and avoided with high-visibility fencing during construction. Both archaeological and Native American monitors will be present during construction.

- The contractor should notify the resident engineer 10 days before working in areas that are to be monitored.
- A Caltrans archaeologist should be notified at least five days before the start of ground-disturbing activities.
- If the archaeological or Native American monitor identifies a resource considered potentially significant, the monitor will immediately inform the responsible Caltrans Professionally Qualified Staff and the resident engineer. The resident engineer, or his or her representative, will temporarily stop all construction activities within 60 feet of the discovery. The resource will then be assessed to determine whether it constitutes a significant cultural resource and whether it was exposed or adversely affected by construction activities.

2.1.6 Energy

Considering the information in the Energy Analysis Technical Memorandum dated October 2025, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Energy
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation?	**No Impact**
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	**No Impact**

2.1.7 Geology and Soils

Considering the information in the Paleontological Identification Report-Project Approval and Environmental Document Compliance Study dated October 2025, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Geology and Soils
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**
ii) Strong seismic ground shaking?	**No Impact**
iii) Seismic-related ground failure, including liquefaction?	**No Impact**
iv) Landslides?	**No Impact**
b) Result in substantial soil erosion or the loss of topsoil?	**No Impact**
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on-site or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	**No Impact**
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	**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**
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	**No Impact**

2.1.8 Greenhouse Gas Emissions

Considering the information in the Climate Report dated January 2024, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Greenhouse Gas Emissions
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	**Less Than Significant Impact**
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	**No Impact**

Affected Environment

a) The project would repair or replace 49 existing culverts on State Routes 33, 41, 43, 198, and 269 at various locations in Kings County. The project is in a rural area, with an economy based primarily on natural resources, including agricultural production and tourism- and recreation-related interests. State Routes 33, 41, 43, 198, and 269 carry both passenger and commercial vehicles and accommodate recreational traffic as well as heavy commuter traffic to and through cities and unincorporated communities throughout the Central Valley. In addition, the Burlington Northern and Santa Fe Railway runs near State Route 43, with freight trains operating daily.

The Kings County Association of Governments' 2026 Regional Transportation Plan guides transportation development. The 2026 Regional Transportation Plan/Sustainable Communities Strategy and Chapter 10 Air Quality address greenhouse gases in the project area.

The San Joaquin Valley Air Basin is in nonattainment for federal particulate matter 2.5 and attainment/maintenance for federal particulate matter 10.

Environmental Consequences

Operational climate change emissions do not need to be estimated because this is not a capacity-increasing project. This project is not expected to cause any operational effects on air pollutants. Construction greenhouse gas emissions would result from material processing, on-site construction equipment, and traffic delays due to construction. These emissions would be produced at different levels throughout the construction phase; their frequency and occurrence can be reduced through innovations in plans and specifications and by implementing better traffic management during construction phases.

In addition, with innovations such as longer pavement life, improved Traffic Management Plans, and changes in materials, the greenhouse gas emissions produced during construction can be offset to some degree by longer intervals between maintenance and rehabilitation activities. Per Caltrans protocol, carbon dioxide emissions generated by construction equipment were estimated using the Caltrans Construction Emissions Tool (CAL-CET 2021 v1.0). The estimated carbon dioxide construction emissions total 598 U.S. tons over a 180-day work period.

Avoidance, Minimization, and/or Mitigation Measures

While the project would produce greenhouse gas emissions during construction, it is not expected to cause an increase in operational greenhouse gas emissions. The project would not conflict with any applicable plan, policy, or regulation adopted to reduce the emissions of greenhouse gases. With the implementation of construction greenhouse gas reduction measures, the impacts would be less than significant.

Caltrans Standard Specifications Section 14-9.02 Air Pollution Control requires contractors to comply with all air pollution control rules, regulations, ordinances, and statutes. Measures that reduce construction vehicle emissions also help reduce greenhouse gas emissions. The following measures will also be implemented in the project to reduce greenhouse gas emissions and potential climate change impacts from the project:

- To the extent possible, limit idling to 5 minutes for delivery and dump trucks and other diesel-powered equipment.
- To the extent possible, use recycled water to reduce the amount of potable water used by construction activities.
- To the extent possible, maintain equipment in proper working condition, use the right-sized equipment for the job, and use equipment with new technologies.
- To the extent possible, schedule longer-duration lane closures to reduce the number of equipment mobilization efforts. (Combine with public information efforts for congested areas.)
- To the extent possible, salvage large removed trees for lumber or similar on-site beneficial uses other than standard wood chipping, such as use in roadside landscape projects or green infrastructure components.
- To the extent possible, recycle existing project features on-site, such as metal beam guardrail, light standards, sub-base granular material, or native material that meets Caltrans specifications for incorporation into new work.

- To the extent possible, reduce construction waste. For example, reuse or recycle construction and demolition waste to reduce the consumption of raw materials, decrease waste generation and transportation to landfills, and reduce costs.

2.1.9 Hazards and Hazardous Materials

Considering the information in the Initial Site Assessment dated October 2025, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Hazards and Hazardous Materials
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	**No Impact**
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**
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?	**No Impact**
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**
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 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**
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	**No Impact**

Question—Would the project:	CEQA Significance Determinations for Hazards and Hazardous Materials
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	**No Impact**

2.1.10 Hydrology and Water Quality

Considering the information in the Water Compliance Memorandum dated February 2025 and the Location Hydraulic Study dated May 2023, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Hydrology and Water Quality
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface water or groundwater quality?	**No Impact**
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**
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: (i) result in substantial erosion or siltation on-site or off-site;	**No Impact**
(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on-site or off-site;	**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**
(iv) impede or redirect flood flows?	**No Impact**

Question—Would the project:	CEQA Significance Determinations for Hydrology and Water Quality
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	**No Impact**
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	**No Impact**

2.1.11 Land Use and Planning

Considering the information in the 2035 Kings County General Plan-Land Use Element, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Land Use and Planning
a) Physically divide an established community?	**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**

2.1.12 Mineral Resources

Considering the information in the 2035 Kings County General Plan-Resource Conservation Element, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Mineral Resources
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**
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**

2.1.13 Noise

Considering the information in the Noise Compliance Study dated February 2025, the following significance determinations have been made:

Question—Would the project result in:	CEQA Significance Determinations for Noise
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**
b) Generation of excessive groundborne vibration or groundborne noise levels?	**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 2 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**

2.1.14 Population and Housing

Considering the information in the 2035 Kings County General Plan-Open Space Element and 2016-2024 Kings County Housing Element, and the fact that the project would repair, replace, and/or rehabilitate existing culverts, requiring no additional right-of-way and no displacement or impact to local population/housing, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Population and Housing
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**
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	**No Impact**

2.1.15 Public Services

Considering the information in the 2035 Kings County General Plan-Circulation Element and the fact that the scope of the project would not impact any existing public service or construct any new public service, the following significance determinations have been made:

Question:	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**
Police protection?	**No Impact**
Schools?	**No Impact**
Parks?	**No Impact**
Other public facilities?	**No Impact**

2.1.16 Recreation

Considering that the project would repair, replace, and/or rehabilitate existing culverts on multiple state routes at various post miles; would not alter, expand, or impact existing local parks or recreational facilities; and would maintain access to all existing recreational facilities during and after construction, the following significance determinations have been made:

Question—Would the project:	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**
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	**No Impact**

2.1.17 Transportation

The project is listed in the 2024 Kings County Association of Governments' State Highway Operation and Protection Program as a pavement resurfacing and/or rehabilitation project. The main scope of work would be to repair, replace, and/or rehabilitate existing culverts, with no change to or alteration of the existing roadway service. The project would use media and traffic radio announcements to alert commuters before and during construction, so there would be no dramatic change in roadway capacity or traffic patterns. Considering the information in the Transportation Management Plan dated September 2025, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Transportation
a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	**No Impact**
b) Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?	**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**
d) Result in inadequate emergency access?	**Less Than Significant Impact**

Affected Environment

d) Emergency Services

A Transportation Management Plan was prepared in September 2025 to prevent and mitigate construction impacts. Nighttime and daytime work outside peak hours is anticipated for this project. The proposed project construction would require a one-way reversing roadway operation and a temporary lane closure.

Emergency services could be affected during construction due to temporarily increased response times for emergency medical and fire services. The Kings County Sheriff's Office and the California Highway Patrol provide public safety services to the project area.

Nine fire stations are located near the culvert replacement locations:

- Kings County Fire Department stations: Station 4 (Southeast Hanford), Station 5 (Armona), Station 6 (Island District), Station 7 (South Lemoore), Station 9 (Kettleman City), and Station 12 (Avenal).
- Lemoore Fire Department, 210 Fox Street, Lemoore, California 93245.
- Hanford Fire Department, 350 West Grangeville Boulevard, Hanford, California 93230.
- California Department of Forestry and Fire Protection, 25600 Jayne Avenue, Coalinga, California 93210.

Environmental Consequences

The main scope of work would be to repair, replace, and/or rehabilitate existing culverts, with no change to or alteration of the existing roadway service. The project would use media and traffic radio announcements to alert commuters before and during construction, so there would be no dramatic change in roadway capacity or traffic patterns.

Day and night work with lane closures, using reversing one-way traffic control, would be required throughout construction. A flagger positioned on each side of the construction work zone would intermittently control traffic flow, with one direction closed while the other remains open to traffic.

Avoidance, Minimization, and/or Mitigation Measures

A detailed traffic management plan would be developed during the design phase (known as the Plans, Specifications, and Estimates phase) of the project to minimize delays and maximize safety for the traveling public and emergency service providers during construction. No mitigation is anticipated.

2.1.18 Tribal Cultural Resources

Considering the information in the Archaeological Survey Report dated October 2025, the following significance determinations have been made:

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:

Question:	CEQA Significance Determinations for Tribal Cultural Resources
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or	**No Impact**
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**

2.1.19 Utilities and Service Systems

Based on preliminary utility investigations and site visits conducted by the Caltrans Utility Engineering Workgroup in March 2025 and on the information presented in the Draft Project Report dated November 2025, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Utilities and Service Systems
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?	**Less Than Significant 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**
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	**No Impact**

Question—Would the project:	CEQA Significance Determinations for Utilities and Service Systems
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**
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	**No Impact**

Affected Environment

a) The project roadway alignment and culvert locations are next to multiple utilities (both buried and exposed), including but not limited to existing telephone lines, fiber-optic lines, petroleum pipelines, natural gas pipelines, and electrical lines. Potholing would not be required at culvert locations where the maintenance strategy is to line the culvert; however, potholing may be required at locations where the project proposes to replace culverts.

Utility limitations include the ongoing installation of broadband infrastructure associated with the Middle-Mile Broadband Initiative. Currently, Central Valley Independent Network, a fiber-optic telecommunications company, is installing broadband facilities at multiple locations within the project limits under the direction of the California Department of Technology. Depending on where Central Valley Independent Network installs its fiber-optic lines, new conflicts and permit restrictions may be introduced.

Environmental Consequences

Potholing may be required at locations where the project proposes to replace culverts. Potholing activities are anticipated to occur in the spring of 2026. Several culvert locations with a medium to high risk of utility conflicts have been identified, as listed below:

- Drainage System Number 14—Kettleman City on State Route 41.
- Drainage Systems Numbers 39 through 42—City of Avenal on State Route 269/State Route 33.

Culvert replacements along State Route 269 near Avenal may impact utilities such as a natural gas pipeline operated by San Diego Gas and Electric and the communication cable conduit located along the south side of the roadway. Once precise locations have been determined during the Plans, Specifications, and Estimates phase, a determination can be made regarding the implementation of design avoidance measures. Table 2.2 lists the proposed culvert replacements by post mile.

Table 2.2 Culvert Replacement—Utilities

Number	System Number	County	Route	Post Mile	Scope Recommendation
10	450414001428	KIN	41	14.28	Replace
14	450410001686	KIN	41	16.86	Replace
15	450410003085	KIN	41	30.85	Replace
18	450410003348	KIN	41	33.48	Replace 8 feet of reinforced concrete pipe from the inlet and replace the inlet.
20	450410104219	KIN	41	42.19	Replace
22	450410104428	KIN	41	44.28	Replace
26	450430000752	KIN	43	7.52	Replace 6 feet of corrugated steel pipe from the inlet/outlet and add an inlet/outlet.
29	450430000817	KIN	43	8.17	Replace 12 feet of corrugated steel pipe from the outlet and add an outlet.
30	450430000825	KIN	43	8.25	Replace 12 feet of corrugated steel pipe from the outlet and add an outlet.
31	450430000930	KIN	43	9.3	Replace
33	451984101719	KIN	198	17.19	Replace
34	451980101775	KIN	198	17.75	Replace
35	451980101775	KIN	198	17.75	Replace
36	451980101837	KIN	198	18.37	Replace
37	451984101957	KIN	198	19.57	Replace
38	451980102124	KIN	198	21.24	Replace
39	452694000000	KIN	269	0	Replace
40	452694000000	KIN	269	0	Replace the existing culvert and combine it with Culvert 2-1.
41	452694000000	KIN	269	0	Replace
42	452690000000	KIN	269	0	Replace
45	452690000151	KIN	269	1.51	Replace

The proposed project would repair, replace, and/or rehabilitate existing culverts and would not require additional right-of-way. However, the unknown locations of Middle-Mile Broadband Network fiber-optic lines may introduce new utility conflicts and permit restrictions, which could affect environmental clearance and delay the project schedule.

Avoidance, Minimization, and/or Mitigation Measures

During the design phase of the project, a detailed utility investigation would be conducted to identify any necessary utility relocations. Locating utilities before construction would enhance worker safety and prevent service disruptions during activities such as grading, excavation, and pipe installation.

Caltrans would coordinate with affected utility providers to determine the details of any necessary relocations to avoid or minimize service interruptions.

All existing utilities identified before construction would be protected in place whenever feasible. This coordination process would identify potential utility conflicts and inform the development of design measures to avoid impacts on existing infrastructure. Utility users would be notified in advance of any construction activities.

2.1.20 Wildfire

Considering that the mapping of the California Fire Hazard Severity Zones in State Responsibility Areas shows that the project area is designated as a high fire hazard in both rural and urban areas with flat topography in the project locations, the following significance determinations have been made:

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

Question—Would the project:	CEQA Significance Determinations for Wildfire
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	**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?	**Less Than Significant 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**
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**

Affected Environment

b) Wildfires and bushfires can put roadway facilities and nearby structures at risk and result in impacts to nearby communities. Potential effects would vary by location; in cases of direct fire impact, any damage could require an existing facility to be relocated or reconstructed. For wildfire prevention, Caltrans considers these types of climate risks in determining how state highways are planned, designed, built, operated, and maintained.

The Fire Hazard Severity Zone mapping tools developed by the Office of the State Fire Marshal and the California Department of Forestry and Fire Protection show that the project limits run through moderate and high fire hazard severity zones. The 2021 Caltrans District 6 Climate Change Vulnerability Assessment mapping of roadways exposed to wildfire risk indicates that State Route 33 within the project area will experience medium, high, and very high wildfire concern levels from 2025 to 2085.

Environmental Consequences

The project would not introduce any new structures or operations that would worsen the risk of wildfire.

The potential for fire prevention varies with the type of roadside design and maintenance. For example, routine removal of dead trees can reduce fire risk, and metal post guardrails may be used in some high-risk fire areas; grasses on a cut slope with a dike at the base are less likely to be ignited by a cigarette or spark than grasses on a flat, traversable roadside. Caltrans maintenance crews use hand-held weed whackers on off-ramps and steep hillsides. Fire-resistant culvert materials would be selected to ensure that drainage facilities are as fire-resistant as possible. The project would not hinder local emergency response vehicles or emergency evacuation plans. Operationally, the project is not expected to increase the risk of wildfires or worsen the impacts of wildfires.

Avoidance, Minimization, and/or Mitigation Measures

The following Caltrans Best Management Practices would be implemented during construction activities:

- The contractor would obtain the emergency phone numbers of the California Department of Forestry and Fire Protection unit headquarters, the U.S. Forest Service ranger district office, and the U.S. Department of the Interior Bureau of Land Management field offices. These phone numbers will be submitted to the resident engineer before the start of job site activities. The agencies' names and emergency phone numbers must be posted at a prominent place at the job site.

- The California Department of Forestry and Fire Protection, the U.S. Forest Service, and the Bureau of Land Management have established the following adjective class ratings for five levels of fire danger for use in public information releases and fire protection signing: "low," "moderate," "high," "very high," and "extreme." The fire danger rating for the project area can be obtained from the nearest California Department of Forestry and Fire Protection unit headquarters, the U.S. Forest Service ranger district office, or the Bureau of Land Management field office. Monitor the National Weather Service's daily forecasts for "fire weather watches" and "red flag warnings" covering the project's locations.

- Locate flammable materials at least 50 feet away from equipment service, parking, and gas or oil storage areas. Each small mobile or stationary engine site must be cleared of flammable material for a radius of at least 15 feet from the engine.

- Before clearing and grubbing, clear a firebreak at the outer limits of the areas to be cleared and grubbed. Where clearing and grubbing limits allow, use a minimum firebreak width of 20 feet. Each area to be cleared and grubbed must be cleared and kept clear of flammable material, such as dry grass, weeds, brush, downed trees, oily rags and waste, paper, cartons, and plastic waste.

- In addition to being available at the worksite, the truck and operator must patrol the construction area from noon until at least 30 minutes after job site activities have ended. If the fire danger rating is “very high” or “extreme” or if a “fire weather watch” or “red flag warning” is issued, the truck and operator must patrol the construction area while work is being done and for at least 30 minutes after job activities have ended.

- Arrangements have been made with the California Department of Forestry and Fire Protection, the U.S. Forest Service, and the Bureau of Land Management to notify Caltrans when the fire danger rating is “very high” or “extreme.” This information will be provided to the resident engineer, who will notify the contractor for dissemination and implementation within the affected area. If a discrepancy exists between this notice and the fire danger rating obtained from the nearest office of the California Department of Forestry and Fire Protection or the U.S. Forest Service, the contractor must conduct operations in accordance with the higher of the two fire danger ratings.

- Work that could start a fire requires that properly equipped fire guards be assigned to such operations for the duration of the work. The resident engineer may suspend work completely or in part due to hazardous fire conditions. Days during such suspensions will be considered nonworking days. If field or weather conditions necessitate suspension of the work, Section 7-1.02M(2) will not be enforced for the duration of the suspension.

2.1.21 Mandatory Findings of Significance

Question:	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**
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**
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	**No Impact**

Affected Environment

a) Special-status animal and plant species historically present within the 7.5-minute U.S. Geological Survey quadrangles were queried using the U.S. Fish and Wildlife Service's Information for Planning and Consultation system, the California Department of Fish and Wildlife's California Natural Diversity Database, and the California Native Plant Society's Inventory of Rare and Endangered Plants. The project could affect the habitat quality of four special-status animal species—San Joaquin kit fox, Swainson's hawk, western burrowing owl, and blunt-nosed leopard lizard—and one special-status plant species—California Jewelflower. Refer to the biological section in this environmental document for details.

San Joaquin Kit Fox

The San Joaquin kit fox is listed as a state-threatened endangered species. Multiple occurrences of the San Joaquin kit fox have been recorded along the

corridors of State Routes 33, 41, 43, 198, and 269. No kit fox individuals, tracks, scats, or potential dens were observed within the biological study area during Caltrans surveys. The biological study area primarily consists of disturbed non-native grassland, ruderal roadside vegetation, and agricultural margins with scattered alkali scrub patches. These features offer low- to moderate-quality foraging or movement habitat but lack the contiguous open space and stable burrow networks typically required for denning or population establishment.

Swainson's Hawk

The Swainson's hawk is a state-threatened endangered species. The culvert locations on State Routes 41 (North), 43, and 198 are within the range of this species and offer suitable foraging and nesting habitat. No Swainson's hawks were observed along State Routes 33 or 269, as habitat along these routes consists predominantly of dry rangeland or narrow agricultural margins that lack the tall tree structure typically used for nesting. The absence of suitable nesting substrate and limited foraging resources make occupancy by this species unlikely. No active nests were identified within or immediately next to the Caltrans right-of-way. The potential for unrecorded nests within 0.5 mile of suitable habitat cannot be entirely ruled out due to the species' wide foraging range and use of isolated roadside trees for nesting.

Western Burrowing Owl

The western burrowing owl is recognized as a California Species of Special Concern and is a state candidate. The culvert locations on State Routes 33, 41, and 269 are within the range of the species and offer suitable burrow habitat. During a visual survey, one adult burrowing owl was observed three times along State Route 41. Habitat along State Route 41 and State Route 269 consisted of disturbed grassland and alkali-scrub edges with patchy burrow networks, representing low-to-moderate-quality potential habitat. Habitat along State Routes 33, 43, and 198 was characterized as low quality due to disturbance and lack of intact burrow systems. Predators observed during surveys included red-tailed hawks, red-shouldered hawks, domestic cats, and coyotes, all of which may discourage owl occupancy. No western burrowing owl was present within or next to any portion of the project limits.

Blunt-Nosed Leopard Lizard

The blunt-nosed leopard lizard is listed as a state endangered species. A protocol-level blunt-nosed leopard lizard presence/absence survey and two juvenile-season surveys were conducted in 2025. No adult or juvenile blunt-nosed leopard lizards were observed during any survey round. However, side-blotched lizards were detected frequently across all survey routes, including hatchlings, juveniles, and adults, confirming that environmental conditions were optimal for detecting surface-active reptiles. Habitat along State Route 33 and State Route 41 lacks native shrubs, and frequent disking and mowing result in low suitability for blunt-nosed leopard lizards. State

Route 269, a landscape of patchy scrub and dense grasses with open sandy soil, provides low to moderate suitability for the blunt-nosed leopard lizard.

California Jewelflower

The California jewelflower is an annual mustard listed as a California state-endangered species. Within the project area, sandy or loamy roadside soils are limited and occur primarily along State Route 269, where disturbed areas support dense invasive grasses and are not representative of the intact open grassland and scrub habitats favored by the species. The nearest documented occurrences are approximately 2 miles southeast of State Route 269 at post mile 1.5, within the Garza Peak and Avenal quadrangles. Given the absence of suitable soil structure and the high degree of disturbance, the species' potential to occur within the biological study area is low.

Environmental Consequences

San Joaquin Kit Fox

No roadway widening, new ground disturbance outside the established right-of-way, or removal of native shrubs or trees is proposed. Temporary disturbance areas at individual culvert sites are small (typically less than 0.01 acre per site) and will be restored to pre-project contours and stabilized following construction. Excavation and equipment staging will be confined to previously compacted or graded surfaces that lack burrow complexes or subsurface refugia. The likelihood of encountering a transient individual is extremely low, and implementation of preconstruction surveys and daily inspections of open trenches or pipes will further reduce the risk of accidental entrapment. No designated critical habitat for the San Joaquin kit fox occurs within or next to the project limits.

Swainson's Hawk

Temporary disturbance may occur where construction access or excavation is required near open fields used for hunting. Disturbance would be limited to narrow work zones at each culvert location, and temporary work areas would be restored to preconstruction contours and hydroseeded following project completion. Because the total disturbance area is minimal (less than 0.01 acre per site) and occurs within already developed transportation corridors, effects on Swainson's hawk habitat quantity or quality are expected to be negligible. No tree removal or vegetation clearing is anticipated outside the defined work limits. Consequently, the project will not result in the permanent loss of nesting trees or the substantial alteration of available foraging habitat.

Western Burrowing Owl

Documented records indicate the presence of western burrowing owls within approximately 1 to 3 miles of the State Route 41 and State Route 269 corridors, confirming that the species continues to occur intermittently within agricultural and transportation landscapes of Kings County. No designated critical habitat for western burrowing owls is present within or next to any

portion of the project limits. However, potential impacts to western burrowing owls have recently been assessed in accordance with the California Department of Fish and Wildlife's guidelines. A no-disturbance buffer for western burrowing owls should be applied for all construction activities and if avoidance would not be possible then a 2081 incidental take permit may be required.

Blunt-Nosed Leopard Lizard

No blunt-nosed leopard lizards were observed during the 2025 protocol surveys, and no burrows, tracks, or other diagnostic signs of the species were detected. Habitat within the Caltrans right-of-way is highly fragmented and periodically graded, reducing the likelihood of occupancy. Although isolated patches of friable soil and rodent burrows were documented along State Route 33 and State Route 269, these areas are too small and disturbed to support resident populations. Because no individuals or active burrows occur within the project limits, direct impacts such as injury, mortality, or burrow destruction are not anticipated. The compacted, disturbed shoulders where construction will occur are considered unsuitable for sustained occupancy.

California Jewelflower

Within the project area, only limited sandy or loamy roadside soils occur, primarily along State Route 269, where disturbed areas support dense invasive grasses and are not representative of the intact open grassland and scrub favored by the species. The nearest documented occurrences are approximately 2 miles southeast of State Route 269 at post mile 1.5 within the Garza Peak and Avenal quadrangles. These populations lie outside the project corridor and are separated by agricultural fields. Given the absence of suitable soil structure and the high degree of disturbance, the species' potential to occur within the biological study area is low.

Avoidance, Minimization, and/or Mitigation Measures

San Joaquin Kit Fox

The following avoidance and minimization measures for the San Joaquin kit fox will be implemented:

- Preconstruction Surveys**:** A qualified biologist will conduct preconstruction surveys for potential or active San Joaquin kit fox dens no more than 30 days before the start of ground disturbance. Surveys will follow the U.S. Fish and Wildlife's (2011) Standardized Recommendations and will include inspection of all proposed work areas, access routes, and staging locations.

- Delineation of Buffers**:** If dens are identified, no-work exclusion zones will be established consistent with U.S. Fish and Wildlife Service guidance—250 feet for natal or pupping dens, 150 feet for known dens, and 50 feet for potential dens. Work within these exclusion zones will not resume until

cleared by the U.S. Fish and Wildlife Service and/or the California Department of Fish and Wildlife.

- Worker Environmental Awareness Training: Before construction starts, all personnel will receive environmental training conducted by a qualified biologist. The training will include San Joaquin kit fox identification, species ecology, avoidance procedures, and reporting protocols.

- Construction Monitoring: A qualified biologist will monitor initial ground-disturbing activities and remain on call throughout construction. If a kit fox is observed within or near the work area, activities will pause until the animal has left the area on its own.

- Wildlife Entrapment Prevention: All open trenches, pipes, and excavations will be covered or fitted with escape ramps at the end of each workday to prevent wildlife entrapment. Pipes will be capped or securely covered when not in use.

- Speed Control: Construction vehicle speeds will be limited to 10 miles per hour within active work zones and access routes to minimize the potential for collisions with wildlife.

- Lighting Restrictions: Temporary lighting used for night work will be directed downward and shielded to avoid light spill into nearby habitat. Lighting will be limited to the minimum intensity required for worker safety.

- Trash and Food Waste Management: All food waste and refuse will be stored in closed containers and removed regularly to avoid attracting predators such as coyotes, which pose risks to the San Joaquin kit fox.

- Soil and Vegetation Stabilization: Disturbed areas will be recontoured and stabilized upon completion of construction to prevent erosion and promote natural revegetation, reducing the potential for habitat degradation next to suitable habitat areas.

Swainson's Hawk

- Worker Environmental Awareness Training: Before the start of construction, all personnel involved in construction activities will attend a Worker Environmental Awareness Training course led by a qualified biologist. The training course will cover identification, ecology, and legal protections of Swainson's hawks and other sensitive raptors, as well as avoidance procedures, restricted activity zones, and notification protocols if nesting raptors are encountered during construction.

- Preconstruction Nesting-Season Surveys: If construction is scheduled during the Swainson's hawk breeding season (March 1 to September 15), a qualified biologist will conduct preconstruction nesting surveys following

the Swainson's Hawk Technical Advisory Committee (2000) protocol. Surveys will include a 0.5-mile radius around all active work areas and will be completed no more than 14 days before the start of construction. All observations of nesting or foraging hawks will be recorded, and any active nests will be mapped and reported to a Caltrans biologist and the California Department of Fish and Wildlife.

- Avoidance Buffers: If an active Swainson's hawk nest is identified, construction activities will be avoided within a minimum 500-foot buffer during the nesting season. The buffer distance may be modified in coordination with the California Department of Fish and Wildlife based on topography, project activity, and observed hawk behavior. Buffers will be clearly marked in the field with temporary fencing or flagging and maintained until a qualified biologist has confirmed that the young have fledged and the nest is no longer active.

- Monitoring During Construction: If construction occurs within 0.5 mile of an active nest, a qualified biological monitor will be on-site during all initial ground-disturbing or high-noise activities. The monitor will ensure full compliance with avoidance and minimization measures and will have the authority to stop or modify work if hawks exhibit signs of distress, such as alarm calls, defensive flights, or extended absence from the nest. Monitoring will continue until construction has progressed beyond the potential zone of influence or the risk of disturbance has been eliminated.

- Timing and Location of Construction Activities: To the extent feasible, the most noise-intensive work (e.g., jackhammering, concrete saw cutting, or large-equipment operation) will be scheduled outside the nesting season. Equipment staging and laydown areas will be located at least 500 feet from active nests or large trees suitable for nesting to minimize visual and auditory disturbance.

- Dust, Noise, and Lighting Control: Construction activities will adhere to project-specific Best Management Practices to minimize dust, noise, and glare. Equipment will be maintained in good working order with functional mufflers, and all temporary lighting will be directed downward and shielded to reduce spillover into nearby habitat. These measures will reduce temporary sensory disturbance to nesting or foraging hawks.

- Tree Removal Restrictions: No removal of mature trees or potential nest structures will occur during the breeding season unless preconstruction surveys confirm that no active nests are present. If tree removal becomes necessary, it will occur between September 16 and February 28, outside the nesting period.

- Postconstruction Site Stabilization: Following construction, all temporarily disturbed areas will be restored to pre-project contours and stabilized with

a Caltrans-approved erosion-control seed mix. Restoration will promote low-profile vegetation compatible with nearby agricultural or roadside habitat while maintaining open visibility suitable for foraging raptors.

Western Burrowing Owl

No take of individual burrowing owls are anticipated as a result of the proposed project. All construction activities will be confined to previously disturbed Caltrans right-of-way, and no new ground disturbance will occur outside delineated work limits. Work will include culvert replacement, headwall stabilization, and shoulder grading within areas that are already compacted or unvegetated. During coordination with the California, Department of Fish and Wildlife from August to November 2025, the agency indicated that a no disturbance buffer for western burrowing owls should be applied to all construction activities and if avoidance would not be possible a 2081 incidental take permit may be required.

- Worker Environmental Awareness Training: Before the start of construction, all personnel involved in ground-disturbing activities will attend a Worker Environmental Awareness Training course led by a qualified biologist. The training course will cover the identification, habitat requirements, and legal protections of western burrowing owls and other sensitive wildlife. Workers will be instructed on avoidance procedures, restricted activity zones, and notification protocols if wildlife is encountered during construction.

- Preconstruction Surveys: A qualified biologist will conduct preconstruction western burrowing owl surveys within the Project Impact Area and a minimum 50-foot buffer no more than 14 days before the start of ground-disturbing activities. The surveys will identify any occupied burrows or new signs of owl activity, such as whitewash, pellets, or tracks. If active burrows are detected, the California Department of Fish and Wildlife will be notified, and appropriate no-disturbance buffers will be established.

- Avoidance Buffers: If occupied burrows are present, a no-disturbance buffers of at least 500 feet during the breeding season (February 1 to August 31) and 150 feet during the non-breeding season will be implemented around each active burrow. The buffer distance may be adjusted in consultation with the California Department of Fish and Wildlife based on site conditions, project activities, and observed owl behavior. Buffers will be clearly marked with temporary fencing or flagging to prevent accidental intrusion.

- Monitoring During Construction: If western burrowing owls are present or found within the biological study area, or if construction occurs next to established no-disturbance buffers, a qualified biological monitor will be on-site during all initial ground-disturbing activities. The monitor will ensure full compliance with avoidance and minimization measures and will have

the authority to stop or modify work if owls exhibit signs of stress, agitation, or displacement. Biological monitoring will continue as needed until construction has progressed beyond all areas of occupancy or the risk of disturbance has been eliminated.

- Dust, Noise, and Lighting Control: Construction activities will follow project-specific best management practices to reduce dust, noise, and glare. Equipment will be maintained in good condition with functional mufflers, and night work will use downward-shielded lighting to minimize disturbance. These measures will reduce temporary sensory disturbance to owls in nearby habitats.

- Postconstruction Site Stabilization: Following construction, all temporarily disturbed areas will be restored to preconstruction contours and stabilized with a Caltrans-approved erosion-control seed mix. Restoration will promote reestablishment of open, low-stature vegetation preferred by western burrowing owls for foraging and transient use.

Blunt-Nosed Leopard Lizard

These measures are intended to prevent take of individual lizards, avoid disturbance to potential habitat, and ensure that construction remains confined to the previously disturbed Caltrans right-of-way.

- Preconstruction Surveys: A qualified biologist will conduct preconstruction blunt-nosed leopard lizard surveys within all work areas and a 50-foot buffer no more than 30 days before the start of ground-disturbing activities. Surveys will confirm the absence of blunt-nosed leopard lizard individuals and identify any potential burrows or microhabitats suitable for occupancy.

- Worker Environmental Awareness Training: All construction personnel will attend a Caltrans-approved environmental awareness training course before working on-site. The training course will include identification of the blunt-nosed leopard lizard, its habitat requirements, legal protections under federal and state law, and required response procedures if an individual is observed during construction.

- Work Area Delineation: All project limits will be clearly delineated with temporary fencing or flagging before construction to ensure that equipment and personnel remain within approved boundaries.

- Exclusion of Potential Habitat Disturbance: Construction staging, access, and equipment storage will be restricted to existing disturbed surfaces (e.g., paved or compacted shoulders) to avoid encroachment into nearby alkali scrub or grassland habitat.

- Preconstruction Clearance and Stop-Work Procedure: Before the start of initial ground disturbance, a qualified biologist will conduct a final

preconstruction clearance inspection to confirm that no wildlife, burrows, or other sensitive resources are present within the work area. If any wildlife is observed, it will be allowed to leave the area voluntarily.

  - During construction, if a blunt-nosed leopard lizard is observed on-site, all work will immediately stop within 50 feet of the observation, and Caltrans will coordinate with the U.S. Fish and Wildlife Service and the California Department of Fish and Wildlife to determine appropriate next steps before work resumes.
  - This measure ensures compliance with federal and state wildlife protection laws while avoiding the need for continuous biological monitoring, which is not required given the absence of detections and low habitat suitability within the Caltrans right-of-way.

- Lighting and Speed Controls: Temporary construction lighting will be directed downward, fully shielded, and limited to the minimum intensity necessary for worker safety to avoid illuminating nearby habitat. Vehicle speeds within active work zones will be limited to 10 miles per hour to reduce collision risk.

- Soil Stabilization and Restoration: Upon completion of work, all temporarily disturbed areas will be recontoured and stabilized to match preproject conditions. Hydroseeding with a Caltrans-approved native or sterile cover mix will be used to prevent erosion and promote vegetation recovery.

California Jewelflower

- Preconstruction Botanical Verification: Before the start of ground-disturbing activities, a qualified biologist will perform a preconstruction botanical survey of all work areas to confirm the continued absence of special-status plant species. The verification will occur during the typical blooming period (spring/early summer). Results will be documented in the project record.

- Worker Environmental Awareness Training: All construction personnel will receive a biologist-led environmental training before beginning work. The training will emphasize recognition of sensitive resources with the potential to be on-site, work-limit boundaries, and environmental compliance obligations. The training will also include instruction on procedures to follow if an unanticipated biological resource is discovered.

- Work Area Delineation and Access Controls: The project biologist will verify that all construction limits are clearly delineated in the field prior to mobilization using flagging, staking, or temporary fencing. All construction activities, vehicle movement, and equipment staging will remain strictly within approved disturbance limits. No personnel or equipment will be allowed to enter areas outside the designated work boundaries.

- Erosion and Sediment Control: Temporary erosion-control measures and Best Management Practices such as silt fencing, fiber rolls, and straw wattles will be installed where appropriate to prevent sediment transport and protect nearby vegetation. All disturbed soils will be stabilized at the conclusion of work through hydroseeding or erosion-control seeding using sterile or native seed mixes consistent with Caltrans specifications.

- Vegetation Restoration: Areas subject to temporary vegetation disturbance will be recontoured, stabilized, and hydroseeded following construction to promote soil stabilization and natural revegetation. Seeding and erosion-control specifications will be developed in coordination with a District 6 Landscape Architect and environmental staff.

- Construction Compliance Monitoring: A qualified biologist will periodically monitor construction activities to ensure compliance with environmental commitments and delineation boundaries. The project biologist will coordinate with the resident engineer to address any noncompliance or unanticipated environmental issues.

- Environmental Commitment Tracking: All environmental commitments, including the above avoidance and minimization measures, will be tracked and documented through the System for Tracking Environmental Evaluations (STEVE) for compliance verification. Compliance verification will occur at project milestones and at construction closeout to ensure full implementation of avoidance and minimization measures.

Chapter 3 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 notices, and Native American coordination. This chapter summarizes the results of Caltrans' efforts to identify, address, and resolve project-related issues through early and continuing coordination.

3.1.1 Biological Resources

November 7, 2025—Caltrans Senior Environmental Scientist Dena Gonzalez initiated a phone conversation with Margarita Gordus of the California Department of Fish and Wildlife's Habitat Conservation Program to discuss western burrowing owl avoidance buffers and seasonal restrictions. Ms. Gordus confirmed that the California Department of Fish and Wildlife would require a 1,640-foot avoidance buffer for occupied western burrowing owls. Furthermore, Ms. Gordus would follow up and verify the appropriate seasonal avoidance distances.

October 2025—Email correspondence with Quad Knopf, Inc., regarding site-specific trapping authorization and completion of small-mammal trapping surveys for EA 06-1E950.

September 15, 2025—Caltrans sent a follow-up email regarding the California Department of Fish and Wildlife's previous correspondence (initial letters, submittal of a Keyhole Markup Language map, and site table) received between August 27, 2025, and September 11, 2025.

September 11, 2025—The California Department of Fish and Wildlife initiated a focus meeting between Caltrans District 6 and the Region 4 coordinator to discuss and resolve conditions of an Incidental Take Permit.

August 27, 2025—Caltrans District 6 initiated formal coordination with Mary (Mindy) Trask, a biologist with the California Department of Fish and Wildlife, and included a table summarizing field survey findings, jurisdictional determinations, and the status of special-status species surveys completed to date.

3.1.2 Cultural Resources

March 5, 2025—No correspondence or messages from any other tribal representatives have been received.

February 25, 2025—A consultation log detailing all correspondence and consultation efforts was sent to all five tribal representatives by email for comment.

January 31, 2025—A video conference was conducted with Samantha McCarty, David Lanner, and Aubrie Morlet. In summary, the Area of Potential Effects locations were to be reviewed by Samantha for previous identification efforts conducted by the Tribe to determine whether monitoring would be necessary. No response was received from Samantha McCarty after January 31.

January 13, 2025—California Office of Historic Preservation online database search.

January 13, 2025—Samantha McCarty emailed Caltrans requesting a video conference to discuss culvert details and the cultural sensitivity of the project area.

November 27, 2024—A second round of letters was mailed to all five tribal representatives with an Area of Potential Effects map indicating the location of all 49 culverts. The letter was an invitation to consult on the Area of Potential Effects and requested comments concerning tribal knowledge of any cultural or archaeological resources within or next to the Area of Potential Effects.

December 18, 2024—Caltrans provided a Keyhole Markup Language file of culvert locations and a record of a nearby historic-era site.

December 11, 2024—Samantha McCarty, Cultural Specialist 2 of the Santa Rosa Rancheria Tachi-Yokut Tribe, responded by email requesting additional information concerning the locations of culvert work and records of sites in the vicinity of the project.

October 21, 2024—Native American consultation was initiated through letters and emails to tribal representatives. Five tribal representatives, identified through California Native American Heritage Commission correspondence, were used for project outreach.

Appendix A Title VI Policy Statement

CALIFORNIA STATE TRANSPORTATION AGENCY GAVIN NEWSOM, GOVERNOR

California Department of Transportation

OFFICE OF THE DIRECTOR
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September 2025

TITLE VI/NON-DISCRIMINATION POLICY STATEMENT

It is the policy of the California Department of Transportation (Caltrans), in accordance with Title VI of the Civil Rights Act of 1964 and the assurances set forth in the Caltrans' Title VI Program Plan, to ensure that no person in the United States shall on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance. Related non-discrimination authorities, remedies, and state law further those protections, including sex, disability, religion, sexual orientation, age, low income, and Limited English Proficiency (LEP).

Caltrans is committed to complying with 23 C.F.R. Part 200, 49 C.F.R. Part 21, 49 C.F.R. Part 303, and the Federal Transit Administration Circular 4702.1B. 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 (including LEP). In addition, Caltrans will facilitate meaningful participation in the transportation planning process in a non-discriminatory manner.

The overall responsibility for this policy is assigned to the Caltrans Director. The Caltrans Title VI Coordinator is assigned to the Caltrans Office of Civil Rights Deputy Director, who then delegates sufficient responsibility and authority to the Office of Civil Rights' managers, including the Title VI Branch Manager, to effectively implement the Caltrans Title VI Program. Individuals with questions or requiring additional information relating to the policy or the implementation of the Caltrans Title VI Program should contact the Title VI Branch Manager at title.vi@dot.ca.gov or at (916) 639-6392, or visit the following web page: https://dot.ca.gov/programs/civil-rights/title-vi.

Dina El-Tawansy (Sep 12, 2025 16:52:12 PDT)
DINA A. EL-TAWANSY
Director

"Improving lives and communities through transportation."

List of Technical Studies Bound Separately

Air Quality Memorandum: October 2025

Noise Compliance Memorandum: September 2025

Water Compliance Memorandum: February 2025

Energy Analysis Technical Memorandum: October 2025

Natural Environment Study: October 2025

Location Hydraulic Study: May 2023

Historic Property Survey Report: October 2025

Archaeological Survey Report: October 2025

Initial Site Assessment: October 2025

Visual Impact Assessment Memorandum: November 2025

Paleontological Identification Report-Project Approval and Environmental Document Compliance Study: October 2025

Climate Change: January 2024

To obtain a copy of one or more of these technical studies/reports or the Initial Study, please send your request to:

Judith Lopez, Senior Environmental Scientist
District 6 Environmental Division
California Department of Transportation
2015 East Shields Avenue, Suite 100, Fresno, California 93726

Or send your request via email to: judith.lopez@dot.ca.gov
Or call: 559-240-5068

Please provide the following information in your request:

Project title: KIN 41 Drainage Restoration
General location information: On State Routes 33, 41, 43, 198, and 269 in Kings County
District number-county code-route-post mile: 06-KIN-33, 41, 43, 198, and 269-PM various
EA: 06-1E950/Project ID Number 0622000122