

Tulare 198 Culverts Repair and Replacement Project

State Route 198 in Tulare County

06-TUL-198-PM 0.0-44.0

Project Number 0618000045

Initial Study with Proposed Negative Declaration

Volume 1 of 2



Prepared by the
State of California Department of Transportation

October 2021



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 Tulare 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 6 office at 1352 West Olive Avenue, Fresno, California 93728, the Tulare County Library at 200 West Oak Avenue, Visalia, California 93291, the Tulare County Library at 42052 Eggers Drive, Three Rivers, California 93271, and online at <https://dot.ca.gov/caltrans-near-me/district-6>.
- 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: Juergen Vespermann, District 6 Environmental Division, California Department of Transportation, 2015 East Shields Avenue, Suite 100, Fresno, California 93726. Submit comments via email to: juergen.vespermann@dot.ca.gov.
- Submit comments by the deadline: January 22, 2022.

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: Juergen Vespermann, District 6 Environmental Division, 2015 East Shields Avenue, Suite 100, Fresno, California 93726; 559-832-0051 (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.

Repair or replace 140 culverts at various locations on State Route 198 from
post miles 0.0 to 44.0 in Tulare County

**INITIAL STUDY
with Proposed Negative Declaration**

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

THE STATE OF CALIFORNIA
Department of Transportation
and
Responsible Agency: California Transportation Commission



Jennifer H. Taylor
Environmental Office Chief, District 6
California Department of Transportation
CEQA Lead Agency

11/08/2021

Date

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

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0051



DRAFT
Proposed Negative Declaration

Pursuant to: Division 13, Public Resources Code

District-County-Route-Post Mile: 06-TUL-198-PM 0.0-44.0

EA/Project 06-0X260/0618000045

Project Description

The California Department of Transportation (Caltrans) proposes to repair or replace 140 culverts on State Route 198 in Tulare County at various locations from the Kings/Tulare county line to Pumpkin Hollow Bridge on the Kaweah River, about half a mile west of the Sequoia National Park entrance.

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 forest resources, air quality, cultural resources, paleontology, energy, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, noise, population and housing, public services, recreation, transportation, tribal cultural resources, utilities and service systems, and wildfires.

The project would have no significant effect on geology and soils (paleontological resources), greenhouse gas emissions, and biological resources.

Jennifer H. Taylor
Environmental Office Chief, District 6
California Department of Transportation

Date

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Chapter 1 Proposed Project

1.1 Introduction

The California Department of Transportation (Caltrans) proposes to repair or replace 140 culverts on State Route 198 in Tulare County at various locations from the Kings/Tulare county line to Pumpkin Hollow Bridge on the Kaweah River, about half a mile west of the Sequoia National Park entrance.

State Route 198 in Tulare County begins about 3.5 miles west of State Route 99 at the Kings/Tulare county line (Road 44) in a flat agricultural area consisting of row crops, fruit and nut orchards, and dairies. This state route extends eastward from State Route 99 through the City of Visalia for 9 miles through urban flat terrain. To the east and north of Visalia, State Route 198 runs through flat agricultural land within the San Joaquin Valley for about 14 miles; the highway is bordered by nut and fruit tree orchards, including citrus, vineyards, and rangelands. Approximately 1 mile north of Lemon Cove, State Route 198 climbs past Terminus Dam to Lake Kaweah. East of the lake, the state route follows the Kaweah River through the rural community of Three Rivers in mountainous terrain, ending just short of Pumpkin Hollow Bridge.

Currently, the segment of State Route 198 from the Kings/Tulare county line to the east of Road 68 is a four-lane expressway with 10-foot-wide outside shoulders and 5-foot-wide inside shoulders. The segment from east of Road 80 (Plaza Drive) to Outside Creek is a four-lane freeway. The highway segment from Outside Creek to State Route 245 is a four-lane expressway. The highway segment from State Route 245 to the Sequoia National Park boundary is a rural, conventional two-lane highway with 0 to 2-foot-wide outside shoulders.

The preliminary estimated construction cost of the project is \$10,101,000. The project is to be funded from the 2020 State Highway Operation and Protection Program's Drainage System Restoration Program in the 2022/2023 fiscal year.

Construction is scheduled to begin in April 2024 and would take 300 working days to complete. No night work is planned for this project.

1.2 Purpose and Need

1.2.1 Purpose

The purpose of the project is to preserve the operational integrity of the highway system.

1.2.2 Need

Rehabilitation of drainage culverts is essential for this segment of State Route 198 in Tulare County to avoid possible future flooding damage and the resulting pavement failure caused by blocked and defective culverts. Maintaining culverts is necessary for the stability and proper functioning of the roadway.

These culverts have reached or exceeded their design life. They are perforated, heavily rusted, and have damaged end sections and separated joints. Repairing and replacing the culverts is necessary to maintain the highway in good operating condition.

1.3 Project Description

The project would repair or replace 140 culverts on State Route 198 in Tulare County at various locations from the Kings/Tulare county line to Pumpkin Hollow Bridge on the Kaweah River, about half a mile west of the Sequoia National Park entrance. See Figure 1-1 for the project vicinity map and Figure 1-2 for the project location map.

Figure 1-1 Project Vicinity Map

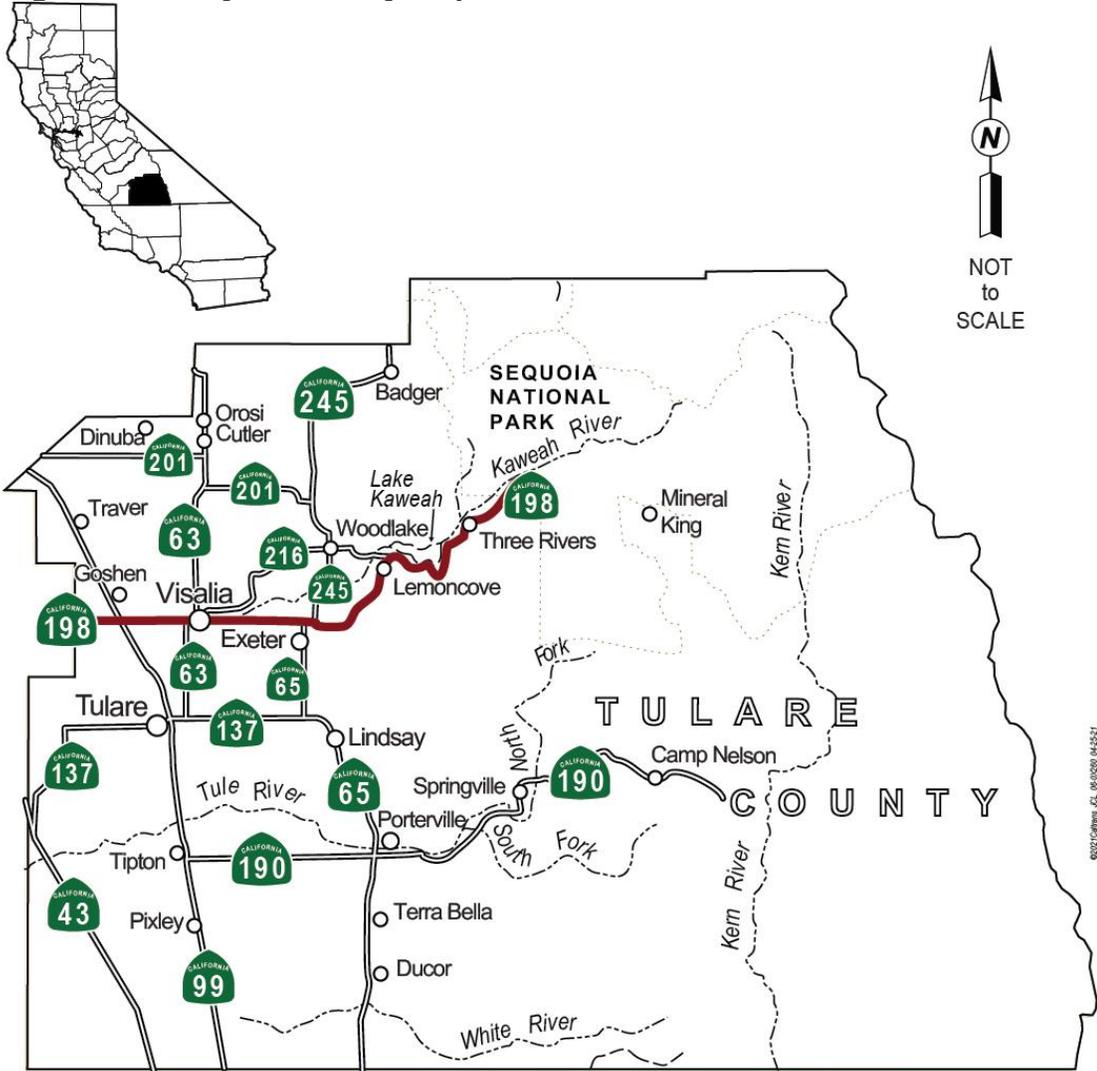
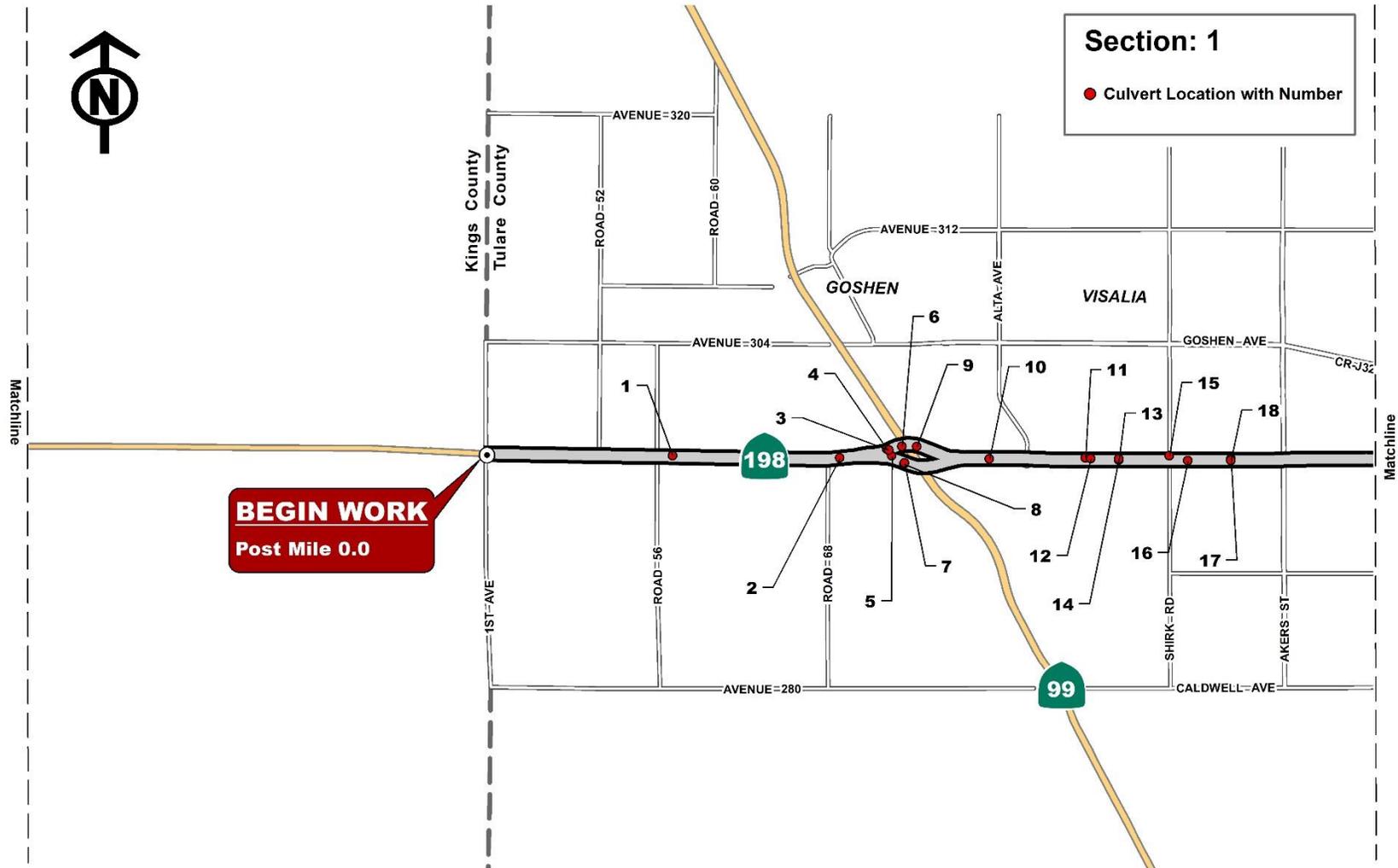
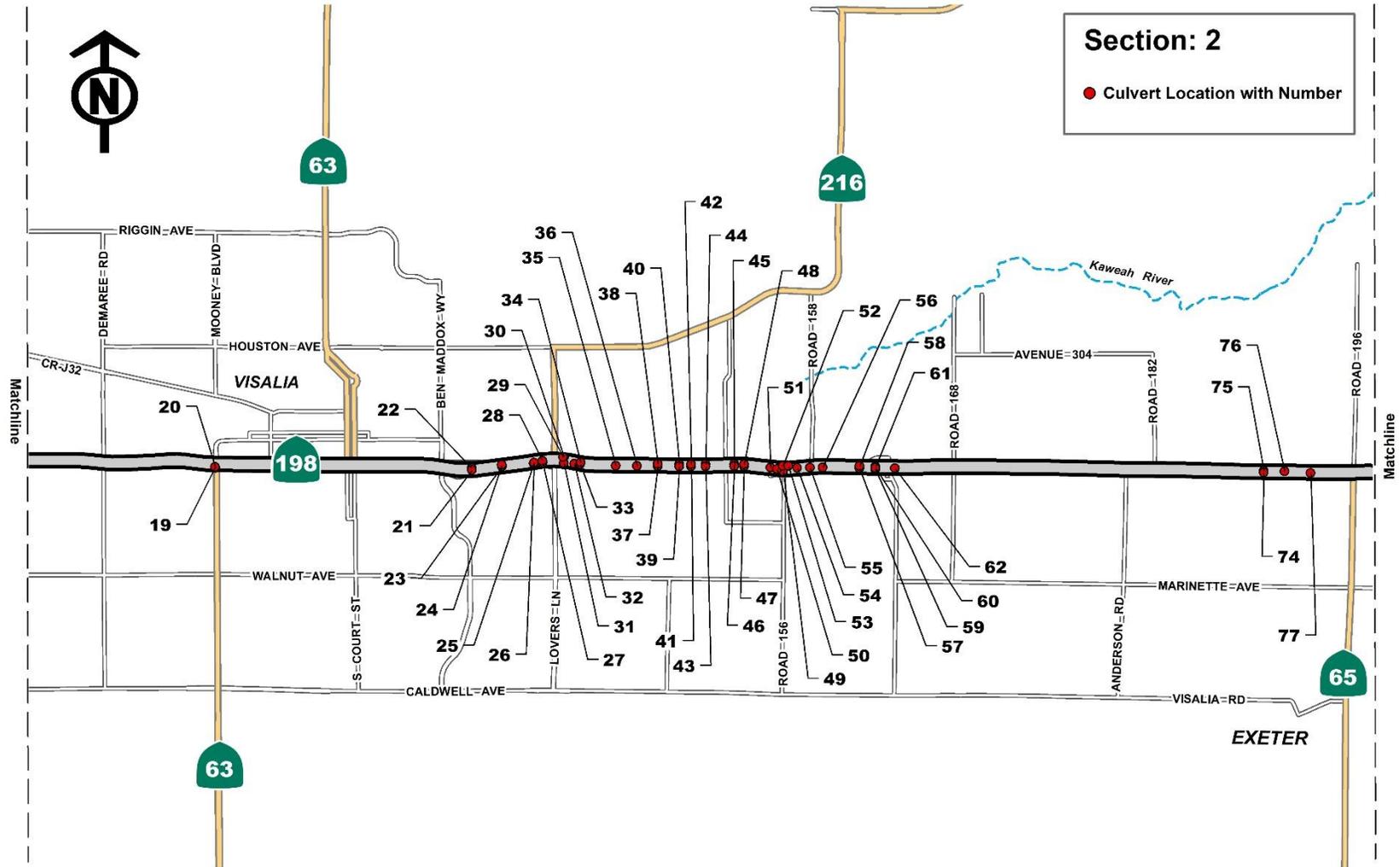
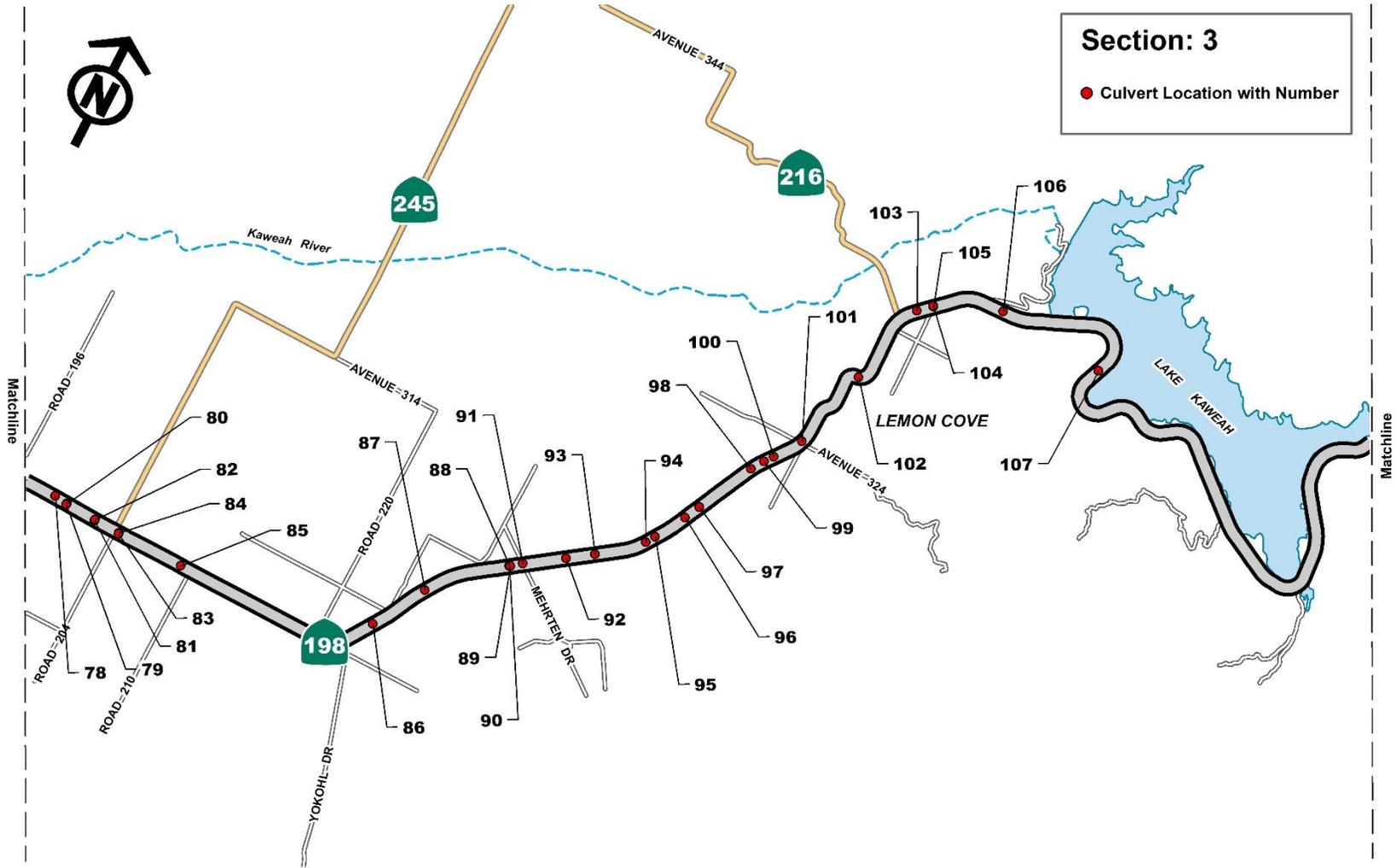
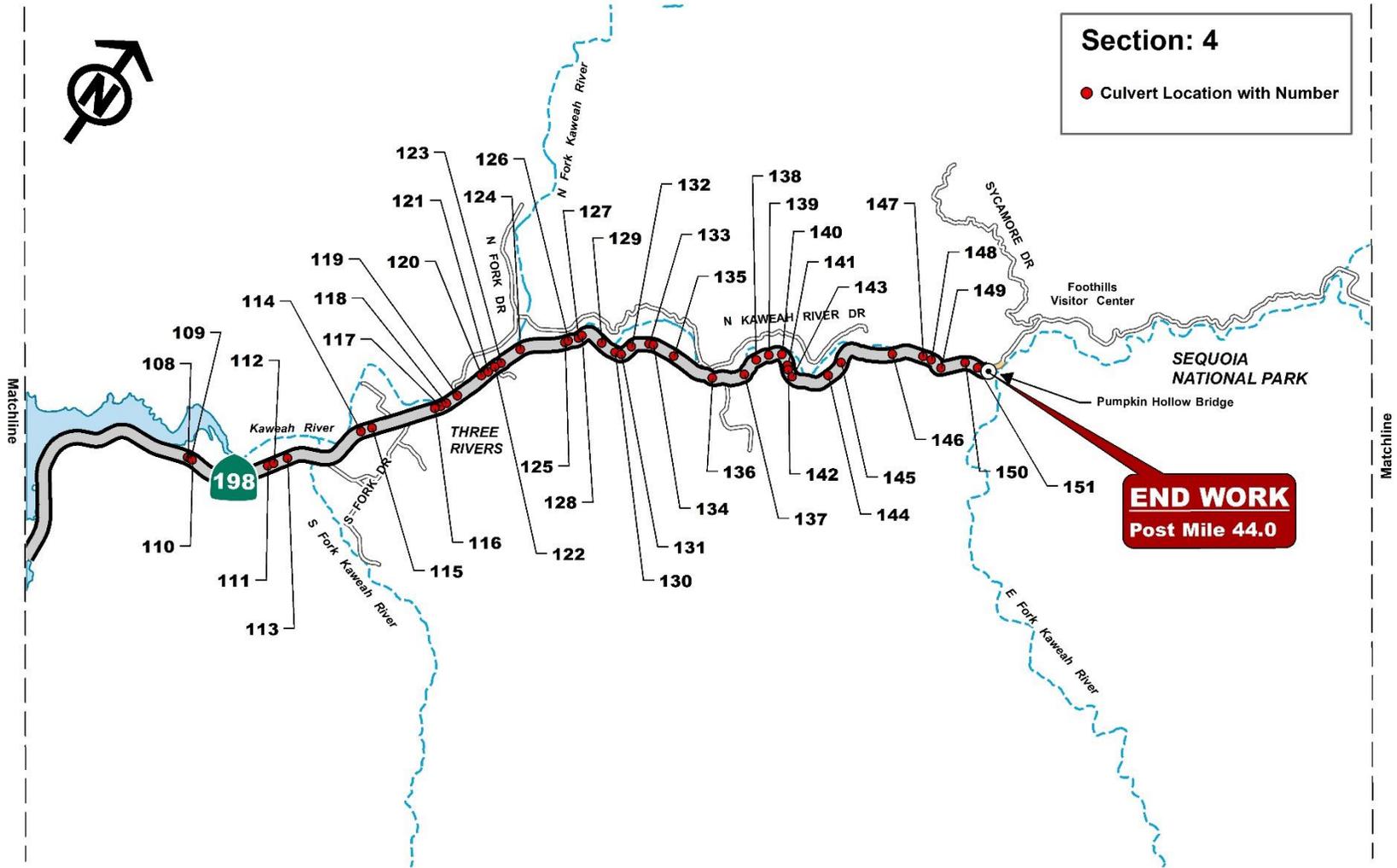


Figure 1-2 Project Location Map









1.4 Project Alternatives

1.4.1 Build Alternative

The build alternative would restore the existing drainage system to good condition by repairing and/or replacing the identified deteriorating culverts within the project limits.

Most of the existing culverts are corrugated steel pipe (also known by the abbreviation CSP). A few culverts are high-density polyethylene (abbreviated HDPE) or concrete.

An estimated 61 culverts would be replaced. All new culverts would be 24 inches in diameter, so smaller diameter culverts would be upgraded. The pipe materials would likely be reinforced concrete pipe at most locations; plastic culvert pipe may also be used at some locations. The line and grade of the new culvert would match that of the existing culvert unless the culvert needs to be lowered to maintain the minimum cover over the pipe, or if a change in the profile or alignment of the culvert is needed in order to install it properly. Existing inlets and headwalls would be replaced as well.

Two construction methods are proposed for installing the new culverts. At 14 locations that are in freeway/expressway segments with high traffic volumes, trenchless excavation construction methods (jack and bore method) are proposed to minimize disruptions to existing traffic and to avoid needing to trench through concrete pavement. For new culverts located on the two-lane conventional highway, open trench construction methods are proposed.

Most of the repair work would involve installing culvert barrel linings using the cured-in-place pipe method at 74 locations. Grading around the inlet and outlet of the existing culvert would be minimal. Repairs at three culverts would include joint sealing and repair. A segment of a pipe would be replaced on one culvert, and stabilization of an embankment would be the only work at one location.

The existing slopes at the culvert outlet would be restored by stabilizing the slope with rock slope protection and erosion control; embankment stabilization would also be done at one culvert replacement location.

At the time environmental studies began, 151 culverts were planned for repair or replacement. Since that time, 11 locations (Locations 63 to 73) were eliminated from the scope of work because a prior construction project addressed the culverts at those locations.

Table 1.1 lists each culvert location, the material of the existing pipe, and the diameter, length, and proposed improvements to repair or replace each

culvert. In the table, the following abbreviations or terms are used: CSP—corrugated steel pipe; CSP arch—corrugated steel pipe that is bent to be flatter on the bottom; HDPE—high-density polyethylene; Dual—a set of two pipes of the same diameter lie abutting each other; APC—alternative pipe culvert—the contractor chooses the type of pipe from a list in the specifications.

Table 1.1 Culvert Improvements on State Route 198

Location	Post Mile	Culvert Material	Existing Diameter (Inches)	Existing Length (Feet)	Proposed Improvement
1	1.64	HDPE	24	83	Joint sealing/repair
2	3.11	CSP	18	64	Culvert barrel lining
3	3.54	CSP	24	103	Culvert barrel lining
4	3.54	CSP	24	107	Culvert barrel lining
5	3.54	CSP	24	246	Culvert barrel lining
6	3.63	CSP	24	90	Culvert barrel lining
7	3.73	CSP	24	89	Install flared end section on pipe
8	3.73	CSP	24	191	Culvert barrel lining
9	3.83	CSP	12	40	Culvert barrel lining
10	4.45	CSP	Dual 18	69	Culvert barrel lining
11	5.28	CSP	24	37	Culvert barrel lining
12	5.34	CSP	Dual 18	64	Culvert barrel lining
13	5.59	CSP	18	55	Culvert barrel lining
14	5.59	CSP	18	53	Culvert barrel lining
15	5.80	CSP	18	54	Culvert barrel lining
16	5.80	CSP	18	86	Embankment stabilization
17	6.31	CSP/HDPE	18	78	Replace with 24-inch-diameter reinforced concrete pipe using the jack and bore method
18	6.31	CSP	18	78	Culvert barrel lining
19	8.15	Concrete	15	23	Joint sealing/repair
20	8.15	Concrete	18	48	Joint sealing/repair

Location	Post Mile	Culvert Material	Existing Diameter (Inches)	Existing Length (Feet)	Proposed Improvement
21	11.01	CSP	24	84	Replace with 24-inch-diameter reinforced concrete pipe using the jack and bore method
22	11.01	CSP	24	94	Replace with 24-inch-diameter reinforced concrete pipe using the jack and bore method
23	11.28	CSP	24	68	Culvert barrel lining
24	11.28	CSP	24	64	Culvert barrel lining
25	11.56	CSP	18	47	Replace with 24-inch-diameter reinforced concrete pipe using the jack and bore method
26	11.56	CSP	18	56	Culvert barrel lining
27	11.64	CSP	18	50	Culvert barrel lining
28	11.64	CSP	18	50	Culvert barrel lining
29	11.79	CSP	18	46	Culvert barrel lining
30	11.79	CSP	18	46	Culvert barrel lining
31	11.81	CSP	18	62	Culvert barrel lining
32	11.91	CSP	18	48	Culvert barrel lining
33	11.96	CSP	24	83	Culvert barrel lining
34	11.96	CSP	24	63	Culvert barrel lining
35	12.28	CSP	24	93	Culvert barrel lining
36	12.47	CSP	24	96	Replace with 24-inch-diameter reinforced concrete pipe using the jack and bore method
37	12.65	CSP	24	97	Culvert barrel lining
38	12.65	CSP arch	24 by 18	98	Culvert barrel lining
39	12.84	CSP	24	96	Replace with 24-inch-diameter reinforced concrete pipe using the jack and bore method
40	12.84	CSP arch	24 by 18	98	Culvert barrel lining

Location	Post Mile	Culvert Material	Existing Diameter (Inches)	Existing Length (Feet)	Proposed Improvement
41	12.94	CSP	24	96	Replace with 24-inch-diameter reinforced concrete pipe using the jack and bore method
42	12.94	CSP	24	94	Replace with 24-inch-diameter reinforced concrete pipe using the jack and bore method
43	13.06	CSP	24	To be determined	Culvert barrel lining
44	13.06	CSP	18	To be determined	Culvert barrel lining
45	13.31	CSP	24	98	Culvert barrel lining
46	13.31	CSP arch	24 by 18	100	Culvert barrel lining
47	13.40	CSP	24	116	Culvert barrel lining
48	13.40	CSP	24	107	Culvert barrel lining
49	13.67	CSP	18	58	Culvert barrel lining
50	13.67	CSP	18	25	Culvert barrel lining
51	13.67	CSP	18	44	Culvert barrel lining
52	13.67	CSP	24	117	Replace with 24-inch-diameter reinforced concrete pipe using the jack and bore method
53	13.67	CSP	18	46	Culvert barrel lining
54	13.67	CSP	18	63	Culvert barrel lining
55	13.67	CSP	18	45	Culvert barrel lining
56	14.09	CSP	24	96	Replace with 24-inch-diameter reinforced concrete pipe using the jack and bore method
57	14.42	CSP	24	100	Replace with 24-inch-diameter reinforced concrete pipe using the jack and bore method
58	14.42	CSP	18	108	Replace with 24-inch-diameter reinforced concrete pipe using the jack and bore method

Location	Post Mile	Culvert Material	Existing Diameter (Inches)	Existing Length (Feet)	Proposed Improvement
59	14.64	CSP	24	62	Replace with 24-inch-diameter reinforced concrete pipe using the jack and bore method
60	14.64	CSP	24	50	Culvert barrel lining
61	14.64	CSP arch	24 by 18	82	Culvert barrel lining
62	14.72	CSP	18	63	Replace with 24-inch-diameter reinforced concrete pipe using the jack and bore method
74	17.98	CSP	24	86	Culvert barrel lining
75	17.98	CSP	24	87	Culvert barrel lining
76	18.14	CSP	24	66	Replace with 24-inch-diameter alternative pipe culvert
77	18.37	CSP	24	64	Replace with 24-inch-diameter alternative pipe culvert
78	19.18	CSP	18	46	Culvert barrel lining
79	19.30	CSP	24	60	Replace with 24-inch-diameter alternative pipe culvert
80	19.30	CSP	24	66	Replace with 24-inch-diameter alternative pipe culvert
81	19.58	CSP	24	52	Culvert barrel lining
82	19.58	CSP	24	48	Culvert barrel lining
83	19.81	CSP	24	61	Culvert barrel lining
84	19.81	CSP	24	63	Culvert barrel lining
85	20.43	CSP arch	24 by 12	60	Culvert barrel lining
86	22.32	CSP	24	60	Culvert barrel lining
87	22.86	CSP	18	63	Culvert barrel lining
88	23.64	CSP	24	74	Replace with 24-inch-diameter alternative pipe culvert

Location	Post Mile	Culvert Material	Existing Diameter (Inches)	Existing Length (Feet)	Proposed Improvement
89	23.64	CSP	24	65	Replace with 24-inch-diameter alternative pipe culvert
90	23.64	CSP	Dual 36	61	Culvert barrel lining
91	23.76	CSP	24	132	Culvert barrel lining
92	24.15	CSP	24	61	Replace with 24-inch-diameter alternative pipe culvert
93	24.40	CSP	24	69	Culvert barrel lining
94	24.87	CSP	24	68	Culvert barrel lining
95	24.96	CSP	24	68	Culvert barrel lining
96	25.24	CSP	24	73	Culvert barrel lining
97	25.39	CSP	24	101	Culvert barrel lining
98	25.98	CSP	24	81	Replace with 24-inch-diameter alternative pipe culvert
99	26.11	CSP	24	63	Culvert barrel lining
100	26.20	Concrete/CSP	12/18	58	Replace with 24-inch-diameter alternative pipe culvert
101	26.49	CSP	Dual 24	89	Replace one pipe with a 24-inch-diameter alternative pipe culvert
102	27.29	CSP	24	98	Replace with 24-inch-diameter alternative pipe culvert
103	28.12	CSP	24	135	Replace with 24-inch-diameter alternative pipe culvert
104	28.28	CSP	18	20	Replace with 24-inch-diameter alternative pipe culvert
105	28.28	CSP	18	74	Replace with 24-inch-diameter alternative pipe culvert
106	28.91	CSP	36	278	Culvert barrel lining
107	30.29	CSP	48	169	Culvert barrel lining

Location	Post Mile	Culvert Material	Existing Diameter (Inches)	Existing Length (Feet)	Proposed Improvement
108	35.86	CSP	24	64	Replace with 24-inch-diameter alternative pipe culvert
109	35.89	CSP	18	67	Replace with 24-inch-diameter alternative pipe culvert
110	35.89	Concrete	18	45	Replace with 24-inch-diameter alternative pipe culvert
111	36.66	CSP	18	52	Replace with 24-inch-diameter alternative pipe culvert
112	36.72	CSP	24	54	Culvert barrel lining
113	36.84	CSP	18	57	Replace with 24-inch-diameter alternative pipe culvert
114	37.59	CSP	24	63	Culvert barrel lining
115	37.69	CSP	18	64	Replace with 24-inch-diameter alternative pipe culvert
116	38.27	CSP	18	67	Culvert barrel lining
117	38.33	CSP	18	75	Replace with 24-inch-diameter alternative pipe culvert
118	38.39	CSP	18	61	Replace with 24-inch-diameter alternative pipe culvert
119	38.50	CSP	12	37	Replace with 24-inch-diameter alternative pipe culvert
120	38.28	CSP	18	185	Replace with 24-inch-diameter reinforced concrete pipe, using the jack and bore method.
121	38.82	CSP	18	42	Replace with 24-inch-diameter alternative pipe culvert
122	38.91	CSP	24	59	Replace with 24-inch-diameter alternative pipe culvert

Location	Post Mile	Culvert Material	Existing Diameter (Inches)	Existing Length (Feet)	Proposed Improvement
123	38.99	CSP	12	45	Culvert barrel lining
124	39.20	CSP	12	40	Culvert barrel lining
125	39.60	CSP	18	33	Replace with 24-inch-diameter alternative pipe culvert
126	39.63	CSP	18	44	Replace with 24-inch-diameter alternative pipe culvert
127	39.73	CSP	18	43	Replace with 24-inch-diameter alternative pipe culvert
128	39.77	CSP	18	38	Replace with 24-inch-diameter alternative pipe culvert
129	39.97	CSP	18	38	Culvert barrel lining
130	40.09	CSP	18	39	Replace with 24-inch-diameter alternative pipe culvert
131	40.14	CSP	24	45	Replace with 24-inch-diameter alternative pipe culvert
132	40.20	CSP	12	To be determined	Replace with 24-inch-diameter alternative pipe culvert
133	40.41	CSP	18	41	Replace with 24-inch-diameter alternative pipe culvert
134	40.45	CSP	18	57	Replace with 24-inch-diameter alternative pipe culvert
135	40.65	CSP	18	To be determined	Replace with 24-inch-diameter alternative pipe culvert
136	41.12	CSP	18	74	Culvert barrel lining
137	41.35	CSP	12	48	Culvert barrel lining
138	41.50	CSP	18	42	Replace with 24-inch-diameter alternative pipe culvert
139	41.62	CSP	18	60	Culvert barrel lining

Location	Post Mile	Culvert Material	Existing Diameter (Inches)	Existing Length (Feet)	Proposed Improvement
140	41.74	CSP	24	55	Replace with 24-inch-diameter alternative pipe culvert
141	41.85	CSP	12	42	Replace with 24-inch-diameter alternative pipe culvert and stabilize embankment
142	41.97	CSP	18	38	Replace with 24-inch-diameter alternative pipe culvert
143	41.97	CSP	12	38	Replace with 24-inch-diameter alternative pipe culvert
144	42.38	CSP	18	106	Replace with 24-inch-diameter alternative pipe culvert
145	42.54	CSP	12	57	Replace with 24-inch-diameter alternative pipe culvert
146	43.11	CSP	24	46	Replace with 24-inch-diameter alternative pipe culvert
147	43.49	CSP	18	36	Replace with 24-inch-diameter alternative pipe culvert
148	43.47	CSP	18	41	Culvert barrel lining
149	43.59	CSP	18	40	Culvert barrel lining
150	43.80	CSP	12	46	Replace with 24-inch-diameter alternative pipe culvert
151	43.88	CSP	18	38	Replace with 24-inch-diameter alternative pipe culvert

Note: Locations 63 through 73 were eliminated from the scope of work because a prior construction project addressed the culverts at those locations.

Temporary construction easements would be needed from approximately 38 parcels because Caltrans' right-of-way is very narrow along some parts of the rural highway near Lemon Cove and in the vicinity of Three Rivers. Table 1.2 shows the location and post mile, Assessor's Parcel Number, and area of temporary construction easements in fractions of an acre.

No right-of-way acquisition would be needed. However, approximately 18 permanent drainage easements would need to be acquired from adjoining landowners where existing culverts extend beyond Caltrans' narrow right-of-way. Table 1.3 shows the location, Assessor's Parcel Number (APN), and the area of permanent drainage easements in fractions of an acre. Because construction work would take place in these permanent easements, the locations are also listed in Table 1.2 as requiring temporary construction easements.

Table 1.2 Temporary Construction Easements Needed

Location	Post Mile	Assessor's Parcel Number (APN)	Temporary Construction Easement Area (Acre)
44	13.06	(APN) 103-510-006	0.022
93	24.40	(APN) 115-050-070	0.005
94	24.87	(APN) 113-370-026	0.005
95	24.96	(APN) 113-370-025	0.005
96	25.24	(APN) 113-370-020	0.005
96	25.24	(APN) 113-370-010	0.005
97	25.39	(APN) 113-360-001	0.005
97	25.39	(APN) 113-360-007	0.005
98	25.98	(APN) 113-250-076	0.005
102	27.29	(APN) 113-130-001	0.007
102	27.29	(APN) 113-130-001	0.007
103	28.12	(APN) 113-160-012-	0.035
111	36.66	(APN) 066-100-010	0.002
112	36.72	(APN) 068-130-041	0.002
118	38.39	(APN) 068-030-011	0.007
120	38.78	(APN) 068-320-043	0.070
120	38.78	(APN) 068-320-044	0.090
122	38.91	(APN) 068-320-018	0.005
122	38.91	(APN) 067-190-008	0.005
123	38.99	(APN) 067-190-008	0.007
126	39.63	(APN) 067-140-011	0.005
130	40.09	(APN) 069-160-001	0.005
131	40.14	(APN) 069-160-001	0.005
134	40.45	(APN) 069-200-046	0.007
136	41.12	(APN) 069-190-035	0.014
136	41.12	(APN) 069-190-033	0.005
137	41.35	(APN) 069-450-011	0.007
139	41.62	(APN) 069-450-011	0.009
140	41.74	(APN) 069-350-025	0.011
141	41.85	(APN) 069-350-028	0.003
141	41.85	(APN) 069-350-021	0.005
142	41.89	(APN) 069-420-003	0.005
144	42.38	(APN) 069-040-03	0.035
144	42.38	(APN) 069-040-012	0.005
145	42.54	(APN) 069-050-038	0.002
145	42.54	(APN) 069-050-039	0.002
146	43.11	(APN) 069-300-014	0.007
148	43.47	(APN) 069-300-020	0.006
149	43.59	(APN) 069-060-040	0.004

Table 1.3 Permanent Drainage Easements Needed

Location	Post Mile	Assessor's Parcel Number (APN)	Permanent Drainage Easement Area (Acre)
103	28.12	(APN) 113-160-007	0.035
118	38.39	(APN) 068-030-011	0.007
120	38.78	(APN) 068-320-043	0.070
120	38.78	(APN) 068-320-044	0.090
122	38.91	(APN) 068-320-018	0.005
123	38.99	(APN) 067-190-008	0.007
126	39.63	(APN) 067-140-011	0.005
134	40.45	(APN) 069-200-046	0.007
136	41.12	(APN) 069-190-035	0.014
137	41.35	(APN) 069-450-011	0.007
139	41.62	(APN) 069-450-011	0.009
140	41.74	(APN) 069-350-025	0.011
141	41.85	(APN) 069-350-028	0.003
141	41.85	(APN) 069-350-021	0.005
142	41.89	(APN) 069-420-003	0.005
144	42.38	(APN) 069-040-034	0.035
145	42.54	(APN) 069-050-038	0.002
145	42.54	(APN) 069-050-039	0.002

During construction along the two-lane conventional highway segment of State Route 198, one-way traffic control would be implemented during working hours. Within the freeway and expressway segments, shoulder closures are anticipated next to the construction areas.

The preliminary estimated construction cost of the project is \$10,101,000. The project would be funded from the 2020 State Highway Operation and Protection Program's Drainage System Restoration Program in the 2022/2023 fiscal year.

This project contains a number of standardized project measures that are used on most, if not all, Caltrans projects and were not developed in response to any specific environmental impact resulting from the proposed project. These measures are listed later in this chapter under "Standard Measures and Best Management Practices Included in Build Alternative."

1.4.2 No-Build (No-Action) Alternative

The No-Build Alternative would mean that the culverts identified for repair or replacement by this project would continue to deteriorate, causing potential flood damage and pavement failure. The No-Build Alternative would not meet the purpose and need for the project.

1.5 Standard Measures and Best Management Practices Included in Build Alternative

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

- 7-1.02K(6)(j)(iii) Earth Material Containing Lead
- 13-2 Water Pollution Control Program
- 13-4 Job Site Management
- 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.
- 14-6.03 Species Protection: Pertains to protecting regulated species and their habitat that occur within or near the job site. Upon discovery of a regulated species, notify the resident engineer.
- 14-6.03B Bird Protection: Pertains to protecting migratory and nongame birds, their occupied nests, and their eggs. Upon discovery of an injured or dead bird or migratory or nongame bird nests that may be adversely affected by construction activities, immediately stop all work and notify the resident engineer. Exclusion devices, nesting-prevention measures, and removing constructed and unoccupied nests may be used.
- 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.
- 14-9.02 Air Pollution Control: Comply with air pollution control rules, regulations, ordinances, and statutes that apply to work performed under the construction contract.
- 14-11 Hazardous Waste and Contamination: Includes specifications relating to hazardous waste and contamination.
- 14-11.04 Dust Control: Excavation, transportation, and handling of material containing hazardous waste or contamination must result in no visible dust migration. When clearing, grubbing, and performing earthwork operations in areas containing hazardous waste or contamination, provide a water truck or tank on the job site.
- 14-11.12 (also 36-4 and/or 84-9.03B) Removal of Yellow Traffic Stripe and Pavement Marking with Hazardous Waste Residue: Includes specifications for removing, handling, and disposing of yellow thermoplastic and yellow-painted traffic stripe and pavement marking. The residue from the removal of this material is a generated hazardous waste (lead chromate). Removal of existing yellow thermoplastic and yellow-

painted traffic stripe and pavement marking exposes workers to health hazards that must be addressed in a Lead Compliance Plan.

- 14-11.13C Safety and Health Protection Measures: Applies to worker protective measures for potential lead exposure.

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 will be 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	1602 Lake and Streambed Alteration Agreement	Will be applied for during the design phase of the project.
U.S. Army Corps of Engineers	Section 404 Nationwide Permit	Will be applied for during the design phase of the project.
Central Valley Regional Water Quality Control Board	Section 401 Water Quality Certification	Will be applied for during the design phase of the project.

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 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

During the scoping phase of the project, it was determined, based on the type of project, that a Scenic Resources Evaluation did not need to be prepared; therefore, the following 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 Forest Resources

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

Considering that this project would not acquire any new right-of-way, the following determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Agriculture and Forest 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

Question—Would the project:	CEQA Significance Determinations for Agriculture and Forest Resources
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 Memorandum dated September 27, 2021, 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
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 September 29, 2021, 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?	Less Than Significant Impact
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	No Impact
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) For details of biological studies, please refer to the Natural Environment Study in Volume 2 (also available upon request—see the last page of this document).

For a list of Federal Endangered Species Act determinations for the project, see Appendix B.

Special-Status Plant Species

The following special-status plant species were not observed within the action area (the area that would be directly affected by the project, plus adjacent areas that may be indirectly affected) and are not expected to be present: San Joaquin adobe sunburst (*Pseudobahia peirsonii*) (Federal Threatened, State Endangered, and California Native Plant Society List 1B.1) and striped adobe lily (*Fritillaria striata*) (State Threatened, California Native Plant Society List 1B.1), and these California Native Plant Society-listed species: brittlescale (*Atriplex depressa*), calico monkeyflower (*Diplacus pictus*), and heartscale (*Atriplex cordulata* var. *cordulata*).

None of the following species were observed during the several botanical surveys conducted throughout the growing season. However, these species could potentially be present within the action area.

Four California Native Plant Society List 1B.2 plant species—Madera leptosiphon (*Leptosiphon serrulatus*), mouse buckwheat (*Eriogonum nudum* var. *murinum*), recurved larkspur (*Delphinium recurvatum*), and Winter's sunflower (*Helianthus winteri*)—were not observed during botanical surveys; there is a very low potential that they are present in the action area. In addition, Springville clarkia (*Clarkia springvillensis*), another California Native Plant Society List 1B.2 plant species, which is also a California Endangered species, was not seen; there is a very low potential for this species to occur in the action area.

There is a low potential for these species listed on the California Native Plant Society rare and endangered plant inventory to be present within the action area: Kaweah monkeyflower (*Erythranthe norrisii*), Sierra Nevada monkeyflower (*Erythranthe sierrae*), lesser saltscale (*Atriplex minuscula*), Munz's iris (*Iris munzii*), and spiny-sepaled button celery (*Eryngium spinosepalum*).

Although the following three species were not observed during botanical surveys, there is a moderate potential for these plants to grow in the project footprint.

Kaweah brodiaea (Brodiaea insignis)

The Kaweah brodiaea is a State of California Endangered species. The California Native Plant Society's rare and endangered plant inventory ranks this species as a List 1B.2 plant.

This species grows only in the southern Sierra Nevada foothills, especially around the Kaweah and Tule River drainages.

Kings River monkeyflower (Erythranthe acutidens)

The California Native Plant Society's rare and endangered plant inventory ranks the Kings River monkeyflower as a List 3 plant.

This monkeyflower species grows only in the Sierra Nevada foothills. Due to the ephemeral nature of water at most culvert locations, conditions within the action area generally remain drier than the moist sites preferred by this species.

Streambank spring beauty (Claytonia parviflora subsp. grandiflora)

The California Native Plant Society's rare and endangered plant inventory ranks the streambank spring beauty as a List 4.2 plant.

The streambank spring beauty is distributed throughout California's Sierra Nevada foothills.

While foothill woodland and seasonal ephemeral wet drainages and disturbed areas are present throughout the action area, this species was not seen during botanical surveys.

Special-Status Animal Species

The following special-status animal species were not observed within the action area (the area that would be directly affected by the project, plus adjacent areas that may be indirectly affected) and are not expected to be present or to nest within the action area:

Bald eagle (*Haliaeetus leucocephalus*) - (California fully protected species and Forest Service Sensitive Species, also federally protected under the Bald and Golden Eagle Protection Act, the Migratory Bird Treaty Act, and the Lacey Act).

California condor (*Gymnogyps californianus*) – (federally and state listed as endangered and California fully protected species).

San Joaquin kit fox (*Vulpes macrotis mutica*) –(federally endangered and state threatened species).

Crotch's bumblebee (*Bombus crotchii*) – (California state candidate for endangered species).

The American badger (*Taxidea taxus*), Northern California legless lizard (*Anniella pulchra*), Western spadefoot toad (*Spea hammondi*), and the tricolored blackbird (*Agelaius tricolor*) are California Species of Special Concern. The tricolored blackbird is also listed as threatened by the State of California.

Swainson's hawk (*Buteo swainsoni*)

Swainson's hawk is listed as Threatened by the State of California.

Most of the California population of Swainson's hawk is found in the Great Valley. During the summer months, this species eats mostly insects, smaller birds, and small mammals while occasionally taking reptiles, amphibians, and other invertebrates.

Swainson's hawks prefer open habitats for foraging, such as fallow or alfalfa fields and rangeland habitat. Although much of their native grassland habitat has been converted to agricultural land, this species has adapted to the changing environment. These hawks roost in scattered tree stands near suitable foraging areas and are often seen following field tractors that stir up small mammals in the field. Due to habitat conversion and the introduction of non-native grasses, perennial grasslands were replaced with annual grasslands (with low prey populations), as well as with agricultural crops.

Breeding habitat for this species is commonly associated with riparian areas in California, probably because some trees still remain there. Nesting usually begins in late March, and the young usually leave the nest by July. Nests are typically made out of sticks, bark, and fresh leaves and are usually placed near the top of a tree, which may be solitary or in a small grove along a stream. If a preferred nesting site is not available, Swainson's hawks occasionally nest on power poles or transmission towers or even in orchard trees. Nesting Swainson's hawks are somewhat tolerant of human activity. Nest sites are often near roads and houses and frequently near the edge of cultivated fields.

Several recent Swainson's hawk observations were recorded within 1 mile of the action area. Several nests were reported along State Route 198 between the Kings/Tulare County line and the City of Visalia, recorded between 1999 and 2016. Potential nesting trees are present within the Caltrans right-of-way throughout the project limits.

No nesting Swainson's hawks were seen during biological surveys conducted for the project. Protocol-level surveys for this species were not conducted.

It is anticipated that Swainson's hawks are likely to be present and nesting in suitable trees within or next to the action area during the breeding season.

c) Waters and Wetlands

The action area falls within the National Fish and Wildlife Foundation's Kaweah River/Tule River Watershed Service Area. Also, the project is within the Upper Kaweah sub-watershed (Hydrologic Unit Code 8 – 18030007) and the Upper Tule sub-watershed (Hydrologic Unit Code 8 – 18030006).

The project study area includes 28 potentially jurisdictional drainages. Of these jurisdictional channels, 26 are ephemeral in nature, containing water only immediately following a rain event and draining runoff from the adjacent hills. Two drainages (Locations 128 and 138) contain intermittent flows from human-made upstream retention ponds fed by several small ephemeral drainages.

Environmental Consequences

a) Special-Status Plant Species

No direct or indirect impacts to special-status plant species are anticipated from this project. Work would be confined mostly to the paved road surface, compacted shoulder areas, and very small areas around the inlets and outlets of existing culverts. No special-status species are known to be currently occupying areas within or right next to proposed worksites. Preconstruction species surveys, environmentally sensitive area fencing, and biological monitoring, if necessary, would enable the project to avoid and minimize impacts to special-status species.

Special-Status Animal Species

No impacts are expected to these species, their habitat, or nests: bald eagles, California condors, Crotch's bumblebees, American badgers, Northern California legless lizards, western spadefoot toads, pallid bats, Western mastiff bats, San Joaquin kit foxes, and tricolored blackbirds.

No direct impacts to special-status animal species are anticipated from this project. Work would be confined mostly to the paved road surface, compacted shoulder areas, and very small areas around the inlets and outlets of existing culverts. No special-status species are known to be currently occupying areas within or right next to proposed worksites. The most likely impacts would be from construction-related disturbances resulting from noise, vibration, vehicle activity, and the presence of work crews, which could cause animals to be displaced from the work area. Preconstruction species surveys, nest-protection buffers, environmentally sensitive area fencing, and biological monitoring, if necessary, would enable the project to avoid and minimize impacts to special-status species.

Before construction begins, a qualified biologist would conduct a Worker Environmental Awareness Training for all work personnel to inform them of the special-status species potentially within the work area, protective measures, reporting procedures, and consequences of violating environmental laws and permit requirements.

Swainson's hawk (Buteo swainsoni)

No impacts to quality or quantity of available foraging habitat are anticipated to be caused by the project. Given the relatively low intensity of the proposed work, the short duration of work at each culvert site, and the high baseline

level of disturbance, no effects to Swainson's hawks are anticipated with the implementation of avoidance and minimization measures.

c) Waters and Wetlands

No wetlands are present within the project footprint.

While several blue-line drainages are present within the overall vicinity of the project, no impacts to these waterways are proposed or anticipated.

Of the 28 potentially jurisdictional drainages, 16 drainages are proposed for culvert replacement, with the remaining 12 proposed for relining. Work at drainages would be performed during no-flow conditions when possible. Culvert relining and minor repair work would have very minor, temporary impacts to waterways that would not involve fill or result in alterations to flow or carrying capacity. Culvert replacement work would result in impacts to waterways due to soil disturbance and the excavation of the culvert trench. No proposed actions would result in diminished streamflow or altered flow patterns. Streamflow capacity would be increased where culverts are being enlarged from a diameter of 18 inches to 24 inches.

Some locations proposed for work under this project are expected to fall under the jurisdiction of the California Department of Fish and Wildlife, the U.S. Army Corps of Engineers, and the Regional Water Quality Control Board as ephemeral to intermittent natural drainages as Waters of the U.S.

A total of 0.13 acre of temporary impacts to ephemeral drainages is currently estimated.

A U.S. Army Corps of Engineers 404 Nationwide permit would be obtained for the project.

The project would also obtain a 401 Water Quality Certification from the Regional Water Quality Control Board.

The project would obtain a 1602 Lake and Streambed Alteration Agreement because this permit is required for impacts to natural channels, including ephemeral drainages. However, mitigation under a 1602 permit is typically required only for permanent impacts to jurisdictional channels, and no permanent impacts are anticipated at this time.

Avoidance, Minimization, and/or Mitigation Measures

The following avoidance and minimization measures are proposed for plant species:

- Focused botanical preconstruction surveys would be performed the flowering season before work at all worksites where ground disturbance is anticipated and suitable habitat for listed species exists.

- If populations of special-status plants are discovered in proximity to worksites, populations would be delineated and protected by an environmentally sensitive area buffer, clearly designated by high visibility fencing or flagging.
- For any flowering populations discovered within a worksite, immediately before any soil disturbance, the location of each population would be noted on a worksite plan. The plants would then be excavated along with sufficient blocks of the surrounding soil to retain the root structure. The plants and soil would be placed in a safe location near the worksite and kept moist. Upon completion of the work, the plants would be carefully placed within or as close to their original location as possible.
- For worksites where construction begins after the flowering period, if special-status plant populations are discovered in the worksite, the topsoil would be removed and stored safely near the work area and replaced after construction is finished to maintain the existing seed bank and ensure the continued growth of that population.

The following avoidance and minimization measure are proposed for animal species:

- Worker Environmental Awareness Training would be performed by a qualified biologist for all work personnel to inform them of the special-status species potentially within the work area, protective measures, reporting procedures, and consequences of violating environmental laws and permit requirements.

The following avoidance and minimization measures are proposed for Swainson's hawk (*Buteo swainsoni*)

- Protocol-level nesting surveys in accordance with the Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley would be completed the season before construction to determine if any Swainson's hawks are nesting in the project area.
- If nesting pairs are identified within 500 feet of the project footprint, additional avoidance and minimization measures would be implemented to avoid direct impacts. These measures would include, but would not be limited to, Environmental Sensitive Area fencing enclosing the nest tree, a 500-foot buffer surrounding the nest, and a biological monitor would be present during construction activities that occur within this buffer.

Waters

A U.S. Army Corps of Engineers 404 Nationwide permit would be obtained due to an estimated total of 0.13 acre of temporary impacts to ephemeral drainages.

The project would obtain a 401 Water Quality Certification from the Regional Water Quality Control Board.

The project would also obtain a 1602 Lake and Streambed Alteration Agreement because this permit is required for impacts to natural channels, including ephemeral drainages. However, because no permanent impacts to 1602 jurisdictional channels are anticipated, no compensatory mitigation is proposed.

2.1.5 Cultural Resources

Considering the information in the Historic Property Survey Report dated September 9, 2021, 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
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	No Impact
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	No Impact

No cultural resources were identified within the Area of Potential Effects defined for the culvert locations work. Therefore, the Caltrans finding is No Historic Properties Affected.

On December 1, 2020, consultation with tribes was initiated by Caltrans to complete Section 106 and CEQA cultural studies compliance. Ten tribal representatives were contacted; additional information was mailed out on May 25, 2021, and August 30, 2021. Consultation is ongoing to date.

No specific tribal resources have been identified within the Area of Potential Effects for the project.

New archaeological surveys would be required if project plans are changed to include areas that have not been previously surveyed. Expanding the Area of Potential Effects for temporary construction and drainage easements would trigger the requirement for supplemental cultural resources studies if the easements are enlarged in the future.

If cultural materials or remains are encountered during construction, it is Caltrans' policy that work must stop in that area until a qualified archaeologist

can evaluate the nature and significance of the discovery. In addition, Caltrans would contact consulting parties.

2.1.6 Energy

Considering that the project would simply repair or replace existing culverts that are failing, 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 Alquist-Priolo Earthquake Fault Zones Map viewed at <https://maps.conservation.ca.gov/cgs/EQZApp/> and <https://maps.conservation.ca.gov/cgs/informationwarehouse/index.html?map=landslides> on June 18, 2021, the information included in the Water Quality Memorandum dated September 16, 2021, and the Paleontological Identification Report dated September 29, 2021, 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
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: ii) Strong seismic ground shaking?	No Impact

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: iii) Seismic-related ground failure, including liquefaction?	No Impact
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: 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 onsite or offsite 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?	Less Than Significant Impact

Affected Environment

f) Paleontological Resources

From west to east within the Great Valley geomorphic province of the San Joaquin Valley, the geology underlying the project area consists of Holocene fan deposits, Pleistocene nonmarine sediments, and Holocene alluvium. The fan deposits include the Modesto Formation, and the Riverbank Formation is part of the Pleistocene nonmarine sediments.

Within the Sierra Nevada geomorphic province, the geologic materials consist of Mesozoic granitic rocks and Pre-Cretaceous metamorphic rock.

Due to recent discoveries, including at the State Route 99 Plainsburg Road/Arboleda Drive freeway project in Merced County, the paleontological sensitivity of the Modesto Formation and the Riverbank Formation is categorized as high. The high sensitivity of the Modesto Formation and the Riverbank Formation is equivalent to the high potential definition in the tripartite classification scale that Caltrans uses.

High potential includes rock units which, based on previous studies, contain or are likely to contain scientifically significant vertebrates, invertebrates, or plant fossils.

Environmental Consequences

f) Paleontological Resources

High potential paleontological resources of the Modesto Formation and the Riverbank Formation underlie the project area. Based on the ground disturbance activities associated with the project, the resources would be impacted; however, the extent and intensity of the proposed ground disturbance activities are expected to be localized and limited to shallow soils that were previously disturbed when the original culverts were constructed. Because the soil has already been disturbed, it is now classified as fill. As a result, scientifically significant fossils are unlikely to be encountered. Paleontological mitigation is not recommended at this time.

If an unanticipated fossil discovery were to occur during construction, Specification Section 14-7.03 of the Caltrans 2018 Standard Specifications identifies the procedures required to protect the paleontological resource.

Avoidance, Minimization, and/or Mitigation Measures

No mitigation is required.

2.1.8 Greenhouse Gas Emissions

Considering the information in the Climate Change technical report dated September 15, 2021, 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?	Less Than Significant Impact

Affected Environment

a, b) This project would repair or replace 140 culverts at spot locations along the 44-mile length of State Route 198 in Tulare County. The route goes through mostly flat agricultural, grazing, and urban land uses west of Lake Kaweah, then climbs past Terminus Dam to Lake Kaweah and follows the Kaweah River through the rural community of Three Rivers in mountainous terrain, ending just short of Pumpkin Hollow Bridge near the boundary of Sequoia National Park. Within the project limits, the route includes segments of four-lane expressway, four-lane freeway, and rural conventional two-lane highway.

Environmental Consequences

a, b) This project would not add capacity to the highway. There would be no increase in operational emissions because the project would repair or replace existing culverts. With the implementation of construction greenhouse gas reduction measures, impacts would be less than significant.

Construction greenhouse gas emissions for the project were calculated using Caltrans' Construction Emissions Tool (CAL-CET) v1.1. Project construction is expected to generate approximately 688 tons of carbon dioxide (CO₂) during 300 working days.

While some construction greenhouse gas emissions would be unavoidable, implementing standard conditions or Best Management Practices designed to reduce or eliminate emissions as part of the project would reduce impacts to less than significant.

Measures to reduce greenhouse gas emissions include:

- Alternative fuels such as renewable diesel to be used for construction equipment.
- Idling would be limited to 5 minutes for delivery and dump trucks and other diesel-powered equipment.
- Recycled water is to be used where possible to reduce the amount of potable water used by construction activities.
- Improved fuel efficiency by construction equipment would be obtained by maintaining equipment in proper working condition, using the right-sized equipment for the job, and using equipment with new technologies when possible.
- The Caltrans Environmental Construction Liaison is to include in preconstruction training of contractor workers information regarding methods to reduce greenhouse gas emissions related to construction.

Avoidance, Minimization, and/or Mitigation Measures

No mitigation is needed.

2.1.9 Hazards and Hazardous Materials

Considering the information in the Initial Site Assessment dated September 27, 2021, the Noise Compliance Memorandum dated September 21, 2021, and the California Department of Forestry and Fire Protection’s Fire Hazard Severity Zone Maps, 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
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 Quality Memorandum dated September 16, 2021, and the Location Hydraulic Study signed August 4, 2021, 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 onsite or offsite;	No Impact
(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding onsite or offsite;	No Impact
(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
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 that the project would only involve the repair or replacement of existing culverts and that the project improvements would not affect the land

use of properties next to the highway, 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 that the project would not acquire any new right-of-way, 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 Memorandum dated September 21, 2021, 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

Question—Would the project result in:	CEQA Significance Determinations for Noise
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 that the project would not add capacity to the highway or acquire any new right-of-way, the following 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 that the project would not affect any government facilities or trigger the need for new facilities or government services, the following 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 not affect parks or recreational facilities or trigger the need for more recreational facilities to be constructed, the following 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

Considering that this maintenance project would not add capacity to the highway or reconfigure the roadway, the following 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?	No Impact

2.1.18 Tribal Cultural Resources

Considering the information in the Historic Property Survey Report dated September 9, 2021, 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

Considering that the proposed project is a highway maintenance project and would not trigger the need for utilities and service systems, 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?	No Impact
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	No Impact
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
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

2.1.20 Wildfire

Considering the information in the California Department of Forestry and Fire Protection’s Fire Hazard Severity Zone Maps and information in the Climate Change technical report dated September 15, 2021, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Wildfire
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	No Impact

Question—Would the project:	CEQA Significance Determinations for Wildfire
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	No Impact
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

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?	No 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

Appendix A Title VI Policy Statement

DEPARTMENT OF TRANSPORTATION

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Making Conservation
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August 2020

NON-DISCRIMINATION POLICY STATEMENT

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

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

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

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

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

Original signed by
Toks Omishakin
Director

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

Appendix B Federal Endangered Species Act Determinations

Species	Scientific Name	Status	Federal Endangered Species Act Determination
Fisher	<i>Pekania pennanti</i>	Federal Endangered	No effect
Fresno kangaroo rat	<i>Dipodomys nitratooides exilis</i>	Federal Endangered	No effect
San Joaquin kit fox	<i>Vulpes macrotis mutica</i>	Federal Endangered	No effect
Tipton kangaroo rat	<i>Dipodomys nitratooides</i>	Federal Endangered	No effect
California condor	<i>Gymnogyps californianus</i>	Federal Endangered	No effect
Blunt-nosed leopard lizard	<i>Gambelia sila</i>	Federal Endangered	No effect
Giant garter snake	<i>Thamnophis gigas</i>	Federal Threatened	No effect
California red-legged frog	<i>Rana draytonii</i>	Federal Threatened	No effect
California tiger salamander	<i>Ambystoma californiense</i>	Federal Threatened	No effect
Delta smelt	<i>Hypomesus transpacificus</i>	Federal Threatened	No effect
Conservancy fairy shrimp	<i>Branchinecta conservatio</i>	Federal Endangered	No effect
Vernal pool fairy shrimp	<i>Branchinecta lynchi</i>	Federal Threatened	No effect
Vernal pool tadpole shrimp	<i>Lepidurus packardi</i>	Federal Endangered	No effect
Greene's tuctoria	<i>Tuctoria greenei</i>	Federal Endangered	No effect
San Joaquin adobe sunburst	<i>Pseudobahia peirsonii</i>	Federal Threatened	No effect
San Joaquin orcutt grass	<i>Orcuttia inaequalis</i>	Federal Threatened	No effect
Springville clarkia	<i>Clarkia springvillensis</i>	Federal Threatened	No effect
California condor critical habitat	Not Applicable	Critical Habitat	No effect

List of Technical Studies Bound Separately (Volume 2)

Air Quality Memorandum

Noise Memorandum

Water Quality Memorandum

Natural Environment Study

Location Hydraulic Study

Historical Property Survey Report

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

Hazardous Waste Memorandum

- Initial Site Assessment

Paleontological Identification Report

Climate Change Study

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

Juergen Vespermann
District 6 Environmental Division
California Department of Transportation
2015 East Shields Avenue, Suite 100, Fresno, California 93726

Or send your request via email to: juergen.vespermann@dot.ca.gov
Or call Juergen Vespermann at 559-832-0051

Please provide the following information in your request:

Tulare 198 Culverts Repair and Replacement Project
State Route 198 in Tulare County
06-TUL-198-PM 0.0-44.0
Project ID number 0618000045