

State Route 4 Culvert Replacement

In Alpine County along State Routes 4, 88, and 89
10-ALP-4, 88, 89-VARIOUS
10-1F720/1017000180

Initial Study with Proposed Mitigated Negative Declaration

Volume 1 of 2



Prepared by the
State of California Department of Transportation

February 2022



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 Alpine 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 10 office at 1976 Dr. Martin Luther King, Jr. Boulevard, Stockton, CA 95205; the Alpine County Library at 270 Laramie, Markleeville, CA 96120; and the Bear Valley Branch Library at 367 Creekside Drive, Bear Valley, CA 95223. The document can also be downloaded at the following website: <https://dot.ca.gov/caltrans-near-me/district-10/district-10-current-projects#cnty-alpine>. If you prefer that a hard copy or CD of the document be sent to your home, please email Jaycee Azevedo, Senior Environmental Planner, at jaycee.azevedo@dot.ca.gov.
- 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: Jaycee Azevedo, District 10 Environmental Compliance, California Department of Transportation, 1976 Dr. Martin Luther King, Jr. Boulevard, Stockton, CA, 95205. Submit comments via email to: jaycee.azevedo@dot.ca.gov.
- Submit comments by the deadline: **June 20, 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.

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

For individuals with sensory disabilities, this document can be made available in Braille, in large print, on audiocassette, or on computer disk. To obtain a copy in one of these alternate formats, please write to or call Caltrans, Attention: Jaycee Azevedo, District 10 Environmental Compliance, 1976 Dr. Martin Luther King, Jr. Boulevard, Stockton, CA 95205; phone 209-992-9824 (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.

Rehabilitate or replace deteriorated culverts in Alpine County on State Routes
4, 88, and 89 at various post miles

INITIAL STUDY
with Proposed Mitigated Negative Declaration

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

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



James P. Henke
Environmental Office Chief
California Department of Transportation
CEQA Lead Agency

2/18/2022

Date

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

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DRAFT

Proposed Mitigated Negative Declaration

Pursuant to: Division 13, Public Resources Code

State Clearinghouse Number: pending

District-County-Route-Post Mile: 10-ALP-4, 88, 89-VARIOUS

EA/Project Number: 10-1F720/1017000180

Project Description

The California Department of Transportation (Caltrans) proposes to rehabilitate or replace deteriorated culverts in Alpine County on State Routes 4, 88, and 89 at various post miles.

Determination

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

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

- **Compensatory Mitigation – Wetlands and Other Waters of the United States.** Caltrans proposes to compensate for the permanent loss of potentially jurisdictional waters of the United States by participating in the United States Army Corps of Engineers and National Fish and Wildlife Foundation’s “In Lieu Fee” program.
- **Compensatory Mitigation – Riparian Vegetation.** Caltrans proposes to compensate for the loss of riparian vegetation at a ratio of 3 to 1.

James P. Henke
Environmental Office Chief
California Department of Transportation

Date

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Chapter 1 Proposed Project

1.1 Introduction

The California Department of Transportation (Caltrans) proposes to rehabilitate or replace culverts along State Routes 4, 88, and 89 at various locations in Alpine County.

Within the project limits, State Routes 4, 88, and 89 are two-lane conventional or expressway facilities. State Route 4 runs through Alpine County in a south to north direction from Calaveras County to its intersection with State Route 89 and functions mainly as a recreational route. State Route 88 runs through Alpine County in a west to east direction from Amador County to the Nevada State line and supports interregional movement of goods and services between California and Nevada. State Route 89 is on the east side of the Sierra Nevada mountain range, running north to south from El Dorado County to Mono County near the Nevada State line.

Existing cross drainage culverts under State Routes 4, 88, and 89 convey the flow of surface water and stream flow across or away from the highway. The drainage systems also provide protection against flooding.

1.2 Purpose and Need

1.2.1 Purpose

The purpose of the project is to maintain existing drainage systems and preserve roadway integrity.

1.2.2 Need

Culverts in the system have exceeded their design life and show extensive wear with deteriorated, corroded, and damaged inverts, shape loss, and joint separation. The Maintenance Engineering Culvert Inspection Team reported that several existing culverts need repairs or replacement. If these culverts continue to deteriorate, undermining of the roadways will occur and highways will be compromised.

1.3 Project Description

Caltrans proposes to rehabilitate or replace existing culverts on State Route 4, 88, and 89 in Alpine County. Existing drainage systems at the proposed locations have exceeded their design life and have deteriorated or failed.

Certain culverts would be replaced with the existing size, and others would be upsized to maintain existing water flow capacity. The project would also upgrade or replace end treatments and headwalls as needed. To maintain and upgrade the existing facilities, work off the paved roadway, ground disturbance, work in the channel, and vegetation removal would be required. Permanent right-of-way acquisition, temporary construction easements, and work on federal lands would be required.

Figure 1-1 Project Vicinity Map

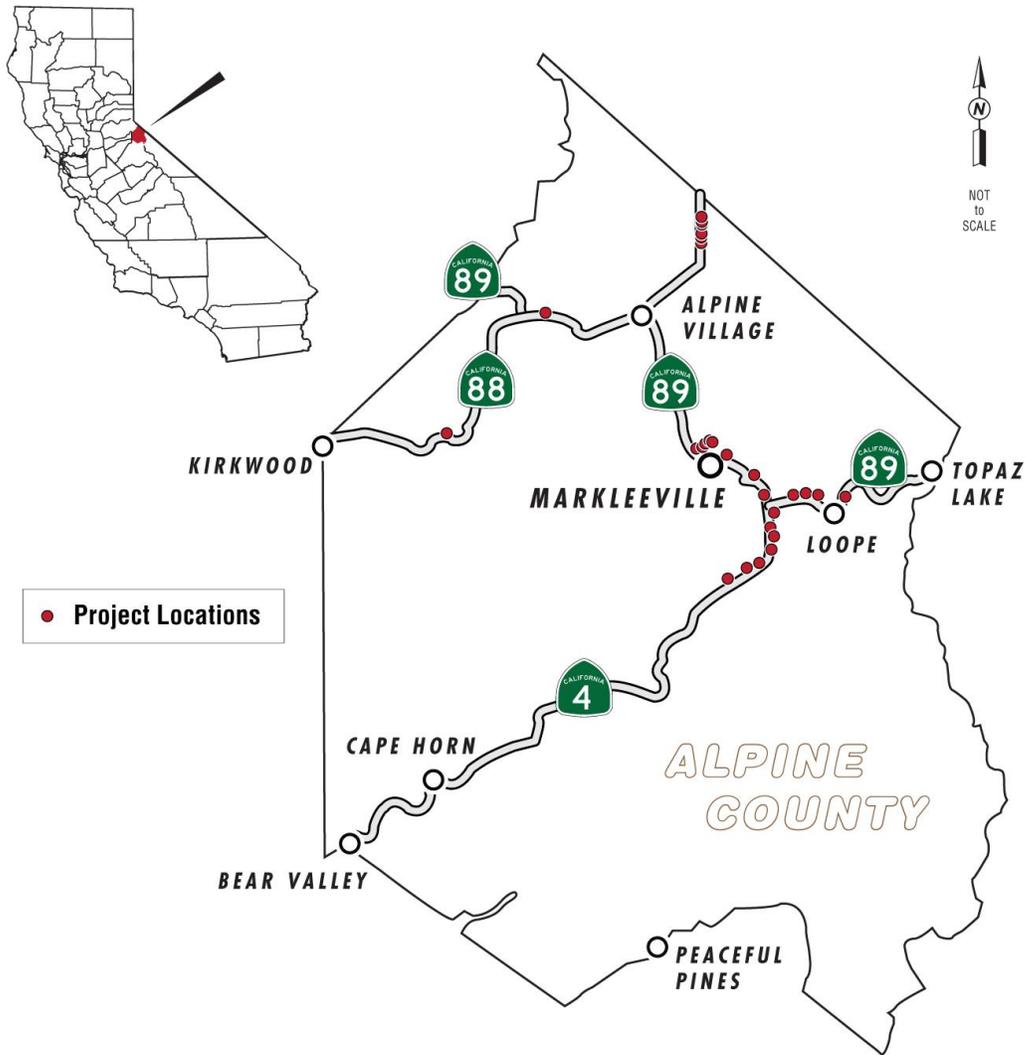
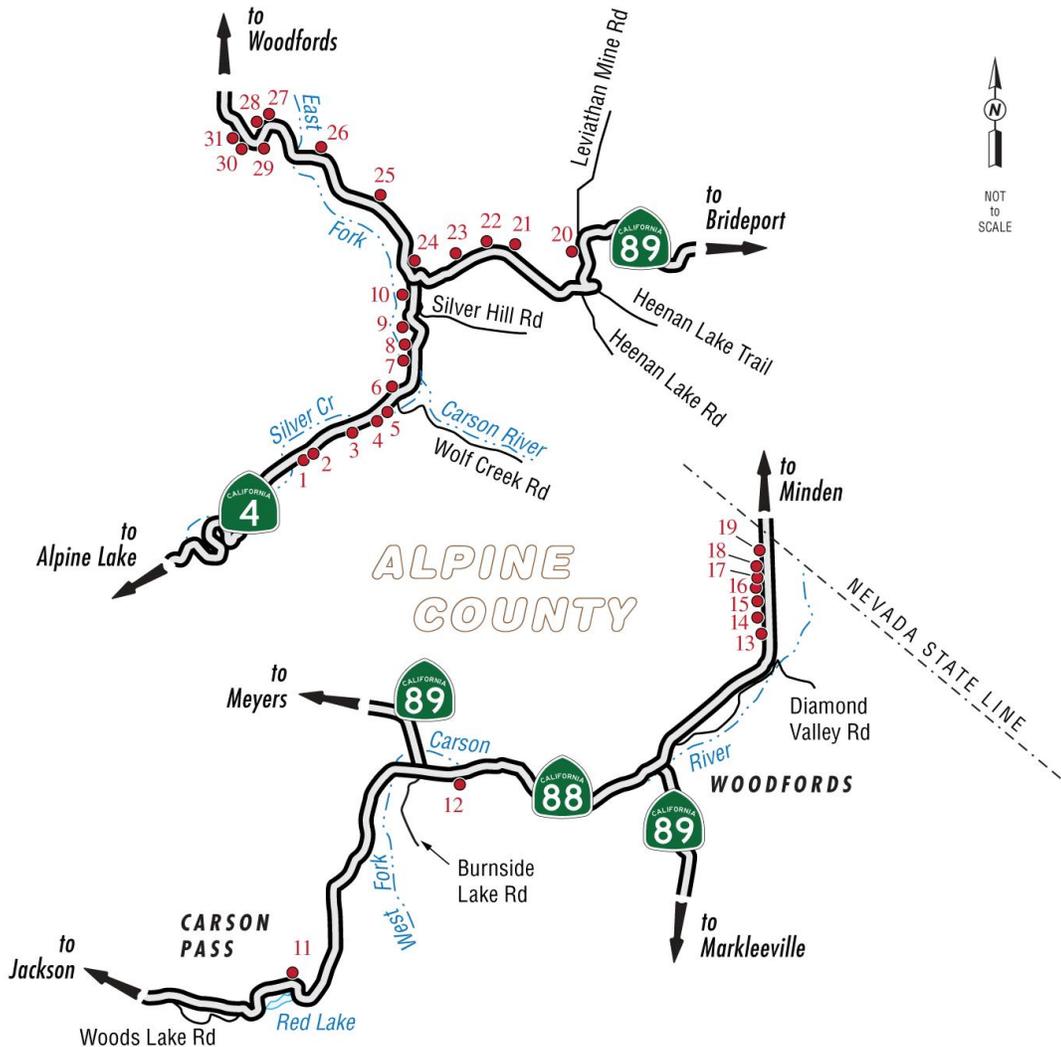


Figure 1-2 Project Location Map



1.4 Project Alternatives

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

1.4.1 Build Alternative

The project would rehabilitate or replace deteriorated culverts in Alpine County on State Routes 4, 88, and 89 at various post miles. Existing culverts would be replaced with reinforced concrete pipe culverts, and end treatments would be installed at inlets and outlets where necessary. Temporary construction easements and permanent right-of-way acquisitions may be

required at certain locations. Table 1-1 lists each drainage system location and notes whether the existing culvert would be replaced with a culvert of the same size or a larger culvert and if permanent right-of-way acquisition is required.

Table 1-1 Culvert Locations

Drainage System Number	State Route	Post Mile	Proposed Upgrades	Permanent Right-of-Way Acquisition
1	4	26.77	Replace with culvert of the same size.	Yes
2	4	26.81	Replace with a larger culvert.	Yes
3	4	27.78	Replace with a culvert of the same size.	Yes
4	4	28.41	Replace with a larger culvert.	Yes
5	4	28.45	Replace with a larger culvert.	Yes
6	4	29.28	Replace with a larger culvert.	Yes
7	4	29.89	Replace with a larger culvert.	Yes
8	4	29.96	Replace with a larger culvert.	Yes
9	4	30.40	Replace with culvert of the same size.	Yes
10	4	31.21	Replace with culvert of the same size.	Yes
11	88	06.94	Replace with culvert of the same size.	No
12	88	14.33	Replace with culvert of the same size.	No
13	88	23.17	Replace with culvert of the same size.	Yes
14	88	23.42	Replace with culvert of the same size.	Yes
15	88	23.54	Replace with culvert of the same size.	No
16	88	23.82	Replace with culvert of the same size.	Yes
17	88	23.94	Replace with culvert of the same size.	No
18	88	24.19	Replace with culvert of the same size.	No
19	88	24.42	Replace with culvert of the same size.	Yes
20	89	05.46	Replace with culvert of the same size.	Yes
21	89	07.78	Replace with culvert of the same size.	No
22	89	08.24	Replace with culvert of the same size.	No
23	89	08.73	Replace with a larger culvert.	No
24	89	10.31	Replace with culvert of the same size.	No

Drainage System Number	State Route	Post Mile	Proposed Upgrades	Permanent Right-of-Way Acquisition
25	89	11.39	Existing culvert will be maintained.	Yes
26	89	13.04	Replace with culvert of the same size.	No
27	89	14.24	Replace with larger culvert.	No
28	89	14.33	Replace with larger culvert.	No
29	89	14.43	Replace with larger culvert.	No
30-31	89	14.70	This location has three drainage systems connected to each other. Drainage system 30 is the outlet and would be replaced with a culvert of the same size. Drainage system 31 is the inlet and would be replaced with a larger culvert. The existing middle culvert would not be replaced.	No

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 All Build Alternatives.”

1.4.2 No-Build (No-Action) Alternative

Under the No-Build Alternative, the culverts would remain in their current deteriorated condition. Caltrans would not acquire new right-of-way to construct or maintain the drainage systems as part of this project.

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

AQ-1 Caltrans Standard Specifications Section 14-9.02 “Air Pollution Control” is required on all construction contracts and requires the contractor to comply with air pollution control rules, ordinances, regulations, and statutes that apply to work performed under the contract.

AQ -2 Caltrans Standard Specifications Section 10-5 “Dust Control” is required on all construction contracts and requires the contractor to comply with air pollution control rules, ordinances, regulations, and statutes that apply to work performed under the contract.

- BIO-1** Environmentally Sensitive Area Designation
- BIO-2** Designated Biologist
- BIO-3** Worker Environmental Awareness Training
- BIO-4** Limited Operation Period – In-Water Construction Activities
- BIO-5** Limit Vegetation Removal
- BIO-6** Restore and Revegetate Temporarily Disturbed Areas Onsite
- BIO-7** Preconstruction Surveys – Special-Status Plants
- BIO-8** Weed-Free Construction Equipment and Vehicles
- BIO-9** Weed Control During Construction
- BIO-10** Weed-Free Erosion Control and Revegetation Treatments – Caltrans Standard Specifications Section 21-2.02
- BIO-11** Special-Status Animals – Preconstruction Surveys
- BIO-12** Bumblebee Hive Avoidance – Avoid Active Hives
- BIO-13** Salvage Species from Dewatered Areas
- Bio-14** Preconstruction Surveys and Construction Site Biological Monitoring – Sierra Nevada Yellow-Legged Frog
- BIO-15** Construction Site Best Management Practices (page 85)
- BIO-16** Roosting Bat Avoidance – Preconstruction Surveys
- BIO-17** Roosting Bat Avoidance – Avoid Active Roosts
- BIO-18** Nesting Bird Avoidance – Limited Operation Period
- BIO-19** Nesting Bird Avoidance – Preconstruction Surveys During Nesting Season
- BIO-20** Nesting Bird Avoidance – Avoid Active Nests
- GHG-1** Caltrans Standard Specifications Sections 7-1.02A and 7-1.02C, Emissions Reduction, which require contractors to comply with all laws applicable to the project and to certify they are aware of and will comply with all Air Resources Board emission reduction regulations.

GHG-2 Caltrans Standard Specifications Section 14-9.02, Air Pollution Control, which requires contractors to comply with all air pollution control rules, regulations, ordinances, and statutes. Certain common regulations, such as equipment idling restrictions, that reduce construction vehicle emissions also help reduce greenhouse gas emissions.

GHG-3 Caltrans Standard Specifications 10-4, 10-6, and 20-2.01 are included in the construction contracts to reduce construction water consumption of potable water.

GHG-4 Caltrans Standard Specification 14-10 is included in the construction contract for the recycling of appropriate construction materials.

HW-1 Caltrans Standard Special Provision 7-1.02K(6)(j)(iii) pertaining to Earth Material Containing Lead will be added to the construction contract. A lead compliance plan prepared by a Certified Industrial Hygienist is required.

HW-2 Caltrans Standard Special Provision 14-11.14 pertaining to treated wood waste will be added to the construction contract.

NQ-1 Caltrans Standard Specifications Section 14-9, “Noise and Vibrations,” is required on all construction contracts and requires the contractor to comply with specifications for controlling noise and vibration.

NQ-2 Do not exceed [noise level] 86 dBA Lmax at 50 feet from the job site activities from 9 p.m. to 6 a.m.

NQ-3 Equip an internal combustion engine with the manufacturer-recommended muffler. Do not operate an internal combustion engine on the job site without the appropriate muffler.

WQ-1 Caltrans Standard Specifications Section 13-1 is required on all construction contracts and requires the contractor to comply with Best Management Practices at a minimum and address all potential water quality impacts that may occur when performing construction activities.

1.6 Discussion of the NEPA Categorical Exclusion

This document contains information regarding compliance with the California Environmental Quality Act (known as 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 (known as NEPA). 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	1600 Agreement	A 1600 Notification will be submitted in the Plans, Specifications, and Estimates phase following project approval.
Regional Water Quality Control Board	401 Certification	Permit applications will be submitted in the Plans, Specifications, and Estimates phase following project approval.
United States Fish and Wildlife Service	Section 7 Consultation (Letter of Concurrence)	Consultation ongoing—Letter of Concurrence expected prior to final environmental document.
United States Army Corps of Engineers	404 Permit (Non-Reporting)	Permit applications will be submitted in the Plans, Specifications, and Estimates phase following project approval.

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 Scenic Resources Evaluation, dated February 10, 2022, 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 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 the information in the Alpine General Plan dated April 18, 1999 and revised March 2017, the following significance 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

Question—Would the project:	CEQA Significance Determinations for Agriculture and Forest Resources
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 Memorandum dated December 1, 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

Question—Would the project:	CEQA Significance Determinations for Air Quality
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 December 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 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?	Less Than Significant Impact With Mitigation Incorporated
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	Less Than Significant Impact With Mitigation Incorporated
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

Question—Would the project:	CEQA Significance Determinations for Biological Resources
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 Natural Environment Study was prepared for this project. Surveys for general biological inventory and preliminary investigation of hydrologic features were conducted by Caltrans biology staff on July 7, 2021 and September 1, 2021.

The project area sits on the western and eastern slopes of the California Sierra Nevada province with mountain ridges, valleys, and streams that flow into canyons. Elevation in the area ranges from 4,940 feet to 8,200 feet above sea level. The area has warm, dry summers and cold winters. Precipitation in the area is mostly in the form of snow, and the average annual precipitation equates to approximately 18.7 inches of rain. Nearby, Carson Valley has dry summers (warm at lower elevations and cool at higher elevations) and cold winters. Precipitation in the Carson Valley is mostly in the form of snow and ranges from about 7 inches in the valley to about 30 inches in the mountains. The project falls within the Upper Carson watershed unit. The main perennial streams in the project vicinity are Silver Creek, Monitor Creek, West Fork Carson River, and East Fork Carson River. A perennial stream typically has flowing water year-round.

Several vegetation communities are recorded within and adjacent to the project area, including East Side Pine, Montane Riparian, Wet Meadow, and Pasture. The project area could support common migratory birds, wildlife species, and various invasive plant and animal species. The project area does not fall within areas identified by the California Essential Habitat Connectivity Project as natural landscape blocks or essential connectivity areas. State Routes 4, 88, and 89 divide large natural landscape blocks to the north, south, and west of the highways.

The Natural Environment Study contains lists of sensitive plant and animal species and sensitive habitats potentially occurring within the project area. The following sections discuss only the biological resources that have been recorded in the vicinity of the project area or that may be affected by the project.

Waters of the United States and Waters of the State of California

At the federal level, wetlands and surface waters are regulated by the Clean Water Act and administered by the United States Army Corps of Engineers

with oversight by the United States Environmental Protection Agency. At the state level, wetlands and waters are regulated by the California State Water Resources Control Board, Regional Water Quality Control Boards, and California Department of Fish and Wildlife. Waters that may qualify as waters of the United States and/or waters of the State of California were found at locations 1, 2, 5, 7,8, 9, 10, 12, 14, 15, 16, 17, 18, 19, 20, 22, 25, 26, and 29.

Riparian Vegetation

Non-federal waters may also include riparian vegetation. Riparian vegetation was found at locations 5, 7, 9, 10, 12, 22, 25, 26, and 29.

Special-Status Plant Species

Liddon's Sedge

Liddon's sedge occurs in broadleaf upland forests, lower montane coniferous forests, meadows and seeps, and pinyon juniper woodlands at elevations of 2,000 to 11,000 feet. The species is listed by the California Native Plant Society as a rare species in California but more common elsewhere.

Western Valley Sedge

Western valley sedge occurs in mesic habitat in great basin meadows from 5,000 to 9,200 feet in elevation. The species is listed by the California Native Plant Society as a rare species in California but more common elsewhere.

Invasive Species

Invasive species in the project area consist of annual grasses and forbs, which are components of disturbed vegetation along the roadside and in non-landscaped portions of the project area. No invasive animals were identified that are expected to occur in the project area.

Special-Status Animal Species

Western Bumblebee and Morris Bumblebee

Bumblebees are insects that live in colonies composed of a queen, worker bees, and reproductive bees. Colonies are annual, and only the new mated queens overwinter. Nests are often underground in abandoned rodent nests or above-ground in grass, old bird nests, rock piles, or dead trees.

Bumblebees are threatened by various factors, including pesticide use, pathogens from managed pollinators, competition with non-native bees, and climate change. The western bumblebee is a candidate for listing under the California Endangered Species Act and is considered a sensitive species by the United States Department of Agriculture's Forest Service. The Morris bumblebee has no formal listing or protection status but appears in the California Natural Diversity Database due to its conservation status.

Monarch Butterfly

The lifestyle of monarch butterflies varies by geographic location but, in many regions, monarchs breed year-round and, in temperate climates, individual monarchs undergo long-distance migration. Adult monarch butterflies require a diversity of blooming nectar resources as well as milkweed to lay eggs and feed larvae. The main threats to monarch butterflies include loss of habitat due to land conversion, loss of habitat due to herbicide use, and loss of habitat resulting from mowing. The monarch butterfly is a candidate for listing under the Federal Endangered Species Act.

Carson Valley Silverspot Butterfly

The Carson Valley silverspot butterfly occurs in meadows along the eastern base of the Carson Range from southern Washoe County, Nevada, to northern Alpine County, California. The species' main nectar sources are thistles, and the violet serves as the larval host plant. The species has no formal listing or protection status but appears in the California Natural Diversity Database due to its conservation status.

Lahontan Cutthroat Trout

The Lahontan cutthroat trout is native to the drainages of the Truckee, Humboldt, Carson, Walker, and Quinn rivers as well as several smaller rivers in the Great Basin of North America. The species is migratory and may dwell in streams or lakes. Spawning of the species depends on stream flow, elevation, and water temperature. The species is listed as threatened under the Federal Endangered Species Act.

Mountain Sucker

The mountain sucker occurs in the Walker, Carson, Truckee, and Susan drainages of the Lahontan basin in the eastern Sierra Nevada as well as the North Fork Feather River. This fish occurs in shallow, clear streams with diverse streambeds in areas with dense cover. It may also be found in larger rivers and some smaller lakes or reservoirs. The species spawns in summer. The mountain sucker is considered a species of concern by the California Department of Fish and Wildlife.

Mountain Whitefish

The mountain whitefish occurs in western North America and in California currently occupies the Lower, Little, and Upper Truckee, East Fork Carson, and East and West Walker river drainages on the east side of the Sierra Nevada. It can also be found in natural lakes. The species occurs in clear, cold streams and rivers. The mountain whitefish is considered a species of concern by the California Department of Fish and Wildlife.

Sierra Nevada Yellow-Legged Frog

The Sierra Nevada yellow-legged frog occurs in the western Sierra Nevada from north of Fresno County to east of Inyo County, through Mono County, to

areas north of Lake Tahoe. The species occurs in lakes, ponds, marshes, meadows, and streams at high elevations. It is highly aquatic. The Sierra Nevada yellow-legged frog is listed as an endangered species under the Federal Endangered Species Act and is listed as threatened under the California Endangered Species Act.

Tree-Roosting Bats

Several species of bats require trees as daytime roosts, while others day-roost in trees occasionally or use trees as night roosts. Tree-roosting bats may be found roosting in cavities, under exfoliating bark, and among foliage. Several species of tree-roosting bats may occur in the project vicinity, including the silver-haired bat, hoary bat, western red bat, pallid bat, big brown bat, California Myotis bat, small-footed Myotis bat, little brown Myotis bat, fringed Myotis bat, long-legged Myotis bat, and Yuma Myotis bat.

Common Fish and Wildlife

Migratory Birds

Several species of migratory birds could nest on the ground or within shrubs and trees within the project area.

Fish Passage

Caltrans is required to complete assessments of potential barriers to anadromous fish prior to starting any project using state or federal transportation funds.

Common Wildlife and Terrestrial Habitat Connectivity

The project was assessed to determine if the project may result in adverse impacts to terrestrial wildlife habitat connectivity.

Environmental Consequences

Agency Coordination

United States Fish and Wildlife Service and National Marine Fisheries Service species lists were obtained for the project. Coordination will be required with the United States Fish and Wildlife Service and the California Department of Fish and Wildlife, as detailed below.

Waters of the United States and Waters of the State of California

Project drainage work would affect potential waters of the United States and/or waters of the State of California. The project would result in approximately 778.68 square feet of permanent fill in potentially jurisdictional waters of the United States due to installation of culvert end treatments. Up to approximately 13,058.48 square feet of potentially jurisdictional wetlands may be temporarily disturbed by contractor equipment and crew access within the project limits or by the culvert installation operations at location 20. Approximately 60.08 cubic yards of permanent fill in an area of approximately

1,191.11 square feet below the top of bank throughout the project limits would be impacted by culvert extensions and installation of culvert end treatments. Approximately 10,910.34 square feet of potentially jurisdictional waters below the top of bank would be temporarily disturbed by contractor equipment and crew access and/or by temporary water diversion activities. Installation of temporary cofferdams at locations 2 and 25 would result in 4.55 cubic yards of temporary fill. Table 2-1 shows the impacts to potential waters of the United States and waters of the State of California in the project area.

Table 2-1 Impacts to Potential Waters of the United States and Waters of the State of California

Drainage System Number	Permanent Impact (square feet)	Temporary Impact (square feet)
1 - Wetland	75.68	1,111.08
2 – Other Waters of the United States	217.03	0
2 – Wetland	0	803.92
5 – Other Waters of the United States	64.52	154.8
7 – Other Waters of the United States	72	1,750.51
8 – Other Waters of the United States	72	1,510.81
9 – Other Waters of the United States	288	2,070.29
10 – Other Waters of the United States	72	1,272.76
12 – Wetland	72	1,543.51
14 – Wetland	0	334.02
15 – Wetland	72	1,777.6
16 – Wetland	162	2,029.19
17 – Wetland	162	1,375.9
18 – Wetland	162	1,769.4
19 – Wetland	72	1,857.24
20 – Other Waters of the United States	10.08	710.49
20 - Wetland	0	456.62
22 – Other Waters of the United States	0	94.52
25 – Other Waters of the United States	284.7	1,943.45
26	72	1,532.4
29	39.78	81.62
Subtotal Wetlands	778.68 square feet, or 0.02 acre	13,058.48 square feet, or 0.30 acre
Subtotal Other Waters	1,191.11 square feet, or 0.03 acre	10,910.34 square feet, or 0.25 acre
Total	1,969.79 square feet, or 0.05 acre	23,968.82 square feet, or 0.55 acre

Temporary and permanent impacts to potentially jurisdictional wetlands and “other waters” of the United States are expected to occur. A Clean Water Act Section 404 permit from the United States Army Corps of Engineers and a Clean Water Act Section 401 Certification from the Central Valley Regional Water Quality Control Board are anticipated. These waters also potentially qualify as waters of the State of California, and the project will also require a California Fish and Game Code Section 1600 Lake and Streambed Alteration Agreement.

Riparian Vegetation

Trimming or removal of riparian, or streamside, trees and shrubs is expected to occur at several locations. Table 2-2 shows the project impacts to riparian vegetation.

Table 2-2 Impacts to Riparian Vegetation

Drainage System Number	Vegetation Type	Impact (square feet) [out of a total of 7,256.92 square feet, or 0.17 acre]
5	Willow scrub	137.67
7	Willow scrub	143.82
8	Willow scrub	452.62
9	Willow scrub	1,186.26
10	Willow scrub, black cottonwood	528.05
12	Willow scrub	1,248.77
22	Willow scrub	441.16
25	Willow scrub	1,743.77
26	Willow scrub	1,140.82
28	Mature alder, willow scrub	234.03

A California Fish and Game Code Section 1600 Lake and Streambed Alteration Agreement is anticipated for the project due to impacts to riparian vegetation potentially jurisdictional under Sections 1600-1616 of the California Fish and Game Code.

Special-Status Plant Species

Neither Liddon’s sedge nor western valley sedge was observed during Caltrans surveys conducted for the project. With the inclusion of the standard measure listed below, the project is not expected to result in adverse impacts to special-status plant species.

Invasive Species

Project construction activities will take place mostly in open, disturbed areas along the roadway and will not break new ground potentially available for new invasive species infestations. It is possible that invasive species biological material originating within the project area may be transported to other areas within or outside of the project area. Use of standard measures below would further reduce any impacts of invasive species caused by project construction.

Special-Status Animal Species

The Natural Environment Study contains a list of all special-status animal species considered as part of the evaluation for this project. The following species could potentially occur within the project area.

Western Bumblebee and Morris Bumblebee

No formal surveys for bumblebees were conducted for the Natural Environment Study, and no species of bumblebees were observed during site visits, but bumblebee species could occur within the project area. The project may result in adverse impacts to plant species that may be used as food by bumblebees. However, activities that would result in “take,” perusal, capture, or intentional or accidental killing of bumblebees are not expected as a result of the proposed project.

Monarch Butterfly

No formal surveys for monarch butterflies were conducted for this study, and no monarch butterflies were observed during site visits, but migratory and non-migratory butterflies could occur within the project area. State Route 4 in Alpine County supports nectar and milkweed resources for monarch butterflies on at least a seasonal basis. Project activities have the potential to adversely affect plants that may be used for nectar or as host plants for the species on at least a temporary basis and may result in impacts to monarch butterfly eggs or larvae if the project results in effects to host milkweed plants.

The monarch butterfly is a candidate for listing under the Federal Endangered Species Act. Candidate species are those on which the United States Fish and Wildlife Service has sufficient information (regarding their biological status and threats to propose listing), but for which the development of a proposed listing is precluded by other higher-priority listing activities. Candidate species receive no protection under the Federal Endangered Species Act, and consultation or conference with the United States Fish and Wildlife Service under Section 7 will not be required.

Carson Valley Silverspot Butterfly

Wet meadow habitat along State Route 88 may be able to support the Carson Valley silverspot butterfly. The project would result in the placement of 630 square feet, or 0.01 acre, of permanent fill in the form of culvert flared end sections and rock slope protection. The project would result in the temporary disturbance of up to 9,143.35 square feet, or 0.21 acre, in wet meadows adjacent to State Route 88, which are considered as habitat for this species. The project may result in the loss or temporary disturbance of larval host plants and/or nectar plants for this species. However, activities that may result in the “take” of butterflies are not expected to occur as a result of the project.

Lahontan Cutthroat Trout

The Natural Environment Study assumes that Lahontan cutthroat trout may occur in any perennial stream tributary to the East Fork or West Fork Carson rivers within the project area. Impacts to the streambed, water column, streambanks, adjacent riparian vegetation, increased levels of suspended sediment, introduction or resuspension of contaminants, and/or noise,

vibrations, artificial light, and other physical disturbances may have potentially adverse effects to the species.

The project is expected to permanently and temporarily impact perennial stream habitat that may support the species. The installation of water diversion structures at locations would result in the temporary loss of 248.7 square feet, or 0.01 acre, of aquatic habitat at location 2 and 258.06 square feet, or 0.01 acre, of aquatic habitat at location 25. Fish relocation at these locations will be conducted with electroshocking gear, seining gear, dip nets, or combinations of these methods by qualified biologists. When the aquatic habitats have been sufficiently dewatered, relocation efforts will continue until all fish have been removed from the dewatered area. Despite these measures, mortality of fish is likely at each location due to injury, stress, or eluding capture. However, mortality associated with relocation activities is expected to be low, not exceeding 3 percent of fish collected.

When streamside vegetation is removed, the temperature of the water in summer typically increases. Primary elements of habitat for fish species and other aquatic species may also be impacted by the vegetation removal. The project is expected to result in the trimming or removal of up to approximately 7,256.97 square feet, or 0.17 acre, of montane willow scrub, black cottonwood, and alder riparian vegetation at streams throughout the project area.

Moderate but short-duration temporary increases in turbidity may occur during culvert replacement activities if water is present during construction. Increasing the amount of sediment in the water may degrade existing habitat if present. Increased turbidity levels as a result of culvert work for the project are not expected to physically injure special-status fish or result in adverse behavioral effects, but may result in some limited behavioral effects that are not expected to cause mortality or decrease the probability of individual species survival within the project area.

Short-term noise and vibration disturbance caused by construction equipment would occur during construction, which may cause special-status fish species to avoid habitat adjacent to the construction area but are not expected to cause injury or mortality. Night work may be proposed, and temporary lighting to facilitate construction may occur, potentially affecting fish behavior.

Project activities have the potential to result in permanent and temporary fills in perennial stream aquatic habitat and may require fish capture and relocation due to temporary stream diversion activities. These activities may result in the take of the Lahontan cutthroat trout due to harassment, harm, pursuit, entrapment, capture, injury, or mortality. Caltrans has determined that the project “may affect” the species, and consultation with the United States Fish and Wildlife Service under Section 7 of the Federal Endangered Species Act will be required.

Mountain Sucker

The Natural Environment Study assumes that the mountain sucker may occur in any perennial stream tributary to the East Fork or West Fork Carson rivers within the project area. The potential for the project to result in adverse impacts to the species due to the effects of permanent and temporary fill, water diversion, modifications to riparian vegetation, exposure to sediments, contaminants, or toxic chemicals, changes in water quality, or due to disturbance or direct injury is the same as that discussed for the Lahontan cutthroat trout above. The project may result in the “take” of the mountain sucker. Coordination with the California Department of Fish and Wildlife per the California Fish and Game Code Section 1600 will be required.

Mountain Whitefish

The Natural Environment Study assumes that the mountain whitefish may occur in any perennial stream tributary to the East Fork or West Fork Carson rivers within the project area. The potential for the project to result in adverse impacts to the species due to the effects of permanent and temporary fill, water diversion, modifications to riparian vegetation, exposure to sediments, contaminants, or toxic chemicals, changes in water quality, or due to disturbance or direct injury is the same as that discussed for the Lahontan cutthroat trout above. The project may result in the “take” of the mountain whitefish. Coordination with the California Department of Fish and Wildlife per the California Fish and Game Code Section 1600 will be required.

Sierra Nevada Yellow-Legged Frog

The Sierra Nevada yellow-legged frog was not observed at any location during surveys conducted for the project. All project locations except for location 11 are considered outside of the range of the species. Location 11 is within the current or historic range of the species but does not support aquatic habitat suitable to support the species at any life stage. Caltrans has determined that the project “may affect, but is not likely to adversely affect” the Sierra Nevada yellow-legged frog. Consultation with the United States Fish and Wildlife Service under Section 7 of the Federal Endangered Species Act will be required. The construction activities in the project area are not expected to result in take, as defined by the California Fish and Game Code, of the Sierra Nevada yellow-legged frog, and the project is not expected to require a California Endangered Species Act consultation or an Incidental Take Permit under Section 2080 or 2081 of the California Fish and Game Code.

Tree-Roosting Bats

Mature trees throughout the project area have the potential to provide day roosts for bats—in cavities, under exfoliating bark, and among dense foliage. Vegetation clearing or trimming may be required to construct the project. Trees that could support tree-roosting bats may have to be removed to perform culvert replacement work. The project is not expected to result in the

take, as defined by the California Fish and Game Code, of tree-roosting bats. Coordination with the California Fish and Game Code Section 1600 may be required.

Common Fish and Wildlife

Migratory Birds

Suitable nesting habitat for migratory birds, including raptors, occurs within the project area; migratory birds and/or raptors may attempt to nest in appropriate habitats, including but not limited to ground and vegetation, between February 1 and September 30 annually. The potential to encounter nesting migratory birds during this time within the project area is moderate.

Fish Passage

No waters designated as “Essential Fish Habitat” by the National Marine Fisheries Service occur within the project area. Culverts that carry intermittent streams that could bear fish species on a seasonal basis were identified at locations 2 and 25. It is unknown if either of these culverts is a potential impediment to fish passage.

Common Wildlife and Terrestrial Habitat Connectivity

Habitat for common wildlife species occurs within and adjacent to the project area. The highway system, local roads, and adjacent land uses, including recreational and agricultural development, are potential barriers to regional terrestrial wildlife movement for some species. Project construction activities would avoid disturbance of natural vegetation communities and habitats supporting common wildlife species to the greatest extent feasible. The proposed construction activities are not expected to result in the take, as defined by the California Fish and Game Code, of common wildlife species. None of the proposed project features are expected to result in any additional adverse effects on the ability for most terrestrial wildlife to pass through the project area. Increasing the size of several culverts in the project area may provide access for larger-sized classes of animals to pass through the culvert systems.

Standard Measures and Best Management Practices

The following standard measures are included in most, if not all, Caltrans projects and would be applied to the proposed project and would further reduce temporary or permanent impacts to resources.

WQ-1 Caltrans Standard Specifications Section 13-1 is required on all construction contracts and requires the contractor to comply with Best Management Practices at a minimum and address all potential water quality impacts that may occur when performing construction activities.

BIO-1 Environmentally Sensitive Area Designation. Caltrans Standard Specifications (or Special Provisions) Section 14-1.02 will be included in the

construction contract, and all areas outside of the proposed construction footprint, as well as any areas determined by a qualified biologist during project planning and preconstruction surveys, will be designated as environmentally sensitive areas.

BIO-2 Designated Biologist. A designated biologist or biologists will be onsite during any activities that have the potential to affect sensitive biological resources. Regulatory agency approval will be required prior to Caltrans' acceptance of the designated biologist. The designated biologist may be supplied by Caltrans or the contractor. If contractor-supplied biologists are used, Caltrans Standard Specifications (or Special Provisions) Section 14-6.03D(1-3) will be added to the contract and will specify the biologist qualifications, responsibilities, and submittals.

BIO-3 Worker Environmental Awareness Training for Construction Personnel. Before any work occurs in the project area, a qualified designated biologist will conduct mandatory contractor/worker environmental awareness training for all construction personnel to explain the need to avoid and minimize effects to sensitive biological resources in and around the project area. Training will be required for any construction personnel intending to enter the construction site for more than 15 minutes.

BIO-4 Limited Operation Period – In-Water Construction Activities. Construction activities occurring at sites determined as potentially jurisdictional waters of the United States and waters of the State of California will occur between June 1 and October 15 of any construction season, unless earlier or later dates for in-channel construction activities are approved by the California Department of Fish and Wildlife and the United States Fish and Wildlife Service.

BIO-5 Limit Vegetation Removal. Vegetation removal shall be limited to the absolute minimum amount required for construction.

BIO-6 Restore and Revegetate Temporarily Disturbed Areas Onsite. Disturbed areas within the construction limits will be graded to minimize surface erosion and siltation into receiving waters. Disturbed areas will be recontoured to as close to pre-project condition as possible and will be stabilized as soon as feasible and no later than October 15 of each construction season to avoid erosion during storms and runoff. Permanent erosion control seeding will be performed at all disturbed sites by hydro-seeding over the course of construction as each site is completed, with all sites seeded by the completion of construction activities.

BIO-7 Preconstruction Surveys – Special-Status Plants. Preconstruction surveys will be completed for special-status plants that may occur in the project area. California Department of Fish and Wildlife will be presented with the qualifications of any proposed biological monitor for review and written

approval at least two weeks prior to conducting project activities. Preconstruction surveys will be completed by the approved biologist for sensitive plant species, using California Department of Fish and Wildlife-approved survey protocols, no more than 24 hours prior to any ground disturbance in any given location. If special-status plant species are detected in areas that will be disturbed by project activities, no work will take place at these locations until Caltrans has consulted with the California Department of Fish and Wildlife. New sightings of special-status plant species will be reported to the California Natural Diversity Database.

BIO-8 Weed-Free Construction Equipment and Vehicles. It is recommended that construction equipment and vehicles be cleaned and washed at the contractor's facilities prior to arrival at the construction site. Any vehicle or equipment cleaning that occurs onsite during construction activities will conform with Caltrans Standard Specifications Section 13-4.03E(3) and Caltrans Construction Site Best Management Practices Section NS-08.

BIO-9 Weed Control During Construction. To minimize the potential for spreading weeds originating from the project area during construction activities, weed control would be accomplished per Caltrans Standard Specifications Section 20-1.03C(3). The use of herbicides for weed control activities is discouraged but may be considered on a case-by-case basis depending on the weed species, extent of infestation, or regulatory restrictions.

BIO-10 Weed-Free Erosion Control and Revegetation Treatments. To minimize the risk of introducing weeds into the project area from outside sources, only locally adapted plant species appropriate for the project area will be used in any erosion control or revegetation seed mix or stock. The Caltrans biologist will consult with the Caltrans landscape architect to develop appropriate seed and planting palettes for use in revegetation and/or erosion control products. Any compost, mulch, tackifier, fiber, straw, duff, topsoil, erosion control products, or seed must meet Caltrans Standard Specification (or Special Provisions) Section 21-2.02. Any hydroseed used for revegetation activities must also be certified weed-free per the Standard Specification.

BIO-11 Special-Status Animals – Preconstruction Surveys. Preconstruction surveys will be completed for special-status animals that may occur in the project area, including bumblebees, monarch butterflies, and the Carson Valley silverspot butterfly. The California Department of Fish and Wildlife will be presented with the qualifications of any proposed biological monitor for review and written approval at least two weeks prior to conducting project activities. An approved biologist will be present during all construction-related activities that may affect special-status animal species. A focused survey will be conducted by a qualified biologist within seven days prior to the beginning of project-related activities. Preconstruction surveys for special-status animals

will be specified under Caltrans Standard Specification (or Special Provision) 14-6.03A, Species Protection.

BIO-12 Bumblebee Hive Avoidance – Avoid Active Hives. If active bumblebee hives are found, a protective no-work buffer of 20 feet will be established and Caltrans shall consult with the California Department of Fish and Wildlife to comply with provisions of the Fish and Game Code of California. Protective buffers will be specified under Caltrans Standard Specification (or Special Provision) 14-6.03A, Species Protection. No work will commence within the buffer until authorization is received from the Resident Engineer. If construction or other related activities that may potentially cause hive destruction or hive abandonment resume, monitoring of the hive site by a qualified biologist will be required to ensure that protective buffers are maintained.

BIO-13 Salvage Species from Dewatered Areas. Removing fish from dewatered stream reaches within the construction areas is expected to significantly reduce the number of special-status fish species and other aquatic organisms that may be injured or killed during the summer work season. Salvaged fish and other aquatic organisms would be relocated to suitable habitats adjacent to the construction area.

BIO-14 Preconstruction Surveys and Construction Site Biological Monitoring – Sierra Nevada yellow-legged frog. Preconstruction surveys will be conducted for the Sierra Nevada yellow-legged frog. The qualifications of any proposed biological monitors will be presented to the United States Fish and Wildlife Service and the California Department of Fish and Wildlife for review and written approval at least two weeks prior to conducting project activities. An approved biologist will be present during all construction-related activities that may affect the Sierra Nevada yellow-legged frog or its habitat. The biologist will have the authority to halt work through coordination with the resident engineer or the onsite project manager in the event that a Sierra Nevada yellow-legged frog is observed in the project area. The resident engineer or onsite project manager will ensure construction activities remain suspended in any area where the biologist has determined that the frog is not being harassed by or in danger due to construction activities. If a Sierra Nevada yellow-legged frog is observed in the work area, an approved biologist will notify the regulatory agency contacts by telephone and electronic mail within 24 hours of the initial observation.

BIO-15 Construction Site Best Management Practices. The following best management practices will be observed during construction:

- During construction, stockpiling of construction materials, portable equipment, vehicles, and supplies will be restricted to the designated construction staging areas and all operations will be confined to the minimal area necessary.

- Project-related vehicle traffic will be restricted to the minimum amount necessary. Project vehicles will observe a 20-mile-per-hour speed limit while in the action area.
- Plastic mono-filament netting or similar material will not be used at the project site. Acceptable substitutes include coconut coir matting or tackified hydroseeding compounds.
- Use of rodenticides and herbicides, including fumigation, the use of poison bait or other means of poisoning nuisance animals in the project areas will be restricted.
- All food-related trash items such as wrappers, cans, bottles, and food scraps will be disposed of in securely closed containers and removed at least once a week from a construction or project site.
- No firearms will be allowed on the project site.
- No pets, such as dogs or cats, will be permitted on the project site.

BIO-16 Roosting Bat Avoidance – Preconstruction Surveys. Preconstruction surveys will be completed for special-status animals that may occur in the project area. California Department of Fish and Wildlife will be presented with the qualifications of any proposed biological monitor for review and written approval at least two weeks prior to conducting project activities. An approved biologist will be present during all construction-related activities that may affect tree-roosting bats or their habitats. A survey for tree-roosting bats will be conducted by an approved biologist within 15 days prior to any tree removal or project-related activities. If a lapse in project work of 15 days or longer occurs, another survey and, if necessary, consultation with the California Department of Fish and Wildlife will be required before work can resume. Preconstruction surveys will be specified under Caltrans Standard Specification (or Special Provision) 14-6.03A, Species Protection.

BIO-17 Roosting Bat Avoidance – Avoid Active Roosts. If active day roosts or maternity roosts are found, a protective no-work buffer of 50 feet will be established and Caltrans shall consult with the California Department of Fish and Wildlife to comply with provisions of the Fish and Game Code of California. Protective buffers for tree-roosting bats will be specified under Caltrans Standard Specification (or Special Provision) Section 14-6.03A, Species Protection. No work will commence within the buffer until authorization is received from the resident engineer. If construction or other project-related activities may potentially cause roost destruction or roost abandonment, monitoring of the roost site by a qualified biologist will be required to ensure protective buffers are maintained.

BIO-18 Nesting Bird Avoidance – Limited Operation Period. Performing ground disturbance, vegetation removal, or other construction activities within

nesting bird habitat during the non-nesting season, between October 1 and January 31, would not require preconstruction surveys or nesting bird avoidance measures.

BIO-19 Nesting Bird Avoidance – Preconstruction Surveys during Nesting Season. If ground disturbance, vegetation removal, or other construction activities are scheduled during the nesting season of protected raptors and migratory birds, February 1 to September 30, a focused survey for active nests will be conducted by a qualified biologist within 15 days prior to the beginning of project-related activities. If a lapse in the project work of 15 days or longer occurs, another survey and, if required, consultation with the United States Fish and Wildlife Service and California Department of Fish and Wildlife will be required before the work can be reinitiated. Preconstruction surveys for migratory birds and raptors will be specified under Caltrans Standard Specification (or Standard Provision) Section 14-6.03A, Species Protection, or 14-6.03B, Bird Protection.

BIO-20 Nesting Bird Avoidance – Avoid Active Nests. If active nests are found, a protective no-work buffer will be established and Caltrans will consult with the United States Fish and Wildlife Service regarding appropriate action to comply with the Migratory Bird Treaty Act of 1918 and with the California Department of Fish and Wildlife to comply with provisions of the Fish and Game Code of California.

If nesting migratory birds or nesting raptors are detected by the designated biologist during preconstruction surveys, the appropriate no-work buffer of 300 feet around raptors and 100 feet around other migratory birds will be established around the nest. No work will commence within the buffer until authorization is received from the resident engineer. Protective buffers for nesting migratory birds and raptors will be specified under Caltrans Standard Specification (or Standard Provision) Section 14-6.03A, Species Protection, or 14-6.03B, Bird Protection. If construction or other project-related activities which may cause nest destruction, nest abandonment, or forced fledging of migratory birds are necessary, the designated biologist will be required to monitor the nest site to ensure protective buffers are maintained.

Avoidance, Minimization, and/or Mitigation Measures

In addition to the standard measures listed above, the following mitigation measures would be included in the project.

BIO-21 Compensatory Mitigation-Wetlands and Other Waters of the United States. Construction of the proposed project is expected to result in the permanent loss of intermittent and ephemeral streams and wetlands potentially qualifying as waters of the United States. It is proposed that the permanent loss of potentially jurisdictional waters of the United States be compensated by Caltrans' participation in the Sacramento United States Army Corps of Engineers and National Fish and Wildlife Foundation's "In-Lieu

Fee” program to ensure no net loss of functions and values of potentially jurisdictional waters of the United States. The program makes mitigation credits available for purchase by permittees with the approval of applicable regulatory agencies. The mitigation credits may be used to satisfy the compensatory mitigation requirements applicable to such permittees for impacts to aquatic resources. Credits would be purchased in the Walker-Carson Rivers Aquatic Service Area.

BIO-22 Compensatory Mitigation-Riparian Vegetation. Construction of the proposed project is expected to result in the trimming or removal of streamside montane riparian willow scrub, black cottonwood, and alder riparian vegetation. The loss of riparian vegetation is expected to require a 3 to 1 compensation ratio by the California Department of Fish and Wildlife. Caltrans proposes to compensate for the loss of riparian vegetation with the establishment of 0.51 acre of riparian vegetation either within the project limits or at an offsite location.

2.1.5 Cultural Resources

Considering the information in the Historic Property Survey Report dated November 8, 2021 and the Archaeological Survey Report dated October 12, 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?	Less Than Significant 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

Affected Environment

A Historic Property Survey Report and an Archaeological Survey Report were completed for this project and approved on November 8, 2021 and October 12, 2021, respectively. Cultural resources staff conducted record searches and coordinated with the Washoe Tribe, the Alpine County Historical Society, and Humboldt-Toiyabe National Forest regarding the project. Three cultural resources were identified within the project area. There were two cultural resources within the project area that were previously determined not eligible for inclusion in the National Register of Historic Places. Table 2-3 lists the

three cultural resources identified for this project that are eligible or assumed eligible for the National Register of Historic Places.

Table 2-3 Cultural Resources Eligible or Assumed Eligible for the National Register of Historic Places

Site Number and Name	Site Description	Eligibility
P-02-000606 (Chalmer's Mansion site)	A historic-era resource with a built environment component	Eligible for the National Register of Historic Places
P-02-000608 (Centerville Flat site)	A multicomponent site containing both prehistoric and historic-era period components	Historic-era components are eligible for the National Register of Historic Places
P-02-001107	A sparse prehistoric lithic scatter	Assumed eligible for the purposes of this project

Environmental Consequences

A Finding of No Adverse Effect without standard conditions was adopted for the project with State Historic Preservation Officer concurrence of the finding on December 22, 2021.

If cultural materials are discovered during construction, all earth-moving activity within and around the immediate discovery area will be diverted until a qualified archaeologist can assess the nature and significance of the find.

If human remains are discovered, California Health and Safety Code Section 7050.5 states that further disturbances and activities shall stop in any area or nearby area suspected to overlie remains, and the County Coroner contacted. If the remains are thought by the coroner to be Native American, the coroner will notify the Native American Heritage Commission, who, pursuant to Public Resources Code Section 5097.98, will then notify the Most Likely Descendent. At this time, the person who discovered the remains will contact the District 10 Cultural Resources Branch staff so that they may work with the Most Likely Descendent on the respectful treatment and disposition of the remains. Further provisions of Public Resources Code Section 5097.98 are to be followed as applicable.

Avoidance, Minimization, and/or Mitigation Measures

CUL-1 During construction, the sites will be designated as Environmentally Sensitive Areas and P-02-000606 and P-02-001107 will have monitoring.

2.1.6 Energy

Considering the information in the Alpine County Energy Action Plan dated December 6, 2016, 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, dated January 14, 2022, and the California Earthquake Hazards Zone Application from the California Department of Conservation, 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: <ul style="list-style-type: none"> 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 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

Question—Would the project:	CEQA Significance Determinations for Geology and Soils
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	No Impact
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 Change Memorandum dated January 11, 2022, 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

The project is in rural areas along State Routes 4, 88, and 89 in Alpine County. State Routes 4, 88, and 89 are main transportation routes to and through the area for passenger and commercial vehicles. The nearest alternate routes are State Route 50 or US Highway 395 through Nevada. The Alpine County Local Transportation Commission is the designated Regional Transportation Planning Agency for the county. The Alpine County General Plan (2017) guides planning in the county, and the Alpine County Regional Transportation Plan (2020) guides transportation development. The Regional Transportation Plan addresses greenhouse gas emissions through regional goals, objectives, and strategies.

Environmental Consequences

Construction greenhouse gas emissions would result from material processing, onsite construction equipment, and traffic delays due to construction. These emissions will be produced at different levels throughout the construction phase; their frequency and occurrence can be reduced through innovations in plans and specifications and by implementing better traffic management during construction phases.

In addition, with innovations such as longer pavement lives, improved traffic management plans, and changes in materials, the greenhouse gas emissions produced during construction can be offset to some degree by longer intervals between maintenance and rehabilitation activities.

Construction greenhouse gas emissions for the project were calculated using the Department of Transportation's Construction Emissions Tool (Cal-CET 2021 v1.0 Beta). Project construction is expected to generate approximately 165 tons of carbon dioxide (CO₂) during 175 working days.

The following standard measures will be included in the construction contract:

GHG-1 Caltrans Standard Specifications Section 7-1.02A and 7-1.02C, Emissions Reduction, which require contractors to comply with all laws applicable to the project and to certify they are aware of and will comply with all Air Resources Board emission reduction regulations.

GHG-2 Caltrans Standard Specifications Section 14-9.02, Air Pollution Control, which requires contractors to comply with all air pollution control rules, regulations, ordinances, and statutes. Certain common regulations, such as equipment idling restrictions, that reduce construction vehicle emissions also help reduce greenhouse gas emissions.

GHG-3 Caltrans Standard Specifications 10-4, 10-6, and 20-2.01 are included in the construction contracts to reduce construction water consumption of potable water.

GHG-4 Caltrans Standard Specification 14-10 is included in the construction contract for the recycling of appropriate construction materials.

Avoidance, Minimization, and/or Mitigation Measures

The project would have a less than significant impact on greenhouse gas emissions with the use of avoidance, minimization, and/or mitigation measures. Caltrans Standard Specifications listed in the above section would further reduce project impacts.

2.1.9 Hazards and Hazardous Materials

Considering the information in the Initial Site Assessment dated August 30, 2021, 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 one-quarter 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 two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	No Impact
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 Compliance Memorandum dated February 12, 2021 and the Preliminary Location Hydraulic/Floodplain Study dated March 5, 2018, 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 the information in the Alpine County General Plan dated April 18, 1999 and revised March 2017, 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 Alpine County General Plan dated April 18, 1999 and revised March 2017, 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 January 12, 2022, 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 two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	No Impact

2.1.14 Population and Housing

Considering the scope and location of the project, 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 scope of the project, 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 the information in the scope of the project, 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

Considering the information in the Alpine County Regional Plan dated 2015, 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?	No Impact

2.1.18 Tribal Cultural Resources

Considering the information in the Historic Property Survey Report dated November 8, 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 the scope of the project, 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 storm water 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 Climate Change Memorandum dated January 11, 2022, 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?	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

<p style="text-align: center;">Question:</p>	<p style="text-align: center;">CEQA Significance Determinations for Mandatory Findings of Significance</p>
<p>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.)</p>	<p style="text-align: center;">No Impact</p>
<p>c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?</p>	<p style="text-align: center;">No Impact</p>

Appendix A Title VI Policy Statement

DEPARTMENT OF TRANSPORTATION

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Making Conservation
a California Way of Life.

September 2021

NON-DISCRIMINATION POLICY STATEMENT

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

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

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

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

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

A blue ink signature of Toks Omishakin, consisting of stylized cursive letters.

Toks Omishakin
Director

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

List of Technical Studies Bound Separately (Volume 2)

Air Quality Memorandum

Climate Change Memorandum

Noise Study Memorandum

Water Quality Memorandum

Natural Environment Study

Historical Property Survey Report

- Historic Property Survey Report
- Archaeological Survey Report

Initial Site Assessment

Scenic Resource Evaluation/Visual Assessment

Paleontological Identification Report

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

Jaycee Azevedo
District 10 Environmental Division
California Department of Transportation
1976 Dr. Martin Luther King, Jr. Boulevard
Stockton, CA 95295

Or send your request via email to: jaycee.azevedo@dot.ca.gov
Or call: (209) 992-9824

Please provide the following information in your request:

State Route 4 Culvert Replacement
State Routes 4, 88, 89 in Alpine County
10-ALP-4, 88, 89-VARIOUS
10-1F720/1017000180