

# Butte & Ash Creek Bridge Replacement Project

MODOC COUNTY, CALIFORNIA  
02-MOD-299-PM 0.5, 1.0  
EA#: 02-4F210  
EFIS#: 0212000072

## Draft Initial Study with Proposed Negative Declaration



Prepared by the  
State of California, Department of Transportation  
Caltrans District 2  
1657 Riverside Drive, MS-30  
Redding, CA 96001

**November 2016**



# General Information about this Document

## What's in this document?

This Draft Initial Study with proposed Negative Declaration (IS/ND) examines the potential environmental effects of a proposed bridge replacement project on State Route 299, in Modoc County. The purpose of the project is to restore the long-term reliability of the Butte Creek Bridge and Ash Creek Bridge, and reduce the need for continued maintenance and repairs. This Initial Study was prepared to comply with the California Environmental Quality Act (CEQA). This document describes the purpose and need for the project, project alternatives, existing conditions, and potential effects from the proposed project.

## What should you do?

- Please read this Initial Study
- You are invited to review the environmental document and technical studies. A printed copy of the document and technical studies can be found during business hours (Monday-Friday, 8:00 a.m. to 4:30 p.m.) at the Caltrans District Office located at 1657 Riverside Drive in Redding, or a printed copy of the document is available for review at the Adin Post Office (Monday-Friday, 8:30 a.m. to 2:00 p.m. and 2:30 p.m. to 5:00 p.m.), located at 512 South Main Street in Adin. A copy of the environmental document is also available on Caltrans' website at [www.dot.ca.gov/dist3/departments/envinternet/envdoc.htm](http://www.dot.ca.gov/dist3/departments/envinternet/envdoc.htm).
- We welcome your comments. If you have any information or concerns regarding the project, please send your written comments to Caltrans by the deadline. Submit comments via regular mail to:

California Department of Transportation  
Attention: Chris Quiney  
North Region Office of Environmental Mgmt., MS-30  
1657 Riverside Drive  
Redding, CA 96001

- You may also submit comments via e-mail to [Chris.Quiney@dot.ca.gov](mailto:Chris.Quiney@dot.ca.gov)
- Submit comments by the deadline: December 3, 2016.

## What happens after this?

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

For individuals with sensory disabilities, this document is available in Braille, large print, on audiocassette, or computer disk. To obtain a copy in one of these alternate formats, please call or write to Caltrans, Attn: Chris Quiney, North Region Environmental Management, 1657 Riverside Drive, Redding, CA 96001; (530) 225-3174 Voice, or use the California Relay Service TTY number, 711 or 1-800-735-2929.



**Butte & Ash Creek Bridge Replacement Project**

In Modoc County near Adin at Butte Creek Bridge and at Ash Creek Bridge

**DRAFT INITIAL STUDY WITH  
PROPOSED NEGATIVE DECLARATION**

Submitted Pursuant to: Division 13, California Public Resources Code

STATE OF CALIFORNIA  
Department of Transportation



Amber Kelley  
Office Chief - Redding  
North Region Environmental Services  
California Department of Transportation



Date



## Proposed Negative Declaration

Pursuant to: Division 13, California Public Resources Code

### Project Description

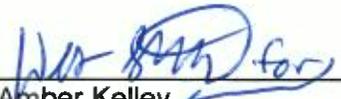
The California Department of Transportation (Caltrans) proposes to replace two bridges along State Route (SR) 299 in Modoc County. The purpose of the project is to restore the long-term reliability of the Butte Creek Bridge and Ash Creek Bridge, and reduce the need for continued maintenance and repairs. Work activities would include the construction of two new bridges on their existing alignment, installation of new guardrails and bridge railing, reconstruction of approach pavement and shoulders to conform to the new bridges, and the improvement of road connections within the project limits. The project would require vegetation clearing, temporary construction easements, and acquisition of new right-of-way. The project would include water diversion at Ash Creek Bridge, and pile driving at both the Butte Creek and Ash Creek Bridges. Vehicle parking and construction stockpiling would occur within Caltrans right-of-way. The project would require permits from the California Department of Fish and Wildlife (1600), Regional Water Quality Control Board (401), and a non-reporting permit from the U.S. Army Corps of Engineers (404).

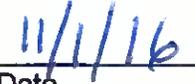
### Determination

This proposed Negative Declaration (ND) is included to give notice to interested agencies and the public that it is Caltrans' intent to adopt an ND for this project. This does not mean that Caltrans' decision regarding the project is final. This ND is subject to change based on comments received by interested agencies and the public.

Caltrans has prepared an Initial Study for this project, and pending public review, expects to determine from this study that the proposed project would not have a significant impact on the environment for the following reasons:

- The proposed project would have no impact with regard to aesthetics, agriculture and forest resources, cultural resources, geology and soils, land use and planning, mineral resources, population and housing, public services, recreation, tribal cultural resources, utilities and service systems, energy resources, or mandatory findings of significance.
- The proposed project would have less-than-significant impacts with regard to air quality, biological resources, hazards and hazardous materials, hydrology and water quality, noise, and transportation/traffic.

  
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Amber Kelley  
Office Chief - Redding  
North Region Environmental Services  
California Department of Transportation

  
\_\_\_\_\_  
Date



# Chapter 1. Proposed Project

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## **Project Title**

Butte & Ash Creek Bridge Replacement Project

## **Lead Agency Name and Address**

California Department of Transportation, District 2  
Office of Environmental Management, MS-30  
1657 Riverside Drive  
Redding, CA 96001

## **Contact Person and Phone Number**

Chris Quiney  
Office of Environmental Management Branch Chief  
Phone: (530) 225-3174  
Email: [chris.quiney@dot.ca.gov](mailto:chris.quiney@dot.ca.gov)

## **Project Location**

The project is located on State Route 299 (SR 299), at Post Mile (PM) 0.5, and 1.0 in Modoc County (Figures 1 and 2a-2c).

## **Project Sponsor's Name and Address**

California Department of Transportation, District 2  
1657 Riverside Drive  
Redding, CA 96001

## **Purpose and Need**

The purpose of the project is to restore the long-term reliability of the Butte Creek Bridge and Ash Creek Bridge, and reduce the need for continued maintenance and repairs. Both bridges are exhibiting deterioration of the concrete understructures and decks, primarily due to age.

## **Existing Facilities**

The proposed project is located in the town of Adin, in Modoc County, on SR 299. Adin serves as a community hub with approximately 250 residents. SR 299 passes through this community and serves as its central arterial. Within the project vicinity SR 299 is a two-lane highway, with 12-foot wide travel lanes and treated shoulders that vary between four- to 8-feet wide. Butte Creek Bridge was built in 1929, is 48-feet long and 42-feet wide (with 12-foot wide travel lanes and 8-foot wide shoulders), and has one pier in Butte Creek. Ash Creek Bridge was built in 1929, is 130-feet long and 42-feet wide (with 12-foot wide travel lanes and 8-foot wide shoulders), and has two piers in Ash Creek.

## Project Description (Build Alternative)

The California Department of Transportation (Caltrans) is proposing to replace the Butte Creek Bridge (Bridge No. 03-0001) at PM 0.51, and the Ash Creek Bridge (Bridge No. 03-002) at PM 1.02 on State Route (SR) 299 in Modoc County. Work activities would include the construction of two new bridges on their existing alignment, installation of new guardrails and bridge railing, reconstruction of approach pavement and shoulders to conform to the new bridges, and the improvement of some road connections within the project limits. The new bridges would be longer and wider than the existing bridges, in order to meet current design standards (Table 1). The existing bridges would be removed in sections as the new bridges are being constructed. Construction would occur over two years, and utilize half-width construction methods and the One Way Reversing Traffic Control methodology.

**Table 1: Summary of Existing and Proposed Bridge Dimensions**

Bridge	Dimensions		
	Length (feet)	Width (feet)	Piers
<b>Butte Creek Bridge</b>			
Existing	48	42	1
Proposed	60	44	0
Change	+12	+2	-1
<b>Ash Creek Bridge</b>			
Existing	130	42	2
Proposed	150	44	2
Change	+20	+2	N/A

Construction activities at Butte Creek Bridge would consist of construction of a single 60-foot long, 44-foot wide pre-cast, pre-stressed concrete slab bridge that spans the entire creek. The existing pier in Butte Creek would be removed. The new bridge would be wide enough to accommodate two 12-foot wide lanes and two eight-foot wide shoulders. The new bridge deck would have a polyester concrete overlay, and type ST-70 (see-through metal) bridge railing would be used. It is anticipated that abutments would be founded on steel piles. During construction, some existing in-channel vegetation within the Environmental Study Limits (ESL) may be removed, and the existing streambed may be graded to improve flows and to minimize potential future debris accumulation.

Construction activities at Ash Creek Bridge would consist of construction of a single 150-foot long, 44-foot wide pre-cast, pre-stressed concrete slab bridge with two piers in Ash Creek. The existing two piers in Ash Creek would be removed and replaced with two new piers. The new bridge would be wide enough to accommodate two 12-foot wide lanes and two eight-foot wide shoulders. The new bridge deck would have a polyester concrete overlay, and type ST-70 (see-through metal) bridge railing would be used. It is anticipated that the abutments would be founded on steel piles. The piers would be formed using Cast-in-steel-shell (CISS) piles or a similar type of pile. Clear water diversion is anticipated to be used to isolate construction from stream flow; a portable settling tank or a settling basin outside the creek or in an adjacent upland area may be employed for the dewatering of cofferdams. As a Caltrans standard practice, in-water construction would occur during the low flow period (May-October).

The existing bridges would be broken into manageable pieces and removed in sections using cranes as the new bridges are being constructed. In accordance with Caltrans standard practice, exclusion devices to protect migratory birds would be used, as needed. Excavation would be required prior to the removal of abutments and piers; excavation near piers may require the use of cofferdams. Temporary access roads would be required to access work areas below the bridges; removal of vegetation is anticipated for the construction of temporary access roads or in locations where access is necessary to safely facilitate construction. In accordance with Caltrans standard practice, Environmentally Sensitive Area fencing would be used to protect riparian vegetation that is outside of the disturbance area, and vegetation would be removed outside of the nesting period for migratory birds (February 15 – September 1). Relocation of existing buried and overhead electrical utilities would be coordinated with the appropriate utility companies.

No borrow or disposal of earthen material is anticipated for this project. All vehicle parking and construction stockpiling would occur within Caltrans right-of-way; Temporary Construction Easements would be required for work outside of Caltrans' right-of-way. The project would require the acquisition of minor amounts of new right-of-way to better accommodate future bridge maintenance and access.

## **Project Alternatives**

Two project alternatives, one of which is a “no-build” alternative, were developed as potential solutions to address the purpose and need for the proposed project.

Alternative 1 (Build Alternative) is the preferred alternative as it meets the project purpose and need.

Alternative 2 (No Build Alternative) does not meet the purpose and need of this project. Ongoing maintenance would be required to maintain the existing bridges. This strategy would result in a higher cost to the taxpayer, and greater and prolonged environmental disturbance, while only temporarily delaying replacement of the aging bridges.

## **Permits and Approvals**

Proposed work activities would require permits from the California Department of Fish and Wildlife (CDFW), U.S. Army Corps of Engineers (ACOE) (non-reporting), and the Regional Water Quality Control Board (RWQCB).

A Water Pollution Control Program (WPCP) would be prepared and implemented in accordance with Caltrans Standard Specifications for Water Pollution Control (Caltrans, 2016a).



Figure 1: Project Vicinity Map

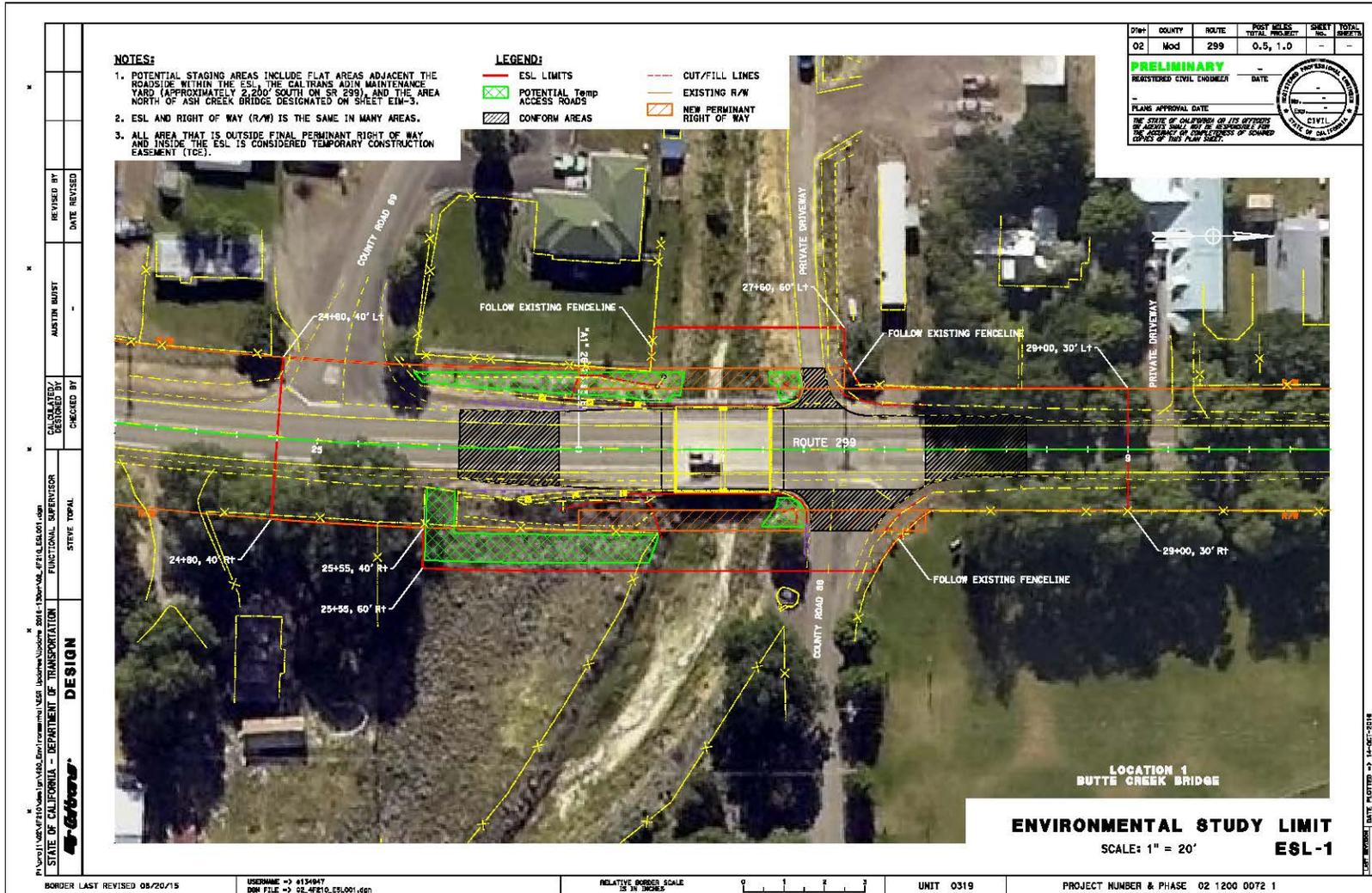


Figure 2a: Project Location Map

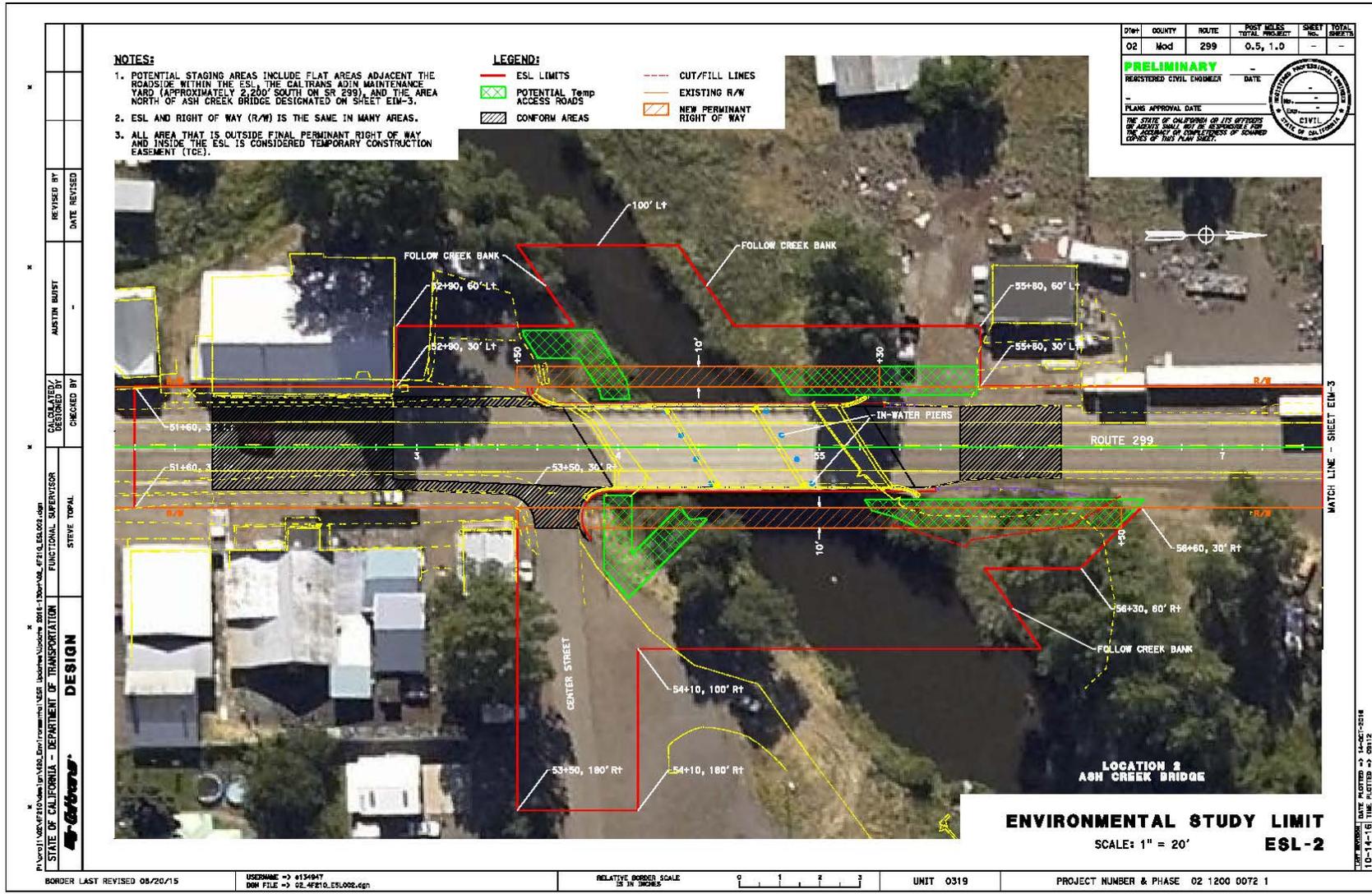


Figure 2b: Project Location Map

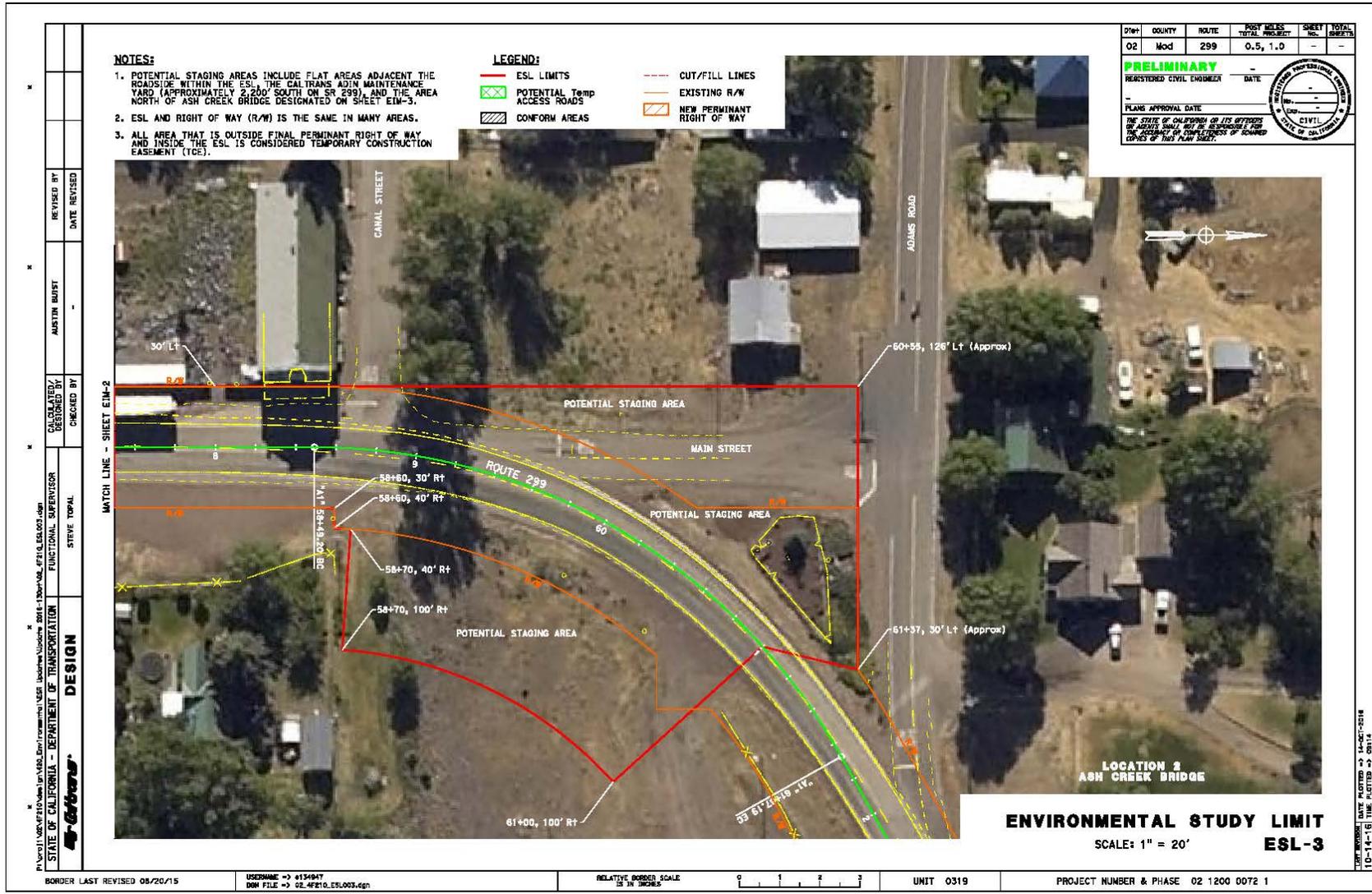


Figure 2c: Project Location Map



## Chapter 2. CEQA Environmental Checklist

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This checklist identifies physical, biological, social, and economic factors that might be affected by the proposed project. In many cases, background studies performed in connection with the projects indicate no impacts. A NO IMPACT answer in the last column reflects this determination. Where there is a need for clarifying discussion, the discussion is included in the section following the checklist. The words "significant" and "significance" used throughout the following checklist are related to CEQA, not NEPA, impacts. The questions in this form are intended to encourage the thoughtful assessment of impacts and do not represent thresholds of significance.

Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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**I. AESTHETICS:** Would the project:

a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The project site is located along SR 299 within the community of Adin. The project site is not located within an area designated by Modoc County as a scenic area; however, it is within an area designated by the state of California as an Eligible State Scenic Highway – Not Officially Designated (Caltrans, 2016c).

Minor vegetation removal is necessary for this project in order to accommodate construction activities and safety requirements. In accordance with Caltrans standard construction specifications, areas cleared of vegetation during construction activities would be reseeded following construction.

The proposed project consists of the replacement of existing bridges, and would have no impact to scenic vistas, scenic resources, and would not substantially degrading the existing visual character or quality of the site and its surroundings. The proposed project would not create a new source of light or glare.

The proposed project would have no impact to aesthetics.

Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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**II. 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 Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

There is no Prime Farmland, Unique Farmland, Farmland of Statewide Importance, or a Williamson Act contract in the project vicinity (California Department of Conservation, 2016a). Some Farmland of Local Importance is located northeast of Ash Creek Bridge in a vacant, graveled area that would be temporarily used by the project for vehicle parking and stockpiling of materials. The parcel is not currently in use as farmland. Vehicle parking and/or stockpiling of materials are not activities that are anticipated to have an impact on the designation of the parcel as Farmland of Local Importance.

Land in the immediate project vicinity is within the town of Adin and is not considered to be forest land and/or timberland.

The proposed project would have no impact to agriculture and forest resources.

Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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**III. AIR QUALITY:** Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:

a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) 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 (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

See Section 3.1: Air Quality.

**IV. BIOLOGICAL RESOURCES:** Would the project:

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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 Game or US Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

See Section 3.2: Biological Resources.

**V. CULTURAL RESOURCES:** Would the project:

a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Literature and record searches of the proposed project area included visits to and/or contacts with a number of repositories, agencies, organizations, and Native American representatives. The cultural resources field review for this project was conducted in 2016. The purpose of these efforts was to identify and evaluate any cultural resources that may exist within the project Area of Potential Effects (APE), and to assess any effects that the proposed project might have related to the cultural resources.

Both the Butte Creek Bridge and Ash Creek Bridge have been evaluated by Caltrans (Caltrans, Office of Environmental Analysis, North Region, 2016a) and determined to be Category 5 bridges (i.e., not eligible for inclusion in the National Register of Historic Places or the California Register of Historical Resources). The proposed project would have no impact to historical resources.

Three previously recorded archaeological sites were identified within the project vicinity; these resources are not within the project APE and would not be affected by the proposed project (Caltrans, Office of Environmental Analysis, North Region, 2016a). The proposed project would have no impact to archaeological resources.

The Adin Supply Company is a National Register Listed Property that is located adjacent to the APE. A small curb (within the APE) within Caltrans right-of-way would be replaced in the street in front of the storefront, at the request of the property owner. This work would not affect the Adin Supply Company building, or its listing on the National Register of Historic Places, as the work would consist of replacing an existing feature within Caltrans right-of-way, and would not consist of work related to the Adin Supply Company building.

Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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It is Caltrans' policy to avoid impacting cultural resources whenever possible. If buried cultural materials are encountered during construction, it is Caltrans' policy that work stop in the area until a qualified archaeologist can evaluate the nature and significance of the find.

There are no known paleontological resources in the proposed project limits; the proposed project is not expected to have an impact to paleontological resources.

The proposed project would have no impact to cultural resources.

**VI. GEOLOGY AND SOILS:** Would the project:

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The project site is not located in an area that contains a known earthquake fault (California Department of Conservation, 2016b), or that is subject to strong seismic ground shaking, seismic-related ground failure, and/or landslides.

Soil types found in the project area are not known to be expansive (Natural Resources Conservation Service, 2016). While some soil types in the proposed project area can have some unstable properties, work activities would be within the existing roadway and disturbed areas, and would not include new facilities on unstable soil.

Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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The project does not include the use of septic tanks and/or alternative waste water disposal systems.

The proposed project would have no impact to geology and soils.

**VII. CLIMATE CHANGE:** Would the project:

- a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?
- b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

An assessment of the greenhouse gas emissions and climate change is included in the section following the checklist. While Caltrans has included this good faith effort in order to provide the public and decision-makers as much information as possible about the project, it is Caltrans determination that in the absence of further regulatory or scientific information related to GHG emissions and CEQA significance, it is too speculative to make a significance determination regarding the project's direct and indirect impact with respect to climate change. Caltrans does remain firmly committed to implementing measures to help reduce the potential effects of the project. These measures are outlined in the section following the checklist.

See Section 3.3: Climate Change.

**VIII. HAZARDS AND HAZARDOUS MATERIALS:** Would the project:

- |  |                          |                          |                                     |                                     |
|--|--------------------------|--------------------------|-------------------------------------|-------------------------------------|
| a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?  | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| 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?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| 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?                                   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| 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 for people residing or working in the project area? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

See Section 3.4: Hazards and Hazardous Materials.

**IX. HYDROLOGY AND WATER QUALITY:** Would the project:

a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
j) Inundation by seiche, tsunami, or mudflow	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

See Section 3.5: Hydrology and Water Quality.

**X. LAND USE AND PLANNING:** Would the project:

a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The proposed project would not physically divide an established community.

Land in the immediate project vicinity is within the town of Adin. The project consists of the replacement of existing bridges; there is no conflict with regard to any applicable land use plan, policy, and or regulation of an agency with jurisdiction over the project (Modoc County, 1998). The project would require the acquisition of minor amounts of new right-of-way.

There are no habitat conservation plans and/or natural community conservation plans that apply to the project site.

The proposed project would have no impact to land use and planning.

**XI. MINERAL RESOURCES:** Would the project:

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The proposed project consists of the replacement of bridges; there would be no impact to mineral resources.

Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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**XII. NOISE:** Would the project result in:

- |   |                          |                          |                                     |                                     |
|---|--------------------------|--------------------------|-------------------------------------|-------------------------------------|
| a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?  | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| 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 expose people residing or working in the project area to excessive noise levels? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| ) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

See Section 3.6: Noise.

**XIII. POPULATION AND HOUSING:** Would the project:

- |   |                          |                          |                          |                                     |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Induce substantial 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)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

The proposed project consists of the replacement of existing bridges; there would be no impact to population growth, or displacement of housing or people.

Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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**XIV. 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:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The proposed project consists of the replacement of existing bridges; there would be no impact related to public services. Provisions would be made during construction to minimize traffic delays and to allow access and passage to emergency vehicles.

The proposed project would have no impact to public services.

**XV. 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The proposed project consists of the replacement of existing bridges; there would be no impact to recreation.

Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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**XVI. TRANSPORTATION/TRAFFIC:** Would the project:

a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

See Section 3.7: Transportation/Traffic.

Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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**XVII. TRIBAL CULTURAL RESOURCES:** Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

- |   |                          |                          |                          |                                     |                                     |                                     |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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 Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |

There are no tribal cultural resources that are listed or eligible for listing in the California Register of Historical Resources, or in a local register or historical resources, or determined to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1 within the project limits.

There would be no project-related impacts to tribal cultural resources.

**XVII. UTILITIES AND SERVICE SYSTEMS:** Would the project:

- |   |                          |                          |                          |                                     |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?                            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?                                     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The proposed project consists of the replacement of existing bridges; there would be no impact to utilities and service systems.

**XVIII. MANDATORY FINDINGS OF SIGNIFICANCE**

a) Does the project have the potential to 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The proposed project consists of the replacement of existing bridges; there would be no impact related to mandatory findings of significance.

## Chapter 3. Discussion of Environmental Impacts

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### 3.1 Air Quality

The proposed project would not increase capacity on SR 299, and would not result in any permanent operational-related air quality impacts.

The proposed project would not expose sensitive receptors to substantial pollutant concentrations, or create objectionable odors.

The proposed project may result in the generation of short-term construction-related air emissions, including fugitive dust and exhaust emissions from construction equipment. Fugitive dust, sometimes referred to as windblown dust or PM10, would be the primary short-term construction impact, which may be generated during excavation, grading, pavement grinding, and hauling activities. Both fugitive dust and construction equipment exhaust emissions would be temporary and transitory in nature, and would not result in long-term adverse conditions. Temporary construction emissions related to greenhouses gases have been addressed in Section 3.3: Climate Change.

The proposed project would have a less-than-significant impact to air quality.

### 3.2 Biological Resources

Biological resources-related literature and record searches of the proposed project area included review of numerous databases, lists, and maps, as well as visits to and/or contacts with relevant agencies (Caltrans, Office of Environmental Management, North Region, 2016).

Biological field surveys were conducted on multiple occasions in 2015 and 2016 to assess the existing environment, gather information on the presence of special status species, and determine project level impacts with regard to biological resources.

Results and findings based on the above literature searches, surveys, and analyses are presented below.

#### **Habitats and Natural Communities of Concern**

No natural communities of special concern were observed in the proposed project area.

Habitats of concern within the proposed project area include riparian habitat and riverine/waters habitat. These habitats are protected by both federal and State laws and regulations, and impacts to these resources require permits or agreements from resource agencies.

#### ***Riparian Habitat***

Approximately 0.072 acres of riparian vegetation was observed within the project ESL, including both Butte Creek and Ash Creek. The estimated average width of the riparian corridor within the ESL is approximately three to four feet for Butte Creek and four to eight feet for Ash Creek, and is confined to streambanks on both sides of each creek. Riparian vegetation was observed along the banks in broken bands and patches, and is sparse, as heavy foot traffic occurs in these areas. Stream banks adjacent to privately owned lands consist mostly of annual grasses.

Mature tree stands, of any type, provide limited canopy cover or shade along the banks of Butte Creek and Ash Creek.

Of the 0.072 acres of riparian vegetation observed within the project ESL, an estimated 0.070 acre of riparian vegetation would be temporary impacted, and approximately 0.002 acre of riparian vegetation would be permanently impacted (Table 2). Temporary impacts include the clearing of vegetation in locations where access is necessary to facilitate the construction of the new bridges and removal of the existing bridges. Permanent impacts include the removal of vegetation in locations needed to accommodate the wider abutments proposed for the new bridges.

**Table 2: Estimated Riparian Habitat and Impact within the ESL**

<b>Riparian Habitat Area</b>						
<b>Bridge Type</b>	<b>Butte Creek</b>		<b>Ash Creek</b>		<b>TOTAL</b>	
	<b>Square Feet</b>	<b>Acre</b>	<b>Square Feet</b>	<b>Acre</b>	<b>Square Feet</b>	<b>Acre</b>
<b>Existing</b>	860	0.020	2,252	0.052	2,898	0.072
<b>Permanent Impact</b>	34	0.001	46	0.001	77	0.002
<b>Temporary Impact</b>	826	0.019	2,206	0.051	2,821	0.070

The total estimated riparian area for the combined watersheds (Butte Creek and Ash Creek) is approximately 379,151 acres (Caltrans, Office of Environmental Management, North Region, 2016). Although the proposed project would result in 0.070 acres of temporary impacts and 0.002 acres of permanent impacts to riparian habitat, this is only a fraction of the total riparian vegetation area within the Butte Creek and Ash Creek watersheds. Natural revegetation and recruitment is expected to quickly replace riparian functions and values over the area lost to permanent impacts.

Impacts from the proposed project would not have a substantial adverse effect, either directly or indirectly, on the riparian habitat on a local or regional level, and have been determined to be less-than-significant; however, the following Caltrans standard practices would be included:

- Vegetation removal would not exceed the minimum necessary to complete the project activities.
- Woody vegetation in riparian areas that are subject to temporary impacts would be trimmed instead of completely removed to promote rapid regrowth.
- Areas that are temporarily disturbed during construction would be stabilized by re-vegetating them with native grasses and forbs.
- Best Management Practices (BMPs) for erosion control would be in place during all phases of construction to lessen impacts to riparian habitats as a result of increased sediment from eroding banks.
- To prevent unnecessary vegetation removal on both banks upstream and downstream of the bridges, temporary protective fencing would be installed during construction to protect existing and adjacent native plant communities located within the project ESL.

***Waters/Riverine Habitat***

An investigation of ordinary high water marks (OHWM), completed by Caltrans biological staff, identified approximately 22,292 square feet or 0.512 acre of stream habitat within the project ESL. Of this amount, an estimated 22,252 square feet or 0.511 acre of stream habitat would be temporary impacted, and approximately 40 square feet or 0.001 acre of stream habitat would be

permanently impacted by project activities. Temporary impacts are a result of in-water work activities at each creek, including but not limited to clear water diversion and installation and dewatering of cofferdams. In-water work is needed to isolate construction activities from the active stream flow during the construction of the abutments and piers at Ash Creek. Permanent impacts are a result of the placement of the new in-water piers.

Table 3 provides estimated stream habitat and potential impacts that could result from proposed construction activities to Butte Creek and Ash Creek within the project ESL.

**Table 3: Estimated Stream Habitat and Impacts within the ESL**

Stream Habitat Area						
Bridge Type	Butte Creek		Ash Creek		Total	
	Square Feet	Acre	Square Feet	Acre	Square Feet	Acre
Existing	4,954	0.114	17,338	0.398	22,292	0.512
Permanent Impact	0.00	0.00	40.00 <sup>2</sup>	0.001	40.00	0.001
Temporary Impact	4,954	0.114	17,298	0.397	22,252	0.511
Net Gain	183 <sup>1</sup>	0.004	336.00 <sup>3</sup>	0.008	519	0.012

<sup>1</sup> Removal of Pier 2 at Butte Creek Bridge would provide an additional 183 square feet of stream habitat.

<sup>2</sup> New piers for Ash Creek Bridge are pile extension and therefore do not have footings. The pier columns are 30 inches in diameter. The area for each column is 4.90 square feet. There are a total of eight columns.

<sup>3</sup>The area for the existing piers at Ash Creek Bridge is 188 square feet each. There are currently two piers. The removal of these piers would provide an additional 376 square feet of stream habitat.

The total estimated open water (stream habitat) for the combined watersheds (Butte Creek and Ash Creek) is approximately 96,473,762.88 square feet or 2,214.73 acres (Caltrans, Office of Environmental Management, North Region, 2016). The removal of existing Pier 2 at Butte Creek, and the replacement of existing piers with pier columns at Ash Creek would provide an additional 519 square feet, or 0.012 acre, of stream habitat within the project ESL. There is no net loss of open water as a result of the proposed project, and a net gain of stream habitat would occur. The proposed project would not significantly impact waters, directly or indirectly, on a local or regional level.

The proposed project would have a less-than-significant impact to waters.

**Special-Status Animal Species**

Based on database queries, a list of special-status animal species with the potential to occur within the ESL was compiled and evaluated (Appendix A). Special-status animal species with the potential to occur within the project limits are discussed in this section.

**Special-Status Bat Species**

The as-built plans and bridge inspection reports suggested that the existing bridge types have the potential to provide day and night roosting habitat for special-status bat species (Pallid bat (*Antrozous pallidus*), Big brown bat (*Espesicus fuscus*), California myotis (*Myotis californicus*), little brown bat (*Myotis lucifugus*), long-legged myotis (*Myotis volans*), fringed myotis (*Myotis thysanodes*), long-eared myotis (*Myotis evotis*), western small-footed myotis (*Myotis ciliolabrum*), and Yuma myotis (*Myotis yumanensis*)); however, they do not provide hibernation

roosting habitat. The existing decks lack hollow interiors that would normally provide roosting conditions suitable for hibernation. Several daylight surveys were conducted to determine if bats have been using the existing bridge structures as night or day roosting habitat. No bats were observed within the bridge joints on either structure, and are not being used by day roosting bats. Based on field observations, night roosting appears to be light and likely seasonal at Ash Creek Bridge, while night roosting is extremely light, if any, at Butte Creek Bridge. There is no evidence of a maternity colony or hibernacula use.

Based on the species requirements and the size of trees in the project area, proposed tree removal activities are not anticipated to have a direct impact on bats, as bats are not anticipated to be using existing riparian vegetation for roosting.

The removal of vegetation in locations where access is necessary to facilitate the replacement and demolition and removal of the existing bridge structures may result in impacts to bats foraging habitats. However, downstream and upstream reaches of Ash Creek contain open water and riparian vegetation that would provide equal or greater foraging ground to bats. These foraging grounds are in proximity to the proposed project location and the bats could remain in the area between hunting forays without expending a large amount of energy. Also, Butte Creek would be dry during the construction season; therefore, bats would be least expected at this time and minimally impacted.

Impacts from the proposed project would not have an adverse effect, either directly or indirectly, on bats or their habitat on a local or regional level, and have been determined to be less-than-significant. .

### ***Migratory Bird Species***

Based on field observations, both Butte Creek Bridge and Ash Creek Bridge are used heavily by cliff swallows. Demolition of the existing bridges has the potential to affect swallow nesting under the bridge along the girders, piers, or beneath the exterior web and deck overhang, where nests are easily attached to the vertical surface. Removal of swallow nests on bridges during breeding season is prohibited by the Migratory Bird Treaty Act of 1918. The California Department of Fish and Game considers February 15 to September 1 to be the swallow nesting season. Netting installation is usually recommended to aid in the deterrent of the swallows from using the bridges. As Caltrans standard practice, when swallows are present, exclusion devices are installed prior to February 15, before the swallow arrive to nest.

Other migratory bird species may also be present, and may be utilizing trees and shrubs within the ESL as nesting habitat.

While the proposed project would have a less-than-significant impact to bird species of special concern, the following standard practices are included as part of the proposed project:

- Vegetation would be removed outside of the bird nesting season (i.e., removal would occur between September 1 and February 14).
- Bridge deck work must be done during the non-nesting season from September 1 to February 15.
- Nest removal must be done during the non-nesting season from September 1 to February 15, and nest materials must not be allowed to fall into waterways.
- Exclusion devices must be installed during the non-nesting season from September 1 to February 15.

- Exclusion devices must be one of the following materials:
  - Plastic sheeting that is thick enough to withstand the elements
  - Weather resistant polypropylene netting with 0.25-inch or smaller openings
- Install bird exclusion devices such that bird access to the underside of the bridge, including its exterior girders, is completely blocked.
- Clean bird waste or other debris from the contact surfaces of the bridge girders before installing the exclusion devices.
- Monitor the devices daily and maintain and repair them to keep them effective.

Upon completion of the work, bird exclusion devices would become property of the contractor and must be removed from the job site.

### **Special Status Plant Species**

Based on database queries, a list of special-status plant species with the potential to occur within the ESL was compiled and evaluated (Appendix A). The ESL supports suitable habitat for three special-status species; however, they were identified as having low potential to occur within the ESL. Following a floristic survey and several field reviews, conducted during the blooming periods of the flowers in accordance with CNPS Botanical Survey Guidelines, the identified special-status plant species were not observed within the ESL limits and no other special-status plant species were identified. The proposed project would have no impact to special-status plant species.

### **Threatened and Endangered Species**

The proposed project would have no impact to federally-listed or state-listed threatened and/or endangered species.

### **Invasive Species**

Several invasive plant species were observed within the proposed project area, including Scotch thistle and dyer's woad.

The proposed project would have a less-than-significant impact with regard to invasive species; however, to reduce the spread of invasive plant species and minimize the potential for disturbance that results in a decrease in prevalence of native plant species Caltrans would implement the following standard construction practices, as practicable:

- Efforts would be made to monitor and remove Scotch thistle and dyer's woad from the project ESL until construction begins to reduce the risk of spreading Scotch thistle and dyer's woad during construction.
- Plant species used for erosion control would consist of native species or non-persistent hybrids that would prevent invasive species from colonizing disturbed areas.
- Erosion control materials such as straw and seed mixes would be certified weed-free.
- Native vegetation would not be removed unless necessary for construction of the project.
- Caltrans would not allow transport of soil and/or plant materials from any areas that support invasive species to areas that support native-dominated plant communities.

### 3.3 Climate Change

Climate change refers to long-term changes in temperature, precipitation, wind patterns, and other elements of the earth's climate system. An ever-increasing body of scientific research attributes these climatological changes to greenhouse gas (GHG) emissions, particularly those generated from the production and use of fossil fuels. Research from such establishments as the Intergovernmental Panel on Climate Change (IPCC) are primarily concerned with the emissions of GHGs generated by human activity including carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), tetrafluoromethane, hexafluoroethane, sulfur hexafluoride (SF<sub>6</sub>), HFC-23 (fluoroform), HFC-134a (s, s, s, 2-tetrafluoroethane), and HFC-152a (difluoroethane).

In the United States, the main source of GHG emissions is electricity generation, followed by transportation. In California, however, transportation sources (including passenger cars, light duty trucks, other trucks, buses, and motorcycles) make up the largest source (second to electricity generation) of GHG emitting sources. The dominant GHG emitted is CO<sub>2</sub>, primarily from fossil fuel combustion.

There are four primary strategies for reducing GHG emissions from transportation sources: 1) improving the transportation system and operational efficiencies, 2) reducing growth of vehicle miles traveled (VMT), 3) transitioning to lower GHG emitting fuels, and 4) improving vehicle technologies. To be most effective all four strategies should be pursued collectively. The following Regulatory Setting section outlines state and federal efforts to comprehensively reduce GHG emissions from transportation sources.

#### Regulatory Setting

This section outlines state and federal efforts to comprehensively reduce GHG emissions from transportation sources.

##### **State**

With the passage of several pieces of legislation including State Senate and Assembly bills and Executive Orders, California has been innovative and pro-active in addressing GHG emissions and climate change.

##### **Assembly Bill 1493 (AB 1493), Pavley, Vehicular Emissions: Greenhouse Gases, 2002:**

This bill requires the California Air Resources Board (ARB) to develop and implement regulations to reduce automobile and light truck GHG emissions. These stricter emissions standards were designed to apply to automobiles and light trucks beginning with the 2009-model year.

**Executive Order S-3-05 (EO) (June 1, 2005):** The goal of this EO is to reduce California's GHG emissions to: 1) year 2000 levels by 2010, 2) year 1990 levels by the 2020, and 3) 80 percent below the year 1990 levels by 2050. This goal was further reinforced with the passage of Assembly Bill 32 in 2006 and SB32 in 2016.

**Assembly Bill 32 (AB 32), Chapter 488, 2006 Núñez and Pavley, The Global Warming Solutions Act of 2006:** AB 32 codified the 2020 GHG emissions reduction goals as outlined in EO S-3-05, while further mandating that ARB create a scoping plan and implement rules to achieve "real, quantifiable, cost-effective reductions of greenhouse gases." The Legislature also

intended that that the statewide GHG emissions limit continue in existence and be used to maintain and continue reductions in emissions of greenhouse gases beyond 2020 (Health and Safety Code Section 38551(b)). The law requires ARB to adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective GHG reductions.

**Executive Order S-20-06 (October 18, 2006):** This order establishes the responsibilities and roles of the Secretary of the California Environmental Protection Agency (Cal/EPA) and state agencies with regard to climate change.

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

**Senate Bill 97 (SB 97) Chapter 185, 2007, Greenhouse Gas Emissions:** required the Governor's Office of Planning and Research (OPR) to develop recommended amendments to the California Environmental Quality Act (CEQA) Guidelines for addressing GHG emissions. The amendments became effective on March 18, 2010.

**Senate Bill 375 (SB 375), Chapter 728, 2008, Sustainable Communities and Climate Protection:** This bill requires the California Air Resources Board (CARB) to set regional emissions reduction targets from passenger vehicles. The Metropolitan Planning Organization (MPO) for each region must then develop a "Sustainable Communities Strategy" (SCS) that integrates transportation, land-use, and housing policies to plan for the achievement of the emissions target for their region.

**Senate Bill 391 (SB 391) Chapter 585, 2009 California Transportation Plan:** This bill requires the State's long-range transportation plan to meet California's climate change goals under AB 32.

**Executive Order B-16-12 (March 2012)** orders State entities under the direction of the Governor including ARB, the Energy Commission, and Public Utilities Commission to support the rapid commercialization of zero emission vehicles. It directs these entities to achieve various benchmarks related to zero emission vehicles.

**Executive Order B-30-15 (April 2015),** establishes an interim statewide greenhouse gas emission reduction target to reduce greenhouse gas emissions to 40 percent below 1990 levels by 2030 in order to ensure California meets its target of reducing greenhouse gas emissions to 80 percent below 1990 levels by 2050. It further orders that all state agencies with jurisdiction over sources of greenhouse gas emissions to implement measures, pursuant to statutory authority, to achieve reductions of greenhouse gas emissions to meet the 2030 and 2050 greenhouse gas emissions reductions targets. It also directs ARB to update the Climate Change Scoping Plan to express the 2030 target in terms of million metric tons of carbon dioxide equivalent (MMTCO<sub>2e</sub>). Finally, it requires the Natural Resources Agency to update the state's climate adaptation strategy, Safeguarding California, every three years, and to ensure that its provisions are fully implemented.

**Senate Bill 32 (SB32) Chapter 249, 2016**, this legislation codifies the greenhouse gas reduction targets to achieve a mid-range goal of 40 percent below 1990 levels by 2030 established in EO B-30-15.

### ***Federal***

Although climate change and GHG reduction are a concern at the federal level; to date no national standards have been established for nationwide mobile source GHG reduction targets, nor have any regulations or legislation been enacted specifically to address climate change and GHG emissions reduction at the project level.

Climate change and its associated effects are being addressed through various efforts at the federal level to improve fuel economy and energy efficiency.

**The Energy Policy Act of 1992** (102nd Congress H.R.776.ENR, abbreviated as EPACT92) was passed by Congress and set goals, created mandates, and amended utility laws to increase clean energy use and improve overall energy efficiency in the United States. The Act consists of twenty-seven titles detailing various measures designed to lessen the nation's dependence on imported energy, provide incentives for clean and renewable energy, and promote energy conservation in buildings. Title III of EPACT92 addresses alternative fuels. It gave the U.S. Department of Energy administrative power to regulate the minimum number of light duty alternative fuel vehicles required in certain federal fleets beginning in fiscal year 1993. The primary goal of the Program is to cut petroleum use in the United States by 2.5 billion gallons per year by 2020

**Energy Policy Act of 2005(109th Congress H.R.6 (2005-2006)** Sets forth an energy research and development program covering: (1) energy efficiency; (2) renewable energy; (3) oil and gas; (4) coal; (5) Indian energy; (6) nuclear matters and security; (7) vehicles and motor fuels, including ethanol; (8) hydrogen; (9) electricity; (10) energy tax incentives; (11) hydropower and geothermal energy; and (12) climate change technology.

**Energy Policy and Conservation Action of 1975 and Corporate Average Fuel Standards**  
The Energy Policy and Conservation Act of 1975 (42 USC Section 6201 [1975]) establishes fuel economy standards for on-road motor vehicles sold in the United States. Compliance with federal fuel economy standards is determined through the Corporate Average Fuel Economy (CAFE) program on the basis of each manufacturer's average fuel economy for the portion of its vehicles produced for sale in the United States.

**Executive Order 13514**, Federal Leadership in Environmental, Energy, and Economic Performance 74 *Federal Register* 52117 (October 8, 2009). The Executive Order set sustainability goals for federal agencies and focuses on making improvements in their environmental, energy, and economic performance. Instituted policy of the United States that Federal agencies measure, report, and reduce their GHG emissions from direct and indirect activities.

**Executive Order 13653** *Preparing the United States for the Impacts of Climate Change* (78 *Federal Register* 66817, November 6, 2013) Builds on a previously released (and since revoked) EO 13514 Federal Leadership in Environmental Energy, and Economics Performance to establish direction for federal agencies on how to improve on climate preparedness and resilience strategies.

**President Obama’s Climate Action Plan June 2013**, President Obama announced a comprehensive plan for action to cut carbon pollution, prepare the Nation for the impacts of climate change, and lead international efforts to address climate change as a global challenge. The Plan builds on the work of the 13 USGCRP member agencies, the USGCRP National Climate Assessment program, and the Interagency Climate Change Adaptation Task Force.

**Executive Order 13693 Planning for Federal Sustainability (80 Federal Register 15869, March 2015)**. Reaffirms the policy of the United States that Federal agencies measure, report, and reduce their GHG emissions from direct and indirect activities. Sets sustainability goals for all agencies to promote energy conservation, efficiency, and management while by reducing energy consumption and GHG emissions. Builds on the adaptation and resiliency goals in EO 13693 to ensure agency operations and facilities prepare for impacts of climate change. Revokes EO 13514.

U.S. EPA’s authority to regulate GHG emissions stems from the U.S. Supreme Court decision in *Massachusetts v. EPA* (2007). The Supreme Court ruled that GHGs meet the definition of air pollutants under the existing Clean Air Act and must be regulated if these gases could be reasonably anticipated to endanger public health or welfare. Responding to the Court’s ruling, U.S. EPA finalized an endangerment finding in December 2009. Based on scientific evidence it found that six greenhouse gases constitute a threat to public health and welfare. Thus, it is the Supreme Court’s interpretation of the existing Act and EPA’s assessment of the scientific evidence that form the basis for EPA’s regulatory actions.

U.S. EPA in conjunction with NHTSA issued the first of a series of GHG emission standards for new cars and light-duty vehicles in April 2010<sup>[1]</sup> and significantly increased the fuel economy of all new passenger cars and light trucks sold in the United States. The standards set a requirement to meet an average fuel economy of 34.1 miles per gallon by 2016. In August 2012, the federal government adopted the second rule that increases fuel economy for the fleet of passenger cars, light-duty trucks, and medium-duty passenger vehicles for model years 2017 and beyond to average fuel economy of 54.5 miles per gallon by 2025. Because NHTSA cannot set standards beyond model year 2021 due to statutory obligations and the rules’ long timeframe, a mid-term evaluation is included in the rule. The Mid-Term Evaluation is the overarching process by which NHTSA, EPA, and the California Air Resources Board (CARB) will decide on CAFE and GHG emissions standard stringency for model years 2022-2025. Standards for model years 2022 through 2025 have not been formally adopted by NHTSA.

NHTSA and EPA issued a Final Rule for “Phase 2” for medium and heavy duty vehicles to improve fuel efficiency and cut carbon pollution. The agencies estimate that the standards will save up to 2 billion barrels of oil and reduce CO2 emissions by up to 1.1 billion metric tons over the lifetimes of model years 2018-2029 vehicles.

### **Project Analysis**

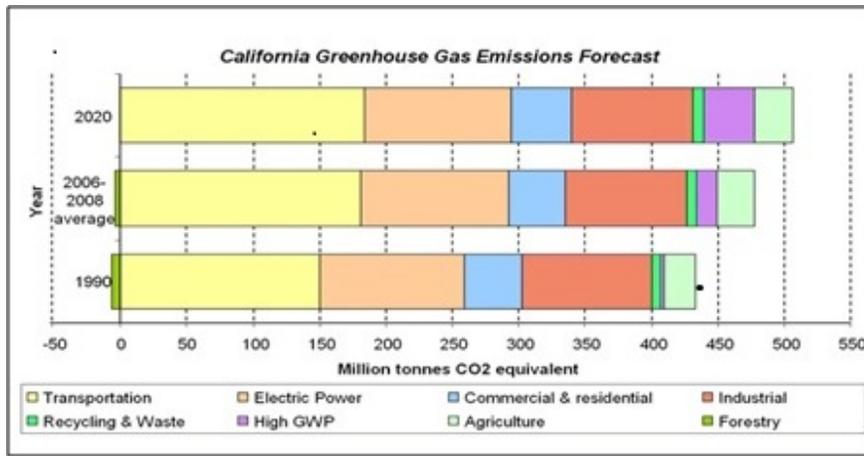
An individual project does not generate enough GHG emissions to significantly influence global climate change. Rather, global climate change is a cumulative impact. This means that a project may contribute to a potential impact through its *incremental* change in emissions when

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<sup>[1]</sup> <http://www.c2es.org/federal/executive/epa/greenhouse-gas-regulation-faq>

combined with the contributions of all other sources of GHG.<sup>1</sup> In assessing cumulative impacts, it must be determined if a project's incremental effect is "cumulatively considerable" (CEQA Guidelines sections 15064(h)(1) and 15130). To make this determination the incremental impacts of the project must be compared with the effects of past, current, and probable future projects. To gather sufficient information on a global scale of all past, current, and future projects in order to make this determination is a difficult, if not impossible, task.

The AB 32 Scoping Plan mandated by AB 32 contains the main strategies California will use to reduce GHG emissions. As part of its supporting documentation for the Draft Scoping Plan, ARB released the GHG inventory for California (forecast last updated: October 28, 2010). The forecast is an estimate of the emissions expected to occur in the year 2020 if none of the foreseeable measures included in the Scoping Plan were implemented. The base year used for forecasting emissions is the average of statewide emissions in the GHG inventory for 2006, 2007, and 2008.



Source: <http://www.arb.ca.gov/cc/inventory/data/forecast.htm>

**Figure 3: California Greenhouse Gas Forecast**

Caltrans and its parent agency, the Business, Transportation, and Housing Agency, have taken an active role in addressing GHG emission reduction and climate change. Recognizing that 98 percent of California's GHG emissions are from the burning of fossil fuels and 40 percent of all human-made GHG emissions are from transportation, Caltrans has created and is implementing the Climate Action Program at Caltrans, published in December 2006.<sup>2</sup>

The purpose of the project is to repair and replace culverts in accordance with current requirements, as well as construct new drainage systems where appropriate. The proposed project would not increase capacity or vehicle miles travelled, therefore no increases in operational GHG emissions are anticipated.

<sup>1</sup> This approach is supported by the AEP: *Recommendations by the Association of Environmental Professionals on How to Analyze GHG Emissions and Global Climate Change in CEQA Documents* (March 5, 2007), as well as the South Coast Air Quality Management District (Chapter 6: The CEQA Guide, April 2011) and the US Forest Service (Climate Change Considerations in Project Level NEPA Analysis, July 13, 2009).

<sup>2</sup> Caltrans Climate Action Program is located at the following web address: [http://www.dot.ca.gov/hq/tpp/offices/ogm/key\\_reports\\_files/State\\_Wide\\_Strategy/Caltrans\\_Climate\\_Action\\_Program.pdf](http://www.dot.ca.gov/hq/tpp/offices/ogm/key_reports_files/State_Wide_Strategy/Caltrans_Climate_Action_Program.pdf)

### **Construction Emissions**

Greenhouse gas emissions for transportation projects can be divided into those produced during construction and those produced during operations. Construction GHG emissions include emissions produced as a result of material processing, emissions produced by onsite construction equipment, and emissions arising from traffic delays due to construction. These emissions would be produced at different levels throughout the construction phase; their frequency and occurrence can be reduced through innovations in plans and specifications, and by implementing traffic management practices during construction phases.

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

### **CEQA Conclusion**

While construction would result in GHG emissions, it is anticipated that the project would not cause any increase in operational GHG emissions. It is Caltrans' determination that in the absence of further regulatory or scientific information related to GHG emissions and CEQA significance, it is too speculative to make a significance determination with regard to the project's direct impact and its contribution on the cumulative scale related to climate change. However, Caltrans is firmly committed to implementing measures to help reduce GHG emissions, as discussed below.

### **Greenhouse Gas Reduction Strategies**

There are typically two terms used when discussing the impacts of climate change. "Greenhouse Gas Mitigation" is a term for reducing GHG emissions in order to reduce or "mitigate" the impacts of climate change. "Adaptation," refers to the effort of planning for and adapting to impacts resulting from climate change (such as adjusting transportation design standards to withstand more intense storms and higher sea levels)<sup>3</sup>.

### **Greenhouse Gas Mitigation**

#### **AB 32 Compliance**

Caltrans continues to be actively involved on the Governor's Climate Action Team as ARB works to implement the Executive Orders S-3-05 and S-01-07 and help achieve the targets set forth in AB 32. Many of the strategies Caltrans is using to help meet the targets in AB 32 come from the California Strategic Growth Plan, which is updated each year.

The following measures would also be included in the project to reduce the GHG emissions and potential climate change impacts from the project:

- According to Caltrans Standard Specifications, the contractor must comply with all of the Lassen County Air Pollution Control District rules, ordinances, and regulations regarding air quality restrictions.
- Caltrans Standard Specifications, a required part of all construction contracts, should effectively reduce and control emission impacts during construction under the provisions of Section 7-1.02C "Emission Reduction" and Section 14-9.03 "Dust Control". Provision 14-9.02 "Air Pollution Control" requires the contractor to comply with all pertinent rules, regulations, ordinances, and statutes of the local air district.

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<sup>3</sup> [http://climatechange.transportation.org/ghg\\_mitigation/](http://climatechange.transportation.org/ghg_mitigation/)

- Landscaping reduces surface warming, and through photosynthesis, decreases CO<sub>2</sub>. The project includes replanting in areas cleared by construction activities. This replanting would help offset any potential CO<sub>2</sub> emissions increase.
- Vehicle traffic during construction would be controlled using the One Way Reversing Traffic Control method. Stop signs would be placed at both ends of the work area for each bridge location, and traffic would be able to proceed one direction at a time. Idling time for vehicles would be limited to the amount of time it takes for traffic from one direction to pass through the construction site.

### Adaptation Strategies

“Adaptation strategies” refer to how Caltrans and others can plan for the effects of climate change on the state’s transportation infrastructure and strengthen or protect the facilities from damage. Climate change is expected to produce increased variability in precipitation, rising temperatures, rising sea levels, storm surges and intensity, and the frequency and intensity of wildfires. These changes may affect the transportation infrastructure in various ways, such as damaging roadbeds by longer periods of intense heat; increasing storm damage from flooding and erosion; and inundation from rising sea levels. These effects would vary by location and may, in the most extreme cases, require that a facility be relocated or redesigned. There may also be economic and strategic ramifications as a result of these types of impacts to the transportation infrastructure.

Interim guidance has been released by The Coastal Ocean Climate Action Team (CO-CAT) as well as the Department as a method to initiate action and discussion of potential risks to the states infrastructure due to projected sea level rise.

All projects that have filed a Notice of Preparation as of the date of EO S-13-08, and/or are programmed for construction funding from 2008 through 2013, or are routine maintenance projects may, but are not required to, consider these planning guidelines. The proposed project is outside the coastal zone and direct impacts to transportation facilities due to projected sea level rise are not expected.

Executive Order S-13-08 also directed the Business, Transportation, and Housing Agency to prepare a report to assess vulnerability of transportation systems to sea level rise affecting safety, maintenance, and operational improvements of the system, and economy of the state. The Department continues to work on assessing the transportation system vulnerability to climate change, including the effect of sea level rise.

## **3.4 Hazards and Hazardous Materials**

An Initial Site Assessment (Caltrans, 2012) identified the potential for several minor hazardous waste/material issues within the project site; Asbestos Containing Material (ACM), Treated Wood Waste (TWW), Lead Containing Paint (LCP) related to thermoplastic and/or paint striping removal, and Aerially Deposited Lead (ADL).

Asbestos Containing Material (ACM) may be present in shims, joints, and/or bearing plates of the bridges. If ACM is present it would be treated in accordance with the Caltrans Standard Specifications, including requiring the contractor be notified as to the presence of suspected ACM. ACM removal must be conducted by a licensed and certified asbestos abatement contractor.

Treated wood is present within the project limits in the form of MBGR and sign posts. If Treated Wood Waste (TWW) is generated during this project, the storage and disposal would be in accordance with Caltrans Standard Specifications.

In accordance with Caltrans Standard Specifications, a Lead Compliance Plan would be prepared and implemented to address appropriate lead removal related to Lead Containing Paint (LCP) and Aerially Deposited Lead (ADL), including temporary storage, testing, and transportation to an appropriate disposal or recycling facility.

Prior to construction activities a Preliminary Site Investigation would be completed in order to identify and, if necessary, quantify the presence of these waste/material issues.

The project does not involve the routine transport or disposal of hazardous materials, and is not located on a known hazardous materials site.

The project is not in the vicinity of an existing or proposed school, or public or private airport and/or airstrip.

The project would not interfere with an emergency response plan and/or emergency evacuation plan, or expose people or structures to wildland fire-related hazards.

The proposed project would have a less-than-significant impact related to hazards and hazardous materials.

### **3.5 Hydrology and Water Quality**

In accordance with Caltrans standard construction specifications, the contractor would be required to submit a Water Pollution Control Program (WPCP) for the proposed project. The WPCP would be prepared in accordance with Caltrans' Storm Water Management Program and the Statewide Caltrans NPDES Permit issued by the State Water Resources Control Board. The WPCP would identify potential sources of pollution and includes Caltrans' Best Management Practices (BMPs) that would be implemented to avoid and/or minimize potential water quality-related impacts in the proposed project vicinity (Caltrans, 2016a).

The project consists of the replacement of existing bridges, and would not impact groundwater supplies, alter existing drainage patterns, create additional runoff water, or otherwise degrade water quality.

Both Butte Creek Bridge and Ash Creek Bridge are located in a Zone AE Special Flood Hazard Area (Caltrans, 2016b), where Butte Creek and Ash Creek cross SR 299. A Special Flood Hazard Area (SFHA) is defined as the land area covered by the floodwaters of base flood waters (FEMA, 2016). As part of the Floodplain Evaluation Report Summary prepared by Caltrans (2016), both creeks were modeled using HEC-RAS software. At Butte Creek, removing the pier lowers the 100-year water surface elevation less than 0.1 foot; there would be no impact to base flood water elevations. At Ash Creek, there is no significant difference between the substructure configuration of the existing and proposed structures. Since the 100-year flow does not interact with the bridge deck (currently or with the proposed, new structure), there is no significant change in the base flood elevations. This project would not significantly impact the floodplains or base flood elevations of Butte Creek or Ash Creek.

The project site is not located in an area that would be impacted by flooding as result of the failure of a levee or dam, or in an area subject to potential inundation by a seiche, tsunami, or mudflow.

The proposed project would have a less-than-significant impact related to hydrology and water quality.

### 3.6 Noise

Noise generated by construction activities is a function of the noise levels generated by individual pieces of construction equipment, the type and amount of equipment operating at any given time, the timing and duration of construction activities, and the proximity of nearby sensitive receptors.

This project would include demolition, earthwork/excavation, paving, concrete work, and pile driving. Construction noise would primarily result from the operation of heavy construction equipment and arrival and departure of heavy-duty trucks. Construction noise levels would vary on a day-to-day basis during each phase of construction depending on the specific task being completed.

FHWA’s Roadway Construction Noise Model was used to calculate the maximum noise levels anticipated during each phase of construction. Table 4 shows the construction noise levels for each major phase of the project. Table 5 shows noise generated by impact pile driving operations at various distances. Noise generated by construction equipment drops off at a rate of approximately 6 dB per doubling of distance.

**Table 4-Construction Noise Levels**

Construction Phase	Maximum Noise Level (Lmax, dBA)
	50 feet
Demolition	89
Earthwork	85
Paving	85
Structures	101

**Table 5-Noise from Impact Pile Driving Operation**

Distance from Pile Driving Operation (feet)	Maximum Noise Level (Lmax, dBA)
50	101
100	95
150	92
200	89
250	87
300	86

The loudest noise generating construction activity on this project would be pile driving. Pile driving typically occurs during daytime hours over short durations with breaks in between each

pile. Impact pile driving can generate noise levels up to 101 dBA Lmax at 50 feet. The nearest sensitive receptor to the Ash Creek Bridge is located approximately 200 feet southeast of the project area between Center Street and McDowell Street. At this distance, maximum noise levels during pile driving would be approximately 89 dBA Lmax. The nearest sensitive receptor to the Butte Creek Bridge is located approximately 70 feet southwest of the project area, west of SR 299 and south of Butte Creek. At this distance, maximum noise levels during pile driving would be approximately 98 dBA Lmax.

Construction noise is regulated by Caltrans Standard Specifications Section 14-8.02, "Noise Control". These requirements state:

- Control and monitor noise resulting from work activities.
- Do not exceed 86 dBA Lmax at 50 feet from the job site activities from 9 p.m. to 6 a.m.

Construction impacts are temporary in nature and sensitive receptors would not be exposed to construction noise for any longer than necessary to complete the project. With the implementation of Caltrans Standard Specifications, no substantial noise impacts from construction are anticipated.

The proposed project would not result in a permanent increase in noise levels and would have no long-term impact.

The project site is not located in the vicinity of a public or private airport and/or airstrip.

The proposed project would have a less-than-significant impact related to noise.

### **3.7 Transportation and Traffic**

The proposed project would not result in conflicts or impacts related to an applicable congestion management program, air traffic patterns, increased hazards due to a design feature, inadequate emergency access, and/or adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities.

Vehicle traffic during construction would be controlled using the One Way Reversing Traffic Control method. Stop signs would be placed at both ends of the work area for each bridge location, and traffic would be able to proceed one direction at a time. Idling time for vehicles would be limited to the amount of time it takes for traffic from one direction to pass through the construction site. Non-motorized traffic would be escorted through the construction area, or a designated route would be identified at each construction location.

The proposed project would have a less-than-significant impact to transportation and traffic.

## Chapter 4. List of Preparers

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This Initial Study was prepared by the California Department of Transportation, North Region Office of Environmental Management, with input from the following staff:

**Austin Buist**, Project Engineer  
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**Chelsea Tran-Wong**, Project Biologist  
Contribution: Natural Environment Study

**Chris Kuzak**, PQS Principal Architectural Historian  
Contribution: Cultural resource surveys and reports

**Chris Quiney**, Environmental Branch Chief  
Contribution: Document preparation oversight

**Dan McGann**, Project Archaeologist  
Contribution: Cultural resource surveys and reports

**Eric Akana**, Project Manager  
Contribution: Project management

**Julie McFall**, Environmental Coordinator  
Contribution: Document writer

**Mark Harvey**, NPDES Coordinator  
Contribution: Water Quality Assessment Report

**Mark Melani**, Engineering Geologist  
Contribution: Initial Site Assessment for Hazardous Waste

**Ryan Pommerenck**, Air and Noise Specialist  
Contribution: Construction Noise Memorandum and Pile Driving Vibration Impacts Memorandum

**Steve Topal**, Design Senior  
Contribution: Design oversight

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Special-Status Plants Evaluation For Butte and Ash Creek Replacement Project

Scientific Name	Common Name	Legal Status Federal/State/CNRS	Other Status	Habitat	Habitat Present?	Potential for Occurrence & Rationale
<b>PLANTS</b>						
<i>Arnica filifera</i>	hillside arnica	--/2B.2		Great Basin scrub   Lower montane coniferous forest   Meadow & seep. Open, damp depressions and meadows in sagebrush scrub or juniper woodland. 1310-2195 m.	No	Not present. Suitable habitat is not present within the ESL.
<i>Astragalus amicus</i>	Ash Valley milk-vetch	--/1B.3	BLM S-Sensitive   USFS S-Sensitive	Great Basin scrub   Pinon & juniper woodlands   Upper montane coniferous forest. Shallow barren volcanic outcrops in sagebrush-juniper-Jeffrey pine areas. 1565-1665.	No	Not present. Suitable habitat is not present within the ESL. ESL is out of species' elevation range.
<i>Astragalus lemmonii</i>	Lemmon's milk-vetch	--/1B.2	BLM S-Sensitive   USFS S-Sensitive	Great Basin scrub   Marsh & swamp   Meadow & seep   Wetland. Lakeshore, meadows and seeps. 1007-2200 m.	No	Not present. Suitable habitat is not present within the ESL.
<i>Chilochortus lanchebarbatum</i> var. <i>lanchebarbatum</i>	long-haired star-tulip	--/1B.2	BLM S-Sensitive   USFS S-Sensitive	Great Basin scrub   Lower montane coniferous forest   Meadow & seep   Vernal pool   Wetland. In wet meadows or grassy areas along drainages within forest. Clay soils. 975-2665 m.	No	Not present. Suitable habitat is not present within the ESL.
<i>Chrys otheroides</i>	wheat sedge	--/2B.2		Marsh & swamp   Meadow & seep   Pinon & juniper woodlands   Wetland. 1300-1540 m.	No	Not present. Suitable habitat is not present within the ESL.
<i>Chrys petasota</i>	Liddon's sedge	--/2B.3		Broadleaved upland forest   Lower montane coniferous forest   Meadow & seep   Pinon & juniper woodlands   Wetland. 825-2020 m.	No	Not present. Suitable habitat is not present within the ESL.
<i>Chrys sheldoni</i>	Sheldon's sedge	--/2B.2		Freshwater marsh   Lower montane coniferous forest   Marsh & swamp   Riparian scrub   Wetland. Mesic sites; along creeks and in wet meadows. 1200-2015 m.	Yes	Species was not observed during field surveys.
<i>Castropus castlegarensis</i>	Castlegar hawkherb	-/1.3		Riparian woodland moist rocky loam.	Yes	Species was not observed during field surveys.
<i>Chept's runcinata</i>	fiddleleaf hawkbeard	--/2B.2		Mojave desert scrub   Pinon & juniper woodlands. Moist, alkaline valley bottoms. 280-3110 m.	No	Not present. Suitable habitat is not present within the ESL.
<i>Cimicifuga howellii</i>	doublet	--/2B.3		Lower montane coniferous forest   Pinon & juniper woodlands. On slopes in dry gravelly volcanic soils. 1340-2380 m.	No	Not present. Suitable habitat is not present within the ESL.
<i>Dawsonia laeta</i>	Great Basin downingia	--/2B.2		Great Basin scrub   Marsh & swamp   Meadow & seep   Pinon & juniper woodlands   Vernal pool   Wetland. In mesic sites or wetlands. 1220-2200 m.	No	Not present. Suitable habitat is not present within the ESL.
<i>Dawsonia laeta</i>	Great Basin downingia	--/2B.2		Great Basin scrub   Marsh & swamp   Meadow & seep   Pinon & juniper woodlands   Vernal pool   Wetland. In mesic sites or wetlands. 1220-2200 m.	No	Not present. Suitable habitat is not present within the ESL.
<i>Eriogonum procerum</i>	prairie buckwheat	--/1B.2	BLM S-Sensitive   USFS S-Sensitive	Great Basin scrub   Pinon & juniper woodlands   Upper montane coniferous forest. Dry volcanic slopes and hills, (Jeppson Manual says granite). 1300-2705 m.	No	Not present. Suitable habitat is not present within the ESL.
<i>Eriogonum umbellatum</i> var. <i>glaberrimum</i>	Warner Mountains buckwheat	--/1B.3	BLM S-Sensitive   USFS S-Sensitive	Great Basin scrub   Lower montane coniferous forest   Upper montane coniferous forest. Sandy or gravelly sites. 1525-2300 m.	No	Not present. Suitable habitat is not present within the ESL. ESL is out of species' elevation range.
<i>Eum aleppicum</i>	Aleppo sars	--/2B.2		Great Basin scrub   Lower montane coniferous forest   Meadow & seep. 460-1500 m.	No	Not present. Suitable habitat is not present within the ESL.
<i>Gratiola heterosepala</i>	Boggs Lake hedge-hyssop	-/E/1B.2	BLM S-Sensitive	Freshwater marsh   Marsh & swamp   Vernal pool   Wetland. Clay soils; usually in vernal pools, sometimes on lake margins. 10-2375 m.	No	Not present. Suitable habitat is not present within the ESL.
<i>Ilama bakeri</i>	Baker's globe mallow	-/1.4.2		Chaparral   Pinon & juniper woodlands. Rocky loam or volcanic soils. 1000-2500 m.	No	Not present. Suitable habitat is not present within the ESL.
<i>Ivesia paniculata</i>	Ash Creek Ivesia	--/1B.2	BLM S-Sensitive   USFS S-Sensitive	Great Basin scrub   Pinon & juniper woodlands   Upper montane coniferous forest. Gravelly silt, volcanic ash on barren ridges. 1430-1915 m.	No	Not present. Suitable habitat is not present within the ESL. ESL is out of species' elevation range.
<i>Lomatium paniculaceum</i> ssp. <i>macdougalii</i>	MacDougal's lomatium	--/2B.2		Chenopods scrub   Great Basin scrub   Lower montane coniferous forest   Pinon & juniper woodlands. Volcanic soil. 1200-2065 m.	No	Not present. Suitable habitat is not present within the ESL.
<i>Lomatium rosenii</i>	Raven's lomatium	--/2B.3		Great Basin scrub. Open, slightly alkaline flats, poorly drained adobe soils. Often with Artemisia tridentata, Grayia, etc. 1000-2000 m.	No	Not present. Suitable habitat is not present within the ESL.
<i>Mertensia longiflora</i>	long bluebells	--/2B.2		Great Basin scrub   Lower montane coniferous forest. 1225-1920 m.	No	Not present. Suitable habitat is not present within the ESL.
<i>Mimulus cusickii</i>	Cusick's monkeyflower	--/2B.3		Great Basin scrub   Lower montane coniferous forest. Roadsides, gravelly sites. On scree, volcanic substrates. 1430-1500 m.	Yes	Species was not observed during field surveys.
<i>Mimulus evanescens</i>	ephemeral monkeyflower	--/1B.2	BLM S-Sensitive   USFS S-Sensitive	Great Basin scrub   Lower montane coniferous forest   Pinon & juniper woodlands. Gravelly or rocky sites; vernal mesic. 1250-1740 m.	No	Not present. Suitable habitat is not present within the ESL.
<i>Nemophila breviflora</i>	Great Basin nemophila	--/2B.3		Great Basin scrub   Meadow & seep   Upper montane coniferous forest. Mesic sites. 1520-2410 m.	No	Not present. Suitable habitat is not present within the ESL. ESL is out of species' elevation range.
<i>Penstemon lanchebarbatum</i>	Janish's beardtongue	--/2B.2	BLM S-Sensitive	Great Basin scrub   Lower montane coniferous forest   Pinon & juniper woodlands. Volcanic soils, gravelly sites. 1065-2350 m.	No	Not present. Suitable habitat is not present within the ESL.
<i>Pogogyne floribunda</i>	profuse-flowered pogogyne	-/1.4.2		Vernal pool   Wetland. Heavy clay soil; surrounding community often pine/juniper or sagebrush scrub. 946-1746 m.	No	Not present. Suitable habitat is not present within the ESL.
<i>Ranunculus macounii</i>	Macoun's buttercup	--/2B.2		Great Basin scrub   Meadow & seep   Pinon & juniper woodlands   Wetland. Mesic sites. 1400-1800 m.	No	Not present. Suitable habitat is not present within the ESL. ESL is out of species' elevation range.
<i>Scutellaria galericata</i>	marsh skullcap	--/2B.2		Lower montane coniferous forest   Marsh & swamp   Meadow & seep   Wetland. Swamps and wet places. 0-1950 m.	No	Not present. Suitable habitat is not present within the ESL.
<i>Siene oregona</i>	Oregon campion	--/2B.3		Great Basin scrub   Subalpine coniferous forest. 1675-2930 m.	No	Not present. Suitable habitat is not present within the ESL. ESL is out of species' elevation range.
<i>Stachys pilosa</i>	hairy marsh hedge-nettle	--/2B.3		Great Basin scrub   Meadow & seep. Mesic sites. 1200-1770 m.	No	Not present. Suitable habitat is not present within the ESL.
<i>Stemmatococcus lanchebarbatum</i> var. <i>lanchebarbatum</i>	woolly stemmatococcus	--/2B.2	BLM S-Sensitive	Great Basin scrub   Meadow & seep   Pinon & juniper woodlands. Exposed ridges and flats in shallow, rocky soil. Often in sagebrush at edges of other vegetation types. 1500-1930 m.	No	Not present. Suitable habitat is not present within the ESL. ESL is out of species' elevation range.
<i>Thelypodium howellii</i> ssp. <i>howellii</i>	Howell's thelypodium	--/1B.2	BLM S-Sensitive   USFS S-Sensitive	Great Basin scrub   Meadow & seep. Moist alkaline meadows. 1200-3930 m.	No	Not present. Suitable habitat is not present within the ESL.

<i>Thelypodium howellii</i> ssp. <i>howellii</i>	Howell's thelypodium	--/1B.2	BLM S-Sensitive   USFS S-Sensitive	Great Basin scrub   Meadow & seep. Moist alkaline meadows. 1200-3830 m.	No	Not present. Suitable habitat is not present within the ESL.
<i>Triteleia grandiflora</i>	large-flowered triteleia	--/2B.1		Great Basin scrub   Pinon & juniper woodlands. In rocky areas in sagebrush scrub, and in woodland. 700-1500 m.	No	Not present. Suitable habitat is not present within the ESL.
<p>Status Definition          California Native Plant Society (CNPS)          - = No status          3 = Need more information about this plant (Review List)          4 = Limited distribution (Watch List)          1B = Rare, threatened, or endangered in California and elsewhere          2B = Rare, threatened, or endangered in California but more common elsewhere          0.1 = Seriously endangered in California          0.2 = Fairly endangered in California          0.3 = Not very endangered in California</p>				<p>Federal          - = No status          State          - = No status          E = Endangered</p>		

Special-Status Wildlife Evaluation For Butte and Ash Creek Bridge Replacement Project						
Scientific Name	Common Name	Legal Status Federal/State	Other Status	Habitat	Habitat Present?	Potential for Occurrences & Rationale
<b>Amphibians</b>						
<i>Rana pretiosa</i>	Oregon spotted frog	T/--	BLM_S-Sensitive   CDFW_SSC-Species of Special Concern   IUCN_VU-Vulnerable	Low swampy areas in mountainous woodlands & wet meadows, springs, small cold streams & lakes in northeastern California. Standing water needed for breeding.	No	Not present. The ESL does not contain suitable habitat for the species.
<b>Birds</b>						
<i>Accipiter gentilis</i>	northern goshawk	--/--	BLM_S-Sensitive   CDF_S-Sensitive   CDFW_SSC-Species of Special Concern   IUCN_LC-Least Concern   USFS_S-Sensitive	Within, and in vicinity of, coniferous forest. Uses old nests, and maintains alternate sites. Usually nests on north slopes, near water. Red fir, lodgepole pine, Jeffrey pine, and aspens are typical nest trees.	No	Not present. The ESL does not contain suitable habitat for the species.
<i>Buteo swainsoni</i>	Swainson's hawk	--/T	BLM_S-Sensitive   IUCN_LC-Least Concern   USFWS_BCC-Birds of Conservation Concern	Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, & agricultural or ranch lands with groves or lines of trees. Requires adjacent suitable foraging areas such as grasslands, or alfalfa or grain fields supporting rodent populations.	Yes	Unlikely. Although the project ESL is generally within the species' range, there, the project ESL does not contain suitable habitat for the species. See NES for further discussion.
<i>Centrocercus urophasianus</i>	greater sage-grouse	--/--	BLM_S-Sensitive   CDFW_SSC-Species of Special Concern   IUCN_NT-Near Threatened   USFS_S-Sensitive	Found in the northeastern, Great Basin portion of state. Restricted to flat/rolling terrain vegetated by sagebrush, upon which it depends for both food and shelter.	No	Not present. The ESL does not contain suitable habitat for the species.
<i>Coccyzus americanus occidentalis</i>	western yellow-billed cuckoo	T/E	BLM_S-Sensitive   NABCI_RWL-Red Watch List   USFS_S-Sensitive   USFWS_BCC-Birds of Conservation Concern	Riparian forest nester, along the broad, lower flood-bottoms of larger river systems. Nests in riparian jungles of willow, often mixed with cottonwoods, w/ lower story of blackberry, nettles, or wild grape.	No	Not present. The ESL does not contain suitable habitat for the species.
<i>Grus canadensis tabida</i>	greater sandhill crane	--/T	BLM_S-Sensitive   CDFW_FP-Fully Protected   USFS_S-Sensitive	Nests in wetland habitats in northeastern California; winters in the Central Valley. Prefers grain fields within 4 mi of a shallow body of water used as a communal roost site, irrigated pasture used as loafing sites.	Yes	Unlikely. Although Butte and Ash Creeks are shallow streams, Butte Creek dries up during the summer months and both creeks are near agriculture lands, the project ESL lacks riparian thickets that would provide adequate habitat require by the species. See NES for further discussion.
<i>Haliaeetus leucocephalus</i>	bald eagle	D/E	BLM_S-Sensitive   CDF_S-Sensitive   CDFW_FP-Fully Protected   IUCN_LC-Least Concern   USFS_S-Sensitive   USFWS_BCC-Birds of Conservation Concern	Ocean shore, lake margins, & rivers for both nesting & wintering. Most nests within 1 mi of water. Nests in large, old-growth, or dominant live tree w/open branches, especially ponderosa pine. Roosts communally in winter.	No	Not present. The ESL does not contain suitable habitat for the species.
<i>Strix occidentalis caurina</i>	Northern spotted owl	T/--		Over the full extent of their range, Spotted Owls occur in a variety of habitat types centered around mature forests with dense canopies. The Northern Spotted Owl requires unlogged, expansive, mature coniferous forest stands with large trees and a complex array of vegetation types, sizes and ages. This subspecies tends to avoid crossing clearcut, recently logged, or brushy areas, but will forage in redwood forests that have been previously logged if some old and large trees remain.	No	Not present. The ESL does not contain suitable habitat for the species.
<b>Fish</b>						
<i>Catostomus microps</i>	Modoc sucker	E/E	AFS_EN-Endangered   CDFW_FP-Fully Protected   IUCN_EN-Endangered	Found in tributary streams of the upper Pit River. Found in large, shallow, muddy-bottomed pools. They are even found in intermittent streams. Spawn in riffle areas.	Yes	Unlikely. Although Butte and Ash Creeks are streams, Butte Creek does not flow year round and both creeks do not contain suitable pool for the species to utilize within the project ESL. See NES for further discussion.
<i>Chasmistes brevirostris</i>	shortnose sucker	E/E	AFS_EN-Endangered   CDFW_FP-Fully Protected   IUCN_EN-Endangered	Native to the Klamath and Lost River systems in California & Oregon. Spend most of year in open waters of large lakes. They feed on plankton. Spawn in tributary streams.	No	Not present. The ESL does not contain suitable habitat for the species.
<i>Deltistes luxatus</i>	Lost River sucker	E/E	AFS_EN-Endangered   CDFW_FP-Fully Protected   IUCN_EN-Endangered	Native to the Lost River system in California & Oregon. Primarily a lake species found in fairly deep water. Adults run up tributary streams to spawn in the spring.	No	Not present. The ESL does not contain suitable habitat for the species.
<i>Pit River Drainage Modoc Sucker Stream</i>	Pit River Drainage Modoc Sucker Stream	--/--		The Upper Pit River Watershed begins in the Warner Mountains of northeast California and flows in a southwesterly direction toward Shasta Lake. The watershed is characterized by sagebrush, juniper, and mixed conifer forests, rugged mountains, and broad alluvial valleys that contain significant riparian areas, meadows, and irrigated pastures.	No	Not present. The ESL does not contain designated critical habitat for the species.
<b>Mammals</b>						
<i>Antrozous pallidus</i>	pallid bat	--/--	BLM_S-Sensitive   CDFW_SSC-Species of Special Concern   IUCN_LC-Least Concern   USFS_S-Sensitive   WBWG_H-High Priority	Deserts, grasslands, shrublands, woodlands & forests. Most common in open, dry habitats with rocky areas for roosting. Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites. Day roosts include rock outcrops, mines, caves, tree hollows, buildings, and bridges. Night roosts commonly under bridges.	Yes	Likely. Assumed night roosts under bridge(s).
<i>Canis lupus</i>	gray wolf	E/E	IUCN_LC-Least Concern	Habitat generalists, historically occupying diverse habitats including tundra, forests, grasslands, and deserts. Primary habitat requirements are the presence of adequate ungulate prey, water, and low human contact.	No	Not present. The ESL does not contain suitable habitat for the species.
<i>Eptesicus fuscus</i>	big brown bat	--/--	IUCN_LC-Least Concern   WBWG_L-Low Priority	Variety of habit. Day roosts in mines, caves, buildings, bridges, and trees (e.g., ponderosa, aspen, oaks, and sycamores). Night roosts in open setting including buildings, mines, and bridges.	Yes	Likely. Assumed night roosts under bridge(s).
<i>Gulo gulo</i>	California wolverine	--/T	CDFW_FP-Fully Protected   IUCN_NT-Near Threatened   USFS_S-Sensitive	Found in the north coast mountains and the Sierra Nevada. Found in a wide variety of high elevation habitats. Needs water source. Uses caves, logs, burrows for cover & den area. Hunts in more open areas. Can travel long distances.	No	Not present. The ESL does not contain suitable habitat for the species.
<i>Lasiurus v. n. accubans</i>	silver-haired bat	--/--	IUCN_LC-Least Concern   WBWG_M-Medium Priority	Primarily a coastal & montane forest dweller feeding over streams, ponds & open brushy areas. Roosts in hollow trees, beneath exfoliating bark, abandoned woodpecker holes & rarely under rocks. Needs drinking water.	No	Not present. It's a tree roosting species, but may be present in the project ESL for water.
<i>Lasiurus cinereus</i>	hoary bat	--/--	IUCN_LC-Least Concern   WBWG_M-Medium Priority	Prefers open habitats or habitat mosaics, with access to trees for cover & open areas or habitat edges for feeding. Roosts in dense foliage of medium to large trees. Feeds primarily on moths. Requires water.	No	Not present. It's a tree roosting species, but may be present in the project ESL for water.
<i>Myotis californicus</i>	California myotis	--/--	IUCN_LC-Least Concern   WBWG_L-Low Priority	Variety of habitats from lower Sonoran desert scrub to forests. Wide variety of day roosts including mines, caves, buildings, rock crevices, hollow trees, and under tree bark. Crevices roosting. Night roosts in a wider variation of structures.	Yes	Likely. Assumed night roosts under bridge(s).

<i>Myotis ciliolabrum</i>	western small-footed myotis	--/--	BLM_S-Sensitive   IUCN_LC-Least Concern   WBWG_M-Medium Priority	Wide range of habitats mostly arid wooded & brushy uplands near water. Seeks cover in caves, buildings, mines & crevices. Prefers open stands in forests and woodlands. Requires drinking water. Feeds on a wide variety of small flying insects.	Yes	Likely. Assumed night roosts under bridge(s).
<i>Myotis evotis</i>	long-eared myotis	--/--	BLM_S-Sensitive   IUCN_LC-Least Concern   WBWG_M-Medium Priority	Found in all brush, woodland & forest habitats from sea level to about 9000 ft. prefers coniferous woodlands & forests. Nursery colonies in buildings, crevices, spaces under bark, & snags. Caves used primarily as night roosts.	Yes	Likely. Assumed night roosts under bridge(s).
<i>Myotis lucifugus</i>	little brown bat	--/--	IUCN_LC-Least Concern   WBWG_M-Medium Priority	Found primarily at higher elevations and higher latitudes, often associated with coniferous. Needs water nearby. Day roosts in hollow trees, rock outcrops, buildings, and occasionally mines and caves. Night roosts may be same structures used for day roost, but in more open locations. Hibernates generally in mines or caves.	Yes	Likely. Assumed night roosts under bridge(s).
<i>Myotis thysanodes</i>	fringed myotis	--/--	CDFW_WL-Watch List   IUCN_LC-Least Concern	In a wide variety of habitats, optimal habitats are pinyon-juniper, valley foothill hardwood & hardwood-conifer. Uses caves, mines, buildings or crevices for maternity colonies and roosts.	Yes	Likely. Assumed night roosts under bridge(s).
<i>Myotis volans</i>	long-legged myotis	--/--	IUCN_LC-Least Concern   WBWG_H-High Priority	Most common in woodland & forest habitats above 4000 ft. Trees are important day roosts; caves & mines are night roosts. Nursery colonies usually under bark or in hollow trees, but occasionally in crevices or buildings.	Yes	Likely. Assumed night roosts under bridge(s).
<i>Myotis yumanensis</i>	Yuma myotis	--/--	BLM_S-Sensitive   IUCN_LC-Least Concern   WBWG_LM-Low-Medium Priority	Optimal habitats are open forests and woodlands with sources of water over which to feed. Distribution is closely tied to bodies of water. Maternity colonies in caves, mines, buildings or crevices.	Yes	Likely. Assumed night roosts under bridge(s).
<i>Tadarida brasiliensis</i>	Brazilian or Mexican free-tailed bat	--/--	IUCN_LC-Least Concern   WBWG_L-Low Priority	Found mostly at lower elevations, but has been known to occur over 10,000 ft. in the Sierra Nevada. Is the most common species in the Central Valley of California. Roosts may vary considerably, from cliff faces, bridges, buildings, mines, and caves.	Yes	Likely. Assumed night roosts under bridge(s).
<b>Reptiles</b>						
<i>Actinemys marmorata</i>	western pond turtle	--/--	BLM_S-Sensitive   CDFW_SSC-Species of Special Concern   IUCN_VU-Vulnerable   USFS_S-Sensitive	A thoroughly aquatic turtle of ponds, marshes, rivers, streams & irrigation ditches, usually with aquatic vegetation, below 6000 ft elevation. Need basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 km from water for egg-laying.	Yes	Unlikely. Although the project ESL is within species' elevation range and contain stream habitat, only Ash Creek contains water year round. See NES for further discussion.
<b>Status Explanation:</b> <b>Federal</b> -- = No status definition D = Delisted E = Endangered				<b>State</b> -- = No status definition E = Listed as endangered under the California Endangered Species Act. T = Listed as threatened under the California Endangered Species Act.		