

Siskiyou 3 Bridges. Rail Upgrade Project

SISKIYOU COUNTY, CALIFORNIA

02-SIS-96-PM 52.48, 60.17, 88.26

EA#: 02-4E650

EFIS#: 02-1200-0012

Draft Initial Study & Proposed Mitigated Negative Declaration



Prepared by the State of California
Department of Transportation
April 2015

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General Information about this Document

What's in this document?

This Draft Initial Study with proposed Mitigated Negative Declaration (IS/MND) examines the potential environmental effects of a proposed bridge rail upgrade project on 3 bridges, in Siskiyou County on Highway 96 between Happy Camp and Interstate 5. The purpose of the project is to bring the bridge rails up to current standards at Thompson Creek, Seiad Creek and Beaver Creek bridges. 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. A printed copy of the document can be found at the following locations:
 - Caltrans District Office located at 1657 Riverside Drive in Redding. Monday-Friday, 7:30 a.m. to 4:30 p.m.
 - Siskiyou County Library, Happy Camp Branch, located at 143 Buckhorn Road in Happy Camp. Their hours are Tuesday 12pm-5pm.
 - Siskiyou County Library, Yreka Branch, located at 719 4th Street in Yreka. Their hours are Monday-Tuesday 1pm-5pm, Wednesday-Thursday 12pm-4pm, Saturday 12pm-4pm, Closed Friday and Sunday.
 - An electronic copy of the environmental document is also available on Caltrans' website at www.dot.ca.gov/dist3/departments/envinternet/envdoc.htm.
- Technical studies are available upon request by contacting Wes Stroud, Senior Environmental Planner at 530-225-2928, or Wesley.Stroud@dot.ca.gov.
- 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: Wesley Stroud
North Region Office of Environmental Mgmt., MS-30
1657 Riverside Drive
Redding, CA 96001

- You may also submit comments via e-mail to Wesley.Stroud@dot.ca.gov
- Submit comments by the deadline: May 18, 2015.

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: Wes Stroud, North Region Environmental Management, 1657 Riverside Drive, Redding, CA 96001; (530) 225-2928 Voice, or use the California Relay Service TTY number, 711.

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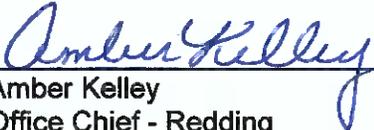
Siskiyou 3 Bridges. Rail Upgrade Project

In Siskiyou County, California, on State Route 96
Post Miles 52.48, 60.17, 88.26, between Happy Camp and Interstate 5.

**DRAFT INITIAL STUDY
WITH PROPOSED MITIGATED 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

4-16-15
Date

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Proposed Mitigated Negative Declaration

Pursuant to: Division 13, California Public Resources Code

Project Description

Caltrans proposes to replace non-standard bridge rails on three (3) bridges in Siskiyou County. The three (3) bridges are on Highway 96 at Thompson Creek, Seiad Creek and Beaver Creek, between Happy Camp and Interstate 5. Upgrading the bridge rails would require widening the bridge deck, foundations, abutments, and adding rock slope protection. Completion of the proposed project would require water diversions, in-stream work, minor grading, vegetation removal, and traffic control. No additional right-of-way is needed to complete the project.

Determination

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

The Department 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 effect on the environment for the following reasons:

- The proposed project would have *No Impact* to: *Aesthetics, Agriculture and Forest Resources, Air Quality, Cultural Resources, Geology and Soils, Hazards and Hazardous Materials, Hydrology and Water Quality, Land Use and Planning, Mineral Resources, Noise, Population and Housing, Public Services, Recreation, Transportation and Traffic, Utilities and Service Systems.*
- The proposed project will have a *Less-Than-Significant Impact with Mitigation* to: *Biological Resources.*

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

Date

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Chapter 1. Proposed Project

1.1. Project Title

Siskiyou 3 Bridges. Rail upgrade Project.

1.2. Lead Agency Name and Address

Caltrans, District 2
1657 Riverside Drive, MS-30
Redding, CA 96001

1.3. Contact Person and Phone Number

Wesley Stroud
Caltrans Environmental Branch Chief
Phone: (530) 225-2928

1.4. Project Location

The project takes place at three (3) locations on Highway 96 in Siskiyou County (see Figure 2):

- Thompson Creek Bridge. Post Mile 52.48.
- Seiad Creek Bridge. Post Mile 60.17.
- Beaver Creek Bridge. Post Mile 88.26

1.5. Project Sponsor's Name and Address

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

1.6. Purpose and Need

These bridges have been identified as having non-standard bridge rails and have been on the State's Bridge Rail Program list for bridge rail replacement since the early 1990's. The purpose of the proposed project is to bring the bridge rails up to current design standards.

1.7. Project Description

The project would replace the existing non-standard bridge rails, with new bridge rails that meet current standards. All three (3) bridges would receive the same type of architectural bridge rail with a "see-through" design (see Figures 7-10 General Plans). The bridges that have been identified for this improvement are Thompson Creek Bridge at PM 52.48, Seiad Creek Bridge at PM 60.17, and Beaver Creek Bridge at PM 88.26. These bridges are located on Highway 96 in Siskiyou County, between Happy Camp and Interstate 5 (see Figure 1. Project Vicinity Map, and Figure 2. Project Location Map).

In order to bring the bridge rails up to current standards, the bridge decks need to be widened. To support the wider deck, the foundation system under the bridge needs to be strengthened. Strengthening the foundation system requires widening the foundation structures under the bridge. Foundation work would require stream diversions and work within the limits of the creek. A more detailed discussion of work at each bridge is included below. After the bridge rails are replaced, metal beam guardrail (MBG) would be replaced. Minor grading and fill would occur to widen the road for 200 feet at each end of the bridge to transition the existing roadway into the widened bridge deck. Rock slope protection (RSP) will be added to the bridge

foundations and abutments to protect these areas of the bridge from erosion. Construction is expected to take place over two construction seasons, and tentatively scheduled to be constructed in 2016 and 2017.

Thompson Creek Bridge. PM 52.48 (Br.No.02-0068)

The Thompson Creek Bridge is currently 28-feet wide. In order to accommodate current bridge rail standards, the bridge would have to be widened 4-feet on the up-stream side and 4-feet on the down-stream side, for a total additional width of 8-feet (see Figure 7, Bridge General Plan. Thompson Creek). The completed bridge would be 36-feet wide, have an upgraded bridge rail, 4-foot shoulders, and 12-foot travel lanes. In addition to widening the bridge deck, the bearings and joint seals would be replaced.

To support the widened bridge deck, the abutments at each end of the bridge and the piers on each side of the bridge would need to be widened (see Figure 7. Thompson Creek General Plan). Stream diversions may be needed to widen both piers, however, the abutments are above the flow of Thompson Creek in the summer months, and water diversions are not anticipated. The improved structure would be protected from erosion by placing RSP around the abutments, and around the base of each pier (see Figure 3. Thompson Creek ESL Map).

New MBGR would be added at each end of the bridge rails. The roadway, for 200-feet on each side of the bridge, would be widened to transition the existing highway into the widened bridge. Trees and shrubs within 20-feet of the widened roadway would be removed to improve site distance, and to provide a Clear Recovery Zone for errant vehicles.

Seiad Creek Bridge. PM 60.17 (Br.No.02-0072)

The Seiad Creek Bridge is currently 33-feet wide. The project would widen the upstream side of the bridge by 4-feet and the downstream side of the bridge by 7-feet, for a total additional width of 11-feet (see Figure 8&9. Seiad Creek Bridge. General Plan Sheets 1&2). The completed bridge would be 44-feet wide, have an upgraded bridge rail, 8-foot shoulders, and 12-foot travel lanes.

In addition to widening the bridge deck, the bearings, joint seals and asphalt-concrete deck would be replaced. A new culvert would be installed under the highway approximately 150-feet east of the bridge. The culvert would outlet near the creek channel on the downstream side of the bridge.

To support the widened bridge deck, the abutments at each end of the bridge, and the piers on each side of the bridge would need to be widened (see Figure 8 & 9, Seiad Creek General Plan Sheets 1 & 2). Stream diversions would be used to widen abutment 1, as well as piers 2 and 3. Abutment 4 sits above Seiad Creek during low flow conditions and water diversions are not anticipated.

The improved structure would be protected from erosion by placing RSP around the abutments, and around the base of each pier (see Figure 4 & 5. Seiad Creek ESL Map Sheets 1 & 2).

New MBGR would be added at each end of the bridge rails. The roadway, for 200-feet on each side of the bridge, would be widened to transition the existing highway into the widened bridge.

Trees and shrubs within 20-feet of the widened roadway would be removed to improve site distance, and to provide a Clear Recovery Zone for errant vehicles.

Beaver Creek Bridge. PM 88.26 (Br.No. 02-0081)

The Beaver Creek Bridge is currently 26-feet wide. The project would widen both sides of the bridge by 5 feet for a total additional width of 10-feet (see Figure 10. Beaver Creek. General Plan Sheets). The completed bridge would be 36-feet wide, have an upgraded bridge rail, 4-foot shoulders and 12-foot travel lanes.

In addition to widening the deck, the bearings, joint seals and asphalt-concrete deck would be replaced. A new culvert would be installed under the highway approximately 150-feet west of the bridge. The culvert would outlet near the creek channel on the downstream side of the bridge.

To support the widened bridge deck, the abutments and piers will need to be widened. The bent caps on both sides of the bridge will be extended, and new columns will be constructed to support them (see Beaver Creek General Plan). In-stream work will be needed to widen abutment 1 and pier 2. Pier 3 and abutment 4 sit outside the flow of Beaver Creek during the dry season.

The improved structure will be protected from bridge scour and erosion by placing RSP around the abutments, around the base of each pier, on the banks of the creek, and within the ordinary high water mark of the creek (see Beaver Creek ESL Map).

New MBGR would be added at each end of the bridge rails. The roadway, for 200-feet on each side of the bridge, would be widened to transition the existing highway into the widened bridge. Trees and shrubs within 20-feet of the widened roadway would be removed to provide improved site distance, and to provide a Clear Recovery Zone for errant vehicles.

Construction Scenario – All Locations

Vehicle traffic will be managed in accordance with a Traffic Management Plan, and is anticipated to be controlled using one way traffic control. Flaggers or signals would be placed at both ends of the bridge, 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.

Pedestrian traffic during construction would be facilitated with flaggers, or with push buttons if signalized traffic control is used. Pedestrians would push a button when they need to cross the bridge, and would have a predetermined timeframe during which vehicle traffic across the bridge would be prevented.

Temporary, construction access roads would be graded on both sides of the creek, on the upstream and downstream side of the bridges, to provide the contractor access to the abutments and piers of the bridge.

Prior to working in the creeks, a biologist and their assistants would set up fish screening to prevent fish and other aquatic species from entering the area to be de-watered. After the

screens are in place, the biologist will use a combination of methods to collect and relocate fish and other species outside of the work area. Methods include, nets, buckets, seine, and electro-shockers. After the work area has been cleared of fish and other aquatic species, water diversions would be set up to protect the creeks from construction activities (construction debris, soil, vehicles etc.).

Fish passage will be maintained through the worksite after the clear water diversions are in place at each creek. Passage is expected to be interrupted up to three days at Thompson and Beaver creeks while block nets are in place and the clear water diversion is installed.

Clean-washed river gravel would be imported to create a work pad for vehicles and bridge scaffolding. After the bridge is widened, excess gravel would be removed and the remnants would be blended in to the contours of the stream.

Staging would most likely take place in the closed vehicle lanes, and in existing dirt pullouts within the right-of-way and project area. Additional staging areas have been identified outside of the right-of-way, on private property near the end of each bridge. Temporary Construction Easements on private property would be needed prior to construction, however, these locations have been evaluated and included in this environmental analysis (see Figures 3-6. ESL maps)

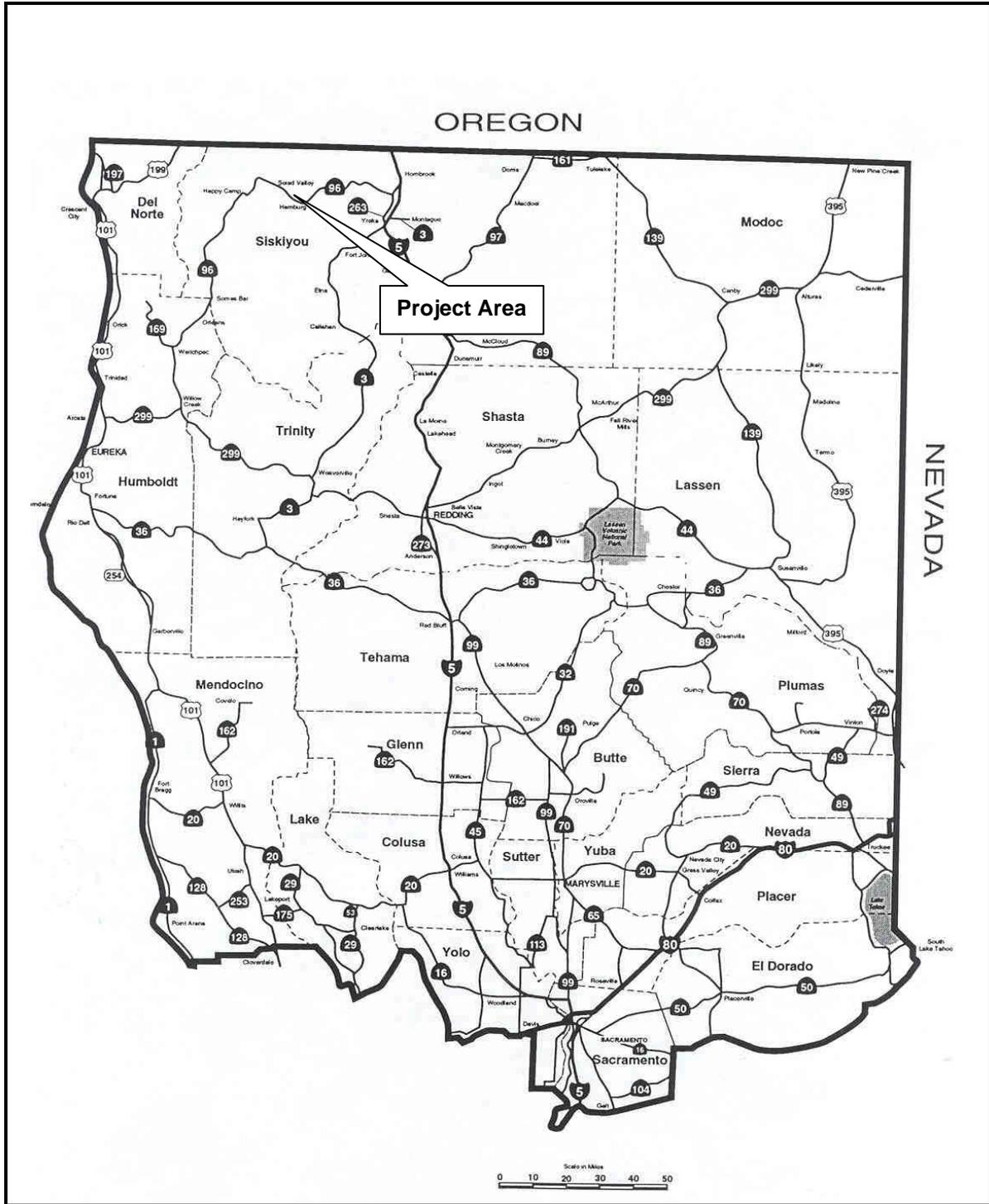
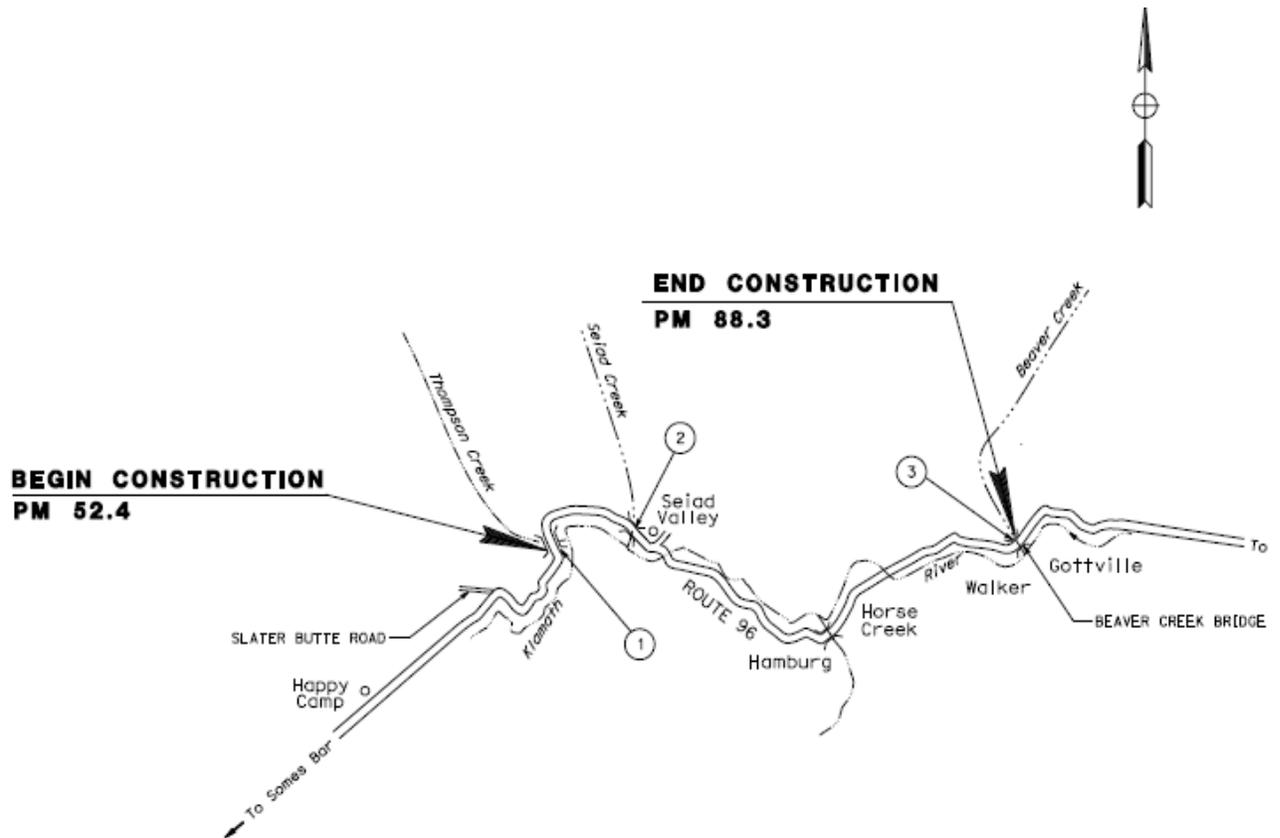


Figure 1: Project Vicinity Map

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LOCATIONS OF CONSTRUCTION

No.	COUNTY	ROUTE	POST MILE	BRIDGE NAME/No.
①	Sis	96	52.48	THOMPSON CREEK BRIDGE 02-0068
②	Sis	96	60.17	SEIAD CREEK BRIDGE 02-0072
③	Sis	96	88.26	BEAVER CREEK BRIDGE 02-0081

Figure 2: Project Location Map

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Figure 3: Environmental Study Limits. Thompson Creek.

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Figure 4: Environmental Study Limits. Seiad Creek. Page 1 of 2.

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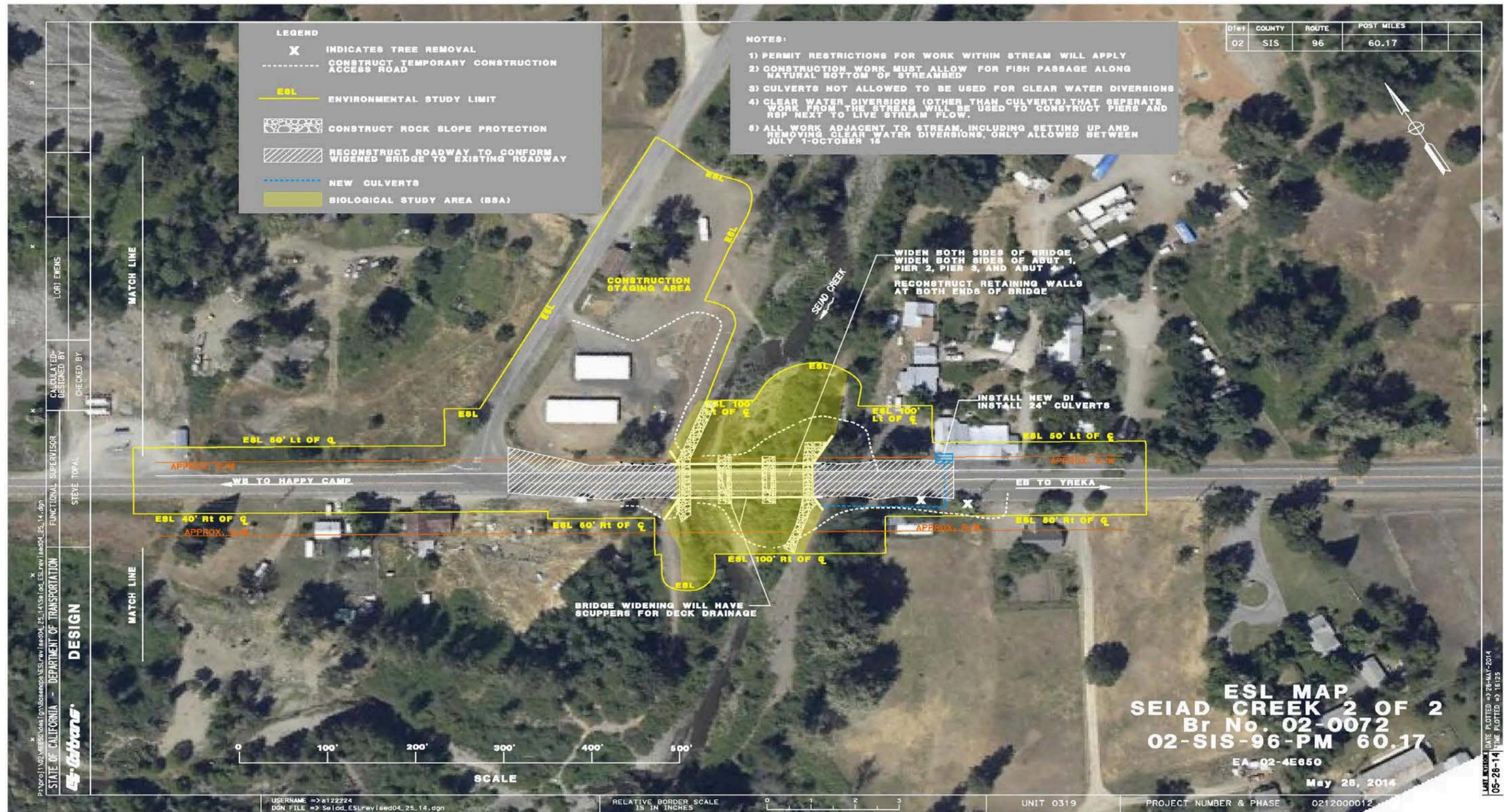


Figure 5: Environmental Study Limits. Seiad Creek. Page 2 of 2.

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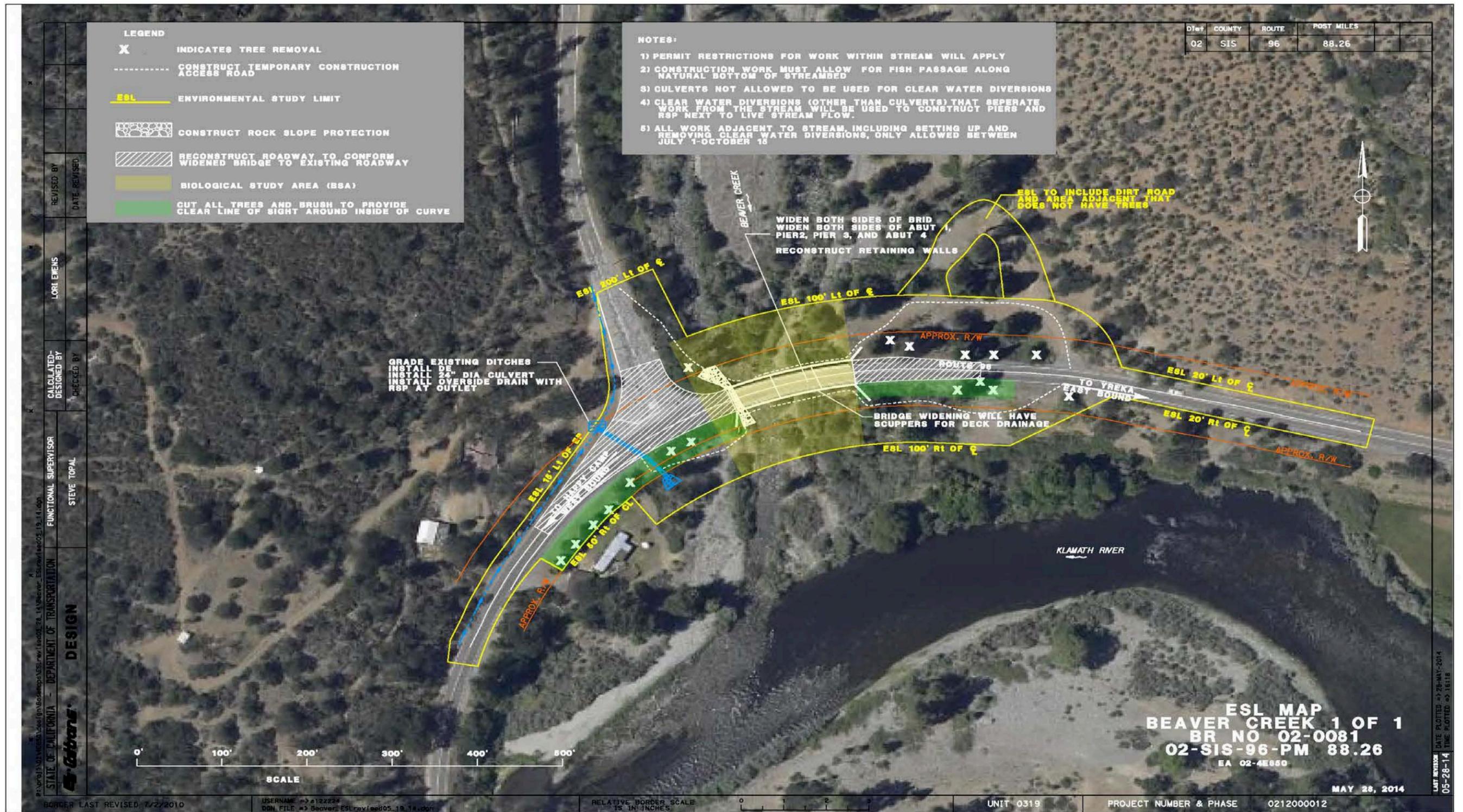


Figure 6: Environmental Study Limits. Beaver Creek.

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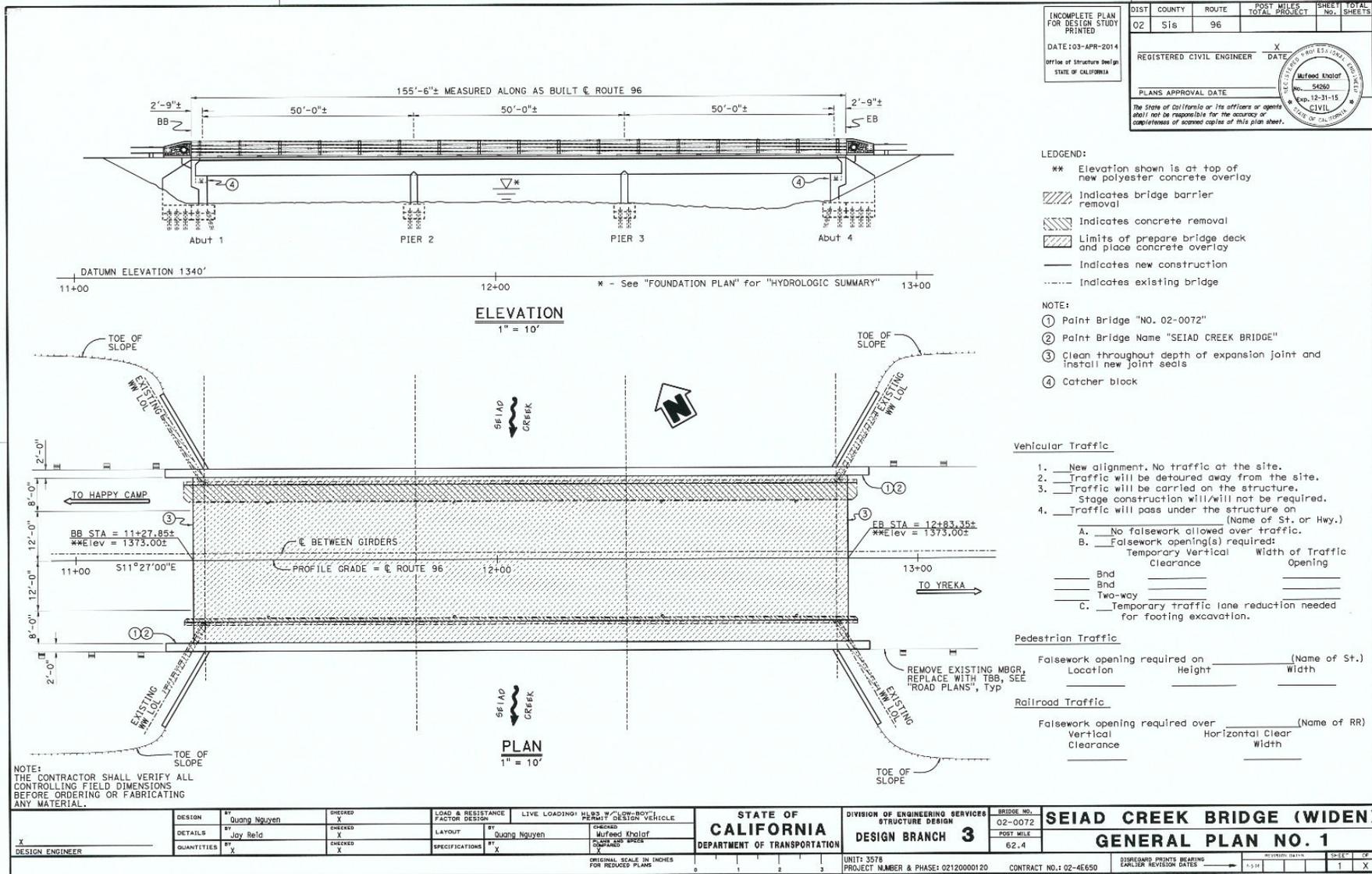


Figure 8: Bridge General Plan. Seiad Creek. Page 1 of 2.

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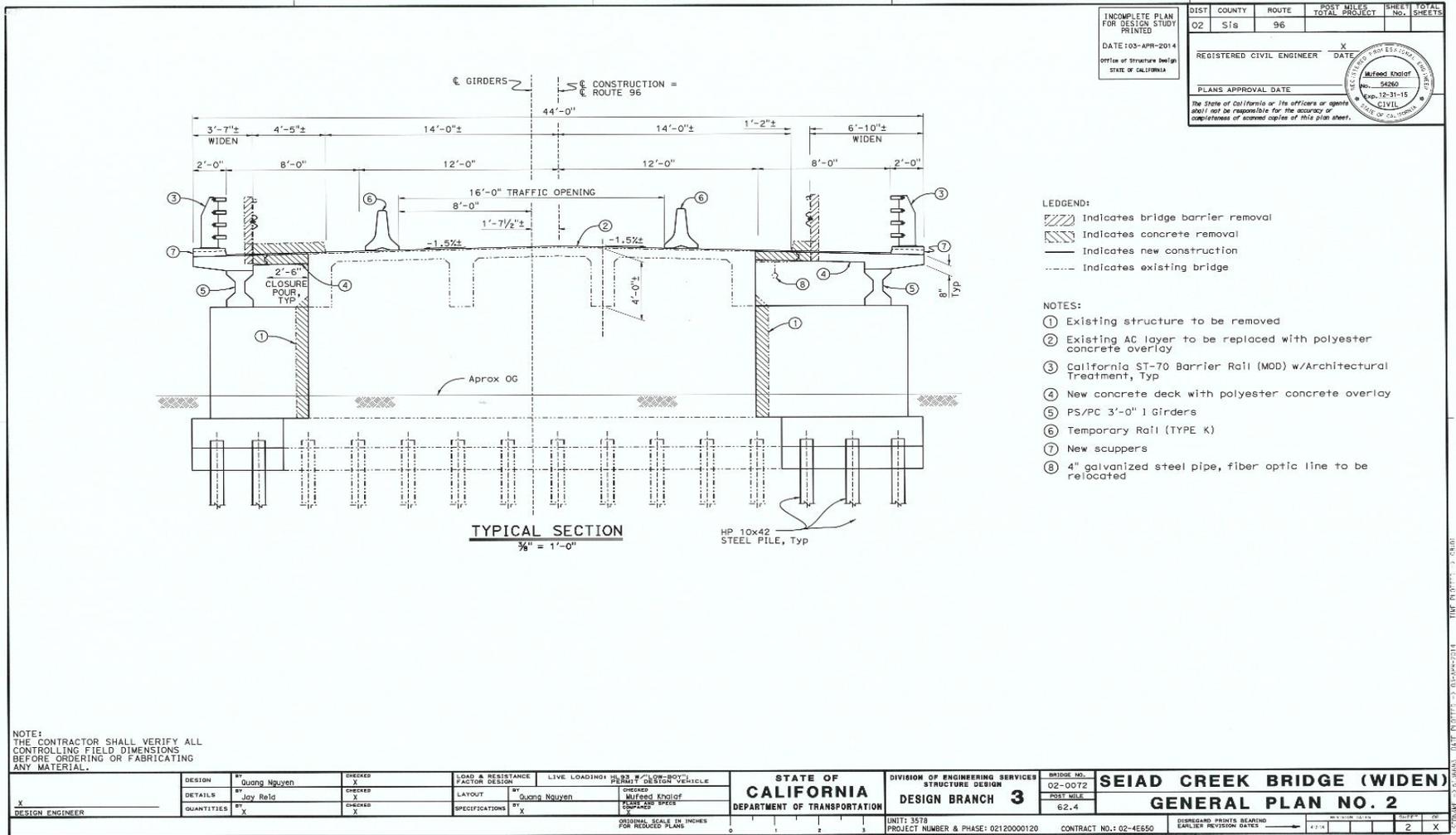


Figure 9: Bridge General Plan. Seiad Creek. Page 2 of 2.

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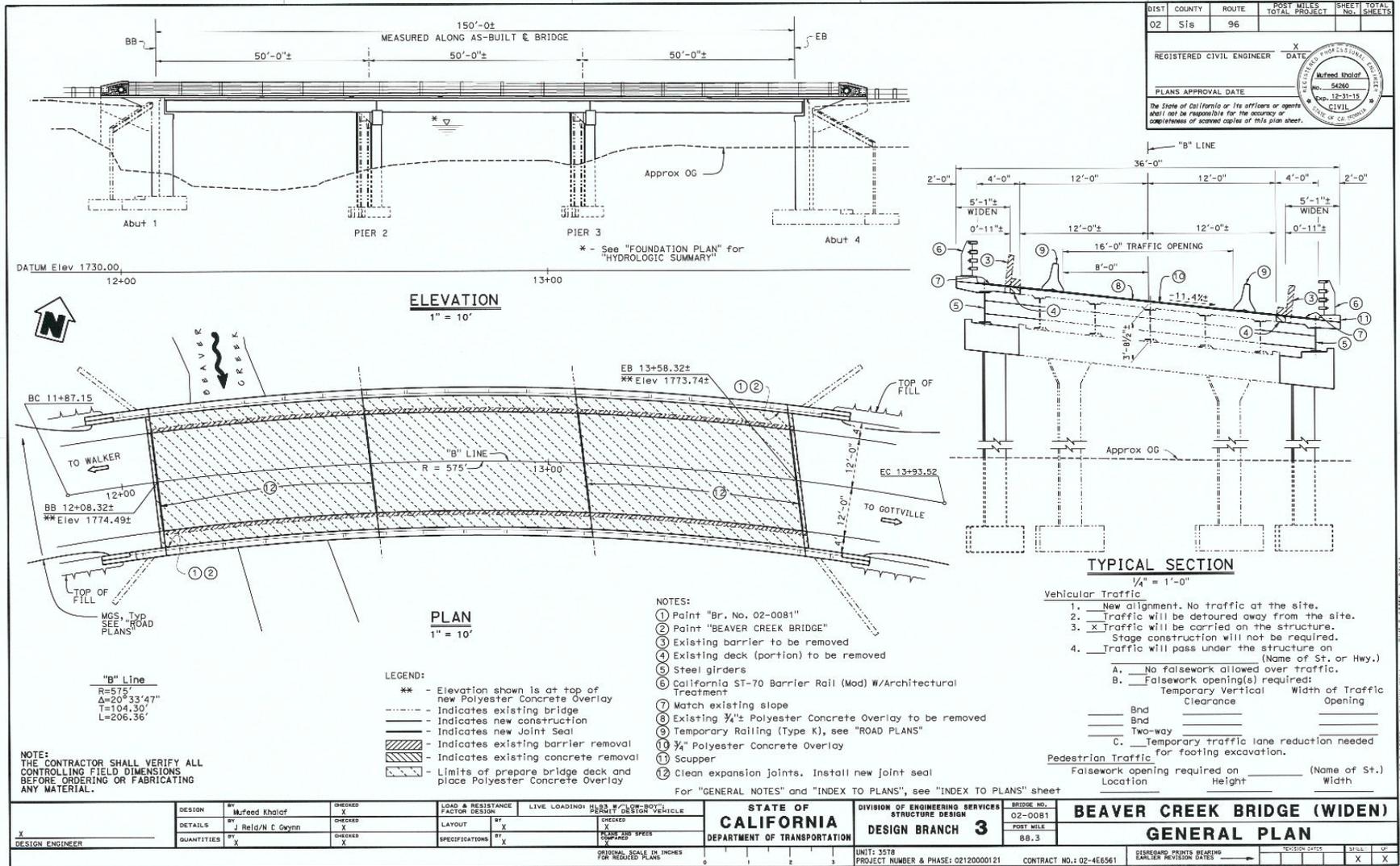


Figure 10: Bridge General Plan. Beaver Creek.

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1.8. Project Alternatives

The project has 2 alternatives, including a “no-build” alternative. The alternatives considered are outlined in Table 1.

“No Build” Alternative

The No-Build Alternative is defined as not implementing any aspect of the proposed project. A no-build alternative should be considered as a baseline for comparing the environmental impacts associated with the proposed build alternative. This alternative would not result in temporary environmental impacts, but would continue to perpetuate a highway crossing that does not meet modern highway design standards. The No-Build Alternative would not meet the defined purpose and need for the proposed project.

Preferred Alternative

The Preferred Alternative is alternative 1, which includes removing the existing bridge railings and replacing them with railings that meet current design standards.

1.9. Permits and Approvals

Proposed work in the riparian area and within the banks of Thompson Creek, Seiad Creek and Beaver Creek, would require permits from the California Department of Fish and Wildlife (CDFW), U.S. Army Corps of Engineers (ACOE), the Regional Water Quality Control Board (RWQCB).

A Water Pollution Control Permit (WPCP) or a Storm Water Pollution Prevention Plan (SWPPP) would be prepared and implemented in accordance with the National Pollutant Discharge Elimination System (NPDES) to minimize erosion and prevent it from entering the creeks.

1.10. Environmental Factors Potentially Affected

The environmental factors checked below may be potentially affected by this project. Please see the checklist beginning on the following page for additional information.

<input type="checkbox"/>	Aesthetics	<input type="checkbox"/>	Agriculture and Forestry	<input type="checkbox"/>	Air Quality
<input checked="" type="checkbox"/>	Biological Resources	<input type="checkbox"/>	Cultural Resources	<input type="checkbox"/>	Geology/Soils
<input type="checkbox"/>	Greenhouse Gas Emissions	<input type="checkbox"/>	Hazards and Hazardous Materials	<input checked="" type="checkbox"/>	Hydrology/Water Quality
<input type="checkbox"/>	Land Use/Planning	<input type="checkbox"/>	Mineral Resources	<input checked="" type="checkbox"/>	Noise
<input type="checkbox"/>	Population/Housing	<input type="checkbox"/>	Public Services	<input type="checkbox"/>	Recreation
<input type="checkbox"/>	Transportation/Traffic	<input type="checkbox"/>	Utilities/Service Systems	<input type="checkbox"/>	Mandatory Findings of Significance

1.11. Environmental Determination

On the basis of this initial evaluation:

<input type="checkbox"/>	I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
<input checked="" type="checkbox"/>	I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
<input type="checkbox"/>	I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
<input type="checkbox"/>	I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
<input type="checkbox"/>	I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required
Signature: <i>Amber Kelley</i>	
Printed Name: Amber Kelley	
Date: 4-16-15	
For:	

Chapter 2. CEQA Environmental Checklist

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
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"/>

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"/> |

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 type="checkbox"/>	<input checked="" 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"/>
	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact

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 checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input 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"/>
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"/>

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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"/>

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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"/>

Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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VII. GREENHOUSE GAS EMISSIONS: 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.

Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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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?
- 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?
- c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?
- 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?
- 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?
- 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"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<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"/>
	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact

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 type="checkbox"/>	<input checked="" 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 checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input 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"/>
j) Inundation by seiche, tsunami, or mudflow	<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
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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"/> |

Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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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"/> |

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"/> |

Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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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"/> |

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"/> |

Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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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"/> |

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 type="checkbox"/> | <input checked="" 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"/> |

Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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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"/> |
| 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"/> |

Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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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"/> |

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Chapter 3. **Discussion of Environmental Impacts**

3.1. Air Quality

The 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 will not result in long-term adverse conditions. Implementation of construction standard specifications related to air quality would address any air quality impacts resulting from construction activities to a *No Impact* level.

3.2. Aesthetics

The existing bridge rails are made of standard Metal Beam Guardrail attached to steel posts. The railing proposed for each bridge is an architectural steel rail made of square steel tubing attached to steel posts. The railing would tie into decorative concrete blocks at each corner of the bridge. The open steel railing proposed for the bridges allows motorist to see through the rail and into the creek corridor, whereas, a solid concrete bridge rail would not. Views of the bridge from surrounding areas would be improved with the decorative rail with a “see through” appearance.

3.3. Biological Resources

The biological evaluation for this project included data base research, reviewing in-house records, coordination with State and Federal agencies and multiple field surveys for biological resources including plants, animals, and habitat.

Results and Findings

Special Status Species

The following list includes the special status species that are thought to occur in and around the project area:

- Bald eagle (*Haliaeetus leucocephalus*)
- Great Blue heron (*Ardea Herodias*)
- Pallid bat (*Antrozous pallidus*)
- Townsend’s big-eared bat (*Corynorhinus townsendii*)
- Fringed myotis (*Myotis thysanodes*)
- Silver-haired bat (*Lasionycteris noctivagans*)
- Klamath Mountain Province (KMP)-winter steelhead trout (*Oncorhynchus mykiss irideus*)

- Klamath River lamprey (*Entosphenus similis*)
- Pacific lamprey (*Lampetra tridentate*)
- Upper Klamath Trinity River (UKTR) fall-run Chinook salmon (*Oncorhynchus tshawytscha*)
- Southern Oregon Northern California Coast (SONCC) Coho salmon (*Oncorhynchus kisutch*)
- *No special status plants were discovered during field surveys.*

Temporary Construction Impacts (see Figures 3-6 Environmental Study Limits)

Temporary construction impacts associated with the proposed project include:

- Disturbance to aquatic wildlife caused by pre-construction relocation efforts
- Grading to construct an access road from the highway, down to the creek. This could potentially take place on the upstream and downstream side of the bridge on both banks depending on the contractor's construction approach.
- Placement of gravel to create a work pad in the dry portions of the stream, which would support scaffolding and construction equipment.
- Removal of vegetation to construct the access road and gravel pads.
- Dewatering and stream diversions to route clean water around the construction area.
- Noise associated with construction equipment.
- Noise associated with driving sheet piles for construction of coffer dams.
- Noise associated with driving piles at Seiad Creek.
- Periodic increased turbidity when water diversions are installed and removed.
- Streambed grading at Seiad Creek to route the creek around the work area.

Permanent Impacts (see Figures 3-6 Environmental Study Limits)

Permanent impacts associated with the proposed project include:

- Increasing the size of each pier under the bridge.
- Increasing the size of the abutments at each end of the bridge.
- Placing Rock Slope Protection (RSP) around the abutments, piers of the bridge.
- Placing RSP on the banks of the creek under the bridge.

Bald eagle

Based on the habitat requirements, field observations by the Klamath National Forest Service, and the frequent human disturbances present at the three bridge sites, proposed construction activities are not anticipated to have an effect to Bald eagles. Bald eagles were not observed during field surveys.

Great Blue heron

There are 15 known nests within a 10-mile radius of the bridge sites. Of the known nests, only one is within 1/4 mile of Thompson Creek bridge. Based on the distance of the nest, and the constant human presence at the bridge sites, proposed construction activities are not

anticipated to have an effect on the great blue heron. Additionally, great blue heron were not observed during all field surveys.

Pallid bat, Townsend's big-eared bat, Fringed myotis, and Silver-haired bat

Pallid bat and Townsend's bat are State listed *species of concern*. Fringed myotis and Silver-haired bat are Forest Service *regionally sensitive species*. All of these bats are believed to occur within the project vicinity. Field surveys concluded that bats use the bridges for night roosting but do not live inside of the bridge structure.

The proposed tree removal window for nesting birds (August 15 to March 15) would benefit bats. Bridge construction would most likely occur during daytime hours, when bats are not roosting on the bridge. Therefore, proposed construction activities are not anticipated to have an effect on bats.

KMP-winter steelhead trout

KMP Steelhead trout is a Forest Service *regionally sensitive fish species*. Measures to protect Coho salmon would also protect KMP steelhead. The proposed project is not anticipated to have an effect on KMP steelhead.

Klamath River lamprey

Klamath River lamprey is a Forest Service *sensitive species*. They have not been extensively studied and documented. They are believed to be present in the lower Klamath River and tributaries and therefore are thought to be present at the bridge locations.

Measures to protect Coho salmon and their critical habitat would also protect the Klamath River lamprey. The proposed project is not anticipated to have an effect on Klamath River Lamprey.

Pacific lamprey

The Pacific lamprey is a Forest Service *sensitive species*. There is very little known about the species at this time, although they are thought to be found wherever salmon and steelhead are present. For this reason, they may be present at the bridge locations.

The measures to protect Coho salmon and their critical habitat would also protect the Pacific lamprey. The proposed project is not anticipated to have an effect on Pacific Lamprey.

Chinook Salmon

Chinook Salmon is a Forest Service *regionally sensitive fish species*. Measures to protect Coho salmon would also protect Chinook Salmon. The proposed project is not anticipated to have an effect on Chinook Salmon.

Coho Salmon

Coho Salmon is listed as a State and Federal *Threatened* species. All three creeks contain adult and juvenile Coho Salmon.

Temporary effects to Coho Salmon include:

- Physical disturbance from fish exclusion and relocation efforts prior to construction.
- Noise disturbance from driving H-piles (Seiad Creek only).

Permanent effects to Coho salmon include:

- Permanent increase of bridge piers, abutments, retaining walls, and RSP.

The foundation system for Seiad Creek Bridge calls for the use of H-piles. H-piles are steel beams that are driven into the ground with heavy equipment until they contact bedrock or similar material. Pile driving activities have the potential to temporarily affect Coho salmon. However, at Seiad Creek, pile driving would take place during the summer low-flow period (between June 15 and October 15) when there is the least amount of fish in the creeks. Additionally, pile driving will take place inside of a dewatered coffer dam, in a dry creek bed, at least 50 feet from the low-flow channel. A hydro-acoustic analysis concluded that pile driving activities are not likely to result in lethal effects to salmonids.

Caltrans has completed Endangered Species Act consultation with NOAA Fisheries for impacts to Coho salmon. In the analysis for Coho Salmon, NOAA Fisheries estimates up to 85 individual juvenile Coho salmon could potentially be captured and relocated as a result of pre-construction fish relocation efforts. Furthermore, NOAA estimates as a result of relocating Coho salmon, up to 4 individual juvenile Coho may not survive the relocation effort. After reviewing the effects of the project, NOAA Fisheries has determined that the number of fish relocated and possibly killed as a result of relocation efforts, is not likely to jeopardize the continued existence of Coho Salmon.

A Biological Opinion has been issued by NOAA Fisheries, which contains measures to reduce project effects to Coho salmon. Those measures will be incorporated into the project and will mitigate the impact to a less than significant level. The mitigation measures are included in Appendix A of this document. A copy of the Biological Opinion Issued from NOAA Fisheries is in the project file.

Stream Habitat

The project would have temporary and permanent effects to stream habitat.

Temporary impacts to in-stream habitat include:

- Physical disturbance from installation and removal of water diversions.
- Periodic turbidity and sedimentation from installation and removal of water diversions.
- Placement of gravel work pads.
- Temporary stream crossings over the creek.
- Removal of riparian vegetation.

Permanent effects to in-stream habitat include:

- Increasing bridge piers, abutments, retaining walls and RSP.

Location	Lineal Feet of Wet Channel	Width of Wet Channel (ft)	Existing Wet Channel		Permanent Impact		Temporary Impact	
			(ft ²)	Acres	(ft ²)	Acres	(ft ²)	Acres
Beaver Creek	205	20	4,100	0.094	272	0.006	1,164	0.027
Seiad Creek	239	25	5,975	0.137	1,487	0.034	11,950	0.274
Thompson Creek	203	25	5,075	0.117	0.00	0.00	757	0.017
Total	647	70	15,150	0.348	1,759	0.040	13,871	0.318

Temporary construction impacts to in-stream habitat at all three locations are approximately 13,871 square feet (0.32 acres). Permanent impacts at all three locations are approximately 1,759 square feet (0.04 acres).

These impacts are the results of instream work including dewatering, stream diversion, streambed grading, widening of the piers and abutments, installing rock-slope-protection (RSP), and temporary bridge crossings.

Critical Habitat and Essential Fish Habitat

Thompson, Seiad, and Beaver Creeks are all tributaries to the Klamath River. Each tributary is designated Critical Habitat for Coho salmon (SONCC Coho) and Essential Fish Habitat (EFH) for Coho, and Chinook salmon (UKTR Chinook).

Temporary effects to habitat include:

- Physical disturbance from installation and removal of water diversions.
- Noise disturbance from installing and removing coffer dams.
- Noise disturbance from driving H-piles (Seiad Creek only).
- Periodic turbidity and sedimentation from installation and removal of water diversions.
- Placement of gravel work pads.
- Temporary stream crossings over the creek.
- Removal of riparian vegetation.

Permanent effects to habitat include:

- Permanent increase of bridge piers, abutments, retaining walls, and RSP.

Caltrans has completed Endangered Species Act consultation with NOAA Fisheries for impacts to habitat. After reviewing the effects of the project, NOAA Fisheries has determined that the proposed action *is not likely to destroy or adversely modify designated critical habitat* for Coho

Salmon, however the project *would adversely affect* Coho Salmon and Chinook Salmon *Essential Fish Habitat*.

A Biological Opinion has been issued which contains measures to reduce project effects to *Critical Habitat* and *Essential Fish Habitat*. Those measures would be incorporated into the project and would mitigate the impacts to a *less than significant* level. The mitigation measures are included in Appendix A of this document. A copy of the Biological Opinion Issued from NOAA Fisheries is in the project file.

Waters of the U.S.

Thompson Creek, Seiad Creek and Beaver Creek are considered Waters of the US. The total amount of Waters of the US within the Environmental Study Limits for all three locations is 15,246 square feet (0.35 acres).

Any work within the Ordinary High Water Mark (OHWM) of the creek is subject to regulation under the Clean Water Act, and the Department of Fish and Game code. Temporary and permanent impacts associated with the project would require permits from: the Army Corps of Engineers (404 authorization), Department of Fish and Wildlife (1600 Agreement) and the Regional Water Quality Control Board (401 Certification), prior to construction. All three of the permits would include additional measures to protect.

Temporary impacts to Waters of the US associated with construction activities could affect up to 15,246 square feet (0.35 acres) of Waters at all three locations combined. Permanent impacts to Waters of the US associated with foundation widening, pier widening and placement of RSP, could affect up to 1,759 square feet (0.04 acres) at all three locations combined. The amount of temporary and permanent affects to Waters of the US is less than significant.

Wetlands.

No wetlands are present in the project area.

Riparian Habitat

Temporary impacts to riparian habitat associated with the project include clearing and grading for construction access under each bridge. Permanent impacts to riparian habitat include the increased size of the bridge abutments and piers, and placement of RSP. The table below summarizes the individual and cumulative effects of the proposed project.

Location	Existing Riparian Area		Permanent Impact		Temporary Impact	
	(ft ²)	Acres	(ft ²)	Acres	(ft ²)	Acres
Beaver Creek Bridge	4,055	0.093	449	0.01	1,660	0.038
Seiad Creek Bridge	6,424	0.147	1,182	.027	3,744	0.086
Thompson Creek Bridge	5,259	0.121	370	.008	3,039	0.070
Total	15,738	0.361	2,001	0.046	8,443	0.194

The project would temporarily impact approximately 8,443 square feet (0.19 acres) of riparian habitat at all three locations combined. The combined total of permanent impacts to riparian areas at all three locations are approximately 2,001 square feet (0.05 acres). The project will have a less than significant impact to riparian habitat.

Limited tree removal would take place as a result of the proposed project. Most of the trees proposed for removal are along the highway and in upland areas outside of riparian habitat (see table below).

Location	Species	DBH (approximate inches)	Number to be Removed (approximate)	Source of Nutrients (N) and Shade (S)	
				N	S
Beaver Creek Bridge	Oregon White Oak	6	4		
	Incense Cedar	10–12	6		
	Incense Cedar	30	2		
	Oregon Ash	6	1		
	Jeffrey Pine	24–36	3		
	Jeffrey Pine	10	1		X
Seiad Creek Bridge	Big Leaf Maple	10	1		
	Black Cottonwood	10	1		
	Black Walnut	10	1		
	Catalpa	8	1		
Thompson Creek Bridge	Ponderosa Pine	4–30	7		
	Ponderosa Pine	6–12	2		X
	Oregon White Oak	6–12	2		X
	Persimmon	4–7	13		
	Madrone	8–10	3		
	Honey Locust	4–6	2		

At Beaver Creek, approximately 17 trees would be removed. All of the trees are near the highway, in upland areas outside of riparian habitat. One of the trees does provide some shade to the creek.

At Seiad Creek, approximately 4 trees would be removed. All of the trees proposed for removal are in upland areas and are less than 10 inches DBH. None of these trees are considered to provide a direct benefit to the creek.

At Thompson Creek, approximately 29 trees are proposed for removal. All of the trees proposed for removal are near the highway, in upland areas and do not have a direct benefit to the creek.

The project would remove a total of five trees that provide some shade benefit to the creeks. Given the number of remaining trees and other vegetation, water temperatures in the creek will not be affected, therefore tree removal will have no impact on the creeks.

Although tree and vegetation removal has been determined to have no impact under CEQA, Caltrans standard practice is to replace vegetation when feasible. Approximately 12-16 months after construction, Caltrans will evaluate the project locations for natural regrowth of vegetation and trees. If these areas are not showing signs of natural re-growth, a planting plan would be developed and implemented.

Nesting Birds

It is Caltrans standard practice to remove trees during the non-nesting period for migratory birds (currently August 15 to March 15 for the project area). Cliff swallow nests are present on all three bridges. Caltrans standard practice would limit bridge work to the non-nesting period (from September 1 to February 15), unless swallow exclusion methods are used to prevent swallows from nesting on the bridge structure. The project will have no impact on nesting birds.

Agency Coordination

Caltrans is coordinating with the National Marine Fisheries Service (NMFS) and the California Department of Fish and Wildlife (DFW) on the effects of the proposed project. Coordination and approval from both agencies is required before the project can proceed to construction.

3.4. Cultural Resources

A records search has been conducted, and consultation with Native American groups has been completed. Each of the bridge locations were surveyed in the field for cultural resources by a Caltrans archaeologist.

The results of the records search, Native American contacts and field surveys concluded there are no pre-historic resources within the project area. Historic resources discovered during field surveys include placer mine tailings, a mining cut, and an abandoned road segment. A records check determined these features are not associated with any named mining association or claim.

The historic resources found during field surveys are exempted from further evaluation according to, the January 2014 First Amended Programmatic Agreement among the Federal Highway Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and the California Department of Transportation regarding compliance with Section 106 of the National Historic Preservation Act, as it pertains to the administration of the Federal-Aid Highway Program in California.

The cultural review for this project resulted in a determination of *No Historic Properties Affected*. For more information, please see the Historic Properties Survey Report/ Archaeological Survey Report (HPSR/ASR) on file with the department.

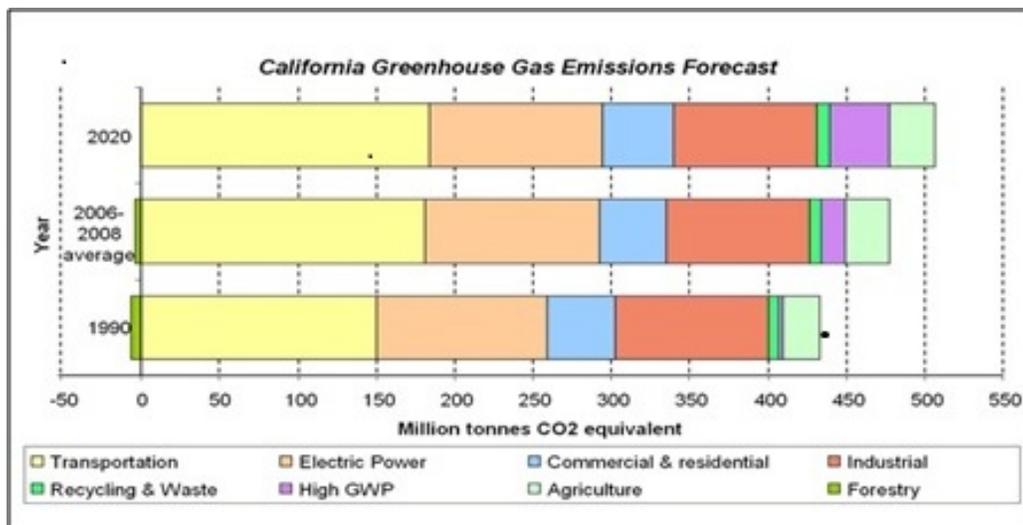
It is Caltrans' policy to avoid cultural resources whenever possible. If buried cultural materials are discovered during construction, it is Caltrans' policy that work in the area of discovery stops until a Caltrans archaeologist can evaluate the discovery and determine the appropriate course of action.

3.5. Greenhouse Gas Emissions

An individual project does not generate enough greenhouse gas (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 combined with the contribution of all other sources of GHG.¹ 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: May 2014). 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.

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 2006.²



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

¹ 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).

² 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

Figure 11. California Greenhouse Gas Forecast

Project Analysis

The purpose of the project is to bring the bridge rails of three bridges up to current standards. The proposed project would not increase capacity or vehicle miles travelled, therefore no increases in operational GHG emissions are anticipated.

Construction Emissions

GHG 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 will be produced at different levels throughout the construction phase; their frequency and occurrence can be reduced through innovations in plans and specifications, and by implementing traffic management practices during construction phases. Even though the project is not anticipated to increase operational GHG emissions, the proposed project would generate some GHG emissions during construction.

CEQA Conclusion

While construction would result in a slight increase in GHG emissions during construction, it is anticipated that the project would not result in 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 follows:

Project level GHG measures

During construction, the project would use one-way reversing traffic control measures, which would reduce traffic delays and long periods of traffic holding (idling). While construction emissions of greenhouse gases are unavoidable, the proposed project is minor in scope, and construction utilizing mechanized equipment will be of relatively short duration.

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. Former Governor Arnold Schwarzenegger's Strategic Growth Plan calls for a \$222 billion infrastructure improvement program to fortify the state's transportation system,

education, housing, and waterways, including \$100.7 billion in transportation funding during the next decade. The Strategic Growth Plan targets a significant decrease in traffic congestion below today’s level, and a corresponding reduction in GHG emissions; the Strategic Growth Plan proposes to accomplish these targets while accommodating growth in population and the economy. A suite of investment options has been created that, combined together, are expected to reduce congestion. The Strategic Growth Plan relies on a complete systems approach to attain CO₂ reduction goals: systems monitoring and evaluation, maintenance and preservation, smart land use and demand management, and operational improvements, as depicted in Figure 5.



Figure 12: Mobility Pyramid

Caltrans is supporting efforts to reduce vehicle miles traveled by planning and implementing smart land use strategies: job/housing proximity, developing transit-oriented communities, and high density housing along transit corridors. Caltrans works closely with local jurisdictions on planning activities, but does not have local land use planning authority. Caltrans assists efforts to improve the energy efficiency of the transportation sector by increasing vehicle fuel economy in new cars, and light and heavy-duty trucks; Caltrans is doing this by supporting on-going research efforts at universities, by supporting legislative efforts to increase fuel economy, and by its participation on the Climate Action Team. It is important to note; however, that the control of the fuel economy standards is held by the U.S.EPA and ARB.

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 will 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.

On November 14, 2008, former Governor Arnold Schwarzenegger signed EO S-13-08 which directed a number of state agencies to address California's vulnerability to sea level rise caused by climate change. This EO set in motion several agencies and actions to address the concern of sea level rise.

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.

The proposed project location is outside of the coastal zone and is not in an area expected to experience direct impacts due to sea level rise for the projected 2050 and 2100 years.

Currently, the Department is working to assess which transportation facilities are at greatest risk from climate change effects. However, without statewide planning scenarios for relative sea level rise and other climate change effects, the Department has not been able to determine what change, if any, may be made to its design standards for its transportation facilities. Once statewide planning scenarios become available, the Department will be able review its current design standards to determine what changes, if any, may be warranted in order to protect the transportation system from sea level rise.

Climate change adaptation for transportation infrastructure involves long-term planning and risk management to address vulnerabilities in the transportation system from increased precipitation and flooding; the increased frequency and intensity of storms and wildfires; rising temperatures; and rising sea levels. The Department is an active participant in the efforts being conducted in response to EO S-13-08 and is mobilizing to be able to respond to the National Academy of Science Sea Level Rise Assessment Report.

3.6. Hydrology and Water Quality

All three bridges are within a Special Flood Hazard Area (SFHA) based on current maps from the Federal Emergency Management Agency (FEMA). Thompson Creek Bridge and Seiad Creek Bridge have a flood history with flood elevations at or above the bridge deck.

The proposed deck widening would maintain the same elevations as the existing deck. Pier widening would maintain the same thickness of the existing piers, so widening would not

change water surface elevations. For more information see the Floodplain Evaluation Report dated January 1, 2015, and the Structures Final Hydraulic Report dated January 6, 2015.

All three creeks are tributaries to the Klamath River. All of the bridge locations are within the jurisdiction of the North Coast Regional Water Quality Control Board (North Coast RWQCB) and would require a 401 Certification from the North Coast Board prior to construction.

The existing stormwater drainage system consists of pipes, culverts, and ditches. Some of these features would be extended on the upstream side, or replaced in their existing location. Stormwater outfalls within the project limits would remain the same. No new stormwater outfalls would be constructed with the project.

Temporary Construction Impacts.

The project has the potential to cause short-term water quality impacts associated with construction activities and equipment. Potential water quality impacts would come from: sediment and turbidity, concrete waste water and contact water, oil and grease, organic compounds, and trash and debris (also called *pollutants of concern*).

A Storm Water Pollution Prevention Plan (SWPPP) would be prepared by the contractor for review and approval by Caltrans. After Caltrans approves the plan, it is sent to the North Coast Waterboard for their review and approval. Best Management Practices (BMPs) used in the project would meet the requirements of the National Pollutant Elimination Discharge System (NPDES), Construction General Permit (CGP), and the Caltrans Statewide NPDES Permit. The proposed project would be required to meet all applicable water quality objectives for surface waters and groundwater contained in the *North Coast Regional Water Quality Control Plan* (Basin Plan).

Permanent Impacts.

All three locations combined would add approximately 7,000 square feet (0.16 acre) of pavement as a result of bridge deck widening and transition paving. The additional paved area would not cause hydro-modification impacts, and would not impact the current drainage regime. The added pavement would not result in significant changes in stormwater volume and velocity flow rates, and therefore would not increase the erosion potential at each of the bridge locations.

Caltrans has determined that the project will have a *less than significant impact* on hydrology and water quality. For more information see the Water Quality Assessment Report, Dated April 2015.

3.7. Noise

The bridges are located in Siskiyou County on State Route 96, between Happy Camp and Interstate 5. Existing noise receptors at all three bridges include single family residences on large acreage lots. At Seiad Creek, there is a grocery store, restaurant, and storage facility near the bridge. Temporary increases in ambient noise levels would occur in the project vicinity during construction due to the operation of construction equipment. Caltrans standard

specifications would restrict noise levels to acceptable standards. Caltrans has determined that construction noise levels will have a less than significant impact.

Chapter 4. List of Preparers

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

André Benoist, Environmental Coordinator
Contribution: Document writer

Rajive Chadha, Office of Environmental Engineering
Contribution: Initial Site Assessment for Hazardous Waste

Brett Ditzler, Hydraulics Project Engineer
Contribution: Floodplain Evaluation Report Summary

Lori Ewens, Project Engineer
Contribution: Project design

Amber Kelly, Environmental Office Chief
Contribution: Document preparation oversight and approval

Dan McGann, Project Archaeologist
Contribution: Cultural resource surveys, reports and Native American Coordination

David Melendrez, Branch Chief, North Region of Environmental Engineering-North
Contribution: Water Quality Assessment Report

Wesley Stroud, Environmental Branch Chief
Contribution: Document preparation oversight

Steve Topal, Design Senior
Contribution: Project design

Chelsea Tran-Wong, Project Biologist
Contribution: Natural Environment Study, Biological Assessment

Derek Willis, Program Project Manager
Contribution: Project Management

Xing Zheng, Engineering Geologist
Contribution: Structure Preliminary Geotechnical Report

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California Department of Transportation, Office of Geotechnical Design- North
January 17, 2013. *Structure Preliminary Geotechnical Report Thompson Creek*
January 17, 2013. *Structure Preliminary Geotechnical Report Seiad Creek*
January 17, 2013. *Structure Preliminary Geotechnical Report Beaver Creek*

California Department of Transportation, North Region Office of Hydraulic Design - Redding. January 22, 2015. *Floodplain Evaluation Report Summary and Location Hydraulic Study*.

California Department of Transportation, Office of Environmental Analysis, North Region. February 2015. *Historic Property Survey Report/Archaeological Survey Report*.³

California Department of Transportation, Office of Environmental Analysis, North Region. August 2015. *Biological Assessment, Siskiyou 3 Bridges Project*.

California Department of Transportation, Office of Environmental Analysis, North Region. March 2015. *Natural Environment Study, Siskiyou 3 Bridges Project*.

California Department of Transportation. Office of Environmental Engineering, North Region. April 2015. *Water Quality Assessment Report*.

³ Technical studies containing cultural resources information are confidential and are not available for public review.

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Appendix A. Summary of Mitigation Measures

The following mitigation measures have been developed for impacts to Coho Salmon and their habitat.

Environmental Factor	Potential Impact	Avoidance/Minimization Measure
Biological Resources	Critical Habitat/ Essential Fish Habitat.	Stream diversions would be minimized to the extent practicable to complete the project.
Biological Resources	Critical Habitat/ Essential Fish Habitat.	Monitoring during the first rain event following construction would be provided. Additional erosion control measures would be implemented if needed to reduce and eliminate erosion. Additional measures include: mulch, silt fences, straw wattles or other measures deemed appropriate.
Biological Resources	Coho salmon	In-stream work would be limited to the low-flow season between June 15 and October 15 of any year outside of the spawning season for listed fish.
Biological Resources	Coho salmon	To fully mitigate for the incidental take of listed fish species, Caltrans would issue funds, in an agreed to amount, to the Siskiyou County Resource Conservation District for the maintenance of fish screens in the Klamath Watershed. These funds would maintain the fish screen program for 1-2 years.
Biological Resources	Coho salmon	All pile driving, and spread footing activities will occur within a dewatered cofferdam to attenuate sound by providing an air space between the exposed pile and the water column.
Biological Resources	Coho salmon	A minimum distance of 50 feet is required between the pile driving activities and the active stream channel.

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Appendix B. List of Technical Studies

The following technical studies were prepared with regard to the proposed project and are available for public review upon request.

California Department of Transportation, Office of Environmental Engineering, North Region.
March 27, 2015. *Initial Site Assessment.*

California Department of Transportation, Office of Geotechnical Design- North
January 17, 2013. *Structure Preliminary Geotechnical Report Thompson Creek*
January 17, 2013. *Structure Preliminary Geotechnical Report Seiad Creek*
January 17, 2013. *Structure Preliminary Geotechnical Report Beaver Creek*

California Department of Transportation, North Region Office of Hydraulic Design - Redding.
January 22, 2015. *Floodplain Evaluation Report Summary and Location Hydraulic Study.*

California Department of Transportation, Office of Environmental Analysis, North Region.
April 2015. *Historic Property Survey Report/Archaeological Survey Report.*⁴

California Department of Transportation, Office of Environmental Analysis, North Region.
June 2014. Biological Assessment, *Siskiyou 3 Bridges Project.*

California Department of Transportation, Office of Environmental Analysis, North Region.
April 2015. *Natural Environment Study, Siskiyou 3 Bridges Project.*

California Department of Transportation. Office of Environmental Engineering, North Region.
April 2015. *Water Quality Assessment Report.*

⁴ Technical studies containing cultural resources information are confidential and are not available for public review.

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