# CULVERT REHABILITATION
# AND FISH PASSAGE PROJECT

## INITIAL STUDY

**with Proposed Negative Declaration**



**DEL NORTE COUNTY, CALIFORNIA**

**DISTRICT 1 – DN – 101 — Post Miles M0.0 to 46.5**

**EA 01-0K690 / EFIS 0120000135**

**Prepared by the**
**State of California Department of Transportation**

**May 2025**



## General Information About This Document

### *What is in this document?*

The California Department of Transportation (Caltrans) has prepared this Initial Study with proposed Negative Declaration (IS/ND) which examines the potential environmental impacts of the Del Norte Culvert Rehabilitation and Fish Passage Project on U.S. Highway 101 in Del Norte County, California.

Caltrans is the lead agency under the California Environmental Quality Act (CEQA). This document tells you why the project is being proposed, how the existing environment could be affected by the project, the potential impacts of the project, and proposed avoidance, minimization, and/or mitigation measures.

***What you should do:***

- Please read this document.
- Additional copies of this document are available at:
  - Caltrans District 1 Office, 1656 Union Street, Eureka, CA 95501
  - Del Norte County Library, 190 Price Mall, Crescent City
  - Del Norte County Library, 241 First Street, Smith River
- Technical studies can be made available upon request.
- This document may be downloaded at the following website: https://tinyurl.com/dn101culverts
- We'd like to hear what you think. If you have any comments about the proposed project, please send your written comments to Caltrans by the deadline, **July 11, 2025.**
- Please send comments via U.S. mail to:

  California Department of Transportation
  North Region Environmental –District 1
  Attention: Rachel Conway
  1656 Union Street
  Eureka, CA 95501

- Send comments via e-mail to: DN101culvertrehab@dot.ca.gov

### *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) do additional environmental studies, or (3) abandon the project. If the project is given environmental approval and funding is obtained, Caltrans could complete the design and construct all or part of the project.

## *Alternate Formats*

For individuals with sensory disabilities, this document can be made available in Braille, in large print, on audiocassette, or on computer disk. To obtain a copy in one of these alternate formats, please call or write to Caltrans, Attn: Myles Cochrane, North Region Environmental-District 1, 1656 Union Street, Eureka, CA 95501; (707) 445-6600 Voice, or use the California Relay Service 1 (800) 735-2929 (TTY to Voice), 1 (800) 735-2922 (Voice to TTY), 1 (800) 855-3000 (Spanish TTY to Voice and Voice to TTY), 1-800-854-7784 (Spanish and English Speech-to-Speech) or 711.

# CULVERT REHABILITATION AND FISH PASSAGE PROJECT

Rehabilitate drainage systems and provide fish passage on U.S. Highway 101 in Del Norte County between Post Miles M0.0 and 46.5

## INITIAL STUDY
## with Proposed Negative Declaration

**Submitted Pursuant to:**

State: Division 13, California Public Resources Code

**THE STATE OF CALIFORNIA**
**Department of Transportation**

5/30/2025
Date of Approval

Liza Walker
Liza Walker, Office Chief
North Region Environmental–District 1
California Department of Transportation
CEQA Lead Agency

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# PROPOSED NEGATIVE DECLARATION

**Pursuant to: Division 13, California Public Resources Code**

**State Clearinghouse Number: Pending**

### *Project Description*

The California Department of Transportation (Caltrans) proposes the Culvert Rehabilitation and Fish Passage Project on U.S. Highway 101 between Post Miles M0.0 and 46.5 in Del Norte County. The project would rehabilitate 20 drainage systems and remediate fish passage at two of the locations.

### ***Determination***

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

Caltrans has prepared an Initial Study for this project and, following public review, has determined from this study that the proposed project would have ***No Impact*** on:

- Aesthetics
- Agriculture and Forest Resources
- Air Quality
- Cultural Resources
- Energy
- Geology and Soils
- Land Use and Planning
- Mineral Resources
- Noise
- Population and Housing
- Public Services
- Recreation
- Transportation
- Tribal Cultural Resources
- Utilities and Service Systems
- Wildfire
- Mandatory Findings of Significance

DRAFT

The proposed project would have ***Less than Significant Impacts*** to:

- Biological Resources
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality

_____ _____

Liza Walker, Office Chief
North Region Environmental–District 1
California Department of Transportation

Date

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# Acronyms and Abbreviated Terms

| Acronym/Abbreviation | Description |
|---|---|
| AB | Assembly Bill |
| AC | Asphalt Concrete |
| ACE | Areas of Conservation Emphasis (CDFW) |
| AITS | Alternative In-Line Terminal System |
| APC | Alternative Pipe Culvert |
| BMPs | Best Management Practices |
| BO | Biological Opinion |
| BSA | Biological Study Area |
| ºC | degrees Celsius |
| CAA | Clean Air Act |
| CAFE | Corporate Average Fuel Economy |
| CAL-CET | Caltrans Construction Emissions Tool |
| CAL FIRE | California Department of Forestry and Fire Protection |
| Cal/OSHA | California Occupational Safety and Health Administration |
| Caltrans | California Department of Transportation |
| CAPTI | Climate Action Plan for Transportation Infrastructure |
| CARB | California Air Resources Board |
| CCC | California Coastal Commission |
| CCR | California Code of Regulations |
| CDFW | California Department of Fish and Wildlife |
| CDP | Coastal Development Permit |
| CEHC | California Essential Habitat Connectivity |
| CEQ | Council on Environmental Quality |
| CEQA | California Environmental Quality Act |
| CESA | California Endangered Species Act |
| CFGC | California Fish and Game Code |
| CFR | Code of Federal Regulations |
| CGP | Construction General Permit |
| $CH_4$ | methane |
| CIA | Cumulative Impact Analysis |
| CIDH pile | Cast-in-Drilled-Hole pile |
| CIP | Cast-in-Place |
| CISS pile | Cast-in-Steel-Shell pile |
| CMP | Corrugated Metal Pipe |
| CNPS | California Native Plant Society |
| CO | carbon monoxide |
| $CO_2$ | carbon dioxide |
| $CO_2e$ | carbon dioxide equivalent |

| Acronym/Abbreviation | Description |
|---|---|
| CSP | Corrugated Steel Pipe |
| CTP | California Transportation Plan |
| CWA | Clean Water Act |
| dB | decibels |
| DD | Downdrain |
| DED | Draft Environmental Document |
| DI | Drainage Inlet |
| DOT | Department of Transportation |
| DP | Director's Policy |
| DPS | Distinct Population Segment |
| DWR | Department of Water Resources |
| ECL | Environmental Construction Liaison |
| EFH | Essential Fish Habitat |
| EIR | Environmental Impact Report |
| EO(s) | Executive Order(s) |
| EPA | Environmental Protection Agency |
| ESA | Endangered Species Act |
| ESA(s) | Environmentally Sensitive Area(s) |
| ESHAs | Environmentally Sensitive Habitat Area(s) |
| ESL | Environmental Study Limits |
| ESU | Evolutionarily Significant Unit |
| ETW | Edge of Traveled Way |
| ºF | degrees Fahrenheit |
| FED | Final Environmental Document |
| FES | Flared End Section |
| FESA | Federal Endangered Species Act |
| FHSZ | Fire Hazard Severity Zone (CAL FIRE) |
| FHWA | Federal Highway Administration |
| FR | Federal Register |
| GHG | greenhouse gas |
| GWP | Global Warming Potential |
| H&SC | Health & Safety Code |
| HDPE | High Density Polyethylene |
| HFCs | hydrofluorocarbons |
| HMA | Hot Mix Asphalt |
| HW | Headwall |
| IPaC | Information for Planning and Consultation (USFWS) |
| IS | Initial Study |
| IS/ND | Initial Study/Negative Declaration |
| LRA | Local Responsibility Area |
| LSAA | Lake and Streambed Alteration Agreement (CDFW) |

| Acronym/Abbreviation | Description |
|---|---|
| MAMU | Marbled murrelet |
| MBGR | Metal Beam Guardrail |
| MBTA | Migratory Bird Treaty Act |
| MGS | Midwest Guardrail System |
| MLD | Most Likely Descendent |
| MMT | million metric tons |
| MND | Mitigated Negative Declaration |
| MPO | Metropolitan Planning Organization |
| MSA | Magnuson-Stevens Fishery Conservation and Management Act |
| MTP | Metropolitan Transportation Plan |
| $N_2O$ | nitrous oxide |
| NAAQS | National Ambient Air Quality Standards |
| NAGPRA | Native American Graves Protection and Repatriation Act of 1990 |
| NAHC | Native American Heritage Commission |
| NC | North Coast or Northern California |
| NCRWQCB | North Coast Regional Water Quality Control Board |
| ND | Negative Declaration |
| NEPA | National Environmental Policy Act |
| NES | Natural Environment Study |
| NHTSA | National Highway Traffic and Safety Administration |
| NMFS | National Marine Fisheries Service |
| NOAA | National Oceanic and Atmospheric Administration |
| NOx | Nitrogen oxide |
| NPDES | National Pollutant Discharge Elimination System |
| NRCS | Natural Resources Conservation Service |
| NRHP | National Register of Historic Places |
| NSO | Northern spotted owl |
| $O_3$ | ozone |
| OHM | Ordinary High Water |
| OHWM | Ordinary High Water Mark |
| OPC | Ocean Protection Council |
| OPR | Governor's Office of Planning and Research |
| PBO | Programmatic Biological Opinion |
| PC/PS | Precast/Prestressed concrete |
| PDT | Project Development Team |
| PLACs | Permits, Licenses, Agreement and Certifications |
| PLOC | Programmatic Letter of Concurrence |
| $PM_{2.5}$ | Particulate matter 2.5 |
| $PM_{10}$ | Particulate matter 10 |
| PM(s) | Post Mile(s) |
| Porter-Cologne Act | Porter-Cologne Water Quality Control Act |

| Acronym/Abbreviation | Description |
|---|---|
| Project | Culvert Rehabilitation and Fish Passage Project |
| PRC | (California) Public Resources Code |
| RCB | Reinforced Concrete Box Culvert |
| RCP | Reinforced Concrete Pipe |
| RCP | Representative Concentration Pathways 8.5 Emissions Scenario |
| RSP | Rock Slope Protection |
| RTP | Regional Transportation Plan |
| RTPA | Regional Transportation Planning Agency |
| RWQCB | Regional Water Quality Control Board |
| SB | Senate Bill |
| SCS | Sustainable Communities Strategy |
| $SF_6$ | sulfur hexafluoride |
| SHPO | State Historic Preservation Officer |
| SHS | State Highway System |
| SLR | Sea Level Rise |
| SNC(s) | Sensitive Natural Community(ies) |
| $SO_2$ | sulfur dioxide |
| SPCC Plan | Spill Prevention Control, and Countermeasures Plan |
| SR | State Route |
| SRA | State Responsibility Area |
| SS | Standard Specifications |
| SSC | Species of Special Concern |
| SWMP | Storm Water Management Plan |
| SWPPP | Stormwater Pollution Prevention Plan |
| SWRCB | State Water Resources Control Board |
| TCE | Temporary Construction Easement |
| THVF | Temporary High Visibility Fencing |
| TMDLs | Total Maximum Daily Loads |
| TMP | Transportation Management Plan |
| UHPC | Ultra-High Performance Concrete |
| UNESCO | United Nations Educational, Scientific and Cultural Organization |
| U.S. or US | United States |
| U.S. 101 or US 101 | U.S. (United States) Highway 101 |
| USACE | United States Army Corps of Engineers |
| USC | United States Code |
| USDOT | U.S. Department of Transportation |
| U.S. EPA | U.S. Environmental Protection Agency |
| USFWS | U.S. Fish and Wildlife Service |
| VIA | Visual Impact Assessment |
| VOCs | Volatile organic compounds |
| VMT | Vehicle Miles Traveled |

| Acronym/Abbreviation | Description |
|---|---|
| WOTUS | Waters of the U.S. |
| WPCP | Water Pollution Control Program |
| WQAR | Water Quality Assessment Report |
| WSP | Welded Steel Pipe |
| WW | Wingwall |



# Chapter 1. Proposed Project

## 1.1 Introduction/Project History

The California Department of Transportation (Caltrans) proposes the Culvert Rehabilitation and Fish Passage Project. The project is located on U.S. Highway 101 in Del Norte County, between Post Miles M0.0 and 46.5 (Figure 1). The project was programmed in the SHOPP Roadway Preservation Program. The original project scope included two alternatives: one that included 26 drainage systems and another that included 41 drainage systems. The current scope includes 20 drainage systems with fish passage remediation at two of the locations, including a bridge at Mello Creek (Figure 2).

The Department of Transportation (Caltrans) is the lead agency under the California Environmental Quality Act (CEQA).

## 1.2 Purpose and Need

### *Purpose*

The purpose of this project is (1) to rehabilitate existing drainage systems to a state of good condition, and (2) to remediate barriers to fish passage.

### *Need*

The project is needed to repair deteriorating or failing drainage systems to prevent erosion and potential roadway embankment failure. Additionally, conditions resulting in barriers to fish passage exist within the project limits. These barriers require remediation per Senate Bill 857 because they prevent fish from accessing habitat that is necessary for survival and spawning during various life stages.

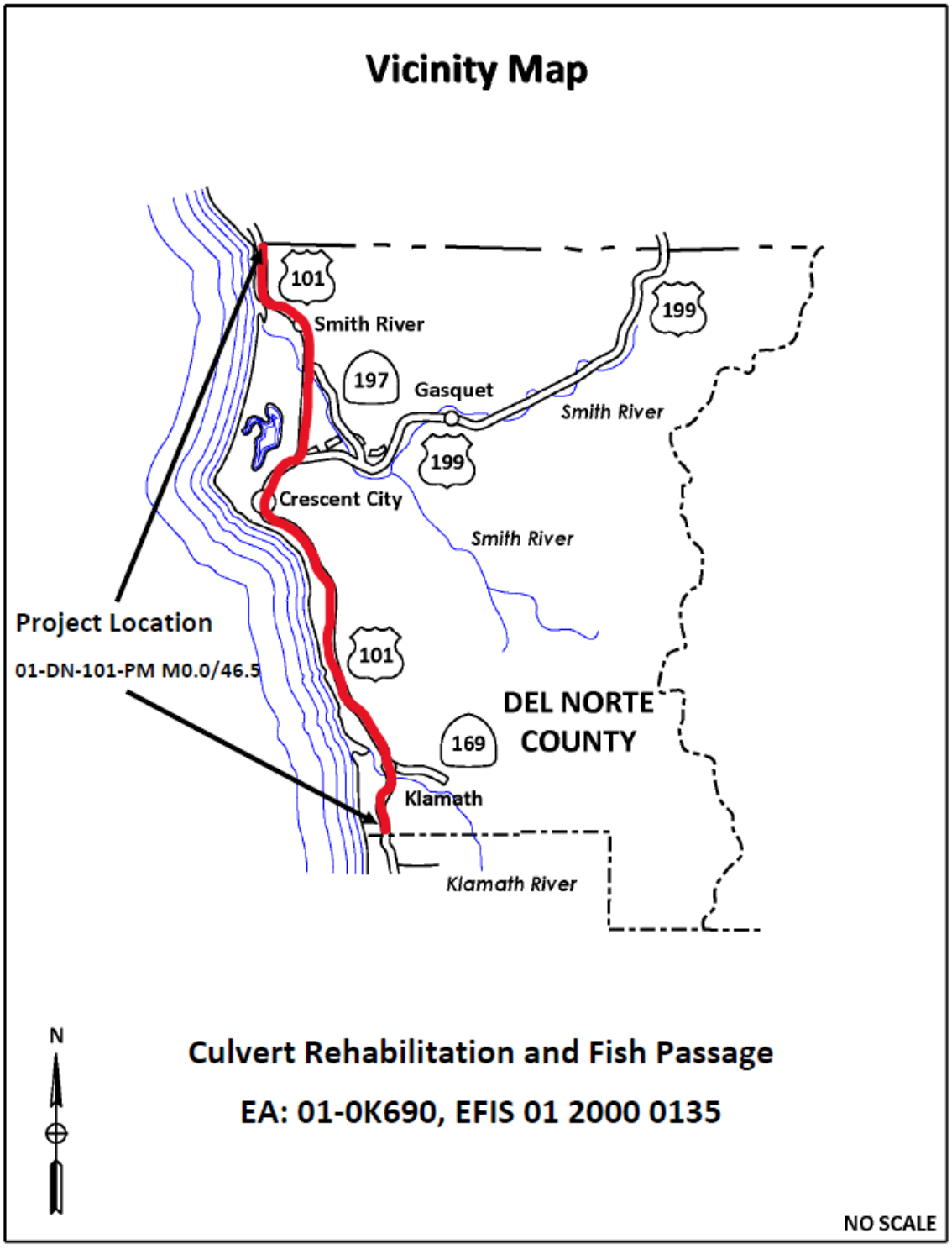



**Figure 1. Project Vicinity Map**

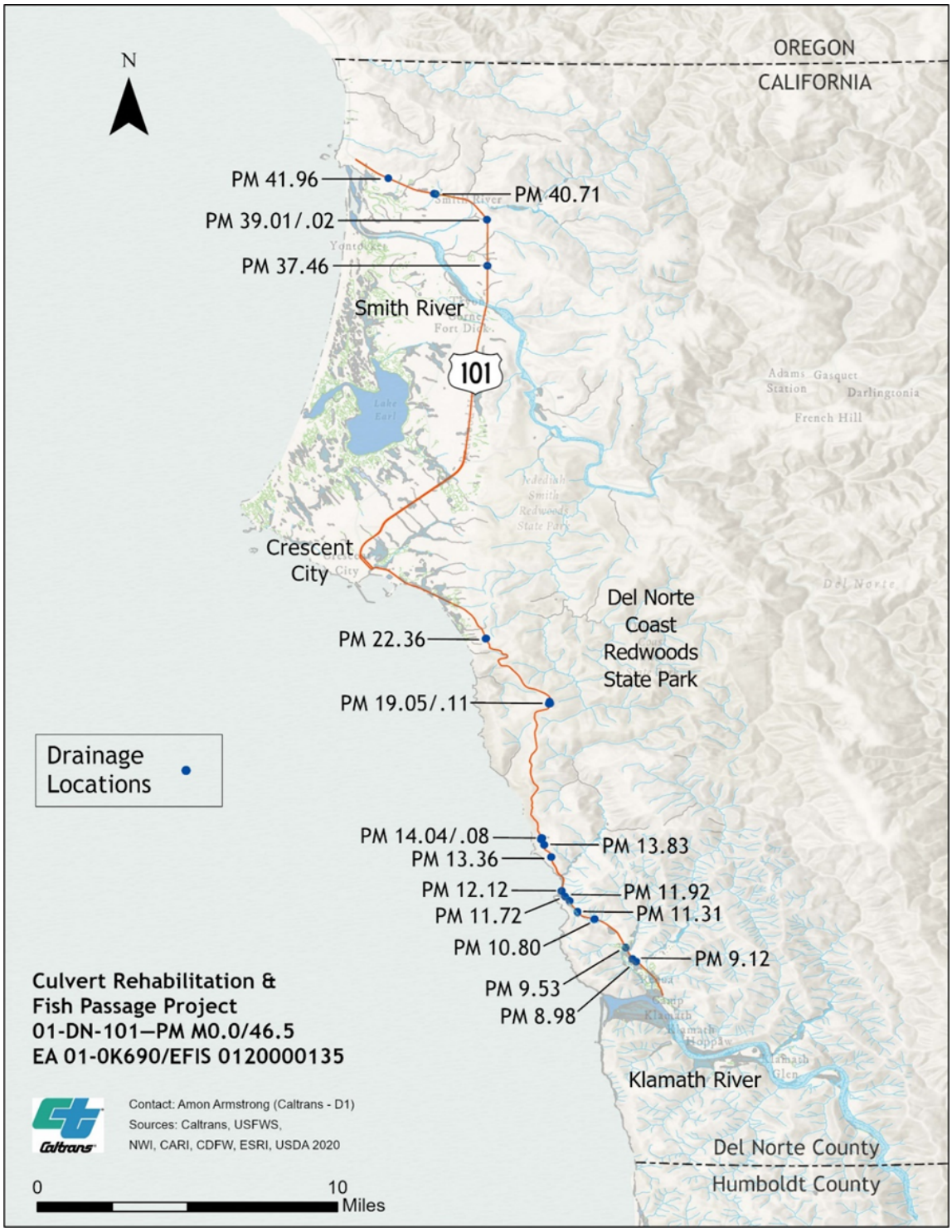



**Figure 2. Culvert/Fish Passage Locations**

## 1.3 Project Description

Caltrans proposes to rehabilitate 20 drainage systems on U.S. Highway 101 (US 101) in Del Norte County from Post Miles (PMs) M0.0 to 46.5 (Figure 2 and Table 1). Most drainage systems would be rehabilitated by replacing culverts using the cut and cover method at depths of up to 20 feet. For deeper systems, located at PMs 10.80 and 19.05, a trenchless method would be used for installation. Proposed work would include replacement of culverts, downdrains (DD), drainage inlets (DI), flared end sections (FES), headwalls, end walls, and disturbed pavement. Additionally, guardrail with concrete vegetation control strips, cable railing, rock slope protection (RSP) and rock-lined ditches would be installed. At the proposed bridge location at PM 37.46, shoulder widening would occur, including additional paving and removal of a concrete-lined ditch adjacent to the highway. Based on hydraulic recommendations, many existing culverts would be replaced in-kind or increased in diameter. At PMs 9.53 and 40.71 existing culverts would be replaced with larger reinforced box culverts to better convey flows and improve wildlife crossing. Culverts at multiple locations would be shortened ("daylighted"), increasing runoff filtration through larger infiltration capacity and improving aquatic habitat in some locations.

Fish passage remediation would occur at two locations. At PM 37.46, a priority fish passage location would be remediated by constructing a single-span bridge. At PM 40.71, a 36-inch-diameter culvert would be replaced with a 12-foot-wide bottomless box culvert. If water is present during construction, dewatering and water diversion would be necessary at several locations. Vegetation clearing and grubbing, branch trimming, and/or removal of trees would be required for construction access and culvert replacement activities at some locations. Revegetation would occur within disturbed soil areas to replace vegetation removed and to provide soil stabilization and erosion control. Examples of revegetation could include erosion control seeding, natural regeneration, and planting. Temporary erosion control would be included to meet water quality requirements. The project would be constructed in conformance with a Stormwater Pollution Prevention Plan. Refer to project layout sheets for the scope and limits of proposed work (Appendix A). Table 1 below provides a summary of proposed work at each location.

**Table 1. Scope of Work at Drainage System Locations**

| PMs | Construction Method | Proposed Work |
|---|---|---|
| 8.98 | Cut and Cover | Remove two L-shaped headwalls and a 24"-wide x 24"-high x 76.9'-long reinforced concrete box (RCB) culvert. Install two L-shaped headwalls with cable railings and a 24"-diameter x 76.9'-long alternative pipe culvert (APC). Cofferdam and dewatering required. Rock slope protection (RSP) will be added to the inlet and outlet. |
| 9.12 | Cut and Cover | Remove a 36"-diameter x 74.5'-long corrugated steel pipe (CSP) culvert. Install a 48"-diameter x 74.5'-long APC. Cofferdam and dewatering required. |
| 9.53 | Cut and Cover | Remove two headwalls, a 30"-wide x 30"-high x 65.7'-long RCB culvert, and a 24"-wide x 24″-high x 65.8'-long RCB culvert. Install two headwalls with cable railing and two 12'-wide x 8'-high x 56.8'-long RCB culverts. Cofferdam and dewatering required. |
| 10.8 | Trenchless | Remove two headwalls and abandon a 24"-wide x 24"-high x 127.5'-long RCB culvert. Install two headwalls with cable railings and a 54"-diameter x 127.5'-long welded steel pipe (WSP) culvert. Temporary access road would be needed. |
| 11.31 | Cut and Cover | Remove two headwalls and a 24"-wide x 24"-high x 74.3'-long RCB culvert. Install two headwalls with cable railings and a 30"-diameter x 74.3'-long APC. Widen shoulders to 4' from the edge of traveled way (ETW) and match adjacent side slope on west side. Clear water diversion at inlet. |
| 11.72 | Cut and Cover | Remove a flared end section (FES) and a 36"-diameter x 60.8' high density polyethylene (HDPE) culvert. Install an FES and a 36"-diameter x 60.8'-long APC. Cofferdam and dewatering required. |
| 11.92 | Cut and Cover | Remove two drainage inlets (DI), a 30"-diameter x 15.5'-long concrete culvert and a 24"-wide x 24"-high x 94.4'-long RCB culvert. Install two G1 DIs, a 30"-diameter x 15.5'-long APC culvert, and a 36"-diameter x 94.4'-long APC. |
| 12.12 | Cut and Cover | Remove an FES and a 42"-diameter x 85.9'-long CSP culvert. Install an FES and a 36"-diameter x 85.9'-long APC. Initial planning proposes a 10,000 square foot bio-strip, or infiltration basin. |
| 13.36 | Cut and Cover | Remove a headwall and a 24"-diameter x 122.8'-long CSP culvert. Install a headwall and a 24"-diameter x 122.8′-long APC culvert. Clear water diversion at inlet. |

| PMs | Construction Method | Proposed Work |
|---|---|---|
| 13.83 | Cut and Cover | Remove an FES, a 36"-diameter x 68'-long CSP culvert, and a 36"-diameter x 53.6'-long CSP culvert downdrain. Install an FES, a 36"-diameter x 81.5'-long APC and a 36"-diameter x 41.8'-long APC downdrain with anchor assembly, and RSP. Remove two headwalls and an 18″-diameter x 40.89'-long culvert. Install RSP and gravel filter in place of culvert. Clear water diversion at inlet. |
| 14.04A | Cut and Cover | Remove drainage inlet and a 24"-diameter x 152.3'-long CSP culvert. Install a G1 drainage inlet, a 35.5"-diameter x 88.4'-long APC culvert, and 9′-wide x 77.4'-long rock-lined ditch consisting of RSP and a gravel filter. |
| 14.04B | Cut and Cover | Remove a headwall and a 24"-diameter x 61.2'-long CSP culvert. Install rock-lined ditch consisting of RSP and gravel filter at inlet. |
| 14.08 | Cut and Cover | Remove a DI and an 18"-diameter x 66'-long CSP culvert. Install a G1 DI and a 24"-diameter x 66'-long APC culvert. RSP would be refreshed at the outlet. |
| 19.05 | Trenchless | Remove a headwall, abandon a 24"-diameter x 206.7'-long CSP culvert, removing a 20'-long section at the inlet and outlet. Install a headwall with cable railing at inlet, 42"-diameter x 128.4'-long WSP culvert, a 42"-diameter x 68.5'-long APC downdrain, and RSP with gravel filter at outlet. Two clear water diversions would be needed; one at each inlet stream channel. |
| 19.11 | Cut and Cover | Remove an 18"-diameter x 60.4'-long CSP culvert. Install a 24"-diameter x 54.9'-long APC, a 24"-diameter x 5.5'-long APC downdrain, and RSP. |
| 22.36 | Cut and Cover | Remove a 24"-diameter x 157.2'-long CSP culvert. Install a 30"-diameter x 157.2'-long APC. |
| 37.46 | Bridge (Mello Creek) | Remove four headwalls, a 36"-diameter x 95'-long CSP, a 36"-diameter x 98.7'-long CSP culvert, and a 72"-wide x 72"-high x 92.3'-long RCB cattle crossing. Install a full span bridge with Midwest Guardrail System (MGS) with two alternative in-line terminal systems (AITS) and two crash cushions. Clear water diversion at inlet. Priority fish passage installation. |
| 39.01/ 39.02 | Cut and Cover | Remove four headwalls (HW), an 18"-diameter x 67'-long CSP, and a 24"-diameter x 67'-long CSP culvert. Install 12'-wide x 6'-high x 67.3'-long RCB culvert. Clear water diversion. |

| PMs | Construction Method | Proposed Work |
|---|---|---|
| 40.71 | Cut and Cover | Replace 36"-diameter x 60'-long RCP culvert with 12'-wide x 8'-high x 60'-long RCB culvert. Replace inlet and outlet HW and wingwalls (WW). RSP at outlet. Fish passage to be engineered. |
| 41.96 | Cut and Cover (Delilah Creek) | Remove an FES and a 24"-diameter x 44.2'-long CSP culvert. Install two headwalls with cable railing and a 36"-diameter x 44.2'-long APC culvert. Clear Water Diversion at inlet. |

| | | |
|---|---|---|
| APC – Alternative Pipe Culvert<br>HDPE – High Density Polyethylene<br>CMP – Corrugated Metal Pipe<br>HMA – Hot Mix Asphalt<br>CSP – Corrugated Steel Pipe | RCP – Reinforced Concrete Pipe<br>DD – Downdrain<br>RSP – Rock Slope Protection<br>RCB – Reinforced Concrete Box Culvert | DI – Drainage Inlet<br>WSP – Welded Steel Pipe<br>FES – Flared End Section<br>HW – Headwall<br>WW - Wingwall |

Lane closures would be necessary at multiple locations to complete work. Work at some locations would be carried out using half-width construction (a staged construction sequence) and a temporary signal system. Equipment and materials staging would occur within the closed lane and shoulders. Most of the work would occur within the existing State right of way. Some locations would involve work within existing drainage easements. Permanent easements (transfer of jurisdiction) will be required at locations within State Parks (PM 14.04) and National Parks (PMs 13.83 and 14.04). Temporary construction easements (TCE) from adjacent property owners would be required at some locations. Utility relocations are not anticipated.

### *Construction Scenarios*

All work, regardless of method, would begin with the following six steps:

- Set up temporary traffic control using portable delineators and traffic signs for single lane closure as required.
- Set up staging areas in designated pullouts as well as within the existing closed portion of the roadbed.
- Set up project erosion control Best Management Practices (BMPs), as needed.
- Conduct nesting bird surveys, as needed, for vegetation clearing.
- Conduct minor vegetation removal. May require small equipment such as a bobcat and trimming/removal equipment.

- Set up clear water diversion and/or perform dewatering, as needed.

### *Cut and Cover Installation*

The maximum depth of excavation would be 20 feet without an engineered shoring plan, and the width would be the diameter of the pipe with roughly 24 inches on each side of the pipe.

Following the initial steps 1-6 above, replacement of culverts via the cut and cover method generally includes the following steps:

- Sawcut or grind existing roadway one traffic lane at a time (half width construction).
- Conduct culvert improvements one half at a time (half width construction).
- Excavate trench using an excavator.
- Remove or abandon existing culvert, inlets, and associated drainage structures per plan using a crane, excavator, dump truck or bobcat.
- Install new culverts using a crane, backhoe, loader, bobcat, or compactor.
- Construct inlets, headwalls, wingwalls, downdrains, and outfalls per plan using a crane, excavator, bobcat, and compactors, as needed. Concrete truck would operate from closed traffic lane with potential use of concrete pump.
- Remove clear water diversion, as needed.
- Replace or install RSP as needed, or fill under the downdrain using excavator, bobcat, skip loader, or boom truck.
- At locations where culverts would be realigned, backfill existing culvert location with structural backfill (i.e., soil or fill from excavated area for new culvert location).
- Restore asphalt using a paver and pavement striper.
- Restore site, including placing erosion control measures.

### *Jack and Bore Trenchless Installation*

Following the initial steps 1-6 above, replacement of culverts via the Jack and Bore trenchless method generally includes the following steps:

- Excavate and remove 10 to 30 feet of existing pipe at inlet and outlet. Pump cement/sand mixture (slurry) into remaining existing pipe (abandon culvert) using cement trucks and cement pump truck as needed on adjacent roadway or staging area. Slurry fill would require multiple lifts to fill entire abandoned culvert.
- Cover abandoned culvert using native material or imported fill designated by the landscape architect.
- Dig a sending and a receiving pit to the required depth for boring equipment.
- Place a jack and bore machine into the sending pit.
- Use the machine to cut a hole through the ground and push the new pipe in place.
- Remove the jack and bore machine.
- Connect the new welded steel pipe to drain inlet or downdrain.
- Install additional system components (drainage inlet, downdrains, pipe reducers, and anchorage systems).
- Back fill equipment pit, if necessary.
- Conduct quality control inspections.
- Remove clear water diversion, as needed.
- Replace or install rock slope protection (RSP) as needed, or fill under the downdrain using excavator, bobcat, skip loader, or boom truck.
- Restore site, including placing erosion control measures.

***Bridge Construction (Mello Creek; PM 37.46; Accelerated Bridge Construction)***

*Site Preparation:*

- Construction area signs would be placed on US 101 notifying motorists of construction and lane closure of US 101 at Mello Creek. Install temporary safety barriers and signal system for one-way traffic handling.
- Construct frontage road and axillary access for adjacent properties.
- Set up staging areas within the existing closed portion of the roadway and in designated pullouts.
- Set up project temporary erosion control BMPs, as needed.
- Conduct nesting bird surveys, as needed, for vegetation clearing.
- Install Environmentally Sensitive Area (ESA) fencing and exclusionary fencing.
- Conduct clearing and grubbing.
- Remove asphalt concrete (AC) pavement or existing guardrail for stage construction within the work zone lane closure.

***Stage 1 – Bridge Construction (Stage Construction–Southbound US 101):***

- Bridge construction would utilize Accelerated Bridge Construction techniques.
- Temporary shoring for roadway during excavation – contractor could utilize either sheet pile or H-pile wall shoring methods (following description for most likely H-pile shoring).
    - Drill through existing pavement from roadway and install steel piles for temporary shoring and backfill the hole with pea gravel or similar. Excavate down to bottom of vertical abutment and install steel road plate as lagging between piles. Typically, the contractor will slot the road plates between adjacent piles and hold in place with C-clamps. After excavating about 4 feet, the C-clamps are removed (after an excavator supports the road plate from above and lowers it to the bottom of excavation). The clamps are reinstalled, and the process repeated until the plate reaches the bottom of vertical abutment elevation. Additionally, walers may be needed as support.

- Excavate to bottom of abutment elevation. Existing culvert to remain in place to convey water through project until bridge construction complete. Groundwater could be exposed at lower elevations. Pumps would be used to remove water from excavated areas within the work zone.
- Install bridge substructure piling. Piles could be driven steel H-piles, driven Cast-In-Steel-Shell (CISS) piles or Cast-In-Drilled-Hole (CIDH) reinforced concrete piles.
- Construct abutments and wingwalls. Could be precast or cast-in-place (CIP) concrete (some closure pours would be needed).
- Erect precast/prestressed (PC/PS) concrete voided slab. A crane with outriggers about the width of a two-lane rural highway would install one slab at a time with short full closures. The full closure should be under 20 minutes to set up the crane, pick and place the slab, and clear the traffic lane.
- Place ultra-high-performance concrete (UHPC) in key-ways between PC deck slabs and cure.
- Construct approach slab (as needed).
- Prepare bridge deck and apply polyester concrete overlay.
- Bridge rails would be constructed on southbound side of bridge. Bridge rail construction would consist of placing forms and reinforcing steel then pouring concrete. Staining or architectural finishes would take place after the concrete has had sufficient time to cure (approximately 3 weeks).
- Place structure backfill one foot beyond limits of abutments and compact to 95%.

### *Stage 2 – Bridge Construction–Northbound US 101*

- Repeat preliminary steps as needed to reset traffic controls, BMPs, etc. to perform work on the other side of the roadway.
- Repeat Stage 1 process.

### *Roadway*

- Guardrails would be installed to conform to the bridge railing.
- Place backfill and install new pavement structural section to conform roadway to bridge deck to allow for Stage 2 traffic handling switch.
- Relocate temporary safety barriers and temporary striping for Stage 2 construction.

### *Stage 3 - Remove Culvert–Restore Streambed*

- Following bridge construction and after the creek begins to dry up to a non-flowing condition, in-channel work would proceed. This work could be performed off the traveled way with temporary traffic control provided by flagging, if needed.
- Install temporary clear water diversion using temporary cofferdam and culvert system to convey stream water through the project location.
- Remove existing culvert.
- Excavate to channel subgrade.
- Install engineered streambank material and bankline rock per grading plans and specs using a mini-excavator/skid steer loader and jet in fines to keep flow on surface.
- Remove clear water diversion.
- Final grading of embankment.
- Apply permanent erosion control (hydroseed, planting, mulch).
- Complete final paving. The remaining portions of the existing roadway would receive hot mix asphalt (HMA) overlay to 0.1 feet below finish grades (or asphalt obliterated or cold planed) prior to placing a final structural section consisting of base rock and HMA paving.
- Remove temporary safety barriers and signal system.
- Site cleanup, remove temporary Best Management Practices (BMPs) and CAS.
- Final guardrail and traffic striping would be placed to complete roadway work and return traffic to its pre-construction disposition.

### *Construction Schedule*

There are 320 working days anticipated for the project based on a potential two season work period for Mello Creek Bridge, potentially beginning in 2028 and ending in 2030. The expected working days are divided among the other 19 locations with 5 to 20 working days per location, simultaneous with the bridge construction.

Work windows to avoid impacts to sensitive biological resources are provided in the Work Windows section below. Work within drainage systems where water may be present would be scheduled later in the season, as feasible, to minimize the number of locations where dewatering and/or water diversion would be required.

Artificial night lighting may be required. To reduce potential disturbance to sensitive resources, lighting would be temporary and directed specifically on the portion of the work area actively under construction. Use of artificial lighting would be limited to California Occupational Safety and Health Administration (Cal/OSHA) work area lighting requirements. The County of Del Norte does not have a specific noise regulation ordinance outside of residential areas, however any night work would be subject to the county Nuisance Ordinance and would comply with reasonable accommodations.

## 1.4 Proposed Alternatives

### *No-Build (No-Action) Alternative*

The No-Build Alternative would maintain the facility in its current condition and would not meet the purpose and need of the project. For each potential impact area discussed in Chapter 2, the No-Build Alternative has been determined to have no impact. Under the No-Build Alternative, no alterations to the existing conditions would occur and the proposed improvements would not be implemented.

### *Alternatives Considered but Eliminated from Further Consideration*

Several drainage system replacement alternatives were considered during the development of the project. The original scope included two alternatives: one included 26 drainage systems and the other included 41 drainage systems. Subsequently, the Project Development Team (PDT) chose to eliminate certain locations that did not meet the programmed scope and schedule. While various drainage system designs and construction strategies were considered for each location, the scope and purpose of the project remains the same, which is to

rehabilitate the drainage systems. Replacement strategies at each location were developed in consultation with the PDT, based in part by hydraulic conditions and environmental constraints.

## 1.5 Existing Conditions

The existing facility varies between 2-lane conventional highway, 4-lane freeway, and 2-lane and 3-lane expressways within the project limits. Some segments also include a passing lane. All project locations are located in sections of conventional highway in rural, mountainous areas along curvilinear alignments, with shoulder widths varying from 1 foot to 10 feet. Right of way widths extend from 26 feet to 480 feet from the US 101 centerline.

Multiple communities are located within the project limits including Klamath, Crescent City, and Smith River. Segments of the highway within the project limits traverse Del Norte Coast Redwoods State Park, designated a World Heritage site by the United Nations Educational, Scientific and Cultural Organization (UNESCO). Both State and National parks are located within the project limits. Multiple drainage systems are located within the Coastal Zone.

The project area is primarily forested and coastal, while some of the land is agricultural. US 101 in Del Norte County is a coastal route intersecting two primary watersheds: the Klamath River and the Smith River. Several of the proposed culvert locations are within a floodplain of either one of these river basins and/or within the Coastal Floodplain zone.

Aerial and underground power and communication lines are present throughout the project limits. There are no railroad facilities within the project limits. Culverts included in the project are in poor or fair condition and are in need of rehabilitation and/or replacement to preserve the roadway.

## 1.6 Surrounding Land Use

The project area and surrounding lands are within Del Norte County, spanning 45 miles of the US 101 corridor. The project is located within remote rural and resource lands. The predominant land uses are State and National parks, agriculture, and rural residential uses, with a few small clusters of commercial development within the communities of Klamath, Crescent City, and Smith River.

Thirteen of the locations [PMs 11.31, 11.72, 11.92, 12.12, 13.36, 13.83, 14.04A, 14.04B, 14.08, 22.36, 37.46 (Mello Creek), 40.71, and 41.96 (Delilah Creek) are within the Coastal Zone.

## 1.7 Permits and Approvals Needed

Table 2 below indicates the permits, licenses, agreements, and certifications (PLACs) that are required for project construction.

**Table 2. Agency, Permit/Approval Needed and Status**

| Agency | Permit/Approval | Status |
|---|---|---|
| California Department of Fish and Wildlife (CDFW) | 1602 Lake and Streambed Alteration Agreement | Obtain after Final Environmental Document (FED) approval |
| CDFW | California Endangered Species Act Consistency Determination or Incidental Take Permit | Obtain after FED approval if warranted by final project design |
| National Marine Fisheries Service (NMFS) | ~~I~~ndividual Section 7 Consultation | Initiate after Draft Environmental Document (DED) circulation |
| Regional Water Quality Control Board (RWQCB) | Clean Water Act Section 401 Water Quality Certification | Obtain after FED approval |
| U.S. Army Corps of Engineers (USACE) | Section 404 authorization (Nationwide permit) for work in Waters of the United States | Obtain after FED approval |
| U.S. Fish and Wildlife Service (USFWS) | Programmatic Letter of Concurrence (PLOC) (USFWS 2022) | Initiate consultation after DED circulation |
| California Coastal Commission (CCC) or Local Jurisdiction | Coastal Development Permit | Obtain after FED approval |
| California Department of State Parks | Right of Entry Permit | Obtain after FED approval |

For projects that have federal funds involved, Section 4(f) of the U.S. Department of Transportation (USDOT) Act of 1966 prohibits the Federal Transit Administration and other USDOT agencies from using land from publicly owned parks, recreation areas (including recreational trails), wildlife and water fowl refuges, or public and private historic properties, unless there is no feasible and prudent alternative to that use and the action includes all possible planning to minimize harm to the property resulting from such a use. This project has federal funds and would require the temporary occupation and permanent incorporation of Section 4(f) resources. A Section 4(f) Evaluation with *de minimis* Determination is being prepared for the project and will be circulated for public review and comment separately from this document.

## 1.8 Standard Measures and Best Management Practices Included in All Alternatives

Under CEQA, “mitigation” is defined as avoiding, minimizing, rectifying, reducing/ eliminating, and compensating for an impact. In contrast, Standard Measures and Best Management Practices (BMPs) are prescriptive and sufficiently standardized to be generally applicable, and do not require special tailoring for a project. These are measures that typically result from laws, permits, agreements, guidelines, resource management plans, and resource agency directives and policies. For this reason, the measures and practices are not considered “mitigation” under CEQA; rather, are included as part of the project description in environmental documents.

The project contains a number of standardized project features, standard practices (measures), and Best Management Practices (BMPs) which are employed on most, if not all, Caltrans projects and were not developed in response to any specific environmental impact resulting from the proposed project and, as such, are included as part of the project description. Any project-specific avoidance, minimization, or mitigation measures that would be applied to reduce the effects of project impacts are listed further below as Additional Measures or in Section 2.4.–Biological Resources.

### *Aesthetics Resources*

**AR-1:** Aesthetic treatment (such as tribal patterns) to bridges/guardrails/retaining walls would be included to address context sensitivity.

**AR-2:** Temporary access roads, construction easements, and staging areas that were previously vegetated would be restored to a natural contour and revegetated with regionally-appropriate native vegetation.

**AR-3:** Where feasible, guardrail terminals would be buried; otherwise, an appropriate terminal system would be used, if appropriate.

**AR-4:** Where feasible, construction lighting would be temporary and directed specifically on the portion of the work area actively under construction, pursuant to Cal/OSHA lighting requirements.

**AR-5:** Where feasible, the removal of established trees and vegetation would be minimized. To demarcate areas where vegetation would be preserved and root systems of trees protected, Temporary High Visibility Fencing (THVF) would be installed in Environmentally Sensitive Areas (ESAs) before start of construction.

**AR-6**: To ensure that vegetation control will be visually compatible with the scenic corridor, provide integral colored or stained vegetation control (Minor Concrete), preferably black or dark grey, at all MGS replacement locations. The color and application method will be determined during the final design phase of the project.

## *Biological Resources*

**BR-1: General**

Before start of work, as required by permit or consultation conditions, a Caltrans biologist or Environmental Construction Liaison (ECL) would meet with the contractor to brief them on environmental permit conditions and requirements relative to each stage of the proposed project, including, but not limited to, work windows, drilling site management, and how to identify and report regulated species within the project areas.

**BR-2: Animal Species**

A. To protect migratory and nongame birds (occupied nests and eggs), if possible, vegetation removal would be limited to the period outside of the bird breeding season (removal would occur between September 16 and January 31). If vegetation removal is required during the breeding season, a nesting bird survey would be conducted by a qualified biologist within five days prior to vegetation removal. If an active nest is located, the biologist would coordinate with CDFW to establish appropriate species-specific buffer(s) and any monitoring requirements. The buffer would be delineated around each active nest and construction activities would be excluded from these areas until birds have fledged, or the nest is determined to be unoccupied.

B. A *Bird Exclusion Plan* would be prepared by a qualified biologist prior to construction. Exclusion devices would be designed so they would not trap or entangle birds or bats. Exclusion devices would be installed outside of the breeding season (September 16 through January 31) to eliminate the re-occupancy of existing structures by migratory bird species that may attempt to nest on the structure during construction. On structures or parts of structures where it is not feasible to install bird exclusion devices, partially constructed and unoccupied nests within the construction area would be removed and disposed of on a regular basis throughout the breeding season (February 1 through September 15, with biologist discretion) to prevent their occupation. Nest removal would be repeated weekly under guidance of a qualified biologist to ensure nests are inactive prior to removal.

C. Pre-construction surveys for active raptor nests within one-quarter mile of the construction area would be conducted by a qualified biologist within one week prior to initiation of construction activities. Areas to be surveyed would be limited to those areas subject to increased disturbance due to construction activities (i.e., areas where existing traffic or human activity is greater than or equal to construction-related disturbance need not be surveyed). If any active raptor nests are identified, appropriate conservation measures (as determined by a qualified biologist) would be implemented. These measures may include, but are not limited to, establishing a construction-free buffer zone around the active nest site, biological monitoring of the active nest site, and delaying construction activities near the active nest site until the young have fledged.

D. To prevent attracting corvids (birds of the *Corvidae* family which include jays, crows, and ravens), no trash or foodstuffs would be left or stored on-site. All trash would be deposited in a secure container daily and disposed of at an approved waste facility at least once a week. Also, on-site workers would not attempt to attract or feed any wildlife.

E. Hydroacoustic monitoring would occur during activities such as impact pile driving, hoe ramming, or jackhammering which could potentially produce impulsive sound waves that may affect listed fish species.

Hydroacoustic monitoring would comply with the terms and conditions of federal and state Endangered Species Act (ESA) consultations.

The *Hydroacoustic Monitoring Plan* would describe the monitoring methodology, frequency of monitoring, positions that hydrophones would be deployed, techniques for gathering and analyzing data, quality control measures, and reporting protocols.

To reduce potential hydroacoustic impacts to anadromous species due to impact pile driving, a sound-attenuation system may be implemented. The sound attenuation system would be used for piles installed in water by impact hammer. If the sound attenuation system fails, pile driving would stop immediately and not resume until the system is operational. Types of sound attenuation system include, but are not limited to:

a) Confined bubble curtain

b) Unconfined bubble curtain

c) Isolation casings

F. A qualified biologist would monitor in-stream construction activities that could potentially impact sensitive biological receptors (e.g., amphibians, fish). To ensure adherence to permit conditions, the biological monitor or a contractor-supplied biologist would be present during activities such as installation and removal of dewatering or diversion systems, bridge demolition, pile-driving and hoe-ramming, and drilling for bridge foundations to ensure adherence to permit conditions. In-water work restrictions would be implemented.

G. An *Aquatic Species Relocation Plan*, or equivalent, would be prepared by a qualified biologist and include provisions for pre-construction surveys and the appropriate methods or protocols to relocate any species found. If previously unidentified threatened or endangered species are encountered or anticipated incidental take levels are exceeded, work would either be stopped until the species is out of the impact area, or the appropriate regulatory agency would be contacted to establish steps to avoid or minimize potential adverse effects. This

Plan may be included as part of the Temporary Creek Diversion System Plan identified in BR-5.

H. Artificial night lighting may be required. To reduce potential disturbance to sensitive resources, lighting would be temporary and directed specifically on the portion of the work area actively under construction. Use of artificial lighting would be limited to Cal/OSHA work area lighting requirements.

I. A Limited Operating Period would be observed, whereby all in-stream work below ordinary high water (OHW) would be restricted to the period between June 15 and October 15 to protect water quality and vulnerable life stages of sensitive fish species.

J. To protect nesting or roosting northern spotted owl (NSO) and marbled murrelet (MAMU), suitable NSO or MAMU nesting trees would be removed between September 16 and January 31. No construction activities generating sound levels 20 or more decibels (dB) above ambient sound or with maximum sound levels (ambient sound level plus activity-generated sound level) above 90 dB (with the exception of backup alarms) would occur between February 1 and August 5. Between August 6 and September 15, work that generates sound levels equal to or greater than 10 dB above ambient sound levels or above 90 dB max would observe a daily work window beginning 2 hours post-sunrise and ending 2 hours pre-sunset. Sound-related work windows would be lifted between September 16 and January 31.

   No human activities (including use of drones) would occur within a visual line-of-sight of 328 feet (100 meters) or less from a known nest site (USFWS 2020), or from unsurveyed suitable nesting habitat containing potential murrelet nest trees within 328 feet (100 meters) of proposed activities or, for NSO, from unsurveyed suitable nesting/roosting habitat containing potential owl nest trees. These visual disturbance restrictions would be lifted after September 15; after which the USFWS considers visual disturbance as having “no effect” on nesting adults or dependent young. The 328-foot (100 meters) visual disturbance distance may be reduced or eliminated through technical assistance with the USFWS if site-specific information

suggests that ambient visual disturbance within the action area is already high enough to likely preclude species from nesting within 328 feet (100 meters) of the project footprint, or vegetation near the roadway is sufficiently dense to shield the view from habitat farther from the roadway.

K. Caltrans would contact USFWS if proposed NSO/MAMU habitat removal is within the designated critical habitat area to ensure removal would not result in an adverse effect.

**BR-3: Invasive Species**

Invasive non-native species control would be implemented. Measures would include:

- Straw, straw bales, seed, mulch, or other material used for erosion control or landscaping would be free of noxious weed seed and propagules.

- All equipment would be thoroughly cleaned of all dirt and vegetation prior to entering the job site to prevent importing invasive non-native species. Project personnel would adhere to the latest version of the *California Department of Fish and Wildlife Aquatic Invasive Species Decontamination Protocol (Northern Region)* (CDFW 2022) for all field gear and equipment in contact with water.

**BR-4: Plant Species, Sensitive Natural Communities, and ESHA**

A. A *Revegetation Plan* would be prepared which would include a plant palette, establishment period, watering regimen, monitoring requirements, and invasive plant species control measures. The Revegetation Plan would also address measures for wetland and riparian areas temporarily impacted by the project.

B. Prior to the start of work, Temporary High Visibility Fencing (THVF) and/or flagging would be installed around sensitive natural communities, environmentally sensitive habitat areas, rare plant occurrences, intermittent streams and wetlands and other waters, where appropriate. No work would occur within fenced/flagged areas.

C. Where feasible, the structural root zone (SRZ) would be identified around each large-diameter tree (>2-foot diameter-at-breast height [DBH]) directly adjacent to project activities, and work within the zone would be limited.

D. When possible, excavation of roots of large diameter trees (>2-foot DBH) would not be conducted with mechanical excavator or other ripping tools. Instead, roots would be severed using a combination of root-friendly excavation and severance methods (e.g., sharp-bladed pruning instruments or chainsaw). At a minimum, jagged roots would be pruned away to make sharp, clean cuts.

E. Upon completion of construction, all superfluous construction materials would be completely removed from the site. The site would then be restored by regrading and stabilizing with a hydroseed mixture of native species along with fast growing sterile erosion control seed, as required by the Erosion Control Plan.

**BR-5: Wetlands and Other Waters**

A. The contractor would be required to prepare and submit a *Temporary Creek Diversion System Plan* to Caltrans for approval prior to any creek diversion. Depending on site conditions, the plan may also require specifications for the relocation of sensitive aquatic species (see also Aquatic Species Relocation Plan in **BR-2**). Water generated from the diversion operations would be pumped and discharged according to the approved plan and applicable permits.

B. In-stream work would be restricted to the period between June 15 and October 15 to protect water quality and vulnerable life stages of sensitive fish species (see also **BR-2**). Construction activities restricted to this period include any work below ordinary high water (OHW). Construction activities performed above the ordinary high water mark (OHWM) of a watercourse that could potentially directly impact surface waters (i.e., soil disturbance that could lead to turbidity) would be performed during the dry season, typically between June through October, or as weather permits per the authorized contractor-prepared Storm Water Pollution Prevention Plan (SWPPP) or Water

Pollution Control Program (WPCP), and/or project permit requirements.

C. See **BR-4** for Temporary High Visibility Fencing (THVF) information.

D. If allowed by regulatory agencies, temporary wetland protection mats may be used to prevent permanent damage and minimize temporary damage to wetlands from construction activities. Mats should be designed to accommodate motorized equipment or vehicles. Mats would be removed when wetland access is no longer needed or by November 1 of each year.

## *Cultural Resources*

**CR-1:** If cultural materials are discovered during construction, work activity within a 60-foot radius of the discovery would be stopped and the area secured until a qualified archaeologist can assess the nature and significance of the find in consultation with the State Historic Preservation Officer (SHPO).

**CR-2:** If human remains and related items are discovered on private or State land, they would be treated in accordance with State Health and Safety Code (H&SC) § 7050.5. Further disturbances and activities would cease in any area or nearby area suspected to overlie remains, and the County Coroner contacted. Pursuant to California Public Resources Code (PRC) § 5097.98, if the remains are thought to be Native American, the coroner would notify the Native American Heritage Commission (NAHC) who would then notify the Most Likely Descendent (MLD).

Human remains and related items discovered on federally-owned lands would be treated in accordance with the Native American Graves Protection and Repatriation Act of 1990 (NAGPRA) (23 USC 3001). The procedures for dealing with the discovery of human remains, funerary objects, or sacred objects on federal land are described in the regulations that implement NAGPRA 43 CFR Part 10.

All work in the vicinity of the discovery shall be halted and the administering agency's archaeologist would be notified immediately. Project activities in the vicinity of the discovery would not resume until the federal agency complies with the 43 CFR Part 10 regulations and provides notification to proceed.

## Geology, Seismic/Topography, and Paleontology

**GS-1:** The project would be designed to minimize slope failure, settlement, and erosion using recommended construction techniques and Best Management Practices (BMPs). New earthen slopes would be vegetated to reduce erosion potential.

**GS-2:** In the unlikely event that paleontological resources (fossils) are encountered, all work within a 60-foot radius of the discovery would stop, the area would be secured, and the work would not resume until appropriate measures are taken.

## Greenhouse Gas Emissions

**GHG-1:** Caltrans Standard Specification "Air Quality" requires compliance by the contractor with all applicable laws and regulations related to air quality (Caltrans Standard Specification [SS] 14-9).

**GHG-2:** Compliance with Title 13 of the California Code of Regulations, which includes restricting idling of diesel-fueled commercial motor vehicles and equipment with gross weight ratings of greater than 10,000 pounds to no more than 5 minutes.

**GHG-3:** Caltrans Standard Specification "Emissions Reduction" ensures that construction activities adhere to the most recent emissions reduction regulations mandated by the California Air Resources Board (CARB) (Caltrans SS 7-1.02C).

**GHG-4:** Use of a Transportation Management Plan (TMP) to minimize vehicle delays and idling emissions. As part of this, construction traffic would be scheduled and routed to reduce congestion and related air quality impacts caused by idling vehicles along the highway during peak travel times.

**GHG-5:** All areas temporarily disturbed during construction would be revegetated with appropriate native species, as appropriate. Landscaping reduces surface warming and, through photosynthesis, decreases $CO_2$. This replanting would help offset any potential $CO_2$ emissions increase.

**GHG-6:** Pedestrian and bicycle access would be maintained on U.S. Highway 101 during project activities.

### *Hazardous Waste and Material*

**HW-1:** Per Caltrans requirements, the contractor(s) would prepare a project-specific *Lead Compliance Plan* (CCR Title 8, § 1532.1, the "Lead in Construction" standard) to reduce worker exposure to lead-impacted soil. The plan would include protocols for environmental and personnel monitoring, requirements for personal protective equipment, and other health and safety protocols and procedures for the handling of materials containing lead.

**HW-2:** If treated wood waste (such as removal of sign posts or guardrail) is generated during this project, it would be disposed of in accordance with Standard Specification 14-11.14 "Treated Wood Waste."

### *Traffic and Transportation*

**TT-1:** A Transportation Management Plan (TMP) would be prepared for the project. The contractor would be required to schedule and conduct work to avoid unnecessary inconvenience to the public and to maintain access to driveways, houses, and buildings within the work zones. Pedestrian and bicycle access would be maintained during construction.

### *Utilities and Emergency Services*

**UE-1:** All emergency response agencies in the project area would be notified of the project construction schedule and would have access to U.S. Highway 101 throughout the construction period.

**UE-2:** The project is located within the *Moderate* CAL FIRE Fire Hazard Severity Zone (FHSZ). The contractor would be required to submit a jobsite *Fire Prevention Plan* as required by Cal/OSHA before starting job site activities. In the event of an emergency or wildfire, the contractor would cooperate with fire prevention authorities.

## *Water Quality and Stormwater Runoff*

**WQ-1:** The project would comply with the provisions of the Caltrans Statewide National Pollutant Discharge Elimination System (NPDES) Permit (Order 2022-0033-DWQ), effective January 1, 2023. If the project results in a land disturbance of one acre or more, coverage under the Construction General Permit (CGP) (Order 2022-0057-DWQ) is also required.

Before any ground-disturbing activities, the contractor would prepare a Stormwater Pollution Prevention Plan (SWPPP) (per the Construction General Permit Order 2022-0057-DWQ) or Water Pollution Control Program (WPCP) (projects that result in a land disturbance of less than one acre) that includes erosion control measures and construction waste containment measures to protect Waters of the State during project construction. For SWPPP projects (which are governed according to both the Caltrans NPDES permit and the Construction General Permit), soil disturbance is permitted to occur year-round as long as the Caltrans NPDES and CGP and the corresponding requirements of those permits are adhered to. For WPCP projects (which are governed according to the Caltrans NPDES permit), soil disturbance is permitted to occur year-round as long as the Caltrans NPDES permit is adhered to.

The SWPPP or WPCP would identify the sources of pollutants that may affect the quality of stormwater; include construction site Best Management Practices (BMPs) to control sedimentation, erosion, and potential chemical pollutants; provide for construction materials management; include non-stormwater BMPs; and include routine inspections and a monitoring and reporting plan. All construction site BMPs would follow the latest edition of the *Caltrans Storm Water Quality Handbooks: Construction Site BMPs Manual* to control and reduce the impacts of construction-related activities, materials, and pollutants on the watershed.

The project SWPPP or WPCP would be continuously updated to adapt to changing site conditions during the construction phase.

Construction may require one or more of the following temporary construction site BMPs:

- Any spills or leaks from construction equipment (e.g., fuel, oil, hydraulic fluid, and grease) would be cleaned up in accordance with applicable local, state, and/or federal regulations.
- Accumulated stormwater, groundwater, or surface water from excavations or temporary containment facilities would be removed by dewatering.
- Water generated from the dewatering operations would be discharged on-site for dust control and/or to an infiltration basin or disposed of offsite.
- Temporary sediment control and soil stabilization devices would be installed.
- Existing vegetated areas would be maintained to the maximum extent practicable.
- Clearing, grubbing, and excavation would be limited to specific locations, as delineated on the plans, to maximize the preservation of existing vegetation.
- Vegetation reestablishment or other stabilization measures would be implemented on disturbed soil areas, per the Erosion Control Plan.
- For SWPPP projects (which are governed according to both the Caltrans NPDES permit and the Construction General Permit), soil disturbance is permitted to occur year-round as long as the Caltrans NPDES and CGP and the corresponding requirements of these permits are adhered to. For WPCP projects (which are governed according to the Caltrans NPDES permit), soil disturbance is permitted to occur year-round as long as the Caltrans NPDES permit is adhered to.

**WQ-2:** The project would incorporate pollution prevention and design measures consistent with the *2016 Caltrans Storm Water Management Plan* (Caltrans 2016). This plan complies with the requirements of the Caltrans Statewide NPDES Permit (Order 2022-0033-DWQ).

The project design may include one or more of the following:

- Vegetated surfaces would feature native plants, and revegetation would use the seed mixture, mulch, tackifier, and fertilizer recommended in the Erosion Control Plan prepared for the project.
- Where possible, stormwater would be directed in such a way as to sheet flow across vegetated slopes, thus providing filtration of any potential pollutants.

## 1.9 Discussion of the NEPA Categorical Exclusion

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



# Chapter 2. CEQA Environmental Checklist

## *Environmental Factors Potentially Affected*

The environmental factors noted below would be potentially affected by this project. Please see the CEQA Environmental Checklist topics on the following pages for additional information.

| Potential Impact Area | Impacted: Yes / No |
|---|---|
| Aesthetics | No |
| Agriculture and Forest Resources | No |
| Air Quality | No |
| **Biological Resources** | **Yes** |
| Cultural Resources | No |
| Energy | No |
| Geology and Soils | No |
| **Greenhouse Gas Emissions** | **Yes** |
| **Hazards and Hazardous Materials** | **Yes** |
| **Hydrology and Water Quality** | **Yes** |
| Land Use and Planning | No |
| Mineral Resources | No |
| Noise | No |
| Population and Housing | No |
| Public Services | No |
| Recreation | No |
| Transportation | No |
| Tribal Cultural Resources | No |
| Utilities and Service Systems | No |
| Wildfire | No |
| Mandatory Findings of Significance | No |

The CEQA Environmental 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 project will indicate there are no impacts to a particular resource. A “NO IMPACT” answer in the last column of the checklist reflects this determination. The words “significant” and “significance” used throughout the CEQA Environmental Checklist are only related to potential impacts pursuant to CEQA. The questions in the CEQA Environmental Checklist are intended to encourage the thoughtful assessment of impacts and do not represent thresholds of significance.

Project features, which can include both design elements of the project, as well as standardized measures that are applied to all or most Caltrans projects (such as Best Management Practices [BMPs] and measures included in the Standard Plans and Specifications or as Standard Special Provisions [Section 1.4]), are considered to be an integral part of the project and have been considered prior to any significance determinations documented in the checklist or document.

## *Project Impact Analysis Under CEQA*

CEQA broadly defines “project” to include “the whole of an action, which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment” (14 California Code of Regulations [CCR] § 15378). Under CEQA, normally the baseline for environmental impact analysis consists of the existing conditions at the time the environmental studies began. However, it is important to choose the baseline that most meaningfully informs decision-makers and the public of the project’s possible impacts. Where existing conditions change or fluctuate over time, and where necessary to provide the most accurate picture practically possible of the project’s impacts, a Lead Agency may define existing conditions by referencing historic conditions, or conditions expected when the project becomes operational, or both, that are supported with substantial evidence. In addition, a Lead Agency may also use baselines consisting of both existing conditions and projected future conditions that are supported by reliable projections based on substantial evidence in the record. The CEQA Guidelines require a “statement of the objectives sought by the proposed project” (14 CCR § 15124(b)).

The legal standard for determining the significance of impacts is whether a "fair argument" can be made that a "substantial adverse change in physical conditions" would occur. The fair argument must be backed by substantial evidence including facts, reasonable assumption predicated upon fact, or expert opinion supported by facts. Generally, an environmental professional with specific training in an area of environmental review can make this determination.

Though not required, CEQA suggests Lead Agencies adopt thresholds of significance, which define the level of effect above which the Lead Agency will consider impacts to be significant, and below which it will consider impacts to be less than significant. Given the size of California and it's varied, diverse, and complex ecosystems, as a Lead Agency that encompasses the entire State, developing thresholds of significance on a state-wide basis has not been pursued by Caltrans. Rather, to ensure each resource is evaluated objectively, Caltrans analyzes potential resource impacts in the project area based on their location and the effect of the potential impact on the resource as a whole. For example, if a project has the potential to impact 0.10 acre of wetland in a watershed that has minimal development and contains thousands of acres of wetland, then a "less than significant" determination would be considered appropriate. In comparison, if 0.10 acre of wetland would be impacted that is located within a park in a city that only has 1.00 acre of total wetland, then the 0.10 acre of wetland impact could be considered "significant."

If the action may have a potentially significant effect on any environmental resource (even with mitigation measures implemented), then an Environmental Impact Report (EIR) must be prepared. Under CEQA, the Lead Agency may adopt a Negative Declaration (ND) if there is no substantial evidence that the project may have a potentially significant effect on the environment (14 CCR § 15070(a)).

A proposed Negative Declaration must be circulated for public review, along with a document known as an Initial Study.

CEQA documents must consider direct and indirect impacts of a project (California Public Resources (CPR) Code § 21065.3). They are to focus on significant impacts (14 CCR § 15126.2(a)). Impacts that are less than significant need only be briefly described (14 CCR § 15128). All potentially significant effects must be addressed.

## No-Build (No-Action) Alternative

For each of the following CEQA Environmental Checklist questions, the “No-Build” Alternative has been determined to have "No Impact”. Under the “No-Build” Alternative, no alterations to the existing conditions would occur and no proposed improvements would be implemented. The “No-Build” Alternative will not be discussed further in this document.

## Definitions of Project Parameters

When determining the parameters of a project for potential impacts, the following definitions are provided:

***Project Area:*** This is the general area where the project is located. This term is mainly used in the *Affected Environment* section (e.g., watershed, climate type, etc.).

***Project Limits:*** This is the beginning and ending post miles for a project. This is different than the Environmental Study Limits in that it sets the beginning and ending limits of a project along the highway. It is the limits programmed for a project, and every report, memo, etc., associated with a project should use the same post mile limits. In some cases, there may be areas associated with a project that are outside of the project limits, such as staging and disposal locations.

***Project Footprint:*** The area within the Environmental Study Limits (ESL) the project is anticipated to impact, both temporarily and permanently. This includes staging and disposal areas.

***Environmental Study Limits (ESL):*** The project engineer provides the Environmental team the ESL as an anticipated boundary for potential impacts. The ESL is *not* the project footprint. Rather, it is the area *encompassing* the project footprint where there could *potentially* be direct and indirect disturbance by construction activity. The ESL is larger than the project footprint in order to accommodate any future scope changes. The ESL is also used for identifying the various Biological Study Areas (BSAs) needed for different biological resources.

The Biological Study Area (BSA) encompasses the ESL, as well as areas adjacent to the ESL where standard environmental assessments for sensitive resources (habitats, plants, wildlife, wetlands, rivers/creeks, etc.) are conducted. The limits of the project BSAs were determined to be:

- A 328-foot buffer surrounding the construction footprint for potential auditory and visual disturbance.
- A 100-foot buffer surrounding the coastal portion of the construction footprint to evaluate the potential presence and impacts to Environmentally Sensitive Habitat Areas (ESHAs) for the Coastal Development Permit (CDP) (Figures 3-5).

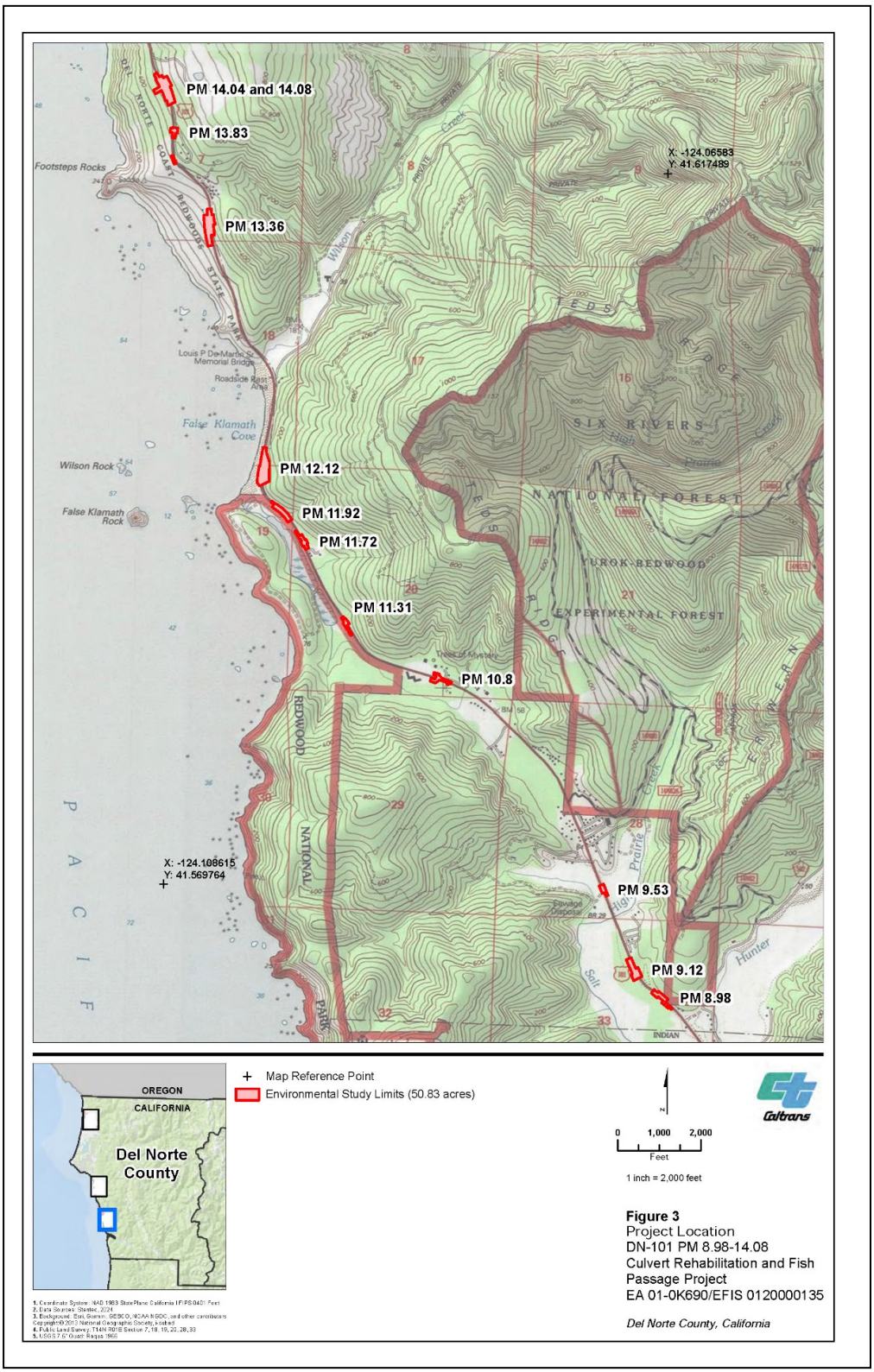



**Figure 3**
Project Location
DN-101 PM 8.98-14.08
Culvert Rehabilitation and Fish Passage Project
EA 01-0K690/EFIS 0120000135

*Del Norte County, California*

**Figure 3. Environmental Study Limits and Biological Study Area - 8.98 to 14.08**

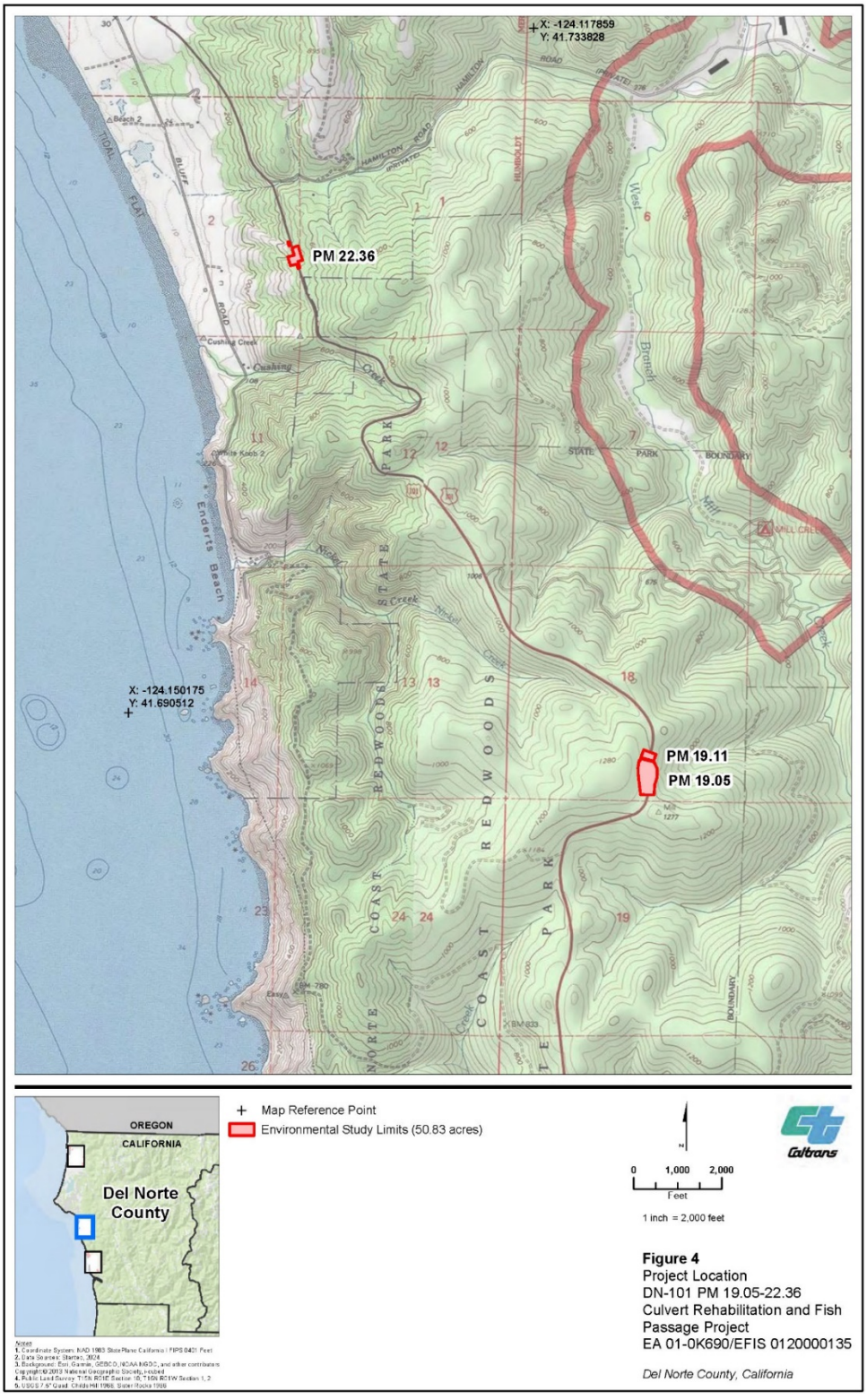



**Figure 4. Environmental Study Limits and Biological Study Area - 19.05 to 22.36**

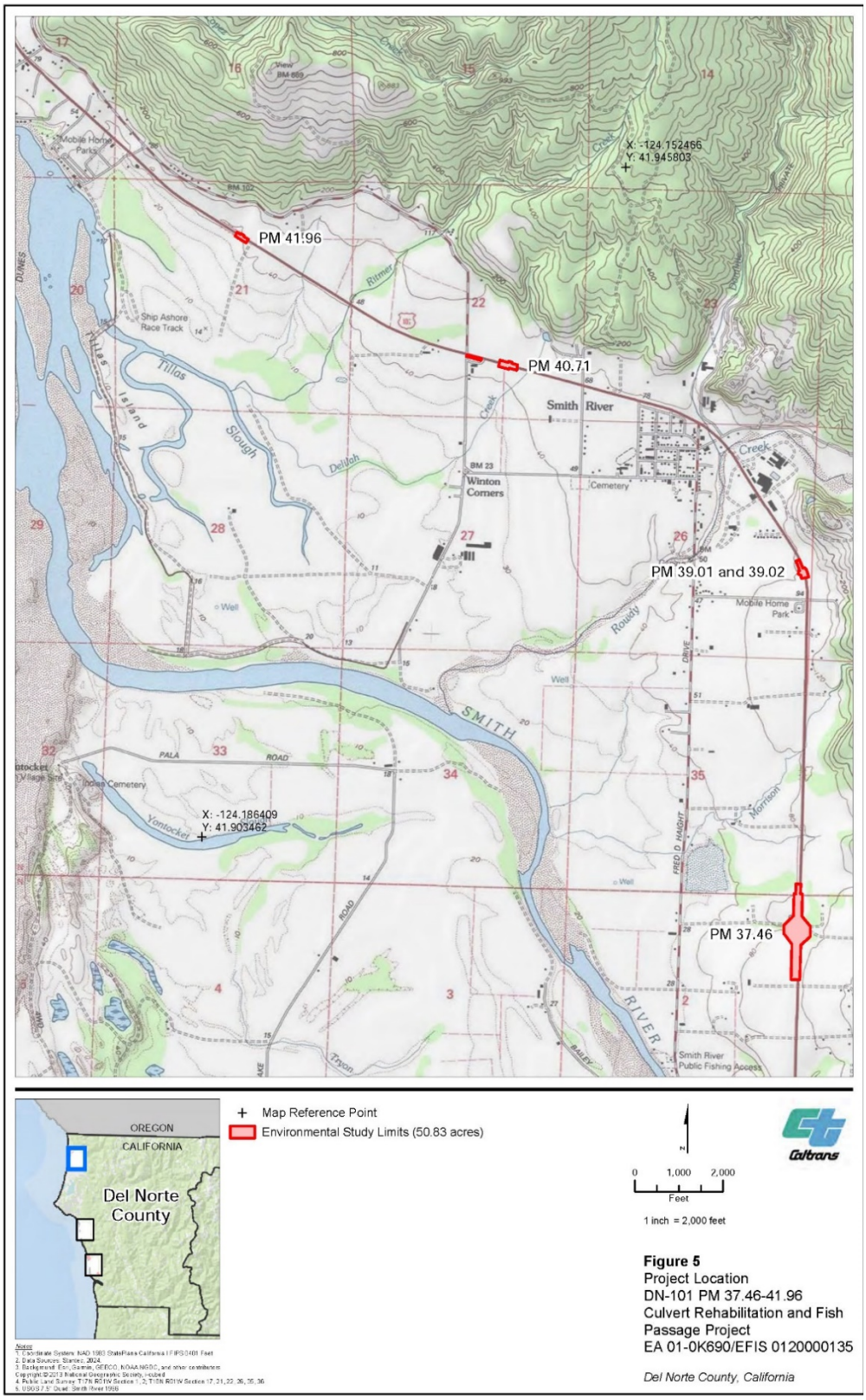



**Figure 5. Environmental Study Limits and Biological Study Area - 37.46 to 41.96**

## 2.1 Aesthetics

| Except as provided in Public Resources Code Section 21099: | Significant and Unavoidable Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| **Would the project:** a) Have a substantial adverse effect on a scenic vista? | | | | ✓ |
| **Would the project:** b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway? | | | | ✓ |
| **Would the project:** c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality? | | | | ✓ |
| **Would the project:** d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area? | | | | ✓ |

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project, as well as the *Visual Impact Assessment Memo* (VIA) dated February 5, 2025 (Caltrans 2025a).

US 101 is a Designated State Scenic Highway between Post Miles 11 and 23.1 and an Eligible Scenic Highway for all other locations within Del Norte County. The project area comprises coastal mountains bordering the Pacific Ocean, crosses the Klamath River and Smith River, multiple creeks and washes, and includes Redwood National and State parks, and a designated UNESCO World Heritage site.

From project locations there are views to the ocean, redwood forests, mountains, cliffsides, farmland, and marshes. The majority of the project locations are in rural or undeveloped areas with little to no residential or commercial infrastructure nearby. The project is highly compatible with the existing landscape. Upon completion of construction, at most project locations there would be no impact to the visual character of landscape due to the limited amount of disturbance and vegetation removal at most locations. Disturbed areas would be revegetated. There would likely be a positive visual change at the fish passage locations by creating and opening up views of the creeks that were previously confined to smaller culverts and restoring the creek channels and banks with natural streambed materials and native vegetation. The project includes no new sources of lighting.

Trees would need to be removed at some locations to construct temporary access roads. The majority of proposed tree removal would occur at PM 19.05, with 23 trees proposed for removal ranging from 0.9 feet diameter at breast height (dbh) to 2.5 feet dbh with an average dbh of 1.4 feet. The density of the forest at this location and the location of the 23 trees proposed for removal within the forest and mostly out of view from the traveled roadway would result in little to no noticeable visual impacts. The area of tree removal is so small as to be inconsequential on a landscape scale. The work at PM 19.05 and the existing conditions are similar to other locations requiring an access road. In other project locations where large coast redwoods occur, methods would be utilized as needed to protect structural root systems to avoid injury (refer to Standard Measures in Section 1.8).

Given the above, Caltrans anticipates the project would have **"No Impact"** on visual resources. No mitigation would be required.

## 2.2 Agriculture and Forest Resources

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

| Question | Significant and Unavoidable Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| **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? | | | | ✓ |
| **Would the project:** b) Conflict with existing zoning for agricultural use, or a Williamson Act contract? | | | | ✓ |
| **Would the project:** c) Conflict with existing zoning for, or cause rezoning of forest land (as defined by 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))? | | | | ✓ |
| **Would the project:** d) Result in the loss of forest land or conversion of forest land to non-forest use? | | | | ✓ |

| Question | Significant and Unavoidable Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| **Would the project:**<br>e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use? | | | | ✓ |

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project. Del Norte County does not participate in the Williamson Act program (California Department of Conservation 2025a). There is no Farmland of Statewide Importance identified in the California Important Farmland Finder (California Department of Conservation 2025b). Impacts to agriculture and forest resources are not anticipated as the improvement of existing drainage facilities would not cause a change in zoning or land use or result in the loss or conversion of forest or agricultural land.

Given the above, Caltrans anticipates the project would have **"No Impact"** on agriculture and forest resources. No mitigation would be required.

## 2.3 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.

| Question | Significant and Unavoidable Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| **Would the project:** a) Conflict with or obstruct implementation of the applicable air quality plan? | | | | ✓ |
| **Would the project:** b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard? | | | | ✓ |
| **Would the project:** c) Expose sensitive receptors to substantial pollutant concentrations? | | | | ✓ |
| **Would the project:** d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people? | | | | ✓ |

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project, as well as the *Air Quality and Noise Analysis for the Culvert Rehabilitation & Fish Passage Project* dated January 2, 2025 (Caltrans 2025b).

Del Norte County is categorized as an attainment/unclassified area for all current National Ambient Air Quality Standards (NAAQS). Therefore, transportation conformity requirements do not apply. The project would not change traffic volume, fleet mix, speed, or any other factor that would cause an increase in emissions relative to the No-Build Alternative; therefore, this project would not cause an increase in operational emissions.

During construction, short-term degradation of air quality may occur due to the release of particulate emissions (airborne dust) generated by excavation, grading, hauling, and other construction-related activities. Emissions from construction equipment are also expected and would include carbon monoxide (CO), nitrogen oxides (NOx), volatile organic compounds (VOCs), directly emitted particulate matter ($PM_{10}$ and $PM_{2.5}$), and toxic air contaminants, such as diesel exhaust particulate matter. Construction activities are expected to increase traffic congestion temporarily in the area, resulting in increases in emissions from traffic during the delays.

Fugitive dust would be generated during grading and construction operations. Sources of fugitive dust include disturbed soils at the construction site and trucks carrying uncovered loads of soils. Unless properly controlled, vehicles leaving the site may deposit mud on local streets, which could be an additional source of airborne dust after it dries. $PM_{10}$ emissions may vary from day to day, depending on the nature and magnitude of construction activity and local weather conditions. $PM_{10}$ emissions depend on soil moisture, silt content of soil, wind speed, and the amount of equipment operating. Larger dust particles would settle near the source, while fine particles would be dispersed over greater distances from the construction site.

Emissions resulting from fugitive dust and pollutants from construction equipment would be temporary and limited to the immediate area surrounding the construction site. Dust and emissions would be minimized in conformance with Caltrans Standard Specifications (SS), including SS 14-9 and SS 7-1.02C "Emissions Reduction," which require construction activities adhere to regulations mandated by the California Air Resources Board (CARB). A discussion of greenhouse gas emissions is provided in Section 2.8.

Given the above, Caltrans anticipates the project would have **“No Impact”** on air quality. No mitigation would be required.

## 2.4 Biological Resources

| Question | Significant and Unavoidable Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| **Would the project:**<br>a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife, U.S. Fish and Wildlife Service, or NOAA Fisheries? | | | ✓ | |
| **Would the project:**<br>b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service? | | | ✓ | |
| **Would the project:**<br>c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? | | | ✓ | |
| **Would the project:**<br>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? | | | | ✓ |

| Question | Significant and Unavoidable Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| **Would the project:**<br>e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? | | | | ✓ |
| **Would the project:**<br>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? | | | | ✓ |

### *Regulatory Setting*

Within this section of the document (2.4. Biological Resources), the topics are separated into Natural Communities, Wetlands and Other Waters, Plant and Animal Species, including Threatened and Endangered Species, and Invasive Species. Threatened and endangered special status plant and animal species include USFWS, NMFS and CDFW candidate species and CDFW Fully Protected (FP) species. CDFW Species of Special Concern (SSC) and California Native Plant Society (CNPS) rare plants (CNPS 2025) are covered in their respective Plant and Animal sections.

The following sections rely on Chapter 4 of the project *Natural Environment Study* (NES) (Caltrans 2025c).

## NATURAL COMMUNITIES OF SPECIAL CONCERN

This section of the document discusses Natural Communities of Special Concern. The focus is on biological communities, not individual plant or animal species. CDFW maintains a list of sensitive natural communities (SNCs). SNCs are those natural communities that are of limited distribution statewide or within a county or region and are often vulnerable to environmental effects of projects. These communities may or may not contain special status taxa or their habitat.

This section also includes information on wildlife corridors, fish passage, and habitat fragmentation. Wildlife corridors are areas of habitat used by wildlife for seasonal or daily migration. Habitat fragmentation involves the potential for dividing sensitive habitat and thereby lessening its biological value.

Habitat areas that have been designated as critical habitat (CH) under the Federal Endangered Species Act are discussed below in the Threatened and Endangered Species section.

### WETLANDS AND OTHER WATERS

Wetlands and Waters of the United States and State are protected under several laws and regulations. The primary laws and regulations governing wetlands and other waters include:

- Federal: Clean Water Act (CWA)–33 United States Code (USC) 1344 (USACE–Section 404 Permits)
- Federal: Executive Order for the Protection of Wetlands (Executive Order [EO] 11990)
- State: California Fish and Game Code (CFGC)–Sections 1600–1607
- State: Porter-Cologne Water Quality Control Act–Section 3000 et seq.

### ENVIRONMENTALLY SENSITIVE HABITAT AREAS (ESHA)

The California Coastal Commission (CCC) through the Coastal Act, and the County of Del Norte through the Local Coastal Program, are the jurisdictional agencies that have authority in the identification and protection of ESHAs.

An ESHA is defined *as any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments*.

### PLANT SPECIES

The U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW) have regulatory responsibility for the protection of special status plant species. "Special status" species are selected for protection because they are rare and/or subject to population and habitat declines. The primary laws governing plant species include:

- Federal Endangered Species Act (FESA)–USC 16 Section 1531, et seq. See also 50 Code of Federal Regulations (CFR) Part 402
- California Endangered Species Act (CESA)–California Fish and Game Code (CFGC) Section 2050, et seq.
- Native Plant Protection Act–California Fish and Game Code Sections 1900–1913
- California Environmental Quality Act (CEQA)–California Public Resources Code (PRC) Sections 21000–21177

### ANIMAL SPECIES

The USFWS, NMFS, and CDFW have regulatory responsibility for the protection of special status animal species. The primary laws governing animal species include:

Federal laws and regulations relevant to wildlife include the following:

- Migratory Bird Treaty Act–16 USC Sections 703–712
- Fish and Wildlife Coordination Act–16 USC Section 661

State laws and regulations relevant to wildlife include the following:

- California Environmental Quality Act
- Sections 1600–1603 of the California Fish and Game Code
- Sections 4150 and 4152 of the California Fish and Game Code

### THREATENED AND ENDANGERED SPECIES

The primary laws governing threatened and endangered species include:

- FESA–16 USC Section 1531, et seq. See also 50 CFR Part 402
- CESA–California Fish and Game Code Section 2050, et seq.
- CESA–California Fish and Game Code Section 2080
- CEQA–California Public Resources Code Sections 21000–21177
- Magnuson-Stevens Fishery Conservation and Management Act, as amended–16 USC Section 1801

## INVASIVE SPECIES

The primary laws governing invasive species are Executive Order (EO) 13112 and NEPA.

### *Environmental Setting*

Caltrans coordinated with fisheries biologists and water quality specialists, as well as agency personnel from USFWS, NMFS, CDFW, California State Parks, and National Parks. See Chapter 3 for a summary of these coordination efforts and professional contacts.

A Natural Environment Study (NES) dated February 2025 (Caltrans 2025c) was prepared for the project. The following information relies on the Natural Environment Study.

The Environmental Study Limits (ESL), provided by the Caltrans Design team at the beginning of the environmental study process, are the anticipated boundaries for potential impacts. The ESL is the area encompassing the project footprint where there could potentially be direct and indirect disturbance by construction activity. The ESL is also used for identifying the Biological Study Area (BSA) needed for various biological resources. The BSA encompasses the ESL as well as any areas adjacent to the ESL that may potentially be affected by the project (e.g., noise and visual disturbance). Since this project includes 20 drainage systems, it has multiple ESLs and BSAs that include both the culvert systems to be replaced as well as the staging areas needed to conduct the work. See Appendix A for individual ESLs, shown on project layouts.

The BSAs for the project include the following buffers:

- A 328-foot buffer surrounding the construction footprint for potential auditory and visual disturbance determined using the USFWS Guidance: *Estimating the Effects of Auditory and Visual Disturbance to Northern Spotted Owl and Marbled Murrelets in Northwestern California* (Caltrans 2025c).
- A 100-foot buffer surrounding the coastal portion of the construction footprint to evaluate the potential presence and impacts to ESHAs for the Coastal Development Permit.

### *SENSITIVE NATURAL COMMUNITIES*

Natural and semi-natural vegetation types within the BSA were identified based on the vegetation classification and keys in *A Manual of California Vegetation, 2nd edition and online updates* (Sawyer et al., 2009). The classification is based on the dominant plant species and emphasizes natural, existing vegetation. Vegetation types within the BSA were identified at the alliance level where possible. Rarity of each vegetation type was determined from CDFW's current California Natural Communities List, the current list of vegetation Alliances, Associations, and Special Stands, which notes which vegetation types are considered sensitive.

The global rank reflects the overall status of an element throughout its global range:

- G1 = Critically Imperiled—At very high risk of extinction due to extreme rarity (often 5 or fewer populations), very steep declines, or other factors.
- G2 = Imperiled—At high risk of extinction due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors.
- G3 = Vulnerable—At moderate risk of extinction due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors.
- G4 = Apparently Secure—Uncommon but not rare; some cause for long-term concern due to declines or other factors.
- G5 = Secure—Common; widespread and abundant.

The state rank reflects the overall status of an element throughout its California range:

- S1 = Critically Imperiled—Critically imperiled in the state because of extreme rarity (often 5 or fewer populations) or because of factor(s), such as very steep declines, making it especially vulnerable to extirpation from the state.
- S2 = Imperiled—Imperiled in the state because of rarity due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation from the state.
- S3 = Vulnerable—Vulnerable in the state due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation from the state.
- S4 = Apparently Secure—Uncommon but not rare in the state; some cause for long-term concern due to declines or other factors.
- S5 = Secure—Common, widespread, and abundant in the state.

For alliances with State ranks of S1, S2, and S3, all associations within them are also considered sensitive. Alliances that are not sensitive may have associations within them that are sensitive; therefore, the natural vegetation types were identified to the association level as far as possible and where necessary to determine if sensitive associations are present. Semi-natural stands are not ranked because they are strongly dominated by non-native species.

### *Affected Environment*

Field surveys to map vegetation types were conducted concurrently with the special status plant surveys and the wetland delineation surveys. During the field surveys, Stantec and ICF/Kingfisher biologists identified the boundaries of each vegetation type polygon and noted dominant species and associated species.

Table 3 below identifies the natural communities observed within the ESL, including Sensitive Natural Communities and Natural Communities of Concern. Additional detail for all communities is available in the NES (Caltrans 2025c). There are no habitat types within the ESL that are considered to be globally imperiled, globally critically imperiled, or state critically imperiled. Of the 12 alliances and associations

identified within the ESLs (totaling 50.83 acres), five communities (18.38 acres) are considered SNCs by CDFW.

**Table 3. Natural Communities within the ESL**

| Alliance or Association | Rarity (Global/State) | Sensitive | ESL Area (Acres) |
|---|---|---|---|
| ***Forest and Woodland*** | | | |
| Red alder forest<br>*Alnus rubra* Forest Alliance | G5/S4 | No | 3.37 |
| Red alder/salmonberry – red elderberry forest *Alnus rubra/Rubus spectabilis – Sambucus racemosa* Association | G3G4/SNR | Yes | 5.81 |
| Sitka spruce forest and woodland<br>*Picea sitchensis* Forest and Woodland Alliance | G5/S2 | Yes | 4.53 |
| Shining willow groves<br>*Salix lucida* ssp. *lasiandra (S. lasiandra)* Forest and Woodland Alliance | G4/S3 | Yes | 0.30 |
| Redwood woodland and forest<br>*Sequoia sempervirens* Forest and Woodland Alliance | G3/S3 | Yes | 5.82 |
| | | **Subtotal** | **19.83** |
| ***Shrubland*** | | | |
| Coyote brush scrub<br>*Baccharis pilularis* Shrubland Alliance | G5/S5 | No | 0.29 |
| Salal – berry brambles<br>*Gaultheria shallon – Rubus (ursinus)* Shrubland Alliance | GNR/S4 | No | 0.27 |
| Himalayan blackberry scrub<br>*Rubus armeniacus* Shrubland Semi-natural Alliance | GNA/SNA | No | 2.66 |
| Coastal dune willow–Sitka willow thickets<br>*Salix hookeriana–Salix sitchensis* Shrubland Alliance | G4/S3 | Yes | 1.92 |
| | | **Subtotal** | **5.14** |
| ***Herbaceous*** | | | |
| Annual brome grasslands<br>*Bromus* spp. Semi-natural Alliance | GNA/SNA | No | 4.02 |
| Reed Canary grass swards<br>*Phalaris arundinacea* Semi-natural Alliance | GNA/SNA | No | 0.15 |

| Alliance or Association | Rarity (Global/State) | Sensitive | ESL Area (Acres) |
|---|---|---|---|
| Cattail marshes<br>*Typha latifolia* Alliance | G5/S5 | No | 0.25 |
| | | **Subtotal** | **4.42** |
| **Other** | | | |
| Agriculture | N/A | N/A | 2.13 |
| Pavement/Barren | N/A | N/A | 18.43 |
| Urban | N/A | N/A | 0.88 |
| | | **Subtotal** | **21.44** |
| | | **Total** | **50.83** |

## ***Environmental Consequences***

Minimal permanent and temporary impacts to Sensitive Natural Communities are expected within the ESLs as they are already fragmented by roads and development. These forest and vegetation types are generally less than one-half acre within the ESLs (Table 4). Based on design plans at the time of NES submission (February 2025), there would be permanent impacts of 0.083 acre. The impact area will continue to be assessed while design plans and resource mapping are refined.

Temporary impacts are estimated to be up to 1.450 acre (63,145 square feet) for access to, and restoration of, culvert systems. Table 4 summarizes the estimated temporary impacts on SNCs within the ESL.

**Table 4. Estimated Temporary Impacts on Sensitive Natural Communities within the ESL**

| Post Mile | Vegetation Type | Global/State Rank | Area of Temporary Impacts | |
|---|---|---|---|---|
| | | | Acre | Square Feet |
| 10.80, 13.36, 13.83, 14.04/ 14.08, 22.36 | Red alder/salmonberry – red elderberry forest<br>*Alnus rubra/Rubus spectabilis – Sambucus racemos*a Association | G3G4/SNR | 0.457 | 19,907 |
| 8.98, 10.80, 11.31, 11.92, 12.12, 22.36 | Sitka spruce forest and woodland<br>*Picea sitchensis* Forest and Woodland Alliance | G5/S2 | 0.643 | 28,009 |
| 40.71 | Shining willow groves | G4/S3 | 0.0302 | 1,316 |

| Post Mile | Vegetation Type | Global/State Rank | Area of Temporary Impacts | |
|---|---|---|---|---|
| | | | Acre | Square Feet |
| | *Salix lucida* ssp. *lasiandra* (*S. lasiandra*) Forest and Woodland Alliance | | | |
| 19.05 | Redwood forest and woodland *Sequoia sempervirens* Forest and Woodland Alliance | G3/S3 | 0.255 | 11,108 |
| 9.12, 11.72, 12.12 | Coastal dune willow–Sitka willow thickets *Salix hookeriana–Salix sitchensis* Shrubland Alliance | G4/S4 | 0.0644 | 2,805 |
| **Total Impacts (rounded)** | | | **1.450** | **63,145** |

### *Avoidance, Minimization and Mitigation Measures*

Caltrans would develop a Revegetation Plan for areas impacted by construction, as described in Section 1.8. Several other Standard Measures implemented for the project would help reduce overall impacts to SNCs within the project ESLs. These would include protecting adjacent SNCs as Environmentally Sensitive Areas (ESA), including the installation of THVF at the closest edge of the proposed ESLs. Therefore, no project-specific avoidance and minimization measures are proposed for Sensitive Natural Communities.

Based on the determinations made in the CEQA Environmental Checklist, no mitigation measures are proposed.

## *WETLANDS AND OTHER WATERS*

### *Affected Environment*

Wetland delineations were performed to survey for potentially jurisdictional wetland and non-wetland Waters of the U.S. and State and Coastal wetlands defined by the California Coastal Act within and adjacent to the project construction footprint at each location. A *Final Aquatic Resources Delineation Report* was prepared by Stantec Consulting Services, Inc. in accordance with U.S. Army Corps of Engineers (USACE) *Wetlands Delineations Manual* (Caltrans 2025c). The USACE

methodology relies on a three-parameter approach in which criteria for hydrophytic vegetation, hydric soils, and wetland hydrology are all evaluated.

Coastal wetlands delineated in the Aquatic Resources Delineation Report occur in the Coastal Zone are defined by the California Coastal Act as areas that are permanently or periodically covered with shallow water. Coastal wetlands only need to meet one parameter to be classified as a wetland.

Within the project ESLs, potentially jurisdictional aquatic resources were delineated by Stantec biologists from November 27 to December 1, 2023, January 7 to 11, 2024, and February 14, 2024. The delineation documented the potential presence of three parameter wetlands, coastal wetlands, and other waters as described in Tables 5 and 6 below. Wetlands include palustrine emergent, palustrine scrub-shrub, and palustrine forested. Other waters include perennial streams, intermittent streams, ephemeral streams, and non-vegetated ditches. A total of 2.266 acres (3,417 linear feet) of aquatic resources were delineated, including 1.962 acres of three-parameter wetlands, 0.127 acre of coastal wetlands, and 0.177 acre of other waters.

**Table 5. Aquatic Resources within the Environmental Study Limits**

| Post Mile (PM) | Cowardin[1] | Name (map) | Type | Isolated | Area (Acres) | Length (feet) | OHWM Width (feet) |
|---|---|---|---|---|---|---|---|
| ***Three-parameter Wetlands*** | | | | | | | |
| 8.98 | PEM | W2 | Palustrine Emergent | No | 0.058 | — | — |
| | PEM | W3 | Palustrine Emergent | No | 0.023 | — | — |
| | PEM | W4 | Palustrine Emergent | No | 0.056 | — | — |
| | PEM | W5 | Palustrine Emergent | No | 0.010 | — | — |
| 9.12 | PEM | W6 | Palustrine Emergent | No | 0.239 | — | — |
| | PSS | W7 | Palustrine Scrub-Shrub | No | 0.369 | — | — |
| 9.53 | PSS | W8 | Palustrine Scrub-Shrub | No | 0.069 | — | — |
| | PSS | W9 | Palustrine Scrub-Shrub | No | 0.236 | — | — |
| 11.31 | PEM | W10 | Palustrine Emergent | No | 0.016 | — | — |
| | PFO | W11 | Palustrine Forested | No | 0.060 | — | — |
| 11.72 | PSS | W12 | Palustrine Scrub-Shrub | No | 0.193 | — | — |
| | PFO | W13 | Palustrine Forested | No | 0.101 | — | — |
| 11.92 | PEM | W15 | Palustrine Emergent | No | 0.058 | — | — |
| | PSS | W16 | Palustrine Scrub-Shrub | No | 0.002 | — | — |
| | PSS | W37 | Palustrine Scrub-Shrub | No | 0.039 | — | — |
| 12.12 | PEM | W14 | Palustrine Emergent | No | 0.067 | — | — |

| Post Mile (PM) | Cowardin[1] | Name (map) | Type | Isolated | Area (Acres) | Length (feet) | OHWM Width (feet) |
|---|---|---|---|---|---|---|---|
| 13.36 | PEM | W17 | Palustrine Emergent | No | 0.003 | — | — |
| | PEM | W18 | Palustrine Emergent | No | 0.012 | — | — |
| 37.46 | PEM | W26 | Palustrine Emergent | No | 0.016 | — | — |
| | PEM | W27 | Palustrine Emergent | No | 0.002 | — | — |
| | PEM | W28 | Palustrine Emergent | Yes | 0.017 | — | — |
| 39.01/ 39.02 | PEM | W20 | Palustrine Emergent | No | 0.047 | — | — |
| | PEM | W21 | Palustrine Emergent | No | 0.009 | — | — |
| | PEM | W22 | Palustrine Emergent | No | 0.005 | — | — |
| | PEM | W23 | Palustrine Emergent | No | 0.001 | — | — |
| 40.71 | PSS | W29 | Palustrine Scrub-Shrub | No | 0.172 | — | — |
| | PSS | W30 | Palustrine Scrub-Shrub | No | 0.033 | — | — |
| | PSS | W31 | Palustrine Scrub-Shrub | No | 0.005 | — | — |
| | PSS | W32 | Palustrine Scrub-Shrub | No | 0.002 | — | — |
| 41.96 | PEM | W35 | Palustrine Emergent | No | 0.022 | — | — |
| | PEM | W36 | Palustrine Emergent | No | 0.020 | — | — |
| **Total Three-Parameter Wetlands** | | | | | **1.962** | **—** | **—** |
| ***Coastal Wetlands*** | | | | | | | |
| 40.71 | PEM | W33 | Palustrine Emergent | No | 0.050 | — | — |
| 40.71 | PFO | W34 | Palustrine Forested | No | 0.077 | — | — |
| **Total Coastal Wetlands** | | | | | **0.127** | **—** | **—** |
| ***Other Waters*** | | | | | | | |
| 10.80 | R4SB | OW1 | Intermittent Stream | No | 0.002 | 45 | 1.5-3 |
| | R6 | OW2 | Ephemeral Stream | No | <0.001 | 6 | 2 |
| 11.92 | R2UB | OW3 | Lower Perennial Stream | No | 0.034 | 194 | 2-12 |
| | R2UB | OW4 | Lower Perennial Stream | No | 0.003 | 16 | 7 |
| 13.36 | R3UB | OW6 | Upper Perennial Stream | No | 0.004 | 69 | 1.5-2.5 |
| | R4SB | OW15 | Intermittent Stream | Yes | 0.006 | 57 | 4 |
| 13.83 | R6 | OW5 | Non-Vegetated Ditch | Yes | 0.001 | 57 | 0.5 |
| 14.04/ 14.08 | R4SB | OW18 | Intermittent Stream | No | 0.007 | 107 | 2.5-3 |
| | R6 | OW19 | Non-Vegetated Ditch | No | 0.002 | 156 | 0.5 |
| | R6 | OW20 | Ephemeral Stream | No | 0.002 | 74 | 1 |
| 19.05 | R6 | OW8 | Ephemeral Stream | Yes | 0.004 | 66 | 2 |
| | R4SB | OW9 | Intermittent Stream | No | 0.014 | 346 | 1.5-2 |
| 22.36 | R6 | OW10 | Ephemeral Stream | No | 0.003 | 59 | 2 |
| 37.46 | R6 | OW24 | Non-Vegetated Ditch | No | 0.026 | 1120 | 1 |
| | R6 | OW22 | Non-Vegetated Ditch | No | 0.036 | 764 | 2 |
| | R4SB | OW23 | Intermittent Stream | No | 0.004 | 33 | 5 |
| | R3UB | OW11 | Upper Perennial Stream | No | 0.007 | 43 | 4-14 |

| Post Mile (PM) | Cowardin[1] | Name (map) | Type | Isolated | Area (Acres) | Length (feet) | OHWM Width (feet) |
|---|---|---|---|---|---|---|---|
| 39.01/ 39.02 | R4SB | OW12 | Intermittent Stream | No | 0.010 | 148 | 1.5-4 |
| 40.71 | R4SB | OW14 | Intermittent Stream (Delilah Creek) | No | 0.011 | 57 | 4-11 |
| **Total Other Waters** | | | | | **0.177** | **3,417** | **—** |
| **Total Aquatic Resources** | | | | | **2.266** | **3,417** | **—** |

### *Environmental Consequences*

The project has the potential to result in permanent and temporary impacts to Waters of the U.S. and State, including jurisdictional wetlands and riparian habitat. Additional indirect temporary impacts caused by sedimentation or modification of hydrology could affect streams, wetlands, or riparian habitat. Temporary impacts may result from construction of access roads, work areas, containment systems, clear water diversions, and excavation work for culvert placement. Culvert realignment, restoration of flow lines, rock slope protection, and the extension of culvert systems would result in permanent impacts.

The project would result in approximately 0.0873 acre of temporary impacts and 0.0106 acre of permanent impacts to wetland Waters of the U.S. and State (Table 6). Coastal wetlands would be impacted at PM 40.71 (approximately 600 square feet of temporary impacts and 168 square feet of permanent impacts).

The project would result in approximately 0.0342 acre of temporary impacts to non-wetland Waters of the U.S. and State (“Other Waters”). The project would result in permanent impacts of approximately .00631 acre of Other Waters (Table 7).

**Table 6. Temporary and Permanent Impacts to Wetlands**

| Post Mile | Cowardin Type | Temporary (Square Feet) | Permanent (Square Feet) |
|---|---|---|---|
| 8.98 | Palustrine Emergent | - | 240 |
| 9.12 | Palustrine Emergent | 345 | -- |
| | Palustrine Scrub-Shrub | 230 | -- |
| 9.53 | Palustrine Scrub-Shrub | 185 | -- |
| 11.31 | Palustrine Forested | 270 | -- |
| | Palustrine Emergent | 30 | -- |
| 11.72 | Palustrine Forested | 175 | -- |
| | Palustrine Scrub-Shrub | 175 | -- |
| 39.01/ 39.02 | Palustrine Emergent | 12 | 55 |
| 40.71 | Palustrine Emergent (also Coastal Wetland) | 600 | 168 |
| | Palustrine Scrub-Shrub | 1,646 | -- |
| 41.96 | Palustrine Emergent | 135 | -- |
| **Total Wetland Impacts** | | **3,803** | **463** |
| **Acres** | | **0.0873** | **0.0106** |

**Table 7. Temporary and Permanent Impacts to Other Waters**

| Post Mile | Cowardin Type | Temporary Impacts | | Permanent Impacts | |
|---|---|---|---|---|---|
| | | Length (linear feet) | Area (square feet) | Length (linear feet) | Area (square feet) |
| 11.92 | Lower Perennial Stream (R2UB) | 10 | 70 | -- | -- |
| 13.36 | Intermittent Stream (R4SB) | -- | -- | 24 | 85 |
| 19.05 | Intermittent Stream (R4SB) | -- | -- | 105 | 160 |
| 22.36 | Ephemeral Stream (R6) | 37 | 80 | -- | -- |
| 37.46 | Upper Perennial Stream (R3UB) | 97 | 856 | -- | -- |
| 39.01/ 39.02 | Intermittent Stream (R4SB) | 37 | 125 | 14 | 30 |
| 40.71 | Intermittent Stream (R4SB) | 25 | 357 | -- | -- |
| **Total Other Waters Impacts** | | **206** | **1,488** | **143** | **275** |
| **Acres** | | **0.0342** | | **0.00631** | |

### *Avoidance, Minimization and Mitigation Measures*

Impacts on jurisdictional waters and riparian vegetation would be minimized with incorporation of the Standard Measures and BMPs identified in Section 1.8. Therefore, no project-specific avoidance and minimization measures are proposed for jurisdictional waters and riparian vegetation.

Based on the determinations made in the CEQA Environmental Checklist, no mitigation measures are proposed.

## *ENVIRONMENTALLY SENSITIVE HABITAT AREAS (ESHA)*

### *Affected Environment*

The proposed project contains multiple locations within the Coastal Zone. Because the project is focused on drainage improvements within perennial and ephemeral streams, many of the sites will be located within a designated ESHA. An assessment

of potential Environmentally Sensitive Habitat Areas (ESHA) within the project ESLs was prepared for Caltrans in November 2024 (Caltrans 2024a).

The ESHA resources identified within the ESLs include Coastal wetlands, sensitive natural communities, riparian areas, species of rare or endangered plants, and habitats of rare and endangered plants and animals. ESHA resources have been identified at PMs 10.8, 11.31, 11.72, 11.92, 12.12, 13.36, 13.83, 14.04/14.08, 22.36, 37.46, 40.71, and 41.96.

### *Environmental Consequences*

Impacts to each type of ESHA resource resulting from the proposed project and restoration of impacted habitats in these locations will be determined in consultation with the County of Del Norte and/or the California Coastal Commission during the permitting phase of the project.

### *Avoidance, Minimization and Mitigation Measures*

In addition to the Standard Measures and BMPs to protect ESHAs identified in Section 1.8, Caltrans would work with the County and/or CCC to minimize impacts to ESHA resources through the Coastal Development Permit process. Therefore, no project-specific avoidance and minimization measures are proposed for Environmentally Sensitive Habitat Areas.

Based on the determinations made in the CEQA Environmental Checklist, no mitigation measures are proposed.

## CRITICAL HABITAT

### Affected Environment

Critical habitat refers to specific geographical areas designated by USFWS or NMFS for federally listed species with special management or protections. Located within a specific geographic area, these areas contain the physical or biological features essential to the conservation of endangered and threatened species (as determined by USFWS and/or NMFS) that may need special management or protection. This may include areas that were occupied by the specific species at the time it was listed, or those areas not occupied by the species at the time of listing but are considered essential to its conservation.

A summary of critical habitat types, location, and extent in the project area is provided in Table 8 below.

**Table 8. Critical Habitat within the Project Area**

| Species/Habitat | Post Mile | ESL Area (acres) | BSA Area (acres) |
|---|---|---|---|
| Marbled murrelet | 12.12, 13.36, 13.83, 14.04-14.08, 19.05-19.11, 22.36 (within 328 feet) | 11.14 | 88.54 |
| Coho salmon–Southern Oregon/Northern California Coast ESU (Pop. 2) | 8.98 (Salt Creek>Klamath River)<br>9.12 (Salt Creek>Klamath River)<br>9.53 (Salt Creek>Klamath River)<br>37.46 (Mello Creek>Morrison Creek>Smith River) (fish passage)<br>9.01/39.02 (Outlet>Rowdy Creek>Smith River)<br>40.71 (Delilah Creek>Smith River) fish passage) | None | Tributary connection only |
| (Pacific) eulachon–Southern DPS | 8.98 (Salt Creek>Klamath River)<br>9.12 (Salt Creek>Klamath River)<br>9.53 (Salt Creek>Klamath River) | None | Marsh/creek connection only |
| Green sturgeon–Southern DPS | 12.12 | None | 3.45; Marine |

## Environmental Consequences

### Marbled Murrelet

The scope of work requires the removal of approximately 4 trees within 328 feet (100 meters; visual disturbance distance per USFWS) of marbled murrelet (MAMU) critical habitat. Discussion with Caltrans' USFWS liaisons Matt Parker and Greg Schmidt resulted in agreement that such minimal tree removal would not result in substantial adverse effects to MAMU critical habitat. Full USFWS protocol-level, multi-year surveys would not be necessary. Pre-construction surveys for nesting birds would determine any immediate presence. Construction sound levels are not anticipated to exceed the threshold of 20 or more decibels above the ambient conditions (81–90 dB) or exceed the maximum of 90 decibels overall.

### SONCC Coho Salmon

The project would result in the temporary loss of riparian and in-stream habitat. These temporary losses are not likely to have significant effects on the overall quantity or quality of rearing habitat available to juvenile coho salmon because existing stream access at PMs 37.46 and 40.71 are currently extremely limited. The effect on food production is also expected to be short-lived due to rapid recolonization of the streambed by macroinvertebrates following construction.

The proposed action would result in potential temporary impacts to waters connected to designated critical habitat for SONCC coho salmon. However, the project provides the opportunity for an eventual increase of approximately 170 linear feet of in-stream habitat at PM 37.46 (Mello Creek), as well as new fish passage and riparian habitat on both banks of newly constructed sections of the creek at PM 40.71 following restoration.

Consequently, the temporary adverse effects on both in-channel and riparian habitat resulting from construction would be minor and outweighed by the long-term beneficial effects on fish passage and restoration of access to spawning and rearing habitat upstream of the fish passage locations. The project is not likely to destroy or adversely modify designated critical habitat for SONCC coho salmon.

### *Pacific Eulachon*

The Klamath River is designated critical habitat for eulachon (sDPS); however, this is outside of any project BSA and construction impacts are not expected, even indirectly, due to the relatively minor turbidity or toxin transfer potential from culvert replacement and anticipated marsh infiltration prior to the Salt Creek tributary connection.

### *Green Sturgeon*

There is critical habitat (marine) within the BSA of PM 12.12. The species may exist in the Pacific Ocean off the coast of the project area; however, the project is not anticipated to directly impact green sturgeon. At PM 12.12, only indirect impacts to water quality, such as temporary increases in turbidity, suspended sediment, and contaminant risk may be considered as potential impacts.

### *Fish Habitat Indirect Effects*

All fish species' critical habitat is downstream from the project locations, as noted in Table 8. During construction, water quality may be temporarily impaired due to short-term, localized increases in turbidity from activities that involve ground disturbance, or by contaminants in roadway stormwater runoff or accidental spills during construction, which could potentially compromise safe passage conditions for fish migration and reduce the quality of localized rearing habitat. Discussion with NMFS liaison Mario Minder resulted in agreement that any work performed within fish-bearing waters would use measures to minimize impacts, such as cofferdams or diversions and seasonal work windows. Work performed at the locations listed in Table 6 for fish would be on drainage systems which drain to waters that are critical habitat. Caltrans has made efforts to shorten downdrains and infiltrate stormwater to increase filtration prior to water reaching critical habitat.

## *Avoidance, Minimization and Mitigation Measures*

Project-specific avoidance and minimization measures are not proposed for Critical Habitat with incorporation of Standard Measures and BMPs to protect water quality identified in Section 1.8.

Based on the determinations made in the CEQA Environmental Checklist, no mitigation measures are proposed.

## ESSENTIAL FISH HABITAT

### Affected Environment

The ESLs and BSAs are within Essential Fish Habitat (EFH) for Chinook and coho salmon, and one location (PM 12.12) is at the coastal limit of EFH for coastal pelagic, groundfish, and highly migratory species. There would be no construction within essential fish habitat waters; however, construction could affect tributaries to EFH species streams by creating turbidity or other water quality changes. Table 9 provides a summary of fish species EFH, location, and extent in the project area.

**Table 9. Essential Fish Habitat in Project Area**

| Species/Habitat | Post Mile/Tributary | ESL Area (acres) | BSA Area (acres) |
|---|---|---|---|
| **Pacific Salmon:** Chinook and coho salmon–Southern Oregon/Northern California Coast ESU | 8.98 (Salt Creek>Klamath River)<br>9.12 (Salt Creek>Klamath River)<br>9.53 (Salt Creek>Klamath River)<br>37.46 (Mello Creek>Morrison Creek>Smith River)<br>39.01/39.02 (Outlet>Rowdy Creek>Smith River)<br>40.71 (Delilah Creek>Smith River) | 6.90 | 91.06 |
| Coastal Pelagic EFH, Groundfish EFH, and Highly Migratory Species EFH | 12.12 (Outlet to rocks/beach) | 0.18 | 6.92 |

### Environmental Consequences

Water quality within EFH may be temporarily impacted during project construction due to short term, localized increases in turbidity from activities that involve ground disturbance, or by contaminants in roadway stormwater runoff or accidental spills during construction. As the work would be done within drainages that flow to EFH streams, potentially minimal amounts of soil or contaminants could enter the river during construction or post-construction prior to full site stabilization. These water quality impacts could compromise safe passage conditions for fish migration and reduce the quality of spawning and rearing habitat, although impacts would be short-term and temporary.

There would also be a small temporal loss (over the period of construction) of riparian habitat as a result of vegetation removal during construction, which could degrade spawning and rearing habitat for Chinook salmon and coho salmon. Riparian vegetation would be restored upon completion of construction.

Caltrans anticipates the proposed project may adversely affect EFH for Pacific salmon (Chinook salmon and coho salmon). However, no measurable, long-term permanent impacts to waters, substrates, food production and availability, cover conditions, or vegetation would be expected. Caltrans anticipates there would be no long-term, permanent impacts to EFH for Pacific salmon after construction that would reduce the quality of habitat to an extent that individual salmon would be impacted.

Given that one location (PM 12.12) is at the coastal limit of Coastal Pelagic EFH, Groundfish EFH, and Highly Migratory Species EFH, the project may adversely affect EFH for these species due to increases in turbidity or accidental spills during construction, or contaminants from stormwater runoff. At the PM 12.12 culvert system, the limited time of construction (approximately one week), low amount of runoff, and natural filtration provided by the rock and sand at the outlet would make any impacts on Coastal Pelagic EFH, Groundfish EFH, and Highly Migratory Species EFH temporary and minor.

### *Avoidance, Minimization and Mitigation Measures*

Caltrans would implement the Alternative BMPs (ABMPs) that were developed for the now expired 2013 NMFS Programmatic Biological Opinion or through future consultation with NMFS to minimize effects to EFH, as well as the appropriate Standard Measures and BMPs to protect water quality (Section 1.8). Treatment BMPs for hillside runoff are also included to minimize impacts to the marine habitat near the culvert outlet at PM 12.12.

Based on the determinations made in the CEQA Environmental Checklist, no mitigation measures are proposed.

## HABITAT CONNECTIVITY/FISH PASSAGE

Wildlife corridors are areas of habitat used by wildlife for seasonal or daily migration. Stream courses and their associated riparian areas are often used as migration corridors by aquatic and terrestrial species. If corridors are degraded, habitat fragmentation can result. Habitat fragmentation is the process by which habitat loss results in the division of large, continuous habitats into smaller, more isolated remnants, thereby lessening its biological value.

The proposed project would enhance terrestrial wildlife connectivity by increasing most culvert diameters and installing a bridge. Where feasible, culverts would be installed to the natural grade to allow for aquatic migration of amphibians, reptiles, semi-aquatic mammals, and fish.

To comply with Senate Bill 857, a single span bridge has been proposed at Mello Creek (PM 37.46). This bridge would allow for the rehabilitation of a priority fish passage location with current barrier issues. Fish passage improvement has also been proposed at Delilah Creek (PM 40.71), which would be realigned approximately 160 feet southeast (PM 40.68). A larger 12-foot-wide x 12-foot-high box culvert would be installed, and a naturalized streambed would be installed inside the culvert.

## PLANT SPECIES

Botanical surveys were conducted in February, May, and August of 2024. Plants are considered to be of special concern based on (1) federal, state, or local laws regulating their development; (2) limited distributions; and/or (3) the habitat requirements of special status plants or animals occurring on-site.

Based on queries to the USFWS, CDFW-CNDDB and CNPS databases, Table 10 below indicates the special status (FESA/CESA) plant species with habitat present that could potentially occur within the project Environmental Study Limits (ESL). However, while none of these species have been observed within the project site, they are included as suitable habitat was present in the appropriate elevational range.

**Table 10. Effect/Impact Findings for Special Status Plant Species with Habitat Present within the ESLs**

| Common Name | *Scientific Name* | Status Federal/State[1] CRPR[2] | Effect/ Impact Determination | Effect Finding for Critical Habitat (if applicable) |
|---|---|---|---|---|
| Alpine marsh violet | *Viola palustris* | --/--/2B.2 | -- | -- |
| Angel's hair lichen | *Ramalina thrausta* | --/--/2B.1 | -- | -- |
| Arctic starflower | *Lysimachia europaea* | --/--/2B.2 | -- | -- |
| Black crowberry | *Empetrum nigrum* | --/--/2B.2 | -- | -- |
| Bolander's lily | *Lilium bolanderi* | --/--/4.2 | -- | -- |
| Bristle-stalked sedge | *Carex leptalea* | --/--/2B.2 | -- | -- |
| Broad-lobed leptosiphon | *Leptosiphon latisectus* | --/--/4.3 | -- | -- |
| Bunchberry | *Cornus unalaschkensis* | --/--/2B.2 | -- | -- |
| California globe mallow | *Iliamna latibracteata* | --/--/1B.2 | -- | -- |
| Coast checkerbloom | *Sidalcea oregana* ssp. *eximia* | --/--/1B.2 | -- | -- |
| Coast fawn lily | *Erythronium revolutum* | --/--/2B.2 | -- | -- |
| Crinkled rag lichen | *Platismatia lacunosa* | --/--/2B.3 | -- | -- |
| Del Norte buckwheat | *Eriogonum nudum* var. *paralinum* | --/--2B.2 | -- | -- |
| Fibrous pondweed | *Potamogeton foliosus* ssp. *fibrillosus* | --/--/2B.3 | -- | -- |
| Ghost-pipe | *Monotropa uniflora* | --/--/2B.2 | -- | -- |
| Giant fawn lily | *Erythronium oregonum* | --/--/2B.2 | -- | -- |
| Green yellow sedge | *Carex viridula* ssp. *viridula* | --/--/2B.3 | -- | -- |
| Henderson's fawn lily | *Erythronium hendersonii* | --/--/2B.3 | -- | -- |
| Howell's fawn lily | *Erythronium howellii* | --/--/1B.3 | -- | -- |
| Howell's montia | *Montia howellii* | --/--/2B.2 | -- | -- |
| Klamath Mountain buckwheat | *Eriogonum hirtellum* | --/---/1B.3 | -- | -- |
| Lagoon sedge | *Carex lenticularis* var. *limnophila* | --/--/2B.2 | -- | -- |
| Langsdorf's violet | *Viola langsdorffii* | --/--/2B.1 | -- | -- |
| Leafy reed grass | *Calamagrostis foliosa* | --/SR/4.2 | No Impact | -- |
| Leafy-stemmed | *Mitellastra caulescens* | --/--/4.2 | -- | -- |

| Common Name | *Scientific Name* | Status Federal/State[1] CRPR[2] | Effect/ Impact Determination | Effect Finding for Critical Habitat (if applicable) |
|---|---|---|---|---|
| mitrewort | | | | |
| Lyngbye's sedge | *Carex lyngbyei* | --/--/2B.2 | -- | -- |
| Maidenhair spleenwort | *Asplenium trichomanes* ssp. *trichomanes* | --/--/2B.1 | -- | -- |
| Maple-leaved checkerbloom | *Sidalcea malachroides* | --/--/4.2 | -- | -- |
| Marsh pea | *Lathyrus palustris* | --/--/2B.2 | -- | -- |
| Methuselah's beard lichen | *Usnea longissima* | --/--/4.2 | -- | -- |
| Minute pocket moss | *Fissidens pauperculus* | --/--/1B.2 | -- | -- |
| Northern clustered sedge | *Carex arcta* | --/--/2B.2 | -- | -- |
| Northern meadow sedge | *Carex praticola* | --/--/2B.2 | -- | -- |
| Nuttall's saxifrage | *Cascadia nuttallii* | --/--/2B.1 | -- | -- |
| Oregon Coast paintbrush | *Castilleja litoralis* | --/--/2B.2 | -- | -- |
| Oregon fireweed | *Epilobium oreganum* | --/--/1B.2 | -- | -- |
| Oregon goldthread | *Coptis laciniata* | --/--/4.2 | -- | -- |
| Oregon polemonium | *Polemonium carneum* | --/--/2B.2 | -- | -- |
| Pacific gilia | *Gilia capitata* ssp. *pacifica* | --/--/1B.2 | -- | -- |
| Perennial goldfields | *Lasthenia californica* ssp. *macrantha* | --/--/1B.2 | -- | -- |
| Running-pine | *Lycopodium clavatum* | --/--/4.1 | -- | -- |
| Sanford's arrowhead | *Sagittaria sanfordii* | --/--/1B.2 | -- | -- |
| Seacoast ragwort | *Packera bolanderi* var. *bolanderi* | --/--/2B.2 | -- | -- |
| Seaside bittercress | *Cardamine angulata* | --/--/2B.2 | -- | -- |
| Siskiyou checkerbloom | *Sidalcea malviflora* ssp. *patula* | --/--/1B.2 | -- | -- |
| Siskiyou paintbrush | *Castilleja elata* | --/--/2B.2 | -- | -- |
| Small groundcone | *Kopsiopsis hookeri* | --/--/2B.3 | -- | -- |

| Common Name | *Scientific Name* | Status Federal/State[1] CRPR[2] | Effect/ Impact Determination | Effect Finding for Critical Habitat (if applicable) |
|---|---|---|---|---|
| Trifoliate laceflower | *Tiarella trifoliata* var. *trifoliata* | --/--/3.2 | -- | -- |
| Thurber's reed grass | *Calamagrostis crassiglumis* | --/--/2B.1 | -- | -- |
| Twisted horsehair lichen | *Sulcaria spiralifera* | --/--/1B.2 | -- | -- |
| Vanilla-grass | *Anthoxanthum nitens* ssp. *nitens* | --/--/2B.3 | -- | -- |
| Western lily | *Lilium occidentale* | FE/SE/1B.1 | No Effect No Impact | |
| White beaked-rush | *Rhynchospora alba* | --/--/2B.2 | -- | -- |
| White-flowered rein orchid | *Piperia candida* | --/--/1B.2 | -- | -- |
| Wolf's evening-primrose | *Oenothera wolfii* | --/--/1B.1 | -- | -- |
| Woodnymph | *Moneses uniflora* | --/--/2B.2 | -- | -- |

[1]Federal Status: FT = Federal Threatened; FE = Federal Endangered; FPT = Federal Proposed Threatened; FC = Federal Candidate; FP = Fully Protected

State Status: ST = State Threatened; SE = State Endangered; SCE = State Candidate Endangered; FP = Fully Protected; SSC = CDFW Species of Special Concern; SR = State Rare

[2]CRPR = California Rare Plant Rank

Based on the same database queries, the following special status (FESA/CESA) plant species were either not observed during botanical surveys, there is no suitable habitat, or the species is out of the elevational range of the project study area; therefore, these species would not be impacted by the project and are not discussed further:

- McDonald's Rockcress (*Arabis Mcdonaldiana*) - federal and state endangered
- Sand dune phacelia (*Phacelia argentea*) and critical habitat - federal threatened

Those special status (FESA/CESA or Rare) plant species that could potentially occur within the Environmental Study Limits are discussed below.

- Leafy reed grass (*Calamagrostis foliosa*) - state rare
- Western lily (*Lilium occidentale*) - federal and state endangered

### *Leafy Reed Grass*

#### *Affected Environment*

Leafy reed grass (*Calamagrostis foliosa*) occurs within Coastal bluff scrub and North Coast coniferous forest, growing at elevations from 0 to 1,220 feet. While suitable habitat for leafy reed grass occurs at ESLs with coniferous and rocky areas, there is only one CNDDB occurrence—found at Red Mountain in 1964—approximately eight miles east of the southern project area. Leafy reed grass was not encountered during botanical surveys conducted for this project.

#### *Environmental Consequences*

As there were no occurrences of this species found within the project ESLs, there are no anticipated impacts at any of the project locations.

Per CESA, Caltrans anticipates no impact to leafy reed grass from the proposed work.

#### *Avoidance, Minimization and Mitigation Measures*

Given leafy reed grass would not be affected by the proposed work, no species-specific avoidance and minimization measures are proposed.

Based on the determinations made in the CEQA Environmental Checklist, no mitigation measures are proposed for this species.

### Western Lily

#### Affected Environment

Western lily (*Lilium occidentale*) occurs in coastal areas between Coos Bay, Oregon, and Eureka; and is typically found on well-drained, old beach washes overlain with wind-blown alluvium and organic topsoil, usually near margins of Sitka spruce at elevations ranging from 6.5 to 605 feet. While the project ESLs may support suitable habitat for western lily, none were observed within the ESLs during botanical surveys. As there are also no recorded occurrences of Western lily within the ESLs, it is not expected to be impacted by the project.

#### Environmental Consequences

As this species was not observed during botanical surveys and also has no known occurrences within the project ESLs, no impacts are anticipated.

#### Avoidance, Minimization and Mitigation Measures

Given Western lily would not be affected by the proposed work, no species-specific avoidance and minimization measures are proposed.

Based on the determinations made in the CEQA Environmental Checklist, no mitigation measures are proposed for this species.

### ANIMAL SPECIES

Based on the USFWS, NMFS, and CDFW-CNDDB database queries, Table 11 below indicates those special status animal species which have habitat present and could potentially occur within the Environmental Study Limits/Biological Study Areas and thus could potentially be impacted by project construction.

**Table 11. Special Status Animal Species with Habitat Present that May Potentially Occur within the Project Study Limits**

| Common Name | *Scientific Name* | Status Federal/ State | Effect/Impact Finding | Effect Finding for Critical Habitat or EFH (if applicable |
|---|---|---|---|---|
| ***AMPHIBIANS*** | | | | |
| Del Norte salamander | *Plethodon elongatus* | --/WL | No Impact | -- |
| Foothill yellow-legged frog–North Coast Distinct Population Segment (DPS) (Pop. 1) | *Rana boylii* | --/SSC | No Impact | -- |
| Northern red-legged frog | *Rana aurora* | --/SSC | No Impact | -- |
| Pacific tailed frog | *Ascaphus truei* | --/SSC | No Impact | -- |
| Southern torrent salamander | *Rhyacotriton variegatus* | --/SSC | No Impact | -- |
| ***BIRDS*** | | | | |
| Bald eagle | *Haliaeetus leucocephalus* | DL/SE, FP | No Effect No Impact | -- |
| Cackling (=Aleutian Canada) goose | *Branta hutchinsii leucopareia* | DL/WL, FP | No Effect No Impact | -- |
| California condor | *Gymnogyps californianus* | FE/SE, FP | No Effect No Impact | -- |
| California brown pelican | *Pelecanus occidentalis californicus* | DL/DL | No Effect No Impact | -- |
| Marbled murrelet | *Brachyramphus marmoratus* | FT/SE | No Effect No Impact | CH Present |
| Northern harrier | *Circus hudsonius* | --/SSC | No Effect No Impact | -- |
| Northern spotted owl | *Strix occidentalis caurina* | FT/ST | No Effect No Impact | CH Absent |
| Osprey | *Pandion haliaetus* | --/WL | No Impact | -- |
| Ruffed grouse | *Bonasa umbellus* | --/WL | No Impact | -- |
| White–tailed kite | *Elanus leucurus* | --/FP | No Impact | -- |
| ***FISH*** | | | | |
| Chinook salmon–Southern Oregon/ Northern California Coast ESU (Pop. 14) | *Oncorhynchus tshawytscha* | FC/SSC | No Effect No Impact | EFH Present |

| Common Name | *Scientific Name* | Status Federal/ State | Effect/Impact Finding | Effect Finding for Critical Habitat or EFH (if applicable |
|---|---|---|---|---|
| Chinook salmon–Upper Klamath and Trinity Rivers ESU (Pop. 30) | *Oncorhynchus tshawytscha* | FC/ST | No Effect<br>No Impact | EFH Present |
| Coastal cutthroat trout | *Oncorhynchus clarkii clarkii* | --/SSC | No Impact | -- |
| Coho salmon–Southern Oregon/ Northern California Coast (ESU) (Pop. 2) | *Oncorhynchus kisutch* | FT/ST | No Effect<br>No Impact | CH Present<br>EFH Present |
| (Pacific) eulachon–Southern DPS | *Thaleichthys pacificus* | FT/SSC | No Effect<br>No Impact | CH Absent |
| Green sturgeon–southern DPS | *Acipenser medirostris* | FT/ST | No Spawning Habitat | CH (Marine) Present |
| Longfin smelt | *Spirinchus thaleichthys* | --/ST | No Impact | -- |
| Pacific lamprey | *Entosphenus tridentatus* | --/SSC | No Impact | -- |
| Steelhead–Klamath Mountains Province DPS (Pop. 1) | *Oncorhynchus mykiss irideus* | --/SSC | No Impact | -- |
| Western brook lamprey | *Lampetra richardsoni* | --/SSC | No Impact | -- |
| ***MAMMALS*** | | | | |
| Fisher–West Coast DPS | *Pekania pennanti* | --/SSC | No Impact | -- |
| Pacific (Humboldt) marten–Coastal DPS | *Martes caurina humboldtensis* | FT/SE, SSC | No Effect<br>No Impact | CH Absent |
| Ringtail | *Bassariscus astutus* | --/FP | No Impact | -- |
| Sonoma tree vole | *Arborimus pomo* | --/SSC | No Impact | -- |
| Townsend's big- eared bat | *Corynorhinus townsendii* | --/SSC | No Impact | -- |
| ***REPTILES*** | | | | |
| Northwestern pond turtle | *Actinemys marmorata* | FPT/SSC | No Effect<br>No Impact | -- |

[1] **Federal Status**: FE = Endangered; FPT = Proposed Threatened; FT = Threatened; FC = Candidate; DL = Delisted

**State Status:** SE = Endangered; ST = Threatened; SCT = Candidate Threatened; SCE = Candidate Endangered; FP = CDFW Fully Protected; SSC = CDFW Species of Special Concern; SR = State Rare; WL = CDFW Watch List Species

(*Source: CDFW-CNDDB 2024; USFWS 2024; NMFS 2024)*

Those special status animal species that will not be impacted by the project, either because the project is out of the geographical range of the species or there is no suitable habitat for the species, are listed below and will not be discussed further.

- American peregrine falcon (*Falco peregrinus anatum*)
- Bank swallow (*Riparia riparia*)
- Black swift (*Cypseloides niger*)
- Double-crested cormorant (*Nannopterum auritum*)
- Fork-tailed storm-petrel (*Hydrobates furcatus*)
- Golden eagle (*Aquila chrysaetos*)
- Hawaiian petrel (*Pterodroma sandwichensis*)
- Little willow flycatcher (*Empidonax traillii brewsteri*)
- Rhinoceros auklet (*Cerorhinca monocerata*)
- Short-tailed albatross (*Phoebastria (=Diomedea) albatrus*)
- Tufted puffin (*Fratercula cirrhata*)
- Western snowy plover (*Charadrius nivosus nivosus*)–Pacific Coast DPS
- Yellow-billed cuckoo (*Coccyzus americanus occidentalis*)–Western U.S. DPS
- Yellow rail (*Coturnicops noveboracensis*)
- Chinook salmon (*Oncorhynchus tshawytscha*)–California Coastal Evolutionarily Significant Unit (ESU) (Pop. 17)
- Green sturgeon (*Acipenser medirostris*)–Northern DPS (Pop. 2)
- Lower Klamath marbled sculpin (*Cottus klamathensis polyporus*)
- Steelhead (*Oncorhynchus mykiss irideus*)–Northern California (NC) DPS *winter-run* (Pop. 49)
- Steelhead (*Oncorhynchus mykiss irideus*)–Northern California (NC) DPS *summer-run* (Pop. 16) -
- Tidewater goby (*Eucyclogobius newberryi*)
- Monarch butterfly (*Danaus plexippus*)

- Oregon silverspot butterfly (*Speyeria zerene hippolyta*)
- Suckley's cuckoo bumble bee (*Bombus suckleyi*)
- Western bumble bee (*Bombus occidentalis*)
- Pallid bat (*Antrozous pallidus*)
- Blue whale (*Balaenoptera musculus*)
- Fin whale (*Balaenoptera physalus*)
- Guadalupe fur-seal (*Arctocephalus townsendi*)
- Humpback whale (*Megaptera novaeangliae*)
- North Pacific right whale (*Eubalaena japonica*)
- Sei whale (*Balaenoptera borealis*)
- Southern resident killer whale (*Orcinus orca*)
- Southern sea otter (*Enhydra lutris nereis*)
- Stellar sea lion (*Eumetopias jubatus*)
- Green sea turtle (*Chelonia mydas*)–East Pacific DPS
- Leatherback sea turtle (*Dermochelys coriacea*)
- Olive Ridley sea turtle (*Lepidochelys olivacea*)

### *Amphibians*

#### *Affected Environment*

Areas within project ESLs or BSAs may support habitat for the following amphibians designated as state Species of Special Concern (SSC):

- Foothill yellow-legged frog (FYLF) (*Rana boylii*)–North Coast DPS (clade)
- Northern red-legged frog (NRLF) (*Rana aurora*)
- Pacific tailed frog (*Ascaphus truei*)
- Southern torrent salamander (*Rhyacotriton variegatus*)

These species may also use areas within the project ESLs as dispersal corridors to and from more suitable aquatic breeding habitats. These species use a variety of habitats found in the project ESLs such as roadside ditches, deep pools and riffles, shaded streams and seeps, woodlands, rocky substrates, and sandy or rocky banks. Northern red-legged frog was also observed at PM 9.53 during a project site visit in August of 2024.

### *Environmental Consequences*

Surveys for special status amphibians were not conducted; however, these species may be present in drainages around the culverts and nearby riparian habitat and could occur within the ESLs at numerous locations. Amphibians could be impacted by construction equipment as well as culvert replacement activities such as excavation.

Project construction could degrade water quality, such as by increasing sediment loads associated with ground disturbance. Accidental spills of fuels, oils, or other construction-related fluids into or in close proximity to waters where intake work would occur could also degrade water quality. However, the outcome of this project will improve water quality and amphibian passage by upsizing the majority of culverts as well as daylighting several culverts.

Instream work and any water diversions would occur during the June 15 to October 15 in-water work season when flows are low and amphibians are unlikely to be present in the work area. Temporarily disturbed areas would be restored to their pre-project conditions to the greatest extent practicable, which would facilitate revegetation of native plant species and minimize temporary impacts to the stream bank and channel.

Due to the limited disturbance, short-term nature of the activities, and the presence of suitable habitat adjacent to the ESLs, Caltrans does not anticipate any adverse effects to these species. As such, there would be no substantial impacts to Foothill yellow-legged frog, Northern red-legged frog, Pacific tailed frog, and Southern torrent salamander.

### *Avoidance, Minimization and Mitigation Measures*

Caltrans would implement the appropriate Standard Measures and BMPs (Section 1.8) to protect water quality to minimize the effects to aquatic species. Therefore, no

project-specific avoidance and minimization measures are proposed for aquatic species.

Based on the determinations made in the CEQA Environmental Checklist, no mitigation measures are proposed for this species.

### Bald Eagle

#### Affected Environment

The bald eagle is a state endangered species that is also federally protected by the Bald and Golden Eagle Protection Act. They typically nest in large trees within one mile of fishable waters, within or directly adjacent to forests with large trees that provide suitable nesting structures. Nesting occurs February through August. In Del Norte County, bald eagles are strongly tied to open water and undisturbed shorelines; with migratory or otherwise nonresident individuals attracted to river corridors and estuaries from October to March.

#### Environmental Consequences

No species-specific surveys were performed for this species, and no bald eagles or nests were observed within the BSAs during field visits. CNDDB lists a 2008 occurrence approximately 1.6 miles northeast of PM 37.46, along with an occurrence on the Klamath River approximately 4 miles south of PM 8.98. Project activities are not anticipated to impact bald eagles.

#### Avoidance, Minimization and Mitigation Measures

Implementation of Standard Measures and Best Management Practices for bird protection (Section 1.8) would avoid impacts to bald eagles. Therefore, no project-specific avoidance and minimization measures are proposed for bald eagle.

Based on the determinations made in the CEQA Environmental Checklist, no mitigation measures are proposed for this species.

## Cackling (= Aleutian Canada) Goose

### Affected Environment

The cackling (=Aleutian Canada) goose is a CDFW "watch list" species. This subspecies nests on the Aleutian Islands, often on steep grassy slopes above shoreline cliffs. During migration and winter, cackling geese gather in flocks in open, mostly treeless habitats. They forage in the freshwater marshes, salt marshes, mudflats, meadows, and agricultural fields common in western Del Norte County.

### Environmental Consequences

No species-specific surveys were conducted. The ESLs contain marginal foraging habitat and the BSAs in open areas include potentially good foraging areas. The CNDDB lists the nearest occurrence of this species at 6 miles southwest of the ESL at PM 41.96. Project activities are not anticipated to impact cackling geese.

### Avoidance, Minimization and Mitigation Measures

Implementation of Standard Measures and Best Management Practices for bird protection (Section 1.8) would avoid impacts to cackling geese. Therefore, no project-specific avoidance and minimization measures are proposed for cackling geese.

Based on the determinations made in the CEQA Environmental Checklist, no mitigation measures are proposed for this species.

## California Condor

### Affected Environment

The California condor is federal and state endangered and state fully protected. In March 2022 the first experimental population of California condors were released in Redwood National and State parks. Nest sites are located in cavities in cliffs, in large rock outcrops, or in large trees. Traditional roosting sites are on cliffs or large trees, often near feeding sites. Nest site selection occurs from December through the spring months. Condors normally lay a single egg between late January and early April. The experimental release site is about 20 miles south of the ESL at PM 8.98, and condors may range up to 100 miles per day.

### *Environmental Consequences*

No species-specific surveys were conducted, and condors were not observed within any of the ESLs. While nesting habitat was not observed, there may be suitable foraging or roosting habitat within the BSAs. Impacts to condors are not anticipated given the minimal amount of vegetation removal and temporary impacts of the project.

### *Avoidance, Minimization and Mitigation Measures*

Implementation of Standard Measures and Best Management Practices for bird protection (Section 1.8) would avoid impacts to California condors. Therefore, no project-specific avoidance and minimization measures are proposed for California condors.

Based on the determinations made in the CEQA Environmental Checklist, no mitigation measures are proposed for this species.

## *Marbled Murrelet (MAMU)*

### *Affected Environment*

Marbled murrelet is federally threatened and state endangered with over 3.6 million acres of critical habitat designated in Washington, Oregon, and California. They occur along the Pacific coast of North America from Alaska to central California, where they forage in the ocean, primarily within a few miles of shore, and fly inland to nest in mature conifers. Nesting habitat is primarily associated with large tracts of old-growth forest, typically within 50 miles from shore, characterized by large trees, a multistoried stand, and moderate to high canopy closure. Nests are not built, but an egg is laid in a depression of moss or other debris on the limb of a large conifer. Suitable nest structures include large mossy horizontal branches, mistletoe infections, structural deformities of the tree, and other such structures.

During the March to September breeding season, MAMU typically fly along river corridors for their morning and evening nest visits. Major factors attributed to their decline from historic levels are loss of nesting habitat due to commercial timber harvest and forage management practices, poor reproductive habitat due to habitat fragmentation and predation, and mortality from net fisheries and oil spills (USFWS 1997).

The primary physical and biological features of critical habitat for MAMU are individual trees with potential nesting platforms, forested areas within 0.5 mile of individual trees with potential nesting platforms, and a canopy height of at least one-half the site-potential tree height (USFWS 2024b).

#### *Environmental Consequences*

Protocol-level surveys were not conducted for MAMU within the project ESLs. MAMU detections are listed in CNDDB along the project area's southern extent. A total of 11.14 acres of MAMU critical habitat are mapped within the BSAs of seven project locations (PMs 12.12, 13.36, 13.83, 14.04, 14.08, 19.05, and 19.11). After consultation with USFWS, it was determined that the project's limited habitat removal would not constitute an adverse effect to the species. Of the total MAMU critical habitat area (11.14 acres), the project would temporarily impact 0.63 acre of critical habitat and permanently impact 0.07 acre due to RSP placement. However, these impacts would be on the forest floor, where it is highly unlikely individual MAMU would be found; therefore, no impacts to MAMU are anticipated.

#### *Avoidance, Minimization and Mitigation Measures*

Implementation of Standard Measures and Best Management Practices (Section 1.8) would minimize impacts to MAMU. Therefore, no project-specific avoidance and minimization measures are proposed for marbled murrelet.

Based on the determinations made in the CEQA Environmental Checklist, no mitigation measures are proposed for this species.

### *Northern Harrier*

#### *Affected Environment*

Northen harrier is a state SSC in California, where they nest and forage in tall grasslands. They usually choose shrubby vegetation at marsh edges where they build large mound nests from sticks. Harriers typically fly low over the ground when hunting, weaving back and forth over fields and marshes as they watch for small animals. They eat on the ground and perch on low posts or tree branches. In migration and winter, harriers typically move south away from areas that receive heavy snow cover, ending up in open habitats similar to breeding habitats.

### Environmental Consequences

No species-specific surveys were conducted. Some ESLs contain marginal foraging and nesting habitat along the sections of marsh or grassland adjacent to the southern portion of the project at PM 8.98 to PM 12.12. The nearest occurrence in CNDDB of this species is 5 miles southwest of the project ESLs.

### Avoidance, Minimization and Mitigation Measures

Implementation of Standard Measures and Best Management Practices for bird protection (Section 1.8) would avoid impacts to northern harriers. Therefore, no project-specific avoidance and minimization measures are proposed for northern harrier.

Based on the determinations made in the CEQA Environmental Checklist, no mitigation measures are proposed for this species.

## Northern Spotted Owl

### Affected Environment

The northern spotted owl (NSO) is a federally and state threatened species that occurs in southwest British Columbia and through the Cascade Mountains and coastal ranges in Washington, Oregon, and south to Marin County in California. Nesting, roosting, and foraging occurs in structurally complex, older, coniferous forests where NSO tend to retain the same breeding territories from year to year. Nests are usually in old-growth coniferous trees and Douglas-fir is the most common nest tree species. Courtship begins in February or March, with one to four eggs laid in late March or April, and young-of-the-year leaving the nest in late May or June, while their parents continue to feed them until late August or September.

### Environmental Consequences

Protocol-level surveys were not conducted for NSO. The most recent observations listed in CNDDB of NSO occurred in 1983 and 1995, each within one mile of the project ESLs at PM 9.53 and PM 19.05. Because there is also suitable nesting habitat from PMs 13.36 to 22.36, Caltrans would assume NSO presence, despite no recent observations or known nesting sites. The project does not include designated critical habitat for NSO.

After consultation with USFWS, it was determined that the limited habitat removal and disturbance would not constitute an adverse effect, as long as standard pre-construction surveys and assessments are performed.

#### *Avoidance, Minimization and Mitigation Measures*

The USFWS PLOC will be used for Section 7 consultation for potential effects to NSO. All PLOC measures for NSO, combined with Standard Measures and Best Management Practices for bird protection (Section 1.8), make this project not likely to adversely affect NSO. Therefore, no project-specific avoidance and minimization measures are proposed for northern spotted owl.

Based on the determinations made in the CEQA Environmental Checklist, no mitigation measures are proposed for this species.

### *Osprey*

#### *Affected Environment*

Osprey are a CDFW state "watch list" species. They are still common and widespread in the state, and currently at low risk for extinction. Osprey feed almost exclusively on fish and inhabit areas near shallow waters, either fresh or salt, that offer a steady source of food. Nests are usually built on snags, treetops, or crotches between large branches and trunks, on cliffs or human-built platforms, in open surroundings for easy approach, and elevated for safety from ground predators.

#### *Environmental Consequences*

No species-specific surveys were conducted for this species. The CNDDB does list osprey nests as potentially being within line of site from the project location at PM 8.98. No nests would be removed or altered during project activities, and osprey are unlikely to be affected by the proposed project work due to the minimal amount of vegetation removal planned, combined with the temporary nature of construction.

#### *Avoidance, Minimization and Mitigation Measures*

Implementation of Standard Measures and Best Management Practices for bird protection (Section 1.8) would avoid impacts to osprey.

A pre-construction osprey survey would be performed to identify potential threats to osprey from project activities, while providing the opportunity to develop appropriate avoidance measures if needed. Therefore, no project-specific avoidance and minimization measures are proposed for osprey.

Based on the determinations made in the CEQA Environmental Checklist, no mitigation measures are proposed for this species.

### *Ruffed Grouse*

#### *Affected Environment*

Ruffed grouse are a CDFW state "watch list" species. They can be found in riparian habitats in the Pacific Northwest (including northern California). Grouse populations are higher in areas where logging, burning, and other disturbance create early successional forests with young stands of trees, which grouse use for both cover and food. Grouse populations are lower in mature forests and in small patches of woods surrounded by agricultural lands. They feed almost exclusively on vegetation, including leaves, buds, and fruits of ferns, shrubs, and woody plants. Their nests are simple, hollowed-out depressions in leaves on the forest floor and are typically at the base of a tree, stump, or rock.

#### *Environmental Consequences*

No species-specific surveys were conducted for this species. While there are no occurrences listed in CNDDB, there are potential foraging areas within the mixed forest or riparian areas of the project BSAs. Ruffed grouse are unlikely to be affected by the proposed work.

#### *Avoidance, Minimization and Mitigation Measures*

Implementation of Standard Measures and Best Management Practices for bird protection (Section 1.8) would avoid impacts to ruffed grouse. Therefore, no project-specific avoidance and minimization measures are proposed for ruffed grouse.

Based on the determinations made in the CEQA Environmental Checklist, no mitigation measures are proposed for this species.

## White-Tailed Kite

### Affected Environment

The white-tailed kite is a state fully protected species in California. It is a year-round resident in coastal and valley lowlands, rarely found away from agricultural areas. The white-tailed kite preys mostly on voles and other small, diurnal mammals, and occasionally on birds, insects, reptiles, and amphibians. It forages in open grasslands, meadows, farmland, and over emergent wetlands. White-tailed kites breed in lowland grasslands, agricultural areas, wetlands, oak-woodland and savannah habitats, and riparian areas associated with open areas. These kites typically nest in the upper third of trees that may be 10-160 feet tall. These can be open country trees growing in isolation, or at the edge of or within a forest. The project BSAs have suitable foraging habitat, but there is no suitable nesting habitat within any ESLs.

### Environmental Consequences

No species-specific surveys were conducted for this species, and there are no recent CNDDB listed occurrences in Del Norte County. Preconstruction bird surveys would be performed as part of the Standard Measures and BMPs (Section 1.8) to identify potential threats to nesting birds from project activities and to provide opportunity to develop appropriate avoidance measures. Due to the lack of suitable nesting habitat within the ESLs, impacts to white-tailed kites are not anticipated.

### Avoidance, Minimization and Mitigation Measures

Implementation of Standard Measures and Best Management Practices for bird protection (Section 1.8) would avoid impacts to white-tailed kite. Therefore, no project-specific avoidance and minimization measures are proposed for white-tailed kite.

Based on the determinations made in the CEQA Environmental Checklist, no mitigation measures are proposed for this species.

## Fish

### Affected Environment

Suitable habitat for the following federal and/or state listed fish species and state Species of Special Concern (SSC) was identified within multiple BSAs. This includes habitat for:

- Chinook salmon (*Oncorhynchus tshawytscha*)–Southern Oregon/Northern California Coast (SONCC) ESU (Pop. 14) – federal threatened and state SSC
- Chinook salmon (*Oncorhynchus tshawytscha*)–Upper Klamath and Trinity Rivers ESU (Pop. 30) – federal candidate and state threatened
- Coastal cutthroat trout (*Oncorhynchus clarkii clarkii*) – state SSC
- Coho salmon (*Oncorhynchus kisutch*)–SONCC ESU (Pop. 2) – federal and state threatened
- (Pacific) eulachon (*Thaleichthys pacificus*)–Southern DPS – federal threatened and state SSC
- Green sturgeon (*Acipenser medirostris*)–Southern DPS – federal threatened and state threatened – *critical habitat only*
- Longfin smelt (*Spirinchus thaleichthys*) – state threatened
- Pacific lamprey (*Entosphenus tridentatus*) – state SSC
- Steelhead (*Oncorhynchus mykiss irideus*)–Klamath Mountains Province DPS (Pop. 1) – state SSC
- Western brook lamprey (*Lampetra richardsoni*) – state SSC

Table 8 shows critical habitat locations and extent of habitat within the ESLs and BSAs. No Chinook critical habitat exists near the project area. Coho salmon critical habitat includes tributaries of both the Smith and Klamath rivers (discussed in Section 2.4 Critical Habitat). The Klamath River is designated critical habitat for eulachon (sDPS); however, this is outside of any project BSA and construction impacts are not expected, even indirectly, due to the relatively minor turbidity or toxin transfer potential from culvert replacement and anticipated marsh infiltration prior to the Salt Creek tributary connection.

Fish passage improvements at Mello Creek (PM 37.46) and Delilah Creek (PM 40.71) are anticipated to increase use by salmonids in these Smith River tributaries.

### *Environmental Consequences*

#### *Chinook Salmon, Coho Salmon, Coastal Cutthroat Trout, and Steelhead*

Project elements that require stream diversion, such as culvert demolition and restoration of the creek banks, would take place during the summer months when fish abundance is at its lowest. However, several activities associated with the project could negatively impact coho and other salmonids if present during in-stream work. Potential impacts include:

- Water Quality—Temporary increases in turbidity, suspended sediment, and contaminant risk during in-water construction and demolition activities
- Noise and Visual Disturbance—Potential behavioral effects from general construction/demolition noise and visual disturbance
- Demolition and Construction Noise—Potential injury and mortality of fish from exposure to demolition and construction noise exceeding established thresholds for injury
- Direct Injury—Potential injury/mortality from direct contact with construction equipment/materials and capture/relocation
- Fish Passage—Potential migration delays and increased exposure of juveniles to predation during passage through the clear water diversion
- Habitat Impacts—Temporary loss of riparian habitat from clearing of vegetation for construction access and streambank stabilization, temporary loss of in-channel habitat from channel dewatering, and permanent effects to in-channel conditions from stream channel and bank stabilization

#### *(Pacific) Eulachon*

The potential impacts on salmonids described above covers most considerations for Pacific eulachon. Like coho salmon, critical habitat exists in the lower Klamath River (up to approximately 10 miles from the mouth of the river). However, Pacific eulachon critical habitat does not reach into tributaries, where the species is less likely to be present.

### Green Sturgeon-Southern DPS Critical Habitat

Unlike the salmonids and other fish species in the project area, green sturgeon–southern DPS do not use rivers and tributaries in the project area for spawning. However, critical habitat does intersect the BSA at PM 12.12—the only culvert replacement site in the project that outlets to marine waters. The species may exist in the Pacific Ocean off the coast of the project area; however, the project is not anticipated to directly impact green sturgeon. At PM 12.12, only indirect impacts to water quality, such as temporary increases in turbidity, suspended sediment, and contaminant risk may be considered as potential impacts.

### Longfin Smelt

Longfin smelt are known to inhabit the Klamath River estuaries, and can venture into completely fresh water, therefore larvae rearing could occur in the ponded waters surrounding Salt Creek at PMs 8.98, 9.12 and 9.53. While no verified records of longfin smelt are known in tributaries to the Klamath River estuary or the Smith River, they potentially could be present and experience similar direct effects as salmonids, including the potential for direct injury from culvert replacement work.

### Pacific Lamprey and Western Brook Lamprey

Dewatering and stream flow management for work at the locations associated with the Salt Creek marsh area (PMs 8.98, 9.12, 9.53) could cause a rapid fluctuation in the water level and strand lamprey ammocoetes in the substrate. Clear water diversion could also impede upstream migrations by adult lamprey and downstream movement of ammocoetes and macropthalmia (pre-adults).

Excavation of substrate within the dewatered water channel could affect all age classes of ammocoetes, if present. Contaminants from accidental spills could also harm or kill ammocoetes, which are thought to have a higher propensity for accumulating toxins given they spend three to seven years filter feeding. Ammocoetes spend most of their time burrowed in stream substrates, making them particularly susceptible to activities that involve excavation, stranding (due to dewatering), or accidental contaminant spills

### Avoidance, Minimization and Mitigation Measures

Given the small amount of habitat affected, the short duration/intermittent nature of the work, and implementation of the Standard Measures and BMPs in Section 1.8 and Alternative BMPs (ABMPs) to avoid impacts, the proposed project is not likely to result in substantial population-level effects to special status salmonids or other listed fish species or SSC because no impacts have been identified that require mitigation.

In addition, the Mello Creek and Delilah Creek fish passage improvements would result in an increase in the amount and quality of stream habitat by restoring banks and opening access to upstream habitat.

Based on the determinations made in the CEQA Environmental Checklist, no mitigation measures are proposed for these species. Species-specific avoidance and minimization measures are discussed below.

### Chinook Salmon, Coho Salmon, Coastal Cutthroat Trout, and Steelhead

The Standard Measures and BMPs outlined in Section 1.8 would be implemented to minimize potential impacts to water quality. These include implementation of standard erosion and sediment control measures, pollution prevention measures, and stormwater treatment measures. In addition, Caltrans would implement the applicable ABMPs from the future NMFS Consultation to minimize effects on listed salmonids.

The contractor would be required to prepare and submit a *Construction Site Temporary Clear Water Diversion System Plan* to Caltrans for authorization prior to any clear water diversion. The Clear Water Diversion Plan would include an Aquatic Species Relocation Plan that would be prepared and implemented by a qualified biologist. Provisions for dewatering and aquatic species relocation would include the following measures:

- Where gravel is removed temporarily to facilitate construction, it would be stored adjacent to the site and then placed back in the channel post-construction at approximately pre-project depth and gradient. If necessary, gravels would be cleaned before returning them to the channel.

- Any gravel added to the channel to create a flat working surface would be removed prior to removal of the diversion.
- Water generated from the dewatering operations from cofferdams would be disposed of per the Field Guide to Construction Site Dewatering (Caltrans 2014) and the Caltrans-authorized Dewatering Plan.

### *Pacific Eulachon, Green Sturgeon–Southern DPS, and Longfin Smelt*

The same avoidance and minimization efforts for the salmonids listed above would be implemented to minimize potential impacts to water quality for these species, including the Standard Measures and BMPs outlined in Section 1.8. These include implementation of standard erosion and sediment control measures, pollution prevention measures, and stormwater treatment measures. In addition, Caltrans would implement the applicable ABMPs from the upcoming NMFS Consultation to minimize effects on critical habitat for the federally listed green sturgeon-sDPS.

### *Pacific Lamprey and Western Brook Lamprey*

In-water salvage techniques for salmonids are often not effective for salvaging lamprey ammocoetes, as ammocoetes may not emerge from dewatered substrates until they begin to desiccate, which often occurs at night after other fish salvage operations have ceased. In addition to the Standard Measures and BMPs outlined in Section 1.8, dewatering and relocation efforts for lamprey would be performed in accordance with *USFWS Best Management Practices to Minimize Adverse Effects to Pacific Lamprey*, which includes the following measures:

1. A pre-construction survey conducted by a professional fisheries biologist in areas affected by dewatering in the Salt Creek marsh area (PMs 8.98, 9.12, 9.53), and other applicable locations, prior to construction to identify lamprey presence.
2. Electrofishing would be performed prior to dewatering to relocate ammocoetes, if present within the work zone, to a safe area away from the construction site.
3. Dewatering would be performed slowly over several days, or at a minimum overnight, to allow opportunity for any remaining lamprey to relocate on their own.

4. The orientation, siting, and type of fish screens used for dewatering operations would be selected to prevent entrainment by lamprey.
5. A qualified biologist would be present during channel excavations to sift through removed substrate to salvage any remaining ammocoetes, returning them to the stream channel a safe distance away from the construction site.

### *Pacific Fisher-West Coast DPS-Northern California ESU*

#### *Affected Environment*

Small portions of the BSAs contain larger trees with potential resting locations and suitable denning cavities at PMs 8.98, 9.12, 9.53, 10.80, 11.31, 11.72, 11.92, 13.36, 13.83, 14.04-14.08, 19.05-19.11, 22.36, and 39.01–39.02. However, there are no potential den structures or day resting locations within the ESL where work would be conducted. Fishers are a nocturnal species averse to interacting with humans. They would likely be absent from otherwise suitable habitat within the BSAs due to high levels of human disturbance, such as areas bordering roads, trails, or human habitation. No signs of fisher occupation were observed.

#### *Environmental Consequences*

This project is not anticipated to impact fisher. Although there is potentially suitable foraging, resting, or denning habitat for fisher adjacent to the ESLs, there are no potential den structures or day resting locations within the ESLs where work would be conducted.

#### *Avoidance, Minimization and Mitigation Measures*

No avoidance and minimization measures are proposed because no impacts on fisher have been identified that require such measures.

Based on the determinations made in the CEQA Environmental Checklist, no mitigation measures are proposed for this species.

### Pacific (Humboldt) Marten–Coastal DPS

#### Affected Environment

There is potentially suitable foraging, resting, or denning habitat for Pacific (Humboldt) marten within the BSAs in forests at PMs 8.98, 9.12, 9.53, 10.80, 11.31, 11.72, 11.92, 13.36, 13.83, 14.04-14.08, 19.05-19.11, and 22.36; however, the BSAs are outside of designated critical habitat. Further, martens are unlikely to occur within the ESLs due to proximity to the busy highway.

#### Environmental Consequences

There are no potential den structures or day resting locations within the ESL where work would be conducted. The USFWS Programmatic Letter of Concurrence (2022) would be used for Section 7 consultation for potential effects to Pacific (Humboldt) marten.

#### Avoidance, Minimization and Mitigation Measures

As tree removal would occur between September 15 and January 31, outside of the Pacific (Humboldt) marten denning season, no additional avoidance and minimization measures would be required.

Based on the determinations made in the CEQA Environmental Checklist, no mitigation measures are proposed for this species.

### Ringtail

#### Affected Environment

The project's region is within the known distribution of this species. No CNDDB occurrence information is available, as CNDDB does not track ringtail observations. Although focused surveys for ringtail were not conducted, no potential natal dens were observed within the project footprint.

#### Environmental Consequences

As this project would not remove ringtail denning habitat, impacts on ringtail are not anticipated.

#### Avoidance, Minimization and Mitigation Measures

No avoidance and minimization measures are proposed because no impacts on ringtail have been identified that require such measures.

Based on the determinations made in the CEQA Environmental Checklist, no mitigation measures are proposed for this species.

### Sonoma Tree Vole

#### Affected Environment

While focused surveys for Sonoma tree vole were not conducted within the project ESLs or BSAs, the species could potentially occur within BSAs at PMs 8.98, 9.12, 9.53, 10.80, 11.31, 11.72, 11.92, 13.36, 13,83; 14.04-14.08, 19.05-19.11, 22.36, and 39.01-39.02. CNDDB RareFind reports the closest detection of Sonoma tree vole approximately 600 feet east of PM 13.83 in 1993 and 0.5 mile from PM 22.36 in 1992.

#### Environmental Consequences

Suitable Sonoma tree vole habitat is not present where project-related vegetation removal would occur. No Douglas-fir or grand fir trees (preferred habitat) are proposed to be removed; therefore, project-related impacts to the species are not expected.

#### Avoidance, Minimization and Mitigation Measures

No avoidance and minimization measures are proposed because no impacts have been identified that require such measures.

Based on the determinations made in the CEQA Environmental Checklist, no mitigation measures are proposed for this species.

### Bats

#### Affected Environment

Although no focused surveys were conducted for bats, CNDDB RareFind shows an occurrence of Townsend's big-eared bat approximately 3.7 miles south of PM 8.98.

Studies of bats using tree hollows in the project area confirm the presence of Townsend's big-eared bats within the southern BSAs at PMs 8.98, 9.12 and 9.53.

At all the ESLs, the roadway offers an opening in the forest for edge-foraging bats. The forested woodlands adjacent to the ESLs offer foraging and roosting habitat for bats (including Townsend's big-eared bat (*Corynorhinus townsendii*)) at PMs 8.98, 9.12, 9.53, 10.80, 11.31, 11.72, 11.92, 13.36, 13,83; 14.04-14.08, 19.05-19.11, 22.36, and 39.01-39.02. Both day and night roosting habitat could occur within crevices and cavities of trees and snags within ESLs at PMs 8.98, 9.12, 9.53, 10.80, 11.31, 11.72, 11.92, 13.36, 13.83, 14.04-14.08, 19.05-19.11, and 22.36.

#### *Environmental Consequences*

No known maternity roosts, colonial night roosts, or appropriate habitat would be removed or altered during project activities. Vegetation removal would occur outside of the maternity season to ensure no impacts would occur to any potentially unidentified maternity roosts. Impacts to bat species are not anticipated given the seasonal timing of impacts. The project would have no impact on bat nursery sites or populations.

#### *Avoidance, Minimization and Mitigation Measures*

As bat species are unlikely to be affected by the proposed work, no species-specific avoidance or minimization measures would be implemented. Should bats be encountered on existing or new structures, implementation of the Standard Measures and BMPs outlined in Section 1.8 would minimize potential impacts.

Based on the determinations made in the CEQA Environmental Checklist, no mitigation measures are proposed for this species.

### *Northwestern Pond Turtle*

#### *Affected Environment*

No species-specific surveys were conducted for Northwestern pond turtle (NWPT). There are no known observations within the project ESLs (confirmed by USFWS). During the October 16, 2024, field visit with USFWS liaisons Matt Parker and Greg Schmidt, we determined that some habitat exists in the southernmost locations (PMs

8.98 to 11.92) and the presence of a red-eared slider (*Trachemys scripta elegans*; invasive) at PM 9.12 confirmed potential turtle habitat.

#### *Environmental Consequences*

Due to the low likelihood of presence, temporary nature of construction, and the abundance of suitable habitat in the southern project area for which turtles could relocate, no impacts to Northwestern pond turtle from this project are anticipated. The project would not have a substantial impact on NWPT populations.

#### *Avoidance, Minimization and Mitigation Measures*

If NWPT are present within the ESLs during the in-stream construction period, impacts would be avoided or minimized with incorporation of the Standard Measures and Best Management Practices identified in Section 1.8. Therefore, no project-specific avoidance and minimization measures are proposed for Northwestern pond turtle.

Based on the determinations made in the CEQA Environmental Checklist, no mitigation measures are proposed for this species.

### *Migratory Birds*

#### *Affected Environment*

No surveys were conducted for migratory birds. Surveys would be conducted for nesting birds if vegetation removal occurs during the breeding season.

#### *Environmental Consequences*

No nests would be removed or altered during project activities. Impacts to migratory birds are not anticipated given the minimal amount of vegetation to be removed, temporary nature of the project, and implementation of the Standard Measures and BMPs to avoid disturbing active nests (Section 1.8).

#### *Avoidance, Minimization and Mitigation Measures*

Project-specific avoidance and minimization measures are not proposed for migratory birds with incorporation of Standard measures and BMPs identified in Section 1.8.

Based on the determinations made in the CEQA Environmental Checklist, no mitigation measures are proposed for this species.

***Discussion of CEQA Environmental Checklist Question 2.4a)—Biological Resources***

> ***a) Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife, U.S. Fish and Wildlife Service, or NOAA Fisheries/NMFS?***

**LESS THAN SIGNIFICANT IMPACT.** Record searches and habitat assessments were conducted to determine whether special status species have the potential to be present in the project area. Federal and state lists of potential species in the vicinity are included in Appendix C. Special status plant and animal species with the potential to occur are discussed in detail above in the Plant Species and Animal Species sections. All CESA and FESA determinations for the applicable species are noted below. The project would have no impact under CEQA on species with no potential habitat. With the Standard Measures and BMPs implemented, as well as continued consultation with agency partners, the project would not have a substantial adverse effect on the identified species. See the previous section, "Affected Environment," for details about project-related impacts to individual species.

## PLANT SPECIES

Comprehensive botanical surveys of the project site were conducted in accordance with CDFW protocol and no special status plant species were observed. Two plant species (FESA/CESA/rare) identified from the special status plant databases could potentially occur within the ESL of the project due to the presence of suitable habitat in the appropriate elevational range for each species.

### *Leafy Reed Grass*

Leafy reed grass (*Calamagrostis foliosa*) is a state listed "Rare" plant, ranked 4.2 (CRPR) as a plant of limited distribution, and is moderately threatened.

Per CESA, Caltrans anticipates the project would have "no impact" on Leafy reed grass.

### Western Lily

Western lily (*Lilium occidentale*) is a federal and state listed perennial herb.

Per FESA, Caltrans anticipates the project would have "no effect" on Western lily.

Per CESA, Caltrans anticipates the project would have "no impact" on Western lily.

## ANIMAL SPECIES

### Del Norte salamander

Del norte salamander (*Plethodon elongatus*) is a species on the CDFW Watch List.

Caltrans has determined this project would have "no impact" on Del Norte salamander.

### Foothill Yellow Legged Frog - North Coast DPS

Foothill yellow legged frog (*Rana boylii*)–North Coast DPS is a state Species of Special Concern.

Caltrans anticipates the project would have "no impact" on Foothill yellow-legged frog.

### Northern Red-Legged Frog

Northern red-legged frog (*Rana aurora*) is a state Species of Special Concern.

Caltrans anticipates the project would have "no impact" on Northern red-legged frog.

### Pacific Tailed Frog

Pacific tailed frog (*Ascaphus truei*) is a state Species of Special Concern.

Caltrans anticipates the project would have "no impact" on Pacific tailed frog.

### Southern Torrent Salamander

Southern torrent salamander (*Rhyacotriton variegatus*) is a state Species of Special Concern.

Caltrans anticipates the project would have "no impact" on Southern torrent salamander.

### Cackling (= Aleutian Canada) Goose

Cackling goose (*Branta hutchinsii leucopareia*) is a federally delisted species and a CDFW fully protected species.

Caltrans anticipates the project would have "no impact" on Cackling goose.

### Northern Harrier

Northern harrier (*Circus hudsonius*) is a state Species of Special Concern.

Caltrans anticipates the project would have "no impact" on Northern harrier.

### Osprey

Osprey (*Pandion haliaetus*) is a CDFW Watch List Species.

Caltrans anticipates the project would have "no impact" on osprey.

### Ruffed Grouse

Ruffed grouse (*Bonasa umbellus*) is a CDFW Watch List Species.

Caltrans anticipates the project would have "no impact" on ruffed grouse.

### White-Tailed Kite

White-tailed kite (*Elanus leucurus*) is a CDFW Fully Protected Species.

Per CESA, Caltrans anticipates the project would have "no take/no impact" on white-tailed kite.

### Coastal Cutthroat Trout

Coastal cutthroat trout (*Oncorhynchus clarkii clarkii*) is a state Species of Special Concern.

Caltrans anticipates the project would have "no impact" on Coastal cutthroat trout.

### Pacific Lamprey

Pacific lamprey (*Entosphenus tridentatus*) is a state Species of Special Concern.

Caltrans anticipates the project would have "no impact" on Pacific lamprey.

### Steelhead - Klamath Mountains Province DPS

Steelhead (*Oncorhynchus mykiss irideus*)–Klamath Mountains Province DPS is a state Species of Special Concern.

Caltrans anticipates the project would have "no impact" on steelhead–Klamath Mountains Province DPS.

### Western Brook Lamprey

Western brook lamprey (*Lampetra richardsoni*) is a state Species of Special Concern.

Caltrans anticipates the project would have "no impact" on Western brook lamprey.

### Fisher - West Coast DPS

Fisher (*Pekania pennanti*)–West Coast DPS is a state Species of Special Concern.

Caltrans anticipates the project would have "no impact" on fisher–West Coast DPS.

### Ringtail

Ringtail (*Bassariscus astutus*) is a CDFW Fully Protected species.

Per CESA, Caltrans anticipates the project would have "no take/no impact" on ringtail.

### Sonoma Tree Vole

Sonoma tree vole (*Arborimus pomo*) is a state Species of Special Concern.

Caltrans anticipates the project would have "no impact" on Sonoma tree vole.

### Townsend's Big-Eared Bat

Townsend's big-eared bat (*Corynorhinus townsendii*) is a state Species of Special Concern.

Caltrans anticipates the project would have "no impact" on Townsend's big-eared bat.

## THREATENED AND ENDANGERED SPECIES

### Bald Eagle

The bald eagle (*Haliaeetus leucocephalus*) is a federally delisted, state endangered, CDFW Fully Protected species.

Per CESA, Caltrans anticipates the project would have "no take/no impact" on bald eagles.

### California Condor

California condor (*Gymnogyps californianus*) is a federally endangered, state endangered, and CDFW Fully Protected species.

Per FESA, Caltrans anticipates the project would have "no effect" on California condor.

Per CESA, Caltrans anticipates the project would have "no take/no impact" on California condor.

### Marbled Murrelet

Marbled murrelet (*Brachyramphus marmoratus*) is a federally threatened and state endangered species.

Per FESA, Caltrans anticipates the project "may affect, but is not likely to adversely affect" marbled murrelet and would have "no adverse effects" to marbled murrelet critical habitat.

Per CESA, Caltrans anticipates the project would have "no take/no impact" on marbled murrelet.

### Northern Spotted Owl

Northern spotted owl (*Strix occidentalis caurina*) is a federally threatened and state threatened species.

Per FESA, Caltrans anticipates the project "may affect, but is not likely to adversely affect" Northern spotted owl.

Per CESA, Caltrans anticipates the project would have "no take/no impact" on Northern spotted owl.

### Chinook Salmon–Southern Oregon/Northern California Coast ESU

Chinook salmon (*Oncorhynchus tshawytscha*)–SONCC ESU is a federal candidate for listing and a state Species of Special Concern.

Per FESA, as a candidate species Caltrans does not require an effects determination for Chinook salmon–SONCC ESU.

Per FESA, Caltrans anticipates the project "may adversely affect" Essential Fish Habitat for Chinook salmon–SONCC ESU.

Caltrans anticipates the project would have "no impact" on Chinook salmon–SONCC ESU.

### Chinook Salmon–Upper Klamath and Trinity Rivers ESU

Chinook salmon (*Oncorhynchus tshawytscha*)–Upper Klamath and Trinity Rivers ESU is a federal candidate for listing as threatened and a state threatened species.

Per FESA, as a candidate species Caltrans does not require an effects determination for Chinook salmon–Upper Klamath and Trinity Rivers ESU.

Per FESA, Caltrans anticipates the project "may adversely affect" Essential Fish Habitat for Chinook salmon–Upper Klamath and Trinity Rivers ESU.

Per CESA, Caltrans anticipates the project would result in potential "take" of Chinook salmon–Upper Klamath and Trinity Rivers ESU.

### Coho Salmon–Southern Oregon/Northern California Coast ESU

Coho salmon (*Oncorhynchus kisutch*)–SONCC ESU is a federally threatened and state threatened species.

Per FESA, Caltrans anticipates the project "may affect, is likely to adversely affect" coho salmon–SONCC ESU and its critical habitat.

Per FESA, Caltrans anticipates the project "may adversely affect" Essential Fish Habitat for coho salmon–SONCC ESU.

Per CESA, Caltrans anticipates the project would result in "take" of coho salmon–SONCC ESU.

### *Pacific Eulachon - Southern DPS*

Pacific eulachon (*Thaleichthys pacificus*)–Southern DPS is federally threatened and a state Species of Special Concern.

Per FESA, Caltrans anticipates the project "may affect, is likely to adversely affect" Pacific eulachon–Southern DPS.

Per FESA, Caltrans anticipates the project "may affect, is not likely to adversely affect" Essential Fish Habitat for Pacific eulachon–Southern DPS.

Caltrans anticipates the project would have "no impact" on Pacific eulachon–Southern DPS.

### *Green sturgeon - Southern DPS*

Green sturgeon (*Acipenser medirostris*)–Southern DPS is a federally threatened, and state threatened species.

Per FESA, Caltrans anticipates the project "may affect, but is not likely to adversely affect" green sturgeon–Southern DPS critical habitat.

Per CESA, Caltrans anticipates the project would have "no take/no impact" on green sturgeon–Southern DPS.

### *Longfin Smelt*

Longfin smelt (*Spirinchus thaleichthys*) is a state threatened species.

Per CESA, Caltrans anticipates the project would result in potential "take" of longfin smelt.

#### *Pacific (Humboldt) Marten–Coastal DPS*

Pacific (Humboldt) marten–Coastal DPS (*Martes caurina humboldtensis*) is a federally threatened, state endangered and state Species of Special Concern.

Per FESA, Caltrans anticipates the project "may affect, but is not likely to adversely affect" Pacific (Humboldt) marten.

Per CESA, Caltrans anticipates the project would have "no take/no impact" on Pacific (Humboldt) marten.

#### *Northwestern Pond Turtle*

Northwestern pond turtle (*Actinemys marmorata*) is a federally proposed threatened, and state Species of Special Concern.

Per FESA, as a candidate species Caltrans does not require an effects determination for Northwestern pond turtle.

Caltrans anticipates the project would have "no impact" on Northwestern pond turtle.

### *Discussion of CEQA Environmental Checklist Question 2.4b)—Biological Resources*

***b) Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?***

**LESS THAN SIGNIFICANT IMPACT.** Based on discussions provided below, the project would result in a Less Than Significant Impact on riparian habitat and sensitive natural communities identified below.

#### *Sensitive Natural Communities*

A less than significant impact to SNCs is anticipated because of the proximity of the road corridor and the forest areas along the road are already influenced by edge effects and habitat fragmentation. These forest vegetation types are typically less

than 0.5 acre in extent within the ESLs. The location at PM 19.05 would require approximately 23 live trees and seven downed trees removed from Redwood (*Sequoia sempervirens*) Forest and Woodland Alliance due to site conditions that require longer roads through the forest to access the culvert. Of the 23 trees, the largest include one Douglas-fir 30" DBH and three redwoods between 25" and 30" DBH. The affected community types are abundant in the watersheds and the region, and the area of disturbance to these communities is so small as to be inconsequential on a landscape scale.

### Riparian Habitat

Removal of riparian vegetation to create access to drainages for culvert replacement would result in the temporary loss of approximately 0.233 acre of riparian vegetation over all ESLs, including an estimated 12 riparian trees. Caltrans would implement a Revegetation Plan to help offset temporary impacts to riparian vegetation. The objective of this plan would be to restore onsite riparian habitat at a minimum ratio of 1:1, subject to final permitting requirements and coordination with resource agencies to ensure no net loss of riparian function.

Following post-construction restoration, temporary losses of riparian habitat are not likely to reduce the overall quantity or quality of rearing habitat available to juvenile coho salmon and other salmonids. Improved passage conditions and restored access to habitat following completion of the project would result in an increase in the availability of habitat to coho salmon and other salmonids. Notably, the removal of culverts and construction of a bridge at Mello Creek would result in a net gain of riparian habitat.

### Invasive Species

Invasive plant species may be introduced to new areas or spread through the work sites by the tires and tracks of construction equipment. They may also recruit naturally and robustly outcompeting native species following soil disturbance. Redtop (*Agrostis stolonifera*), silvery hairgrass (*Aira caryophyllea*), white flowered onion (*Allium triquetrum*), sweet vernal grass (*Anthoxanthum odoratum*), slim oat (*Avena barbata*), common mustard (*Brassica rapa*), bull thistle (*Cirsium vulgare*), poison hemlock (*Conium maculatum*), cape ivy (*Delairea odorata*), English ivy (*Hedera helix*), bristly ox-tongue (*Helminthotheca echioides*), jubata grass

(*Cortaderia jubata*), Scotch broom, (C*ytisus scoparius*), and French broom (*Genista monspessulana*) were observed within the project limits.

To reduce the spread of invasive species, Caltrans endeavors to eradicate newly introduced invasive species ranked as having high ecological impact by the California Invasive Plant Council (Cal-IPC). Caltrans' Standard Measures and Best Management Practices would be implemented to minimize the colonization of invasive species that could adversely impact natural communities (Section 1.8). Such measures include the inspection and cleaning of construction equipment to remove invasive species and/or pathogens during construction, seeding disturbed areas with native herbaceous species post construction, and applying weed-free mulch.

Given the above, the project is anticipated to have a "***Less Than Significant Impact***" in response to CEQA Environmental Checklist Question 2.4 b). No mitigation would be required.

### *Discussion of CEQA Environmental Checklist Question 2.4c)—Biological Resources*

> ***c) Would the project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?***

**LESS THAN SIGNIFICANT IMPACT.** The proposed project has the potential to result in permanent and temporary impacts to Waters of the U.S. and State, including jurisdictional wetlands and riparian habitat, due to replacement of culverts, bridge construction, and associated end treatments. Additional indirect temporary impacts caused by sedimentation or modification of hydrology could affect streams, wetlands, or riparian habitat. Temporary impacts may result from construction of access roads, work areas, containment systems, clear water diversions and excavation work for culvert placement. Work associated with culvert realignment, restoration of flow lines, rock slope protection and the extension of culvert systems would result in permanent impacts.

The project would result in approximately 3,803 square feet of temporary impacts and 463 square feet of permanent impacts to wetland Waters of the U.S. and State (Table 6). The project would result in approximately 600 square feet of temporary impacts and 168 square feet of permanent impacts to coastal wetlands at PM 40.71.

The project would result in approximately 275 square feet of permanent impacts and 1,488 square feet of temporary impacts to non-wetland Waters of the U.S. and State (“Other Waters”) (Table 7).

Permanent displacement of these small areas of jurisdictional waters is not anticipated to have an adverse impact on the quality or function of the adjacent riverine systems and associated habitat. It is anticipated that these temporary and permanent impacts to wetlands, other waters, and riparian habitat will be offset onsite through project improvements (e.g., upsizing, shortening, and/or daylighting culverts, replacing a culvert with a bridge) and revegetation. The project is therefore expected to have a ***"Less Than Significant Impact"*** in response to CEQA Environmental Checklist Question 2.4c. No mitigation would be required.

### *Discussion of CEQA Environmental Checklist Question 2.4d)—Biological Resources*

> ***d) Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?***

**NO IMPACT.** The proposed project would enhance terrestrial wildlife connectivity by increasing most culvert diameters and installing a bridge. Where feasible, culverts would be installed to the natural grade to allow for aquatic migration of amphibians, reptiles, semi-aquatic mammals, and fish.

To comply with Senate Bill 857, a single span bridge has been proposed at Mello Creek (PM 37.46). This bridge would allow for the rehabilitation of a priority fish passage location with current barrier issues. Fish passage improvement has also been proposed at Delilah Creek (PM 40.71), which would be realigned approximately 160 feet southeast (PM 40.68). A larger 12-foot-wide x 12-foot-high box culvert would be installed, and a naturalized streambed would be installed inside the culvert.

Given the project would have an overall long-term benefit to habitat connectivity and fish passage, Caltrans anticipates the project would have ***"No Impact"*** in response to CEQA Environmental Checklist Question 2.4 d). No mitigation would be required.

### *Discussion of CEQA Environmental Checklist Question 2.4e)—Biological Resources*

> ***e) Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?***

**NO IMPACT.** Locations within the Coastal Zone will require a Coastal Development Permit in compliance with the County's Local Coastal Program and ESHA policies. Caltrans did not find any County policies or ordinances that protect specific biological resources such as a tree ordinance. The project was found to be consistent with General Plan policies regarding biological resources. The project would have *"No Impact"* in response to CEQA Environmental Checklist Question 2.4 e). No mitigation would be required.

### *Discussion of CEQA Environmental Checklist Question 2.4f)—Biological Resources*

***f) Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?***

**NO IMPACT.** A portion of the project is located within Redwood National and State Parks (RNSP), which is a UNESCO World Heritage site. RNSP preserves the largest remaining contiguous ancient coast redwood forest in the world in its original setting as well as the important habitat and breeding grounds for shorebirds, seabirds, marine mammals, and rockfish. The ocean waters off the coast of the property are additionally designated as the Redwood National Park Area of Special Biological Significance (ASBS) (UNESCO, 2025). Caltrans has consulted with State Parks and National Parks on this project and anticipates the drainage system improvements would not impact the conservation efforts conducted by RNSP for these valued habitats. The project would therefore have **"No Impact"** in response to CEQA Environmental Checklist Question 2.4 f). No mitigation would be required.

## 2.5 Cultural Resources

| Would the project: | Significant and Unavoidable Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| **Would the project:** a) Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5? | | | | ✓ |
| **Would the project:** b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5? | | | | ✓ |
| **Would the project:** c) Disturb any human remains, including those interred outside of dedicated cemeteries? | | | | ✓ |

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project, as well as Archaeological Screening Report dated May 6, 2025 (Caltrans 2025d), Historic Property Survey Report dated April 28, 2025 (Caltrans 2025e), and consultation with the Native American Heritage Commission (NAHC) and local tribes. Potential impacts to Cultural Resources are not anticipated because no cultural materials were observed during archaeological surveys and no known cultural resources are recorded within the project area of potential effects. Caltrans has determined the project would have no potential to affect historic properties. The Historic Property Survey Report and the Archaeological Screening Report document the finding of **"No Historic Properties Affected."**

Caltrans anticipates the project would have **"No Impact"** on cultural resources. No mitigation would be required.

## 2.6 Energy

| Question | Significant and Unavoidable Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| **Would the project:** a) Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation? | | | | ✓ |
| **Would the project:** b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency? | | | | ✓ |

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project, as well as the Air Quality and Noise Analysis for the Culvert Rehabilitation & Fish Passage Project dated January 2, 2025 (Caltrans 2025b). The project would not increase capacity or provide congestion relief when compared to the no-build alternative and is therefore unlikely to increase direct energy consumption from mobile sources.

Construction would primarily consume diesel and gasoline through operation of heavy-duty construction equipment, material deliveries, and debris hauling. Energy use associated with construction is estimated to result in the total short-term consumption of 4,105 gallons from diesel-powered equipment, 3,855 gallons from gasoline-powered equipment and 1,115 kWh of electricity. This represents a small demand on local and regional fuel supplies that would be easily accommodated, and this demand would cease once construction is complete. Moreover, construction-related energy consumption would be temporary and not a permanent new source of energy demand, and demand for fuel would have no noticeable effect on peak or baseline demands for energy. Therefore, the project would not result in an inefficient, wasteful, and unnecessary consumption of energy.

The proposed project does not include maintenance activities that would result in long-term indirect energy consumption by equipment required to operate and maintain in the roadway. This project is to rehabilitate existing drainage systems to a state of good condition and to improve fish passage. As such, it is unlikely to increase indirect energy consumption though increased fuel usage.

Caltrans anticipates the project would have **"No Impact"** on energy. No mitigation would be required.

## 2.7 Geology and Soils

| Question | Significant and Unavoidable Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| **Would the project:**<br>a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:<br>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. | | | | ✓ |
| ii) Strong seismic ground shaking? | | | | ✓ |
| iii) Seismic-related ground failure, including liquefaction? | | | | ✓ |
| iv) Landslides? | | | | ✓ |
| **Would the project:**<br>b) Result in substantial soil erosion or the loss of topsoil? | | | | ✓ |
| **Would the project:**<br>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? | | | | ✓ |
| **Would the project:**<br>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? | | | | ✓ |
| **Would the project:**<br>e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal | | | | ✓ |

| Question | Significant and Unavoidable Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| systems where sewers are not available for the disposal of wastewater? | | | | |
| **Would the project:**<br>f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? | | | | ✓ |

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project, as well as the California Geological Survey (CGS) Regulatory Maps (CGS 2015a). The project area is not located in an Alquist-Priolo Fault Hazard Zone and is not mapped in a landslide zone or area subject to liquefaction. The project is therefore not anticipated to cause substantial loss, injury, or death that could result from seismic activity or ground failure.

The amount of soil to be disturbed during construction is estimated to be 5.75 acres. The majority of soil disturbance would be associated with culvert rehabilitation within previously disturbed soils in the road fill prism, as well as the construction of temporary access roads. These impacts would be temporary and would be minimized by implementation of Caltrans specifications for sediment and erosion control and site-specific BMPs identified in the Stormwater Pollution Prevention Plan (SWPPP). Standard Measures and BMPs have been incorporated into the project to prevent or minimize erosion during and after construction by protecting existing vegetation, implementing an Erosion Control Plan, and stabilizing slopes and soils in accordance with a revegetation plan (refer to AR-2, AR-5, BR-4E, GS-1, WQ-1 and WQ-2 in Section 1.8).

The project is expected to have a long-term positive impact on soil erosion. Upsizing of culverts, the installation of RSP at outlets, installation of a bridge, reducing culvert lengths, and replacing shortened culvert sections with rock-lined ditch (daylighting) would contribute to decreased water velocities, decreased scour at outlets, and a decrease in soil erosion over the long term. The project would not involve the building of structures or foundations or the disposal of wastewater.

Potential impacts to paleontological resources are not anticipated because the project work would occur predominantly within previously disturbed materials (constructed roadway), largely as fill prisms, thus reducing the likelihood of finding intact or undisturbed specimens. Given the existing footprint of the drainage facilities, unique paleontological resources or geologic features are not anticipated to be destroyed.

Caltrans anticipates the project would have **"No Impact"** on geology and soils. No mitigation would be required.

## 2.8 Greenhouse Gas Emissions

| Question | Significant and Unavoidable Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| **Would the project:** a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? | | | ✓ | |
| **Would the project:** b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases? | | | ✓ | |

### *Climate Change*

Climate change refers to long-term changes in temperature, precipitation, wind patterns, and other elements of the Earth's climate system. The Intergovernmental Panel on Climate Change, established by the United Nations and World Meteorological Organization in 1988, is devoted to greenhouse gas (GHG) emissions reduction and climate change research and policy. Climate change in the past has generally occurred gradually over millennia, or more suddenly in response to cataclysmic natural disruptions. The research of the Intergovernmental Panel on Climate Change and other scientists over recent decades, however, has unequivocally attributed an accelerated rate of climatological changes over the past 150 years to GHG emissions generated from the production and use of fossil fuels.

Human activities generate GHGs consisting primarily of carbon dioxide ($CO_2$), methane ($CH_4$), nitrous oxide ($N_2O$), tetrafluoromethane, hexafluoroethane, sulfur hexafluoride ($SF_6$), and various hydrofluorocarbons (HFCs). $CO_2$ is the most abundant GHG. While it is a naturally occurring and necessary component of Earth's atmosphere, fossil-fuel combustion is the main source of additional, human-generated CO2 that is the main driver of climate change. In the U.S. and in California, transportation is the largest source of GHG emissions, mostly $CO_2$.

The impacts of climate change are already being observed in the form of sea level rise, drought, extended and severe fire seasons, and historic flooding from changing storm patterns. The most important strategy to address climate change is to reduce GHG emissions. Additional strategies are necessary to mitigate and adapt to these impacts. In the context of climate change, "mitigation" involves actions to reduce GHG emissions to lessen adverse impacts that are likely to occur. "Adaptation" is planning for and responding to impacts to reduce vulnerability to harm, such as by adjusting transportation design standards to withstand more intense storms, heat, and higher sea levels. This analysis will include a discussion of both in the context of this transportation project.

## Regulatory Setting

This section outlines federal and state efforts to comprehensively reduce greenhouse gas emissions from transportation sources. For a full list of laws, regulations, and guidance related to climate change (GHGs and adaptation), please refer to Caltrans' Standard Environmental Reference (SER), Chapter 16, Climate Change.

### FEDERAL

To date, no nationwide numeric mobile-source GHG reduction targets have been established, nor have any regulations or legislation been enacted specifically to address climate change and GHG emissions reduction at the project level.

The National Environmental Policy Act (NEPA) (42 United States Code [USC] Part 4332) requires federal agencies to assess the environmental effects of their proposed actions prior to making a decision on the action or project. In January 2023, the White House Council on Environmental Quality (CEQ) issued updated and expanded interim National Environmental Policy Act Guidance on Consideration of

Greenhouse Gas Emissions and Climate Change (88 Fed. Reg. 1196) (CEQ NEPA GHG Guidance), in accordance with EO 14057, *Catalyzing Clean Energy Industries and Jobs Through Federal Sustainability*, 86 FR 70935 (December 13, 2021) and EO 14008, *Tackling the Climate Crisis at Home and Abroad*. The CEQ guidance does not establish numeric thresholds of significance, but emphasizes quantifying reasonably foreseeable lifetime direct and indirect emissions whenever possible. This guidance also emphasizes resilience in project-level climate change and GHG analyses.

The Federal Highway Administration (FHWA) recognizes the threats that extreme weather, sea level rise, and other changes in environmental conditions pose to valuable transportation infrastructure and those who depend on it. FHWA therefore supports a sustainability approach that assesses vulnerability to climate risks and incorporates resilience into planning, asset management, project development and design, and operations and maintenance practices (FHWA 2022). This approach encourages planning for sustainable highways by addressing climate risks while balancing environmental, economic, and social values— “the triple bottom line of sustainability” (FHWA n.d.). Program and project elements that foster sustainability and resilience also support economic vitality and global efficiency, increase safety and mobility, enhance the environment, promote energy conservation, and improve the quality of life.

Early efforts by the federal government to improve fuel economy and energy efficiency to address climate change and its associated effects include The Energy Policy and Conservation Act of 1975 (42 USC Section 6201); and Corporate Average Fuel Economy (CAFE) Standards. The U.S. Department of Transportation’s National Highway Traffic and Safety Administration (NHTSA) sets and enforces corporate average fuel economy (CAFE) standards for on-road motor vehicles sold in the United States. The U.S. Environmental Protection Agency (U.S. EPA) calculates average fuel economy levels for manufacturers, and also sets related GHG emissions standards for vehicles under the Clean Air Act (U.S. EPA 2021). Raising CAFE standards leads automakers to create a more fuel-efficient fleet, which improves our nation’s energy security, saves consumers money at the pump, and reduces GHG emissions (U.S. DOT 2014). These standards are periodically updated and published through the federal rulemaking process.

### STATE

California has been innovative and proactive in addressing GHG emissions and climate change by passing multiple Senate and Assembly bills and executive orders (EOs).

In 2005, EO S-3-05 initially set a goal to reduce California's GHG emissions to 80 percent below year 1990 levels by 2050, with interim reduction targets. Later EOs and Assembly and Senate bills refined interim targets and codified the emissions reduction goals and strategies. The California Air Resources Board (CARB) was directed to create a climate change scoping plan and implement rules to achieve "real, quantifiable, cost-effective reductions of greenhouse gases." Ongoing GHG emissions reduction was also mandated in Health and Safety Code (H&SC) Section 38551(b). In 2022, the California Climate Crisis Act was passed, establishing state policy to reduce statewide human-caused GHG emissions by 85 percent below 1990 levels, achieve net zero GHG emissions by 2045, and achieve and maintain negative emissions thereafter.

Beyond GHG reduction, the State maintains a climate adaptation strategy to address the full range of climate change stressors, and passed legislation requiring state agencies to consider protection and management of natural and working lands as an important strategy in meeting the state's GHG reduction goals.

## Affected Environment

The proposed project is in a rural area, with a primarily natural-resources-based and tourism economy centered on the Redwood National and State Parks. US 101, a designated scenic highway also known as the "Redwood Highway," is the main transportation route to and through the area for both passenger and commercial vehicles. It is also part of the Pacific Coast Bike Route (PCBR). The majority of the drainage system locations are in areas that are largely undeveloped and/or sparsely populated. The only alternate route would require a 449-mile, 8-hour detour between Klamath and Crescent City. The Del Norte Local Transportation Commission (DNLTC) guides transportation development in the project region. Neither the Del Norte County General Plan nor the North Coast Unified Air Quality Management District (NCUAQMD) have established thresholds or guidance for transportation GHG emissions (Caltrans 2023a).

### *GHG INVENTORIES*

A GHG emissions inventory estimates the amount of GHGs discharged into the atmosphere by specific sources over a period of time. Tracking annual GHG emissions allows countries, states, and smaller jurisdictions to understand how emissions are changing and what actions may be needed to attain emission reduction goals. U.S. EPA is responsible for documenting GHG emissions nationwide, and the CARB does so for the state of California, as required by H&SC Section 39607.4. Cities and other local jurisdictions may also conduct local GHG inventories to inform their GHG reduction or climate action plans.

### *NATIONAL GHG INVENTORY*

The annual GHG inventory submitted by the U.S. EPA to the United Nations provides a comprehensive accounting of all human-produced sources of GHGs in the United States. Total national GHG emissions from all sectors in 2021 were 5,586.0 million metric tons (MMT), factoring in deductions for carbon sequestration in the land sector. (Land Use, Land Use Change, and Forestry provide a carbon sink equivalent to 12% of total U.S. emissions in 2021.) While total GHG emissions in 2021 were 17% below 2005 levels, they increased by 6% over 2020 levels. Of these, 79.4% were $CO_2$, 11.5% were $CH_4$, and 6.2% were $N_2O$; the balance consisted of fluorinated gases. From 1990 to 2021, $CO_2$ emissions decreased by only 2% (U.S. EPA 2023).

The transportation sector's share of total GHG emissions increased to 28% in 2021 and remains the largest contributing sector (Figure 6). Transportation fossil fuel combustion accounted for 92% of all $CO_2$ emissions in 2021. This is an increase of 7% over 2020, largely due to the rebound in economic activity following the COVID-19 pandemic (U.S. EPA 2023).

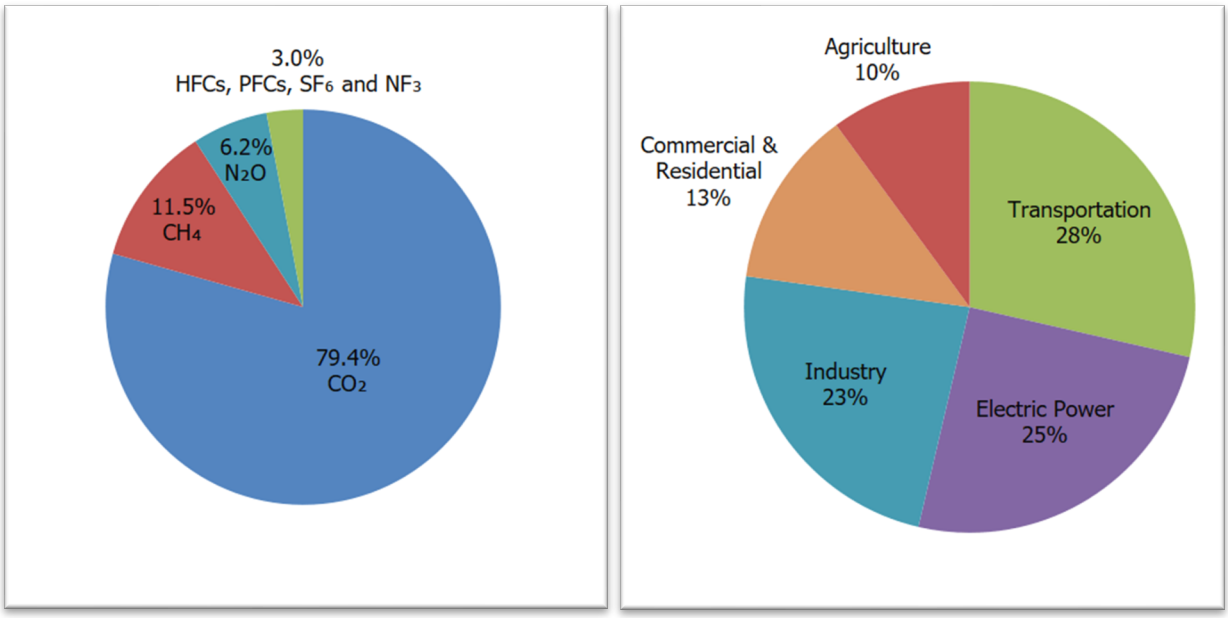



**Figure 6. U.S. 2021 Greenhouse Gas Emissions**

**(Source: U.S. EPA 2023)**

## *STATE GHG INVENTORY*

The CARB collects GHG emissions data for transportation, electricity, commercial and residential, industrial, agricultural, and waste management sectors each year. It then summarizes and highlights major annual changes and trends to demonstrate the state's progress in meeting its GHG reduction goals. Overall statewide GHG emissions declined from 2000 to 2020 despite growth in population and state economic output (Figures 7 and 8) (CARB 2022a).

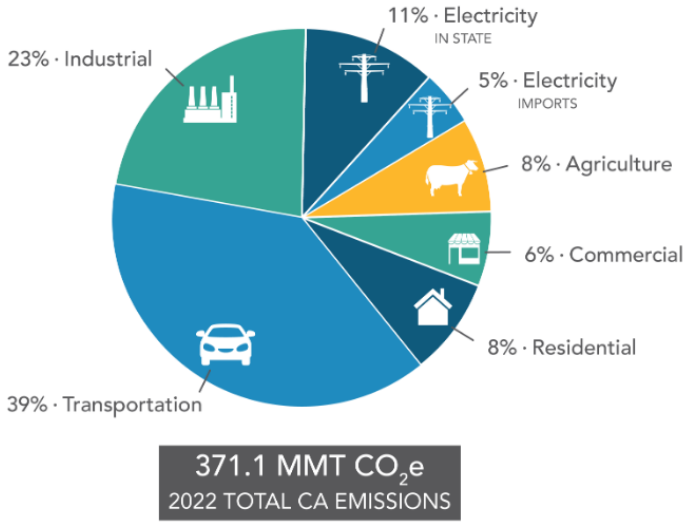



**Figure 7. California 2022 Greenhouse Gas Emissions by Economic Sector**

**(Source: CARB 2025)**

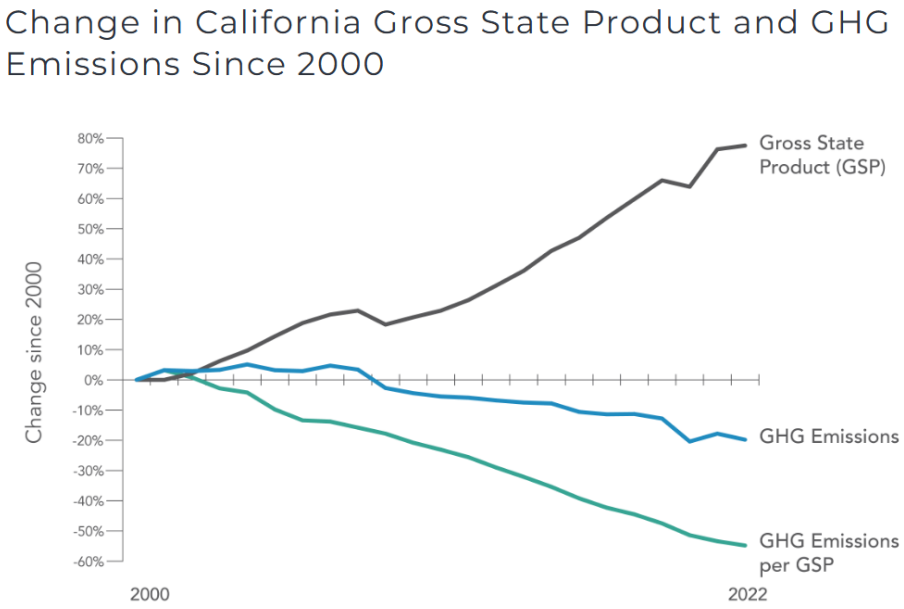



**Figure 8. Change in California Gross State Product (GSP) and GHG Emissions since 2000**

**Source: (CARB 2025)**

AB 32 required the CARB to develop a Scoping Plan that describes the approach California will take to achieve the goal of reducing GHG emissions to 1990 levels by 2020, and to update it every 5 years. The AB 32 Scoping Plan, and the subsequent updates, contain the main strategies California will use to reduce GHG emissions. The CARB adopted the first scoping plan in 2008 (CARB 2008). The second updated plan, California's 2017 Climate Change Scoping Plan, adopted on December 14, 2017, reflects the 2030 target established in EO B-30-15 and SB 32. The 2022 Scoping Plan for Achieving Carbon Neutrality, adopted September 2022, assesses progress toward the statutory 2030 reduction goal and defines a path to reduce human-caused emissions to 85 percent below 1990 levels and achieve carbon neutrality no later than 2045, in accordance with AB 1279 (CARB 2022b).

#### *REGIONAL PLANS*

As required by The Sustainable Communities and Climate Protection Act of 2008, the CARB sets regional GHG reduction targets for California's 18 Metropolitan Planning Organizations (MPOs) to achieve through planning future projects that will cumulatively achieve those goals, and reporting how they will be met in the Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). Targets are set at a percent reduction of passenger vehicle GHG emissions per person from 2005 levels.

The project area is not within the jurisdiction of an MPO and therefore not subject to CARB GHG reduction targets. Neither the County of Del Norte nor the NCUAQMD currently have climate change or GHG reduction plans. The Climate Change and Stormwater Management Plan prepared for the Del Norte Local Transportation Commission does not include GHG reduction strategies and instead focuses on adaptation strategies for sea level rise, coastal erosion, and increased intensity of precipitation events (Schaff and Wheeler 2015).

### *Project Analysis*

GHG emissions from transportation projects can be divided into those produced during operation and use of the State Highway System (SHS) (operational emissions) and those produced during construction. The primary GHGs produced by the transportation sector are $CO_2$, $CH_4$, $N_2O$, and HFCs. $CO_2$ emissions are a product of burning gasoline or diesel fuel in internal combustion engines, along with relatively small amounts of $CH_4$ and $N_2O$. A small amount of HFC emissions related

to refrigeration is also included in the transportation sector. (GHGs differ in how much heat each traps in the atmosphere, called global warming potential, or GWP. $CO_2$ is the most important GHG, so amounts of other gases are expressed relative to $CO_2$, using a metric called “carbon dioxide equivalent”, or $CO_2e$. The global warming potential of $CO_2$ is assigned a value of 1, and the GWP of other gases is assessed as multiples of $CO_2$.)

The CEQA Guidelines generally address greenhouse gas emissions as a cumulative impact due to the global nature of climate change (Public Resources Code § 21083(b)(2)). As the California Supreme Court explained, “because of the global scale of climate change, any one project's contribution is unlikely to be significant by itself.” (Cleveland National Forest Foundation v. San Diego Assn. of Governments (2017) 3 Cal.5th 497, 512.) 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. Although climate change is ultimately a cumulative impact, not every individual project that emits greenhouse gases must necessarily be found to contribute to a significant cumulative impact on the environment.

### *Operational Emissions*

### *Non-Capacity-Increasing Projects*

The purpose of this project is to rehabilitate existing drainage systems and to improve fish passage. The project is needed to repair deteriorating or failing drainage systems and to prevent erosion and potential roadway embankment failure. Additionally, conditions resulting in barriers to fish passage exist within the project limits. These barriers require remediation per Senate Bill 857 because they prevent fish from accessing habitat that is necessary for survival and spawning during various life stages. The project would not increase capacity or change travel demands or traffic patterns when compared to the no-build alternative. Since this project would not increase capacity of the roadway, an increase in operational GHG is not anticipated (Caltrans 2025b).

### *Construction Emissions*

Construction GHG emissions would result from material processing and transportation, on-site construction equipment, and traffic delays due to construction. These emissions will be produced at different levels throughout the construction phase; their frequency and occurrence can be reduced through innovations in plans and specifications and by implementing better traffic management during construction phases. While construction GHG emissions are only produced for a short time, they have long-term effects in the atmosphere, so cannot be considered "temporary" in the same way as criteria pollutants that subside after construction is completed.

Use of long-life pavement, improved Transportation Management Plans, and changes in materials can also help offset GHG emissions produced during construction by allowing longer intervals between maintenance and rehabilitation activities.

Construction is anticipated to begin in June 2028 and occur over approximately 320 working days. The proposed project would result in generation of short-term, construction-related GHG emissions. Construction GHG emissions consist of emissions produced as a result of material processing, emissions produced by onsite construction equipment, and emissions arising from traffic delays and detours due to construction. These emissions would be generated at different levels through the construction phase.

The CAL-CET2021 v1.0.2 was used to estimate average carbon dioxide ($CO_2$), methane ($CH_4$), nitrous oxide ($N_2O$), Black Carbon (BC), and hydrofluorocarbon-134a (HFC-134a) emissions from construction activities. Table 12 below summarizes estimated GHG emissions generated by on-site equipment for the project. The total $CO_2e$ produced during construction is estimated to be 81 metric tons.

**Table 12. Estimates of Total GHG Emissions During Construction**

| Construction Year | $CO_2$ | $CH_4$ | $N_2O$ | BC | HFC-134a | $CO_2e$ |
|---|---|---|---|---|---|---|
| 2028 | 51 | 0.001 | 0.002 | 0.002 | 0.001 | 50 |
| 2029 | 32 | 0.001 | 0.001 | 0.001 | 0.001 | 31 |
| Total | 83 | 0.002 | 0.003 | 0.004 | 0.002 | 81 |

* A quantity of GHG is expressed as carbon dioxide equivalent ($CO_2e$) that can be estimated by the sum after multiplying each amount of $CO_2$, $CH_4$, $N_2O$, and HFCs by its global warming potential (GWP). Each GWP of $CO_2$, $CH_4$, $N_2O$, and HFCs is 1, 25, 298, and 14,800, respectively.

All construction contracts include Caltrans Standard Specifications related to air quality. Sections 7-1.02A and 7-1.02C, Emissions Reduction, require contractors to comply with all laws applicable to the project and to certify they are aware of and will comply with all CARB emission reduction regulations. Section 14-9.02, Air Pollution Control, requires contractors to comply with all air pollution control rules, regulations, ordinances, and statutes. Certain common regulations, such as equipment idling restrictions, that reduce construction vehicle emissions also help reduce GHG emissions.

### *CEQA Conclusion*

While the proposed project will result in GHG emissions during construction, it is anticipated the project would not result in any increase in operational GHG emissions. The proposed project does not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases. With implementation of construction GHG-reduction measures, the project is anticipated to have a ***"Less than Significant Impact"*** on greenhouse gas emissions. No mitigation would be required.

Caltrans is firmly committed to implementing measures to help reduce GHG emissions. These measures are outlined in the following section.

## Greenhouse Gas Reduction Strategies

### STATEWIDE EFFORTS

In response to Assembly Bill 32, the Global Warming Solutions Act, California is implementing measures to achieve emission reductions of GHGs that cause climate change. Climate change programs in California are effectively reducing GHG emissions from all sectors of the economy. These programs include regulations, market programs, and incentives that will transform transportation, industry, fuels, and other sectors to take California into a sustainable, cleaner, low-carbon future, while maintaining a robust economy (CARB 2022b).

Major sectors of the California economy, including transportation, will need to reduce emissions to meet 2030 and 2050 GHG emissions targets. The Governor's Office of Planning and Research (OPR) identified five sustainability pillars in a 2015 report:

- Increasing the share of renewable energy in the State's energy mix to at least 50 percent by 2030
- Reducing petroleum use by up to 50 percent by 2030
- Increasing the energy efficiency of existing buildings by 50 percent by 2030
- Reducing emissions of short-lived climate pollutants; and
- Stewarding natural resources, including forests, working lands, and wetlands, to ensure that they store carbon, are resilient, and enhance other environmental benefits (California Governor's OPR 2015).

The transportation sector is integral to the people and economy of California. To achieve GHG emission reduction goals, it is vital that the state build on past successes in reducing criteria and toxic air pollutants from transportation and goods movement. GHG emission reductions will come from cleaner vehicle technologies, lower-carbon fuels, and reduction of vehicle miles traveled (VMT). Reducing today's petroleum use in cars and trucks is a key state goal for reducing greenhouse gas emissions by 2030 (California Environmental Protection Agency 2015).

In addition, SB 1386 (Wolk 2016) established as state policy the protection and management of natural and working lands and requires state agencies to consider that policy in their own decision making. Trees and vegetation on forests, rangelands, farms, and wetlands remove carbon dioxide from the atmosphere

through biological processes and sequester the carbon in above- and below-ground matter.

Subsequently, Governor Gavin Newsom issued Executive Order N-82-20 to combat the crises in climate change and biodiversity. It instructs state agencies to use existing authorities and resources to identify and implement near- and long-term actions to accelerate natural removal of carbon and build climate resilience in our forests, wetlands, urban greenspaces, agricultural soils, and land conservation activities in ways that serve all communities and in particular low-income, disadvantaged, and vulnerable communities. To support this order, the California Natural Resources Agency released *Natural and Working Lands Climate Smart Strategy* (California Natural Resources Agency 2022).

### *CALTRANS ACTIVITIES*

Caltrans continues to be involved on the Governor's Climate Action Team as the CARB works to implement EOs S-3-05 and S-01-07 and help achieve the targets set forth in AB 32. EO B-30-15, issued in April 2015, and SB 32 in 2016 set an interim target to cut GHG emissions to 40% below 1990 levels by 2030. The following major initiatives are underway at Caltrans to help meet these targets.

#### *Climate Action Plan For Transportation Infrastructure*

The *California Action Plan for Transportation Infrastructure* (CAPTI) builds on executive orders signed by Governor Newsom in 2019 and 2020 targeted at reducing GHG emissions in transportation, which account for more than 40% of all polluting emissions, to reach the state's climate goals. Under CAPTI, where feasible and within existing funding program structures, the state will invest discretionary transportation funds in sustainable infrastructure projects that align with its climate and health goals (California State Transportation Agency 2021).

#### *California Transportation Plan*

The *California Transportation Plan* (CTP) is a statewide, long-range transportation plan to meet our future mobility needs and reduce GHG emissions. It serves as an umbrella document for all the other statewide transportation planning documents. The CTP 2050 presents a vision of a safe, resilient, and universally accessible transportation system that supports vibrant communities, advances racial and economic justice, and improves public and environmental health. The plan's climate

goal is to achieve statewide GHG emissions reduction targets and increase resilience to climate change. It demonstrates how GHG emissions from the transportation sector can be reduced through advancements in clean fuel technologies; continued shifts toward active travel, transit, and shared mobility; more efficient land use and development practices; and continued shifts to telework (Caltrans 2021).

### *Caltrans Strategic Plan*

The *Caltrans 2024-2028 Strategic Plan* includes the goal of climate action. Climate action strategies include developing and implementing a Caltrans Climate Action Plan; a robust program of climate action education, training, and outreach; partnership and collaboration; a VMT monitoring and reduction program; and engaging with communities in developing and implementing Caltrans climate action activities (Caltrans 2024e).

### *Caltrans Policy Directives And Other Initiates*

Caltrans Director's Policy 30 (DP-30) Climate Change (June 22, 2012) established a policy to ensure coordinated efforts to incorporate climate change into Caltrans decisions and activities. Other Director's policies promote energy efficiency, conservation, and climate change, and commit Caltrans to sustainability practices in all planning, maintenance, and operations. *Caltrans Greenhouse Gas Emissions and Mitigation Report* (Caltrans 2020) provides a comprehensive overview of Caltrans' emissions and current Caltrans procedures and activities that track and reduce GHG emissions. It identifies additional opportunities for further reducing GHG emissions from Department-controlled emission sources, in support of Caltrans and State goals.

### *Project-Level Greenhouse Gas Reduction Strategies*

The following measures will also be implemented to reduce greenhouse gas emissions and potential climate change impacts from the project.

- All areas temporarily disturbed during construction would be revegetated with appropriate native species. Landscaping reduces surface warming and, through photosynthesis, decreases $CO_2$. This replanting would help offset any potential $CO_2$ emissions increase.

- Pedestrian and bicycle access would be maintained on US 101 during project activities.
- Where feasible, the removal of established trees and vegetation would be minimized. Environmentally sensitive areas would have Temporary High Visibility Fencing (THVF) installed before start of construction to demarcate areas where vegetation would be preserved and root systems of trees protected.
- Temporary access roads, construction easements, and staging areas that were previously vegetated would be restored to a natural contour and revegetated with regionally-appropriate native vegetation.
- A Revegetation Plan would be prepared which would include a plant palette, establishment period, watering regimen, monitoring requirements, and pest control measures. The Revegetation Plan would also address measures for wetland and riparian areas temporarily impacted by the project.

In addition to the above-listed standard measures, the project would implement the following:

- Use accelerated bridge construction (ABC) methods. Some of the Mello Creek bridge components will be pre-cast, reducing the number of working days with a goal to complete the bridge within one construction season.
- Earthwork Balance: Reduce the need for transport of earthen materials by balancing cut and fill quantities where feasible. With the exception of the bridge location and three large box culverts that will require the disposal of material off-site, cut/fill is expected to balance fairly well at the other locations.

## *Adaptation Strategies*

Reducing GHG emissions is only one part of an approach to addressing climate change. Caltrans must 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, variability in storm surges and their intensity, and in the frequency and intensity of wildfires. Flooding and erosion can damage or wash out roads; longer periods of intense heat can buckle pavement and railroad tracks; storm surges, combined with a rising sea level, can inundate highways. Wildfire can

directly burn facilities and indirectly cause damage when rain falls on denuded slopes that landslide after a fire. Effects will vary by location and may, in the most extreme cases, require a facility be relocated or redesigned. Furthermore, the combined effects of transportation projects and climate stressors can exacerbate the impacts of both on vulnerable communities in a project area. Accordingly, Caltrans must consider these types of climate stressors in how highways are planned, designed, built, operated, and maintained.

### *FEDERAL EFFORTS*

Under NEPA Assignment, Caltrans is obligated to comply with all applicable federal environmental laws and FHWA NEPA regulations, policies, and guidance. Caltrans practices generally align with the *2023 CEQ Interim Guidance on Consideration of Greenhouse Gas Emissions and Climate Change*, which offers recommendations for additional ways of evaluating project effects related to GHG emissions and climate change. These recommendations are not regulatory requirements.

The *Fifth National Climate Assessment*, published in 2023, presents the most recent science and "analyzes the effects of global change on the natural environment, agriculture, energy production and use, land and water resources, transportation, human health and welfare, human social systems, and biological diversity; [It] analyzes current trends in global change, both human-induced and natural, and projects major trends for the subsequent 25 to 100 years … to support informed decision-making across the United States." Building on previous assessments, it continues to advance "an inclusive, diverse, and sustained process for assessing and communicating scientific knowledge on the impacts, risks, and vulnerabilities associated with a changing global climate" (U.S. Global Change Research Program 2023).

The U.S. Department of Transportation (USDOT) recognizes the transportation sector's major contribution of GHGs that cause climate change and has made climate action one of Caltrans' top priorities (USDOT 2023). FHWA's policy is to strive to identify the risks of climate change and extreme weather events to current and planned transportation systems. FHWA has developed guidance and tools for transportation planning that fosters resilience to climate effects and sustainability at the federal, state, and local levels (FHWA 2022).

The National Oceanic and Atmospheric Administration (NOAA) provides sea level rise projections for all U.S. coastal waters to help communities and decision makers assess their risk from sea level rise. Updated projections through 2150 were released in 2022 in a report and online tool (NOAA 2025).

### *STATE EFFORTS*

Climate change adaptation for transportation infrastructure involves long-term planning and risk management to address vulnerabilities in the transportation system. A number of state policies and tools have been developed to guide adaptation efforts.

*California's Fourth Climate Change Assessment* (Fourth Assessment–2018) provides information to help decision makers across sectors and at state, regional, and local levels protect and build the resilience of the state's people, infrastructure, natural systems, working lands, and waters. The Fourth Assessment reported that if no measures are taken to reduce GHG emissions by 2021 or sooner, the state is projected to experience an up to 8.8 degrees Fahrenheit increase in average annual maximum daily temperatures; a two-thirds decline in water supply from snowpack resulting in water shortages; a 77% increase in average area burned by wildfire; and large-scale erosion of up to 67% of Southern California beaches due to sea level rise. These effects will have profound impacts on infrastructure, agriculture, energy demand, natural systems, communities, and public health (State of California 2018).

Sea level rise is a particular concern for transportation infrastructure in the Coastal Zone. Major urban airports will be at risk of flooding from sea level rise combined with storm surge as early as 2040; San Francisco airport is already at risk. Miles of coastal highways vulnerable to flooding in a 100-year storm event will triple to 370 by 2100, and 3,750 miles will be exposed to temporary flooding. The Fourth Assessment's findings highlight the need for proactive action to address these current and future impacts of climate change.

To help actors throughout the state address the findings of California's Fourth Climate Change Assessment, AB 2800's multidisciplinary Climate-Safe Infrastructure Working Group published *Paying it Forward: The Path Toward Climate-Safe Infrastructure in California*. This report provides guidance on assessing risk in the face of inherent uncertainties still posed by the best available climate change science. It also examines how state agencies can use infrastructure

planning, design, and implementation processes to respond to the observed and anticipated climate change impacts (Climate-Safe Infrastructure Working Group 2018).

EO S-13-08, issued in 2008, directed state agencies to consider sea level rise scenarios for 2050 and 2100 during planning to assess project vulnerabilities, reduce risks, and increase resilience to sea level rise. It gave rise to the *2009 California Climate Adaptation Strategy*, the Safeguarding California Plan, and a series of technical reports on statewide sea level rise projections and risks, including the *State of California Sea-Level Rise Guidance Update* in 2018. The reports addressed the full range of climate change impacts and recommended adaptation strategies. The current *California Climate Adaptation Strategy* incorporates key elements of the latest sector-specific plans such as the *Natural and Working Lands Climate Smart Strategy*, *Wildfire and Forest Resilience Action Plan*, *Water Resilience Portfolio*, and the *CAPTI* (described above). Priorities in the *2023 California Climate Adaptation Strategy* include acting in partnership with California Native American tribes, strengthening protections for climate-vulnerable communities that lack capacity and resources, implementing nature-based climate solutions, using best available climate science, and partnering and collaboration to best leverage resources (California Natural Resources Agency 2023).

EO B-30-15 recognizes that effects of climate change threaten California's infrastructure and requires state agencies to factor climate change into all planning and investment decisions. Under this EO, the Office of Planning and Research published *Planning and Investing for a Resilient California: A Guidebook for State Agencies*, to encourage a uniform and systematic approach to building resilience.

SB 1 Coastal Resources: Sea Level Rise (Atkins 2021) established statewide goals to "anticipate, assess, plan for, and, to the extent feasible, avoid, minimize, and mitigate the adverse environmental and economic effects of sea level rise within the Coastal Zone." As the legislation directed, the Ocean Protection Council collaborated with 17 state planning and coastal management agencies to develop the *State Agency Sea-Level Rise Action Plan for California* in February 2022. This plan promotes coordinated actions by state agencies to enhance California's resilience to the impacts of sea level rise (California Ocean Protection Council 2022).

## CALTRANS ADAPTATION EFFORTS

### Caltrans Vulnerability Assessments

Caltrans completed climate change vulnerability assessments to identify segments of the State Highway System vulnerable to climate change effects of precipitation, temperature, wildfire, storm surge, and sea level rise.

The climate change data in the assessments were developed in coordination with climate change scientists and experts at federal, state, and regional organizations at the forefront of climate science. The findings of the vulnerability assessments guide analysis of at-risk assets and development of Adaptation Priority Reports as a method to make capital programming decisions to address identified risks.

### Caltrans Sustainability Programs

The Director's Office of Equity, Sustainability and Tribal Affairs supports implementation of sustainable practices at Caltrans. The *Sustainability Roadmap* is a periodic progress report and plan for meeting the Governor's sustainability goals related to EOs B-16-12, B-18-12, and B-30-15. The Roadmap includes designing new buildings for climate change resilience and zero-net energy, and replacing fleet vehicles with zero-emission vehicles (Caltrans 2023b).

## PROJECT ADAPTATION EFFORTS

### Sea Level Rise

A Sea-Level Rise analysis is required for projects in the Coastal Zone that require approval of a Coastal Development Permit or amendment. This project would require such clearance under the California Coastal Act.

The project is situated on US 101 from PMs 0.0 to 46.5 in Del Norte County. US 101 runs adjacent to the coastline along several stretches of the project limits. Drainage systems at PMs 11.31, 11.72, 11.92, 12.12, 13.36, 13.83, 14.04A, 14.04B, 14.08, 22.36, 37.46 (Mello Creek), 40.71, and 41.96 (Delilah Creek) are located within the Coastal Zone.

Table 12 below provides sea level rise scenarios for Crescent City, the nearest location within the project limits that has sea level rise projections (Ocean Protection Council 2024). The project's design life is 50 years. Fifty years following

construction, the highest sea level rise projection is 3.9 feet. The NOAA Sea-Level Rise viewer indicates that the project locations would not be inundated if sea level rose by as much as 6 feet (NOAA, 2025).

**Table 12. Sea Level Rise Scenarios for Crescent City (in feet)**

| Year | Intermediate Low | Intermediate | Intermediate High | High |
|---|---|---|---|---|
| 2030 | 0.3 | 0.3 | 0.4 | 0.4 |
| 2040 | 0.4 | 0.5 | 0.6 | 0.7 |
| 2050 | 0.6 | 0.7 | 0.9 | 1.2 |
| 2060 | 0.7 | 1.0 | 1.4 | 1.9 |
| 2070 | 0.9 | 1.3 | 2.1 | 2.8 |
| **2080** | **1.0** | **1.7** | **2.9** | **3.9** |
| 2090 | 1.2 | 2.3 | 3.7 | 5.2 |
| 2100 | 1.4 | 2.9 | 4.6 | 6.4 |
| 2110 | 1.6 | 3.6 | 5.5 | 7.7 |
| 2120 | 1.8 | 4.2 | 6.2 | 8.8 |
| 2130 | 1.9 | 4.7 | 6.8 | 9.7 |
| 2140 | 2.1 | 5.2 | 7.3 | 10.6 |
| 2150 | 2.3 | 5.7 | 7.9 | 11.5 |

Source: State of California Sea Level Rise Guidance 2024 Science & Policy Update produced by the Ocean Protection Council 2024.

The proposed project would rehabilitate existing deteriorated culverts with larger diameter culverts where needed, box culverts, and a bridge. Increasing the diameter of culverts is anticipated to reduce the occurrence of flooding upstream of culverts and decrease water velocities at the outlet of culverts. This would decrease erosion of the bed, bank and channel both upstream and downstream of the culverts.

### *Precipitation and Flooding*

The 100-year flood event is commonly used in the sizing and design of culverts and drainage systems. In most cases, it is assumed that the 100-year flood is caused by a 100-year precipitation event. In 2019, The Caltrans Climate Change Vulnerability Assessment for District 1 (Caltrans 2019) mapped potential changes in the 100-year precipitation event throughout the district. The projections are based on the

Representative Concentration Pathways (RCP) 8.5 scenario (likely, or 66% probability). In the RCP 8.5 scenario, the 100-year storm depth in the project area is projected to increase 5.0 - 9.9% in 2055 with no additional increase 30 years later in 2085 (Caltrans 2019). Although runoff and streamflow are proportional to precipitation, a given frequency precipitation event does not always produce the same frequency streamflow (flood) event. Regardless, without extensive data on each watershed, the precipitation frequency is a good proxy for streamflow for a given drainage. A Floodplain Evaluation Report Summary was prepared for the project (Caltrans 2024c).

A few culverts drain areas to the Klamath River lowlands; a few are located upstream, at and north of Lagoon Pond at the south end of False Klamath Cove; a number of culverts are within the coast range through Del Norte Coast Redwoods State Park; and there is a culvert on each side of the town of Smith River. The drainages vary from low gradient, slow moving streams, to steep flashy watersheds with smaller channels. The uplands of the drainages are almost exclusively forested, steep sloping hillsides. Although there are a handful of locations with little relief and backwatered outlets, there appears to be sufficient area for water to spread out on either side of the roadway as to limit the impact of the flooding and backwater.

The proposed culvert work is completely within Zone A (Special Flood Hazard Area) at PMs 8.98, 9.12 and 9.53. Culvert work at PMs 11.31, 11.72, and 11.92 are within Flood Zone D (Area of Undetermined Flood Hazard). Culvert work at PMs 13.36, 13.83, 14.04, 14.08, 19.05, 19.11, and 22.36 are within Flood Zone D but situated higher up on the slope and almost certainly out of a flood inundation zone. Culvert work at PM 12.12 is within Coastal Zone VE (Special Flood Hazard Area with [known] Base Flood Elevation or Depth, EL 40 feet).

Although the culvert locations mentioned above are within designated flood zones, the proposed work would not create new impacts to the floodplain or longitudinally encroach upon the base floodplain. Any encroachment of the drainage systems into the base floodplain are improvements of existing facilities at discrete locations with negligible impacts. The drainage work would reduce flooding and erosion potential in these particular drainage and tributary systems.

It is anticipated that culverts at 15 of the 20 drainage systems would be replaced with larger diameter culverts or a bridge or be daylighted. Because the lifespan of culverts can be 50 years or more, this process of upsizing culverts would help

prepare the roadway for increased flows that may occur due to future precipitation increases, while also decreasing water velocities at culvert outlets, which could decrease downstream erosion. The project is also proposing RSP at approximately half of the locations to reduce erosion during extreme flows. Project work would also stabilize slopes to lower the chances of landslide on slopes at risk of more frequent or intense wildfire and precipitation. The purpose of this project is to improve drainage systems to reduce risk of localized flooding. Accordingly, the project would be resilient to future increases in precipitation and flooding.

### *Wildfire*

Wildfires can strip the land of soil-stabilizing land cover, reducing the capacity of soils to absorb rainfall and leading to mudslides and potential damage to the highway. US 101 through most of the project limits is exposed to landslides and flooding due indirectly to wildfire. The project site is located within both a Local Responsibility Area (LRA) and a State Responsibility Area (SRA) (Figure 9). The project is located primarily within the *Moderate* Fire Hazard Severity Zone (FHSZ), with the drainage system at Post Mile 39.01/39.02 near Smith River in a *High* FHSZ (California Department of Forestry and Fire Protection [CAL FIRE] 2024).

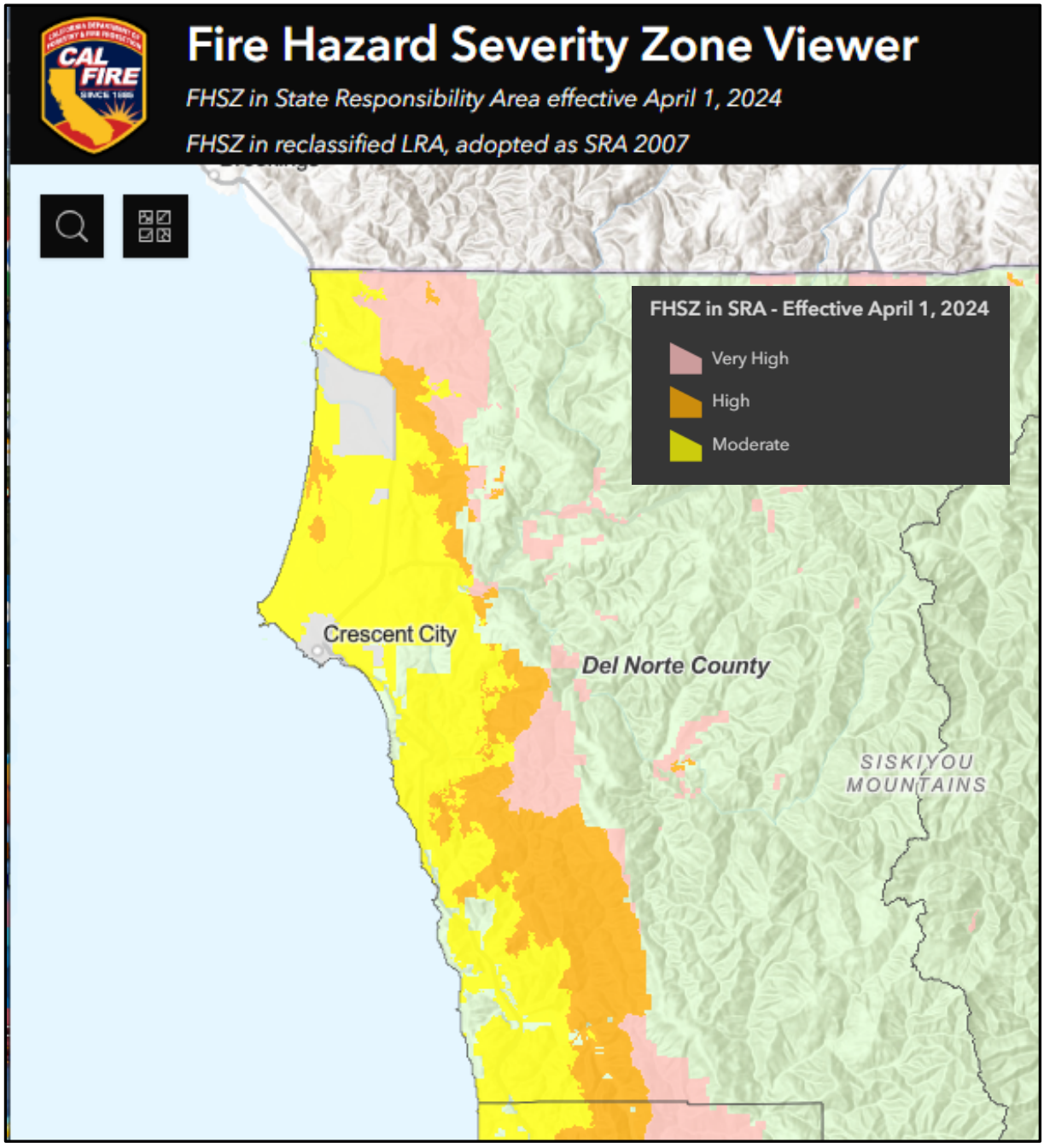



**Figure 9. Fire Hazard Severity Zones in the Project Area**

The *2019 Caltrans Climate Change Vulnerability Assessment for District 1* identifies US 101 within the project site as having below moderate to moderate level of concern for wildfire exposure in 2025. By 2085 the project area is projected to be in areas with a medium to high level of concern for wildfire exposure, with areas of high level of concern expanding northward by 2085 (Caltrans 2019). Projections are based on the Representative Concentration Pathways (RCP) 8.5 Emissions Scenario (Caltrans 2019). While average temperatures on the coast are currently relatively mild, changes in precipitation due to climate change are projected to result in more frequent drought periods and storm events, producing heavier rainfall and leading to an increase in fuels in already fire prone locations. Replacing culverts that have exceeded their design life and armoring exposed soils at culvert outlets with RSP is expected to reduce the risk of slope instability if a wildfire were to leave areas with steep slopes exposed. It is a policy of District 1 to avoid exposing plastic pipe to fire hazard, therefore replacement culverts would be made of corrugated steel pipe or reinforced concrete.

### *Temperature*

Temperature affects choice of pavement materials and pavement condition, which could require more frequent maintenance. While the District 1 Climate Change Vulnerability Assessment indicates substantial maximum temperature changes are expected over the project design life (8.0 - 9.9°F by 2085), no adaptive changes in pavement design or maintenance practices are needed due to current pavement binder specifications being within the appropriate range (Caltrans 2019).

## 2.9 Hazards and Hazardous Materials

| Question | Significant and Unavoidable Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| **Would the project:** a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? | | | ✓ | |
| **Would the project:** 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? | | | | ✓ |
| **Would the project:** c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? | | | | ✓ |
| **Would the project:** 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? | | | | ✓ |
| **Would the project:** e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area? | | | | ✓ |

| Question | Significant and Unavoidable Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| **Would the project:** f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? | | | | ✓ |
| **Would the project:** g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires? | | | | ✓ |

### *Regulatory Setting*

Hazardous materials, including hazardous substances and wastes, are regulated by many state and federal laws. Statutes govern the generation, treatment, storage, and disposal of hazardous materials, substances, and waste, and also the investigation and mitigation of waste releases, air and water quality, human health, and land use.

The primary laws governing hazardous materials, waste and substances include:

- California Health and Safety Code–Chapter 6.5
- Porter-Cologne Water Quality Control Act–§ 13000 et seq.
- CFR Title 22 Division 4.5 Environmental Health Standards for the Management of Hazardous Waste, Title 23 Waters, and Title 27 Environmental Protection

Worker and public health and safety are key issues when addressing hazardous materials that may affect human health and the environment. Proper management and disposal of hazardous material is vital if it is found, disturbed, or generated during project construction.

### *Affected Environment*

The project is located on US 101 in Del Norte County, a rural two-lane highway containing pavement delineation (traffic striping) and wood guardrail along some stretches. Aerially Deposited Lead (ADL) is commonly found in soils adjacent to

roadways that were heavily trafficked when leaded gasoline was in use. The location of the project on US 101 would be within areas potentially containing ADL. The project area is comprised of mostly undeveloped resource lands, State and National Parks, coastal mountains, ocean beaches, rivers, ponds, marshes, and farmland. Development of all kinds is sparse in the region.

***Environmental Consequences***

At all but the trenchless locations, pavement and the attached pavement delineation would be cut and removed. At some locations guardrail with treated wood posts would be removed and new guardrail installed. During culvert replacement and bridge construction, soils would be excavated and either used on-site or transported to a disposal facility.

A Preliminary Site Investigation (PSI) was conducted to evaluate potential ADL within the project limits (Geocon 2024). The investigation evaluated the unpaved shoulders and near-surface soils within the project area. To evaluate the site for hazardous concentrations of lead, soil was excavated from 0- to 2-feet depths along the shoulders of US 101 and analyzed for lead concentrations. The PSI found that:

- Soils excavated from the northbound shoulders at a depth of two feet and shallower would not be classified as California-hazardous soil based on lead content and would qualify as non-regulated material for unrestricted use. These soils are considered to be "clean soil" according to an agreement between Caltrans and the Department of Toxic Substances Control (DTSC Agreement).
- In the southbound shoulders, soils excavated from the top 1 to 2 feet would be classified as California-hazardous soil based on lead content. These soils are considered to be "ADL-contaminated soil." Soil excavated from the top 1 to 2 feet can be reused within Caltrans right of way if placed at least 5 feet above maximum historical water table elevation to avoid contact with groundwater, covered with pavement to protect from erosion, avoid contact with surface water (such as streams and rivers), and in compliance with the DTSC Agreement. If soil excavated from the top 1 to 2 feet would not be reused, then the excavated soil would be managed and disposed of as a California hazardous waste at a Class I disposal facility.

- In the southbound shoulders, soil excavated from the surface to a depth of 0.5 feet in the southbound shoulders would not be classified as California-hazardous soil based on lead content and would qualify as non-regulated material for unrestricted use ("clean soil").
- Soil combined from both the northbound and southbound shoulders from 0 to 2 feet deep would not be classified as California-hazardous based on lead content and would qualify as non-regulated material for unrestricted use ("clean soil").

### *Avoidance, Minimization and Mitigation Measures*

Caltrans standard measures to ensure the proper handling, stockpiling, and disposal of soils containing ADL are discussed in Section 1.8. Therefore, project-specific avoidance and minimization measures are not being proposed for hazards and hazardous materials.

Based on the determinations made in the CEQA Environmental Checklist, no mitigation measures are proposed.

### *Discussion of CEQA Environmental Checklist Question 2.9—Hazards and Hazardous Materials*

***a) Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?***

**Less Than Significant Impact.** If excavated soils are found to contain hazardous concentrations of lead, actions involved with the handling and disposal of the soil would have to comply with requirements in the DTSC Agreement to protect environmental resources, including ground water and surface waters. Caltrans Standard Measures and Best Management Practices (BMPs) (Section 1.8) and specifications would provide additional protections. For these reasons, the project is anticipated to have a less than significant impact on the public and environment due to the routine handling and disposal of hazardous materials.

***b) Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?***

**No Impact.** Given the project scope and the incorporation of Caltrans specifications and Standard Measures and Best Management Practices (BMPs) described above, the project is not anticipated to create a significant hazard due to the release of hazardous materials.

***c) Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?***

**No Impact.** The project would not handle acutely hazardous materials or emit hazardous emissions within a quarter mile of a school.

***d) Would the project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?***

**No Impact.** The project is not on a list of hazardous sites compiled pursuant to Government Code Section 65962.5 (Cortese List).

***e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?***

**No Impact.** Proposed project locations are not within an airport land use plan. The Del Norte County Regional Airport is over 6 miles from the nearest culvert replacement location. The culvert replacement and fish passage project could therefore not result in excessive noise or a safety hazard to people in an airport zone.

***f) Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?***

**No Impact.** During construction, emergency vehicles would be accommodated through any temporary lane closures. If a wildland fire affected the area, work would stop, and evacuation routes would be accessible. The built project would extend the life of the roadway, which would benefit emergency evacuation in the long term.

***g) Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?***

**No Impact.** Construction activities involved in the culvert replacement and fish passage project are not expected to increase the risk of wildland fires. The built project would reduce the potential for lane and road closures associated with the failing culverts and improve the highway's resiliency to wildfire in the long term.

## 2.10 Hydrology and Water Quality

| Question | Significant and Unavoidable Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| **Would the project:**<br>a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality? | | | ✓ | |
| **Would the project:**<br>b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin? | | | | ✓ |
| **Would the project:**<br>c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:<br>(i) result in substantial erosion or siltation on- or off-site; | | | | ✓ |
| (ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite; | | | | ✓ |
| (iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or | | | | ✓ |
| (iv) impede or redirect flood flows? | | | | ✓ |

| Question | Significant and Unavoidable Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| **Would the project:** d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation? | | | ✓ | |
| **Would the project:** e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan? | | | | ✓ |

Sources relied on for the preparation of this section include the *Water Quality Assessment Report* dated January 13, 2025 (Caltrans 2025f), *0-Phase Hydraulic Recommendations* dated September 17, 2024 (Caltrans 2024b), *Floodplain Evaluation Report Summary* dated September 11, 2024 (Caltrans 2024c), and *BMP Feasibility Evaluation for ASBS Statewide ASBS 8 Redwood National Park*, Site ID 1-322 CTSW-TM-23-428.11.3 dated October 2023 (Caltrans 2023c).

### *Regulatory Setting*

The proposed project is subject to policies and regulations that are currently in place to protect surface water quality. These stormwater and non-stormwater discharge requirements necessitate Caltrans to implement operational controls for proper runoff management and adequate water quality treatment. The project is required to comply with the following federal and state water quality regulations and permits:

- Federal Clean Water Act (CWA) - 33 USC 1344
- Porter-Cologne Water Quality Control Act - Section 13000 et seq.
- California Fish and Game Code (CFGC) - Sections 1600–1607
- Water Quality Control Plan for the North Coast Region (Basin Plan) (North Coast Regional Water Quality Control Board)
- Water Quality Control Plan, Ocean Waters of California (Ocean Plan) [State Water Resources Control Board (SWRCB)]

- Caltrans Statewide NPDES Storm Water Permit (Caltrans NPDES Permit) Order 2022-0033-DWQ (SWRCB)
- General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities [Construction General Permit (CGP)] Order 2022-0057-DWQ (SWRCB)
- Municipal Separate Storm Sewer System (MS4) permit (Order 2022-0033-DWQ, NPDES No. CAS000003) (SWRCB)

The U.S. EPA enforces regulations that require the establishment of Total Maximum Daily Loads (TMDLs) for CWA Section 303(d) waterbodies to attain and maintain water quality standards. The overall goal of establishing a TMDL is to ensure that all "beneficial uses" are protected and water quality objectives are met. Water quality objectives and beneficial uses are identified for all water bodies in the Basin Plan.

### *Affected Environment*

The project area spans three watersheds: the Klamath River, Smith River, and Winchuck River. Several culverts drain areas to the Klamath River lowlands; some are located upstream, at and north of Lagoon Pond at the south end of False Klamath Cove; a number of culverts are within the coast range through Del Norte Coast Redwoods State Park; and there is a culvert on each side of the town of Smith River. The drainages vary from low gradient, slow moving streams, to steep, flashy watersheds with smaller channels. The uplands of the drainages are almost exclusively forested, steep sloping hillsides. Most watershed areas are below 500 feet in elevation, with a few watersheds above 800 feet (PMs 10.80, 13.83, 22.35), and two above 1,000 feet (PMs 19.05 and 19.11). Although there are a handful of locations with little relief and backwatered outlets, there appears to be sufficient area for water to spread out on either side of the roadway as to limit the impact of the flooding and backwater.

Watersheds are dominated by soils in the Hydrologic Group C, characterized by moderately high runoff potential when thoroughly wet and 20-40% clay and less than 50% sand. The lowlands near Lagoon Pond are Group B/D due to a shallow water table that limits infiltration. Soil runoff classification is characterized as medium to high.

The Klamath River is listed on the Clean Water Act Section 303(d) list as impaired for aluminum, organic enrichment/low dissolved oxygen, nutrients, sediment, and

temperature. The USEPA has approved the Klamath River TMDLs for Temperature, Dissolved Oxygen, and Nutrients. These impairments have contributed to adverse impacts to the Klamath River, including declining anadromous salmonid populations.

The culvert located at PM 12.12 is within an Area of Special Biological Significance (ASBS), a designation given to coastal areas in California that are protected by the state to preserve their unique marine life and water quality. The outlet at PM 12.12 discharges to Wilson Creek Beach. This location is within ASBS 8 Redwood National Park, which covers 1.6 miles of coastline and has 7 monitored outfalls.

Hydrologic information associated with each drainage system location is provided in Table 15.

**Table 13. Project Area Hydrologic Information**

| Post Mile Limits | Culvert Location | Hydrologic Unit | Hydrologic Area | Hydrologic Sub-Area | Impairment Status[2] | Beneficial Uses[3] |
|---|---|---|---|---|---|---|
| 0–12.0 | 8.98<br>9.12<br>9.53<br>10.8<br>11.31<br>11.72<br>11.92 | Klamath River | Lower Klamath River | Klamath Glen (105.11) | 303(d): aluminum, sedimentation/ siltation<br>TMDL: nutrients, organic enrichment/low dissolved oxygen, water temperature | AGR, AQUA, COLD, COMM, EST, FRSH, GWR, IND, MIGR, MUN, NAV, PROC, RARE, REC1, REC2, SPWN, WARM, WILD |
| 12.0–18.4 | 12.12<br>13.36<br>13.83<br>14.04A<br>14.04B<br>14.08 | Smith River | Wilson Creek | Undefined (103.50) | None | ALL |
| 18.4–21.1 | 19.05<br>19.11 | Smith River | Lower Smith River | Mill Creek (103.13) | None | MUN, AGR, IND, PRO*, FRSH, NAV, POW*, REC1, REC2, COMM, COLD, WILD, RARE, MIGR, SPWN, AQUA* |

| Post Mile Limits | Culvert Location | Hydrologic Unit | Hydrologic Area | Hydrologic Sub-Area | Impairment Status[2] | Beneficial Uses[3] |
|---|---|---|---|---|---|---|
| 21.1–39.5 | 22.36<br>37.46<br>39.01<br>39.02 | Smith River | Lower Smith River | Smith River Plain | None | AGR, AQUA, COLD, COMM, EST, GWR, IND, MIGR, MUN, PROC, RARE, REC1, REC2, SPWN, WARM, WILD |
| 39.5–39.6 | None | Smith River | Lower Smith River | Rowdy Creek (103.12) | None | MUN, AGR, IND, PRO*, FRSH, NAV, POW*, REC1, REC2, COMM, COLD, WILD, RARE, MIGR, SPWN, AQUA* |
| 39.6–43.2 | 40.71<br>41.96 | Smith River | Lower Smith River | Smith River Plain | None | AGR, AQUA, COLD, COMM, EST, GWR, IND, MIGR, MUN, PROC, RARE, REC1, REC2, SPWN, WARM, WILD |
| 43.2–46.49 | None | Winchuck River | Undefined | Undefined (101.00) | None | MUN, AGR, IND, PRO*, FRSH, NAV, POW*, REC1, REC2, COMM, COLD, WILD, RARE, MIGR, SPWN, AQUA* |

1. Caltrans 2025f
2. Per 2020 – 2022 303(d) list and Basin Plan
3. Beneficial uses listed are "existing" unless denoted with an "*" which are "potential", as identified in Table 2-1 "*Beneficial Uses of Surface Waters of the North Coast Region*" of the North Coast Basin Plan.

*Beneficial Uses*

| | | | |
|---|---|---|---|
| MUN | Municipal and Domestic Supply | AGR | Agricultural Supply |
| IND | Industrial Service Supply | PRO | Industrial Process Supply |
| GWR | Groundwater Recharge | FRSH | Freshwater Replenishment |
| NAV | Navigation | POW | Hydropower Generation |
| REC-1 | Water Contact Recreation | REC-2 | Non-Contact Water Recreation |
| COMM | Commercial and Sport Fishing | WARM | Warm Freshwater Habitat |
| COLD | Cold Freshwater Habitat | ASBS | Areas of Special Biological Significance |
| SAL | Inland Saline Water Habitat | WILD | Wildlife Habitat |
| RARE | Rare, Threatened, or Endangered Species | MAR | Marine Habitat |

| | | | |
|---|---|---|---|
| MIGR | Migration of Aquatic Organisms Development | SPWN | Spawning, Reproduction, or Early |
| SHELL | Shellfish Harvesting | EST | Estuarine Habitat |
| AQUA | Aquaculture | CUL | Native American Culture |
| FLD | Flood Peak Attenuation/ Flood Water Storage | WET | Wetland Habitat |
| WQE | Water Quality Enhancement | FISH | Subsistence Fishing |

### *Environmental Consequences*

Temporary impacts to water quality could occur during the construction phase of the project. Soil disturbing work within and adjacent to drainage systems could result in the transport of sediment and other pollutants to adjacent waterways, wetlands, and/or riparian areas. Temporary, short-term increases in turbidity to receiving waters could occur during construction from activities such as vegetation removal, clearing and grubbing, constructing temporary access roads, preparing staging areas, and excavating for the culvert and bridge work. Soil erosion, especially during heavy rainfall, can increase the suspended solids, dissolved solids, and organic pollutants in stormwater runoff generated within the project limits. During construction there is also the potential for accidental release of pollutants to receiving waters such as oil, grease, wash water, solvents, concrete (elevated pH), sanitary waste, and other construction materials. Pollutants could be tracked off-site by vehicles, deposited onto roads, and eventually transported into waterways.

Groundwater may be minimally and temporarily impacted during construction. Dewatering would be incorporated as a project feature as necessary, and clean groundwater would be used as dust control, disposed in an upland area, or transported to a publicly owned treatment works facility.

Bank erosion is identified as a source contributing to sediment impairment in the 303(d)-listed Klamath River watershed. Removal of riparian vegetation is identified as a source contributing to temperature impairment. Disturbance of fine sediments within the channel may release nutrient rich fine sediment and therefore is a potential source contributing to microcystin impairment.

The culvert at PM 12.12 discharges to ASBS 8 and a coastal watershed within one mile of the Pacific Ocean and is therefore subject to the Caltrans MS4 Permit and the Ocean Plan. In ASBS 8, the receiving water location 1-323 was determined to be in exceedance of natural water quality per Table C-1 of the Caltrans MS4 Permit. Caltrans is required to ensure that discharges in this area do not cause or contribute

to alterations of natural water quality. Caltrans discharge Site 1-322 (the outfall at PM 12.12) is one of the Caltrans discharge locations corresponding to site 1-323; therefore, Site 1-322 has been selected to address pollutants of concern that include copper, lead, mercury, nickel, and selenium. The BMP Feasibility Evaluation for ASBS 8 identifies potential structural BMPs at PM 12.12 to achieve compliance with the Special Protections for Beneficial Uses and the MS4 Permit (Caltrans 2023).

***Avoidance, Minimization and Mitigation Measures***

The North Coast Basin Plan requires Caltrans road construction and maintenance projects within and adjacent to areas with sediment TMDLs to implement effective erosion and sediment control measures identified in the Caltrans Statewide Storm Water Management Plan.

The Caltrans NPDES Permit describes specific source controls for sediment and turbidity TMDLs. Specific control measures identified in the Caltrans NPDES Permit include protecting and stabilizing hillsides, intercepting and filtering stormwater runoff, and avoiding concentrating flows in natural channels and constructed drainages.

A Stormwater Pollution Prevention Plan (SWPPP) would be implemented for the project to comply with the provisions of the Construction General Permit. Potential temporary impacts to water quality would be addressed by implementing standard BMPs recommended for particular construction activities. These water pollution control measures are routine Standard Measures and BMPs, as described in Section 1.8. Therefore, project-specific avoidance and minimization measures are not being proposed for hydrology and water quality.

Based on the determinations made in the CEQA Environmental Checklist, no mitigation measures for hydrology or water quality are proposed.

### *Discussion of CEQA Environmental Checklist Question 2.10—Hydrology and Water Quality*

*a) Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?*

**Less Than Significant Impact.** Temporary impacts to water quality could occur during the construction phase of the project. Soil disturbing work within and adjacent to drainage systems could result in the transport of sediment and other pollutants to adjacent waterways, wetlands, and/or riparian areas.

The amount of disturbed soil area (DSA) during construction is estimated to be approximately 5.75 acres, requiring a Stormwater Pollution Prevention Plan (SWPPP).

The inlet at PM 12.12 is downslope of a rock outcrop and a large pullout frequently used for temporarily storing materials, such as landslide debris, by maintenance crews. At PM 12.12, Caltrans proposes to reduce concentrations of copper, lead, mercury, nickel, and selenium to achieve compliance with the Special Protections for Beneficial Uses (Ocean Plan) and the Caltrans MS4 Permit. This would be accomplished through the construction of permanent structural BMPs to treat stormwater that exceeds allowable levels of these pollutants.

A Design Pollution Prevention Infiltration Area (DPPIA) was identified in the BMP Feasibility Study for ASBS 8 as both feasible and workable with an expected removal efficiency of 100 percent. This would be due to the capture and treatment of runoff in the DPPIA, resulting in this runoff no longer discharging to the ASBS location (Wilson Creek Beach). Permanent rock berms would be incorporated to assist with runoff capture and infiltration.

Implementation of Standard Measures and BMPs in Section 1.8, BMPs from the Caltrans Construction Site BMP Manual, the project SWPPP, and permanent BMPs, would reduce potential impacts to water quality standards to a less than significant level.

***b) Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?***

**No Impact.** Dewatering during construction may be necessary in areas where groundwater is encountered during excavation. It is estimated that dewatering may be required at 4 locations and, as a result, the project has the potential to temporarily alter baseflow. Temporary impacts due to dewatering would be minimal and limited to the construction period. The shortening and daylighting of existing culverts and the replacement of a culvert with a bridge would result in an overall net increase of surface waters infiltrating into site soils after the project is constructed. The project is therefore not anticipated to decrease groundwater supplies or adversely affect groundwater recharge.

***c) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:***

***(i) result in substantial erosion or siltation on- or off-site?***

**No Impact.** Soil disturbing work within and adjacent to drainage systems could result in the transport of sediment to adjacent waters and riparian areas. These impacts would be temporary and would be minimized by implementation of Caltrans specifications for sediment and erosion control and site-specific BMPs identified in the SWPPP. These temporary impacts would be a result of construction activities and would not be due to alterations in drainage patterns. Based on the scope of work, which would improve existing drainage systems to reduce scour, erosion, siltation, localized flooding, maintenance issues, and improve climate resiliency, potential adverse impacts to drainage patterns are not anticipated. For these reasons, Caltrans anticipates the project would not result in substantial erosion or siltation due to alterations to drainage patterns.

***(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?***

**No Impact.** The project involves the replacement of drainage systems in poor condition and would result in the upsizing of many currently undersized culverts.

Preliminary design includes upsizing 15 culverts and replacing a culvert with a bridge. Increasing culvert diameter is anticipated to reduce the occurrence of flooding upstream of culverts and water velocities at culvert outlets, which would decrease erosion downstream of the culverts. Although a number of culvert locations are within designated flood zones, the proposed work will not create new impacts to the floodplain or longitudinally encroach upon the base floodplain. Any encroachment of the drainage systems into the base floodplain are improvements of existing facilities at discrete locations with negligible impacts. The purpose of the drainage work is to reduce flooding and erosion potential in these particular drainage and tributary systems. Based on the scope of work, which would improve existing drainage systems and reduce localized flooding potential, Caltrans anticipates the project would not increase surface runoff that would result in increased flooding.

***(iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?***

**No Impact.** The project involves the replacement and improvement of existing drainage facilities and would not alter drainage patterns in a way that would increase runoff volumes or create new sources of runoff. The project would maintain and increase the runoff capacity of existing stormwater drainage systems by enlarging undersized culverts and replacing a culvert with a bridge and would therefore have no impact.

***(iv) impede or redirect flood flows?***

**No Impact.** Existing culverts would be replaced on existing or adjacent alignments without redirecting flood flows. Existing impediments from undersized, poor condition, and failing culverts would be eliminated once the culverts are replaced and the capacity to pass flood flows would be increased. For these reasons the project would have no adverse impact on flood flows.

***d) In flood hazard, tsunami, or seiche zones, would the project risk release of pollutants due to project inundation?***

**Less Than Significant Impact.** Many of the culverts within the project limits are located within flood hazard and tsunami zones, increasing the potential for accidental release of pollutants into flood waters, particularly in the case of an

earthquake-triggered tsunami. Both standard and project-specific measures to prevent pollutants from entering waters would be included in the SWPPP for compliance with the Construction General Permit. Some of these measures are included in the response to question (a) above and in Section 1.8. Permit conditions issued by the RWQCB, Army Corps, and CDFW require potential pollutants be contained to prevent discharge to receiving waters as well as a spill response plan. Due to the protective measures incorporated into the project, Caltrans anticipates the project would have a less than significant impact on the release of pollutants due to project inundation by flood or tsunami.

***e) Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?***

**No Impact.** The purpose of the project is to improve drainage facilities to protect highway facilities, reduce maintenance needs, and improve fish passage. The project would be constructed and permitted in accordance with provisions of the Clean Water Act and other water quality regulations, consistent with the Basin Plan and Ocean Plan. Implementation of structural BMPs at Post Mile 12.12, with the intent of reducing concentrations of copper, lead, mercury, nickel, and selenium by 90 percent, would comply with the exceptions to the Ocean Plan (Special Protections for Beneficial Uses). Other than minor temporary impacts at some locations from dewatering during construction, the project is expected to have no impact on groundwater. As such, the project would have no impact on a water quality control plan or groundwater management plan.

## 2.11 Land Use and Planning

| Question | Significant and Unavoidable Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| **Would the project:** a) Physically divide an established community? | | | | ✓ |
| **Would the project:** b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect? | | | | ✓ |

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project. Potential impacts to land use and planning are not anticipated as the proposed project would not divide an established community or conflict with a land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. The project would have **"No Impact"** on land use and community planning because building this drainage project would support the existing roadways and would not change the layout or composition of any community features. No mitigation would be required.

## 2.13 Noise

| Question | Significant and Unavoidable Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| **Would the project result in:** a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? | | | | ✓ |
| **Would the project result in:** b) Generation of excessive groundborne vibration or groundborne noise levels? | | | | ✓ |
| **Would the project result in:** c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels? | | | | ✓ |

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project, as well as the Air Quality and Noise Analysis for the Culvert Rehabilitation & Fish Passage Project dated January 2, 2025 (Caltrans 2025b). The project is considered a Type III project, which does not require a noise analysis. The project would improve existing drainage facilities and would not involve the construction of a new highway in a new location or substantially change the vertical or horizontal alignments. Traffic volumes, composition, and speeds would remain the same in the build and no-build condition. Long-term operational (traffic) noise impacts are not anticipated, and noise abatement is not considered.

Noise from construction activities may intermittently dominate the noise environment in the immediate area of construction. Construction-generated noise would be a function of the noise levels generated by individual pieces of construction equipment, the type and amount of equipment operating at any given time, the timing and duration of construction activities, and the proximity of nearby sensitive receptors. Construction noise would primarily result from the operation of heavy construction equipment and arrival and departure of heavy-duty trucks. Construction noise levels would vary on a day-to-day basis during each phase of construction depending on the specific task being completed. Construction equipment is expected to generate noise levels ranging from 70 to 90 dBA at a distance of 50 feet, and noise produced by construction equipment would be reduced over distance at a rate of about 6 dB per doubling of distance.

Noise generated during construction would be temporary and would not result in a substantial temporary or permanent increase of ambient noise levels in the vicinity of the project. The project area is generally undeveloped or rural in character. There are a few clusters of residential and urban development on or adjacent to the highway. The location with the longest construction duration would be at PM 37.46, the proposed bridge at Mello Creek, lasting up to two construction seasons. The nearest residential receptor to this location is approximately 700 feet to the northeast. Noise impacts here are expected to be minimal due to the presence of dense vegetation between the location and the residence which would provide some natural noise attenuation, distance to the construction activity, and the limited duration and intermittent nature of noise generating activities during construction.

The project is not located near an airport, but if it were, the project would have no permanent noise impacts and temporary noise would be short term during construction at each site.

A lack of nearby receptors, ambient highway noise, short-duration work periods, and compliance with Caltrans standard noise specifications would prevent excessive noise levels. Potential noise impacts on humans are not anticipated. Potential noise impacts on wildlife are discussed in Section 2.4.

Given the above, the project is anticipated to have **“No Impact”** on noise and vibration. No mitigation would be required.

## 2.12 Mineral Resources

| Question: | Significant and Unavoidable Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| **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? | | | | ✓ |
| **Would the project:** b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan? | | | | ✓ |

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project, as well as the California Department of Conservation Division of Mine Reclamation Mines Online web application (California Department of Conservation 2025c). Given there are no designated mineral resource areas of state or regional importance in the project area, and the project would not reduce the availability of a locally important mineral resource recovery site, the project is anticipated to have **"No Impact"** on mineral resources. No mitigation would be required.

## 2.14 Population and Housing

| Question | Significant and Unavoidable Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| **Would the project:** a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)? | | | | ✓ |
| **Would the project:** b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere? | | | | ✓ |

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project. Potential impacts to population and housing are not anticipated because the project does not involve the construction of homes, businesses, road extensions or infrastructure that could induce population growth. The project would not provide new access or open a new area to development. The project would not involve acquisition of land occupied by homes or residences and would not result in displacement of people or housing.

Given the above, the project is anticipated to have **"No Impact"** on population and housing. No mitigation would be required.

## 2.15 Public Services

| Question | Significant and Unavoidable Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| **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:**<br><br>Fire protection? | | | | ✓ |
| Police protection? | | | | ✓ |
| Schools? | | | | ✓ |
| Parks? | | | | ✓ |
| Other public facilities? | | | | ✓ |

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project. The culvert rehabilitation and fish passage project would not result in an increased demand for fire or police protection or increased demand for space in schools, parks, or other public facilities in the area. Although there would be temporary, short-term lane closures during construction, all emergency response agencies in the project area would be notified of the project

construction schedule and would have access to US 101 throughout the construction period.

Given the above, the project is anticipated to have **"No Impact"** on public services. No mitigation would be required.

## 2.16 Recreation

| Question | Significant and Unavoidable Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| 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? | | | | ✓ |
| b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment? | | | | ✓ |

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project. Potential impacts to recreational facilities due to deterioration, expansion, or construction of new facilities are not anticipated. The project would involve the replacement of existing culverts and would not result in an increased demand for park resources that could cause deterioration of existing parks or recreational facilities. The project does not include the construction of park resources or recreational facilities or the expansion of such facilities. Temporary impacts on State Parks and National Parks land during construction will be addressed in a Section 4(f) Evaluation with *de minimus* Finding to be circulated for public review and comment shortly after circulation of this document.

Given the above, the project is anticipated to have **"No Impact"** on recreation. No mitigation would be required.

## 2.17 Transportation

| Question | Significant and Unavoidable Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| **Would the project:** a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities? | | | | ✓ |
| **Would the project:** b) Conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b)? | | | | ✓ |
| **Would the project:** c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? | | | | ✓ |
| **Would the project:** d) Result in inadequate emergency access? | | | | ✓ |

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project, as well as the *Draft Transportation Management Plan* (TMP) prepared for this project, dated November 8, 2024 (Caltrans 2024d). Although there would be temporary traffic delays on US 101 during construction due to lane closures, there would not be any permanent changes to transportation or traffic. The project would not increase capacity and is not expected to be traffic inducing; therefore, the project is consistent with CEQA Guidelines §15064.3, subdivision (b), and an analysis of vehicle miles traveled (VMT) is not warranted. The drainage system improvement project would not result in a change to the geometric design of the roadway such that there would be increased hazards.

The project would generate short-term construction traffic and result in temporary lane closures. Construction traffic would be scheduled and routed to reduce congestion. The estimated maximum delay would be 10 minutes during flagging or the use of a temporary signal system (at PMs 9.5, 37.5, 39.0, and 40.7) and 20 minutes during intermittent closures while culverts are replaced (all locations) and pile placement (PM 37.5). Bicyclists would be accommodated through the construction area at all times. A Contingency Plan and Emergency Response Access Plan would be required to prepare for and coordinate unanticipated delays and emergencies through the work zones. Emergency response agencies in the project area would be notified of the project construction schedule and would have access to US 101 throughout the construction period.

The TMP for the project would be tailored to minimize project-related traffic delays by the effective application of traditional traffic abatement strategies and an innovative combination of project-specific public and motorist information, demand management, incident management, system management, alternate route strategies, construction strategies, and other strategies.

Given the above, the project is anticipated to have **"No Impact"** on transportation systems. No mitigation would be required.

## 2.18 Tribal Cultural Resources

| Question | Significant and Unavoidable Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| **Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code § 21074 as either a site, feature, place, or cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:**<br>a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code § 5020.1(k), or | | | | ✓ |
| b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code § 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code § 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe. | | | | ✓ |

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project, as well as the Archaeological Screening Report dated April 6, 2025 (Caltrans 2025d) and the Historic Property Survey Report (Caltrans 2025e). The Native American Heritage Commission (NAHC) was contacted in 2024 by a Caltrans archaeologist with a request for a consultation list of tribes, groups, and individuals who have expressed an interest in the project vicinity and for a review of the Sacred Lands File for any potential sacred sites within the project vicinity.

The NAHC responded with a positive result for sacred lands, which indicates sacred sites were identified within the project vicinity; however, none were found to be in conflict with the project. The NAHC also provided a list of Native American tribes, groups, and individuals pursuant to Section 106 consultation requirements. Notification was provided to Elk Valley Rancheria, Tolowa Dee-ni', Tolowa Nation, Yurok Tribe, and Pulikla Tribe of Yurok People (formerly Resighini Rancheria), with updates provided at Caltrans Quarterly Update events. No concerns have been raised as of February 3, 2025. Caltrans will continue to consult with interested tribes and individuals throughout the life of the project as required. Standard measures for the discovery of cultural materials or human remains are incorporated into the project (CR-1 and CR-2 in Section 1.8).

Given the above, the project is anticipated to have "**No Impac**t" on tribal cultural resources. No mitigation would be required.

## 2.19 Utilities and Service Systems

| Question | Significant and Unavoidable Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| **Would the project:** a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities—the construction or relocation of which could cause significant environmental effects? | | | | ✓ |
| **Would the project:** b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years? | | | | ✓ |
| **Would the project:** c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments? | | | | ✓ |
| **Would the project:** d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals? | | | | ✓ |
| **Would the project:** e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste? | | | | ✓ |

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project. The proposed project would rehabilitate existing culverts and drainage systems to good condition, with no new or expanded drainage systems proposed other than the upsizing of currently undersized culverts and construction of a bridge to improve fish passage. Buried and overhead utilities are present within the project limits. AT&T, Pacific Power, Frontier Communication, Smith River Community Services District, and Caltrans all have utilities at or near the work locations. Most utilities are either outside the immediate vicinity of the proposed work or can be protected in place during construction.

Two locations have private water lines running through Caltrans facilities. These facilities would need to be relocated when the culverts are replaced. Caltrans would place a conduit across the highway, but it would be the responsibility of the property/utility owner to install a new water line through the conduit and reconnect their services.

The project would not result in new demand for water supplies, wastewater treatment, or stormwater drainage; does not propose new or expanded natural gas, electric power, or telecommunications systems; and would not generate excess solid waste or conflict with solid waste regulations.

Given the above, the project is anticipated to have **"No Impact"** on utilities and service systems. No mitigation would be required.

## 2.20 Wildfire

| Question | Significant and Unavoidable Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| **If located in or near State Responsibility Areas (SRAs) or lands classified as *very high* Fire Hazard Severity Zones, would the project:**<br>a) Substantially impair an adopted emergency response plan or emergency evacuation plan? | | | | ✓ |
| b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire? | | | | ✓ |
| c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or may result in temporary or ongoing impacts to the environment? | | | | ✓ |
| d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes? | | | | ✓ |

Senate Bill 1241 required the Governor's Office of Planning and Research, the California Natural Resources Agency, and the California Department of Forestry and Fire Protection (CAL FIRE) to develop amendments to the "CEQA Environmental Checklist" for the inclusion of questions related to fire hazard impacts for projects located on lands classified as *very high* Fire Hazard Severity Zones. The 2018 updates to the CEQA Guidelines expanded this to include projects "near" these *very high* Fire Hazard Severity Zones.

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project. The project site is located within a State Responsibility Area (SRA), served by CAL FIRE (refer to Section 2.8–Figure 9) and within a number of regional fire protection districts. Within the SRA, the project site is primarily within the "moderate" fire hazard severity zone (FHSZ), with the drainage system at Post Miles 39.01/39.02 near Smith River in a "high" FHSZ. None of the drainage systems are located within a "very high" FHSZ.

The project would repair deteriorating and damaged drainage systems to maintain an essential emergency services transportation network. The proposed work would not impair an adopted emergency response plan or emergency evacuation plan, exacerbate wildfire risks, or expose people or structures to significant risks. Emergency response agencies in the project area would be notified of the project construction schedule and would have access to US 101 throughout the construction period. Emergency vehicles would be accommodated through any temporary lane closures. If a wildland fire affected the area, work would stop, and evacuation routes would be accessible. Standard measures listed in Section 1.8 would further minimize wildfire risk during construction.

Given the above, the project is anticipated to have **"No Impact"** to wildfire. No mitigation would be required.

## 2.21 Mandatory Findings of Significance

| Does the project: | Significant and Unavoidable Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| a) Have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory? | | | ✓ | |
| b) Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means 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.) | | | | ✓ |
| c) Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly? | | | | ✓ |

### *Discussion of CEQA Environmental Checklist Question 2.21—Mandatory Findings of Significance*

***a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?***

**Less Than Significant Impact.** Impacts to environmental resources, such as Biological Resources, Greenhouse Gas Emissions, Hazards and Hazardous Materials, and Hydrology and Water Quality have been determined to be Less than Significant. There would be no impacts to the remaining environmental resources analyzed in the Initial Study. As the analysis in the Initial Study shows, the proposed project would not significantly 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, nor would it eliminate examples of California history or prehistory. Therefore, the project is anticipated to have a “Less that Significant Impact”.

***b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)***

**No Impact.** The project would not result in cumulative impacts. The project would not permanently increase traffic, vehicle miles traveled, or increase capacity of the transportation facility, and would not directly or indirectly induce population growth. The project would therefore have “No Impacts” that would be cumulatively considerable.

***c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?***

**No Impact.** As discussed in this Initial Study, the project would have “No Impact” either directly or indirectly on human beings.

## 2.22 Cumulative Impacts

Cumulative impacts are those that result from past, present, and reasonably foreseeable future actions, combined with the potential impacts of this proposed project. A cumulative impact assessment looks at the collective impacts posed by individual land use plans and projects. Cumulative impacts can result from individually minor but collectively substantial impacts taking place over a period of time (CEQA § 15355).

Cumulative impacts to resources may result from residential, commercial, industrial, and highway development, as well as from agricultural development and the conversion to more intensive agricultural cultivation. These land use activities can degrade habitat and species diversity through consequences such as displacement and fragmentation of habitats and populations, alteration of hydrology, contamination, erosion, sedimentation, disruption of migration corridors, changes in water quality, and introduction or promotion of predators. They can also contribute to potential community impacts identified for the project, such as changes in community character, traffic patterns, housing availability, and employment.

Per Section 15130 of CEQA, a Cumulative Impact Analysis (CIA) discussion is only required in "…situations where the cumulative effects are found to be significant." An EIR is required in all situations when a project might result in a "significant" direct, indirect, or cumulative impact on any resource. Given that all impacts resulting from the project would be less than significant, an EIR and CIA were not required for this project.



# Chapter 3. Agency and Public Coordination

Early and continuing coordination with the general public and public agencies is an essential part of the environmental process. It helps planners determine the necessary scope of environmental documentation and the level of analysis required, and to identify potential impacts and avoidance, minimization and/or mitigation measures and related environmental requirements. Agency and tribal consultation and public participation for this project have been accomplished through a variety of formal and informal methods, including Project Development Team (PDT) meetings, interagency coordination meetings, field reviews, and virtual site visits. This chapter summarizes the results of Caltrans' efforts to identify, address, and resolve project-related issues through early and continuing coordination.

The following agencies, organizations, and individuals were consulted in the preparation of this environmental document.

### *Coordination with Resource Agencies*

On September 3, 2024, Caltrans staff advised State Parks personnel Rosalind Litzky of proposed work on and near Section 4(f) property. State Parks personnel were advised that two TCEs are anticipated for purposes of staging and parking. However, State Parks requested additional information on the proposed scope of work adjacent to Section 4(f) property, at which time we scheduled a site visit for December 20, 2024. After a virtual site visit in December 2024 with State Parks personnel Mae McLean, it was determined that a 4(f) de minimis agreement would be prepared and further consultation would be conducted. A Right of Entry Permit may be required from State Parks depending on the final design of the project. Caltrans will continue to consult with State Parks personnel to determine the need for this permit during the permitting phase of the project.

On March 20, 2025, Caltrans staff advised National Parks personnel Chad Anderson of proposed work on and near Section 4(f) property with an overview of all proposed work and locations. National Parks personnel were advised that TCEs are anticipated for purposes of staging and parking. National Parks requested a site visit, and it was determined that a 4(f) de minimis agreement would be prepared and further consultation would be conducted. Caltrans will continue to consult with National Parks personnel to determine the need for any permits during the permitting phase of the project.

Caltrans personnel consulted with Caltrans liaisons Mario Minder of NMFS, as well as Matthew Parker and Greg Schmidt of USFWS, regarding use of the now-expired PBO and PLOC, respectively, for this project. Consultations with CDFW, NCRWQCB, the California Coastal Commission, County of Del Norte, and CAL FIRE personnel are planned, which may include site visits with resource agency and Caltrans personnel as necessary.

### *Coordination with Property Owners*

A list of Native American contacts was compiled from the Caltrans District 1 Native American Coordination Database. The results of a Native American Heritage Commission (NAHC) Sacred Lands Search provided an updated contact list of Native American tribes and interested individuals in 2024. Additional outreach and information was provided via email and at quarterly meetings, as possible. Outreach and consultation efforts included the following tribes:

- Elk Valley Rancheria
- Tolowa Dee-ni'
- Tolowa Nation
- Yurok Tribe
- Pulikla Tribe of Yurok People (formerly Resighini Rancheria)

### *Circulation*

This draft document is available online at https://dot.ca.gov/caltrans-near-me/district-1/d1-projects/d1-dn-101-culvert-rehab-fish-passage and at multiple locations for public review for a 30-day comment period.

- Caltrans District 1 Office, 1656 Union Street, Eureka CA 95501
- Del Norte County Library, 190 Price Mall, Crescent City CA 95531
- Del Norte County Library, 241 First Street, Smith River CA 95567

**Table 14. Agency Coordination and Professional Contacts**

| Date | Personnel | Purpose of Coordination |
|---|---|---|
| September 3, 2024 | Caltrans Environmental: Tim Nelson, Julie Price, Rachel Conway<br>State Parks: Rosalind Litzky | State Parks consultation initiation for project overview and potential to use a 4(f) property. |
| October 16, 2024 | Caltrans Environmental: Amon Armstrong, Hilary Hodson, Rachel Conway<br>Caltrans Engineer: Halley Aycock-Rizzo<br>USFWS: Matthew Parker, Gregory Schmidt | Field Review to discuss resources present at all project locations and determine level of consultation. |
| November 22, 2024 | Caltrans Environmental: Dawn Graydon, Amon Armstrong, Hilary Hodson, Rachel Conway, Julie Price, Julie East<br>Caltrans Engineer: Gabriel Adame<br>NMFS: Mario Minder, Jeff Jahn | Initiated coordination with NMFS to review and discuss project locations and determine level of consultation. |
| December 3, 2024 | Caltrans Environmental: Tim Nelson, Julie Price, Rachel Conway<br>State Parks: Rosalind Litzky | Continue project review and plan site visit to all relevant project locations. |
| December 20, 2024 | Caltrans Environmental: Tim Nelson, Julie Price, Rachel Conway<br>Caltrans Engineer: Gabriel Adame<br>State Parks: Mae McLean | State Parks virtual site visit and discussion of all project sites with potential to use a 4(f) property. |
| February 25, 2025 | Caltrans Environmental: Dawn Graydon, Amon Armstrong, Hilary Hodson, Rachel Conway, Julie Price<br>Caltrans Design and Hydraulics Engineers: Gabriel Adame, Brittany Wattle, Jeremy Miller Schulze, Nanette Nickerson, Brian Finck<br>CDFW: Gregory O'Connell, Kristine Pepper | Initiated project coordination with CDFW and reviewed both priority fish passage locations. |
| March 20, 2025 | Caltrans Environmental: Tim Nelson, Julie Price, Rachel Conway<br>National Parks: Chad Anderson | National Parks consultation initiation for project overview and potential to use a 4(f) property. |



# Chapter 4. List of Preparers

The following individuals performed the environmental work and contributed to the preparation of the Initial Study / Proposed Negative Declaration for this project:

### *California Department of Transportation–North Region*

| | |
|---|---|
| Amon Armstrong | Environmental Scientist, Biologist |
| Angel Aguilar | NPDES Coordinator |
| Denise Walker-Brown | Mitigation Specialist |
| Disi Shen | Air Quality Specialist |
| Gabriel Adame | Project Engineer |
| Halley Aycock-Rizzo | Transportation Engineer (Designer) |
| Hilary Hodson | Environmental Scientist, Biologist |
| Jacqueline Farrington | Environmental Planner, Archaeologist |
| Jeffery Barrett | Revegetation Specialist |
| Jeremy Miller-Schulze | Transportation Engineer (Hydraulics) |
| Julie East | Senior Environmental Scientist |
| Julie Price | Environmental Coordinator |
| Paul Sundberg | Engineering Geologist, Hazardous Waste & Paleontology Coordinator |
| Rachel Conway | Environmental Coordinator |
| Tatiene Guia | Landscape Associate |
| Thorin Lynn | Transportation Engineer (Designer) |
| Valerie Jones | Landscape Associate |



# Chapter 5. Distribution List

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### *Tribal Contacts*

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Rosie Clayburn, THPO
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Fawn Murphy, Chairwoman
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Moonchay Dowd, THPO
Pulikla Tribe of Yurok People
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Klamath, CA 95548

### *Interested Groups, Organizations and Individuals*

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### *Utilities*

Christina Medina, Regional Business Manager
Northern California Pacific Power
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Medford, OR 97501

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# Appendix A. Project Layouts



INDEX OF PLANS

| SHEET No. | DESCRIPTION |
|---|---|
| 1 | TITLE AND LOCATION MAP |
| X | KEY MAP AND LOCATIONS |
| X-X | TYPICAL CROSS SECTIONS |
| XX-XX | LAYOUTS |
| XX-XX | TEMPORARY WATER POLLUTION CONTROL PLANS |
| XX-XX | DRAINAGE PLANS AND PROFILES |
| XX-XX | DRAINAGE DETAILS |
| XX-XX | DRAINAGE QUANTITIES |
| XX-XX | UTILITY PLANS |
| XX-XX | CONSTRUCTION AREA SIGNS |
| XX-XX | STAGE CONSTRUCTION PLANS |
| XX-XX | TRAFFIC HANDLING PLANS AND QUANTITIES |
| XX-XX | SUMMARY OF QUANTITIES |
| XX-XX | LANDSCAPE PLANS |
| XX-XX | ELECTRICAL PLANS |
| XX-XX | REVISED STANDARD PLANS |

STRUCTURES PLANS

| | |
|---|---|
| XX-XX | NAME OF BRIDGE, Br No. XX-XXXX |

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

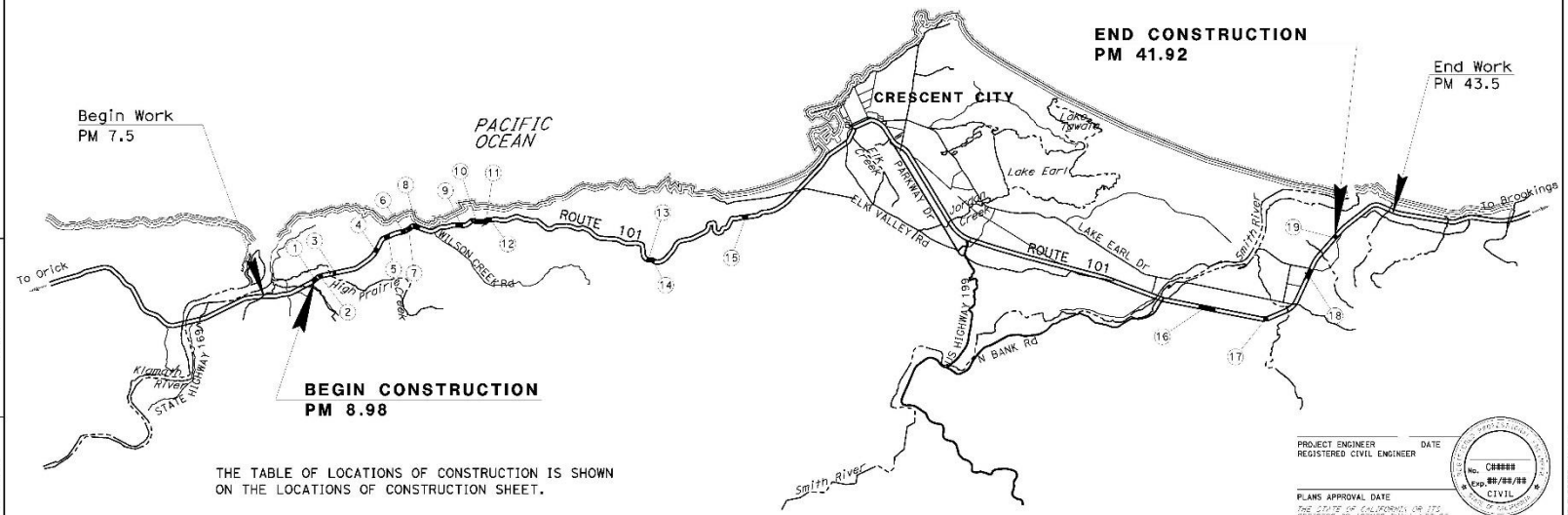
PROJECT PLANS FOR CONSTRUCTION ON
STATE HIGHWAY

IN DEL NORTE COUNTY ON ROUTE 101 FROM
THE HUM-DN COUNTY LINE
TO THE OREGON STATE LINE

TO BE SUPPLEMENTED BY STANDARD PLANS DATED 2024

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 01 | DN | 101 | Var | 1 | XX |




THE TABLE OF LOCATIONS OF CONSTRUCTION IS SHOWN ON THE LOCATIONS OF CONSTRUCTION SHEET.

NO SCALE

THE CONTRACTOR SHALL POSSESS THE CLASS (OR CLASSES) OF LICENSE AS SPECIFIED IN THE "NOTICE TO BIDDERS."

PROJECT ENGINEER DATE
REGISTERED CIVIL ENGINEER
PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR EMPLOYEES SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ELECTRONIC COPIES OF THIS PLAN SHEET.

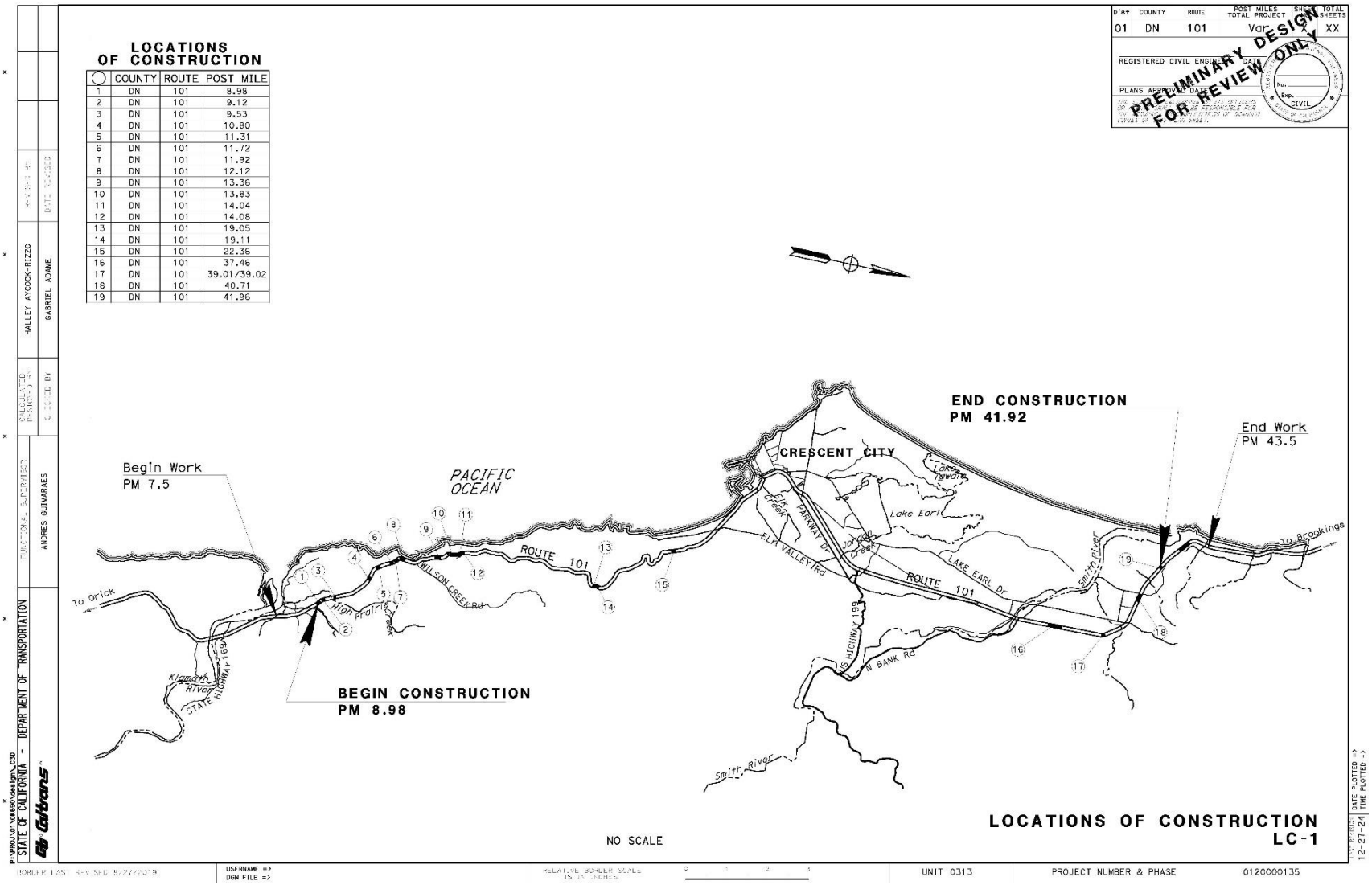
| | |
|---|---|
| CONTRACT No. | 01-0K690 |
| PROJECT ID | 0120000135 |

DESIGN BRIAN FINK
DETAIL ANDRES GUIMARAES

DATE PLOTTED => 12-27-24
TIME PLOTTED =>

USERNAME => SUSAN
DGN FILE => SHEET01

UNIT 0313 PROJECT NUMBER & PHASE 0120000135


LOCATIONS OF CONSTRUCTION
COUNTY ROUTE POST MILE
1 DN 101 8.98
2 DN 101 9.12
3 DN 101 9.53
4 DN 101 10.80
5 DN 101 11.31
6 DN 101 11.72
7 DN 101 11.92
8 DN 101 12.12
9 DN 101 13.36
10 DN 101 13.83
11 DN 101 14.04
12 DN 101 14.08
13 DN 101 19.05
14 DN 101 19.11
15 DN 101 22.36
16 DN 101 37.46
17 DN 101 39.01/39.02
18 DN 101 40.71
19 DN 101 41.96
Dist COUNTY ROUTE POST MILES TOTAL PROJECT SHEET TOTAL SHEETS
01 DN 101 Var XX
REGISTERED CIVIL ENGINEER DATE
PLANS APPROVAL DATE
PRELIMINARY DESIGN FOR REVIEW ONLY
HALLEY AYCOCK-RIZZO
GABRIEL ADAME
ANDRES GUIMARAES
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Begin Work PM 7.5
PACIFIC OCEAN
CRESCENT CITY
END CONSTRUCTION PM 41.92
End Work PM 43.5
ROUTE 101
WILSON CREEK Rd
ELK VALLEY Rd
FAIRWAY Dr
LAKE EARL Dr
N BANK Rd
US HIGHWAY 199
STATE HIGHWAY 169
To Orick
To Brookings
Klamath River
Smith River
Lake Earl
Lake Tyrrell
Elk Creek
Talawa Creek
High Prairie Creek
BEGIN CONSTRUCTION PM 8.98
NO SCALE
LOCATIONS OF CONSTRUCTION
LC-1
USERNAME =>
DGN FILE =>
UNIT 0313
PROJECT NUMBER & PHASE
0120000135
DATE PLOTTED =>
TIME PLOTTED =>
12-27-24

T

NOTE:

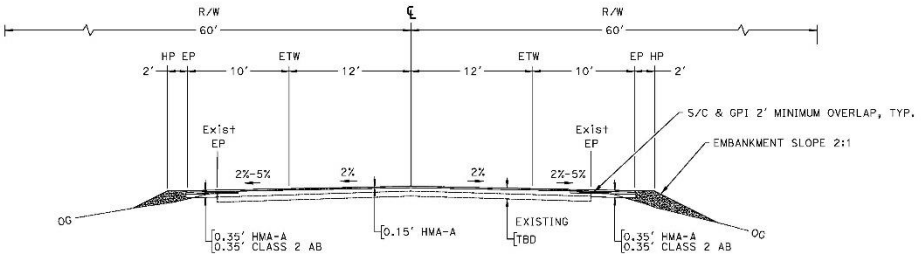
1. DIMENSIONS OF THE PAVEMENT STRUCTURES (STRUCTURAL SECTIONS)ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS
2. SUPERELEVATIONS ARE SHOWN ON THE SUPERELEVATION DIAGRAMS

| Dist | COUNTY | LOCATION CODE | POST MILES TOTAL PROJECT | SHEET TOTAL SHEETS |
|---|---|---|---|---|
| 01 | DN | 101 | 0.0/46.5 | XX |

PRELIMINARY
REGISTERED CIVIL ENGINEER — DATE
First Lost Name
No. XXXXX
Exp. ##/##/##
CIVIL
PLANS APPROVAL DATE

PRELIMINARY DESIGN FOR REVIEW ONLY

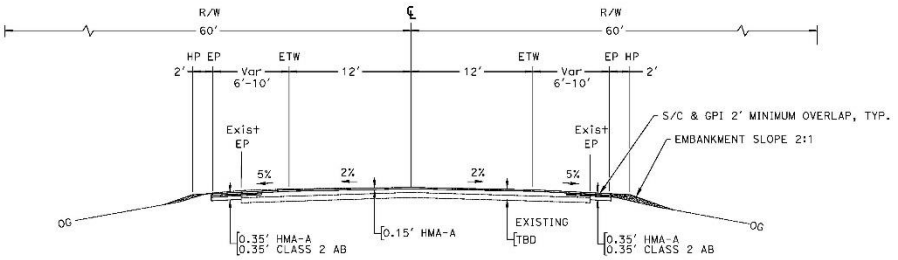
ROUTE 101




**ROUTE 101**

"101 CL" 59+50 TO "101 CL" 60+60

ROUTE 101




**ROUTE 101**

"101 CL" 56+94 TO "101 CL" 59+50

**PM 37.46**

**TYPICAL CROSS SECTIONS**

NO SCALE

**X-1**

DESIGN — FUNCTIONAL SUPERVISOR: ANDRE GUIMARAES — HALLEY AYCOCK-RIZZO — GABRIEL ADAME

DEPARTMENT OF TRANSPORTATION
STATE OF CALIFORNIA

P:\PROJ\01\0K690\design_c3d

BORDER LAST REVISED 8/5/2020

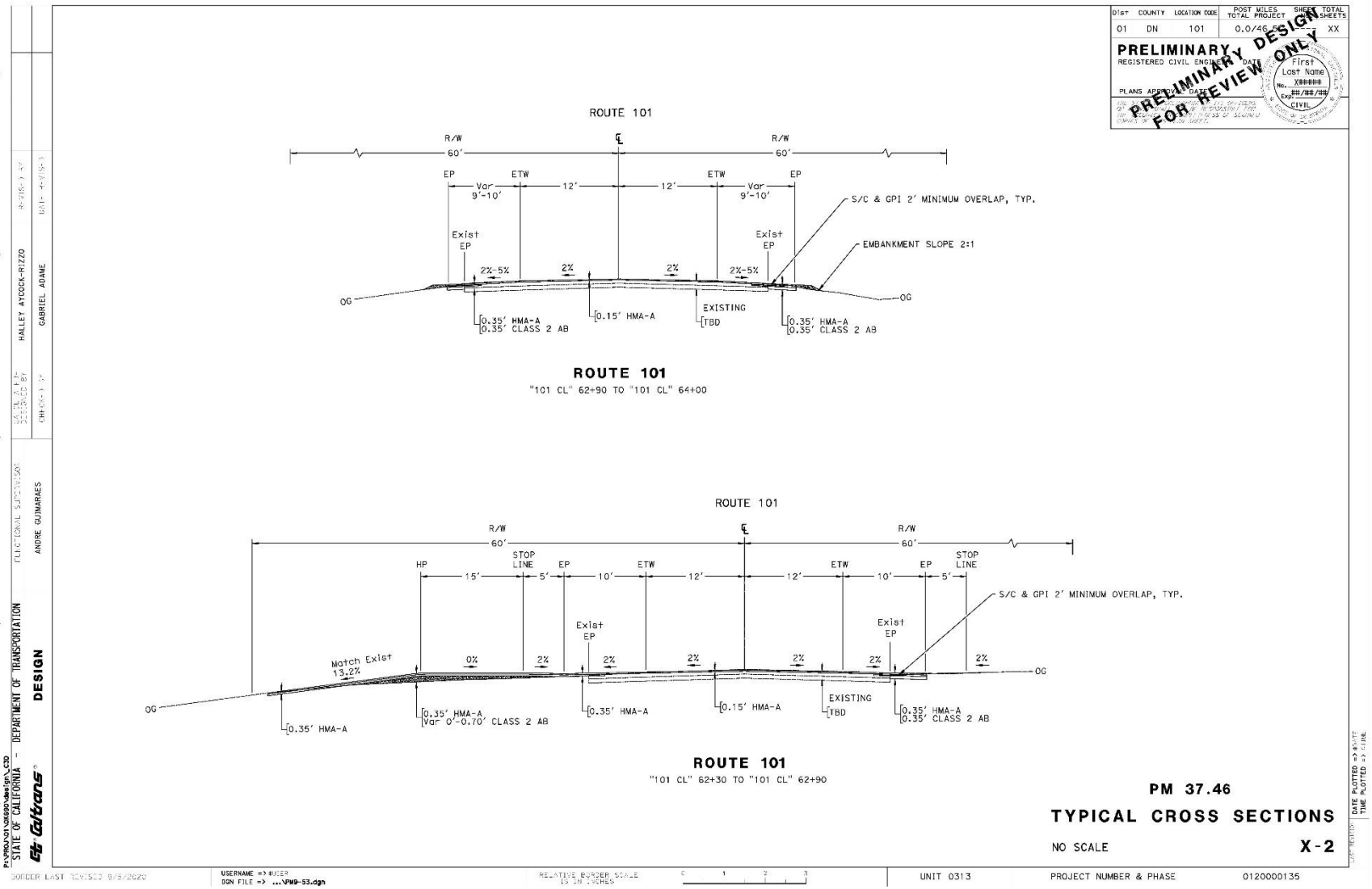
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DGN FILE => ...\PM9-53.dgn

RELATIVE BORDER SCALE IS IN INCHES

UNIT 0313

PROJECT NUMBER & PHASE 0120000135

DATE PLOTTED =>
TIME PLOTTED =>


Dist COUNTY LOCATION CODE
01 DN 101
POST MILES TOTAL PROJECT
0.0/46.
SHEET TOTAL SHEETS
XX
PRELIMINARY
REGISTERED CIVIL ENGINEER DATE
First Last Name
No. XXXXX
Exp. ##/##/##
CIVIL
PLANS APPROVAL DATE
PRELIMINARY DESIGN FOR REVIEW ONLY
ROUTE 101
R/W
60'
℄
EP
ETW
Var 9'-10'
12'
S/C & GPI 2' MINIMUM OVERLAP, TYP.
EMBANKMENT SLOPE 2:1
Exist EP
2%-5%
2%
OG
0.35' HMA-A
0.35' CLASS 2 AB
0.15' HMA-A
EXISTING
TBD
ROUTE 101
"101 CL" 62+90 TO "101 CL" 64+00
ROUTE 101
HP
STOP LINE
15'
5'
10'
Match Exist 13.2%
0%
0.35' HMA-A
Var 0'-0.70' CLASS 2 AB
ROUTE 101
"101 CL" 62+30 TO "101 CL" 62+90
PM 37.46
TYPICAL CROSS SECTIONS
NO SCALE
X-2
DESIGN
FUNCTIONAL SUPERVISOR
ANDRE GUIMARAES
CHECKED BY
GABRIEL ADAME
DESIGNED BY
HALLEY AYCOCK-RIZZO
STATE OF CALIFORNIA – DEPARTMENT OF TRANSPORTATION
Caltrans
P:\PROJ\01\0K690\design_c3d
BORDER LAST REVISED 9/5/2020
USERNAME => BUER
DGN FILE => ...\PM9-53.dgn
RELATIVE BORDER SCALE IS IN INCHES
UNIT 0313
PROJECT NUMBER & PHASE
0120000135
DATE PLOTTED =>
TIME PLOTTED =>

| Dist | COUNTY | LOCATION CODE | POST MILES TOTAL PROJECT | SHEET TOTAL SHEETS |
|---|---|---|---|---|
| 01 | DN | 101 | 0.0/46.[illegible] | XX |

REGISTERED CIVIL ENGINEER DATE

First Last Name
No. XXXXX
Exp. ##/##/##
CIVIL

PLANS APPROVAL DATE

PRELIMINARY DESIGN FOR REVIEW ONLY

DESIGN

FUNCTIONAL SUPERVISOR: ANDRE GUIMARAES

CHECKED BY: GABRIEL ADAME

DESIGNED BY: HALLEY AYCOCK-RIZZO

REVISED

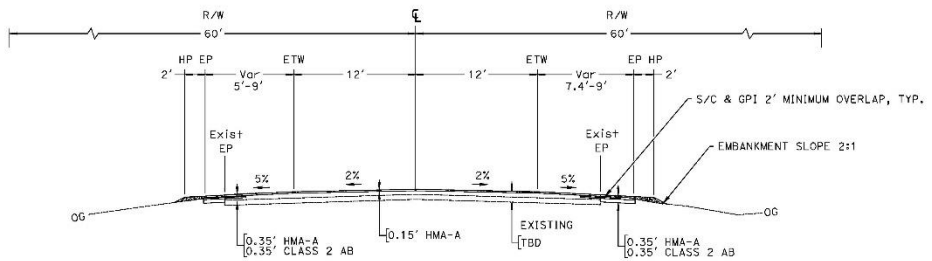
DATE REVISED

DEPARTMENT OF TRANSPORTATION
STATE OF CALIFORNIA

Caltrans

P:\PROJ\01\0K690\design_c3d

ROUTE 101




**ROUTE 101**

"101 CL" 64+00 TO "101 CL" 65+29

**PM 37.46**

**TYPICAL CROSS SECTIONS**

NO SCALE

**X-3**

BORDER LAST REVISED 9/5/2020

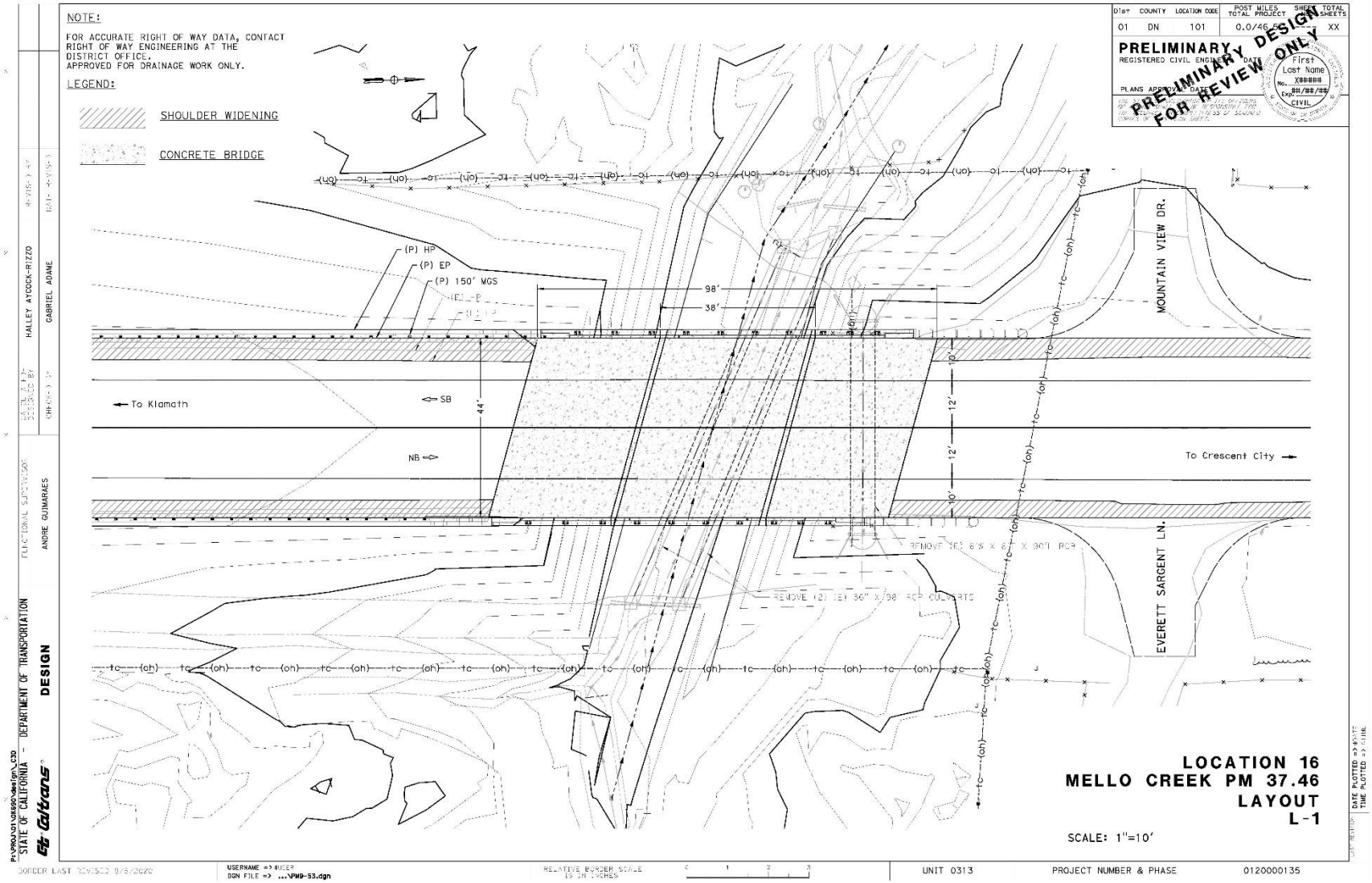
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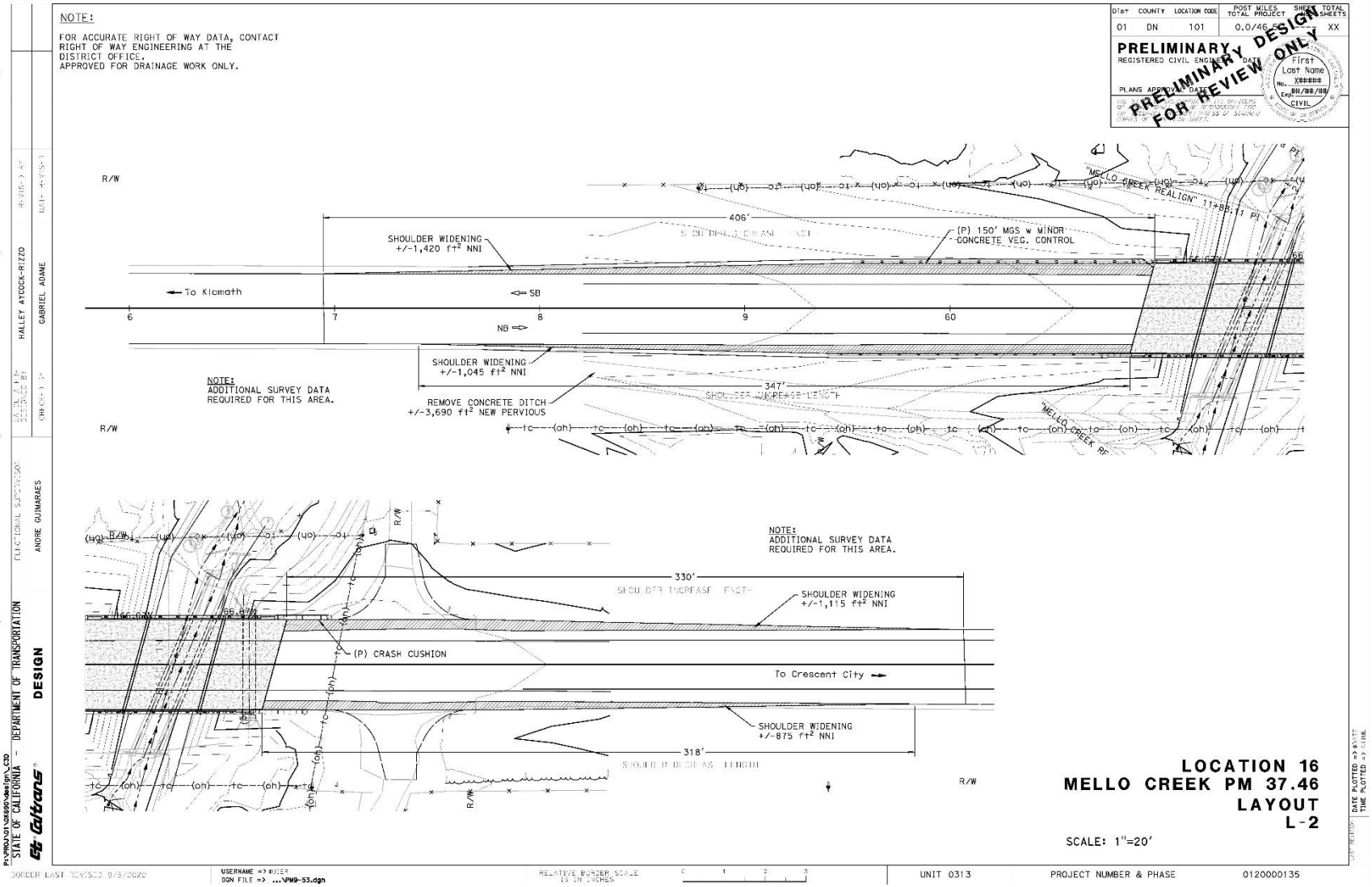
RELATIVE BORDER SCALE IS IN INCHES

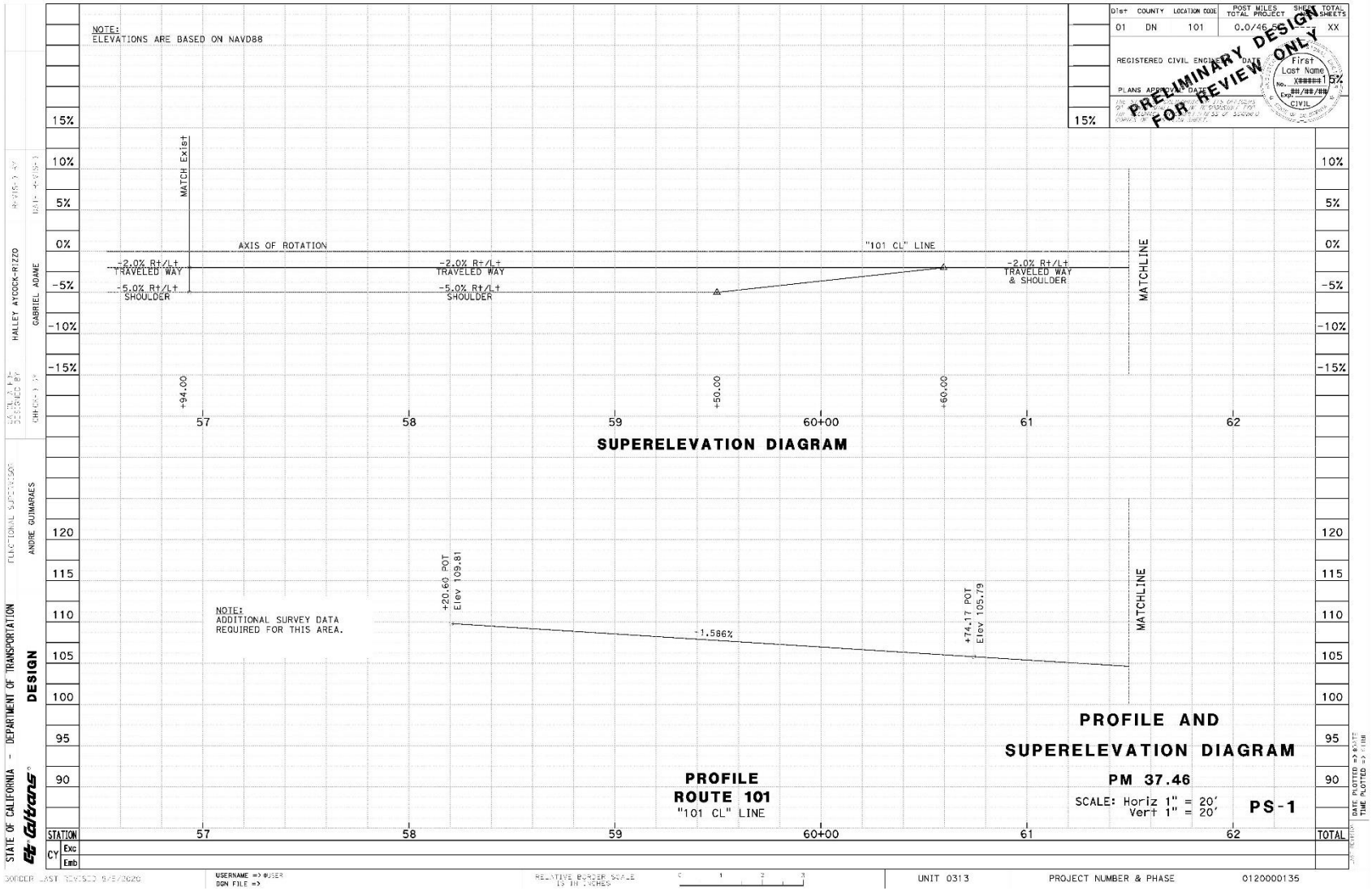
UNIT 0313

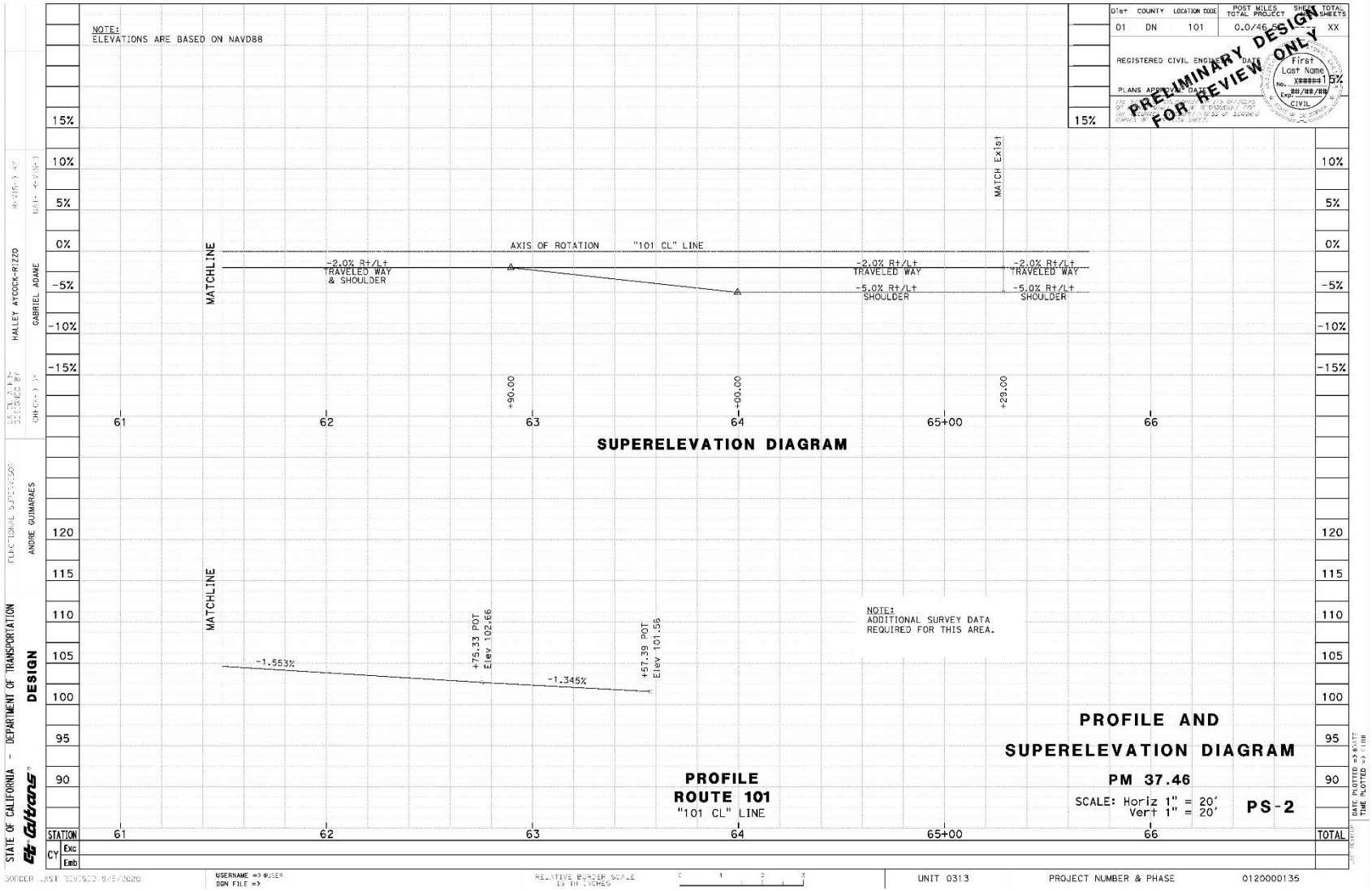
PROJECT NUMBER & PHASE 0120000135

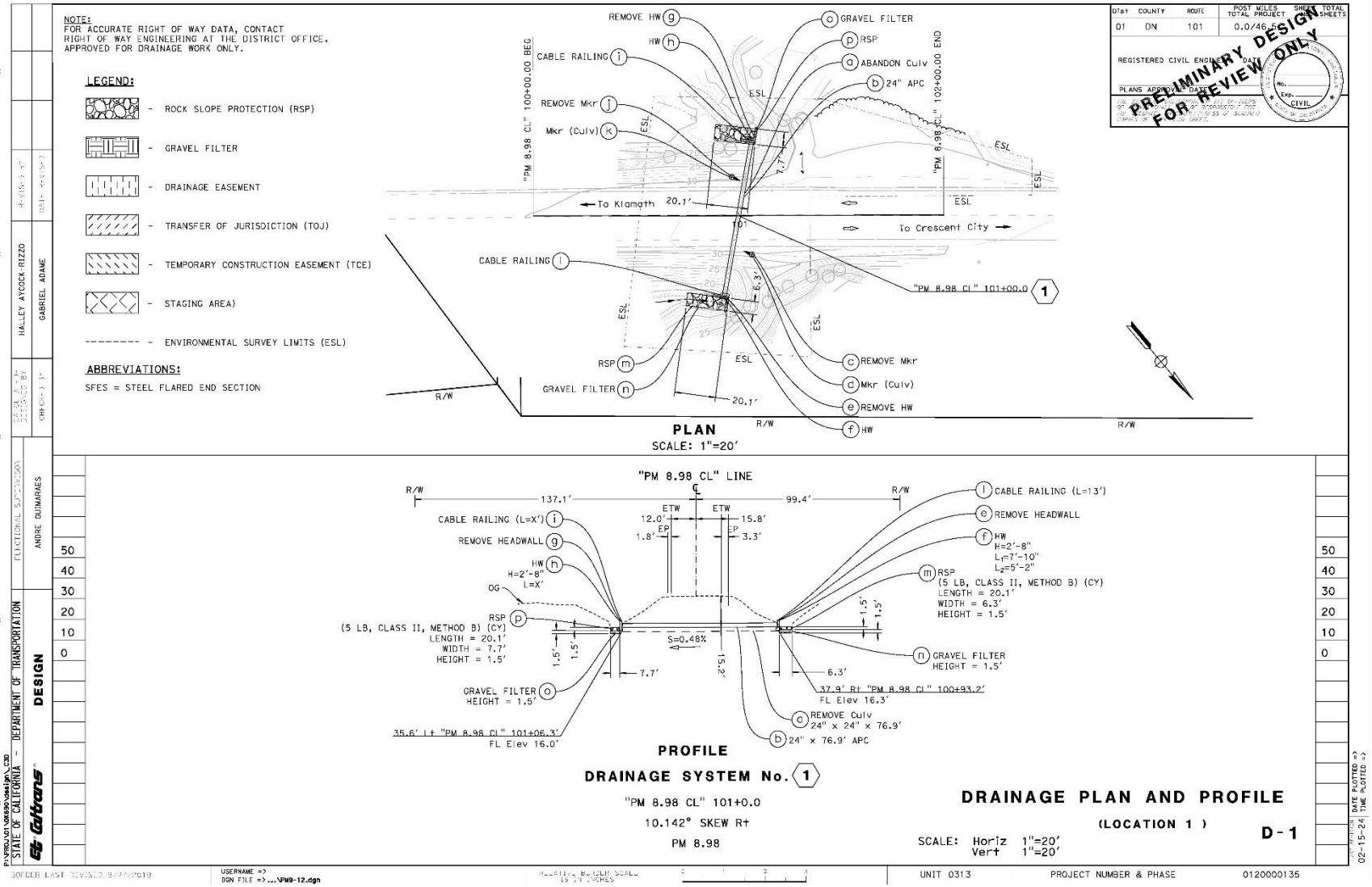
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TIME PLOTTED => 07:08

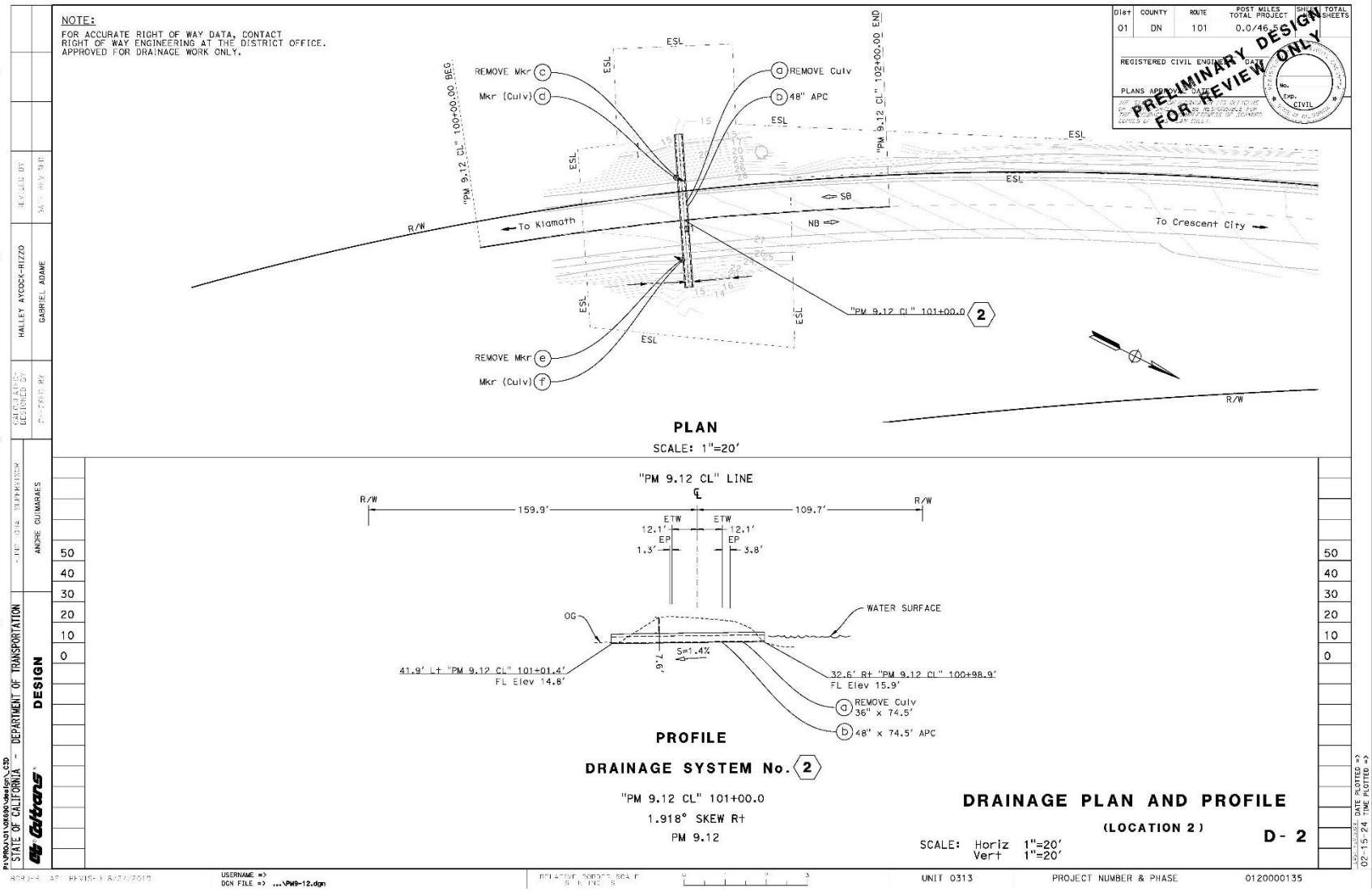

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
APPROVED FOR DRAINAGE WORK ONLY.
LEGEND:
SHOULDER WIDENING
CONCRETE BRIDGE
PRELIMINARY DESIGN FOR REVIEW ONLY
(P) HP
(P) EP
(P) 150' WGS
98'
38'
44'
To Klamath
SB
NB
To Crescent City
MOUNTAIN VIEW DR.
EVERETT SARGENT LN.
LOCATION 16
MELLO CREEK PM 37.46
LAYOUT
L-1
SCALE: 1"=10'
DEPARTMENT OF TRANSPORTATION
STATE OF CALIFORNIA
DESIGN
HALLEY AYCOCK-RIZZO
GABRIEL ADAME
ANDRE GUIMARAES
UNIT 0313
PROJECT NUMBER & PHASE
0120000135

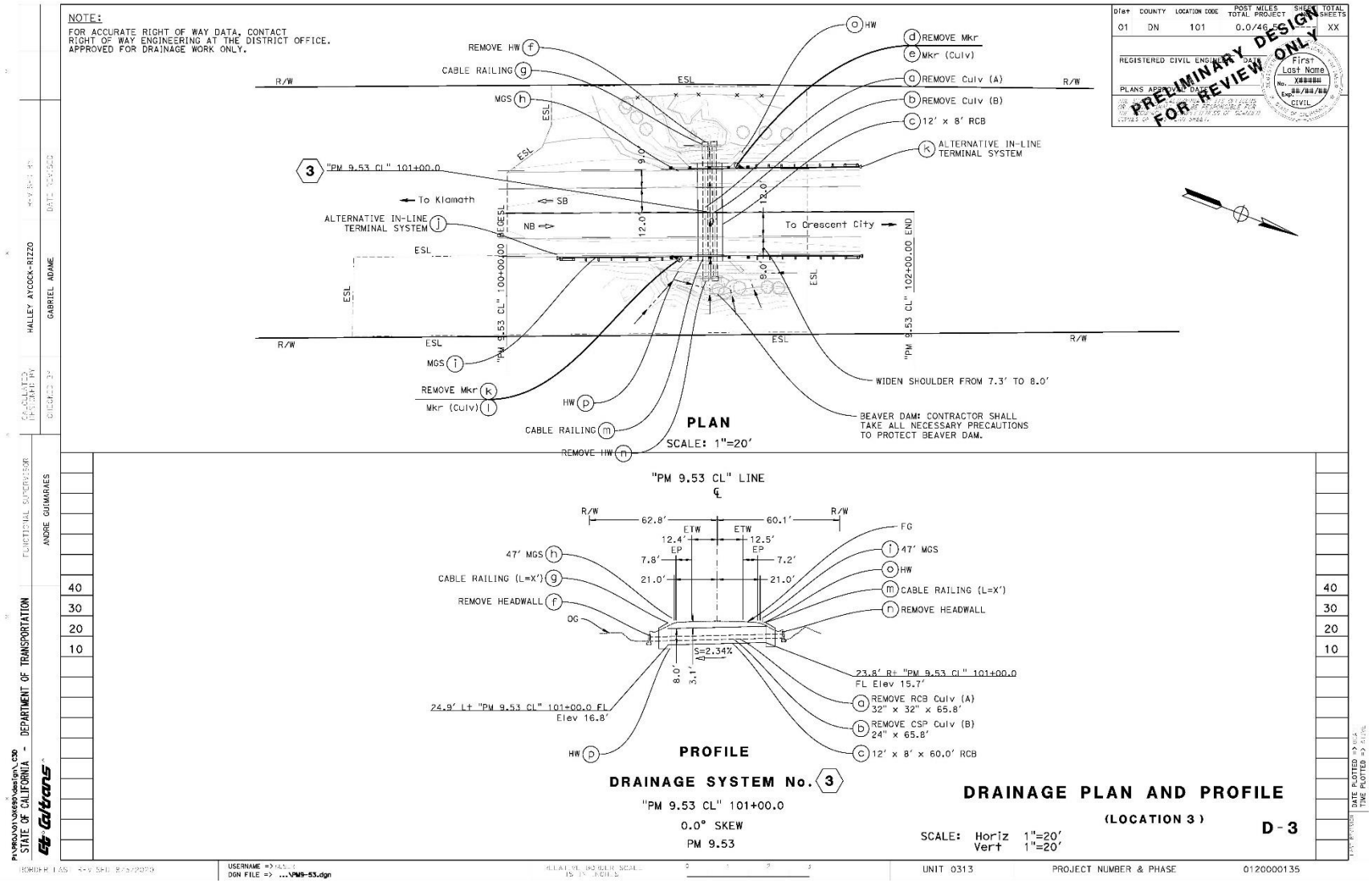

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
APPROVED FOR DRAINAGE WORK ONLY.
PRELIMINARY DESIGN FOR REVIEW ONLY
R/W
406'
SHOULDER WIDENING +/-1,420 ft² NNI
(P) 150' MGS w MINOR CONCRETE VEG. CONTROL
To Klamath
SB
NB
6
7
8
9
60
SHOULDER WIDENING +/-1,045 ft² NNI
NOTE: ADDITIONAL SURVEY DATA REQUIRED FOR THIS AREA.
REMOVE CONCRETE DITCH +/-3,690 ft² NEW PERVIOUS
347'
MELLO CREEK REALIGN
330'
SHOULDER WIDENING +/-1,115 ft² NNI
(P) CRASH CUSHION
To Crescent City
SHOULDER WIDENING +/-875 ft² NNI
318'
LOCATION 16
MELLO CREEK PM 37.46
LAYOUT
L-2
SCALE: 1"=20'
DESIGN
DEPARTMENT OF TRANSPORTATION
STATE OF CALIFORNIA
UNIT 0313
PROJECT NUMBER & PHASE
0120000135

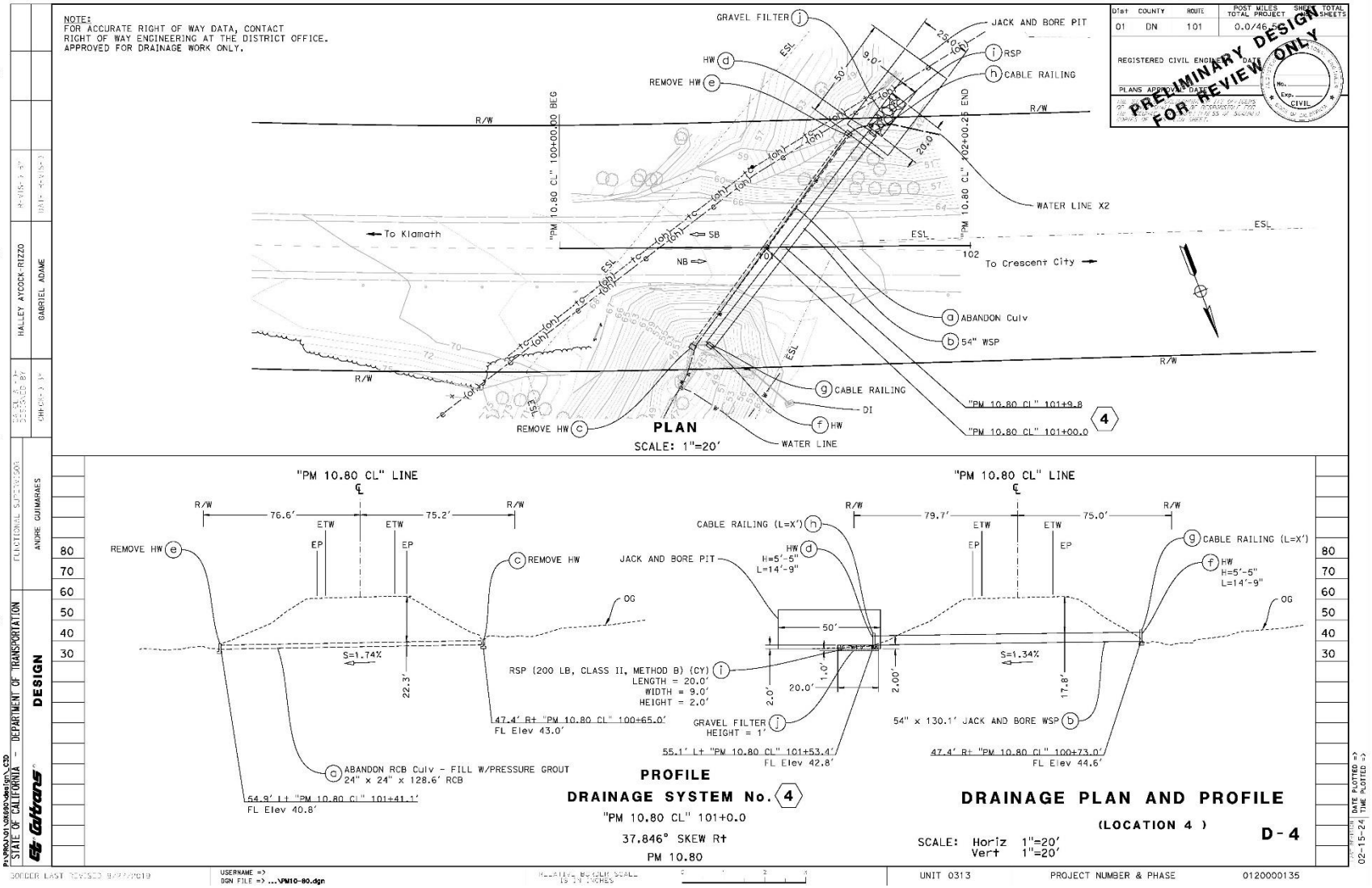

NOTE:
ELEVATIONS ARE BASED ON NAVD88
PRELIMINARY DESIGN FOR REVIEW ONLY
MATCH Exist
AXIS OF ROTATION
"101 CL" LINE
-2.0% Rt/Lt
TRAVELED WAY
-5.0% Rt/Lt
SHOULDER
-2.0% Rt/Lt
TRAVELED WAY
-5.0% Rt/Lt
SHOULDER
-2.0% Rt/Lt
TRAVELED WAY
& SHOULDER
MATCHLINE
+94.00
+50.00
+60.00
57
58
59
60+00
61
62
SUPERELEVATION DIAGRAM
NOTE:
ADDITIONAL SURVEY DATA
REQUIRED FOR THIS AREA.
+20.60 POT
Elev 109.81
-1.586%
+74.17 POT
Elev 105.79
MATCHLINE
PROFILE AND
SUPERELEVATION DIAGRAM
PM 37.46
SCALE: Horiz 1" = 20'
Vert 1" = 20'
PS-1
PROFILE
ROUTE 101
"101 CL" LINE
STATION
CY Exc
Emb
TOTAL
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
HALLEY AYCOCK-RIZZO
GABRIEL ADAME
ANDRE GUIMARAES
UNIT 0313
PROJECT NUMBER & PHASE
0120000135

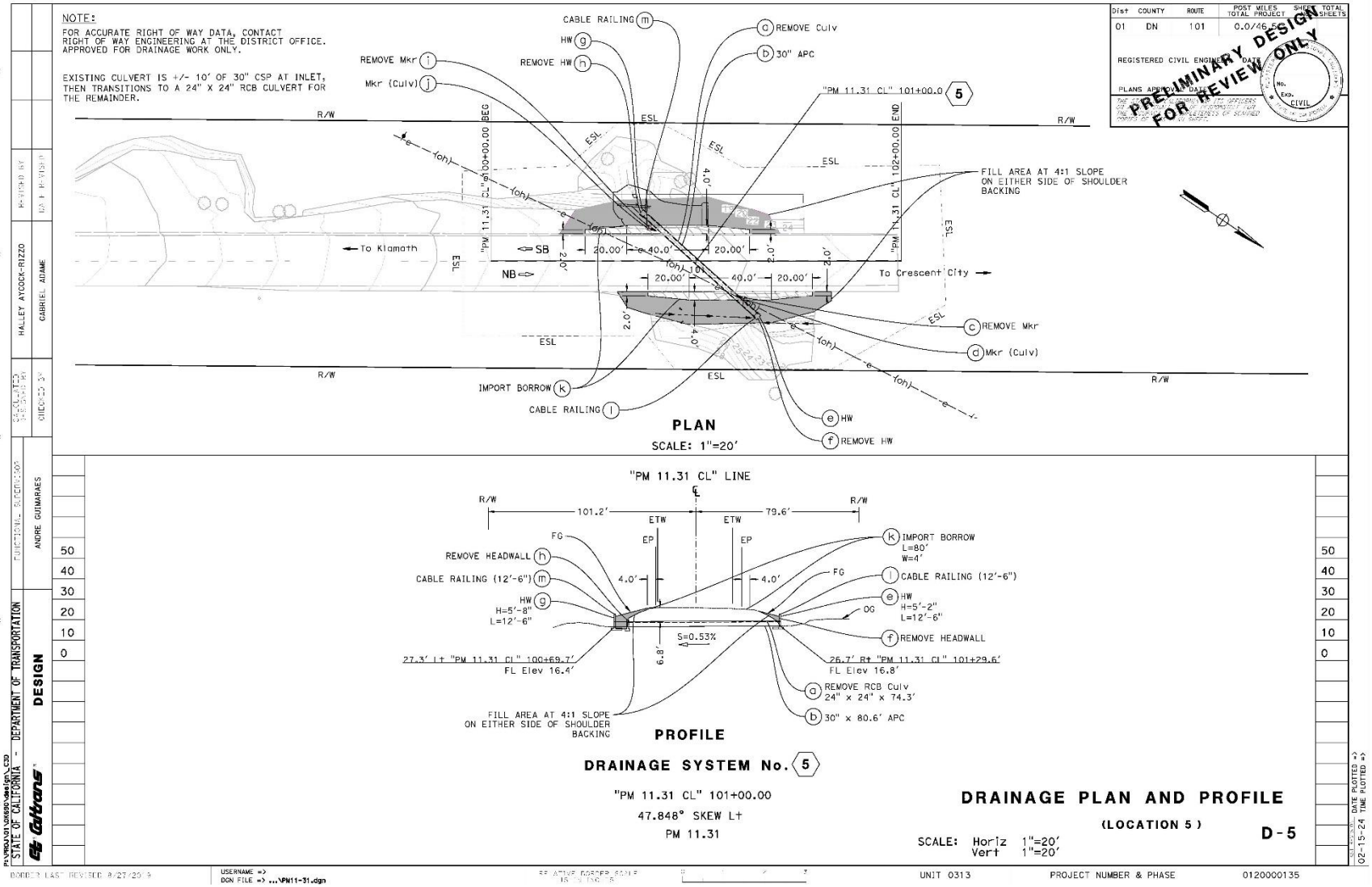

NOTE:
ELEVATIONS ARE BASED ON NAVD88
PRELIMINARY DESIGN FOR REVIEW ONLY
MATCHLINE
AXIS OF ROTATION "101 CL" LINE
-2.0% Rt/Lt TRAVELED WAY & SHOULDER
-2.0% Rt/Lt TRAVELED WAY
-5.0% Rt/Lt SHOULDER
MATCH Exist
SUPERELEVATION DIAGRAM
MATCHLINE
-1.553%
-1.345%
+75.33 POT Elev 102.66
+57.39 POT Elev 101.56
NOTE:
ADDITIONAL SURVEY DATA REQUIRED FOR THIS AREA.
PROFILE
ROUTE 101
"101 CL" LINE
PROFILE AND
SUPERELEVATION DIAGRAM
PM 37.46
SCALE: Horiz 1" = 20'
Vert 1" = 20'
PS-2
STATION
CY Exc
Emb
TOTAL
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
HALLEY AYCOCK-RIZZO
GABRIEL ADAME
ANDRE GUIMARAES
UNIT 0313
PROJECT NUMBER & PHASE
0120000135

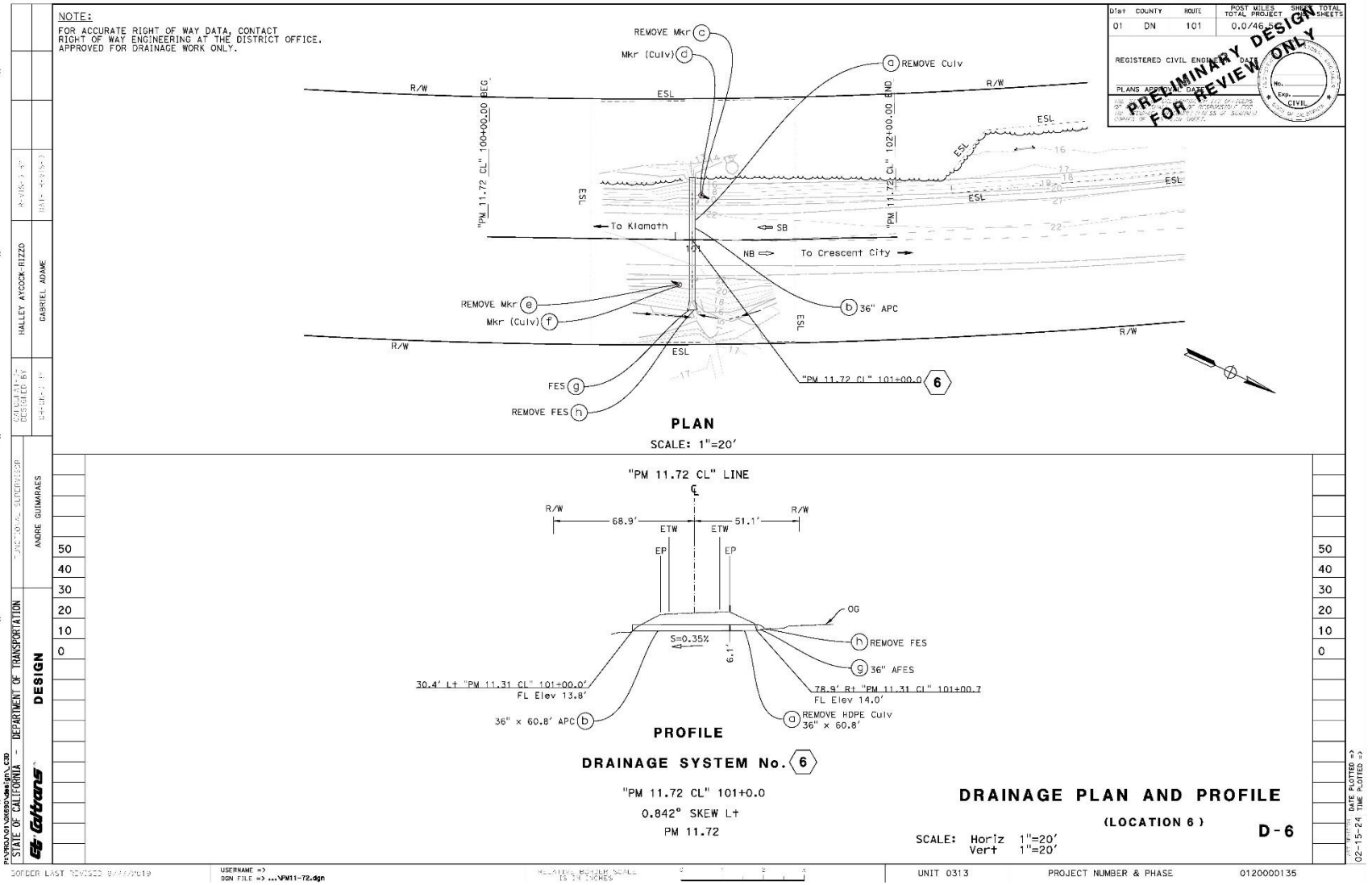

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE. APPROVED FOR DRAINAGE WORK ONLY.
LEGEND:
- ROCK SLOPE PROTECTION (RSP)
- GRAVEL FILTER
- DRAINAGE EASEMENT
- TRANSFER OF JURISDICTION (TOJ)
- TEMPORARY CONSTRUCTION EASEMENT (TCE)
- STAGING AREA)
- ENVIRONMENTAL SURVEY LIMITS (ESL)
ABBREVIATIONS:
SFES = STEEL FLARED END SECTION
REMOVE HW
HW
CABLE RAILING
REMOVE Mkr
Mkr (Culv)
GRAVEL FILTER
RSP
ABANDON Culv
24" APC
"PM 8.98 CL" 100+00.00 BEG
"PM 8.98 CL" 102+00.00 END
ESL
To Klamath
To Crescent City
20.1'
10'
7.7'
6.3'
"PM 8.98 CL" 101+00.0
REMOVE Mkr
Mkr (Culv)
REMOVE HW
HW
R/W
PLAN
SCALE: 1"=20'
Dist COUNTY ROUTE POST MILES TOTAL PROJECT SHEET TOTAL SHEETS
01 DN 101 0.0/46.5
REGISTERED CIVIL ENGINEER DATE
PLANS APPROVAL DATE
PRELIMINARY DESIGN FOR REVIEW ONLY
"PM 8.98 CL" LINE
137.1'
99.4'
ETW
12.0'
15.8'
EP
1.8'
3.3'
CABLE RAILING (L=X')
REMOVE HEADWALL
HW
H=2'-8"
L=X'
OG
RSP
(5 LB, CLASS II, METHOD B) (CY)
LENGTH = 20.1'
WIDTH = 7.7'
HEIGHT = 1.5'
GRAVEL FILTER
HEIGHT = 1.5'
35.6' Lt "PM 8.98 CL" 101+06.3'
FL Elev 16.0'
S=0.48%
15.2'
1.5'
7.7'
6.3'
CABLE RAILING (L=13')
REMOVE HEADWALL
HW
H=2'-8"
L1=7'-10"
L2=5'-2"
RSP
(5 LB, CLASS II, METHOD B) (CY)
LENGTH = 20.1'
WIDTH = 6.3'
HEIGHT = 1.5'
GRAVEL FILTER
HEIGHT = 1.5'
37.9' Rt "PM 8.98 CL" 100+93.2'
FL Elev 16.3'
REMOVE Culv
24" x 24" x 76.9'
24" x 76.9' APC
PROFILE
DRAINAGE SYSTEM No. 1
"PM 8.98 CL" 101+0.0
10.142° SKEW Rt
PM 8.98
DRAINAGE PLAN AND PROFILE
(LOCATION 1 )
SCALE: Horiz 1"=20'
Vert 1"=20'
D-1
DEPARTMENT OF TRANSPORTATION
STATE OF CALIFORNIA
DESIGN
FUNCTIONAL SUPERVISOR
ANDRE GUIMARAES
HALLEY AYCOCK-RIZZO
GABRIEL ADAME
UNIT 0313
PROJECT NUMBER & PHASE
0120000135
02-15-24

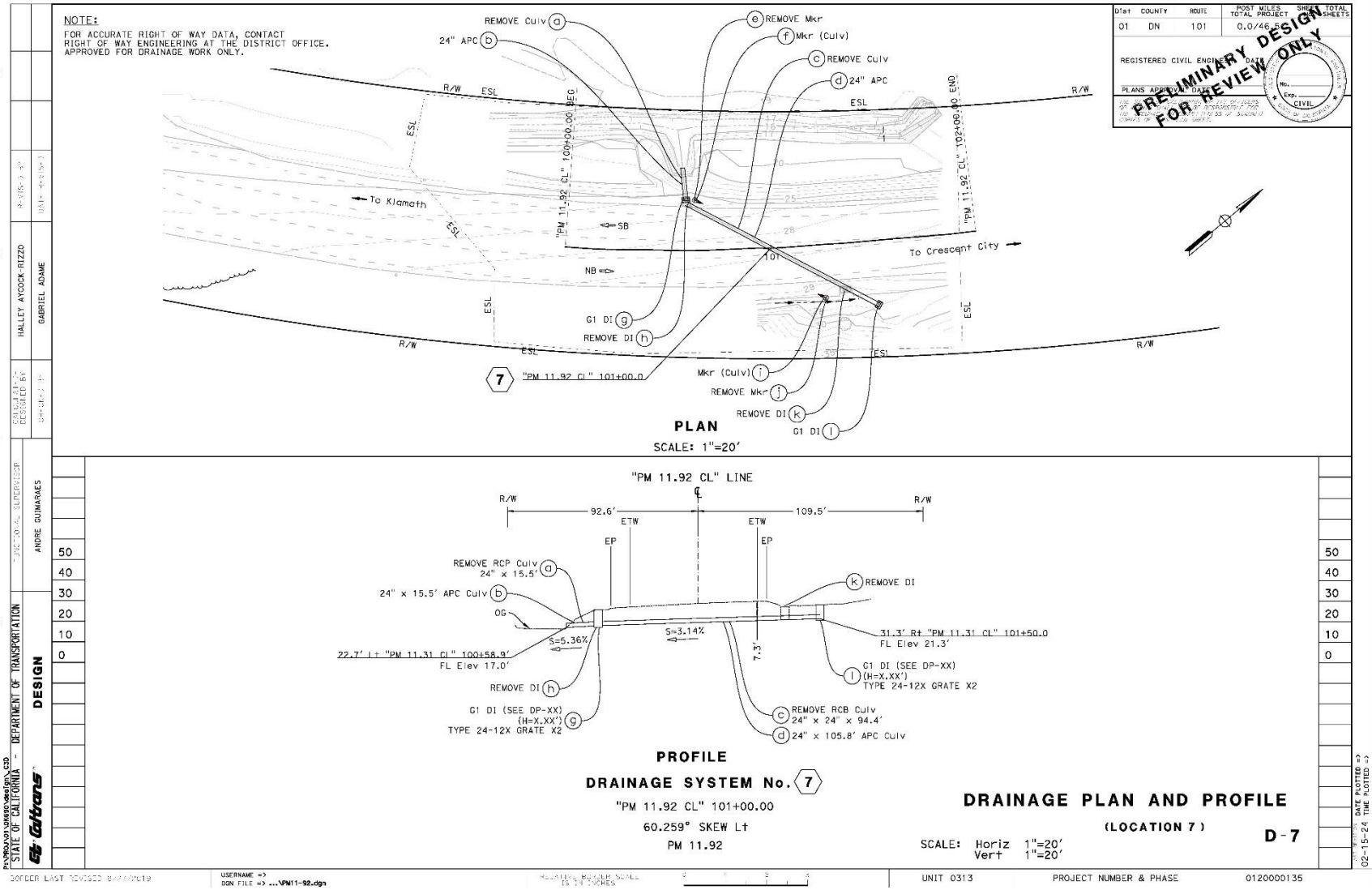

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE. APPROVED FOR DRAINAGE WORK ONLY.
Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET NO. | TOTAL SHEETS
01 | DN | 101 | 0.0/46.5
REGISTERED CIVIL ENGINEER | DATE
PLANS APPROVAL DATE
PRELIMINARY DESIGN FOR REVIEW ONLY
"PM 9.12 CL" 100+00.00 BEG
"PM 9.12 CL" 102+00.00 END
REMOVE Mkr (c)
Mkr (Culv) (d)
(a) REMOVE Culv
(b) 48" APC
ESL
R/W
To Klamath
SB
NB
To Crescent City
"PM 9.12 CL" 101+00.0 (2)
REMOVE Mkr (e)
Mkr (Culv) (f)
PLAN
SCALE: 1"=20'
"PM 9.12 CL" LINE
159.9'
109.7'
ETW
12.1'
EP
1.3'
3.8'
OG
WATER SURFACE
S=1.4%
7.6'
41.9' Lt "PM 9.12 CL" 101+01.4'
FL Elev 14.8'
32.6' Rt "PM 9.12 CL" 100+98.9'
FL Elev 15.9'
(a) REMOVE Culv 36" x 74.5'
(b) 48" x 74.5' APC
PROFILE
DRAINAGE SYSTEM No. (2)
"PM 9.12 CL" 101+00.0
1.918° SKEW Rt
PM 9.12
DRAINAGE PLAN AND PROFILE
(LOCATION 2)
SCALE: Horiz 1"=20'
Vert 1"=20'
D- 2
DESIGN
ANDRE GUIMARAES
HALLEY AYCOCK-RIZZO
GABRIEL ADAME
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
USERNAME =>
DGN FILE => ...\PM9-12.dgn
UNIT 0313
PROJECT NUMBER & PHASE
0120000135
DATE PLOTTED =>
02-15-24
TIME PLOTTED =>

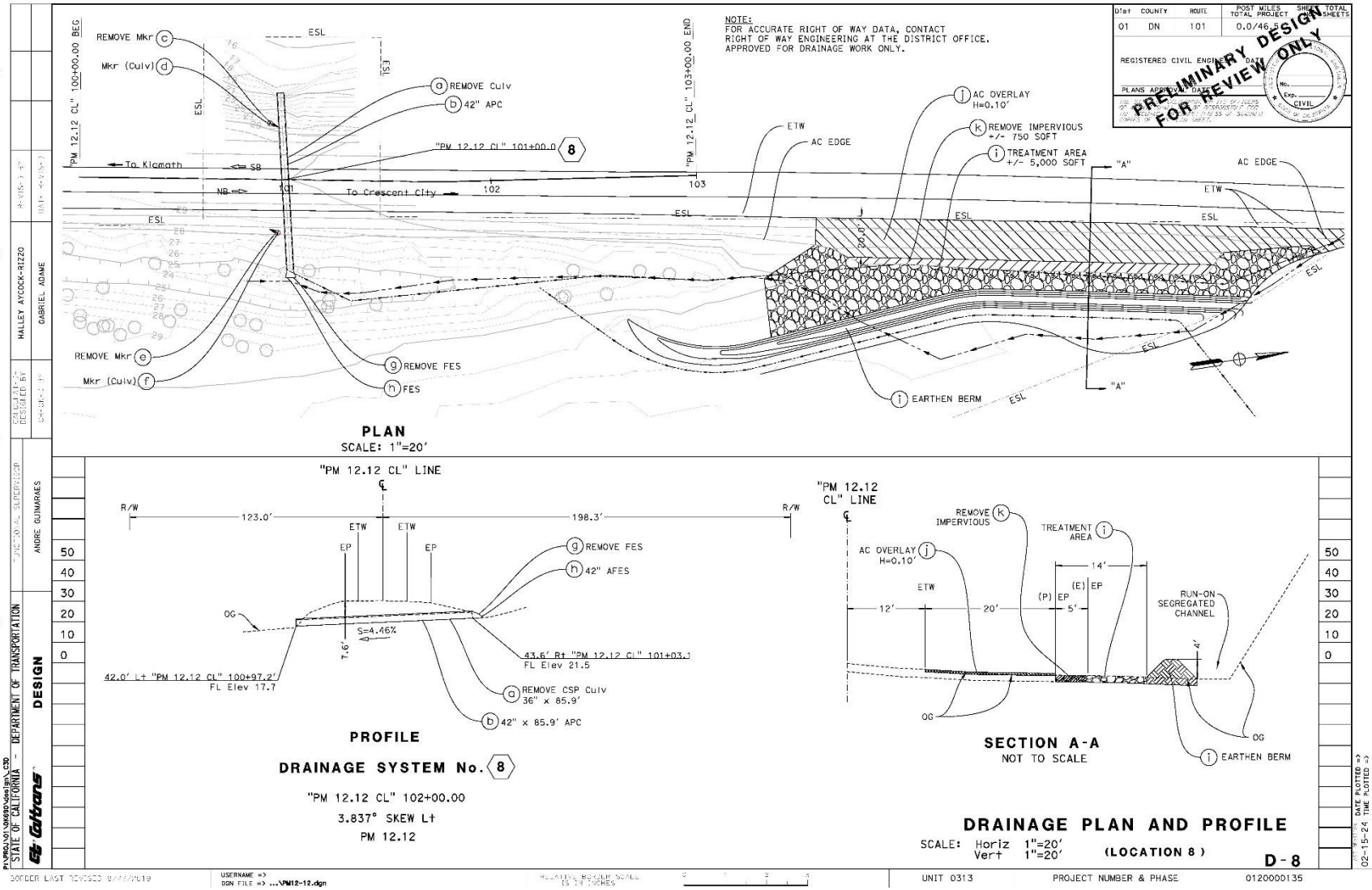

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE. APPROVED FOR DRAINAGE WORK ONLY.
Dist COUNTY LOCATION CODE POST MILES TOTAL PROJECT SHEET TOTAL SHEETS
01 DN 101 0.0/46.5 XX
PRELIMINARY DESIGN FOR REVIEW ONLY
REGISTERED CIVIL ENGINEER DATE
First Last Name
PLANS APPROVAL DATE
CIVIL
REMOVE HW (f)
CABLE RAILING (g)
MGS (h)
ESL
R/W
HW (o)
REMOVE Mkr (d)
Mkr (Culv) (e)
REMOVE Culv (A) (a)
REMOVE Culv (B) (b)
12' x 8' RCB (c)
ALTERNATIVE IN-LINE TERMINAL SYSTEM (K)
3 "PM 9.53 CL" 101+00.0
To Klamath
SB
NB
To Crescent City
ALTERNATIVE IN-LINE TERMINAL SYSTEM (j)
9.0'
12.0'
"PM 9.53 CL" 100+00.00 BEG ESL
"PM 9.53 CL" 102+00.00 END
MGS (i)
REMOVE Mkr (k)
Mkr (Culv) (l)
HW (p)
CABLE RAILING (m)
REMOVE HW (n)
WIDEN SHOULDER FROM 7.3' TO 8.0'
BEAVER DAM: CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT BEAVER DAM.
PLAN
SCALE: 1"=20'
"PM 9.53 CL" LINE
62.8'
60.1'
ETW
12.4'
12.5'
EP
7.8'
7.2'
21.0'
47' MGS (h)
CABLE RAILING (L=X') (g)
REMOVE HEADWALL (f)
OG
FG
47' MGS (j)
HW (o)
CABLE RAILING (L=X') (m)
REMOVE HEADWALL (n)
S=2.34%
8.0'
3.1'
24.9' Lt "PM 9.53 CL" 101+00.0 FL Elev 16.8'
23.8' Rt "PM 9.53 CL" 101+00.0 FL Elev 15.7'
REMOVE RCB Culv (A) 32" x 32" x 65.8' (a)
REMOVE CSP Culv (B) 24" x 65.8' (b)
12' x 8' x 60.0' RCB (c)
HW (p)
PROFILE
DRAINAGE SYSTEM No. 3
"PM 9.53 CL" 101+00.0
0.0° SKEW
PM 9.53
DRAINAGE PLAN AND PROFILE
(LOCATION 3)
SCALE: Horiz 1"=20' Vert 1"=20'
D-3
HALLEY AYCOCK-RIZZO
GABRIEL ADAME
ANDRE GUIMARAES
DEPARTMENT OF TRANSPORTATION
STATE OF CALIFORNIA
Caltrans
USERNAME => ...\PM9-53.dgn
UNIT 0313
PROJECT NUMBER & PHASE
0120000135

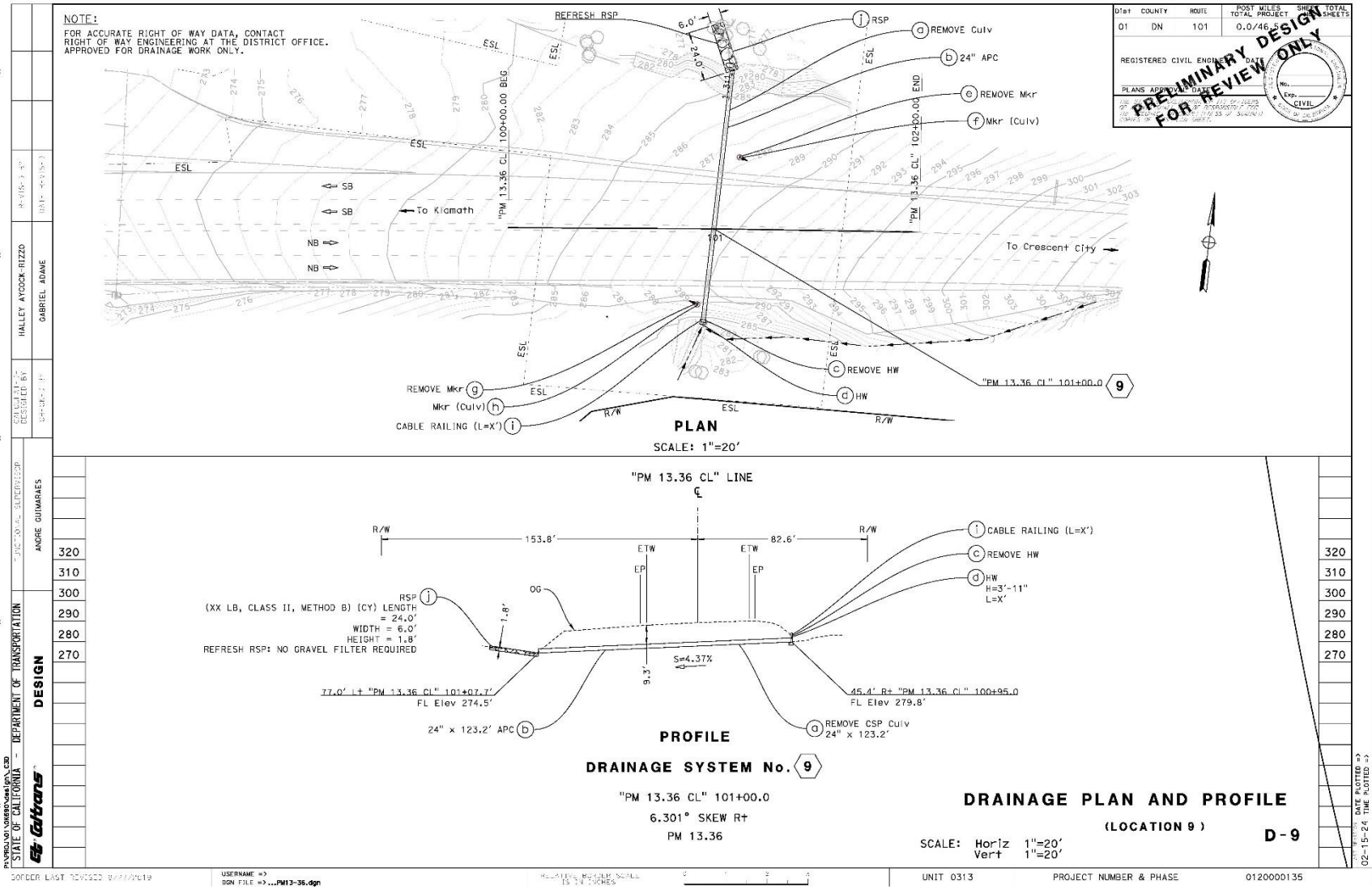

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT
RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
APPROVED FOR DRAINAGE WORK ONLY.
PRELIMINARY DESIGN FOR REVIEW ONLY
GRAVEL FILTER (j)
JACK AND BORE PIT
HW (d)
REMOVE HW (e)
RSP (i)
CABLE RAILING (h)
"PM 10.80 CL" 100+00.00 BEG
"PM 10.80 CL" 102+00.25 END
R/W
WATER LINE X2
To Klamath
SB
NB
ESL
To Crescent City
ABANDON Culv (a)
54" WSP (b)
CABLE RAILING (g)
DI
REMOVE HW (c)
HW (f)
WATER LINE
"PM 10.80 CL" 101+9.8
"PM 10.80 CL" 101+00.0
PLAN
SCALE: 1"=20'
"PM 10.80 CL" LINE
REMOVE HW (e)
REMOVE HW (c)
ABANDON RCB Culv - FILL W/PRESSURE GROUT
24" x 24" x 128.6' RCB
54.9' Lt "PM 10.80 CL" 101+41.1'
FL Elev 40.8'
47.4' Rt "PM 10.80 CL" 100+65.0'
FL Elev 43.0'
S=1.74%
22.3'
PROFILE
DRAINAGE SYSTEM No. 4
"PM 10.80 CL" 101+0.0
37.846° SKEW Rt
PM 10.80
CABLE RAILING (L=X') (h)
JACK AND BORE PIT
HW (d) H=5'-5" L=14'-9"
RSP (200 LB, CLASS II, METHOD B) (CY) (i)
LENGTH = 20.0'
WIDTH = 9.0'
HEIGHT = 2.0'
GRAVEL FILTER (j)
HEIGHT = 1'
55.1' Lt "PM 10.80 CL" 101+53.4'
FL Elev 42.8'
54" x 130.1' JACK AND BORE WSP (b)
47.4' Rt "PM 10.80 CL" 100+73.0'
FL Elev 44.6'
S=1.34%
17.8'
DRAINAGE PLAN AND PROFILE
(LOCATION 4 )
SCALE: Horiz 1"=20'
Vert 1"=20'
D-4
DESIGN
DEPARTMENT OF TRANSPORTATION
STATE OF CALIFORNIA
HALLEY AYCOCK-RIZZO
GABRIEL ADAME
ANDRE GUIMARAES
UNIT 0313
PROJECT NUMBER & PHASE
0120000135

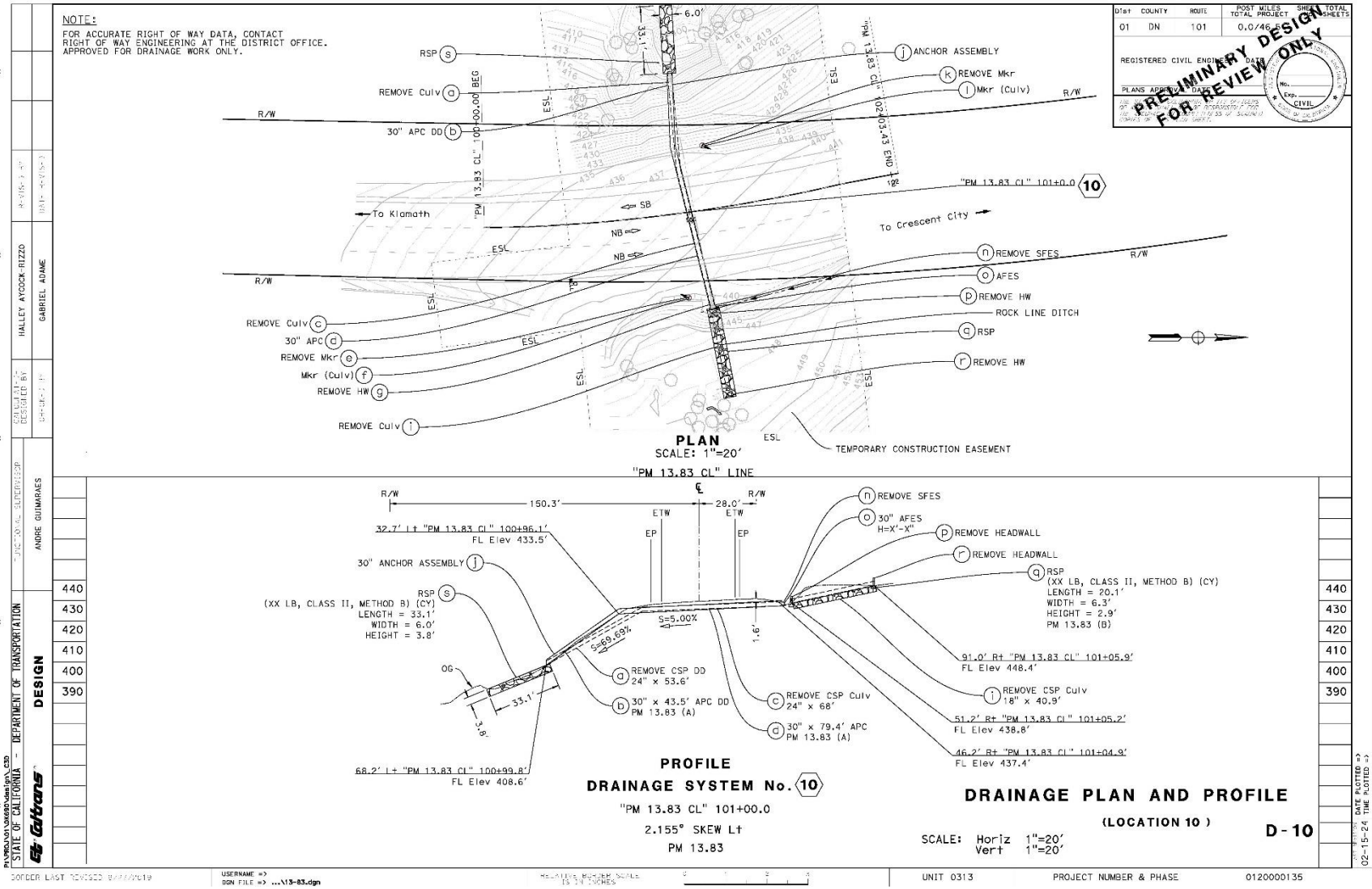

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE. APPROVED FOR DRAINAGE WORK ONLY.
EXISTING CULVERT IS +/- 10' OF 30" CSP AT INLET, THEN TRANSITIONS TO A 24" X 24" RCB CULVERT FOR THE REMAINDER.
Dist COUNTY ROUTE POST MILES TOTAL PROJECT SHEET TOTAL SHEETS
01 DN 101 0.0/46.5
REGISTERED CIVIL ENGINEER DATE
PLANS APPROVAL DATE
PRELIMINARY DESIGN FOR REVIEW ONLY
CABLE RAILING m
HW g
REMOVE HW h
REMOVE Mkr i
Mkr (Culv) j
a REMOVE Culv
b 30" APC
"PM 11.31 CL" 101+00.0 5
R/W
ESL
"PM 11.31 CL" 100+00.00 BEG
"PM 11.31 CL" 102+00.00 END
FILL AREA AT 4:1 SLOPE ON EITHER SIDE OF SHOULDER BACKING
To Klamath
SB
NB
20.00'
40.0'
2.0'
4.0'
To Crescent City
c REMOVE Mkr
d Mkr (Culv)
IMPORT BORROW k
CABLE RAILING l
e HW
f REMOVE HW
PLAN
SCALE: 1"=20'
"PM 11.31 CL" LINE
101.2'
79.6'
ETW
EP
FG
REMOVE HEADWALL h
CABLE RAILING (12'-6") m
HW g
H=5'-8"
L=12'-6"
4.0'
S=0.53%
6.8'
27.3' Lt "PM 11.31 CL" 100+69.7'
FL Elev 16.4'
26.7' Rt "PM 11.31 CL" 101+29.6'
FL Elev 16.8'
k IMPORT BORROW L=80' W=4'
j CABLE RAILING (12'-6")
e HW H=5'-2" L=12'-6"
OG
f REMOVE HEADWALL
a REMOVE RCB Culv 24" x 24" x 74.3'
b 30" x 80.6' APC
FILL AREA AT 4:1 SLOPE ON EITHER SIDE OF SHOULDER BACKING
PROFILE
DRAINAGE SYSTEM No. 5
"PM 11.31 CL" 101+00.00
47.848° SKEW Lt
PM 11.31
DRAINAGE PLAN AND PROFILE
(LOCATION 5)
SCALE: Horiz 1"=20'
Vert 1"=20'
D-5
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
ANDRE GUIMARAES
HALLEY AYCOCK-RIZZO
GABRIEL ADAME
UNIT 0313
PROJECT NUMBER & PHASE
0120000135
02-15-24

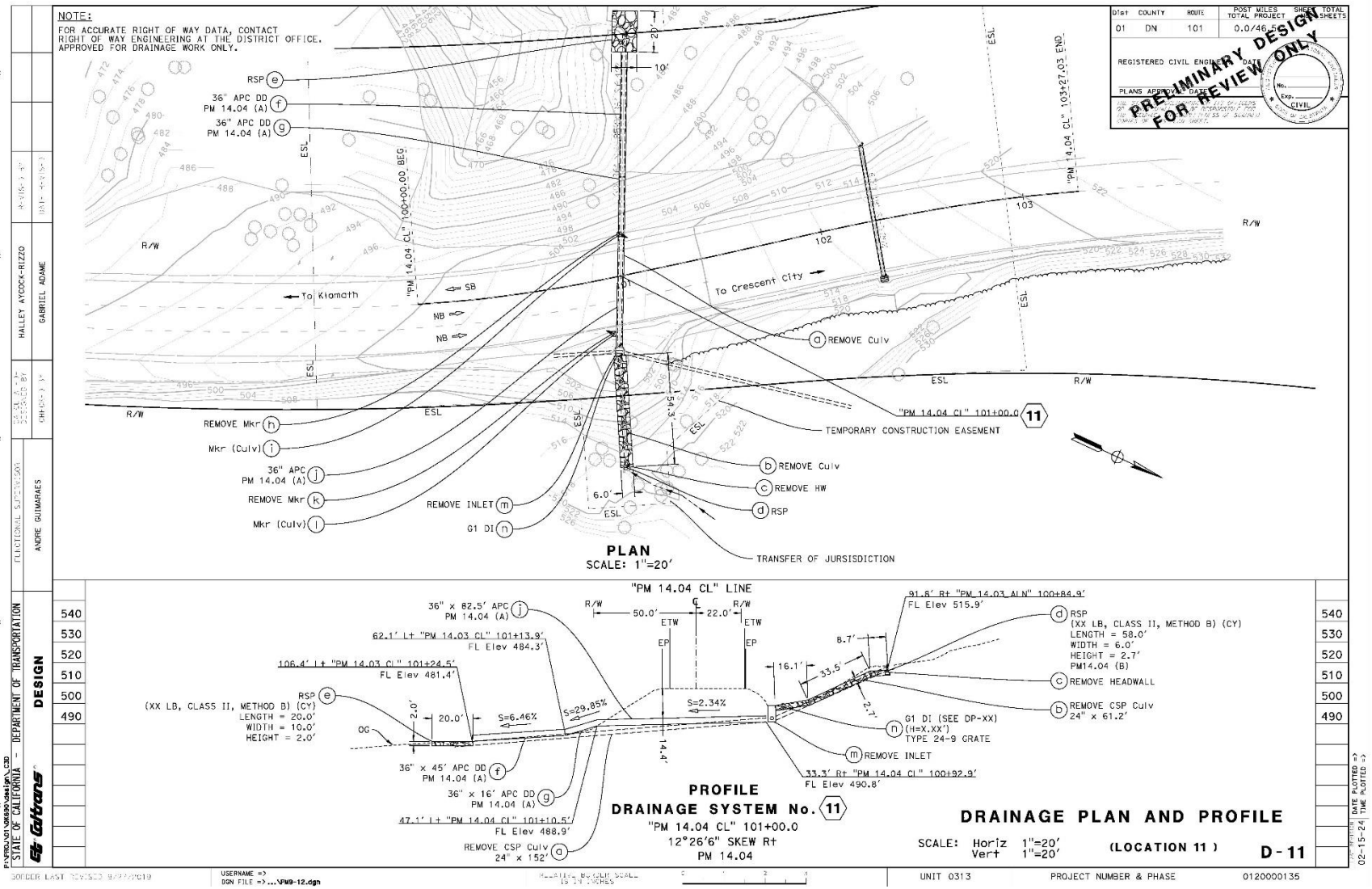

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE. APPROVED FOR DRAINAGE WORK ONLY.
REMOVE Mkr (c)
Mkr (Culv) (d)
(a) REMOVE Culv
R/W
ESL
"PM 11.72 CL" 100+00.00 BEG
"PM 11.72 CL" 102+00.00 END
To Klamath
SB
NB
To Crescent City
101
REMOVE Mkr (e)
Mkr (Culv) (f)
(b) 36" APC
FES (g)
REMOVE FES (h)
"PM 11.72 CL" 101+00.0 6
PLAN
SCALE: 1"=20'
"PM 11.72 CL" LINE
68.9'
51.1'
ETW
EP
OG
S=0.35%
6.1'
(h) REMOVE FES
(g) 36" AFES
30.4' Lt "PM 11.31 CL" 101+00.0' FL Elev 13.8'
78.9' Rt "PM 11.31 CL" 101+00.7 FL Elev 14.0'
36" x 60.8' APC (b)
(a) REMOVE HDPE Culv 36" x 60.8'
PROFILE
DRAINAGE SYSTEM No. 6
"PM 11.72 CL" 101+0.0
0.842° SKEW Lt
PM 11.72
DRAINAGE PLAN AND PROFILE
(LOCATION 6)
SCALE: Horiz 1"=20'
Vert 1"=20'
D-6
PRELIMINARY DESIGN FOR REVIEW ONLY
DEPARTMENT OF TRANSPORTATION
STATE OF CALIFORNIA
DESIGN
ANDRE GUIMARAES
HALLEY AYCOCK-RIZZO
GABRIEL ADAME
UNIT 0313
PROJECT NUMBER & PHASE
0120000135

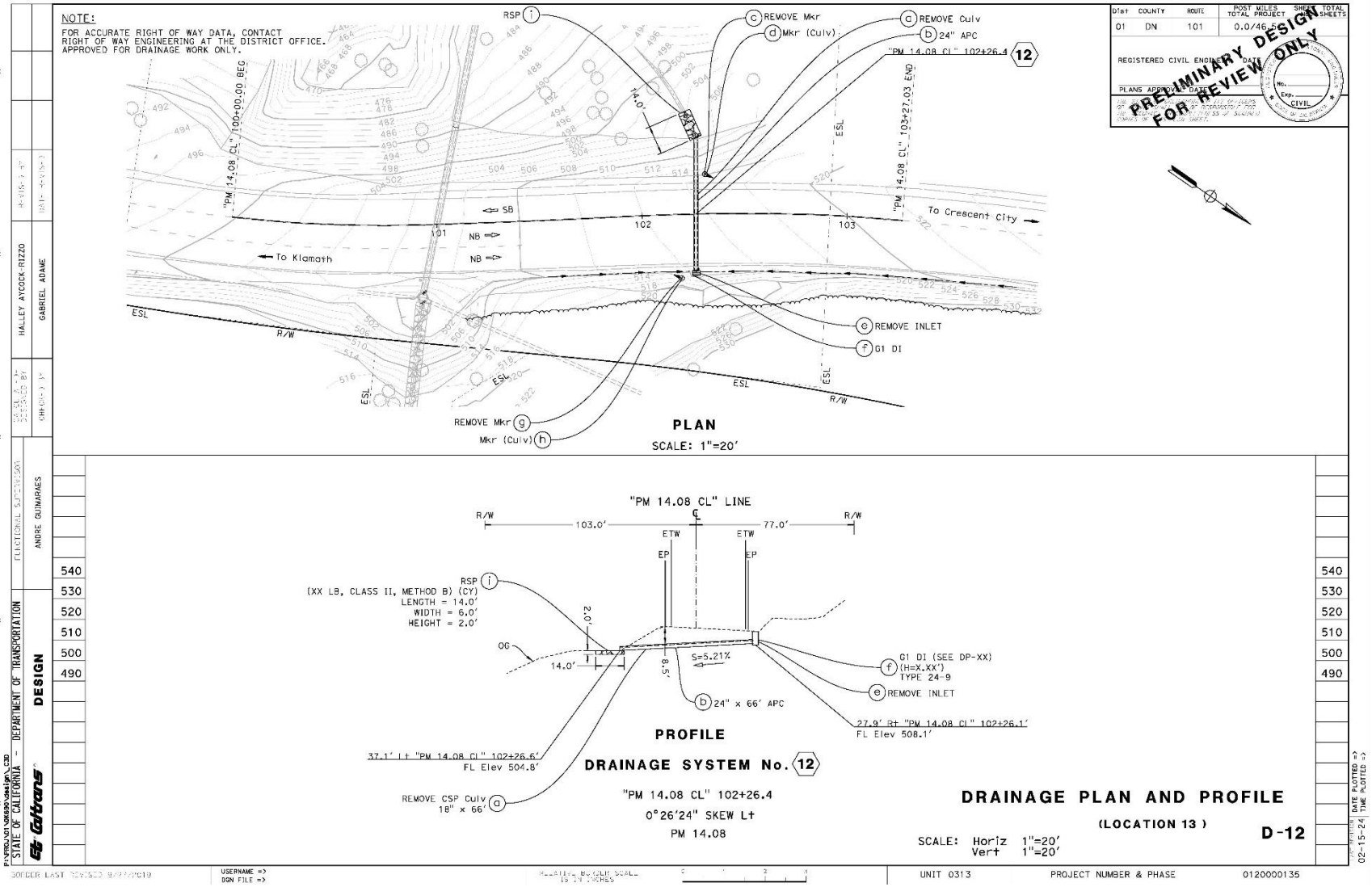

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE. APPROVED FOR DRAINAGE WORK ONLY.
REMOVE Culv (a)
24" APC (b)
REMOVE Mkr (e)
Mkr (Culv) (f)
REMOVE Culv (c)
24" APC (d)
R/W
ESL
"PM 11.92 CL" 100+00.00 BEG
"PM 11.92 CL" 102+00.00 END
To Klamath
To Crescent City
SB
NB
101
G1 DI (g)
REMOVE DI (h)
7
"PM 11.92 CL" 101+00.0
Mkr (Culv) (i)
REMOVE Mkr (j)
REMOVE DI (k)
G1 DI (l)
PLAN
SCALE: 1"=20'
Dist COUNTY ROUTE POST MILES TOTAL PROJECT SHEET TOTAL SHEETS
01 DN 101 0.0/46.5
REGISTERED CIVIL ENGINEER DATE
PLANS APPROVAL DATE
PRELIMINARY DESIGN FOR REVIEW ONLY
"PM 11.92 CL" LINE
92.6'
109.5'
ETW
EP
REMOVE RCP Culv 24" x 15.5' (a)
24" x 15.5' APC Culv (b)
OG
S=5.36%
S=3.14%
22.7' Lt "PM 11.31 CL" 100+58.9' FL Elev 17.0'
REMOVE DI (h)
G1 DI (SEE DP-XX) (H=X.XX') TYPE 24-12X GRATE X2 (g)
REMOVE DI (k)
31.3' Rt "PM 11.31 CL" 101+50.0 FL Elev 21.3'
7.3'
G1 DI (SEE DP-XX) (H=X.XX') TYPE 24-12X GRATE X2 (l)
REMOVE RCB Culv 24" x 24" x 94.4' (c)
24" x 105.8' APC Culv (d)
PROFILE
DRAINAGE SYSTEM No. 7
"PM 11.92 CL" 101+00.00
60.259° SKEW Lt
PM 11.92
DRAINAGE PLAN AND PROFILE
(LOCATION 7)
SCALE: Horiz 1"=20' Vert 1"=20'
D-7
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
ANDRE GUIMARAES
HALLEY AYCOCK-RIZZO
GABRIEL ADAME
UNIT 0313
PROJECT NUMBER & PHASE
0120000135
02-15-24

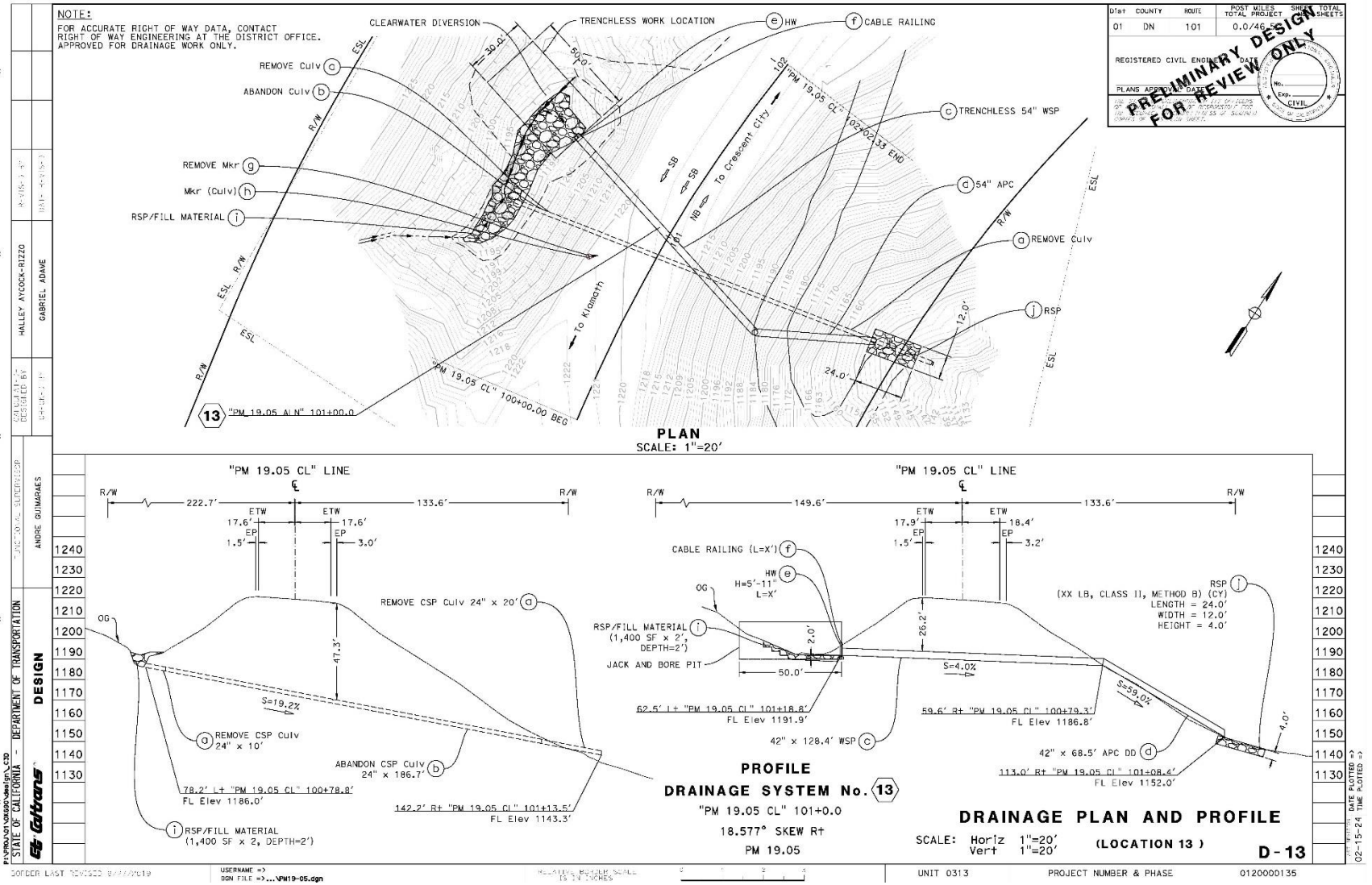

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE. APPROVED FOR DRAINAGE WORK ONLY.
PRELIMINARY DESIGN FOR REVIEW ONLY
REMOVE Mkr
Mkr (Culv)
REMOVE Culv
42" APC
REMOVE Mkr
Mkr (Culv)
REMOVE FES
FES
AC OVERLAY H=0.10'
REMOVE IMPERVIOUS +/- 750 SQFT
TREATMENT AREA +/- 5,000 SQFT
EARTHEN BERM
ETW
AC EDGE
ESL
To Klamath
To Crescent City
SB
NB
PLAN
SCALE: 1"=20'
"PM 12.12 CL" LINE
R/W
123.0'
198.3'
ETW
EP
REMOVE FES
42" AFES
OG
S=4.46%
7.6'
42.0' Lt "PM 12.12 CL" 100+97.2'
FL Elev 17.7
43.6' Rt "PM 12.12 CL" 101+03.1
FL Elev 21.5
REMOVE CSP Culv 36" x 85.9'
42" x 85.9' APC
PROFILE
DRAINAGE SYSTEM No. 8
"PM 12.12 CL" 102+00.00
3.837° SKEW Lt
PM 12.12
REMOVE IMPERVIOUS
TREATMENT AREA
AC OVERLAY H=0.10'
14'
(E) EP
(P) EP
12'
20'
5'
RUN-ON SEGREGATED CHANNEL
4'
SECTION A-A
NOT TO SCALE
EARTHEN BERM
DRAINAGE PLAN AND PROFILE
SCALE: Horiz 1"=20'
Vert 1"=20'
(LOCATION 8)
D-8
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
ANDRE GUIMARAES
HALLEY AYCOCK-RIZZO
GABRIEL ADAME
UNIT 0313
PROJECT NUMBER & PHASE
0120000135
02-15-24

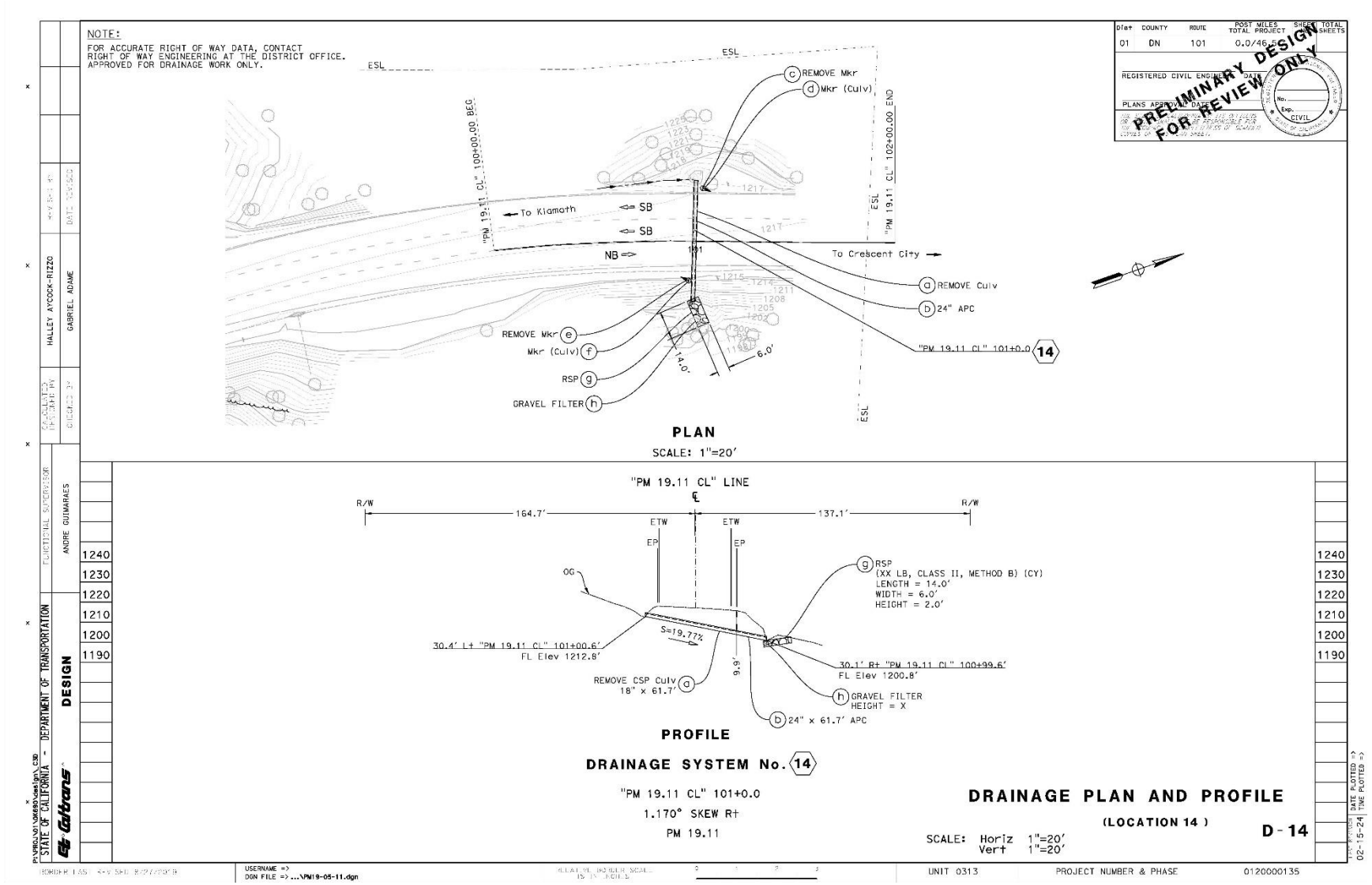

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE. APPROVED FOR DRAINAGE WORK ONLY.
REFRESH RSP
6.0'
24.0'
3:1
RSP
REMOVE Culv
24" APC
REMOVE Mkr
Mkr (Culv)
"PM 13.36 CL" 109+00.00 BEG
"PM 13.36 CL" 102+00.00 END
ESL
SB
SB
To Klamath
NB
NB
101
To Crescent City
REMOVE HW
HW
"PM 13.36 CL" 101+00.0
9
REMOVE Mkr
Mkr (Culv)
CABLE RAILING (L=X')
R/W
PLAN
SCALE: 1"=20'
Dist COUNTY ROUTE POST MILES TOTAL PROJECT SHEET TOTAL SHEETS
01 DN 101 0.0/46.5
REGISTERED CIVIL ENGINEER DATE
PLANS APPROVAL DATE
No. Exp. CIVIL
PRELIMINARY DESIGN FOR REVIEW ONLY
"PM 13.36 CL" LINE
R/W
153.8'
82.6'
R/W
ETW
ETW
EP
EP
OG
CABLE RAILING (L=X')
REMOVE HW
HW
H=3'-11"
L=X'
RSP
(XX LB, CLASS II, METHOD B) (CY) LENGTH = 24.0'
WIDTH = 6.0'
HEIGHT = 1.8'
REFRESH RSP: NO GRAVEL FILTER REQUIRED
1.8'
9.3'
S=4.37%
77.0' Lt "PM 13.36 CL" 101+07.7'
FL Elev 274.5'
45.4' Rt "PM 13.36 CL" 100+95.0
FL Elev 279.8'
24" x 123.2' APC
REMOVE CSP Culv
24" x 123.2'
PROFILE
320
310
300
290
280
270
DRAINAGE SYSTEM No. 9
"PM 13.36 CL" 101+00.0
6.301° SKEW Rt
PM 13.36
DRAINAGE PLAN AND PROFILE
(LOCATION 9)
SCALE: Horiz 1"=20'
Vert 1"=20'
D-9
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
ANDRE GUIMARAES
HALLEY AYCOCK-RIZZO
GABRIEL ADAME
DATE PLOTTED =>
02-15-24
TIME PLOTTED =>
UNIT 0313
PROJECT NUMBER & PHASE
0120000135

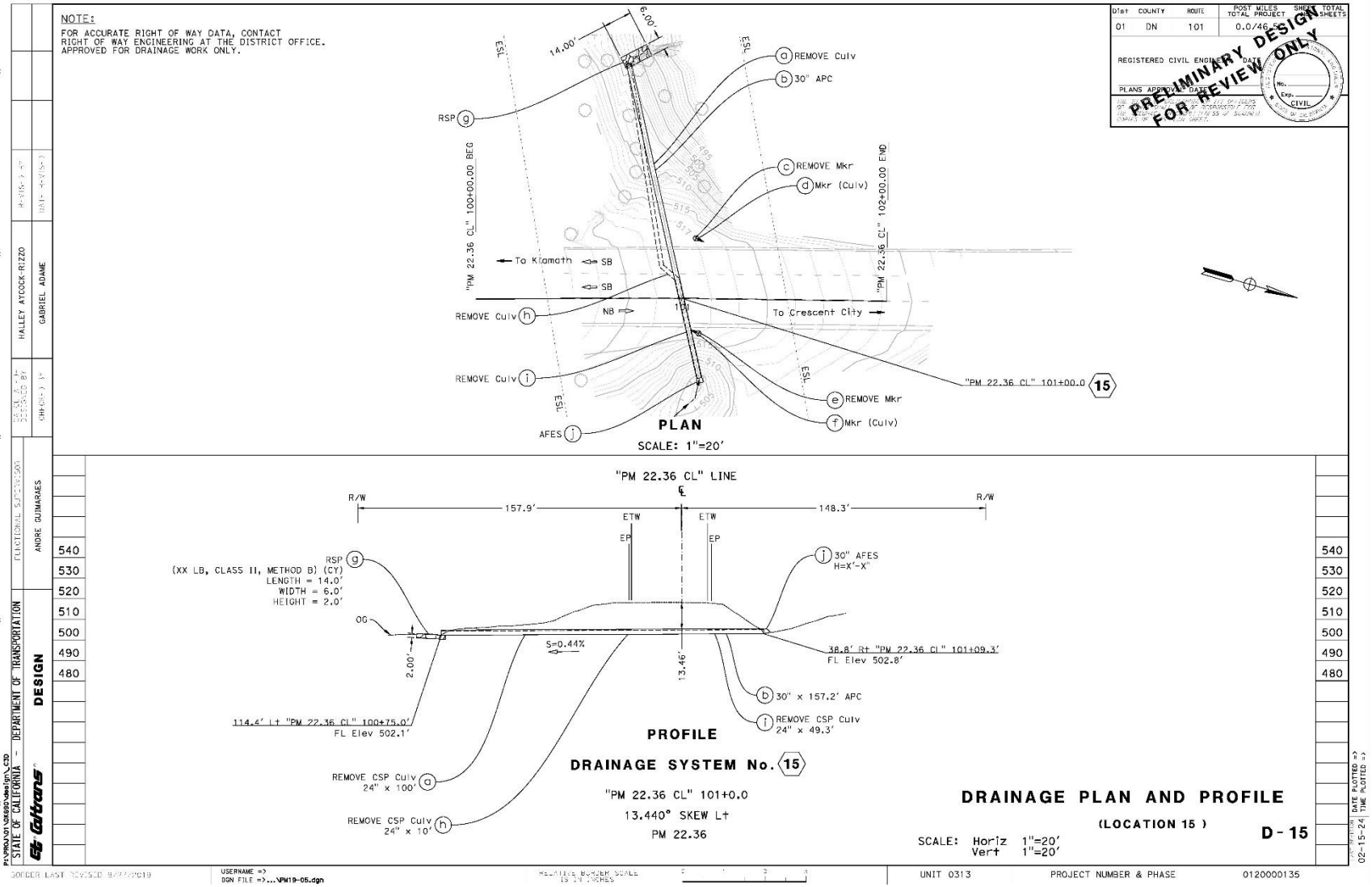

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PRELIMINARY DESIGN FOR REVIEW ONLY
PLAN
SCALE: 1"=20'
"PM 13.83 CL" LINE
TEMPORARY CONSTRUCTION EASEMENT
PROFILE
DRAINAGE SYSTEM No. 10
"PM 13.83 CL" 101+00.0
2.155° SKEW Lt
PM 13.83
DRAINAGE PLAN AND PROFILE
(LOCATION 10 )
SCALE: Horiz 1"=20' Vert 1"=20'
D-10
DESIGN
DEPARTMENT OF TRANSPORTATION
STATE OF CALIFORNIA
Caltrans
HALLEY AYCOCK-RIZZO
GABRIEL ADAME
ANDRE GUIMARAES
UNIT 0313
PROJECT NUMBER & PHASE
0120000135

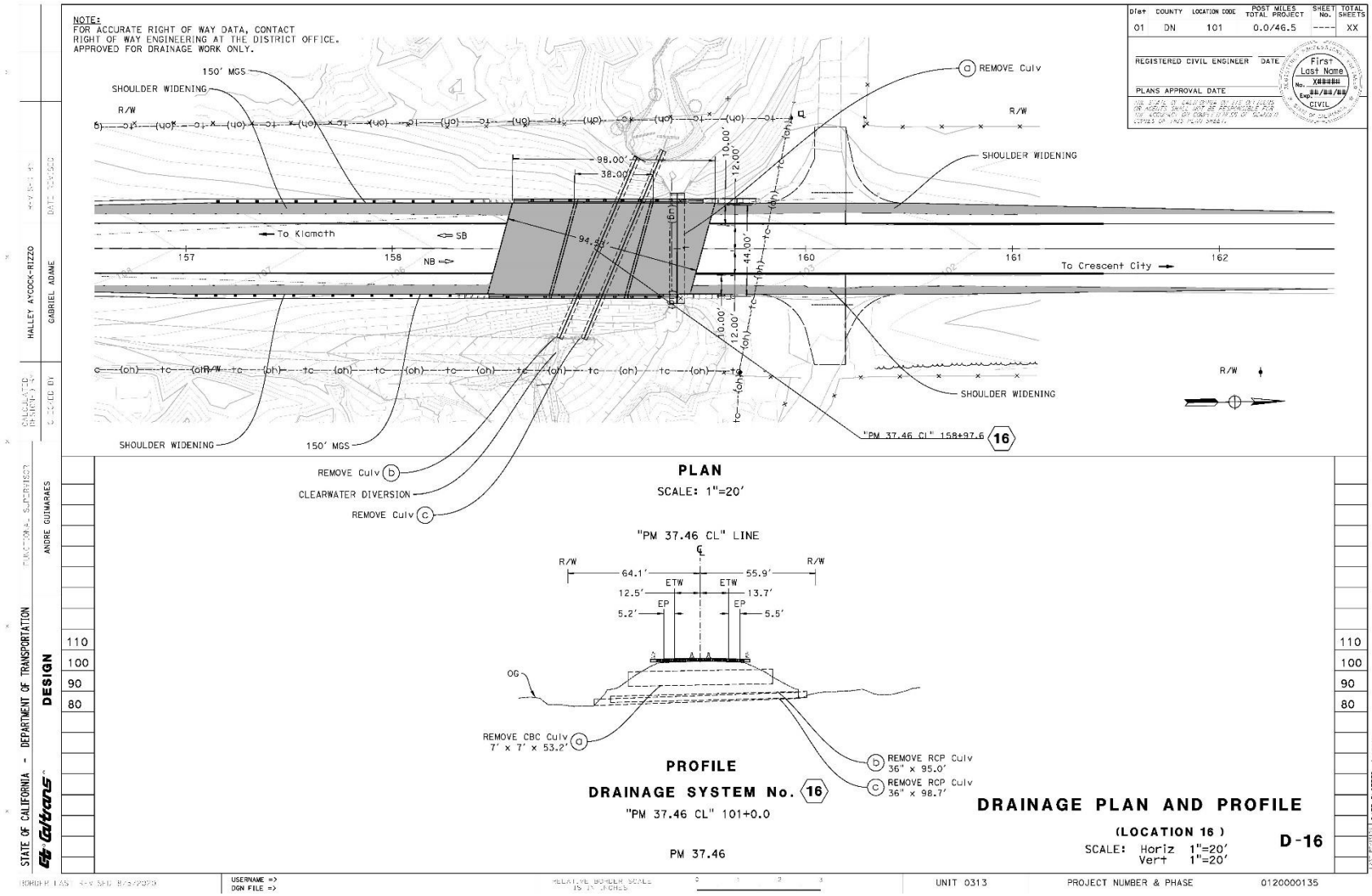

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE. APPROVED FOR DRAINAGE WORK ONLY.
PRELIMINARY DESIGN FOR REVIEW ONLY
RSP (e)
36" APC DD PM 14.04 (A) (f)
36" APC DD PM 14.04 (A) (g)
"PM 14.04 CL" 100+00.00 BEG
"PM 14.04 CL" 103+27.03 END
To Klamath
To Crescent City
SB
NB
NB
R/W
ESL
(a) REMOVE Culv
(b) REMOVE Culv
(c) REMOVE HW
(d) RSP
REMOVE Mkr (h)
Mkr (Culv) (i)
36" APC PM 14.04 (A) (j)
REMOVE Mkr (k)
Mkr (Culv) (l)
REMOVE INLET (m)
G1 DI (n)
"PM 14.04 CL" 101+00.0 11
TEMPORARY CONSTRUCTION EASEMENT
TRANSFER OF JURISDICTION
PLAN
SCALE: 1"=20'
"PM 14.04 CL" LINE
36" x 82.5' APC PM 14.04 (A) (j)
62.1' Lt "PM 14.03 CL" 101+13.9' FL Elev 484.3'
106.4' Lt "PM 14.03 CL" 101+24.5' FL Elev 481.4'
(XX LB, CLASS II, METHOD B) (CY) LENGTH = 20.0' WIDTH = 10.0' HEIGHT = 2.0'
RSP (e)
OG
S=6.46%
S=29.85%
S=2.34%
36" x 45' APC DD PM 14.04 (A) (f)
36" x 16' APC DD PM 14.04 (A) (g)
47.1' Lt "PM 14.04 CL" 101+10.5' FL Elev 488.9'
REMOVE CSP Culv 24" x 152' (a)
91.8' Rt "PM 14.03 ALN" 100+84.9' FL Elev 515.9'
(d) RSP (XX LB, CLASS II, METHOD B) (CY) LENGTH = 58.0' WIDTH = 6.0' HEIGHT = 2.7' PM14.04 (B)
(c) REMOVE HEADWALL
(b) REMOVE CSP Culv 24" x 61.2'
(n) G1 DI (SEE DP-XX) (H=X.XX') TYPE 24-9 GRATE
(m) REMOVE INLET
33.3' Rt "PM 14.04 CL" 100+92.9' FL Elev 490.8'
PROFILE
DRAINAGE SYSTEM No. 11
"PM 14.04 CL" 101+00.0
12°26'6" SKEW Rt
PM 14.04
DRAINAGE PLAN AND PROFILE
SCALE: Horiz 1"=20' Vert 1"=20'
(LOCATION 11)
D-11
DESIGN
FUNCTIONAL SUPERVISOR: ANDRE GUIMARAES
HALLEY AYCOCK-RIZZO
GABRIEL ADAME
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
UNIT 0313
PROJECT NUMBER & PHASE 0120000135

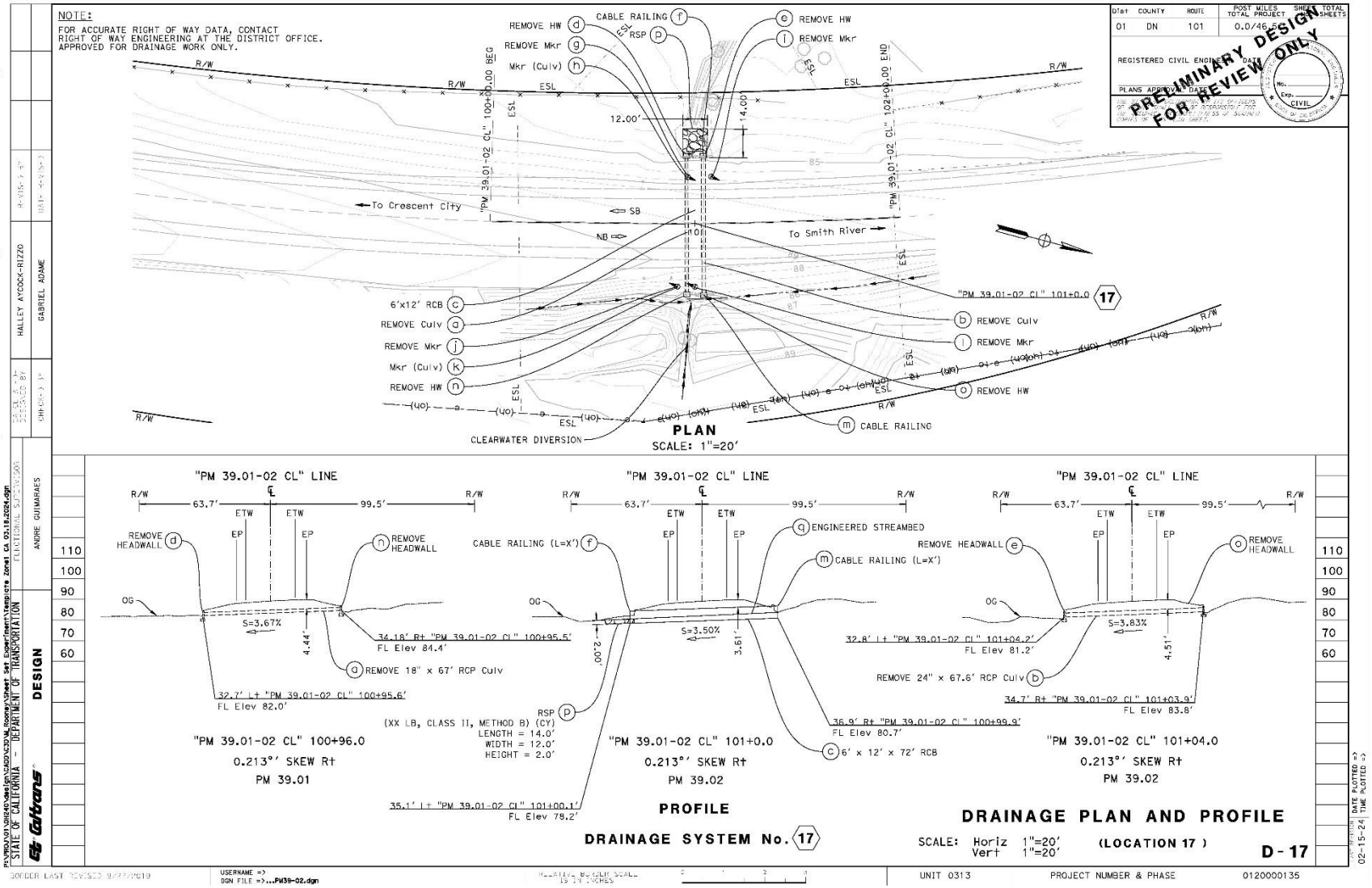

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
APPROVED FOR DRAINAGE WORK ONLY.
RSP (1)
(c) REMOVE Mkr
(d) Mkr (Culv)
(c) REMOVE Culv
(b) 24" APC
"PM 14.08 CL" 102+26.4
12
"PM 14.08 CL" 100+00.00 BEG
"PM 14.08 CL" 103+27.03 END
14.0'
ESL
SB
NB
NB
To Klamath
To Crescent City
101
102
103
R/W
(e) REMOVE INLET
(f) G1 DI
REMOVE Mkr (g)
Mkr (Culv) (h)
PLAN
SCALE: 1"=20'
Dist COUNTY ROUTE POST MILES TOTAL PROJECT SHEET TOTAL SHEETS
01 DN 101 0.0/46.5
REGISTERED CIVIL ENGINEER DATE
PLANS APPROVAL DATE
No. Exp. CIVIL
PRELIMINARY DESIGN FOR REVIEW ONLY
"PM 14.08 CL" LINE
R/W
103.0'
77.0'
R/W
ETW
ETW
EP
EP
RSP (i)
(XX LB, CLASS II, METHOD B) (CY)
LENGTH = 14.0'
WIDTH = 6.0'
HEIGHT = 2.0'
2.0'
OG
14.0'
8.5'
S=5.21%
(f) G1 DI (SEE DP-XX)
(H=X.XX')
TYPE 24-9
(e) REMOVE INLET
(b) 24" x 66' APC
27.9' Rt "PM 14.08 CL" 102+26.1'
FL Elev 508.1'
37.1' Lt "PM 14.08 CL" 102+26.6'
FL Elev 504.8'
REMOVE CSP Culv (a)
18" x 66'
PROFILE
DRAINAGE SYSTEM No. 12
"PM 14.08 CL" 102+26.4
0°26'24" SKEW Lt
PM 14.08
DRAINAGE PLAN AND PROFILE
(LOCATION 13)
SCALE: Horiz 1"=20'
Vert 1"=20'
D-12
540
530
520
510
500
490
DESIGN
ANDRE GUIMARAES
FUNCTIONAL SUPERVISOR
HALLEY AYCOCK-RIZZO
GABRIEL ADAME
DEPARTMENT OF TRANSPORTATION
STATE OF CALIFORNIA
Caltrans
02-15-24
UNIT 0313
PROJECT NUMBER & PHASE
0120000135

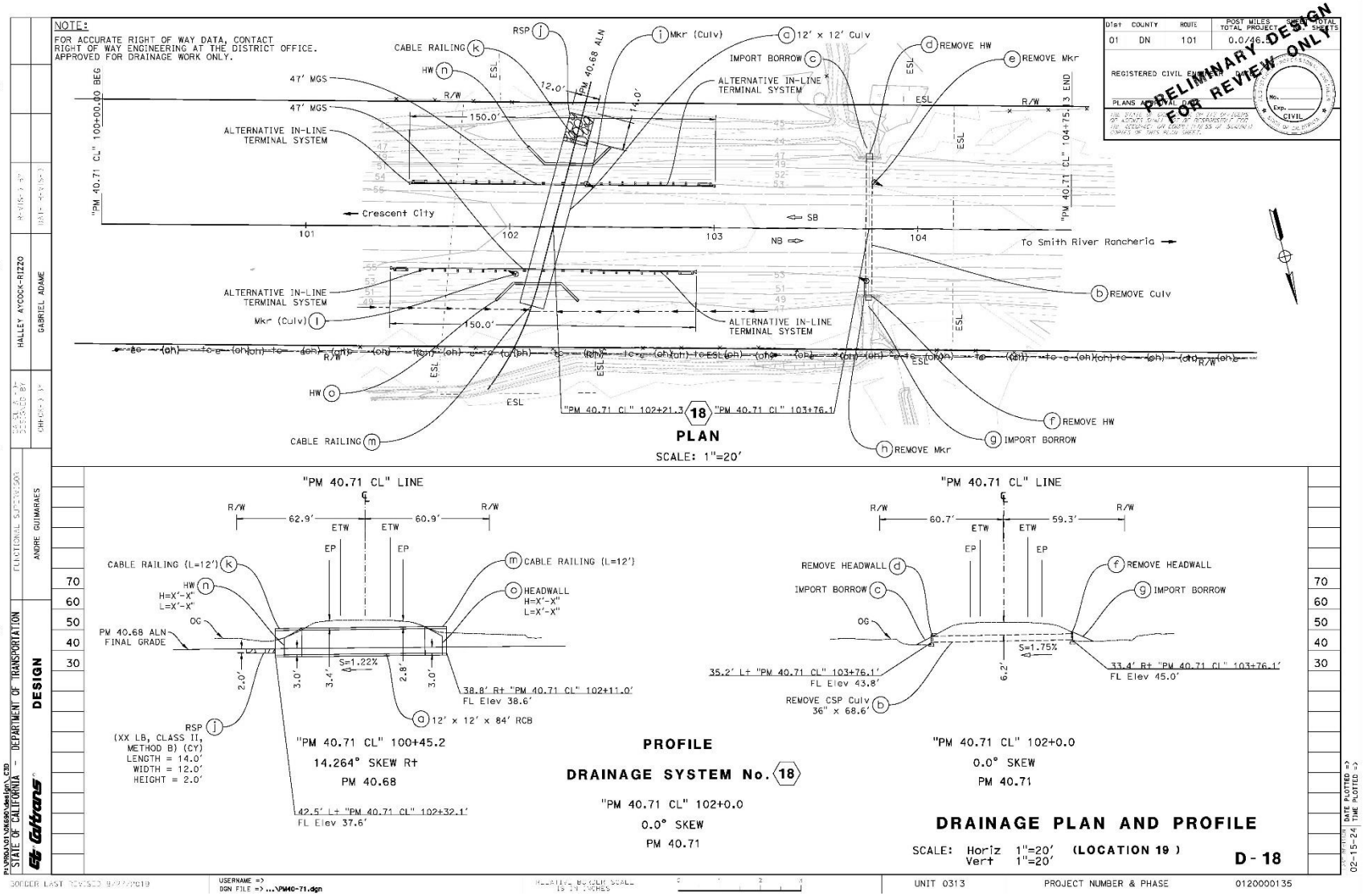

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE. APPROVED FOR DRAINAGE WORK ONLY.
CLEARWATER DIVERSION
TRENCHLESS WORK LOCATION
REMOVE Culv (a)
ABANDON Culv (b)
REMOVE Mkr (g)
Mkr (Culv) (h)
RSP/FILL MATERIAL (i)
(e) HW
(f) CABLE RAILING
(c) TRENCHLESS 54" WSP
(d) 54" APC
(a) REMOVE Culv
(j) RSP
"PM 19.05 CL" 102+02.33 END
"PM 19.05 CL" 100+00.00 BEG
"PM 19.05 ALN" 101+00.0
To Crescent City
To Klamath
SB
NB
ESL
R/W
PLAN
SCALE: 1"=20'
"PM 19.05 CL" LINE
222.7'
133.6'
149.6'
ETW
EP
17.6'
17.9'
18.4'
1.5'
3.0'
3.2'
REMOVE CSP Culv 24" x 20' (a)
47.3'
S=19.2%
OG
(a) REMOVE CSP Culv 24" x 10'
ABANDON CSP Culv 24" x 186.7' (b)
78.2' L+ "PM 19.05 CL" 100+78.8'
FL Elev 1186.0'
142.2' R+ "PM 19.05 CL" 101+13.5'
FL Elev 1143.3'
(i) RSP/FILL MATERIAL (1,400 SF x 2, DEPTH=2')
CABLE RAILING (L=X') (f)
HW (e) H=5'-11" L=X'
RSP/FILL MATERIAL (i) (1,400 SF x 2', DEPTH=2')
JACK AND BORE PIT
2.0'
50.0'
26.2'
S=4.0%
S=59.0%
62.5' L+ "PM 19.05 CL" 101+18.8'
FL Elev 1191.9'
42" x 128.4' WSP (c)
59.6' R+ "PM 19.05 CL" 100+79.3'
FL Elev 1186.8'
RSP (j)
(XX LB, CLASS II, METHOD B) (CY)
LENGTH = 24.0'
WIDTH = 12.0'
HEIGHT = 4.0'
42" x 68.5' APC DD (d)
113.0' R+ "PM 19.05 CL" 101+08.4'
FL Elev 1152.0'
4.0'
PROFILE
DRAINAGE SYSTEM No. 13
"PM 19.05 CL" 101+0.0
18.577° SKEW R+
PM 19.05
DRAINAGE PLAN AND PROFILE
SCALE: Horiz 1"=20'
Vert 1"=20'
(LOCATION 13)
D-13
PRELIMINARY DESIGN FOR REVIEW ONLY
Dist COUNTY ROUTE POST MILES TOTAL PROJECT SHEET TOTAL SHEETS
01 DN 101 0.0/46.5
REGISTERED CIVIL ENGINEER DATE
PLANS APPROVAL DATE
CIVIL
DEPARTMENT OF TRANSPORTATION
STATE OF CALIFORNIA
DESIGN
ANDRE GUIMARAES
HALLEY AYCOCK-RIZZO
GABRIEL ADAME
UNIT 0313
PROJECT NUMBER & PHASE
0120000135
02-15-24

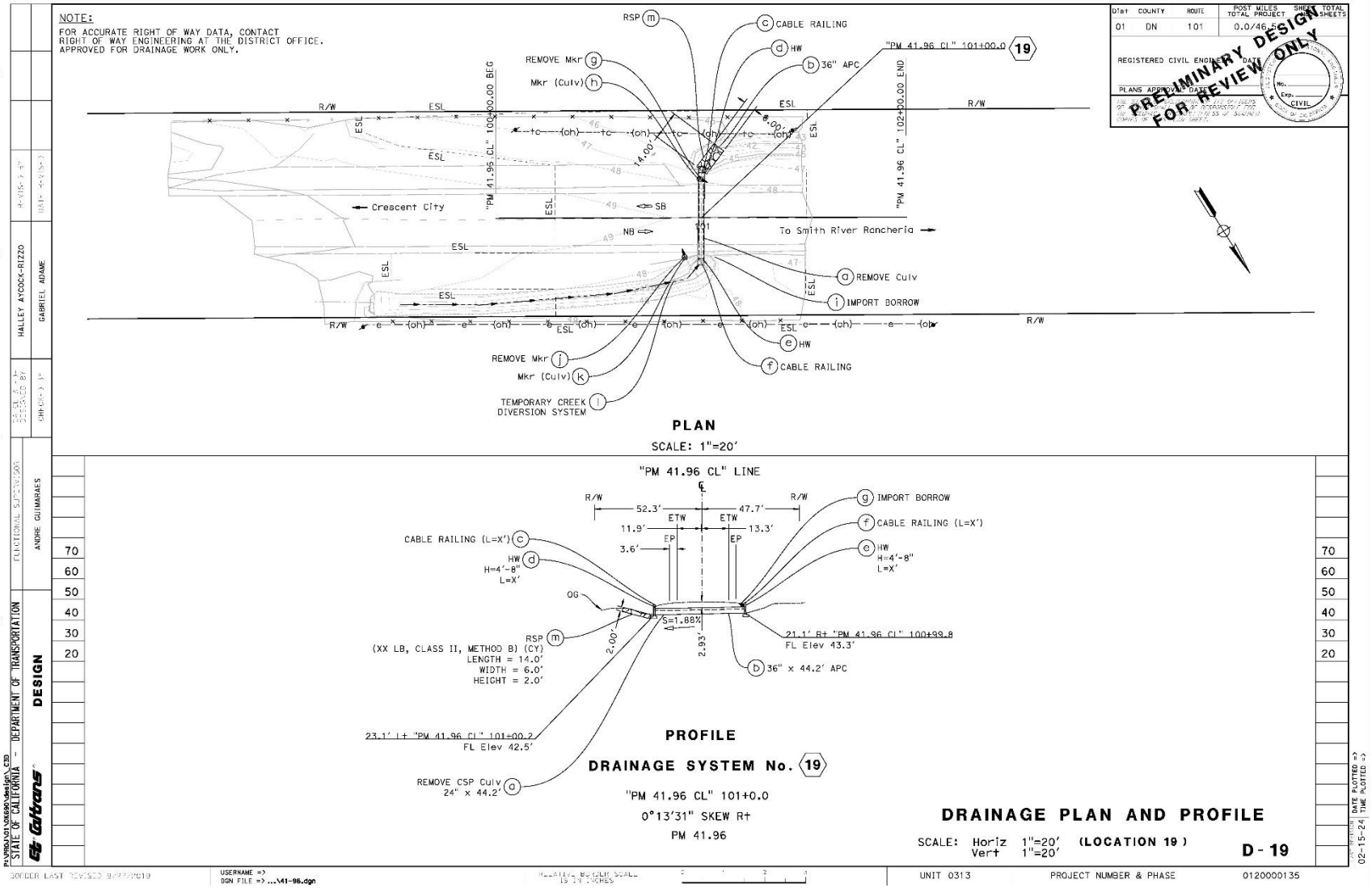

NOTE:
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Dist COUNTY ROUTE POST MILES TOTAL PROJECT SHEET TOTAL SHEETS
01 DN 101 0.0/46.5
REGISTERED CIVIL ENGINEER DATE
PLANS APPROVAL DATE
PRELIMINARY DESIGN FOR REVIEW ONLY
ESL
"PM 19.11 CL" 100+00.00 BEG
"PM 19.11 CL" 102+00.00 END
To Klamath
SB
SB
NB
101
To Crescent City
c REMOVE Mkr
d Mkr (Culv)
a REMOVE Culv
b 24" APC
REMOVE Mkr e
Mkr (Culv) f
RSP g
GRAVEL FILTER h
14.0'
6.0'
"PM 19.11 CL" 101+0.0 14
PLAN
SCALE: 1"=20'
"PM 19.11 CL" LINE
R/W
164.7'
137.1'
ETW
EP
OG
S=19.77%
30.4' Lt "PM 19.11 CL" 101+00.6'
FL Elev 1212.8'
REMOVE CSP Culv 18" x 61.7' a
9.9'
g RSP
(XX LB, CLASS II, METHOD B) (CY)
LENGTH = 14.0'
WIDTH = 6.0'
HEIGHT = 2.0'
30.1' Rt "PM 19.11 CL" 100+99.6'
FL Elev 1200.8'
h GRAVEL FILTER
HEIGHT = X
b 24" x 61.7' APC
1240
1230
1220
1210
1200
1190
PROFILE
DRAINAGE SYSTEM No. 14
"PM 19.11 CL" 101+0.0
1.170° SKEW Rt
PM 19.11
DRAINAGE PLAN AND PROFILE
(LOCATION 14 )
SCALE: Horiz 1"=20'
Vert 1"=20'
D-14
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
ANDRE GUIMARAES
CALCULATED-DESIGNED BY
HALLEY AYCOCK-RIZZO
CHECKED BY
GABRIEL ADAME
DATE REVISED
USERNAME =>
DGN FILE =>...\PM19-05-11.dgn
UNIT 0313
PROJECT NUMBER & PHASE
0120000135
DATE PLOTTED =>
02-15-24
TIME PLOTTED =>


NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE. APPROVED FOR DRAINAGE WORK ONLY.
Dist COUNTY ROUTE POST MILES TOTAL PROJECT SHEET TOTAL SHEETS
01 DN 101 0.0/46.5
REGISTERED CIVIL ENGINEER DATE
PLANS APPROVAL DATE
PRELIMINARY DESIGN FOR REVIEW ONLY
CIVIL
14.00'
6.00'
RSP (g)
(a) REMOVE Culv
(b) 30" APC
(c) REMOVE Mkr
(d) Mkr (Culv)
"PM 22.36 CL" 100+00.00 BEG
"PM 22.36 CL" 102+00.00 END
To Klamath
SB
SB
NB
To Crescent City
REMOVE Culv (h)
REMOVE Culv (i)
AFES (j)
(e) REMOVE Mkr
(f) Mkr (Culv)
"PM 22.36 CL" 101+00.0 15
PLAN
SCALE: 1"=20'
"PM 22.36 CL" LINE
R/W
157.9'
148.3'
R/W
ETW
EP
ETW
EP
RSP (g)
(XX LB, CLASS II, METHOD B) (CY)
LENGTH = 14.0'
WIDTH = 6.0'
HEIGHT = 2.0'
OG
2.00'
S=0.44%
13.46'
(j) 30" AFES
H=X'-X"
38.8' Rt "PM 22.36 CL" 101+09.3'
FL Elev 502.8'
(b) 30" x 157.2' APC
(i) REMOVE CSP Culv
24" x 49.3'
114.4' Lt "PM 22.36 CL" 100+75.0'
FL Elev 502.1'
REMOVE CSP Culv
24" x 100' (a)
REMOVE CSP Culv
24" x 10' (h)
PROFILE
DRAINAGE SYSTEM No. 15
"PM 22.36 CL" 101+0.0
13.440° SKEW Lt
PM 22.36
DRAINAGE PLAN AND PROFILE
(LOCATION 15 )
SCALE: Horiz 1"=20'
Vert 1"=20'
D-15
540
530
520
510
500
490
480
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
ANDRE GUIMARAES
HALLEY AYCOCK-RIZZO
GABRIEL ADAME
Caltrans
P:\PROJ\01\0K690\design\.c3d
02-15-24 DATE PLOTTED =>
TIME PLOTTED =>
USERNAME =>
DGN FILE =>...\PM19-05.dgn
UNIT 0313
PROJECT NUMBER & PHASE
0120000135


NOTE:
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RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
APPROVED FOR DRAINAGE WORK ONLY.
Dist COUNTY LOCATION CODE POST MILES TOTAL PROJECT SHEET No. TOTAL SHEETS
01 DN 101 0.0/46.5 ---- XX
REGISTERED CIVIL ENGINEER DATE
First Last Name
No. X######
Exp. ##/##/##
CIVIL
PLANS APPROVAL DATE
150' MGS
SHOULDER WIDENING
R/W
REMOVE Culv
SHOULDER WIDENING
98.00'
38.00'
10.00'
12.00'
To Klamath
SB
NB
157
158
160
161
162
To Crescent City
94.8'
44.00'
"PM 37.46 CL" 158+97.6
16
SHOULDER WIDENING
150' MGS
REMOVE Culv b
CLEARWATER DIVERSION
REMOVE Culv c
PLAN
SCALE: 1"=20'
"PM 37.46 CL" LINE
64.1'
55.9'
ETW
12.5'
13.7'
EP
5.2'
5.5'
OG
REMOVE CBC Culv
7' x 7' x 53.2'
REMOVE RCP Culv
36" x 95.0'
REMOVE RCP Culv
36" x 98.7'
PROFILE
DRAINAGE SYSTEM No. 16
"PM 37.46 CL" 101+0.0
PM 37.46
DRAINAGE PLAN AND PROFILE
(LOCATION 16 )
SCALE: Horiz 1"=20'
Vert 1"=20'
D-16
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
HALLEY AYCOCK-RIZZO
GABRIEL ADAME
ANDRE GUIMARAES
110
100
90
80
USERNAME =>
DGN FILE =>
UNIT 0313
PROJECT NUMBER & PHASE
0120000135


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PRELIMINARY DESIGN FOR REVIEW ONLY
PLAN
SCALE: 1"=20'
"PM 39.01-02 CL" LINE
"PM 39.01-02 CL" 100+96.0
0.213° SKEW Rt
PM 39.01
"PM 39.01-02 CL" 101+0.0
0.213° SKEW Rt
PM 39.02
"PM 39.01-02 CL" 101+04.0
0.213° SKEW Rt
PM 39.02
PROFILE
DRAINAGE SYSTEM No. 17
DRAINAGE PLAN AND PROFILE
SCALE: Horiz 1"=20' Vert 1"=20'
(LOCATION 17 )
D - 17
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
HALLEY AYCOCK-RIZZO
GABRIEL ADAME
ANDRE GUIMARAES
UNIT 0313
PROJECT NUMBER & PHASE
0120000135


NOTE:
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APPROVED FOR DRAINAGE WORK ONLY.
PRELIMINARY DESIGN FOR REVIEW ONLY
PLAN
SCALE: 1"=20'
"PM 40.71 CL" LINE
PROFILE
DRAINAGE SYSTEM No. 18
"PM 40.71 CL" 102+0.0
0.0° SKEW
PM 40.71
"PM 40.71 CL" 100+45.2
14.264° SKEW Rt
PM 40.68
DRAINAGE PLAN AND PROFILE
SCALE: Horiz 1"=20' (LOCATION 19 )
Vert 1"=20'
D - 18
DESIGN
DEPARTMENT OF TRANSPORTATION
STATE OF CALIFORNIA
HALLEY AYCOCK-RIZZO
GABRIEL ADAME
ANDRE GUIMARAES
UNIT 0313
PROJECT NUMBER & PHASE
0120000135


NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE. APPROVED FOR DRAINAGE WORK ONLY.
Dist COUNTY ROUTE POST MILES TOTAL PROJECT SHEET TOTAL SHEETS
01 DN 101 0.0/46.5
REGISTERED CIVIL ENGINEER DATE
PLANS APPROVAL DATE
PRELIMINARY DESIGN FOR REVIEW ONLY
"PM 41.96 CL" 101+00.0 19
"PM 41.96 CL" 100+00.00 BEG
"PM 41.96 CL" 102+00.00 END
RSP m
CABLE RAILING c
HW d
36" APC b
REMOVE Mkr g
Mkr (Culv) h
R/W
ESL
Crescent City
SB
NB
To Smith River Rancheria
REMOVE Culv a
IMPORT BORROW i
HW e
CABLE RAILING f
REMOVE Mkr j
Mkr (Culv) k
TEMPORARY CREEK DIVERSION SYSTEM l
PLAN
SCALE: 1"=20'
"PM 41.96 CL" LINE
52.3'
47.7'
11.9'
13.3'
3.6'
ETW
EP
CABLE RAILING (L=X') c
HW d H=4'-8" L=X'
IMPORT BORROW g
CABLE RAILING (L=X') f
HW e H=4'-8" L=X'
OG
S=1.88%
RSP m
(XX LB, CLASS II, METHOD B) (CY)
LENGTH = 14.0'
WIDTH = 6.0'
HEIGHT = 2.0'
2.00'
2.93'
21.1' Rt "PM 41.96 CL" 100+99.8
FL Elev 43.3'
36" x 44.2' APC b
23.1' Lt "PM 41.96 CL" 101+00.2
FL Elev 42.5'
REMOVE CSP Culv 24" x 44.2' a
PROFILE
DRAINAGE SYSTEM No. 19
"PM 41.96 CL" 101+0.0
0°13'31" SKEW Rt
PM 41.96
DRAINAGE PLAN AND PROFILE
SCALE: Horiz 1"=20' (LOCATION 19)
Vert 1"=20'
D - 19
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
ANDRE GUIMARAES
HALLEY AYCOCK-RIZZO
GABRIEL ADAME
Caltrans
USERNAME =>
DGN FILE => ...\41-96.dgn
UNIT 0313
PROJECT NUMBER & PHASE
0120000135
DATE PLOTTED =>
02-15-24
TIME PLOTTED =>

# Appendix B. Title VI–Non-Discrimination Policy Statement



CALIFORNIA STATE TRANSPORTATION AGENCY GAVIN NEWSOM, GOVERNOR

California Department of Transportation

OFFICE OF THE DIRECTOR
P.O. BOX 942873, MS–49 | SACRAMENTO, CA 94273–0001
(916) 654-6130 | FAX (916) 653-5776 TTY 711
www.dot.ca.gov

September 2023

**NON-DISCRIMINATION POLICY STATEMENT**

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

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

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

For information or guidance on how to file a complaint, or obtain more information regarding Title VI, please contact the Title VI Branch Manager at (916) 639-6392 or visit the following web page: https://dot.ca.gov/programs/civil-rights/title-vi.

To obtain this information in an alternate format such as Braille or in a language other than English, please contact the California Department of Transportation, Office of Civil Rights, at PO Box 942874, MS-79, Sacramento, CA 94274-0001; (916) 879-6768 (TTY 711); or at Title.VI@dot.ca.gov.

TONY TAVARES
Director

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



# Appendix C. CDFW-CNDDB, CNPS, NMFS, and USFWS Species Lists



# Selected Elements by Common Name

## California Department of Fish and Wildlife

## California Natural Diversity Database

**Query Criteria:** Quad IS (Crescent City (4112472) OR Gasquet (4112378) OR Childs Hill (4112461) OR Requa (4112451) OR Fern Canyon (4112441) OR Mt. Emily (4212412) OR Smith River (4112482) OR Hiouchi (4112471) OR Sister Rocks (4112462) OR Cant Hook Mtn. (4112368) OR Klamath Glen (4112358) OR Ah Pah Ridge (4112348) OR Fourth of July Creek (4212411) OR High Divide (4112481))

| Species | Element Code | Federal Status | State Status | Global Rank | State Rank | Rare Plant Rank/CDFW SSC or FP |
|---|---|---|---|---|---|---|
| **alpine marsh violet**<br>*Viola palustris* | PDVIO041G0 | None | None | G5 | S1S2 | 2B.2 |
| **American peregrine falcon**<br>*Falco peregrinus anatum* | ABNKD06071 | Delisted | Delisted | G4T4 | S3S4 | |
| **angel's hair lichen**<br>*Ramalina thrausta* | NLLEC3S340 | None | None | G5? | S2S3 | 2B.1 |
| **arctic starflower**<br>*Lysimachia europaea* | PDPRI0A020 | None | None | G5 | S1 | 2B.2 |
| **bald eagle**<br>*Haliaeetus leucocephalus* | ABNKC10010 | Delisted | Endangered | G5 | S3 | FP |
| **bank swallow**<br>*Riparia riparia* | ABPAU08010 | None | Threatened | G5 | S3 | |
| **Behrens' snail-eating beetle**<br>*Scaphinotus behrensi* | IICOL4L070 | None | None | G2G4 | S2S4 | |
| **black crowberry**<br>*Empetrum nigrum* | PDEMP03020 | None | None | G5 | S1? | 2B.2 |
| **black swift**<br>*Cypseloides niger* | ABNUA01010 | None | None | G4 | S3 | SSC |
| **black-crowned night heron**<br>*Nycticorax nycticorax* | ABNGA11010 | None | None | G5 | S4 | |
| **Blue Creek stonecrop**<br>*Sedum citrinum* | PDCRA0A200 | None | None | G2 | S2 | 1B.2 |
| **bluff wallflower**<br>*Erysimum concinnum* | PDBRA160E3 | None | None | G3 | S2 | 1B.2 |
| **bristle-stalked sedge**<br>*Carex leptalea* | PMCYP037E0 | None | None | G5 | S1 | 2B.2 |
| **Butte County morning-glory**<br>*Calystegia atriplicifolia ssp. buttensis* | PDCON04012 | None | None | G5T3 | S3 | 4.2 |
| **cackling (=Aleutian Canada) goose**<br>*Branta hutchinsii leucopareia* | ABNJB05035 | Delisted | None | G5T3 | S3 | WL |
| **California globe mallow**<br>*Iliamna latibracteata* | PDMAL0K040 | None | None | G2G3 | S2 | 1B.2 |
| **Cascade downingia**<br>*Downingia willamettensis* | PDCAM060E0 | None | None | G4 | S2 | 2B.2 |
| **Chace juga**<br>*Juga chacei* | IMGASK4180 | None | None | G1 | S1 | |

| Species | Element Code | Federal Status | State Status | Global Rank | State Rank | Rare Plant Rank/CDFW SSC or FP |
|---|---|---|---|---|---|---|
| **coast checkerbloom**<br>*Sidalcea oregana ssp. eximia* | PDMAL110K9 | None | None | G5T1 | S1 | 1B.2 |
| **coast cutthroat trout**<br>*Oncorhynchus clarkii clarkii* | AFCHA0208A | None | None | G5T4 | S3 | SSC |
| **coast fawn lily**<br>*Erythronium revolutum* | PMLIL0U0F0 | None | None | G4G5 | S3 | 2B.2 |
| **Coast Range lomatium**<br>*Lomatium martindalei* | PDAPI1B140 | None | None | G5 | S2 | 2B.3 |
| **Coastal and Valley Freshwater Marsh**<br>*Coastal and Valley Freshwater Marsh* | CTT52410CA | None | None | G3 | S2.1 | |
| **Coastal Brackish Marsh**<br>*Coastal Brackish Marsh* | CTT52200CA | None | None | G2 | S2.1 | |
| **coastal triquetrella**<br>*Triquetrella californica* | NBMUS7S010 | None | None | G2 | S2 | 1B.2 |
| **crinkled rag lichen**<br>*Platismatia lacunosa* | NLLEC2Q010 | None | None | G4 | S2? | 2B.3 |
| **dark-eyed gilia**<br>*Gilia millefoliata* | PDPLM04130 | None | None | G2 | S2 | 1B.2 |
| **Darlingtonia Seep**<br>*Darlingtonia Seep* | CTT51120CA | None | None | G4 | S3.2 | |
| **Del Norte buckwheat**<br>*Eriogonum nudum var. paralinum* | PDPGN08498 | None | None | G5T2 | S1 | 2B.2 |
| **Del Norte pyrrocoma**<br>*Pyrrocoma racemosa var. congesta* | PDASTDT0F4 | None | None | G5T4 | S2 | 2B.3 |
| **Del Norte salamander**<br>*Plethodon elongatus* | AAAAD12050 | None | None | G4 | S3 | WL |
| **double-crested cormorant**<br>*Nannopterum auritum* | ABNFD01020 | None | None | G5 | S4 | WL |
| **eulachon**<br>*Thaleichthys pacificus* | AFCHB04010 | Threatened | None | G5 | S1 | SSC |
| **fibrous pondweed**<br>*Potamogeton foliosus ssp. fibrillosus* | PMPOT030B1 | None | None | G5T2T4 | S1S2 | 2B.3 |
| **Fisher**<br>*Pekania pennanti* | AMAJF01020 | None | None | G5 | S2S3 | SSC |
| **foothill yellow-legged frog - north coast DPS**<br>*Rana boylii pop. 1* | AAABH01051 | None | None | G3T4 | S4 | SSC |
| **fork-tailed storm-petrel**<br>*Hydrobates furcatus* | ABNDC04010 | None | None | G5 | S1 | SSC |
| **Fort Dick limnephilus caddisfly**<br>*Limnephilus atercus* | IITRI15020 | None | None | G3G4 | S1S2 | |
| **fringed myotis**<br>*Myotis thysanodes* | AMACC01090 | None | None | G4 | S3 | |

| Species | Element Code | Federal Status | State Status | Global Rank | State Rank | Rare Plant Rank/CDFW SSC or FP |
|---|---|---|---|---|---|---|
| **Gasquet rose**<br>*Rosa gymnocarpa var. serpentina* | PDROS1J1V1 | None | None | G5T3T4 | S2 | 1B.3 |
| **ghost-pipe**<br>*Monotropa uniflora* | PDMON03030 | None | None | G5 | S2 | 2B.2 |
| **giant fawn lily**<br>*Erythronium oregonum* | PMLIL0U0C0 | None | None | G5 | S2 | 2B.2 |
| **great blue heron**<br>*Ardea herodias* | ABNGA04010 | None | None | G5 | S4 | |
| **great burnet**<br>*Sanguisorba officinalis* | PDROS1L060 | None | None | G5? | S2 | 2B.2 |
| **great egret**<br>*Ardea alba* | ABNGA04040 | None | None | G5 | S4 | |
| **green sturgeon - northern DPS**<br>*Acipenser medirostris pop. 2* | AFCAA01032 | None | None | G2T1 | S1 | SSC |
| **green yellow sedge**<br>*Carex viridula ssp. viridula* | PMCYP03EM5 | None | None | G5T5 | S2 | 2B.3 |
| **Greenland cochlearia**<br>*Cochlearia groenlandica* | PDBRA0S020 | None | None | G4 | S1 | 2B.3 |
| **Henderson's fawn lily**<br>*Erythronium hendersonii* | PMLIL0U070 | None | None | G4 | S2 | 2B.3 |
| **highcap lanx**<br>*Lanx alta* | IMGASL7010 | None | None | G2G3 | S3 | |
| **hooded lancetooth**<br>*Ancotrema voyanum* | IMGAS36130 | None | None | G1G2 | S1S2 | |
| **Hooker's catchfly**<br>*Silene hookeri* | PDCAR0U2M0 | None | None | G4 | S2 | 2B.2 |
| **horned butterwort**<br>*Pinguicula macroceras* | PDLNT01040 | None | None | G4 | S2 | 2B.2 |
| **Howell's fawn lily**<br>*Erythronium howellii* | PMLIL0U080 | None | None | G3G4 | S2 | 1B.3 |
| **Howell's jewelflower**<br>*Streptanthus howellii* | PDBRA2G0N0 | None | None | G2G3 | S2 | 1B.2 |
| **Howell's montia**<br>*Montia howellii* | PDPOR05070 | None | None | G3G4 | S2 | 2B.2 |
| **Howell's sandwort**<br>*Sabulina howellii* | PDCAR0G0F0 | None | None | G4 | S3 | 1B.3 |
| **Humboldt marten**<br>*Martes caurina humboldtensis* | AMAJF01012 | Threatened | Endangered | G4G5T1 | S1 | SSC |
| **Humboldt mountain beaver**<br>*Aplodontia rufa humboldtiana* | AMAFA01017 | None | None | G5TNR | SNR | |
| **Koehler's stipitate rockcress**<br>*Boechera koehleri* | PDBRA060Z0 | None | None | G3G4 | S3 | 1B.3 |

| Species | Element Code | Federal Status | State Status | Global Rank | State Rank | Rare Plant Rank/CDFW SSC or FP |
|---|---|---|---|---|---|---|
| **lagoon sedge**<br>*Carex lenticularis var. limnophila* | PMCYP037A7 | None | None | G5T5 | S1 | 2B.2 |
| **Langsdorf's violet**<br>*Viola langsdorffii* | PDVIO04100 | None | None | G4G5 | S1 | 2B.1 |
| **leafy reed grass**<br>*Calamagrostis foliosa* | PMPOA170C0 | None | Rare | G3 | S3 | 4.2 |
| **leafy-stemmed mitrewort**<br>*Mitellastra caulescens* | PDSAX0N020 | None | None | G5 | S4 | 4.2 |
| **little willow flycatcher**<br>*Empidonax traillii brewsteri* | ABPAE33041 | None | Endangered | G5T3T4 | S3 | |
| **little-leaved huckleberry**<br>*Vaccinium scoparium* | PDERI180Y0 | None | None | G5 | S3 | 2B.2 |
| **long-eared myotis**<br>*Myotis evotis* | AMACC01070 | None | None | G5 | S3 | |
| **longfin smelt**<br>*Spirinchus thaleichthys* | AFCHB03010 | None | Threatened | G5 | S1 | |
| **Lower Klamath marbled sculpin**<br>*Cottus klamathensis polyporus* | AFC4E02153 | None | None | G4T2T4 | S2S4 | SSC |
| **Lyngbye's sedge**<br>*Carex lyngbyei* | PMCYP037Y0 | None | None | G5 | S3 | 2B.2 |
| **maidenhair spleenwort**<br>*Asplenium trichomanes ssp. trichomanes* | PPASP021K2 | None | None | G5T5 | S1 | 2B.1 |
| **maple-leaved checkerbloom**<br>*Sidalcea malachroides* | PDMAL110E0 | None | None | G3 | S3 | 4.2 |
| **marbled murrelet**<br>*Brachyramphus marmoratus* | ABNNN06010 | Threatened | Endangered | G3 | S2 | |
| **mardon skipper**<br>*Polites mardon* | IILEP66030 | None | None | G2 | S1 | |
| **marsh pea**<br>*Lathyrus palustris* | PDFAB250P0 | None | None | G5 | S2 | 2B.2 |
| **marsh walker**<br>*Pomatiopsis chacei* | IMGASJ9030 | None | None | G1 | S2 | |
| **McDonald's rockcress**<br>*Arabis mcdonaldiana* | PDBRA06150 | Endangered | Endangered | G3 | S3 | 1B.1 |
| **Mendocino gentian**<br>*Gentiana setigera* | PDGEN060S0 | None | None | G2 | S2 | 1B.2 |
| **Methuselah's beard lichen**<br>*Usnea longissima* | NLLEC5P420 | None | None | G5 | S4 | 4.2 |
| **minute pocket moss**<br>*Fissidens pauperculus* | NBMUS2W0U0 | None | None | G3? | S2 | 1B.2 |
| **naked flag moss**<br>*Discelium nudum* | NBMUS2E010 | None | None | G4G5 | S1 | 2B.2 |

| Species | Element Code | Federal Status | State Status | Global Rank | State Rank | Rare Plant Rank/CDFW SSC or FP |
|---|---|---|---|---|---|---|
| **North American porcupine**<br>*Erethizon dorsatum* | AMAFJ01010 | None | None | G5 | S3 | |
| **northern clustered sedge**<br>*Carex arcta* | PMCYP030X0 | None | None | G5 | S1 | 2B.2 |
| **Northern Coastal Salt Marsh**<br>*Northern Coastal Salt Marsh* | CTT52110CA | None | None | G3 | S3.2 | |
| **northern harrier**<br>*Circus hudsonius* | ABNKC11011 | None | None | G5 | S3 | SSC |
| **northern meadow sedge**<br>*Carex praticola* | PMCYP03B20 | None | None | G5 | S2 | 2B.2 |
| **northern red-legged frog**<br>*Rana aurora* | AAABH01021 | None | None | G4 | S3 | SSC |
| **northwestern pond turtle**<br>*Actinemys marmorata* | ARAAD02031 | Proposed Threatened | None | G2 | SNR | SSC |
| **Nuttall's saxifrage**<br>*Cascadia nuttallii* | PDSAX0U160 | None | None | G4? | S1 | 2B.1 |
| **obscure bumble bee**<br>*Bombus caliginosus* | IIHYM24380 | None | None | G2G3 | S1S2 | |
| **opposite-leaved lewisia**<br>*Lewisia oppositifolia* | PDPOR040B0 | None | None | G3 | S2 | 2B.2 |
| **Oregon coast paintbrush**<br>*Castilleja litoralis* | PDSCR0D012 | None | None | G3 | S3 | 2B.2 |
| **Oregon goldthread**<br>*Coptis laciniata* | PDRAN0A020 | None | None | G4? | S3? | 4.2 |
| **Oregon polemonium**<br>*Polemonium carneum* | PDPLM0E050 | None | None | G3G4 | S2 | 2B.2 |
| **Oregon silverspot butterfly**<br>*Speyeria zerene hippolyta* | IILEPJ6087 | Threatened | None | G5T1 | S1 | |
| **osprey**<br>*Pandion haliaetus* | ABNKC01010 | None | None | G5 | S4 | WL |
| **Pacific gilia**<br>*Gilia capitata ssp. pacifica* | PDPLM040B6 | None | None | G5T3 | S3 | 1B.2 |
| **Pacific tailed frog**<br>*Ascaphus truei* | AAABA01010 | None | None | G4 | S3S4 | SSC |
| **perennial goldfields**<br>*Lasthenia californica ssp. macrantha* | PDAST5L0C5 | None | None | G3T2 | S2 | 1B.2 |
| **pink sand-verbena**<br>*Abronia umbellata var. breviflora* | PDNYC010N4 | None | None | G4G5T2 | S2 | 1B.1 |
| **rhinoceros auklet**<br>*Cerorhinca monocerata* | ABNNN11010 | None | None | G5 | S3 | WL |
| **robust false lupine**<br>*Thermopsis robusta* | PDFAB3Z0D0 | None | None | G2 | S2 | 1B.2 |

| Species | Element Code | Federal Status | State Status | Global Rank | State Rank | Rare Plant Rank/CDFW SSC or FP |
|---|---|---|---|---|---|---|
| **rocky coast Pacific sideband**<br>*Monadenia fidelis pronotis* | IMGASC7032 | None | None | G4G5T1 | S1 | |
| **ruffed grouse**<br>*Bonasa umbellus* | ABNLC11010 | None | None | G5 | S3S4 | WL |
| **sand dune phacelia**<br>*Phacelia argentea* | PDHYD0C070 | Threatened | None | G2 | S1 | 1B.1 |
| **Sanford's arrowhead**<br>*Sagittaria sanfordii* | PMALI040Q0 | None | None | G3 | S3 | 1B.2 |
| **Scouler's catchfly**<br>*Silene scouleri ssp. scouleri* | PDCAR0U1MC | None | None | G5T4T5 | S2S3 | 2B.2 |
| **seacoast ragwort**<br>*Packera bolanderi var. bolanderi* | PDAST8H0H1 | None | None | G4T4 | S2S3 | 2B.2 |
| **seaside bittercress**<br>*Cardamine angulata* | PDBRA0K010 | None | None | G4G5 | S3 | 2B.1 |
| **seaside pea**<br>*Lathyrus japonicus* | PDFAB250C0 | None | None | G5 | S2 | 2B.1 |
| **serpentine catchfly**<br>*Silene serpentinicola* | PDCAR0U2B0 | None | None | G3 | S3 | 1B.2 |
| **serpentine sedge**<br>*Carex serpenticola* | PMCYP03KM0 | None | None | G4 | S3 | 2B.3 |
| **short-leaved evax**<br>*Hesperevax sparsiflora var. brevifolia* | PDASTE5011 | None | None | G4T3 | S3 | 1B.2 |
| **silver-haired bat**<br>*Lasionycteris noctivagans* | AMACC02010 | None | None | G3G4 | S3S4 | |
| **Siskiyou bells**<br>*Prosartes parvifolia* | PMLIL0R014 | None | None | G2 | S2 | 1B.2 |
| **Siskiyou checkerbloom**<br>*Sidalcea malviflora ssp. patula* | PDMAL110F9 | None | None | G4G5T2 | S2 | 1B.2 |
| **Siskiyou paintbrush**<br>*Castilleja elata* | PDSCR0D213 | None | None | G3 | S2S3 | 2B.2 |
| **small groundcone**<br>*Kopsiopsis hookeri* | PDORO01010 | None | None | G4? | S1S2 | 2B.3 |
| **Smith River stonecrop**<br>*Sedum patens* | PDCRA0A250 | None | None | G2 | S2 | 1B.2 |
| **snowy egret**<br>*Egretta thula* | ABNGA06030 | None | None | G5 | S4 | |
| **Sonoma tree vole**<br>*Arborimus pomo* | AMAFF23030 | None | None | G3 | S3 | SSC |
| **southern torrent salamander**<br>*Rhyacotriton variegatus* | AAAAJ01020 | None | None | G3? | S2S3 | SSC |
| **spiral-spored gilded-head pin lichen**<br>*Calicium adspersum* | NLT0005640 | None | None | G3G4 | S1 | 2B.2 |

| Species | Element Code | Federal Status | State Status | Global Rank | State Rank | Rare Plant Rank/CDFW SSC or FP |
|---|---|---|---|---|---|---|
| **steelhead - northern California DPS winter-run**<br>*Oncorhynchus mykiss irideus pop. 49* | AFCHA0213Q | Threatened | None | G5T3Q | S3 | SSC |
| **Steller sea lion**<br>*Eumetopias jubatus* | AMAJC03010 | Delisted | None | G3 | S2 | |
| **Thurber's reed grass**<br>*Calamagrostis crassiglumis* | PMPOA17070 | None | None | G5Q | S2 | 2B.1 |
| **tidewater goby**<br>*Eucyclogobius newberryi* | AFCQN04010 | Endangered | None | G3 | S3 | SSC |
| **Townsend's big-eared bat**<br>*Corynorhinus townsendii* | AMACC08010 | None | None | G4 | S2 | SSC |
| **Tracy's romanzoffia**<br>*Romanzoffia tracyi* | PDHYD0E030 | None | None | G4 | S2 | 2B.3 |
| **tufted puffin**<br>*Fratercula cirrhata* | ABNNN12010 | None | None | G5 | S1S2 | SSC |
| **twisted horsehair lichen**<br>*Sulcaria spiralifera* | NLT0042560 | None | None | G3G4 | S2 | 1B.2 |
| **vanilla-grass**<br>*Anthoxanthum nitens ssp. nitens* | PMPOA35041 | None | None | G5T5 | S2 | 2B.3 |
| **Waldo rockcress**<br>*Arabis aculeolata* | PDBRA06010 | None | None | G4 | S2 | 2B.2 |
| **Waldo wild buckwheat**<br>*Eriogonum pendulum* | PDPGN084Q0 | None | None | G4 | S2S3 | 2B.2 |
| **Wawona riffle beetle**<br>*Atractelmis wawona* | IICOL58010 | None | None | G3 | S1S2 | |
| **western bumble bee**<br>*Bombus occidentalis* | IIHYM24252 | None | Candidate Endangered | G3 | S1 | |
| **western lily**<br>*Lilium occidentale* | PMLIL1A0G0 | Endangered | Endangered | G1G2 | S1 | 1B.1 |
| **western pearlshell**<br>*Margaritifera falcata* | IMBIV27020 | None | None | G3G4 | S1S2 | |
| **western ragwort**<br>*Packera hesperia* | PDAST8H1L0 | None | None | G3 | S1 | 2B.2 |
| **western ridged mussel**<br>*Gonidea angulata* | IMBIV19010 | None | None | G3 | S2 | |
| **western snowy plover**<br>*Charadrius nivosus nivosus* | ABNNB03031 | Threatened | None | G3T3 | S3 | SSC |
| **western white bog violet**<br>*Viola primulifolia ssp. occidentalis* | PDVIO040Y2 | None | None | G5T2 | S2 | 1B.2 |
| **white beaked-rush**<br>*Rhynchospora alba* | PMCYP0N010 | None | None | G5 | S2 | 2B.2 |
| **white-flowered rein orchid**<br>*Piperia candida* | PMORC1X050 | None | None | G3? | S3 | 1B.2 |

## Selected Elements by Common Name

**California Department of Fish and Wildlife**

**California Natural Diversity Database**

| Species | Element Code | Federal Status | State Status | Global Rank | State Rank | Rare Plant Rank/CDFW SSC or FP |
|---|---|---|---|---|---|---|
| **white-tailed kite**<br>*Elanus leucurus* | ABNKC06010 | None | None | G5 | S3S4 | FP |
| **Wolf's evening-primrose**<br>*Oenothera wolfii* | PDONA0C1K0 | None | None | G2 | S1 | 1B.1 |
| **woodnymph**<br>*Moneses uniflora* | PDPYR02010 | None | None | G5 | S2 | 2B.2 |
| **yellow rail**<br>*Coturnicops noveboracensis* | ABNME01010 | None | None | G4 | S2 | SSC |
| **yellow-tubered toothwort**<br>*Cardamine nuttallii var. gemmata* | PDBRA0K0R3 | None | None | G5T3Q | S2 | 3.3 |
| **Yontocket satyr**<br>*Coenonympha tullia yontockett* | IILEPN6035 | None | None | G5T1T2 | S1S2 | |
| **Yuma myotis**<br>*Myotis yumanensis* | AMACC01020 | None | None | G5 | S4 | |

**Record Count: 151**

CALIFORNIA NATIVE PLANT SOCIETY

CNPS Rare Plant Inventory

## Search Results

**95** matches found. Click on scientific name for details

Search Criteria: CRPR is one of **[1A:1B:2A:2B]** , County or Island is one of **[DNT]**

| ▲ SCIENTIFIC NAME | COMMON NAME | FAMILY | LIFEFORM | BLOOMING PERIOD | FED LIST | STATE LIST | GLOBAL RANK | STATE RANK | CA RARE PLANT RANK | CA ENDEMIC | DATE ADDED | PHOTO |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Abronia umbellata* var. *breviflora* | pink sand-verbena | Nyctaginaceae | annual herb | Jun-Oct | None | None | G4G5T2 | S2 | 1B.1 | | 1988-01-01 |  ©2021 Scot Loring |
| *Anthoxanthum nitens* ssp. *nitens* | vanilla-grass | Poaceae | perennial rhizomatous herb | Apr-Jul | None | None | G5T5 | S2 | 2B.3 | | 1994-01-01 |  ©2013 Kirsten Bovee |
| *Arabis aculeolata* | Waldo rockcress | Brassicaceae | perennial herb | Apr-Jun | None | None | G4 | S2 | 2B.2 | | 1980-01-01 |  © 2020 John Doyen |
| *Arabis mcdonaldiana* | McDonald's rockcress | Brassicaceae | perennial herb | May-Jul | FE | CE | G3 | S3 | 1B.1 | | 1974-01-01 |  © 2003 Norman Jensen |
| *Asarum marmoratum* | marbled wild-ginger | Aristolochiaceae | perennial rhizomatous herb | Apr-Aug | None | None | G4? | S2 | 2B.3 | | 1988-01-01 |  © 2021 Scot Loring |
| *Asplenium trichomanes* ssp. *trichomanes* | maidenhair spleenwort | Aspleniaceae | perennial rhizomatous herb | May-Jul | None | None | G5T5 | S1 | 2B.1 | | 1984-01-01 |  ©2012 Dana York |
| *Boechera koehleri* | Koehler's stipitate rockcress | Brassicaceae | perennial herb | (Mar)Apr-Jul | None | None | G3G4 | S3 | 1B.3 | | 1988-01-01 |  ©2019 Dana York |

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|---|---|---|---|---|---|---|---|---|---|---|
| *Buxbaumia viridis* | green shield-moss | Buxbaumiaceae | moss | | None | None | G5? | S2 | 2B.2 | 2011-03-23  © 2021 Scot Loring |
| *Calamagrostis crassiglumis* | Thurber's reed grass | Poaceae | perennial rhizomatous herb | May-Aug | None | None | G5Q | S2 | 2B.1 | 1980-01-01 No Photo Available |
| *Calicium adspersum* | spiral-spored gilded-head pin lichen | Caliciaceae | crustose lichen (epiphytic) | | None | None | G3G4 | S1 | 2B.2 | 2014-03-01  © 2014 Eric B. Peterson |
| *Cardamine angulata* | seaside bittercress | Brassicaceae | perennial herb | (Jan)Mar-Jul | None | None | G4G5 | S3 | 2B.2 | 2012-04-10  © 2021 Scot Loring |
| *Carex arcta* | northern clustered sedge | Cyperaceae | perennial herb | Jun-Sep | None | None | G5 | S1 | 2B.2 | 2001-01-01  © 2006 Dean Wm. Taylor |
| *Carex lenticularis* var. *limnophila* | lagoon sedge | Cyperaceae | perennial herb | Jun-Aug | None | None | G5T5 | S1 | 2B.2 | 2005-01-01  ©2003 Steve Matson |
| *Carex leptalea* | bristle-stalked sedge | Cyperaceae | perennial rhizomatous herb | Mar-Jul | None | None | G5 | S1 | 2B.2 | 1994-01-01  © 2003 Steve Matson |
| *Carex lyngbyei* | Lyngbye's sedge | Cyperaceae | perennial rhizomatous herb | Apr-Aug | None | None | G5 | S3 | 2B.2 | 2001-01-01  ©2017 Steve Matson |
| *Carex praticola* | northern meadow sedge | Cyperaceae | perennial herb | May-Jul | None | None | G5 | S2 | 2B.2 | 1984-01-01  ©2013 Scot Loring |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| *Carex serpenticola* | serpentine sedge | Cyperaceae | perennial rhizomatous herb | Mar-May | None | None | G4 | S3 | 2B.3 | 2001-01-01 |  ©2005 Norman Jensen |
| *Carex sheldonii* | Sheldon's sedge | Cyperaceae | perennial rhizomatous herb | May-Aug | None | None | G4 | S2 | 2B.2 | 1980-01-01 |  ©2015 Steve Matson |
| *Carex viridula ssp. viridula* | green yellow sedge | Cyperaceae | perennial herb | (Jun)Jul-Sep(Nov) | None | None | G5T5 | S2 | 2B.3 | 2001-01-01 |  © 2015 Dana York |
| *Cascadia nuttallii* | Nuttall's saxifrage | Saxifragaceae | perennial rhizomatous herb | May | None | None | G4? | S1 | 2B.1 | 1988-01-01 |  © 2021 Scot Loring |
| *Castilleja elata* | Siskiyou paintbrush | Orobanchaceae | perennial herb (hemiparasitic) | May-Aug | None | None | G3 | S2S3 | 2B.2 | 1980-01-01 |  © 2021 Scot Loring |
| *Castilleja litoralis* | Oregon coast paintbrush | Orobanchaceae | perennial herb (hemiparasitic) | Jun | None | None | G3 | S3 | 2B.2 | 2001-01-01 |  ©2010 Dana York |
| *Cochlearia groenlandica* | Greenland cochlearia | Brassicaceae | annual herb | May-Jul | None | None | G4 | S1 | 2B.3 | 1984-01-01 | No Photo Available |
| *Cornus unalaschkensis* | bunchberry | Cornaceae | perennial rhizomatous herb | May-Jul | None | None | G5 | S2 | 2B.2 | 2012-12-11 |  © 2021 Scot Loring |
| *Discelium nudum* | naked flag moss | Disceliaceae | ephemeral moss | | None | None | G4G5 | S1 | 2B.2 | 2001-01-01 | No Photo Available |
| *Downingia willamettensis* | Cascade downingia | Campanulaceae | annual herb | Jun-Jul(Sep) | None | None | G4 | S2 | 2B.2 | 2018-09-20 | No Photo Available |
| *Draba carnosula* | Mt. Eddy draba | Brassicaceae | perennial herb | Jul-Aug | None | None | G2 | S2 | 1B.3 | Yes | 1980-01-01 |  ©2011 Steve Matson |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| *Empetrum nigrum* | black crowberry | Empetraceae | perennial evergreen shrub | Apr-Jun | None | None | G5 | S1? | 2B.2 | | 1974-01-01 |  ©2015 Dana York |
| *Epilobium luteum* | yellow willowherb | Onagraceae | perennial stoloniferous herb | Jul-Sep | None | None | G5 | S1 | 2B.3 | | 1974-01-01 |  © 2021 Scot Loring |
| *Epilobium oreganum* | Oregon fireweed | Onagraceae | perennial herb | Jun-Sep | None | None | G2 | S2 | 1B.2 | | 1980-01-01 |  © 2015 Steve Matson |
| *Erigeron bloomeri* var. *nudatus* | Waldo daisy | Asteraceae | perennial herb | Jun-Jul | None | None | G5T4 | S2 | 2B.3 | | 1980-01-01 |  ©2020 John Doyen |
| *Eriogonum hirtellum* | Klamath Mountain buckwheat | Polygonaceae | perennial rhizomatous herb | Jul-Sep | None | None | G2G3 | S2S3 | 1B.3 | Yes | 1974-01-01 |  ©2010 Steve Matson |
| *Eriogonum nudum* var. *paralinum* | Del Norte buckwheat | Polygonaceae | perennial herb | Jun-Sep | None | None | G5T2 | S1 | 2B.2 | | 1994-01-01 | No Photo Available |
| *Eriogonum pendulum* | Waldo wild buckwheat | Polygonaceae | perennial herb | Aug-Sep | None | None | G4 | S2S3 | 2B.2 | | 1974-01-01 |  © 2021 Scot Loring |
| *Erysimum concinnum* | bluff wallflower | Brassicaceae | annual/perennial herb | Feb-Jul | None | None | G3 | S2 | 1B.2 | | 2012-12-03 |  ©2020 John Doyen |
| *Erythronium hendersonii* | Henderson's fawn lily | Liliaceae | perennial bulbiferous herb | Apr-Jul | None | None | G4 | S2 | 2B.3 | | 1974-01-01 |  © 2021 Scot Loring |
| *Erythronium howellii* | Howell's fawn lily | Liliaceae | perennial bulbiferous herb | Apr-May | None | None | G3G4 | S2 | 1B.3 | | 1974-01-01 |  © 2021 Scot Loring |

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|---|---|---|---|---|---|---|---|---|---|---|
| *Erythronium oregonum* | giant fawn lily | Liliaceae | perennial herb | Mar-Jun(Jul) | None | None | G5 | S2 | 2B.2 | 2007-07-23  ©2021 Scot Loring |
| *Erythronium revolutum* | coast fawn lily | Liliaceae | perennial bulbiferous herb | Mar-Jul(Aug) | None | None | G4G5 | S3 | 2B.2 | 2001-01-01  ©2007 Steve Matson |
| *Fissidens pauperculus* | minute pocket moss | Fissidentaceae | moss | | None | None | G3? | S2 | 1B.2 | 2001-01-01  ©2021 Scot Loring |
| *Gentiana setigera* | Mendocino gentian | Gentianaceae | perennial herb | (Apr-Jul)Aug-Sep | None | None | G2 | S2 | 1B.2 | 1980-01-01  ©2008 Keir Morse |
| *Gilia capitata* ssp. *pacifica* | Pacific gilia | Polemoniaceae | annual herb | Apr-Aug | None | None | G5T3 | S3 | 1B.2 | 2001-01-01  © 2016 Steve Matson |
| *Gilia millefoliata* | dark-eyed gilia | Polemoniaceae | annual herb | Apr-Jul | None | None | G2 | S2 | 1B.2 | 2001-01-01  © 2017 John Doyen |
| *Hesperevax sparsiflora* var. *brevifolia* | short-leaved evax | Asteraceae | annual herb | Mar-Jun | None | None | G4T3 | S3 | 1B.2 | 1994-01-01  © 2006 Doreen L. Smith |
| *Horkelia congesta* var. *nemorosa* | Josephine horkelia | Rosaceae | perennial herb | May-Jul | None | None | G4T4? | S1 | 2B.1 | 1988-01-01  © 2011 Doreen L. Smith |
| *Iliamna latibracteata* | California globe mallow | Malvaceae | perennial herb | Jun-Aug | None | None | G2G3 | S2 | 1B.2 | 1974-01-01  ©2013 Scot Loring |
| *Kopsiopsis hookeri* | small groundcone | Orobanchaceae | perennial rhizomatous herb (parasitic) | Apr-Aug | None | None | G4? | S1S2 | 2B.3 | 1994-01-01  ©2016 Vernon Smith |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Lasthenia californica ssp. macrantha* | perennial goldfields | Asteraceae | perennial herb | Jan-Nov | None | None | G3T2 | S2 | 1B.2 | Yes | 2001-01-01 |  © 2013 John Doyen |
| *Lathyrus japonicus* | seaside pea | Fabaceae | perennial rhizomatous herb | May-Aug | None | None | G5 | S2 | 2B.1 | | 2001-01-01 |  ©2021 Scot Loring |
| *Lathyrus palustris* | marsh pea | Fabaceae | perennial herb | Mar-Aug | None | None | G5 | S2 | 2B.2 | | 1994-01-01 |  © 2016 Keir Morse |
| *Lewisia oppositifolia* | opposite-leaved lewisia | Montiaceae | perennial herb | Apr-May(Jun) | None | None | G3 | S2 | 2B.2 | | 1974-01-01 |  © 2013 Scot Loring |
| *Lilium occidentale* | western lily | Liliaceae | perennial bulbiferous herb | Jun-Jul | FE | CE | G1G2 | S1 | 1B.1 | | 1974-01-01 |  © 2018 Jason Matthias Mills |
| *Lomatium martindalei* | Coast Range lomatium | Apiaceae | perennial herb | May-Jun(Aug) | None | None | G5 | S2 | 2B.3 | | 1980-01-01 |  ©2014 Barry Rice |
| *Lysimachia europaea* | arctic starflower | Myrsinaceae | perennial herb | Jun-Jul | None | None | G5 | S1 | 2B.2 | | 1980-01-01 |  ©2017 Barry Rice |
| *Mertensia bella* | Oregon bluebells | Boraginaceae | perennial herb | May-Jul | None | None | G4 | S1 | 2B.2 | | 1994-01-01 |  Dan Post (1997) |
| *Moneses uniflora* | woodnymph | Ericaceae | perennial rhizomatous herb | May-Aug | None | None | G5 | S2 | 2B.2 | | 2001-01-01 |  ©2021 Scot Loring |
| *Monotropa uniflora* | ghost-pipe | Ericaceae | perennial herb (achlorophyllous) | Jun-Aug(Sep) | None | None | G5 | S2 | 2B.2 | | 1974-01-01 |  © 2021 Scot Loring |

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|---|---|---|---|---|---|---|---|---|---|---|
| *Montia howellii* | Howell's montia | Montiaceae | annual herb | (Feb)Mar-May | None | None | G3G4 | S2 | 2B.2 | 1994-01-01 |  © 2004 Dean Wm. Taylor |
| *Oenothera wolfii* | Wolf's evening-primrose | Onagraceae | perennial herb | May-Oct | None | None | G2 | S1 | 1B.1 | 1980-01-01 |  ©2017 Dana York |
| *Packera bolanderi* var. *bolanderi* | seacoast ragwort | Asteraceae | perennial rhizomatous herb | (Jan-Apr)May-Jul(Aug) | None | None | G4T4 | S2S3 | 2B.2 | 2001-01-01 |  © 2021 Scot Loring |
| *Packera hesperia* | western ragwort | Asteraceae | perennial herb | Apr-Jun | None | None | G3 | S1 | 2B.2 | 2007-04-12 |  ©2008 Keir Morse |
| *Peltigera pacifica* | fringed pelt | Peltigeraceae | foliose lichen | | None | None | G3G4 | S2 | 2B.2 | 2021-06-07 |  ©2013 Scot Loring |
| *Phacelia argentea* | sand dune phacelia | Hydrophyllaceae | perennial herb | Jun-Aug | FT | None | G2 | S1 | 1B.1 | 1974-01-01 |  © 2012 Genevieve K Walden |
| *Phacelia leonis* | Siskiyou phacelia | Hydrophyllaceae | annual herb | Jun-Aug | None | None | G3 | S2? | 1B.3 | 1984-01-01 |  ©2019 Steve Matson |
| *Pinguicula macroceras* | horned butterwort | Lentibulariaceae | perennial herb (carnivorous) | Apr-Jun | None | None | G4 | S2 | 2B.2 | 1974-01-01 |  ©2009 Barry Rice |
| *Piperia candida* | white-flowered rein orchid | Orchidaceae | perennial herb | (Mar-Apr)May-Sep | None | None | G3? | S3 | 1B.2 | 1994-01-01 |  ©2016 Barry Rice |
| *Platismatia lacunosa* | crinkled rag lichen | Parmeliaceae | foliose lichen (epiphytic) | | None | None | G4 | S2? | 2B.3 | 2022-09-28 |  © 2014 Chris Wagner |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| *Polemonium carneum* | Oregon polemonium | Polemoniaceae | perennial herb | Apr-Sep | None | None | G3G4 | S2 | 2B.2 | 2008-11-03 |  ©2018 John Doyen |
| *Potamogeton foliosus* ssp. *fibrillosus* | fibrous pondweed | Potamogetonaceae | perennial rhizomatous herb (aquatic) | Unk | None | None | G5T2T4 | S1S2 | 2B.3 | 1994-01-01 | No Photo Available |
| *Prosartes parvifolia* | Siskiyou bells | Liliaceae | perennial bulbiferous herb | May-Sep | None | None | G2 | S2 | 1B.2 | 2012-02-08 |  ©2010 Kjirsten Wayman |
| *Pyrrocoma racemosa* var. *congesta* | Del Norte pyrrocoma | Asteraceae | perennial herb | Aug-Sep | None | None | G5T4 | S2 | 2B.3 | 1980-01-01 |  ©2008 Keir Morse |
| *Ramalina thrausta* | angel's hair lichen | Ramalinaceae | fruticose lichen (epiphytic) | | None | None | G5? | S2S3 | 2B.1 | 2014-03-01 |  © 2013 Scot Loring |
| *Rhynchospora alba* | white beaked-rush | Cyperaceae | perennial rhizomatous herb | Jun-Aug | None | None | G5 | S2 | 2B.2 | 1974-01-01 |  © 2021 Scot Loring |
| *Romanzoffia tracyi* | Tracy's romanzoffia | Hydrophyllaceae | perennial herb | Mar-May | None | None | G4 | S2 | 2B.3 | 2001-01-01 |  ©2017 Steve Matson |
| *Rosa gymnocarpa* var. *serpentina* | Gasquet rose | Rosaceae | perennial rhizomatous shrub | Apr-Jun(Aug) | None | None | G5T3T4 | S2 | 1B.3 | 2011-11-30 |  Dean Wm. Taylor, 2020 |
| *Rubus nivalis* | snow dwarf bramble | Rosaceae | perennial evergreen vine | Jun-Aug | None | None | G4? | S1 | 2B.3 | 1980-01-01 |  © 2021 Scot Loring |
| *Sabulina howellii* | Howell's sandwort | Caryophyllaceae | perennial herb | Apr-Jul | None | None | G4 | S3 | 1B.3 | 1980-01-01 |  ©2015 John Doyen |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| *Sagittaria sanfordii* | Sanford's arrowhead | Alismataceae | perennial rhizomatous herb (emergent) | May-Oct(Nov) | None | None | G3 | S3 | 1B.2 | Yes | 1984-01-01 |  ©2013 Debra L. Cook |
| *Sanguisorba officinalis* | great burnet | Rosaceae | perennial rhizomatous herb | Jul-Oct | None | None | G5? | S2 | 2B.2 | | 1994-01-01 |  ©2006 Dr. Amadej Trnkoczy |
| *Schoenoplectus subterminalis* | water bulrush | Cyperaceae | perennial rhizomatous herb (aquatic) | Jun-Aug(Sep) | None | None | G5 | S3 | 2B.3 | | 1980-01-01 |  Dean Wm. Taylor (1996) |
| *Sedum citrinum* | Blue Creek stonecrop | Crassulaceae | perennial herb | Jun | None | None | G2 | S2 | 1B.2 | Yes | 2015-04-20 |  ©2014 Peter Zika |
| *Sedum patens* | Smith River stonecrop | Crassulaceae | perennial herb | May-Jul | None | None | G2 | S2 | 1B.2 | | 2021-05-14 | No Photo Available |
| *Sidalcea malviflora* ssp. *patula* | Siskiyou checkerbloom | Malvaceae | perennial rhizomatous herb | (Mar-Apr)May-Aug | None | None | G4G5T2 | S2 | 1B.2 | | 1994-01-01 |  ©2004 Dean Wm. Taylor |
| *Sidalcea oregana* ssp. *eximia* | coast checkerbloom | Malvaceae | perennial herb | Jun-Aug | None | None | G5T1 | S1 | 1B.2 | Yes | 1994-01-01 | No Photo Available |
| *Silene hookeri* | Hooker's catchfly | Caryophyllaceae | perennial herb | (Mar)May-Jul | None | None | G4 | S2 | 2B.2 | | 2021-07-30 |  ©2014 John Doyen |
| *Silene scouleri* ssp. *scouleri* | Scouler's catchfly | Caryophyllaceae | perennial herb | (Mar-May)Jun-Aug(Sep) | None | None | G5T4T5 | S2S3 | 2B.2 | | 2017-12-13 |  ©2015 Vernon Smith |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Silene serpentinicola | serpentine catchfly | Caryophyllaceae | perennial rhizomatous herb | May-Jul | None | None | G3 | S3 | 1B.2 | | 2005-01-01 |  ©2008 Norman Jensen |
| Streptanthus howellii | Howell's jewelflower | Brassicaceae | perennial herb | Jul-Aug | None | None | G2G3 | S2 | 1B.2 | | 1980-01-01 |  ©Rick York and CNPS |
| Sulcaria spiralifera | twisted horsehair lichen | Parmeliaceae | fruticose lichen (epiphytic) | | None | None | G3G4 | S2 | 1B.2 | | 2014-03-01 |  © 2021 Scot Loring |
| Thermopsis robusta | robust false lupine | Fabaceae | perennial rhizomatous herb | May-Jul | None | None | G2 | S2 | 1B.2 | Yes | 1994-01-01 |  ©2018 Hayley Ross |
| Triquetrella californica | coastal triquetrella | Pottiaceae | moss | | None | None | G2 | S2 | 1B.2 | | 2001-01-01 | No Photo Available |
| Vaccinium scoparium | little-leaved huckleberry | Ericaceae | perennial deciduous shrub | Jun-Aug | None | None | G5 | S3 | 2B.2 | | 1994-01-01 |  © 2010 Keir Morse |
| Viola langsdorffii | Langsdorf's violet | Violaceae | perennial herb | May-Jul | None | None | G4G5 | S1 | 2B.1 | | 1994-01-01 |  ©2018 John Game |
| Viola palustris | alpine marsh violet | Violaceae | perennial rhizomatous herb | Mar-Aug | None | None | G5 | S1S2 | 2B.2 | | 1994-01-01 |  ©2021 Scot Loring |
| Viola primulifolia ssp. occidentalis | western white bog violet | Violaceae | perennial rhizomatous herb | Apr-Sep | None | None | G5T2 | S2 | 1B.2 | | 1980-01-01 |  ©2003 Norman Jensen |

Showing 1 to 95 of 95 entries

**Suggested Citation:**

California Native Plant Society, Rare Plant Program. 2024. Rare Plant Inventory (online edition, v9.5). Website https://www.rareplants.cnps.org [accessed 6 December 2024].

Quad Name **Requa**
Quad Number **41124-E1**

## ESA Anadromous Fish

| | |
|---|---|
| SONCC Coho ESU (T) - | X |
| CCC Coho ESU (E) - | |
| CC Chinook Salmon ESU (T) - | X |
| CVSR Chinook Salmon ESU (T) - | |
| SRWR Chinook Salmon ESU (E) - | |
| NC Steelhead DPS (T) - | X |
| CCC Steelhead DPS (T) - | |
| SCCC Steelhead DPS (T) - | |
| SC Steelhead DPS (E) - | |
| CCV Steelhead DPS (T) - | |
| Eulachon (T) - | X |
| sDPS Green Sturgeon (T) - | X |

## ESA Anadromous Fish Critical Habitat

| | |
|---|---|
| SONCC Coho Critical Habitat - | X |
| CCC Coho Critical Habitat - | |
| CC Chinook Salmon Critical Habitat - | |
| CVSR Chinook Salmon Critical Habitat - | |
| SRWR Chinook Salmon Critical Habitat - | |
| NC Steelhead Critical Habitat - | |
| CCC Steelhead Critical Habitat - | |
| SCCC Steelhead Critical Habitat - | |
| SC Steelhead Critical Habitat - | |
| CCV Steelhead Critical Habitat - | |
| Eulachon Critical Habitat - | X |
| sDPS Green Sturgeon Critical Habitat - | X |

## ESA Marine Invertebrates

Range Black Abalone (E) -
Range White Abalone (E) -

**ESA Marine Invertebrates Critical Habitat**

Black Abalone Critical Habitat -

**ESA Sea Turtles**

| | |
|---|---|
| East Pacific Green Sea Turtle (T) - | X |
| Olive Ridley Sea Turtle (T/E) - | X |
| Leatherback Sea Turtle (E) - | X |
| North Pacific Loggerhead Sea Turtle (E) - | |

**ESA Whales**

| | |
|---|---|
| Blue Whale (E) - | X |
| Fin Whale (E) - | X |
| Humpback Whale (E) - | X |
| Southern Resident Killer Whale (E) - | X |
| North Pacific Right Whale (E) - | X |
| Sei Whale (E) - | X |
| Sperm Whale (E) - | X |

**ESA Pinnipeds**

Guadalupe Fur Seal (T) -

Steller Sea Lion Critical Habitat -

**Essential Fish Habitat**

| | |
|---|---|
| Coho EFH - | X |
| Chinook Salmon EFH - | X |
| Groundfish EFH - | X |
| Coastal Pelagics EFH - | X |
| Highly Migratory Species EFH - | |

**MMPA Species (See list at left)**

**ESA and MMPA Cetaceans/Pinnipeds**
**See list at left and consult the NMFS Long Beach office**
**562-980-4000**

MMPA Cetaceans - X
MMPA Pinnipeds - X

Quad Name **Childs Hill**
Quad Number **41124-F1**

## ESA Anadromous Fish

SONCC Coho ESU (T) - X
CCC Coho ESU (E) -
CC Chinook Salmon ESU (T) -
CVSR Chinook Salmon ESU (T) -
SRWR Chinook Salmon ESU (E) -
NC Steelhead DPS (T) -
CCC Steelhead DPS (T) -
SCCC Steelhead DPS (T) -
SC Steelhead DPS (E) -
CCV Steelhead DPS (T) -
Eulachon (T) - X
sDPS Green Sturgeon (T) - X

## ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat - X
CCC Coho Critical Habitat -
CC Chinook Salmon Critical Habitat -
CVSR Chinook Salmon Critical Habitat -
SRWR Chinook Salmon Critical Habitat -
NC Steelhead Critical Habitat -
CCC Steelhead Critical Habitat -
SCCC Steelhead Critical Habitat -
SC Steelhead Critical Habitat -
CCV Steelhead Critical Habitat -
Eulachon Critical Habitat -
sDPS Green Sturgeon Critical Habitat - X

## ESA Marine Invertebrates

Range Black Abalone (E) -
Range White Abalone (E) -

**ESA Marine Invertebrates Critical Habitat**

Black Abalone Critical Habitat -

**ESA Sea Turtles**

| | |
|---|---|
| East Pacific Green Sea Turtle (T) - | X |
| Olive Ridley Sea Turtle (T/E) - | X |
| Leatherback Sea Turtle (E) - | X |
| North Pacific Loggerhead Sea Turtle (E) - | |

**ESA Whales**

| | |
|---|---|
| Blue Whale (E) - | X |
| Fin Whale (E) - | X |
| Humpback Whale (E) - | X |
| Southern Resident Killer Whale (E) - | X |
| North Pacific Right Whale (E) - | X |
| Sei Whale (E) - | X |
| Sperm Whale (E) - | X |

**ESA Pinnipeds**

Guadalupe Fur Seal (T) -

Steller Sea Lion Critical Habitat -

**Essential Fish Habitat**

| | |
|---|---|
| Coho EFH - | X |
| Chinook Salmon EFH - | X |
| Groundfish EFH - | X |
| Coastal Pelagics EFH - | X |
| Highly Migratory Species EFH - | |

**MMPA Species (See list at left)**

**ESA and MMPA Cetaceans/Pinnipeds**
**See list at left and consult the NMFS Long Beach office**
**562-980-4000**

MMPA Cetaceans - X
MMPA Pinnipeds - X

Quad Name **Sister Rocks**
Quad Number **41124-F2**

## ESA Anadromous Fish

SONCC Coho ESU (T) - X
CCC Coho ESU (E) -
CC Chinook Salmon ESU (T) -
CVSR Chinook Salmon ESU (T) -
SRWR Chinook Salmon ESU (E) -
NC Steelhead DPS (T) -
CCC Steelhead DPS (T) -
SCCC Steelhead DPS (T) -
SC Steelhead DPS (E) -
CCV Steelhead DPS (T) -
Eulachon (T) - X
sDPS Green Sturgeon (T) - X

## ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat - X
CCC Coho Critical Habitat -
CC Chinook Salmon Critical Habitat -
CVSR Chinook Salmon Critical Habitat -
SRWR Chinook Salmon Critical Habitat -
NC Steelhead Critical Habitat -
CCC Steelhead Critical Habitat -
SCCC Steelhead Critical Habitat -
SC Steelhead Critical Habitat -
CCV Steelhead Critical Habitat -
Eulachon Critical Habitat -
sDPS Green Sturgeon Critical Habitat - X

## ESA Marine Invertebrates

Range Black Abalone (E) -
Range White Abalone (E) -

**ESA Marine Invertebrates Critical Habitat**

Black Abalone Critical Habitat -

**ESA Sea Turtles**

| | |
|---|---|
| East Pacific Green Sea Turtle (T) - | X |
| Olive Ridley Sea Turtle (T/E) - | X |
| Leatherback Sea Turtle (E) - | X |
| North Pacific Loggerhead Sea Turtle (E) - | |

**ESA Whales**

| | |
|---|---|
| Blue Whale (E) - | X |
| Fin Whale (E) - | X |
| Humpback Whale (E) - | X |
| Southern Resident Killer Whale (E) - | X |
| North Pacific Right Whale (E) - | X |
| Sei Whale (E) - | X |
| Sperm Whale (E) - | X |

**ESA Pinnipeds**

Guadalupe Fur Seal (T) -

Steller Sea Lion Critical Habitat -

**Essential Fish Habitat**

| | |
|---|---|
| Coho EFH - | X |
| Chinook Salmon EFH - | X |
| Groundfish EFH - | X |
| Coastal Pelagics EFH - | X |
| Highly Migratory Species EFH - | |

**MMPA Species (See list at left)**

**ESA and MMPA Cetaceans/Pinnipeds**
**See list at left and consult the NMFS Long Beach office**
**562-980-4000**

MMPA Cetaceans - X
MMPA Pinnipeds - X

Quad Name **Smith River**
Quad Number **41124-H2**

## ESA Anadromous Fish

SONCC Coho ESU (T) - X
CCC Coho ESU (E) -
CC Chinook Salmon ESU (T) -
CVSR Chinook Salmon ESU (T) -
SRWR Chinook Salmon ESU (E) -
NC Steelhead DPS (T) -
CCC Steelhead DPS (T) -
SCCC Steelhead DPS (T) -
SC Steelhead DPS (E) -
CCV Steelhead DPS (T) -
Eulachon (T) - X
sDPS Green Sturgeon (T) - X

## ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat - X
CCC Coho Critical Habitat -
CC Chinook Salmon Critical Habitat -
CVSR Chinook Salmon Critical Habitat -
SRWR Chinook Salmon Critical Habitat -
NC Steelhead Critical Habitat -
CCC Steelhead Critical Habitat -
SCCC Steelhead Critical Habitat -
SC Steelhead Critical Habitat -
CCV Steelhead Critical Habitat -
Eulachon Critical Habitat -
sDPS Green Sturgeon Critical Habitat - X

## ESA Marine Invertebrates

Range Black Abalone (E) -
Range White Abalone (E) -

**ESA Marine Invertebrates Critical Habitat**

Black Abalone Critical Habitat -

**ESA Sea Turtles**

| | |
|---|---|
| East Pacific Green Sea Turtle (T) - | X |
| Olive Ridley Sea Turtle (T/E) - | X |
| Leatherback Sea Turtle (E) - | X |
| North Pacific Loggerhead Sea Turtle (E) - | |

**ESA Whales**

| | |
|---|---|
| Blue Whale (E) - | X |
| Fin Whale (E) - | X |
| Humpback Whale (E) - | X |
| Southern Resident Killer Whale (E) - | X |
| North Pacific Right Whale (E) - | X |
| Sei Whale (E) - | X |
| Sperm Whale (E) - | X |

**ESA Pinnipeds**

Guadalupe Fur Seal (T) -

Steller Sea Lion Critical Habitat -

**Essential Fish Habitat**

| | |
|---|---|
| Coho EFH - | X |
| Chinook Salmon EFH - | X |
| Groundfish EFH - | X |
| Coastal Pelagics EFH - | X |
| Highly Migratory Species EFH - | |

**MMPA Species (See list at left)**

**ESA and MMPA Cetaceans/Pinnipeds**
**See list at left and consult the NMFS Long Beach office**
**562-980-4000**

MMPA Cetaceans - X
MMPA Pinnipeds - X

# United States Department of the Interior

FISH AND WILDLIFE SERVICE
Arcata Fish And Wildlife Office
1655 Heindon Road
Arcata, CA 95521-4573
Phone: (707) 822-7201 Fax: (707) 822-8411

In Reply Refer To: 05/27/2025 21:06:04 UTC
Project Code: 2025-0021759
Project Name: 0K690 Culvert and Fish Passage - Del Norte Hwy 101

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological

evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf

**Migratory Birds**: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see https://www.fws.gov/program/migratory-bird-permit/what-we-do.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see https://www.fws.gov/library/collections/threats-birds.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/partner/council-conservation-migratory-birds.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

**Note:** IPaC has provided all available attachments because this project is in multiple field office jurisdictions.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Bald & Golden Eagles
- Migratory Birds
- Wetlands

# OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

**Arcata Fish And Wildlife Office**
1655 Heindon Road
Arcata, CA 95521-4573
(707) 822-7201

This project's location is within the jurisdiction of multiple offices. However, only one species list document will be provided for all offices. The species and critical habitats in this document reflect the aggregation of those that fall in each of the affiliated office's jurisdiction. Other offices affiliated with the project:

**Oregon Fish And Wildlife Office**
2600 Southeast 98th Avenue, Suite 100
Portland, OR 97266-1398
(503) 231-6179

## PROJECT SUMMARY

Project Code: 2025-0021759
Project Name: 0K690 Culvert and Fish Passage - Del Norte Hwy 101
Project Type: Culvert Repair/Replacement/Maintenance
Project Description: Twenty locations from PM 8.98 to 41.96 for culvert replacement. Two fish passages: bridge at PM 37.46 and 12 x 8 foot box for Delilah Creek (PM 40.71) realignment.
Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@41.734912449999996,-124.12270380555915,14z




Counties: California and Oregon

## ENDANGERED SPECIES ACT SPECIES

There is a total of 16 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

## MAMMALS

| NAME | STATUS |
|---|---|
| Pacific Marten, Coastal Distinct Population Segment *Martes caurina*<br>There is **final** critical habitat for this species. Your location overlaps the critical habitat.<br>Species profile: https://ecos.fws.gov/ecp/species/9081 | Threatened |

## BIRDS

| NAME | STATUS |
|---|---|
| California Condor *Gymnogyps californianus*<br>Population: Pacific Northwest NEP<br>No critical habitat has been designated for this species.<br>Species profile: https://ecos.fws.gov/ecp/species/8193 | Experimental Population, Non-Essential |
| Hawaiian Petrel *Pterodroma sandwichensis*<br>No critical habitat has been designated for this species.<br>Species profile: https://ecos.fws.gov/ecp/species/6746 | Endangered |
| Marbled Murrelet *Brachyramphus marmoratus*<br>Population: U.S.A. (CA, OR, WA)<br>There is **final** critical habitat for this species. Your location overlaps the critical habitat.<br>Species profile: https://ecos.fws.gov/ecp/species/4467 | Threatened |
| Northern Spotted Owl *Strix occidentalis caurina*<br>There is **final** critical habitat for this species. Your location overlaps the critical habitat.<br>Species profile: https://ecos.fws.gov/ecp/species/1123 | Threatened |
| Short-tailed Albatross *Phoebastria (=Diomedea) albatrus*<br>No critical habitat has been designated for this species.<br>Species profile: https://ecos.fws.gov/ecp/species/433 | Endangered |
| Western Snowy Plover *Charadrius nivosus nivosus*<br>Population: Pacific Coast population DPS-U.S.A. (CA, OR, WA), Mexico (within 50 miles of Pacific coast)<br>There is **final** critical habitat for this species. Your location overlaps the critical habitat.<br>Species profile: https://ecos.fws.gov/ecp/species/8035 | Threatened |
| Yellow-billed Cuckoo *Coccyzus americanus*<br>Population: Western U.S. DPS<br>There is **final** critical habitat for this species. Your location does not overlap the critical habitat.<br>Species profile: https://ecos.fws.gov/ecp/species/3911 | Threatened |

## REPTILES

| NAME | STATUS |
|---|---|
| Northwestern Pond Turtle *Actinemys marmorata*<br>No critical habitat has been designated for this species.<br>Species profile: https://ecos.fws.gov/ecp/species/1111 | Proposed Threatened |
| Olive Ridley Sea Turtle *Lepidochelys olivacea* | Threatened |

| NAME | STATUS |
|---|---|
| Population: Wherever found, except when listed as endangered under 50 CFR 224.101<br>No critical habitat has been designated for this species.<br>Species profile: https://ecos.fws.gov/ecp/species/1513 | |

## FISHES

| NAME | STATUS |
|---|---|
| Tidewater Goby *Eucyclogobius newberryi*<br>There is **final** critical habitat for this species. Your location overlaps the critical habitat.<br>Species profile: https://ecos.fws.gov/ecp/species/57 | Endangered |

## INSECTS

| NAME | STATUS |
|---|---|
| Monarch Butterfly *Danaus plexippus*<br>There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat.<br>Species profile: https://ecos.fws.gov/ecp/species/9743 | Proposed Threatened |
| Oregon Silverspot Butterfly *Speyeria zerene hippolyta*<br>There is **final** critical habitat for this species. Your location does not overlap the critical habitat.<br>Species profile: https://ecos.fws.gov/ecp/species/6930 | Threatened |
| Suckley's Cuckoo Bumble Bee *Bombus suckleyi*<br>Population:<br>No critical habitat has been designated for this species.<br>Species profile: https://ecos.fws.gov/ecp/species/10885 | Proposed Endangered |

## FLOWERING PLANTS

| NAME | STATUS |
|---|---|
| Mcdonald"s Rock-cress *Arabis mcdonaldiana*<br>No critical habitat has been designated for this species.<br>Species profile: https://ecos.fws.gov/ecp/species/6849 | Endangered |
| Western Lily *Lilium occidentale*<br>No critical habitat has been designated for this species.<br>Species profile: https://ecos.fws.gov/ecp/species/998 | Endangered |

## CRITICAL HABITATS

There are 6 critical habitats wholly or partially within your project area under this office's jurisdiction.

| NAME | STATUS |
|---|---|
| Marbled Murrelet *Brachyramphus marmoratus*<br>https://ecos.fws.gov/ecp/species/4467#crithab | Final |
| Northern Spotted Owl *Strix occidentalis caurina* | Final |

| NAME | STATUS |
|---|---|
| https://ecos.fws.gov/ecp/species/1123#crithab | |
| Pacific Marten, Coastal Distinct Population Segment *Martes caurina*<br>https://ecos.fws.gov/ecp/species/9081#crithab | Final |
| Sand Dune Phacelia *Phacelia argentea*<br>For information on why this critical habitat appears for your project, even though Sand Dune Phacelia is not on the list of potentially affected species at this location, contact the local field office.<br>https://ecos.fws.gov/ecp/species/599#crithab | Final |
| Tidewater Goby *Eucyclogobius newberryi*<br>https://ecos.fws.gov/ecp/species/57#crithab | Final |
| Western Snowy Plover *Charadrius nivosus nivosus*<br>https://ecos.fws.gov/ecp/species/8035#crithab | Final |

# USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

The following FWS National Wildlife Refuge Lands and Fish Hatcheries lie fully or partially within your project area:

| FACILITY NAME | ACRES |
|---|---|
| CASTLE ROCK NATIONAL WILDLIFE REFUGE<br>https://www.fws.gov/our-facilities?$keywords="%5C%22CASTLE+ROCK+NATIONAL+WILDLIFE+REFUGE%5C%22" | 13.807 |

# BALD & GOLDEN EAGLES

Bald and Golden Eagles are protected under the Bald and Golden Eagle Protection Act [2] and the Migratory Bird Treaty Act (MBTA) [1]. Any person or organization who plans or conducts activities that may result in impacts to Bald or Golden Eagles, or their habitats, should follow appropriate regulations and consider implementing appropriate avoidance and minimization measures, as described in the various links on this page.

1. The Bald and Golden Eagle Protection Act of 1940.
2. The Migratory Birds Treaty Act of 1918.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

There are Bald Eagles and/or Golden Eagles in your project area.

**Measures for Proactively Minimizing Eagle Impacts**
For information on how to best avoid and minimize disturbance to nesting bald eagles, please review the National Bald Eagle Management Guidelines. You may employ the timing and activity-specific distance recommendations in this document when designing your project/ activity to avoid and minimize eagle impacts. For bald eagle information specific to Alaska, please refer to Bald Eagle Nesting and Sensitivity to Human Activity.

The FWS does not currently have guidelines for avoiding and minimizing disturbance to nesting Golden Eagles. For site-specific recommendations regarding nesting Golden Eagles, please consult with the appropriate Regional Migratory Bird Office or Ecological Services Field Office.

If disturbance or take of eagles cannot be avoided, an incidental take permit may be available to authorize any take that results from, but is not the purpose of, an otherwise lawful activity. For assistance making this determination for Bald Eagles, visit the Do I Need A Permit Tool. For assistance making this determination for golden eagles, please consult with the appropriate Regional Migratory Bird Office or Ecological Services Field Office.

**Ensure Your Eagle List is Accurate and Complete**
If your project area is in a poorly surveyed area in IPaC, your list may not be complete and you may need to rely on other resources to determine what species may be present (e.g. your local FWS field office, state surveys, your own surveys). Please review the Supplemental Information on Migratory Birds and Eagles, to help you properly interpret the report for your specified location, including determining if there is sufficient data to ensure your list is accurate.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to bald or golden eagles on your list, see the "Probability of Presence Summary" below to see when these bald or golden eagles are most likely to be present and breeding in your project area.

| NAME | BREEDING SEASON |
|---|---|
| Bald Eagle *Haliaeetus leucocephalus*<br>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.<br>https://ecos.fws.gov/ecp/species/1626 | Breeds Mar 1 to Aug 31 |
| Golden Eagle *Aquila chrysaetos*<br>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.<br>https://ecos.fws.gov/ecp/species/1680 | Breeds Mar 1 to Aug 31 |

## PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper

Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

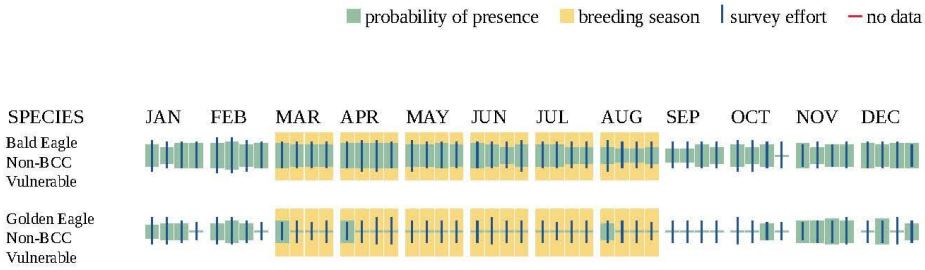
**Probability of Presence (■)**

Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

**Breeding Season (■)**
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

**Survey Effort (|)**
Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

**No Data (–)**
A week is marked as having no data if there were no survey events for that week.




Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide avoidance and minimization measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

# MIGRATORY BIRDS

The Migratory Bird Treaty Act (MBTA) [1] prohibits the take (including killing, capturing, selling, trading, and transport) of protected migratory bird species without prior authorization by the Department of Interior U.S. Fish and Wildlife Service (Service). The incidental take of migratory birds is the injury or death of birds that results from, but is not the purpose, of an activity. The Service interprets the MBTA to prohibit incidental take.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the "Probability of Presence Summary" below to see when these birds are most likely to be present and breeding in your project area.

| NAME | BREEDING SEASON |
|---|---|
| Allen's Hummingbird *Selasphorus sasin*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/9637 | Breeds Feb 1 to Jul 15 |
| Ancient Murrelet *Synthliboramphus antiquus*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/11929 | Breeds Mar 10 to Sep 10 |
| Bald Eagle *Haliaeetus leucocephalus*<br>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.<br>https://ecos.fws.gov/ecp/species/1626 | Breeds Mar 1 to Aug 31 |
| Black Oystercatcher *Haematopus bachmani*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/9591 | Breeds Apr 15 to Oct 31 |
| Black Scoter *Melanitta nigra*<br>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.<br>https://ecos.fws.gov/ecp/species/10413 | Breeds elsewhere |

| NAME | BREEDING SEASON |
|---|---|
| Black Swift *Cypseloides niger*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/8878 | Breeds Jun 15 to Sep 10 |
| Black Turnstone *Arenaria melanocephala*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/10557 | Breeds elsewhere |
| Black-legged Kittiwake *Rissa tridactyla*<br>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.<br>https://ecos.fws.gov/ecp/species/10459 | Breeds elsewhere |
| Black-vented Shearwater *Puffinus opisthomelas*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/9623 | Breeds elsewhere |
| Brandt's Cormorant *Urile penicillatus*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/11903 | Breeds Apr 15 to Sep 15 |
| Brown Pelican *Pelecanus occidentalis*<br>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.<br>https://ecos.fws.gov/ecp/species/6034 | Breeds Jan 15 to Sep 30 |
| California Gull *Larus californicus*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/10955 | Breeds Mar 1 to Jul 31 |
| Cassin's Auklet *Ptychoramphus aleuticus*<br>This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA<br>https://ecos.fws.gov/ecp/species/6967 | Breeds Mar 21 to Sep 21 |
| Cassin's Finch *Haemorhous cassinii*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/9462 | Breeds May 15 to Jul 15 |
| Chestnut-backed Chickadee *Poecile rufescens rufescens*<br>This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA<br>https://ecos.fws.gov/ecp/species/11913 | Breeds Mar 1 to Jul 31 |

| NAME | BREEDING SEASON |
|---|---|
| Clark's Grebe *Aechmophorus clarkii*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/10575 | Breeds Jun 1 to Aug 31 |
| Common Eider *Somateria mollissima*<br>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.<br>https://ecos.fws.gov/ecp/species/10457 | Breeds Jun 1 to Sep 30 |
| Common Loon *gavia immer*<br>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.<br>https://ecos.fws.gov/ecp/species/4464 | Breeds Apr 15 to Oct 31 |
| Common Murre *Uria aalge*<br>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.<br>https://ecos.fws.gov/ecp/species/10453 | Breeds Apr 15 to Aug 15 |
| Double-crested Cormorant *phalacrocorax auritus*<br>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.<br>https://ecos.fws.gov/ecp/species/3478 | Breeds Apr 20 to Aug 31 |
| Evening Grosbeak *Coccothraustes vespertinus*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/9465 | Breeds May 15 to Aug 10 |
| Golden Eagle *Aquila chrysaetos*<br>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.<br>https://ecos.fws.gov/ecp/species/1680 | Breeds Mar 1 to Aug 31 |
| Lesser Yellowlegs *Tringa flavipes*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/9679 | Breeds elsewhere |
| Long-tailed Duck *Clangula hyemalis*<br>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.<br>https://ecos.fws.gov/ecp/species/7238 | Breeds elsewhere |

| NAME | BREEDING SEASON |
|---|---|
| Manx Shearwater *Puffinus puffinus*<br>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.<br>https://ecos.fws.gov/ecp/species/10465 | Breeds Apr 15 to Oct 31 |
| Marbled Godwit *Limosa fedoa*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/9481 | Breeds elsewhere |
| Oak Titmouse *Baeolophus inornatus*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/9656 | Breeds Mar 15 to Jul 15 |
| Olive-sided Flycatcher *Contopus cooperi*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/3914 | Breeds May 20 to Aug 31 |
| Oregon Vesper Sparrow *Pooecetes gramineus affinis*<br>This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA<br>https://ecos.fws.gov/ecp/species/5141 | Breeds Apr 21 to Aug 31 |
| Pink-footed Shearwater *Ardenna creatopus*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/9598 | Breeds elsewhere |
| Pomarine Jaeger *Stercorarius pomarinus*<br>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.<br>https://ecos.fws.gov/ecp/species/10458 | Breeds elsewhere |
| Red Knot *Calidris canutus roselaari*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/8880 | Breeds elsewhere |
| Red Phalarope *Phalaropus fulicarius*<br>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.<br>https://ecos.fws.gov/ecp/species/10469 | Breeds elsewhere |

| NAME | BREEDING SEASON |
|---|---|
| Red-breasted Merganser *Mergus serrator*<br>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.<br>https://ecos.fws.gov/ecp/species/10693 | Breeds elsewhere |
| Red-necked Phalarope *Phalaropus lobatus*<br>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.<br>https://ecos.fws.gov/ecp/species/10467 | Breeds elsewhere |
| Red-throated Loon *Gavia stellata*<br>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.<br>https://ecos.fws.gov/ecp/species/9589 | Breeds elsewhere |
| Ring-billed Gull *Larus delawarensis*<br>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.<br>https://ecos.fws.gov/ecp/species/10468 | Breeds elsewhere |
| Rufous Hummingbird *Selasphorus rufus*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/8002 | Breeds Apr 15 to Jul 15 |
| Short-billed Dowitcher *Limnodromus griseus*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/9480 | Breeds Jun 1 to Aug 10 |
| Sooty Shearwater *Ardenna grisea*<br>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.<br>https://ecos.fws.gov/ecp/species/10417 | Breeds elsewhere |
| South Polar Skua *Stercorarius maccormicki*<br>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.<br>https://ecos.fws.gov/ecp/species/10699 | Breeds elsewhere |
| Surf Scoter *Melanitta perspicillata*<br>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.<br>https://ecos.fws.gov/ecp/species/10463 | Breeds elsewhere |

| NAME | BREEDING SEASON |
|---|---|
| Tufted Puffin *Fratercula cirrhata*<br>This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA<br>https://ecos.fws.gov/ecp/species/430 | Breeds May 5 to Oct 5 |
| Western Grebe *aechmophorus occidentalis*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/6743 | Breeds Jun 1 to Aug 31 |
| Western Gull *Larus occidentalis*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/11969 | Breeds Apr 21 to Aug 25 |
| Western Screech-owl *Megascops kennicottii cardonensis*<br>This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA<br>https://ecos.fws.gov/ecp/species/11923 | Breeds Mar 1 to Jun 30 |
| White-winged Scoter *Melanitta fusca*<br>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.<br>https://ecos.fws.gov/ecp/species/10462 | Breeds elsewhere |
| Willet *Tringa semipalmata*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/10669 | Breeds elsewhere |
| Wrentit *Chamaea fasciata*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/10668 | Breeds Mar 15 to Aug 10 |

## PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

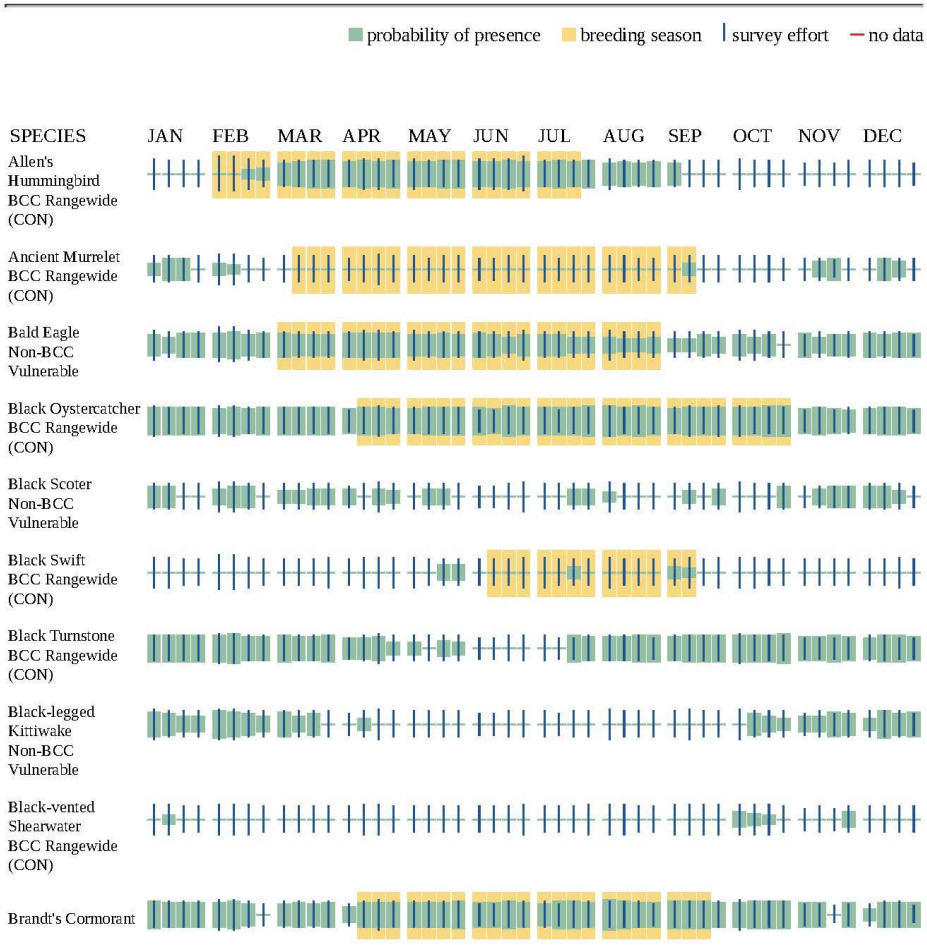
**Probability of Presence (■)**

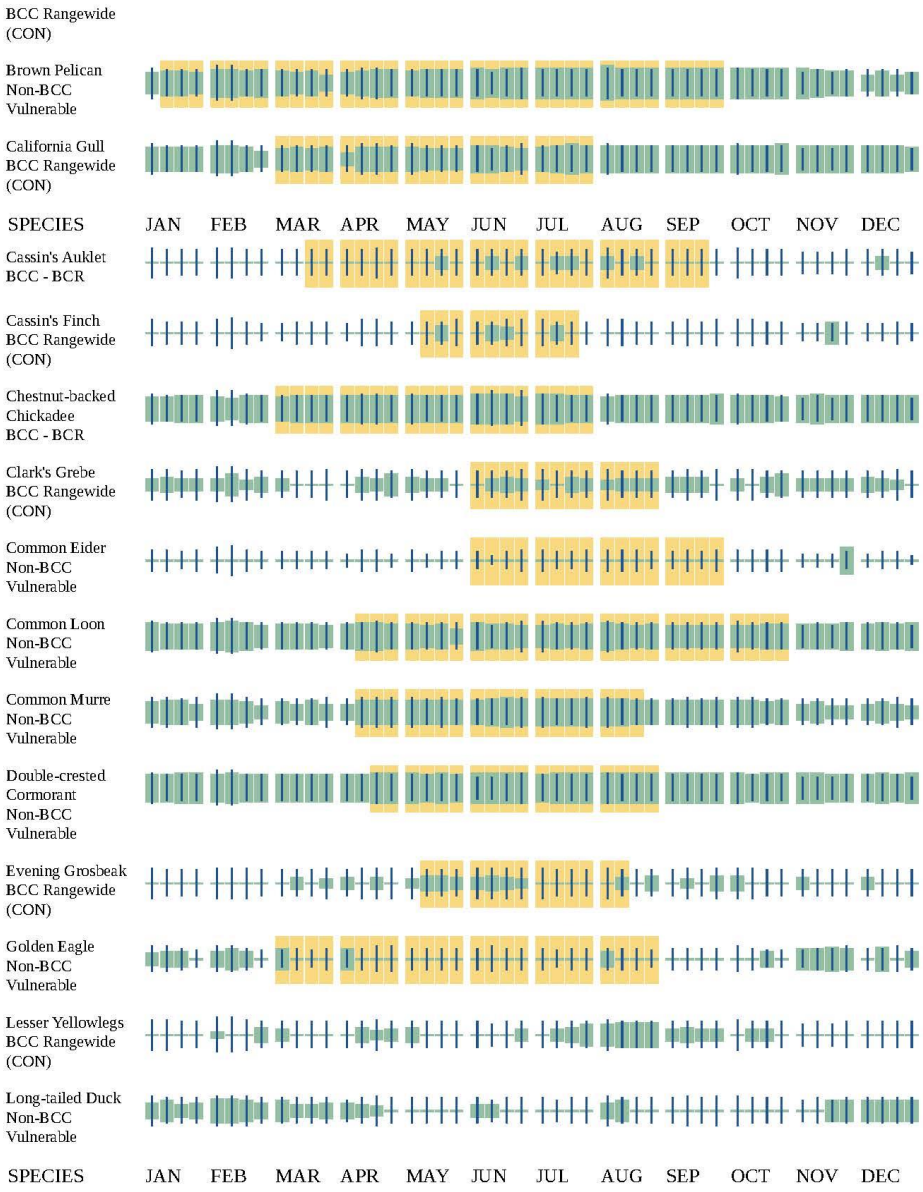
Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

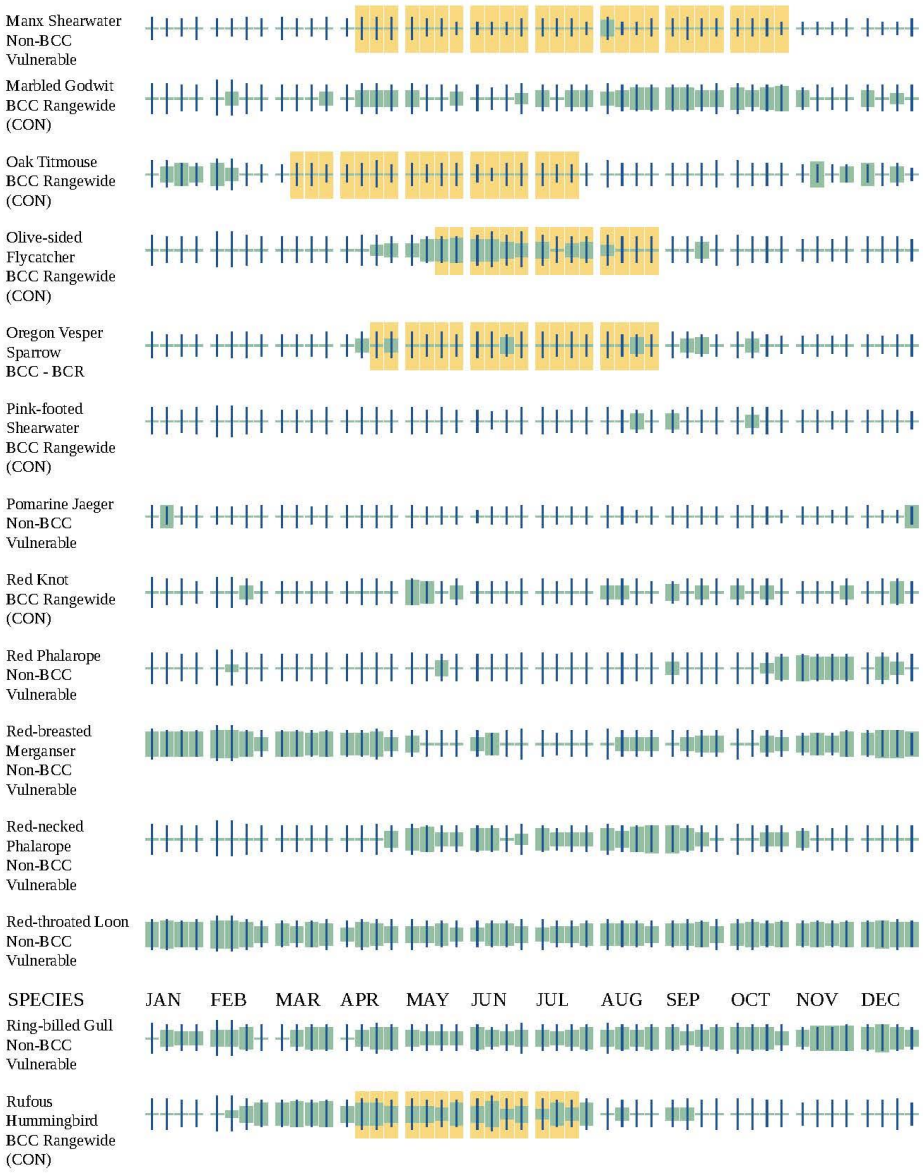
**Breeding Season (■)**
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

**Survey Effort (|)**
Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

**No Data (–)**
A week is marked as having no data if there were no survey events for that week.




BCC Rangewide (CON)
Brown Pelican Non-BCC Vulnerable
California Gull BCC Rangewide (CON)
SPECIES JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
Cassin's Auklet BCC - BCR
Cassin's Finch BCC Rangewide (CON)
Chestnut-backed Chickadee BCC - BCR
Clark's Grebe BCC Rangewide (CON)
Common Eider Non-BCC Vulnerable
Common Loon Non-BCC Vulnerable
Common Murre Non-BCC Vulnerable
Double-crested Cormorant Non-BCC Vulnerable
Evening Grosbeak BCC Rangewide (CON)
Golden Eagle Non-BCC Vulnerable
Lesser Yellowlegs BCC Rangewide (CON)
Long-tailed Duck Non-BCC Vulnerable
SPECIES JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC


Manx Shearwater
Non-BCC
Vulnerable
Marbled Godwit
BCC Rangewide
(CON)
Oak Titmouse
BCC Rangewide
(CON)
Olive-sided
Flycatcher
BCC Rangewide
(CON)
Oregon Vesper
Sparrow
BCC - BCR
Pink-footed
Shearwater
BCC Rangewide
(CON)
Pomarine Jaeger
Non-BCC
Vulnerable
Red Knot
BCC Rangewide
(CON)
Red Phalarope
Non-BCC
Vulnerable
Red-breasted
Merganser
Non-BCC
Vulnerable
Red-necked
Phalarope
Non-BCC
Vulnerable
Red-throated Loon
Non-BCC
Vulnerable
SPECIES
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC
Ring-billed Gull
Non-BCC
Vulnerable
Rufous
Hummingbird
BCC Rangewide
(CON)




Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide avoidance and minimization measures for birds
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

# WETLANDS

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

Due to your project's size, the list below may be incomplete, or the acreages reported may be inaccurate. For a full list, please contact the local U.S. Fish and Wildlife office or visit https://www.fws.gov/wetlands/data/mapper.HTML

FRESHWATER FORESTED/SHRUB WETLAND

- PSS1Cd
- PSS1/UBF
- PSS1C
- PSS1F
- PFO4/1C
- PFO4/1A
- PSS1/EM1C
- PSS1/EM1A
- PSS1S
- PFO1F
- PFO1C
- PFO1/4C
- PSS1/EM1F
- PSS1/FO1C
- PFO4C
- PFO
- PFO1A
- PFO1/EM1F
- PSS1A
- PFO1Ch
- PFO1/SS1C
- PSS1R
- PSS1/USA
- PFO1/EM1A

- PFOA
- PFO5F
- PSS1/USC

LAKE
- L1UBH

FRESHWATER POND
- PUBF
- PABH
- PABHh
- PUBHh
- PUSCx
- PUBT
- PUSC
- PAB3H
- PABHx
- PUBV
- PUSA
- PUBK
- PAB3/UBHx
- PUBH
- PUBFx
- PUBHx

ESTUARINE AND MARINE WETLAND
- E2USM
- M2USN
- E2SS1P
- E2SSP
- E2EM1P
- E2US2N
- E2EM1N
- M2US2N
- E2US2P
- M2RSN
- M2RS2Nr
- M2USP
- M2RS2N

- E2USP
- E2USN
- M2RS1N
- M2RSP

RIVERINE

- R3USC
- R1USQ
- R5UBF
- R1UBV
- R4SBC
- R3US5C
- R2UBH
- R3UBH
- R5UBH
- R3US1C
- R4SBA
- R3UBF

FRESHWATER EMERGENT WETLAND

- PEM1Fh
- PEM1/SS1C
- PEM1F
- PEM1T
- PEM1Fx
- PEM1/FOCh
- PEM1Cx
- PEM1/SSC
- PEM1Cd
- PEM1R
- PEM1A
- PEM1C
- PEM1Ch

ESTUARINE AND MARINE DEEPWATER

- E1UBL

## IPAC USER CONTACT INFORMATION

Agency: California Department of Transportation District 1
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Zip: 95501
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