HUM-169 REHAB CULVERTS PROJECT

HUMBOLDT COUNTY, CALIFORNIA

DISTRICT 1 – HUM – 169 (Post Miles 15.0 to 33.8)

EA 01-0H410 / EFIS 01 1700 0169

INITIAL STUDY

with Proposed Negative Declaration

Prepared by the
State of California Department of Transportation

April 2022

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 effects of a proposed project on State Route 169 near Weitchpec, 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 should you do?

- **Please read this document.**
- Additional copies of this document are available for review at the following locations:
    - Caltrans District 1 Headquarters, 1656 Union Street, Eureka CA 95501
    - Kim Yerton Memorial Library, 370 Loop Road, Hoopa, CA 95546
    - Yurok Tribal Office, Hwy 96, Weitchpec, CA 95546
    - Yurok Tribal Office, 190 Klamath Blvd, Klamath, CA 95548
    - Thomas H. Kuchel Visitor Center, Hwy 101, Orick, CA 95555
    - Stone Lagoon Visitor Center, 15336 US 101, Trinidad, CA 95570
- Copies of technical studies are available by email upon request, or at the District 1 office.
- This document may be downloaded at the following website: https://dot.ca.gov/caltrans-near-me/district-1/d1-projects/route169culvertsrehab
- We'd like to hear what you think. If you have any comments about the proposed project, please send us your comments.
- Send your written comments to Caltrans by the deadline: May 12, 2022
    - Please send comments via U.S. mail to:

      California Department of Transportation
      Attention: Cari Williams
      North Region Environmental–District 1
      1656 Union Street
      Eureka, CA 95501
    - Send comments via e-mail to: Cari.Williams@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.

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, Attention: Myles Cochrane, North Region Environmental-District 1, 1656 Union Street, Eureka, CA 95501; (707) 445-6600 Voice, or use the California Relay Service TTY number, 711 or 1-800-735-2929.

HUM-169 REHAB CULVERTS PROJECT

Rehabilitate 52 culverts, install downdrains, and place rock slope protection at various locations on State Route 169 in Humboldt County, from post miles 15.0 to 33.8 north of Weitchpec

INITIAL STUDY

With Proposed Negative Declaration

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

THE STATE OF CALIFORNIA
Department of Transportation

03/25/2022
Date of Approval

Brandon Larsen
Brandon Larsen, Office Chief
North Region Environmental - District 1
California Department of Transportation
CEQA Lead Agency

The following person may be contacted for more information about this document:

Cari Williams, North Region Environmental - District 1
1656 Union Street
Eureka, CA 95501
(707) 298-1465
or use the California Relay Service TTY number, 711 or 1-800-735-2929

PROPOSED NEGATIVE DECLARATION

Pursuant to: Division 13, California Public Resources Code

SCH Number: Pending

Project Description

The California Department of Transportation (Caltrans) proposes to rehabilitate 52 culverts to good condition on State Route 169 between post miles 15.00 and 33.80 in Humboldt County.

Determination

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

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

The project would have *No Effect* on:

- Aesthetics
- Agriculture and Forest Resources
- Air Quality
- Cultural Resources
- Energy
- Geology and Soils
- Hazards and Hazardous Materials
- Land Use and Planning
- Mineral Resources
- Noise
- Population and Housing
- Public Services
- Recreation
- Tribal Cultural resources
- Utilities and Service Systems

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

- Biological Resources
- Greenhouse Gas Emissions
- Hydrology and Water Quality
- Transportation
- Wildfire

DRAFT **DRAFT**

Brandon Larsen, Office Chief
North Region Environmental–District 1
California Department of Transportation

Date

Table of Contents

List of Appendices

List of Tables

List of Figures

List of Abbreviated Terms and Acronyms

Abbreviation	Description
AB	Assembly Bill
ARB	Air Resources Board
ASR	Archaeological Survey Report
BMPs	Best Management Practices
BO	Biological Opinion
BSA	Biological Study Area
ºC	degrees Celsius
CAA	Clean Air Act
CAFE	Corporate Average Fuel Economy
CAL FIRE	California Department of Forestry and Fire Protection
CAL OES	California Office of Emergency Services
CalEPA	California Environmental Protection Agency
Caltrans	California Department of Transportation
CAPTI	Climate Action Plan for Transportation Infrastructure
CARB	California Air Resources Board
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
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
CHP	California Highway Patrol
CIA	Cumulative Impact Analysis
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CO_2	carbon dioxide
CRPR	California Rare Plant Rank
CTP	California Transportation Plan
CWA	Clean Water Act
dB	decibels
DBH	Diameter at Breast Height
DD	Downdrain
Department	Caltrans
DI	Drainage Inlet
DOT	Department of Transportation
DPS	Distinct Population Segment

Abbreviation	Description
ECL	Environmental Construction Liaison
EIR	Environmental Impact Report
EISA	Energy Independence and Security Act
EO	Executive Order
EPA	Environmental Protection Agency
EPA	Extant Population Area
ESA	Endangered Species Act
ESA(s)	Environmentally Sensitive Area(s)
ESHA	Environmentally Sensitive Habitat Area
ESL	Environmental Study Limits
ESU	Evolutionarily Significant Unit
ºF	degrees Fahrenheit
FED	Final Environmental Document
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration
FR	Federal Register
GHG	greenhouse gas
GWP	Global Warming Potential
H&SC	Health & Safety Code
HCAOG	Humboldt County Association of Governments
HSA	Hydrologic Sub-Area
HFCs	hydrofluorocarbons
IPCC	Intergovernmental Panel on Climate Change
IS	Initial Study
IS/ND	Initial Study/Negative Declaration
LCFS	Low Carbon Fuel Standard
LSAA	Lake and Streambed Alteration Agreement
MAMU	Marbled murrelet
MBTA	Migratory Bird Treaty Act
MMT	million metric tons
MMTC0_2e	million metric tons of carbon dioxide equivalent
MPO	Metropolitan Planning Organization
MSA	Magnuson-Stevens Fishery Conservation and Management Act
NAAQS	National Ambient Air Quality Standards
NAGPRA	Native American Graves Protection and Repatriation Act of 1990
N_2O	nitrous oxide
NC	North Coast
NCC	Northern Coastal California (relative to Pacific marten)
NCRWQCB	North Coast Regional Water Quality Control Board
ND	Negative Declaration

Abbreviation	Description
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
NPDES	National Pollutant Discharge Elimination System
NPS	National Park Service
NRLF	Northern red-legged frog
NSO	Northern spotted owl
OHWM	Ordinary High Water Mark
PDT	Project Development Team
PM(s)	Post Mile(s)
PRC	Public Resources Code
Quad	USGS 7-minute Quadrangle
RED	Rock Energy Dissipator
ROW	right of way
RSP	Rock Slope Protection
RTP	Regional Transportation Plan
RTPA	Regional Transportation Planning Agency
RWQCB	Regional Water Quality Control Board
SAFE	Safer Affordable Fuel Efficient
SB	Senate Bill
SCS	Sustainable Communities Strategy
SF_6	sulfur hexafluoride
SHS	State Highway System
SLR	Sea Level Rise
SNC(s)	Sensitive Natural Community(ies)
SO_2	sulfur dioxide
SR	State Route
SRZ	Structural Root Zone
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
THPO	Tribal Heritage Preservation Officer
THVF	Temporary High Visibility Fencing
TMDL(s)	Total Maximum Daily Load(s)
TMP	Transportation Management Plan
U.S. or US	United States
U.S. 101	U.S. (United States) Highway 101

Abbreviation	Description
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
USGS	United States Geological Survey
VIA	Visual Impact Assessment
VMT	Vehicle Miles Traveled
VROOM	Variety in Rural Options of Mobility
WDRs	Waste Discharge Requirements
WPCP	Water Pollution Control Program
WQAR	Water Quality Assessment Report
WQCP	Water Quality Control Plan
WQOs	Water Quality Objectives
YTED	Yurok Tribe Environmental Department (formerly YTEP)
YTEP	Yurok Tribe Environmental Program

Chapter 1. Proposed Project

1.1 Project History

This project proposes to improve culvert conditions on State Route (SR) 169. The culverts in this project were determined to need repair and maintenance through the Caltrans District 1 Culvert Inspection Program. The project was initially one project with 103 locations. However, to better address varying issues per specific location, including environmental timeframes and project complexity, the project was split into two.

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

1.2 Project Description

Existing Condition

The proposed project is on SR 169, a rural highway in Humboldt and Del Norte counties (Figures 1 and 2). SR 169, a single lane highway with segments of two lanes, provides access to private property and residences, schools, emergency services, employment, mail and fuel delivery, traditional cultural areas, and recreational activities. Culverts included in this project were evaluated and determined to be in poor or fair condition, with some culverts degraded beyond repair.

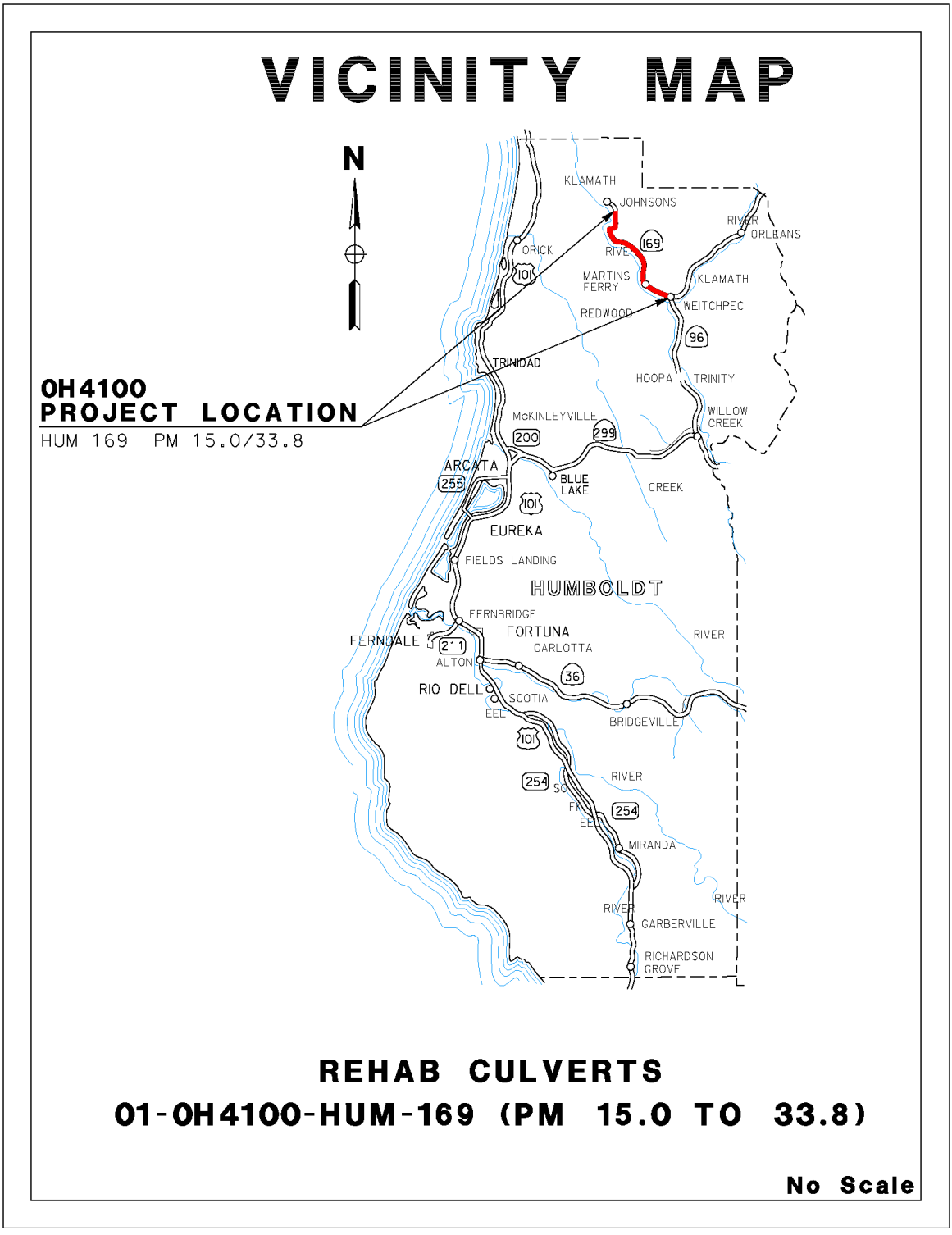


Figure 1. Project Vicinity

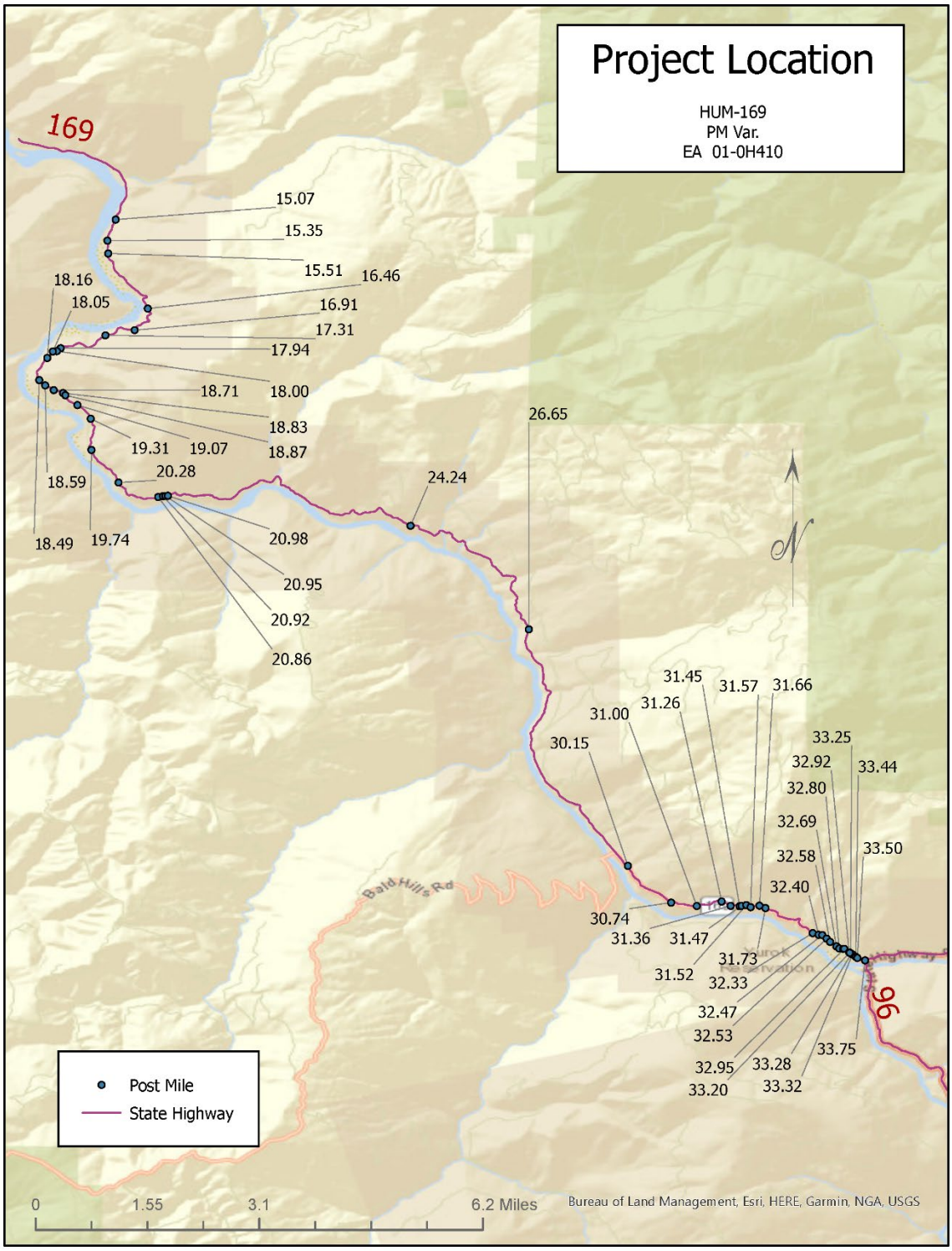


Figure 2. Project Location Map

Segments of SR 169 do not have shoulders, and in other areas with steep cliffs or walls, there is no room to widen the shoulder for pedestrians or bicyclists.

Project Objective

Purpose

The purpose of this project is to rehabilitate 52 existing drainage systems to good condition at various locations along SR 169 in Humboldt County.

Need

The project is needed to repair deteriorating or failing drainage systems to prevent erosion and potential roadway embankment failure.

Proposed Project

Rehabilitation activities include full culvert replacement using the cut and cover method[1], headwall and inlet replacement and construction, underdrain installation, and culvert abandonment/ditch regrading at one location. Table 1 contains specific proposed work for each location. Rock energy dissipator (RED) and rock slope protection (RSP) would also be placed at certain culvert locations to reduce soil erosion and protect water quality. Some locations would require temporary water diversion to complete work. Private water lines that pass through culverts would be removed and replaced in-kind. Where necessary, elements of culvert work would have site-specific designs (referred to as nonstandard) to reduce impacts, avoid natural features, etc. Typical sections are on the location layouts (Appendix A).

Construction is currently scheduled to begin in May 2024 and finish in December 2026, with approximately 190 total working days. Full road closures lasting up to seven hours would be required at locations where the roadway is too narrow to allow safe passage around construction. Some full closures may occur at night. Staging may occur at any pullout large enough within the Environmental Study Limits (ESL) for staging outside of sensitive resource areas.

[1] Cut and cover is a method used in culvert replacement. The original pavement is cut and removed, the drainage system is repaired or replaced, then the trench is covered with pavement to match the existing road level.

The majority of the project is within the existing Caltrans right of way, except for approximately 0.34 acre, which Caltrans would acquire. Approximately 75 (0.78 acre) temporary construction easements (TCEs) would be required to access the culverts and staging areas.

The expected lifespan of the new culverts would be approximately 50 years, while downdrains and pavement are expected to last 20 to 25 years.

Table 1. Proposed Work at Each Culvert Location

Culvert Post Mile	Layout Page	Planned Work
15.07	1	Remove existing 24" x 30' culvert and private water line; replace with 24" x 28' culvert and replace water line. Lane closure required. Approximately 40 SF of vegetation removal.
15.35	2	Remove existing 18" x 35' culvert; replace with 24" x 35' culvert. Install inlet. Place rock energy dissipator. Potential staging. Lane closure required. Approximately 40 SF of vegetation removal.
15.51	3	Remove existing 24" x 34' culvert, replace in-kind. Place rock energy dissipator. Approximately 40 SF of vegetation removal.
16.46	4	Remove existing 18" x 50' culvert and downdrain; replace with 24" x 26' culvert and 22' downdrain. Lane closure required. Approximately 275 SF of vegetation removal.
16.91	5	Remove existing 18" x 40' culvert; replace with 24" x 47' culvert at lower depth. Install inlet with non-standard headwall. Place rock energy dissipator. Lane closure required. Approximately 40 SF of vegetation removal.
17.31	6	Remove existing 18" x 60' culvert and downdrain; replace with 24" x 34' culvert and 71' downdrain. Construct non-standard headwall with cut-off wall. Place rock energy dissipator. Staging nearby. Lane closure required. Approximately 800 SF of vegetation removal.
17.94	7	Remove existing 18" x 65' culvert and downdrain; replace with 24" x 35' culvert and 47' downdrain. Place rock energy dissipator. Lane closure required. Approximately 550 SF of vegetation removal.
18.00	8	Remove existing 18" x 40' culvert and replace with 24" x 37' culvert. Install inlet. Place rock slope protection. Lane closure required. Approximately 40 SF of vegetation removal.

Culvert Post Mile	Layout Page	Planned Work
18.05	9	Remove existing 18" x 40' culvert and replace with 24" x 35' culvert. Install inlet. Place rock energy dissipator. Approximately 40 SF of vegetation removal.
18.16	10	Remove existing 18" x 74' culvert and downdrain. Replace with 24" x 32.5' culvert and 45' downdrain. Place rock energy dissipator. Lane closure required. Approximately 500 SF of vegetation removal.
18.49	11	Remove existing 12" x 31' culvert; replace with 24" x 31' culvert at lower depth. Install inlet. Place rock energy dissipator. Lane closure required. Approximately 40 SF of vegetation removal.
18.59	12	Remove existing 18" x 50' culvert; replace with 24" x 40' culvert at lower depth. Install inlet. Place rock energy dissipator. Approximately 40 SF of vegetation removal.
18.71	13	Remove existing 24" x 42' culvert; replace with same at lower depth. Install inlet. Place rock energy dissipator. Lane closure required. Approximately 40 SF of vegetation removal.
18.83	14	Remove existing 24" x 42' culvert; replace with same at lower depth. Install inlet. Place rock energy dissipator. Staging adjacent. Approximately 40 SF of vegetation removal.
18.87	15	Remove existing 18" x 28' culvert; replace with 24" x 28' culvert. Place rock energy dissipator at outlet. Lane closure required. Approximately 40 SF of vegetation removal.
19.07	16	Remove existing 18" x 31' culvert; replace with 24" x 31' culvert at lower depth. Install inlet. Approximately 40 SF of vegetation removal.
19.31	17	Remove 24" x 35' culvert and downdrain; replace culvert with 24" x 44' culvert. Replace downdrain with 24" x 22' and 24" x 5' downdrains. Construct nonstandard headwall. Place rock energy dissipator at outlet. Staging adjacent. Approximately 320 SF of vegetation removal.
19.74	18	Install temporary water diversion. Remove 18" x 40' culvert; replace with 24" x 40' culvert. Install inlet. Place rock energy dissipator. Staging nearby. Lane closure required. Approximately 40 SF of vegetation removal.
20.28	19	Remove existing 24" x 26' culvert. Replace in-kind at flatter grade. Install 20' downdrain. Construct nonstandard headwall. Place rock energy dissipator. Lane closure required. Approximately 300 SF of vegetation removal.

Culvert Post Mile	Layout Page	Planned Work
20.86	20	Remove existing 24" x 29' culvert. Replace in-kind**.** Construct nonstandard specially designed headwall with cut-off wall. Place rock energy dissipator. Lane closure required. Approximately 80 SF of vegetation removal.
20.92	21	Remove existing 24" x 39' culvert. Replace with 24" x 39' culvert at lower depth. Install inlet. Place rock energy dissipator. Approximately 40 SF of vegetation removal.
20.95	22	Remove existing 18" x 32' culvert and 18" x 22' culvert downdrain. Replace with 24" x 41' culvert at lower depth. Install inlet. Place rock energy dissipator. Lane closure required. Approximately 40 SF of vegetation removal.
20.98	23	Remove existing 24" x 31' culvert and replace with 24" x 31' culvert. Install modified inlet. Place rock slope protection. Approximately 40 SF of vegetation removal.
24.24	24	Remove 18" x 35' culvert; replace with 24" x 40' culvert at lower depth. Install 9.5' and 15' downdrains. Install inlet. Place rock energy dissipator. Lane closure required. Approximately 300 SF of vegetation removal.
26.65	25	Remove existing 18" x 40' culvert; replace with 30" x 45' culvert at lower depth. Install inlet. Place rock energy dissipator. Lane closure required. Approximately 40 SF of vegetation removal.
30.15	26	Replace lower portion of upstream culvert 36" x 10' section. Remove and replace downstream culvert in-kind with 36" x 63' culvert and 30.5' downdrain. Replace with new inlet. Place rock energy dissipator. Staging adjacent. Approximately 450 SF of vegetation removal.
30.74	27	Remove existing 18" x 40' culvert; replace with 30" x 35' culvert at lower depth. Install inlet. Place rock energy dissipator. Staging nearby. Lane closure required. Approximately 40 SF of vegetation removal.
31.00	28	Remove existing 24" x 40' culvert; replace with 24" x 33' culvert. Install nonstandard headwall. Place rock energy dissipator. Approximately 80 SF of vegetation removal.
31.26	29	Remove 12" x 40' culvert; replace with 24" x 36' culvert at lower depth. Install inlet. Place rock energy dissipator. Lane closure required. Approximately 40 SF of vegetation removal.

Culvert Post Mile	Layout Page	Planned Work
31.36	30	Remove existing 18" x 40' culvert; replace with 24" x 41' culvert. Rock energy dissipator. Staging nearby. Approximately 40 SF of vegetation removal.
31.45	31	Remove existing 18" x 40' culvert; replace with 24" x 41' culvert. Install nonstandard headwall. Place rock energy dissipator. Staging nearby. Lane closure required. Approximately 40 SF of vegetation removal.
31.47	32	Remove existing 12" x 35' culvert; replace with 24" x 29' culvert at lower depth. Install nonstandard headwall. Place rock energy dissipator. Approximately 40 SF of vegetation removal.
31.52	33	Remove existing 18" x 56' culvert; replace with 24" x 43' culvert. Install inlet. Place rock energy dissipator. Staging nearby. Lane closure required. Approximately 40 SF of vegetation removal.
31.57	34	Remove existing 18" x 66' culvert; replace with 24" x 45' culvert at lower depth. Install inlet. Place rock energy dissipator. Staging nearby. Approximately 40 SF of vegetation removal.
31.66	35	Remove existing 12" x 40' culvert; replace with 24" x 29' culvert. Install inlet. Place rock energy dissipator. Lane closure required. Approximately 40 SF of vegetation removal.
31.73	36	Remove 24" x 40' culvert; replace with 24" x 41' culvert. Construct nonstandard headwall. Staging nearby. Approximately 40 SF of vegetation removal.
32.33	37	Remove existing 18" x 30' culvert; replace with 24" x 30' culvert at lower depth. Install inlet. Place rock energy dissipator. Lane closure required. Approximately 40 SF of vegetation removal.
32.40	38	Remove existing 24" x 30' culvert; replace with 24" x 27' culvert at lower depth. Install inlet. Place rock energy dissipator. Staging adjacent. Approximately 40 SF of vegetation removal.
32.47	39	Remove 24" x 51' culvert; replace in-kind. Construct nonstandard headwall. Place rock energy dissipator. Staging adjacent. Approximately 40 SF of vegetation removal.
32.53	40	Remove existing 15" x 40' culvert; replace with 24" x 36' culvert at lower depth. Install inlet. Place rock energy dissipator. Lane closure required. Approximately 40 SF of vegetation removal.
32.58	41	Remove existing 24" x 58' culvert; replace with 24" x 53' culvert at lower depth. Remove flared end section and install inlet. Place rock energy dissipator. Approximately 40 SF of vegetation removal.

Culvert Post Mile	Layout Page	Planned Work
32.69	42	Remove 12" x 35' culvert; replace with 24" x 32' culvert at lower depth. Remove and replace private water lines. Install inlet. Place fill and rock slope protection to stabilize scour hole. Lane closure required. Approximately 40 SF of vegetation removal.
32.80	43	Remove existing 12" x 35' culvert; replace with 24" x 28' culvert at lower depth. Install nonstandard headwall. Place rock energy dissipator. Approximately 40 SF of vegetation removal.
32.92	44	Remove existing 12" x 50' culvert; replace with 24" x 40' culvert. Install nonstandard headwall. Place rock energy dissipator. Lane closure required. Approximately 40 SF of vegetation removal.
32.95	45	Remove existing 18" x 30' culvert; replace with 24" x 30' culvert. Install inlet. Place rock energy dissipator. Approximately 40 SF of vegetation removal.
33.20	46	Remove existing 24" x 34' culvert; replace in-kind. Remove existing concrete sacks, place standard headwall. Salvage existing rock slope protection and reinstall. Lane closure required. Approximately 40 SF of vegetation removal.
33.25	47	Remove existing 12" x 26' culvert; replace with 24" x 31' culvert at lower depth. Install modified inlet. Place rock energy dissipator. Staging adjacent. Approximately 40 SF of vegetation removal.
33.28	48	Remove existing 18" x 36' culvert; replace 24" x 35' culvert at lower depth. Install modified inlet with openings on both sides for ditches. Place rock energy dissipator. Lane closure required. Approximately 40 SF of vegetation removal.
33.32	49	Remove existing 18" x 28' culvert. Replace with 24" x 30' culvert at lower depth. Remove existing inlet. Install modified inlet. Place rock energy dissipator. Approximately 40 SF of vegetation removal.
33.44	50	Abandon culvert location. Regrade ditch to ensure drainage to culvert at PM 33.50.
33.50	51	Remove existing 18" x 30' culvert; replace with 24" x 37' culvert. Install inlet. Place rock energy dissipator. Lane closure required. Approximately 40 SF of vegetation removal.
33.75	52	Remove 18" x 40' culvert; replace with 24" x 52.5' culvert and install 50' downdrain. Remove existing drainage inlet (DI); install inlet. Place rock energy dissipator. Approximately 550 SF of vegetation removal.

No-Build Alternative

This alternative would maintain the drainage facilities in their 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. Culverts would continue to deteriorate.

General Plan Description, Zoning, and Surrounding Land Uses

The land surrounding the proposed project footprint is entirely within the Yurok Tribe Reservation. Because of this, the land is not subject to Humboldt County or local land use plans, policies, or zoning regulations. The land is primarily used for private residences. The project is located adjacent to the Klamath River, which is used for recreation, fishing, and local transportation.

1.3 Permits and Approvals Needed

The following table indicates the permitting agency, permits/approvals and status of permits required for the project (Table 2). Permit applications would be submitted to the agency after approval of the Final Environmental Document (FED) and the Final Project Report.

Table 2. Agency Approvals

Agency	Permit/Approval	Status
California Department of Fish and Wildlife (CDFW)	1600 Lake and Streambed Alteration Agreement	Submit after project approval
Yurok Tribe / U.S. Environmental Protection Agency (EPA)	Tribal 401 Concurrence	Submit after project approval
U.S. Army Corps of Engineers (USACE)	404 Non-Reporting	Submit after project approval
U.S. Fish and Wildlife Service (USFWS)	Programmatic Letter of Concurrence (PLOC)	December 7, 2021
National Marine Fisheries Service (NMFS/NOAA Fisheries)	Programmatic Biological Opinion (PBO)	November 30, 2021
National Park Service	Wild and Scenic Rivers Act "No Effect" Concurrence	Concurrence received November 9, 2021

Projects affecting Wild and Scenic Rivers are subject to the National Wild and Scenic Rivers Act (16 United States Code [USC] 1271) and the California Wild and Scenic Rivers Act (California Public Resources Code [PRC] § 5093.50 et seq.). See Appendix D for more information.

1.4 Standard Measures and Best Management Practices

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. They are measures that typically result from laws, permits, agreements, guidelines, and resource management plans. For this reason, the measures and practices are not considered "mitigation" under CEQA; rather, they are included as part of the project description in environmental documents.

Aesthetic Resources

AR-1: Construction easements and staging areas that were previously vegetated would be restored to a natural contour and revegetated with regionally-appropriate native vegetation.

AR-2: Where feasible, guardrail terminals would be buried; otherwise, an appropriate terminal system would be used, if appropriate.

AR-3: Where feasible, construction lighting would be limited to within the area of work.

AR-4: 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.

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 one week 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 because of 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. A qualified biologist would monitor in-stream construction activities that could potentially impact sensitive biological receptors. The biological monitor 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.

F. 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**.

G. 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.

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

I. To protect nesting or roosting northern spotted owl (NSO), marbled murrelet (MAMU), and denning Pacific (Humboldt) marten, suitable northern spotted owl, marbled murrelet, and Pacific (Humboldt) marten nesting/denning trees would be removed between September 16 and January 31. No construction activities generating noise levels greater than 90 decibels (dB) (with the exception of backup alarms) or activities generating sound levels 20 or more dB above ambient sound levels would occur between February 1 and August 5. Between August 6 and September 15, work that generates noise levels 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. Noise-related work windows would be lifted between September 16 and January 31. Further, no construction activities would occur within a visual line-of-sight of 131 feet or less from any known active nesting/denning locations for northern spotted owl, marbled murrelet, or Pacific (Humboldt) marten.

J. Caltrans would contact USFWS if proposed NSO/MAMU/Pacific (Humboldt) marten habitat removal is within the designated critical habitat area to ensure removal would not result in an adverse effect.

K. A qualified biologist would inspect each culvert at least one week prior to construction to ensure bat species are not roosting in the culverts.

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 which 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 Cleaning/Decontamination Protocol (Northern Region)* for all field gear and equipment in contact with water.

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

A. Seasonally appropriate, pre-construction surveys for sensitive plant species would be completed (or updated) by a qualified biologist prior to construction in accordance with *Protocols for Surveying and Evaluating Impacts to Special-status Native Plant Populations and Natural Communities* (CDFW 2018).

B. 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.

C. Prior to the start of work, Environmentally Sensitive Area (ESA) fencing and/or flagging would be installed around sensitive natural communities, environmentally sensitive habitat areas (ESHAs), rare plant occurrences, intermittent streams, and wetlands and other waters, where appropriate. No work would occur within fenced/flagged areas.

D. 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.

E. 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.

F. After completion, 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.

G. Culturally important species would be identified prior to start of work and, if possible, protected by Environmentally Sensitive Area (ESA) fencing.

BR-5: Wetlands and Other Waters

A. Prior to any creek diversion, the contractor would be required to prepare and submit a Temporary Creek Diversion System Plan to Caltrans for approval. 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 (**BR-2**). Construction activities restricted to this period include any work below the ordinary high water. 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), 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 shall be removed when wetland access is no longer needed or by November 1 of each year.

Cultural Resources

CR-1: Caltrans would coordinate with the Yurok Tribe and incorporate measures to protect tribal resources, including potential work windows associated with tribal ceremonies.

CR-2: An archaeological monitor and Yurok tribal monitor would be used during ground-disturbing activities.

CR-3: Federal Regulations will be followed in the case of an inadvertent discovery of cultural material within tribal lands (36 CFR 800.13.d). The Yurok Tribal Inadvertent Discovery Policy (YTC 14.10.070) will also be followed. Notification from Caltrans Project Archaeologist to Tribal Heritage Preservation Officer (THPO) will occur within 48 hours of the discovery.

CR-4: Federal Regulations will be followed in the case of inadvertent discovery of human remains within tribal lands (43 CFR 10.4.e). Communication with the tribe will be immediate telephone notification, followed by written confirmation, to responsible Indian Tribe official (the Yurok THPO).

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.

GS2: 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.

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 Resource Board (CARB).

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. 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 State Route 169 during project activities, except during full road closures.

Hazardous Waste and Material

HW-1: Per Caltrans requirements, the contractor(s) would prepare a project-specific Lead Compliance Plan (California Code of Regulations [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 lead-impacted soil.

HW-2: When identified as containing hazardous levels of lead, traffic stripes would be removed and disposed of in accordance with Caltrans Standard Special Provision "Residue Containing Lead from Paint and Thermoplastic."

HW-3: 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 "Treated Wood Waste."

Traffic and Transportation

TT-1: Pedestrian and bicycle access would be maintained on State Route 169 during construction, except during full closures.

TT-2: 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.

TT-3: A Transportation Management Plan (TMP) would be applied to the project.

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 State Route 169 throughout the construction period.

UE-2: Caltrans would coordinate with utility providers to plan for relocation of any utilities to ensure utility customers would be notified of potential service disruptions before relocation.

UE-3: The project is located within the very high CAL FIRE Threat Zone. 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 2012-0011-DWQ and as amended by subsequent orders, which became effective July 1, 2013) and the Construction General Permit (Order 2009-0009-DWQ).

Before any ground-disturbing activities, the contractor would prepare a Stormwater Pollution Prevention Plan (SWPPP) (per the Construction General Permit Order 2009-0009-DWQ) or Water Pollution Control Program (WPCP) (for 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.

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 off-site.
- 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.
- Soil-disturbing work would be limited in jurisdictional waters during the rainy season.

WQ-2: The project would incorporate pollution prevention and design measures consistent with the *2016 Caltrans Storm Water Management Plan*. This plan complies with the requirements of the Caltrans Statewide NPDES Permit (Order 2012-0011-DWQ) as amended by subsequent orders.

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.

Discussion of the NEPA Categorical Exclusion

This document contains information regarding compliance with the California Environmental Quality Act (CEQA) and other state laws and regulations. Separate environmental documentation supporting a Categorical Exclusion determination will be prepared in accordance with the National Environmental Policy Act. When needed for clarity, or as required by CEQA, this document may contain references to federal laws and/or regulations (CEQA, for example, requires consideration of adverse effects on species identified as a candidate, sensitive, or special-status species by the National Marine Fisheries Service and the United States Fish and Wildlife Service—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 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	No
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	**Yes**
Tribal Cultural Resources	No
Utilities and Service Systems	No
Wildfire	**Yes**
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 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 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)).

CEQA requires the identification of each potentially "significant effect on the environment" resulting from the project, and ways to mitigate each significant effect. Significance is defined as "*Substantial or potentially substantial adverse change to any of the physical conditions within the area affected by the project*" (14 CCR § 15382). CEQA determinations are made prior to and separate from the development of mitigation measures for the project.

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 allows for a "Mitigated Negative Declaration" in which mitigation measures are proposed to reduce potentially significant effects to less than significant (14 CCR § 15369.5).

Although the formulation of mitigation measures shall not be deferred until some future time, the specific details of a mitigation measure may be developed after project approval when it is impractical or infeasible to include those details during the project's environmental review. The lead agency must (1) commit itself to the mitigation, (2) adopt specific performance standards the mitigation will achieve, and (3) identify the type(s) of potential action(s) that can feasibly achieve that performance standard and that will be considered, analyzed, and potentially incorporated in the mitigation measure. Compliance with a regulatory permit or other similar processes may be identified as mitigation if compliance would result in

implementation of measures that would be reasonably expected, based on substantial evidence in the record, to reduce the significant impact to the specified performance standards (§15126.4(a)(1)(B)).

Per CEQA, measures may also be adopted, but are not required, for environmental impacts that are not found to be significant (14 CCR § 15126.4(a)(3)). Under CEQA, mitigation is defined as avoiding, minimizing, rectifying, reducing, and compensating for any potential impacts (CEQA 15370). Regulatory agencies may require additional measures beyond those required for compliance with CEQA. Though not considered "mitigation" under CEQA, these measures are often referred to in an Initial Study as "mitigation", Good Stewardship or Best Management Practices. These measures can also be identified after the Initial Study/Negative Declaration is approved.

CEQA documents must consider direct and indirect impacts of a project (CAL. PUB. RES. 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 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.

2.1. Aesthetics

Except as provided in the 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 dated September 20, 2021 (Caltrans 2021a). Potential impacts to Aesthetics are not anticipated because construction work for culvert replacement would not change the visual quality of the area. Additionally, SR 169 is not a state scenic highway. As small open areas with views of the Klamath River and rocky outcroppings are common in the area, minor vegetation removal would not be expected to change the visual character on SR 169.

Temporary construction lighting may be needed for nightwork. 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.

Mitigation is not proposed because no impacts to Aesthetics are expected.

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 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))?				✓

Question:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project: d) Result in the loss of forest land or conversion of forest land to non-forest use?				✓
Would the project: 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 and description of the proposed project. Potential impacts to Agriculture and Forest Resources are not anticipated because the project does not propose conversion of farmland or agriculture, zoning changes, or tree removal in areas zoned by Humboldt County as forestland, timberland, or Timberland Production. The project is located adjacent to the Yurok Reservation; therefore Humboldt County zoning laws do not apply. The project does not conflict with any known Yurok Tribal policy.

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, GHG, and Energy Analyses for the HUM-169 Rehab Culverts Project memo dated July 02, 2021 (Caltrans 2021b). Long-term impacts to Air Quality are not anticipated. Humboldt County is classified as an "attainment" area for National Ambient Air Quality Standards (NAAQS). Therefore, transportation conformity requirements do not apply. Substantial pollutant concentrations or other substantial emissions would not be expected.

2.4. Biological Resources

Question:	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, 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: 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: 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: 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: e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				✓
Would the project: 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 Species, Animal Species, Threatened and Endangered Species, and Invasive Species. Plant and animal species listed as "threatened" or "endangered" are covered within the Threatened and Endangered sections. Other special-status plant and animal species, including CDFW fully protected species, species of special concern, USFWS and NMFS candidate species, and California Native Plant Society (CNPS) rare and endangered plants are covered in the Plant and Animal sections.

Natural Communities

CDFW maintains records of sensitive natural communities (SNCs) in the California Natural Diversity Database (CNDDB). 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.

Wetlands and Other Waters

"Waters" of the United States (including wetlands) are protected under several laws and regulations. There are no Waters of the State within the Yurok Tribe Reservation. The primary laws and regulations governing wetlands and other waters include:

- Federal Clean Water Act (CWA), 33 USC 1344
- Federal Executive Order for the Protection of Wetlands (Executive Order [EO] 11990)
- State Sections 1600–1607 of the California Fish and Game Code (CFGC)

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. The primary laws governing plant species include:

- Federal Endangered Species Act (FESA), USC 16, Section 1531, et seq. See also 50 CFR Part 402
- California Endangered Species Act (CESA), California Fish and Game Code, Section 2050, et seq.
- Native Plant Protection Act, California Fish and Game Code, Sections 1900–1913
- National Environmental Policy Act (NEPA), 40 CFR Sections 1500 through 1508
- California Environmental Quality Act (CEQA), California Public Resources Code, Sections 21000–21177

Animal Species

Many state and federal laws regulate impacts to wildlife. The U.S. Fish and Wildlife Service (USFWS), the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NMFS), and the California Department of Fish and Wildlife (CDFW) are responsible for implementing these laws. The primary laws governing animal species include:

- NEPA, 40 CFR Sections 1500 through 1508
- CEQA, California Public Resources Code, Sections 21000–21177
- Migratory Bird Treaty Act, 16 USC Sections 703–712
- Fish and Wildlife Coordination Act, 16 USC Section 661

- California Fish and Game Code Sections 1600–1603
- California Fish and Game Code Sections 4150 and 4152

Threatened and Endangered Species

The primary laws governing threatened and endangered species include:

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

Invasive Species

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

Environmental Setting

A Natural Environment Study (NES) was prepared for the project (Caltrans 2022a). References to primary literature sources are listed in the NES. Caltrans coordinated with fisheries biologists and water quality specialists, as well as agency and tribal personnel from USFWS, NMFS, USACE, CDFW, and the Yurok Tribe Environmental Department (YTED). See Chapter 3 for a summary of these coordination efforts and professional contacts.

The proposed project would be built on and adjacent to SR 169. The route parallels the Klamath River.

The ESL, shown in Appendix A, includes the outer limits of the proposed project (construction footprint) and is provided by the Caltrans Design team at the beginning of the Environmental process. This is the area where initial biological surveys typically occur. Within the ESL, direct project impacts are anticipated from project activities, including visual disturbance, equipment staging, and construction of access routes. Biological surveys occurred in these areas.

The BSA includes all currently proposed improvements and additional construction areas (e.g., staging areas) that could potentially be impacted by the project. The BSA also includes a 0.25-mile buffer area to account for potential indirect impacts to sensitive receptors, such as

downstream receiving waters, federally listed species that warrant additional reviews for harassment, and sound impacts due to construction. The limits of the BSA were determined using the U.S. Fish and Wildlife Service (USFWS) guidance: *Estimating the Effects of Auditory and Visual Disturbance to Northern Spotted Owl and Marbled Murrelets in Northwestern California* (USFWS 2020).

An online CNDDB search was conducted for species occurrences within the surrounding 7.5-minute quadrangles (Caltrans 2022a). Because the culvert locations are spread over nearly 19 miles, 16 relevant quadrangles were searched.

Habitat types within the ESL were described and the approximate areas mapped (Caltrans 2022a) (Table 3). Most of the project area was described as ruderal habitat (disturbed roadside) and montane hardwood conifer habitat. Other small areas were described as montane riparian, fresh emergent wetland, and riverine.

Table 3. Habitat Types within the Project Environmental Study Limits

Habitat Type	Total Area (acres)
Ruderal	1.163
Montane Hardwood Conifer	0.768
Montane Riparian	0.303
Fresh Emergent Wetland	0.008
Riverine	0.095

Natural Communities

Two Sensitive Natural Communities (SNCs) were documented within the ESL: Madrone forest (*Arbutus menziesii* Alliance) and California bay forest and woodland (*Umbellularia californica Forest and Woodland Alliance*). Montane riparian habitat (0.303 acre) is also considered sensitive under California Fish and Game Code and by the Yurok Tribal Environmental Program.

Wetlands and Other Waters

Table 3 notes that approximately 0.008 acre of fresh emergent wetland and 0.095 acre of riverine habitat were mapped within the ESL. Additionally, several other ephemeral and intermittent drainages and unnamed streams cross the roadway through culverts that would be repaired. Most of the waters within the ESL flow downslope of the roadway for a short distance and empty directly into the Klamath River.

Plant Species

According to the California Native Plant Society and the California Natural Diversity Database, several special-status plant species may occur in the project area (Table 4). Since no special-status plant species were observed within the ESL during botanical surveys, there would be no impact to plant species; therefore, special-status plant species will not be discussed further in this document.

Table 4. Plant Species That May Occur in Project Area

Common Name *Scientific Name*	Status[1] (Fed/State/ CRPR)	General Habitat Description	Habitat Present/ Absent	Rationale
Bald Mountain milk-vetch *Astragalus umbraticus*	—/—/2B.2	Found in cismontane woodland and lower montane coniferous forest, periodically associated with roadside areas. **Blooms:** May-Aug **Elevation:** 490 to 4,100 feet.	Present	Suitable forested habitat is present; however, species was not observed during botanical surveys. There are 16 CNDDB occurrences within 5 miles of the ESL; the closest is within the ESL (locational details unclear; mapped by CNDDB to approximate location in town of Weitchpec).
Bolander's lily *Lilium bolanderi*	—/—/4.2	Found in chaparral and lower montane coniferous forest in serpentine soils. **Blooms:** Jun-Jul **Elevation:** 100 to 5,250 feet.	Absent	Suitable habitat is not present within the ESL and this species was not observed during botanical surveys. No CNDDB occurrences within 5 miles of the ESL.
bristly leptosiphon *Leptosiphon acicularis*	—/—/4.2	Found in chaparral, cismontane woodland, coastal prairie, and valley and foothill grassland. **Blooms:** Apr-Jul **Elevation:** 180 to 4,920 feet.	Absent	Suitable habitat is not present within the ESL and this species was not observed during botanical surveys. No CNDDB occurrences within 5 miles of the ESL.
bunchberry *Cornus canadensis*	—/—/2B.2	Found in bogs and fens; meadows and seeps; and North coast coniferous forest. **Blooms:** May-Jul **Elevation:** 195 to 6,300 feet.	Absent	Suitable habitat is not present within the ESL and this species was not observed during botanical surveys. No CNDDB occurrences within 5 miles of the ESL.

Common Name *Scientific Name*	Status[1] (Fed/State/ CRPR)	General Habitat Description	Habitat Present/ Absent	Rationale
California globe mallow *Iliamna latibracteata*	—/—/1B.2	Found in chaparral (montane), lower montane coniferous forest, North Coast coniferous forest (mesic), and riparian scrub (streambanks), often in burned areas. **Blooms:** Jun-Aug **Elevation:** 195 to 6,560 feet.	Absent	Suitable habitat is not present within the ESL and this species was not observed during botanical surveys. No CNDDB occurrences within 5 miles of the ESL.
California lady's-slipper *Cypripedium californicum*	—/—/4.2	Found in bogs, fens, and lower montane coniferous forest. **Blooms:** Apr-Aug (Sep) **Elevation:** 100 to 9,025 feet.	Present	Suitable forested habitat is present within the ESL; however, this species was not observed during botanical surveys. No CNDDB occurrences within 5 miles of the ESL.
California pinefoot *Pityopus californicus*	—/—/4.2	Found in broad-leafed upland forest, lower montane coniferous forest, North Coast coniferous forest, upper montane coniferous forest in mesic areas. **Blooms:** (Mar-Apr) May-Aug **Elevation:** 50 to 7,300 feet.	Present	Suitable habitat is present within the ESL; however, this species was not observed during botanical surveys. No CNDDB occurrences within 5 miles of the ESL.
Clustered lady's-slipper *Cypripedium fasciculatum*	—/—/4.2	Found in lower montane coniferous forest and North Coast coniferous forest. **Blooms:** Mar-Aug **Elevation:** 330 to 7,990 feet.	Present	Suitable forested habitat is present within the ESL; however, this species was not observed during botanical surveys. No CNDDB occurrences within 5 miles of the ESL.

Common Name *Scientific Name*	Status[1] (Fed/State/ CRPR)	General Habitat Description	Habitat Present/ Absent	Rationale
Coast checkerbloom *Sidalcea oregana* ssp. *eximia*	—/—/1B.2	Found in lower montane coniferous forest, meadows and seeps, and North Coast coniferous forest. **Blooms:** Jun-Aug **Elevation:** 15 to 4,395 feet.	Present	Suitable habitat is present within the ESL; however, this species was not observed during botanical surveys. There is one CNDDB occurrence within 5 miles of the ESL approximately 1.49 miles northeast.
Coast fawn lily *Erythronium revolutum*	—/—/2B.2	Found in bogs and fens, broad-leafed upland forest, and North Coast coniferous forest in mesic areas along streambanks. **Blooms:** Mar-Jul (Aug) **Elevation:** 0 to 5,250 feet.	Absent	Suitable habitat is not present within the ESL and this species was not observed during botanical surveys. There are 18 CNDDB occurrences within 5 miles of the ESL; the closest occurrence is approximately 0.52 mile north-northeast.
Columbia yellow cress *Rorippa columbiae*	—/—/1B.2	Found in lower montane coniferous forest, meadows and seeps, playas, and vernal pools, in mesic conditions. **Blooms:** May-Sep **Elevation:** 3,935 to 5,905 feet.	Absent	Suitable forested habitat is present; however, ESL occurs outside of the elevational range of this species and the species was not observed during botanical surveys. No CNDDB occurrences within 5 miles of the ESL.

Common Name *Scientific Name*	Status[1] (Fed/State/ CRPR)	General Habitat Description	Habitat Present/ Absent	Rationale
Dudley's rush *Juncus dudleyi*	—/—/2B.3	Found in lower montane coniferous forest in mesic areas. **Blooms:** Jul-Aug **Elevation:** 1,495 to 6,5600 feet.	Absent	Suitable habitat is present; however, the ESL occurs outside of the elevational range of this species and the species was not observed during botanical surveys. No CNDDB occurrences within 5 miles of the ESL.
elongate copper moss *Mielichhoferia elongate*	—/—/4.3	Found in broad-leafed upland forest, chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, meadows and seeps, and subalpine coniferous forest. Associated with metamorphic rock, often on roadsides, sometimes on carbonate. **Blooms:** N/A **Elevation:** 0 to 6,430 feet.	Absent	No suitable soils are present within the ESL to support the species. This species was not observed during botanical surveys. No CNDDB occurrences within 5 miles of the ESL.
evergreen everlasting *Antennaria suffrutescens*	—/—/4.3	Found in lower montane coniferous forest on serpentine soils. **Blooms:** Jan-Jul **Elevation:** 1,640 to 5,250 feet.	Absent	Suitable forested habitat is present; however, ESL occurs outside of the elevational range of this species and the species was not observed during botanical surveys. No CNDDB occurrences within 5 miles of the ESL.
ghost pipe *Monotropa uniflora*	—/—/2B.2	Found in broad-leafed upland forest, and North Coast coniferous forest. **Blooms:** Jun-Aug (Sep) **Elevation:** 35 to 1,805 feet.	Absent	Suitable habitat is not present within the ESL and this species was not observed during botanical surveys. No CNDDB occurrences within 5 miles of the ESL.

Common Name *Scientific Name*	Status[1] (Fed/State/ CRPR)	General Habitat Description	Habitat Present/ Absent	Rationale
giant fawn lily *Erythronium oregonum*	—/—/2B.2	Found in cismontane woodland and meadows and seeps, sometimes in serpentine, rocky, openings. **Blooms:** Mar-Jun (Jul) **Elevation:** 330 to 3,775 feet.	Absent	No suitable habitat is present within the ESL to support the species. There are three CNDDB occurrences within 5 miles of the ESL; the closest occurrence is approximately 1.23 miles east-northeast.
glaucous tauschia *Tauschia glauca*	—/—/4.3	Found in lower montane coniferous forest, in gravelly, serpentine soils. **Blooms:** Apr-Jun **Elevation:** 260 to 5,580 feet.	Absent	No suitable serpentine soils are present within the ESL to support the species. No CNDDB occurrences within 5 miles of the ESL.
heart-leaved twayblade *Listera cordata*	—/—/4.2	Found in bogs and fens, lower montane coniferous forest, and North Coast coniferous forest. **Blooms:** Feb-Jul **Elevation:** 15 to 4,495 feet.	Absent	Suitable habitat is not present within the ESL and this species was not observed during botanical surveys. No CNDDB occurrences within 5 miles of the ESL.
Heckner's lewisia *Lewisia cotyledon* var. *heckneri*	—/—/1B.2	Found in lower montane coniferous forest in rocky areas. **Blooms:** May-Jul **Elevation:** 740 to 6,890 feet.	Absent	Suitable forested habitat is present; however, the ESL occurs outside of the elevational range of this species and the species was not observed during botanical surveys. There is one historic CNDDB occurrence (dated 1942) that shows as occurring within the ESL. (***Note**: This occurrence is assumed to be an error as the descriptor of serpentinized bluffs are not present within the ESL).*

Common Name *Scientific Name*	Status[1] (Fed/State/ CRPR)	General Habitat Description	Habitat Present/ Absent	Rationale
Heckner's stonecrop *Sedum laxum* ssp. *heckneri*	—/—/4.3	Found in lower montane coniferous forest and upper montane coniferous forest in serpentine or gabbro soils. **Blooms:** Jun-Jul **Elevation:** 330 to 6,890 feet.	Absent	Suitable habitat is present; however, appropriate soils are absent. Species was not observed during botanical surveys. No CNDDB occurrences within 5 miles of the ESL.
Howell's lewisa *Lewisia cotyledon* var. *howellii*	—/—/3.2	Found broad-leafed upland forest, chaparral, cismontane woodland, and lower montane coniferous forest in rocky areas. **Blooms:** Apr-Jul **Elevation:** 490 to 6,595 feet.	Absent	Suitable habitat is not present within the ESL and this species was not observed during botanical surveys. No CNDDB occurrences within 5 miles of the ESL.
Howell's montia *Montia howellii*	—/—/2B.2	Found in meadows and seeps, North Coast coniferous forest, and vernal pools; within vernally mesic areas, sometimes along roadsides. **Blooms:** (Feb) Mar-May **Elevation:** 0 to 2,740 feet.	Absent	Suitable habitat is not present within the ESL and this species was not observed during botanical surveys. There is one CNDDB occurrence within 5 miles of the ESL approximately 0.66 mile east-northeast.
Humboldt County fuchsia *Epilobium septentrionale*	—/—/4.3	Found in broad-leafed upland forest and North Coast coniferous forest. **Blooms:** Jul-Sept **Elevation:** 150 to 5,905 feet.	Absent	Suitable habitat is not present within the ESL and this species was not observed during botanical surveys. No CNDDB occurrences within 5 miles of the ESL.

Common Name *Scientific Name*	Status[1] (Fed/State/ CRPR)	General Habitat Description	Habitat Present/ Absent	Rationale
Hutchison's lewisia *Lewisia kelloggii* ssp. *hutchisoniii*	—/—/3.2	Found in upper montane coniferous forest in openings and along ridgetops, often in slate, sometimes rhyolite tuff. **Blooms:** (Apr) May-Aug **Elevation:** 2,510 to 7,760 feet.	Absent	Suitable habitat is not present. ESL occurs outside of the elevational range of this species and the species was not observed during botanical surveys. No CNDDB occurrences within 5 miles of the ESL.
Kellogg's lily *Lilium kelloggii*	—/—/4.3	Found in lower montane and North Coast coniferous forests in openings and along roadsides. **Blooms:** May-Aug **Elevation:** 10 to 4,265 feet.	Present	Suitable habitat is present within the ESL; however, this species was not observed during botanical surveys. No CNDDB occurrences within 5 miles of the ESL.
Klamath arnica *Arnica spathulata*	—/—/4.3	Found in lower montane coniferous forest on serpentine soils. **Blooms:** Apr-Jul **Elevation:** 2,100 to 5,905 feet.	Absent	Suitable forested habitat is present; however, ESL occurs outside of the elevational range of this species and the species was not observed during botanical surveys. No CNDDB occurrences within 5 miles of the ESL.
large-flowered leptosiphon *Leptosiphon grandiflorus*	—/—/4.2	Found in coastal bluff scrub, closed-cone coniferous forest, cismontane woodland, coastal dunes, coastal prairie, coastal scrub, and valley and foothill grassland. **Blooms:** Apr-Aug **Elevation:** 15 to 4,005 feet.	Absent	Suitable habitat is not present within the ESL and this species was not observed during botanical surveys. No CNDDB occurrences within 5 miles of the ESL.

Common Name *Scientific Name*	Status[1] (Fed/State/ CRPR)	General Habitat Description	Habitat Present/ Absent	Rationale
leafy-stemmed miterwort *Mitellastra caulescens*	—/—/4.2	Found in broad-leafed upland forest, lower montane coniferous forest, meadows and seeps, and North Coast coniferous forest, in mesic areas, sometimes along roadsides. **Blooms:** (Mar) Apr-Oct **Elevation:** 15 to 5,580 feet.	Absent	Suitable forested habitat is not present and the species was not observed during botanical surveys. No CNDDB occurrences within 5 miles of the ESL.
lemon-colored fawn lily *Erythronium citrinum* var. *citrinum*	—/—/4.3	Found in chaparral and lower montane coniferous forest, typically in serpentine soils. **Blooms:** Mar-May **Elevation:** 490 to 4,265 feet.	Absent	No suitable habitat is present within the ESL to support the species. No CNDDB occurrences within 5 miles of the ESL.
maple-leaved checkerbloom *Sidalcea malachroides*	—/—/4.2	Found in broad-leafed upland forest, coastal prairie, coastal scrub, North Coast coniferous forest, and riparian scrub, often in disturbed areas. **Blooms:** (Mar) Apr-Aug **Elevation:** 0 to 2,395 feet.	Absent	Suitable habitat is not present within the ESL and species was not observed during botanical surveys. No CNDDB occurrences within 5 miles of the ESL.
Marshall's saxifrage *Micranthes marshallii*	—/—/4.3	Found in riparian forest along rocky streambanks. **Blooms:** Mar-Aug **Elevation:** 295 to 6,990 feet.	Absent	Suitable habitat is not present within the ESL and species was not observed during botanical surveys. No CNDDB occurrences within 5 miles of the ESL.

Common Name *Scientific Name*	Status[1] (Fed/State/ CRPR)	General Habitat Description	Habitat Present/ Absent	Rationale
Methuselah's beard lichen *Usnea longissimi*	—/—/4.2	Found in broad-leafed upland forest and North Coast coniferous forest; grows on tree branches, usually on old-growth hardwoods and conifers. **Blooms:** N/A **Elevation:** 165 to 4,790 feet.	Absent	Suitable habitat is not present within the ESL and species was not observed during botanical surveys. No CNDDB occurrences within 5 miles of the ESL.
mountain lady's-slipper *Cypripedium montanum*	—/—/4.2	Found in broad-leafed upland forest, cismontane woodland, lower montane coniferous forest, and North Coast coniferous forest. **Blooms:** Mar-Aug **Elevation:** 605 to 7,300 feet.	Absent	Suitable habitat is present; however, the ESL occurs outside of the elevational range of this species. The species was not observed during botanical surveys. No CNDDB occurrences within 5 miles of the ESL.
nodding semaphore grass *Pleuropogon refractus*	—/—/4.2	Found in lower montane coniferous forest, meadows and seeps, North Coast coniferous forest, and riparian forest in mesic areas. **Blooms:** (Mar) Apr-Aug **Elevation:** 0 to 5,250 feet.	Present	Suitable habitat is present within the ESL; however, species was not observed during botanical surveys. There are no CNDDB occurrences within 5 miles of the ESL.
Northern meadow sedge *Carex praticola*	—/—/2B.2	Found in meadows and seeps in mesic conditions. **Blooms:** May-Jul **Elevation:** 0 to 10,500 feet.	Absent	Suitable habitat is absent from the ESL. There are two CNDDB occurrences within 5 miles of the ESL; the closest is approximately 1.54 miles southwest.

Common Name *Scientific Name*	Status[1] (Fed/State/ CRPR)	General Habitat Description	Habitat Present/ Absent	Rationale
Oregon bleeding heart *Dicentra Formosa* ssp. *oregana*	—/—/4.2	Found in lower montane coniferous forest in serpentine soils. **Blooms:** Apr-May **Elevation:** 1,395 to 4,870 feet.	Absent	Suitable forested habitat is present; however, the ESL occurs outside of the elevational range of this species and the species was not observed during botanical surveys. No CNDDB occurrences within 5 miles of the ESL.
Oregon fireweed *Epilobium oreganum*	—/—/1B.2	Found in bogs, and fens, lower montane coniferous forest, meadows and seeps, and upper montane coniferous forest. **Blooms:** Jun-Sep **Elevation:** 1,640 to 7,350 feet.	Absent	Suitable forested habitat is present; however, the ESL occurs outside of the elevational range of this species and the species was not observed during botanical surveys. No CNDDB occurrences within 5 miles of the ESL.
Oregon goldthread *Coptis laciniata*	—/—/4.3	Found in meadows and seeps and along streambanks in North Coast coniferous forest in mesic soils. **Blooms:** (Feb) Mar-May (Sep-Nov) **Elevation:** 0 to 3,280 feet.	Absent	Suitable habitat is not present within the ESL and this species was not observed during botanical surveys. There are 14 CNDDB occurrences within 5 miles of the ESL; the closest occurrence is approximately 1.73 miles southwest.
Orleans iris *Iris tenax* ssp. *klamathensis*	—/—/4.3	Found in lower montane coniferous forest (often disturbed areas), **Blooms:** Apr-May **Elevation:** 330 to 4,595 feet.	Absent	Suitable habitat is not present within the ESL and this species was not observed during botanical surveys. No CNDDB occurrences within 5 miles of the ESL.

Common Name *Scientific Name*	Status[1] (Fed/State/ CRPR)	General Habitat Description	Habitat Present/ Absent	Rationale
Pacific fuzzwort *Ptilidium californicum*	—/—/4.3	Found in lower montane and upper montane coniferous forests. **Blooms:** May-Aug **Elevation:** 3,740 to 5,905 feet.	Absent	Suitable habitat is present; however, ESL occurs outside of the elevational range of this species and the species was not observed during botanical surveys. No CNDDB occurrences within 5 miles of the ESL.
Pacific gilia *Gilia capitata* ssp. *pacifica*	—/—/1B.2	Found in coastal bluff scrub, chaparral (openings), coastal prairie, and valley and foothill grassland. **Blooms:** Apr-Aug **Elevation:** 15 to 5,465 feet.	Absent	Suitable habitat is not present within the ESL and this species was not observed during botanical surveys. There are three CNDDB occurrences within 5 miles of the ESL; the closest occurrence is approximately 3.90 miles northeast.
Pacific golden saxifrage *Chrysosplenium glechomifolium*	—/—/4.3	Found in North Coast coniferous forest and riparian forest along streambanks. May be associated with roadsides and seeps. **Blooms:** Feb-Jun **Elevation:** 35 to 720 feet.	Absent	Suitable forested habitat is not present within the ESL and this species was not observed during botanical surveys. No CNDDB occurrences within 5 miles of the ESL.
pale yellow stonecrop *Sedum flavidum*	—/—/4.3	Found in broad-leafed upland forest, chaparral, lower montane coniferous forest, and upper montane coniferous forest with alkaline soil. **Blooms:** (May) Jun-Jul **Elevation:** 490 to 7,070 feet.	Absent	Suitable habitat is present; however, this species was not observed during botanical surveys. No CNDDB occurrences within 5 miles of the ESL.

Common Name *Scientific Name*	Status[1] (Fed/State/ CRPR)	General Habitat Description	Habitat Present/ Absent	Rationale
redwood lily *Lilium rubescens*	—/—/4.2	Found in broad-leafed upland forest, chaparral, lower montane coniferous forest, North Coast coniferous forest, and upper montane coniferous forest, sometimes on serpentine soils and along roadsides. **Blooms:** Apr-Aug (Sep) **Elevation:** 100 to 6,265 feet.	Absent	Suitable habitat is not present within the ESL and this species was not observed during botanical surveys. No CNDDB occurrences within 5 miles of the ESL.
robust false lupine *Thermopsis robusta*	—/—/1B.2	Found in broad-leafed upland forest and North Coast coniferous forest. **Blooms:** May-Jul **Elevation:** 490 to 4,920 feet.	Absent	Suitable habitat is not present within the ESL and this species was not observed during botanical surveys. There are 23 CNDDB occurrences within 5 miles of the ESL; the closest is approximately 1.49 miles northeast.
running pine *Lycopodium clavatum*	—/—/4.1	Found in lower montane coniferous forest (mesic), marshes and swamps, and North Coast coniferous forest (mesic). **Blooms:** Jun-Aug (Sep) **Elevation:** 150 to 4,020 feet.	Absent	Suitable habitat is present within the ESL; however, this species was not observed during botanical surveys. No CNDDB occurrences within 5 miles of the ESL.
Salmon Mountains wakerobin *Trillium ovatum* ssp. *oettingeri*	—/—/4.2	Found in lower montane coniferous forest, riparian scrub, and upper montane coniferous forest, in mesic conditions. **Blooms:** Feb-Jul **Elevation:** 2,805 to 6,640 feet.	Absent	Suitable forested habitat is present; however, the ESL occurs outside of the elevational range of this species and the species was not observed during botanical surveys. No CNDDB occurrences within 5 miles of the ESL.

Common Name *Scientific Name*	Status[1] (Fed/State/ CRPR)	General Habitat Description	Habitat Present/ Absent	Rationale
seacoast ragwort *Packera bolanderi* var. *bolanderi*	—/—/2B.2	Found in coastal scrub and North Coast coniferous forest, sometimes occur along roadsides. **Blooms:** (Jan-Apr) May-Jul (Aug) **Elevation:** 100 to 2,135 feet.	Absent	Suitable habitat is not present within the ESL to support this species. This species was not observed during botanical surveys. No CNDDB occurrences within 5 miles of the ESL.
seaside bittercress *Cardamine angulata*	—/—/2B.2	Found in lower montane and North Coast coniferous forests along streambanks. **Blooms:** (Jan) Mar-Jul **Elevation:** 50 to 3,000 feet.	Present	Suitable forested habitat is present; however, this species was not observed during botanical surveys. There is one CNDDB occurrence within 5 miles of the ESL approximately 4.50 miles west-northwest.
serpentine arnica *Arnica cernua*	—/—/4.3	Found in lower montane coniferous forest on serpentine soils. **Blooms:** Apr-Jul **Elevation:** 1,640 to 6,300 feet.	Absent	Suitable forested habitat is present; however, ESL occurs outside of the elevational range of this species and the species was not observed during botanical surveys. No CNDDB occurrences within 5 miles of the ESL.
Siskiyou aster *Eucephalus glabratus*	—/—/4.3	Found in lower montane and upper montane coniferous forest within openings and rocky areas. **Blooms:** Jun-Sep **Elevation:** 395 to 8,875 feet.	Absent	Suitable habitat is not present within the ESL to support this species. This species was not observed during botanical surveys. No CNDDB occurrences within 5 miles of the ESL.

Common Name *Scientific Name*	Status[1] (Fed/State/ CRPR)	General Habitat Description	Habitat Present/ Absent	Rationale
Siskiyou bells *Prosartes parvifolia*	—/—/1B.2	Found in lower montane and upper montane coniferous forests along roadsides, in disturbed areas and burned areas. **Blooms:** May-Sep **Elevation:** 2,295 to 5,005 feet.	Absent	Suitable habitat is present; however, ESL occurs outside of the elevational range of this species and this species was not observed during botanical surveys. No CNDDB occurrences within 5 miles of the ESL.
Siskiyou checkerbloom *Sidalcea malviflora* ssp. *patula*	—/—/1B.2	Found in coastal bluff scrub, coastal prairie, and open North Coast coniferous forest. **Blooms:** (Mar) May-Aug **Elevation:** 50 to 4,035 feet.	Absent	Suitable habitat is not present within the ESL to support this species. This species was not observed during botanical surveys. No CNDDB occurrences within 5 miles of the ESL.
Siskiyou false-hellebore *Veratrum insolitum*	—/—/4.3	Found in chaparral and lower montane coniferous forest in clay soils. **Blooms:** Jun-Aug **Elevation:** 150 to 5,365 feet.	Absent	Suitable habitat is not present within the ESL to support this species. This species was not observed during botanical surveys. No CNDDB occurrences within 5 miles of the ESL.
Siskiyou Mountains ragwort *Packera macounii*	—/—/4.3	Found in chaparral and lower montane coniferous forest, sometimes within serpentine soils and often in disturbed areas. **Blooms:** Jun-Jul **Elevation:** 1,310 to 3,000 feet.	Absent	Suitable habitat is present; however, ESL occurs outside of the elevational range of this species and the species was not observed during botanical surveys. No CNDDB occurrences within 5 miles of the ESL.

Common Name *Scientific Name*	Status[1] (Fed/State/ CRPR)	General Habitat Description	Habitat Present/ Absent	Rationale
Siskiyou onion *Allium siskiyouense*	—/—/4.3	Found in lower montane and upper montane coniferous forest with rocky and sometimes serpentine soils. **Blooms:** (Apr) May-Jul **Elevation:** 2,805-8205 feet.	Absent	Suitable forested habitat is present; however, CNDDB occurrences are outside of the elevational range of this species and the species was not observed during botanical surveys. No CNDDB occurrences within 5 miles of the ESL.
slender silver moss *Anomobryum julaceum*	—/—/4.2	Found in broad-leafed upland forest, lower montane and North Coast coniferous forests on damp rock and soil on outcrops, usually on roadcuts. **Blooms:** N/A **Elevation:** 330-3,280 feet.	Absent	Suitable habitat is not present within the ESL to support this species. This species was not observed during botanical surveys. There is one CNDDB occurrences within 5 miles of the ESL located approximately 2.46 miles south-southeast of ESL.
small groundcone *Kopsiopsis hookeri*	—/—/2B.3	Found in North Coast coniferous forest **Blooms:** Apr-Aug **Elevation:** 295 to 2,905 feet.	Absent	Suitable habitat is not present within the ESL to support this species. This species was not observed during botanical surveys. There are four CNDDB occurrences within 5 miles of the ESL; the closest occurrence is approximately 1.40 miles south-southwest.
Thurber's reed grass *Calamagrostis crassiglumis*	—/—/2B.1	Found in coastal scrub (mesic conditions) and in freshwater marshes and swamps. **Blooms:** May-Aug **Elevation:** 35 to 195 feet.	Absent	Suitable habitat is not present within the ESL to support this species. This species was not observed during botanical surveys. No CNDDB occurrences within 5 miles of the ESL.

Common Name *Scientific Name*	Status[1] (Fed/State/ CRPR)	General Habitat Description	Habitat Present/ Absent	Rationale
Tracy's collomia *Collomia tracyi*	—/—/4.3	Found in broad-leafed upland forest and lower montane coniferous forest in rocky and sometimes serpentine soils. **Blooms:** Jun-Jul **Elevation:** 985 to 6,890 feet.	Absent	Suitable habitat is present; however, the ESL occurs outside of the elevational range of this species and the species was not observed during botanical surveys. No CNDDB occurrences within 5 miles of the ESL.
Tracy's lomatium *Lomatium tracyi*	—/—/4.3	Found in lower montane and upper montane coniferous forest on serpentine soils. **Blooms:** Feb-Jul **Elevation:** 1,495 to 6,400 feet.	Absent	Suitable forested habitat is present; however, ESL occurs outside of the elevational range of this species and the species was not observed during botanical surveys. No CNDDB occurrences within 5 miles of the ESL.
Tracy's lupine *Lupinus tracyi*	—/—/4.3	Found in upper montane coniferous forest. **Blooms:** (May) Jun-Jul **Elevation:** 2,935 to 6,560 feet.	Absent	Suitable forested habitat is present; however, ESL occurs outside of the elevational range of this species and the species was not observed during botanical surveys. No CNDDB occurrences within 5 miles of the ESL.
Tracy's sanicle *Sanicula tracyi*	—/—/4.2	Found in cismontane woodland, lower montane coniferous forest, and upper montane coniferous forest, within openings. **Blooms:** Apr-Jul **Elevation:** 330 to 5,200 feet.	Present	Suitable habitat is present; however, species was not observed during botanical surveys. No CNDDB occurrences within 5 miles of the ESL.

Common Name *Scientific Name*	Status[1] (Fed/State/ CRPR)	General Habitat Description	Habitat Present/ Absent	Rationale
Tracy's tarplant *Hemizonia congesta* ssp. *tracyi*	—/—/4.3	Found in coastal prairie, lower montane coniferous forest, and North Coast coniferous forest in serpentine soils. **Blooms:** (Mar) May-Oct **Elevation:** 395 to 3,935 feet.	Absent	Suitable habitat is not present within the ESL to support this species. This species was not observed during botanical surveys. No CNDDB occurrences within 5 miles of the ESL.
trailing black currant *Ribes laxiflorum*	—/—/4.3	Found in North Coast coniferous forest, sometimes along roadsides. **Blooms:** Mar-Jul (Aug) **Elevation:** 15 to 4,575 feet.	Absent	Suitable habitat is not present within the ESL to support this species. This species was not observed during botanical surveys. No CNDDB occurrences within 5 miles of the ESL.
trifoliate laceflower *Tiarella trifoliata* var. *trifoliata*	—/—/1B.2	Found in lower montane and North Coast coniferous forests. **Blooms:** (May) Jun-Aug **Elevation:** 560 to 4,920 feet.	Present	Suitable habitat is present within the ESL; however, this species was not observed during botanical surveys. There is one CNDDB occurrence within 5 miles of the ESL approximately 1.13 miles east.
Vollmer's lily *Lilium pardalinum* ssp. *vollmeri*	—/—/4.3	Found in bogs and fens and meadows and seeps (mesic). **Blooms:** (Jun) Jul-Aug **Elevation:** 100 to 5,510 feet.	Absent	Suitable habitat is not present within the ESL to support this species. This species was not observed during botanical surveys. No CNDDB occurrences within 5 miles of the ESL.

Common Name *Scientific Name*	Status[1] (Fed/State/ CRPR)	General Habitat Description	Habitat Present/ Absent	Rationale
water bulrush *Schoenoplectus subterminalis*	—/—/2B.3	Found in bogs and fens, marshes and swamps (along montane lake margins). **Blooms:** Jun-Aug (Sep) **Elevation:** 2,460 to 7,380 feet.	Absent	Suitable wetland and lake habitat is not present within the ESL, and the ESL occurs outside of the elevational range of the species. This species was not observed during botanical surveys. One CNDDB occurrence occurs within 5 miles of the ESL; the closest occurrence is approximately 4.04 miles north-northwest.
white-flowered rein orchid *Piperia candida*	—/—/1B.2	Found in broad-leafed upland forest, lower montane coniferous forest, and North Coast coniferous forest. **Blooms:** (Mar) May - Sep **Elevation:** 100 to 4,300 feet.	Present	Suitable habitat is present within the ESL; however, this species was not observed during botanical surveys. There are 11 CNDDB occurrences within 5 miles of the ESL; the closest is approximately 1.32 miles north.
Wolf's evening-primrose *Oenothera wolfii*	—/—/1B.1	Found in coastal bluff scrub, coastal dunes, coastal prairie, lower montane coniferous forest in sandy soils, usually mesic areas. **Blooms:** May-Oct **Elevation:** 10 to 2,625 feet.	Present	Suitable habitat is present within the ESL; however, this species was not observed during botanical surveys. No CNDDB occurrences within 5 miles of the ESL.

[1] Status Codes:

Federal: Federal Threatened (FT)
State: State Threatened (ST); State Fully Protected (FP); State Species of Special Concern (SSC).
California Rare Plant Rank (CRPR) Codes and Extensions:
1A Plants presumed extirpated in California and either rare or extinct elsewhere.
1B Plants rare, threatened, or endangered in California and elsewhere.
2A Plants presumed extirpated in California, but more common elsewhere.
2B Plants rare, threatened, or endangered in California, but more common elsewhere.
xx.3 Not very endangered in California
xx.2 Fairly endangered in California
xx.1 Seriously endangered in California

Animal Species

Animals are considered "species of special concern" (SSC) based on (1) federal, state, or local laws regulating their development; (2) limited distributions; and/or (3) the habitat requirements of special-status animals occurring on-site. Several special-status animal species could potentially be present within the BSA. Special-status species occurrences within the region are identified on the USFWS and NMFS species list and CNDDB query (Appendix C).

Special-status and sensitive species that are not listed as endangered or threatened are discussed below in the order they appear in Table 4. Species listed or proposed for listing as federal/state threatened or federal/state endangered by regulatory agencies are discussed in the next section (Threatened and Endangered Species). Special-status species with no potential to occur in the project area are not discussed further in this document.

Table 5. Animal Species, Federal and State Listing Status, and Habitats that may occur in Project Area

Common Name *Scientific Name*	Status[1] (Fed/State)	General Habitat Description	Habitat Present/ Absent[2]	Rationale
INVERTEBRATES				
Crotch bumblebee *Bombus crotchii*	—/CE	Grasslands and scrub areas in hot and dry climates.	Absent	Suitable habitat is not present within the ESL. The species was not observed during reconnaissance surveys. No CNDDB occurrences within 5 miles of the ESL.
Monarch butterfly *Danaus plexippus*	CE/—	Requires host plant milkweed (*Asclepias* spp.) for entire life cycle.	Absent	The Monarch Butterfly Habitat Suitability Model (Caltrans 2020a) does not show suitable habitat within the ESL. Furthermore, this species requires a larval host plant (e.g., milkweed) which is not present within the ESL. No CNDDB occurrences within 5 miles of the ESL.
Western bumblebee *Bombus occidentalis*	—/CE	Blooming flowers along streams, meadows, roadsides, and burned or logged areas. Nests found underground in abandoned rodent burrows.	Absent	Nesting on-site is not likely due to disturbance and compacted gravel shoulders present within the ESL. No CNDDB occurrences within 5 miles of the ESL.
FISH				
California Coast Chinook salmon *Oncorhynchus tshawytscha*	FT/--	Spawn and rear in coastal tributary streams and rivers. Requires cool water temperatures for spawning, egg-incubation and juvenile rearing. Spawn in riffles with gravel and cobble.	Absent	The BSA is not within the current known range of the species (i.e., Redwood Creek in Humboldt County south to the Russian River). No CNDDB occurrences for this species within 5 miles of the ESL.

Common Name *Scientific Name*	Status[1] (Fed/State)	General Habitat Description	Habitat Present/ Absent[2]	Rationale
Chinook salmon *Oncorhynchus tshawytscha*— Upper Klamath and Trinity Rivers ESU pop. 30	C/CE,SSC	Spawn and rear in Klamath and Trinity rivers. Require cool year-round water temperatures since spawning occurs during the summer. Requires deep pools and riffles, and clean gravel and cobble substrate to spawn.	Present	Suitable habitat is present within the BSA (in the Klamath River), but not in the intermittent and ephemeral drainages within the ESL. No CNDDB occurrences within 5 miles of the ESL.
Coast cutthroat trout *Oncorhynchus clarkii clarkii*	—/SSC	Uses a large variety of habitat types, including lower and upper reaches of both large and small river systems, estuaries, sloughs, ponds, lakes, and nearshore ocean waters.	Present	Suitable habitat is present in the BSA (within the Klamath River), but not in the intermittent and ephemeral drainages. CNDDB reports the species in the Klamath in the vicinity of the ESL.
Coho salmon *Oncorhynchus kisutch* — Southern Oregon/Northern California Coast (SONCC) ESU pop. 2 and Critical Habitat	FT/ST	Spawn and rear in streams and rivers between Cape Blanco, OR and Punta Gorda, CA in Humboldt County.	Present/ Critical Habitat	Suitable habitat is present in the BSA (within the Klamath River) but not in the intermittent and ephemeral drainages within the ESL. The species was not observed during reconnaissance surveys. No CNDDB occurrences within 5 miles of the ESL. Critical habitat for this species exists in the BSA.
Eulachon *Thaleichthys pacificus* — Southern DPS	FT/—	Spawns in lower reaches of rivers during peak spring flow events. Adults in the southern DPS are semelparous. Needs sand or coarse gravel for spawning substrate. Larvae are transported to estuaries and then to the ocean.	Absent	The ESL is too far upstream for this species and outside its habitat range; thus, there is no suitable habitat within the ESL.

Common Name *Scientific Name*	Status[1] (Fed/State)	General Habitat Description	Habitat Present/ Absent[2]	Rationale
Klamath River lamprey *Entosphenus similis*	—/SSC	The species is found throughout the Klamath River basin in mainstem rivers, including the Trinity River in northern California and the Klamath River in southern Oregon distribution in the lower Klamath and Trinity basins likely coincides with those of spawning Chinook and coho salmon.	Present	Suitable habitat is present in the BSA (within the Klamath River) but not within the intermittent and ephemeral drainages within the ESL. The species was not observed during reconnaissance surveys. No CNDDB occurrences for this species are present within 5 miles of the project.
Lower Klamath marbled sculpin *Cottus klamathensis polyporus*	—/SSC	Swift running waters in the Klamath River drainage from Iron Gate Dam downstream to the mouth of the Trinity River.	Absent	Suitable habitat is not present within the BSA. Marbled Sculpin are usually found in cold (<68°F/20°C) spring-fed streams that have a low gradient and adequate aquatic vegetation. No CNDDB occurrences within 5 miles of the ESL.
Steelhead (*Oncorhynchus mykiss*) — Northern California DPS	FT/SSC	In streams, deep low-velocity pools are important wintering habitats. Spawning habitat consists of gravel substrates free of excessive silt.	Absent	Suitable habitat is not present within the BSA. The project is not within the current known range of the DPS (i.e., Van Duzen, Mad, Eel, Mattole, Big, Navarro, Garcia, and Gualala Rivers and Redwood Creek).
Steelhead *Oncorhynchus mykiss irideus* — Klamath mountains Province pop. 1	—/SSC	This population is found in streams between Elk River, Oregon, and the Klamath and Trinity rivers in California, inclusive.	Present	Suitable habitat is present in the BSA (within the Klamath River) but not within the intermittent and ephemeral drainages within the ESL.

Common Name *Scientific Name*	Status[1] (Fed/State)	General Habitat Description	Habitat Present/ Absent[2]	Rationale
Summer-run steelhead trout *Oncorhynchus mykiss irideus* pop. 36	—/CE,SSC	Northern California coastal streams south to Middle Fork Eel River. Cool, swift, shallow water and clean loose gravel for spawning and suitably large pools in which to spend the summer.	Absent	Suitable spawning habitat is not present within the BSA. The project is not within the current known range of the population (i.e., Eel, Mad, and Mattole rivers and Redwood Creek). The nearest CNDDB occurrence is approximately 5 miles northwest of the project and was recorded in 1993.
AMPHIBIANS				
Foothill yellow-legged frog *Rana boylii*	—/SSC	Found in or near rocky streams (both perennial and intermittent) in a variety of habitats, including valley-foothill hardwood, valley-foothill hardwood conifer, valley-foothill riparian, ponderosa pine, mixed conifer, coastal scrub, mixed chaparral, and wet meadows.	Present	Suitable aquatic habitat is present within the ESL. The species was not observed during site visits. The nearest CNDDB occurrence is approximately 0.9 mile southwest of the ESL and was recorded in 2008.
Northern red-legged frog *Rana aurora*	—/SSC	Occurs in the vicinity of quiet, permanent pools of streams, marshes, and occasionally ponds. Requires permanent or semi-permanent pools for larval development.	Present	Suitable aquatic habitat is present within the ESL. The nearest CNDDB occurrence is approximately 1 mile northwest of the project and was recorded in 1995.

Common Name *Scientific Name*	Status[1] (Fed/State)	General Habitat Description	Habitat Present/ Absent[2]	Rationale
Pacific tailed frog *Ascaphus truei*	—/SSC	Permanent streams with low temperatures in conifer-dominated habitats, including redwood, Douglas-fir, Klamath mixed-conifer, and ponderosa pine habitats. Restricted to montane cold, clear, rocky perennial streams in wet forests.	Absent	Suitable perennial aquatic habitat for the species does not occur within the ESL. The nearest CNDDB occurrence is approximately 0.8-mile southwest of the project and was recorded in 2008.
Southern torrent salamander *Rhyacotriton variegatus*	—/SSC	Found in cold, well-shaded permanent streams and spring seepages in redwood, Douglas-fir, mixed conifer, montane riparian, and montane hardwood-conifer habitats.	Present	Suitable habitat is present within the ESL. The nearest CNDDB occurrence is approximately 0.11-mile northwest of the project and was recorded in 1995.
REPTILES				
Western pond turtle *Emys marmorata*	—/SSC	Slow water aquatic habitat with available basking sites. Hatchlings require shallow water with dense submergent or short emergent vegetation. Requires an upland site for egg deposits near the aquatic site.	Present	Suitable aquatic habitat present within the BSA, but not present within the ESL. Suitable upland habitat present within the ESL; some ESL locations are in close proximity to the Klamath River which could provide oviposition sites for the species. No CNDDB occurrences within 5 miles of the ESL.
BIRDS				
Bald eagle *Haliaeetus leucocephalus*	—/SE,FP	Nests in large, old-growth, or dominant live trees with open branch work. Nests typically located near a permanent water source.	Present	Suitable nesting habitat present in the large trees within the ESL. No CNDDB occurrences within 5 miles of the ESL.

Common Name *Scientific Name*	Status[1] (Fed/State)	General Habitat Description	Habitat Present/ Absent[2]	Rationale
Black swift *Cypseloides niger*	—/SSC	Nests on ledges sheltered by overhang or in protected crevice on cliff, along rocky coast or in mountainous country. Mountain nest sites are often behind waterfalls, in spots where nest is continuously damp from spray.	Absent	Suitable habitat not present within the ESL. No CNDDB occurrences within 5 miles of the ESL.
Marbled murrelet *Brachyramphus marmoratus*	FT/SE	Breeds in inland forests along the coast from Eureka to the Oregon border and from Half Moon Bay to Santa Cruz. Nests in old-growth redwood dominated forests, often in Douglas-fir trees. Nests are typically located in tree snags, cavities, or in broken tops of large trees. Forages near coastal shoreline.	Present	Suitable nesting habitat is not present within the ESL but may be present within the BSA (or within auditory disturbance range of species). No CNDDB occurrences within 5 miles of the ESL.
Northern goshawk *Accipiter gentilis*	—/SSC	Breeds at middle and higher elevations in mature, dense conifer forests.	Present	The ESL is within the year-round range for the species. Suitable foraging and wintering habitat present within and adjacent to the ESL. No CNDDB occurrences within 5 miles of the ESL.
Northern spotted owl *Strix occidentalis caurina*	FT/ST	Old-growth forests or mixed stands of old-growth and mature trees. Occasionally in younger forests with patches of big trees. High, multistory canopy dominated by big trees, many trees with cavities or broken tops, wood debris, and space under canopy.	Present	Suitable nesting habitat absent from the ESL. Suitable roosting and foraging habitat present within the ESL. No CNDDB occurrences within 5 miles of the ESL. The nearest Northern spotted owl activity centers are approximately 0.25 mile to the northwest of the ESL near PM 17.31 and approximately 0.15 mile to the northeast of the ESL near PM 20.28.

Common Name *Scientific Name*	Status[1] (Fed/State)	General Habitat Description	Habitat Present/ Absent[2]	Rationale
Western snowy plover *Charadrius nivosus nivosus*	FT/—	Breeds above the high tide line on coastal beaches, sand spits, dune-backed beaches, sparsely-vegetated dunes, beaches at creek and river mouths, and salt pans at lagoons and estuaries.	Absent	Suitable breeding habitat (i.e., beach) is not present within the ESL. No CNDDB occurrences within 5 miles of the ESL.
Yellow-billed cuckoo *Coccyzus americanus occidentalis*	FT/SE	Nests in dense riparian stands of willow, often mixed with cottonwoods, with lower story of blackberry, nettles, or wild grape.	Absent	Suitable breeding habitat (i.e., dense riparian stands) is not present within the ESL. No CNDDB occurrences within 5 miles of the ESL.
MAMMALS				
Fisher *Pekania pennanti*— West Coast DPS of Northern California ESU	—/SSC	Intermediate to large tree stages of coniferous forests and deciduous riparian areas with high percent canopy closure. Uses cavities, snags, logs, and rocky areas for cover and denning. Needs large areas of mature, dense forest.	Present	Due to the level of human disturbance within the ESL, fisher is not anticipated to den within the ESL. However, suitable foraging habitat is present within the ESL. The nearest CNDDB occurrence is approximately 0.06 mile southwest of the ESL and was recorded in 1991.
Pacific (Humboldt) marten *Martes caurina humboldtensis*— Coastal DPS	FT/SE	Mixed evergreen forests with more than 40% crown closure, with large trees and snags. Requires habitat with limited human use. Nests in cavities of large trees, snags, stumps, logs, burrows, caves, and crevices in rocky areas.	Present / Proposed Critical Habitat	The project is located within the historical range of Pacific (Humboldt) marten and contains suitable habitat for the species. Proposed critical habitat exists in the project limits. No CNDDB occurrences within 5 miles of the ESL.

Common Name *Scientific Name*	Status[1] (Fed/State)	General Habitat Description	Habitat Present/ Absent[2]	Rationale
Pallid bat *Antrozous pallidus*	—/SSC	Day roosts typically include rocky outcrops, cliffs, large-diameter live and snag trees and crevices. Also roost in caves, mines, bridges, culverts, barns, porches, and bat boxes.	Present	Suitable roosting habitat is present within the large trees present throughout the project. No CNDDB occurrences within 5 miles of the ESL.
Ringtail cat *Bassariscus astutus*	—/FP	A mixture of forest and shrubland in close association with rocky areas or riparian habitats. Dens in rock recesses, hollow trees, logs, snags, abandoned burrows, or woodrat nests at low to middle elevations. Usually not found more than 0.6 mile from permanent water.	Present	No potential natal dens were observed within the ESL, but den sites could be present within the BSA.
Sonoma tree vole *Arborimus pomo*	—/SSC	North Coast fog belt from Oregon border to Sonoma County. In Douglas-fir, redwood, and montane hardwood-conifer forests. Feeds almost exclusively on Douglas-fir needles. Will occasionally take needles of grand fir, hemlock, or spruce.	Present (in trees)	The nearest CNDDB occurrence is approximately 1.35 miles southeast of the ESL and was recorded in 1991. Since there is no proposed tree removal for this project, no impacts are anticipated.
Townsend's big-eared bat *Corynorhinus townsendii*	—/SSC	Roosts in the open, hanging from walls and ceilings. Most common in mesic locations. Extremely sensitive to human disturbance.	Present	Human-made structures and large trees with cavities suitable for roosting are not present within the ESL. No large trees with basal cavities were observed. The culverts within the ESL were surveyed and no signs of bats were observed. The nearest CNDDB occurrence is approximately 1.25 miles southeast of the project and was recorded in 1951.

[1] Status Codes:

Federal Threatened (FT); Proposed Threatened (PT); State Endangered (SE); State Threatened (ST); State Fully Protected (FP); Candidate Endangered (CE); State Species of Special Concern (SSC)

[2] Assessment Codes. Absent: No habitat present and no further work needed. Present: Habitat is or may be present.

Key:

BSA = Biological Study Area

CNDDB = California Natural Diversity Database

DPS = Distinct Population Segment

ESL = Environmental Study Limits

ESU = Evolutionarily Significant Unit

Animal Surveys

Focused surveys for animal species were not conducted within the ESL due to COVID-19 restrictions on the Yurok Reservation and road closures due to wildfire. Habitat suitability surveys for animal species were completed during field reconnaissance surveys.

AMPHIBIANS

Foothill Yellow-legged Frog

Foothill yellow-legged frog (*Rana boylii*), a state (CDFW) Species of Special Concern, primarily inhabits partly shaded streams and rivers with shallow, flowing water and at least some cobble-sized substrate. Instream riffles appear to be an important habitat component. Breeding and egg deposits (oviposition) occur at the margins of relatively wide and shallow channel sections. Adults and juveniles use riparian and upland areas immediately adjacent to aquatic habitats. Springs, seeps, pools, and other moist habitats, such as woody debris, root wads, undercut banks, clumps of sedges, and large boulders occurring at high water-lines adjacent to pools, may serve as refugia during periods of high stream flow in winter. One study in Tehama County found foothill yellow-legged frogs rarely go beyond 40 feet from the channel during any time of the year.

Northern Red-legged Frog

Northern red-legged frog (*Rana aurora*), a state (CDFW) Species of Special Concern, primarily inhabits quiet, permanent pools of streams, marshes, and occasionally ponds. This species generally requires permanent or near permanent pools for larval development, which takes 11 to 20 weeks. Northern red-legged frogs are highly aquatic and stay close to streamside habitats. They breed March to July in the north. Females lay 750 to 4000 eggs in clusters up to 10 inches across, attached to vegetation in shallow, protected water.

Southern Torrent Salamander

Southern torrent salamander (*Rhyacotriton variegatus*), a state (CDFW) Species of Special Concern, occurs in coastal forests of northwestern California from the Oregon border south to Point Arena in Mendocino County. Southern torrent salamanders are found primarily in cold, well-shaded permanent streams and spring seepages with coarse rocky substrates in redwood, Douglas-fir, mixed conifer, montane riparian, and montane hardwood-conifer habitats. The elevational range for this species extends from near sea level to about 4,000 feet (1,200 meters). Key habitat features include loose gravel and cobble substrates as species has been documented to be sensitive to fine sediment load. Adults may use adjacent

riparian and forest habitat in the wet season, although this species is generally restricted to moist areas because it relies on its skin surface to take in oxygen. Southern torrent salamanders are believed to be more abundant in late-seral forest (i.e., forests with secondary successional growth but dominated by natural species) compared to younger stands (i.e., forests with younger successional growth and fewer mature natural species).

Amphibian Occurrences

These species may occur in the drainages around the culverts within the ESL. Suitable fall/winter refugia habitat is present within the intermittent streams at PMs 15.51, 18.00, 18.05. 18.83, 19.31, 19.74, 24.24, 26.65, 30.15, 32.33, and 32.69. Surrounding habitat types at these project locations which support upland refugia include white alder groves, Douglas-fir forest, California bay forest and woodland, arroyo willow thickets, California black oak forest and woodland, and madrone forest.

The nearest documented occurrence of the foothill yellow-legged frog is dated 2008 and is 1.02 miles west of the BSA from culvert location PM 18.83, along Clirliah Creek (CDFW 2021a). The nearest documented occurrence of Northern red-legged frog is dated 1995 and is located approximately 1.15 miles northwest of culvert location PM 15.07, in Johnson's along the east side of the Klamath River (CDFW 2021a). The nearest documented occurrence of Southern torrent salamander is dated from 2007 and is located 0.29 mile south of the ESL for culvert location PM 26.65, located along Miner's Creek (CDFW 2021a).

REPTILES

Western Pond Turtle

The Western pond turtle (*Emys marmorata*) is a state (CDFW) Species of Special Concern. Western pond turtles range throughout the state of California, from southern coastal California and the Central Valley, east to the Cascade Range and Sierra Nevada. The Northwestern and Southwestern subspecies are believed to integrate over a broad range in the Central Valley. The project location is within the range of the Western pond turtle.

The Western pond turtle occurs in a variety of permanent and intermittent aquatic habitats, such as ponds, marshes, rivers, streams, and ephemeral pools. They use basking and haul-out sites, such as emergent rocks, large instream woody debris, or floating logs to regulate their temperature throughout the day. In addition to appropriate aquatic habitat, these turtles require an upland egg deposit (oviposition) site in the vicinity of the aquatic habitat, often within 656 feet of aquatic habitat. Nests are typically created in grassy, open fields with soils that are high in clay or silt fraction. Egg laying usually occurs between March and August.

This species may spend the winter in an inactive state, on land or in the water, or, in other cases, may return active and in the water throughout the year. Year-round activity of Western pond turtle is most often observed along the coast and from a watercourse. Upland hibernation habitat may include any type of crack, hole, or object that a turtle seeking cover might squeeze into or burrow underneath.

Reptile Occurrences

Although there is no suitable aquatic habitat within the ESL for this species, there is suitable upland habitat. In ESL locations that are situated close to the Klamath River and where the banks are not too steep, vegetated communities with adequate leaf litter and soft soils could provide upland sites for Western pond turtle females to lay eggs.

The nearest documented occurrence of Western pond turtle is dated from 2005 and is located approximately 7.30 miles northeast of the culvert location at PM 24.24, at Twin Lakes (CDFW 2021a).

BIRDS

Northern Goshawk

Northern goshawk is a state (CDFW) Species of Special Concern. All migratory birds and their nests are protected from take[2] under the federal Migratory Bird Treaty Act (MBTA). All raptor species, including relatively common species and their nests, are protected from take under Section 3503 of the California Fish and Game Code.

Northern goshawk breed in the North Coast and Klamath ranges. Nests are usually near water on northern slopes, in the densest parts of stands but close to openings. Although possible, it is unlikely Northern goshawk would nest alongside a developed road.

Surveys would be conducted for nesting birds if vegetation removal were to occur during the breeding season. The nearest documented occurrence of Northern goshawk is approximately 6.62 miles east of the ESL for culvert location PM 26.65. The occurrence was dated 1980 and located along Slate Creek within the Six Rivers National Forest (CDFW 2021a).

[2] Take, as defined in the Federal Endangered Species Act, means “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct."

MAMMALS

Fisher—West Coast DPS of Northern California ESU

Pacific fisher (*Pekania pennanti*)—West Coast Distinct Population Segment (DPS) of the Northern California Evolutionarily Significant Unit (ESU) is a state (CDFW) Species of Special Concern. Fisher is one of the larger members of the weasel family (*Mustelidae*) and are opportunistic, generalist predators with a diverse diet, including mammalian and avian prey, ungulate carrion, vegetation, insects, and fungi. Fisher are known to occur in mature, second growth, and old-growth coniferous forest stands with a high canopy closure, multiple canopy layers, large trees, and structural components such as snags, cavities, and hollow logs used for resting and natal and maternal dens. They require large areas of mature, structurally complex conifer and mixed conifer hardwood forest and have large home ranges. Fishers are generally solitary animals, except during the breeding season. They mate between February and May (usually late March), giving birth the following March (CDFW 2010). Fishers hunt in forested habitats, typically avoid openings, and likely use corridors with overhead cover to travel between forest patches.

During reconnaissance surveys, the project locations were assessed for trees suitable for fisher resting habitat and maternity den sites. Trees suitable for fisher den sites include larger conifers (22 inches DBH or larger) and hardwoods (18 inches DBH or larger), not smaller trees. Day resting sites could include branches, platforms, and cavities of live trees. Suitably-sized trees with the following characteristics were considered as potential fisher den sites:

- Any broken-topped tree with a minimum diameter at the break of 18 inches or larger
- Trees with one or more limbs 12 inches or greater in diameter
- Trees with a cavity (or void within a tree bole or large limb) with a relatively small opening, which includes all cavities with entrances 2.5 to 6 inches across the smallest direction (for example, a vertical slit-like opening 4 inches across would count, as would a more circular entrance)

Although fisher likely prefer habitats farther away from human disturbance outside of the existing Caltrans right of way, it is possible they could use the forest habitat adjacent to the project sites for foraging; however, due to the deterrence from the highway, it is unlikely fishers would use this habitat for denning. No signs of fisher occupation were observed in or immediately adjacent to the project locations during field surveys.

The nearest documented fisher occurrence is located approximately 2.93 miles north-northwest of the ESL of culvert location PM 15.07. This occurrence is dated 1994 and located on the west side of the Klamath River at river mile point 21.5 (CDFW 2021a).

Sonoma Tree Vole

Sonoma tree vole (*Arborimus pomo*) is a state (CDFW) Species of Special Concern. They are endemic to California and occur in the coastal fog belt from the Oregon border to Sonoma County. It is reported to be rare to uncommon throughout its range, but the difficulty of locating nests and capturing individuals makes abundance hard to estimate. Sonoma tree voles primarily nest in old-growth and other forests, mainly Douglas-fir, redwood, and montane mixed hardwood-conifer habitats. They feed almost exclusively on Douglas-fir and grand fir (*Abies grandis*).

The species could be present in suitable nesting trees within the montane hardwood community (in Douglas-fir forest) present within the BSA. The nearest occurrence is dated 1991 and is located near Bald Hills Road, approximately 1.38 miles west-northwest of culvert location PM 30.15 (CDFW 2021a).

Pallid Bat and Townsend's Big-eared Bat

Pallid bats (*Antrozous pallidus*) are most common in open, dry habitats with rocky areas for roosting. Common day roosts include caves, crevices, mines, and occasionally in hollow trees and buildings. Night roosts can be more open, such as on porches and in open buildings. Maternity colonies form in early April and may support 12 to 100 individuals. Maternity colonies are found near water.

Trees within the BSA may provide roosting habitat and the open spaces around them may provide foraging habitat. Bats may use culverts for roosting, but it is unlikely due to the availability of trees. However, no presence or evidence (e.g., guano or staining) of roosting bats was reported.

The nearest documented occurrence of pallid bat is dated from 1971 and is located approximately 6.14 miles southwest of the BSA of culvert location PM 20.98, generally mapped to the Orick area (CDFW 2021a).

Townsend's big-eared bats (*Corynorhinus townsendii*) require caves, mines, tunnels, buildings, or other human-made structures for roosting. In addition, they occasionally roost in basal hollows in large redwood trees.

Trees within the BSA may provide roosting habitat and the open spaces around them may provide foraging habitat. Bats may use culverts for roosting, but it is unlikely due to the availability of trees. However, no presence or evidence (e.g., guano or staining) of roosting bats was reported.

The nearest documented occurrence of Townsend's big-eared bat is dated from 1951 and is located approximately 6.67 miles south of the BSA of culvert location PM 33.75, generally mapped to the Hoopa Valley Reservation (CDFW 2021a).

Threatened and Endangered Species

FISH

Chinook Salmon—Upper Klamath and Trinity Rivers ESU

Chinook – (*Oncorhynchus tshawytscha*) Upper Klamath Trinity Rivers ESU is a State Candidate (Endangered), Species of Special Concern, and a Federal Candidate for listing.

Adult spring-run Chinook salmon enter the Klamath estuary from March through July, with a peak in late May or early June (CDFW 2020). Spring-run Chinook salmon can migrate up to about 2.2 miles (3.7 km) a day and reach the Trinity River from May through August. They hold in cold water streams from 50-61°F (10–16°C) for 2–4 months before beginning to spawn in early September, about 4–6 weeks earlier than their fall-run counterparts. Adults require deep, cool holding pools to over-summer, such as the mouths of tributaries and areas with subsurface flow from springs or groundwater seeps. The vast majority of juvenile spring-run Chinook salmon begin migrating downstream from February through mid-June to feed and grow in the ocean before returning to spawn at age three or four.

Chinook salmon—upper Klamath and Trinity Rivers ESU may occur during winter and spring months in the Klamath River within the BSA. However, salmonids would not be present in the intermittent or ephemeral drainages at the culverts within the ESL in this watershed.

Coast Cutthroat Trout

Coast cutthroat trout (CCT) (*Oncorhynchus clarkii clarkii*) is a CDFW Species of Special Concern. Most of the coast cutthroat trout in California, including the non-spawning fish, return to freshwater during the winter or high flow months and hide in pools with complex forms of cover. Anadromous populations may reside in freshwater for up to five years before leaving for the ocean, where they are believed to loosely congregate in shoals. In their

freshwater stages, CCT generally live in small low-gradient streams with cool water temperatures.

Juvenile fish are opportunistic feeders that rely mostly on benthic and drift insects. As freshwater CCT get larger, they go from being the possible prey of other salmonids to the potential predators of other salmonids, insects, and crustaceans. In the ocean, cutthroat trout continue to feed on fish and crustaceans and may broaden their diet to include new species of fish.

Anadromous CCT reach sexual maturity in 2-4 years and enter streams to breed with the first high flow between August and October. Egg production increases with body size: females measuring 8–16″ (200-400 mm) will produce an average of 1,100 to 1,700 eggs per spawning season. In California, fry emerge in March–June after 6 to 7 weeks of incubation and time spent as an alevin within the safety of the gravel.

Coho Salmon—Southern Oregon/Northern California Coast ESU

The coho salmon (*Oncorhynchus kisutch*) Southern Oregon/Northern California Coast (SONCC) ESU (pop. 2) was listed as threatened under the FESA in 1997 (62 FR 24588). Critical habitat for coho salmon was designated in 1999 and it includes all accessible reaches of all rivers (including estuarine areas and tributaries) between the Mattole River in California and the Elk River in Oregon, inclusive (64 FR 24049).

SONCC coho salmon are anadromous fish that usually exhibit a 3-year life cycle. Juveniles live in fresh water for up to 15 months and then migrate to the ocean where they spend up to 18 months before returning as adults to spawn. In California, the timing of upstream migration varies but generally occurs from September through January, with a peak in November and December, and spawning occurs mainly from November to January.

Juveniles typically live in their natal stream for one year before emigrating to the ocean, but they may spend up to two years in fresh water. Seaward migration generally occurs from late March or early April through June with a peak in April to late May/early June.

SONCC coho salmon may occur during winter and spring months in the Klamath River within the BSA. However, salmonids would not be present in the intermittent or ephemeral drainages at the culverts within the ESL in this watershed.

Klamath River Lamprey

Klamath River lamprey (*Entosphenus similis*) is a CDFW Species of Special Concern. The species is found throughout the Klamath River basin in mainstem rivers, including the Trinity River in northern California and the Klamath River in southern Oregon distribution in the lower Klamath and Trinity basins likely coincides with those of spawning Chinook and coho salmon. Klamath River lamprey appear to be non-migratory and are resident in both rivers and lakes of the Klamath basin. Adults prey on adult coho salmon and Chinook salmon and other large fishes in the basin.

Klamath River lamprey need cold, clear water for spawning and incubation. They also require a diverse range of habitats to complete their life cycle. Adults typically use spawning gravel to build nests, while larvae (known as ammocoetes) burrow in soft sediments for rearing. Ammocoetes also need larger substrates as they grow and algae for food in habitats with slow or moderately slow water velocities.

Fish Occurrences

Focused surveys were not conducted for fish within the BSA. It is presumed that Chinook salmon-upper Klamath and Trinity Rivers ESU, Coast cutthroat trout, coho salmon-Southern Oregon/Northern California Coast ESU, and Klamath River lamprey may occur during winter and spring months in the Klamath River within the BSA. However, none of these species would occur in the intermittent or ephemeral drainages at the culverts within the ESL in this watershed.

Essential Fish Habitat

Essential Fish Habitat (EFH) is defined by the Magnuson-Stevens Fishery Conservation and Management Act (MSA) for federally-managed species as "those waters and substrate necessary for fish for spawning, breeding, feeding, or growth to maturity". The Klamath River supports EFH for species regulated under the federal Pacific Coast Salmon Fishery Management Plan.

EFH for the Pacific Coast Salmon Fishery means those waters and substrate necessary for salmon production needed to support a long-term sustainable salmon fishery and salmon contributions to a healthy ecosystem. Freshwater EFH for coho salmon and Chinook salmon consists of four major components: (1) spawning and incubation; (2) juvenile rearing; (3) juvenile migration corridors; and (4) adult migration corridors. EFH for Chinook also includes adult holding habitats. There is no suitable spawning habitat within the project ESL.

There is also no juvenile rearing in the project ESLs because these culverted intermittent tributaries are small and dry up in the summer.

While the Klamath River itself is EFH for Chinook salmon and coho salmon, there is no EFH within the project limits. The section of the river adjacent to the project locations is a migration corridor for juveniles and adults, and potentially contains suitable spawning areas and juvenile rearing habitat.

BIRDS

Bald Eagle

Bald eagle (*Haliaeetus leucocephalus)* is listed as endangered under the CESA and is a state fully protected species. All raptors and migratory birds and their nests are protected from take under the federal MBTA. All raptor species, including relatively common species and their nests, are protected from "take" under Section 3503 of the California Fish and Game Code.

Suitable nesting habitat is present within the ESL. The nearest documented occurrence of bald eagle is approximately 6.86 miles north-northwest of the ESL (from culvert location PM 15.07), dated 1999 and located on the east side of the Klamath River just south of the Blue Creek confluence (CDFW 2021a). Bald eagles have been documented all along the Klamath River and are presumed to potentially be present within the river corridor.

Marbled Murrelet

The marbled murrelet (*Brachyramphus marmoratus*) occurs along the Pacific Coast from Alaska to northern Monterey Bay in California. Marbled murrelets are listed federally as threatened and under CESA as state endangered. Breeding occurs in mature, coastal coniferous forest with nests built in tall trees. The birds spend most of their lives at sea but use mature coastal conifer forests for nesting. Nesting occurs close enough to coastal waters (up to about 50 miles) for the birds to return to the marine environment to forage.

In California, breeding occurs primarily in Del Norte and Humboldt counties from egg laying in mid-May through fledging in mid-September. Typically, one egg is laid in a cup created in moss on a tree limb.

Suitable marbled murrelet nesting habitat consists of large intact stands of old-growth forest with large trees, closed canopy, and low undergrowth. The suitability increases with decreased edge effect, low habitat fragmentation, and the close proximity to the marine

environment. The most important element of suitable nesting sites is the presence of large moss-covered platforms, branches, or deformities.

Focused surveys were not conducted for marbled murrelet, but habitat suitability for wildlife species was completed during field reconnaissance surveys. These surveys concluded that the forested habitat types within the BSA do not provide the mature forest habitat with large horizontal limbs that provide nesting platforms for the birds, therefore are not considered suitable. Similarly, suitable foraging habitat (marine waters) are also absent from the BSA.

The nearest documented marbled murrelet occurrence is approximately 6.45 miles west of the ESL at culvert location PM 18.59, located in Redwood National and State Park. However, critical habitat is located approximately 2.4 miles east of the culvert location at PM 24.24. Therefore, suitable nesting habitat is presumed to be present 2.4 miles east of the ESL.

Northern Spotted Owl

Northern spotted owl (*Strix occidentalis caurina*) was listed as a federally threatened species on June 26, 1990 (55 CFR 26114-26194). Northern spotted owls are also listed as threatened under CESA. The Northern spotted owl is a medium-sized, stocky owl with dark eyes, brown coloration with white spots dorsally, and dark bars on its pale ventral side.

The Northern spotted owl is one of three recognized subspecies of spotted owl with a range that currently extends from southwest British Columbia, Canada, through the Cascade Range and coastal ranges in Washington, Oregon, and California, to Marin County, California (USFWS 2011b). Like most owls, Northern spotted owl is nocturnal. It requires older, mixed-age, and structurally complex forests with old-growth characteristics and high canopy closure. It nests and roosts in multi-storied canopies dominated by large diameter trees with a high incidence of snag cavities or broken tops and requires open space below the canopy for flight.

Focused surveys were not conducted for Northern spotted owl, but habitat suitability for wildlife species was completed during field reconnaissance surveys. Suitable nesting habitat does not occur within the ESL; however, suitable roosting, foraging, and dispersal habitat is present within and immediately adjacent to the ESL. The ESL is not within designated critical habitat for Northern spotted owl.

The nearest Northern spotted owl activity centers are approximately 0.25 mile to the northwest of the ESL near PM 17.31 and approximately 0.15 mile to the northeast of the ESL near PM 20.28.

Potential foraging habitat within the ESL consists of montane hardwood-conifer stands with a multi-layered overstory canopy, larger conifers spaced for flight paths, and accumulations of downed woody debris scattered throughout the forest floor.

Potential dispersal habitat occurs in montane hardwood-conifer and montane riparian habitat in the action area, with species composition like the nesting and roosting habitat described above. Forest stands providing dispersal habitat have a minimum of 40% canopy cover and contain trees that measure at least 11 inches diameter at breast height (DBH). Dispersal habitat often includes younger, evenly aged plantations or pole-sized stands. Forest stands that provide dispersal habitat have suitable vegetation structure to provide cover from predators and some limited foraging opportunities.

Areas deemed unsuitable (i.e., non-habitat) for Northern spotted owl include areas with a sparse tree canopy with less than 40% canopy cover, grassland habitats, utility corridors where trees have been substantially thinned or removed with less than 40% canopy cover, existing roadways, or other paved or graveled surfaces.

MAMMALS

Pacific (Humboldt) Marten—West Coast DPS

Pacific (Humboldt) marten (*Martes caurina humboldtensis*) Coastal DPS is a federally threatened species. This same species is classified as the Humboldt marten by CDFW and is a state endangered species under CESA.

The project is within the Northern Coastal California (NCC) Extant Population Area (EPA) for the species. Proposed critical habitat for the marten is located in the northern portion of the BSA and overlaps with the northernmost portion of the project, including PM 15.07 through PM 19.31.

Pacific (Humboldt) marten are associated with late successional conifer stands with dense shrub layers and abundant downed tree structures used for resting, denning, and escape cover. They historically occupied the coastal mountains of California from Sonoma County north to southern Oregon. The current known distribution is limited to Del Norte County, western Siskiyou County, the extreme northern part of Humboldt County, and southern and central Oregon. The BSAs are in the historical range of the Pacific (Humboldt) marten.

Proposed critical habitat for the marten is located in the northern portion of the BSA and overlaps with the northernmost portion of the project, including PM 15.07 through PM 19.31.

Surveys were not conducted for Pacific (Humboldt) marten. During reconnaissance surveys, the project locations were assessed for trees suitable for marten resting habitat and maternity den sites. The NCC EPA of Pacific (Humboldt) marten is within the northern portion of the ESL and, as of 2012, is known to support approximately 60-80 individuals (USFWS 2018b). Pacific (Humboldt) marten detections have been reported near two locations proposed for culvert work:

- approximately 400 feet southwest of PM 16.80
- approximately 525 feet northeast of PM 16.80
- approximately 500 feet northeast of PM 16.46.

Therefore, it is presumed the species would be present in the BSA.

Although marten likely prefer habitats farther away from human disturbance outside of the existing Caltrans right of way, it is possible they could use the forested habitat adjacent to the project sites for foraging. However, due to the deterrence from the highway and the lack of quality dense forested habitat, it is unlikely marten would use this habitat for resting or denning. No signs of marten occupation were observed in or immediately adjacent to the project locations during field surveys.

Ringtail Cat

The ringtail cat (*Bassariscus astutus*) is a state Fully Protected mammal. It is a member of the raccoon family that can be found in fragmented and disturbed areas, and dens inside buildings and other manufactured structures. Ringtail cats are nocturnal carnivores that forage for a variety of prey—primarily rodents (woodrats and mice) and rabbits, but also may eat invertebrates, birds (and eggs), reptiles, fruit, nuts, and some carrion.

In northwest California, ringtail cats tend to select rest sites near steep slopes and water sources. They frequently change rest sites, although some may be revisited regularly. Most litters are born in May or June, with young beginning to forage outside the den site after two months. Dens can be located in rock crevices, living and dead hollow trees, logs, brush piles, buildings, and other manufactured structures. Female ringtails may regularly move young between dens.

Focused surveys were not conducted for ringtail cat, but habitat suitability for wildlife species was completed during field reconnaissance surveys. The species could be present in suitable trees within the montane riparian habitat present within the ESL.

Invasive Species

Invasive plants (i.e., noxious weeds) are undesirable, non-native plants that commonly invade disturbed sites. Most local invasive species have been introduced from Europe and Asia and are known to degrade native wildlife habitat and plant communities. When disturbance results in new habitat openings or intact native vegetation is lost, invasive plants may colonize the site and spread, often out-competing native species. Once established, they are difficult to eradicate and could pose a threat to native species.

All non-native plant species found within the ESL were reviewed to determine their status as invasive plants according to the ratings in the California Invasive Plant Inventory produced by California Invasive Plant Council (Cal-IPC 2021). Cal-IPC categorizes non-native invasive plants into three categories of overall negative ecological impact in California: High, Moderate, and Limited (Caltrans 2022a). Invasive plant species were seen inside the ESL during botanical surveys (Table 6).

Table 6. Invasive Species Found within the Environmental Study Limits

Common Name	*Species Name*	Cal-IPC rating
Scotch broom	*Cystus scoparius*	High
Himalayan blackberry	*Rubus armeniacus*	High
Slender wild oat	*Avena barbata*	Moderate
Wild oat grass	*Avena fatua*	Moderate
Ripgut brome	*Bromus diandrus*	Moderate
Italian thistle	*Carduus pycnocephalus*	Moderate
Poison hemlock	*Conium maculatum*	Moderate
Hedgehog dogtail grass	*Cynosurus echinatus*	Moderate
Tall fescue	*Festuca arundinacea*	Moderate
Perennial rye grass	*Festuca perennis*	Moderate
Mediterranean mustard	*Hirschfeldia incana*	Moderate
Common velvet grass	*Holcus lanatus*	Moderate

Common Name	*Species Name*	Cal-IPC rating
Rough cat's ear	*Hypochaeris radicata*	Moderate
Sheep sorrel	*Rumex acetosella*	Moderate
Soft brome	*Bromus hordaceus*	Limited
Orchard grass	*Dactylis glomerata*	Limited
Dovefoot geranium	*Geranium mole*	Limited
Smooth cat's ear	*Hypochaeris glabra*	Limited
Yellow parentucellia	*Parentucellia viscosa*	Limited
English plantain	*Plantago lanceolata*	Limited
Curly dock	*Rumex crispus*	Limited
Rose clover	*Trifolium hirtum*	Limited
Wooly mullein	*Verbascum thapsus*	Limited

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?

Plant Species

The project would not have a substantial adverse effect on candidate, sensitive, or special-status plant species. No special-status plant species were observed within the ESL, although habitat is present for species listed previously in Table 4. A qualified biologist would place protective fencing around any rare plant species found within the ESL before construction (see Section 1.4).

Animal Species

Amphibians and Reptiles

In work areas adjacent to or within the drainages, special-status amphibians and reptiles potentially present in the project area (Foothill yellow-legged frog, northern red-legged frog, southern torrent salamander, and western pond turtle) could be crushed or run over by construction equipment. They could also become entrapped in trenches excavated for culvert work. Standard measures that include pre-construction surveys and relocation, if found, would minimize these potential impacts.

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 near waters where culvert work would occur could also degrade water quality. Degraded water quality could harm all life stages if they are in or downstream of work areas. However, standard measures to protect water quality would minimize or avoid potential impacts.

Due to the minimal disturbance, short-term nature of the activities, and the presence of suitable habitat within the ESL to which they could relocate if necessary, culvert work is anticipated to have a ***less than significant impact*** to Foothill yellow-legged frog, northern red-legged frog, southern torrent salamander, and western pond turtle.

Birds

Impacts to Northern goshawk and other migratory birds are not anticipated given the minimal amount of vegetation to be removed, the temporary nature of the project, and the standard measures to avoid disturbing active nests. No nests would be removed or altered during project activities. Avoidance and minimization measures for Threatened and Endangered Species would further protect any undiscovered birds within the BSA.

Caltrans has determined the project would have no impacts to Northern goshawk.

Mammals

Fisher—West Coast DPS of Northern California ESU

This project is not expected to adversely impact fisher. As potentially suitable foraging, resting, or denning habitat for fisher was observed in adjacent forested habitats, fisher could occupy or move throughout these areas. No potential den structures or day resting locations were observed within the ESL, and no potential den trees would be removed as a result of project activities.

Caltrans has determined the project would have no impacts to fisher.

Sonoma Tree Vole

Sonoma tree vole could be present in suitable nesting trees in the montane hardwood community (Douglas-fir forest) within the BSA. However, because no trees would be removed for the project, impacts on Sonoma tree vole are not anticipated.

Caltrans has determined the project would have no impacts to Sonoma tree vole.

Pallid Bat and Townsend's Big-eared Bat

Trees within the BSA may provide roosting habitat and the spaces around them may provide foraging habitat for pallid bat and Townsend's big-eared bat. While bats may use culverts for roosting, it is unlikely due to the availability of suitable trees. Since no potentially suitable maternity roosts or other roosting trees for bats would be removed for the project, Caltrans has determined the project would have no impacts to pallid bat or Townsend's big-eared bat.

Threatened and Endangered Species

Fish

The Klamath River habitat within the BSA would not be directly affected by construction activities; however, work at the culvert sites within these watersheds could indirectly affect salmonids that occur in the Klamath River. Some culverts proposed for replacement are within 300 feet of the Klamath River, or connected to the river or a tributary, such as those at post miles 15.07, 15.35, 15.51, 16.46, 30.15, and 33.75. Therefore, project activities could

affect fish habitat in these locations more than other culverts that are greater than 300 feet from and/or are disconnected from the river.

Potential impacts to fish include impacts to water quality and habitat modification from non-tree riparian vegetation removal (Caltrans 2022a). Potential water quality impacts and their effects on fish would be considered negligible and discountable because most of the work would occur at culverts that are disconnected from or greater than 300 feet away from a salmonid stream, and because the impacts would be short-term, temporary, and limited to the construction period. In addition, work would be conducted during the dry season (June 15–October 15) when most of these culverts would be dry.

Potential riparian vegetation impacts and their effects on salmonid habitat would be considered negligible because of the small areas of temporary impacts spread out over seven culverts in two different watersheds. An aggregate of 0.008 acre of riparian vegetation would be permanently removed, and 0.049 acre would be temporarily impacted. Most of the riparian vegetation impacts would occur at culverts that are disconnected from, or greater than 300 feet away from a fish-bearing stream. To minimize the effects of riparian vegetation removal, only the minimum amount of vegetation would be removed to perform the necessary work.

Due to the minimal disturbance generated by construction activities, the short-term nature of the activities, and strict water quality standards, culvert work is expected to have a *less than significant impact* on these species.

Under FESA, the project *may affect, but is not likely to adversely affect* coho salmon–Southern Oregon/Northern California Coast ESU and would have no adverse effects on its critical habitat because potential effects of the project would be negligible.

Under CESA, the project would not result in *"take"* of Chinook salmon–upper Klamath and Trinity Rivers ESU, coast cutthroat trout, coho salmon–SONCC ESU, and Klamath River lamprey.

Essential Fish Habitat

Project activities could affect EFH in the Klamath River. Caltrans has determined that the project would have *no adverse affect* to downstream EFH for species managed under the Pacific Coast Salmon FMP. Potential effects to Pacific salmon EFH from in-channel construction activities include (1) a temporary increase in turbidity and (2) disturbance to benthic invertebrate community. The PBO (Category 2), would be used for Essential Fish Habitat consultation with NMFS to address potential effects on EFH.

Birds

Bald Eagle

No nests would be removed or altered during project activities because they would be avoided. Impacts to bald eagles are not anticipated given the minimal amount of vegetation to be removed, the temporary nature of the project, and the standard measures to avoid disturbing active nests.

Under CESA, Caltrans has determined the project would not result in *"take*" of the bald eagle.

Marbled Murrelet

The project is centered around SR 169 and the associated disturbed roadside habitat, as well as the inlets and outlets of the 52 culverts, which do not occur in old-growth forest or support trees that are sufficiently large to provide suitable nesting habitat for marbled murrelet. There would be minimal vegetation removed for access to the inlet and outlet at each culvert location, which may involve some minor tree trimming, but no tree removal. In addition, these trees do not provide suitable nesting habitat for marbled murrelet. Due to the lack of suitable nesting habitat within the ESL or vicinity (including the defined disturbance radius of 492 feet [150 meters] of the construction area), the project would not result in any auditory or visual harassment of marbled murrelets. Therefore, the project will not result in direct or indirect impacts to marbled murrelet. The project does not occur within marbled murrelet critical habitat, and the nearest designated critical habitat for marbled murrelet occurs approximately 2.4 miles northeast of PM 24.24.

Under FESA, Caltrans has determined the project *may affect, but is not likely to adversely affect* marbled murrelet and would have no effect on its designated critical habitat. Consultation with the USFWS would be carried out through the Programmatic Letter of

Concurrence (PLOC) (File No. AFWO-12B0001-12I0001) to address potential effects to marbled murrelet.

Under CESA, Caltrans has determined the project would not result in "*take*" of marbled murrelet.

Northern Spotted Owl

There would be minimal vegetation removal associated with the access to the culvert inlet and outlet vicinity at each location, and no trees would be removed. The project would not result in direct impacts to NSO habitat. While there would be no visual disturbances to Northern spotted owl nests within a visual line-of-sight of 131 feet (40 meters), auditory disturbance is possible. Baseline noise levels within the ESL for NSO were evaluated using the USFWS guidance *"Estimating the Effects of Auditory and Visual Disturbance to Northern Spotted Owls and Marbled Murrelets in Northwestern California"* (USFWS 2020).

To evaluate the possible auditory impacts to NSO, the USFWS guidance was implemented and determined that the *High* sound category (i.e., 81-90 decibels [dB]) best represents baseline noise conditions in the project area and vicinity. The USFWS and USACE (2014) *Programmatic Informal Consultation for the California Department of Transportation's Routine Maintenance and Repair Activities, and Small Projects Program for Districts 1 and 2* were used to assess the potential for project-related auditory and visual impacts to NSO (USFWS and USACE 2014).

Consultation with the USFWS would be carried out through the Programmatic Letter of Concurrence (PLOC) (File No. AFWO-12B0001-12I0001) to address potential effects to NSO.

Under FESA, the project *may affect, but is not likely to adversely affect* Northern spotted owl because the avoidance measures described in the PLOC would be implemented to avoid any adverse effects to the species. The project would have *no effect* on NSO designated critical habitat.

Under CESA, Caltrans has determined the project would not result in *"take"* of Northern spotted owl.

Mammals

Pacific Marten—Coastal Distinct Population Segment

This project is not anticipated to impact Pacific (Humboldt) marten. Although there is potentially suitable foraging, resting, and denning habitat for Pacific (Humboldt) marten in forested areas adjacent to the project, there are no potential den structures or suitable day resting locations within the ESL itself and no trees would be removed. Additionally, the proximity to an active roadway and human activity would likely deter marten from utilizing habitat within the ESL.

The ESL overlaps with a combined total of 0.814 acre of proposed critical habitat for the Pacific (Humboldt) marten. Excluding Disturbed/Developed (0.161 acre) and Ruderal (0.288 acre) habitat types (0.449 acre), a total of 0.314 acre of temporary impacts and 0.177 acre of permanent impacts would occur to habitat types that could provide any physical or biological features for Pacific (Humboldt) marten. Types include montane hardwood conifer and montane riparian habitats, which could provide forage and cover from predators, but not are not suitable for breeding, denning, or resting. Given that project impacts are minimal and suitable breeding, denning, and resting habitat is absent, and that this area represents marginal quality habitat for the species, less than significant impacts to critical habitat are anticipated.

While the USFWS currently has no auditory or visual disturbance guidelines for Pacific marten, guidelines for NSO detailed in the PLOC (USFWS 2018a) are currently being used for Pacific marten until species-specific guidelines are developed (G. Schmidt [USFWS], personal communication, December 7, 2021).

Per FESA, Caltrans has determined the project *may affect, but is not likely to adversely affect* the Pacific (Humboldt) marten and its proposed critical habitat. Per USFWS concurrence, the PLOC (USFWS 2018a) would be used for Section 7 consultation for potential effects of the project on Pacific marten–Coastal DPS and retroactively for potential effects on their proposed critical habitat (G. Schmidt [USFWS], personal communication, December 7, 2021).

Under CESA, Caltrans has determined the project would not result in *"take"* of Pacific (Humboldt) marten.

Ringtail Cat

No trees or other suitable denning habitat would be removed for the project. Therefore, impacts to ringtail cat are not anticipated.

Under CESA, Caltrans has determined the project would not result in *"take"* of ringtail cat.

Invasive Species

Some invasive species near the project area are purposely cultivated by the Yurok people or are protected by historical and cultural designation. However, none of these occurrences or plantings would be impacted by the project.

Areas disturbed by project work would be replanted under standard replanting guidelines, which are intended to reduce invasive species introduction. Standard Measures and Best Management Practices identified in Section 1.4 would be implemented. Therefore, no impacts to sensitive habitats from invasive species are expected from this project.

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?

Natural Communities

Riparian

The project would result in permanent impacts to approximately 0.008 acre and temporary impacts to 0.049 acre of riparian habitat. Permanent impacts would occur from the placement of new culverts, inlet/headwall structures, and rock slope protection, which would require minor riparian vegetation removal at some locations. Trees would not be removed. Compensatory mitigation is not proposed. These figures are maximum estimates, which may potentially decrease during the final design phase for the project. The project would result in a ***less than significant impact*** to riparian habitat.

Sensitive Natural Communities

The project would impact approximately 0.211 acre of Sensitive Natural Communities. There would be temporary impacts to 0.064 acre of madrone forest and 0.129 acre of California bay forest and woodland. The project would permanently impact 0.006 acre of madrone forest and 0.012 acre of California bay forest and woodland. No trees would be removed.

Excluding the placement of hardscape (new culvert components or rock slope protection), only minimal impacts are expected to the understory layer of these sensitive natural communities. Compensatory mitigation is not proposed. Permanently impacted habitat would be reestablished on-site within the project limits, where there is opportunity for restoration of degraded areas. Plans for reestablishment would be developed during the final design phase. Temporarily impacted habitat would be restored to preconstruction conditions. Therefore, with implementation of Standard Measures and Best Management Practices, a ***less than significant impact is*** expected to Sensitive Natural Communities.

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?***

Wetlands and Other Waters

Impacts to approximately 0.144 acre of potentially jurisdictional aquatic features may result from this project (Table 7). Because work is proposed in jurisdictional waters, the project would require a 1602 Lake and Streambed Alteration Agreement from CDFW, a water quality certification from the Yurok Tribe Environmental Department under Section 401 of the Clean Water Act (CWA), and a permit from the USACE under Section 404 of the CWA (Section 1.3).

The estimated total acreage of impacts to aquatic features would be less than 0.03 acre per location, therefore the project would not require compensatory mitigation. Permanently impacted habitat would be reestablished on-site within the project limits, where there is opportunity for restoration of similar habitat. Plans for reestablishment would be developed during the final design phase.

Temporarily impacted habitat would be restored to preconstruction conditions. Estimated acreage figures are expected to decrease once wetland delineations are completed. Therefore, a ***less than significant impact*** is expected to Wetlands and Other Waters.

Table 7. Estimated Impacts to Jurisdictional Areas within the ESL

Potential Waters of the United States	Permanent Impact (acre)	Temporary Impact (acre)	Total Acreage
Intermittent Stream	0.007	0.038	0.045
Ephemeral Stream	0.007	0.025	0.032
Palustrine Emergent Wetland	0.003	0.007	0.010
Riparian	0.008	0.049	0.057
Total Potential Waters of the United States	**0.025**	**0.119**	**0.144**

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 impacts to resident or migratory species or with established native resident or migratory wildlife corridors are expected because the project does not propose any obstacles to wildlife movement. The project would not impede the use of any known native wildlife nursery sites. The project would perpetuate the existing hydraulic facilities and the minimal footprint of new permanent impacts is not expected to negatively impact wildlife; therefore, Caltrans has determined the project would have no impact.

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?

The project would not conflict with any known local policies or ordinances protecting biological resources. Tree removal is not expected. Caltrans practices incorporate standard measures and Best Management Practices to protect resources and comply with ordinances; therefore, Caltrans has determined the project would have no impact.

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?

The project would not conflict with an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other known approved local, regional, or state habitat conservation plans. The project's environmental impacts are expected to be minimal due to the scope of work and with implementation of standard measures and Best Management Practices; therefore, Caltrans has determined the project would have no impact.

Mitigation Measures

Based on the determinations made in the CEQA Environmental Checklist, mitigation measures have not been proposed for the project.

2.5. Cultural Resources

Question:	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 the Archaeological Survey Report and Area of Potential Effects Map dated December 15, 2021 (Caltrans 2021c). Potential impacts to Cultural Resources are not anticipated.

Archaeological and cultural studies were conducted by Caltrans staff and included background research, literature review, in-person field surveys, and field meetings with residents who live near SR 169. Additionally, consultation with the Yurok Tribe is ongoing, and Caltrans awaits concurrence by the Tribal Historic Preservation Officer (THPO). To date, no concerns have been raised.

Caltrans would not begin construction until a YTED permit was received and conditions were agreed upon. Tribal monitors would be present for all ground-disturbing work, including pre-construction wetland delineations.

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, GHG, and Energy Analyses for HUM-169 Rehab Culverts Project memo dated July 02, 2021 (Caltrans 2021b). Potential impacts to Energy are not anticipated due to the temporary nature of the construction project. No permanent new sources of energy consumption would be created during this project.

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: a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.				✓
ii) Strong seismic ground shaking?				✓
iii) Seismic-related ground failure, including liquefaction?				✓
iv) Landslides?				✓
Would the project: b) Result in substantial soil erosion or the loss of topsoil?				✓
Would the project: 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: 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?				✓

Question:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project: e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?				✓
Would the project: 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 and location of the proposed project, as well as the California Geological Survey Regulatory Maps (California Geological Survey 2015), accessed on August 19, 2021, and the Paleontology Screening, completed on October 20, 2021. Potential impacts to Geology and Soils are not anticipated because the project is not located in an area prone to landslides, liquefaction, or unstable soils, and the project is not located in a Alquist-Priolo Fault Hazard Zone. There are no known fault zones near the project and there are no known paleontological resources or geologic features within the ESL.

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 Earth's climate system. The Intergovernmental Panel on Climate Change (IPCC), 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. However, the research of the IPCC and other scientists 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 and is the main driver of climate change. While it is a naturally occurring and necessary component of Earth's atmosphere, fossil-fuel combustion is the main source of additional, human-generated CO_2. In the U.S. and 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 reduce and adapt to these impacts. "Reductions" involve actions to decrease GHG emissions to lessen adverse impacts that are likely occur. "Adaptations" plan for and respond to impacts to decrease vulnerability and increase resilience, such as adjusting transportation design standards to withstand more intense storms and higher sea levels. This analysis will include a discussion of both in the context of this proposed transportation project.

Regulatory Setting

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

Federal

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

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.

The Federal Highway Administration (FHWA) recognizes the threats that extreme weather, sea-level change, 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 2019). 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.

The federal government has taken steps to improve fuel economy and energy efficiency to address climate change and its associated effects. The most important of these was the

Energy Policy and Conservation Act of 1975 (42 USC Section 6201) as amended by the Energy Independence and Security Act (EISA) of 2007; and Corporate Average Fuel Economy (CAFE) Standards. This act established fuel economy standards for on-road motor vehicles sold in the United States. The U.S. Department of Transportation's National Highway Traffic and Safety Administration (NHTSA) sets and enforces the CAFE standards based on each manufacturer's average fuel economy for the portion of its vehicles produced for sale in the United States. The Environmental Protection Agency (U.S. EPA) calculates average fuel economy levels for manufacturers, and also sets related GHG emissions standards under the Clean Air Act (CAA). 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).

U.S. EPA published a final rulemaking on December 30, 2021, that raised federal GHG emissions standards for passenger cars and light trucks for model years 2023 through 2026, increasing in stringency each year. This rulemaking revised lower emissions standards that had been previously established for model years 2021 through 2026 in the Safer Affordable Fuel Efficient (SAFE) Vehicles Rule Part Two in June 202. The updated standards will result in avoiding more than 3 billion tons of GHG emissions through 2050 (U.S. EPA 2021a).

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) including, but not limited to, the following:

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

Assembly Bill 32, Chapter 488, 2006, Núñez and Pavley, The Global Warming Solutions Act of 2006: AB 32 codified the 2020 GHG emissions reduction goals outlined in EO S-3-05, while further mandating that the California Air Resources Board (CARB) create a scoping plan and implement rules to achieve "real, quantifiable, cost-effective reductions of greenhouse gases." The Legislature also intended that the statewide GHG emissions limit continue in existence and be used to maintain and continue reductions in emissions of GHGs beyond 2020 (Health and Safety Code [H&SC] Section 38551(b)). The law requires the

CARB to adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective GHG reductions.

EO S-01-07 (January 18, 2007): This order sets forth the low carbon fuel standard (LCFS) for California. Under this EO, the carbon intensity of California's transportation fuels is to be reduced by at least 10 percent by the year 2020. The CARB re-adopted the LCFS regulation in September 2015, and the changes went into effect on January 1, 2016. The program establishes a strong framework to promote the low-carbon fuel adoption necessary to achieve the governor's 2030 and 2050 GHG reduction goals.

Senate Bill (SB) 375, Chapter 728, 2008, Sustainable Communities and Climate Protection: This bill requires the CARB to set regional emissions reduction targets for passenger vehicles. The Metropolitan Planning Organization (MPO) for each region must then develop a "Sustainable Communities Strategy" (SCS) that integrates transportation, land-use, and housing policies to plan how it will achieve the emissions target for its region.

SB 391, Chapter 585, 2009, California Transportation Plan: This bill requires the State's long-range transportation plan to identify strategies to address California's climate change goals under AB 32.

EO B-16-12 (March 2012): Orders State entities under the direction of the Governor, including the CARB, the California Energy Commission, and the Public Utilities Commission, to support the rapid commercialization of zero-emission vehicles. It directs these entities to achieve various benchmarks related to zero-emission vehicles.

EO B-30-15 (April 2015): Establishes an interim statewide GHG emission reduction target of 40 percent below 1990 levels by 2030 to ensure California meets its target of reducing GHG emissions to 80 percent below 1990 levels by 2050. It further orders all state agencies with jurisdiction over sources of GHG emissions to implement measures, pursuant to statutory authority, to achieve reductions of GHG emissions to meet the 2030 and 2050 GHG emissions reductions targets. It also directs the CARB to update the Climate Change Scoping Plan to express the 2030 target in terms of million metric tons of carbon dioxide equivalent ($MMTCO_2e$).[3] Finally, it requires the Natural Resources Agency to update the

[3] GHGs differ in how much heat each trap in the atmosphere (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" (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.

state's climate adaptation strategy, *Safeguarding California*, every 3 years, and to ensure that its provisions are fully implemented.

SB 32, Chapter 249, 2016: Codifies the GHG reduction targets established in EO B-30-15 to achieve a mid-range goal of 40 percent below 1990 levels by 2030.

SB 1386, Chapter 545, 2016: Declared "it to be the policy of the state that the protection and management of natural and working lands … is an important strategy in meeting the state's greenhouse gas reduction goals, and would require all state agencies, departments, boards, and commissions to consider this policy when revising, adopting, or establishing policies, regulations, expenditures, or grant criteria relating to the protection and management of natural and working lands."

AB 134, Chapter 254, 2017: Allocates Greenhouse Gas Reduction Funds and other sources to various clean vehicle programs, demonstration/pilot projects, clean vehicle rebates and projects, and other emissions-reduction programs statewide.

SB 743, Chapter 386 (September 2013): This bill changes the metric of consideration for transportation impacts pursuant to CEQA from a focus on automobile delay to alternative methods focused on vehicle miles traveled, to promote the state's goals of reducing greenhouse gas emissions and traffic-related air pollution and promoting multimodal transportation while balancing the needs of congestion management and safety.

SB 150, Chapter 150, 2017, Regional Transportation Plans: This bill requires the CARB to prepare a report that assesses progress made by each metropolitan planning organization in meeting their established regional greenhouse gas emission reduction targets.

EO B-55-18 (September 2018): Sets a new statewide goal to achieve and maintain carbon neutrality no later than 2045. This goal is in addition to existing statewide targets of reducing GHG emissions.

EO N-19-19 (September 2019): Advances California's climate goals in part by directing the California State Transportation Agency to leverage annual transportation spending to reverse the trend of increased fuel consumption and reduce GHG emissions from the transportation sector. It orders a focus on transportation investments near housing, managing congestion, and encouraging alternatives to driving. This EO also directs the CARB to encourage automakers to produce more clean vehicles, formulate ways to help Californians purchase them, and proposes strategies to increase demand for zero-emission vehicles.

Environmental Setting

The proposed project is in a rural area on the Yurok Tribe Reservation. SR 169 is the main transportation route to and through the area for both passenger and commercial vehicles. Traffic counts and population density are low. The Humboldt County Association of Governments (HCOAG), acting as the Regional Transportation Agency (RTP), guides transportation development. The Humboldt County General Plan Circulation, Air Quality, and Energy elements, as well as the Variety in Rural Options of Mobility (VROOM) portion of the RTP, address GHGs in the project area (Humboldt County 2017a, 2017b).

A GHG emissions inventory estimates the amount of GHGs discharged into the atmosphere by specific sources over a period of time, such as a calendar year. 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, as required by H&SC Section 39607.4.

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. The 1990–2019 inventory found that overall GHG emissions were 6,558 million metric tons (MMT) in 2019, down 1.7 percent from 2018 but up 1.8% from 1990 levels. Of these, 80 percent were CO_2, 10 percent were CH_4, and 7 percent were N_2O; the balance consisted of fluorinated gases. CO_2 emissions in 2019 were 2.2 percent less than in 2018, but 2.8 percent more than in 1990. As shown on Figure 3, the transportation sector accounted for 29 percent of U.S. GHG emissions in 2019 (U.S. EPA 2021b, 2021c).

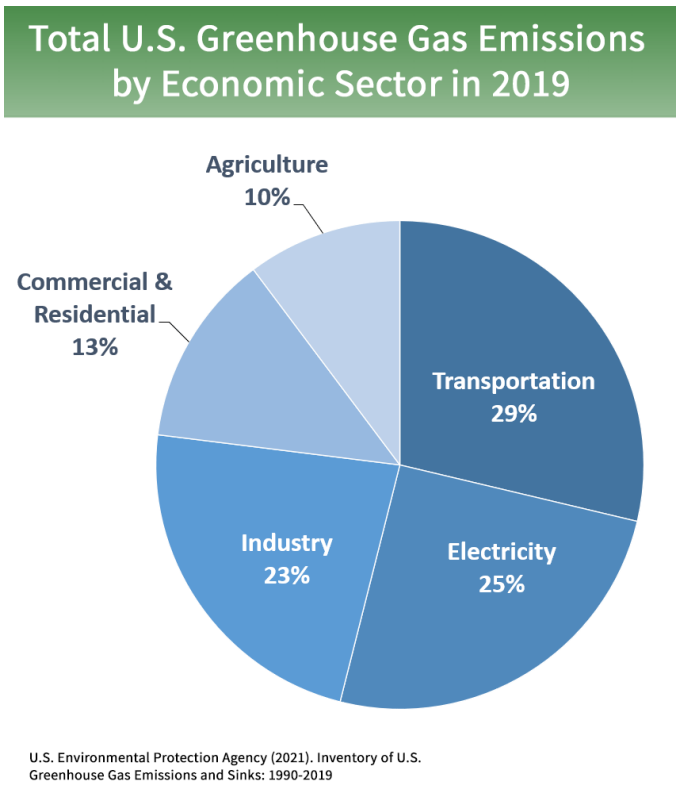


Figure 3. U.S. 2019 Greenhouse Gas Emissions

(Source: U.S. EPA 2021d)

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. The 2021 edition of the GHG emissions inventory reported emissions trends from 2000 to 2019. It found total California emissions were 418.2 $MMTCO_2e$ in 2019, a reduction of 7.2 $MMTCO_2e$ since 2018 and almost 13 $MMTCO_2e$ below the statewide 2020 limit of 431 $MMTCO_2e$. The transportation sector (including intrastate aviation and off road sources) was responsible for about 40 percent of direct GHG emissions, a 3.5 $MMTCO_2e$ decrease from 2018. Overall statewide GHG emissions declined from 2000 to 2019 despite growth in population and state economic output (Figure 5) (CARB 2021).

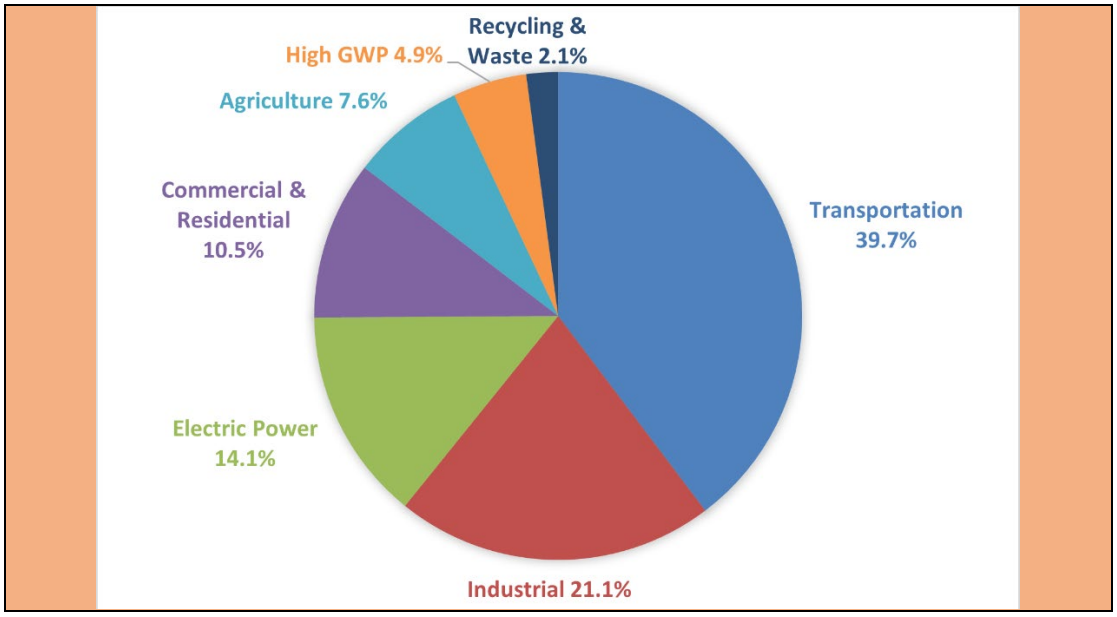


Figure 4. California 2019 Greenhouse Gas Emissions by Economic Sector

(Source: CARB 2021)

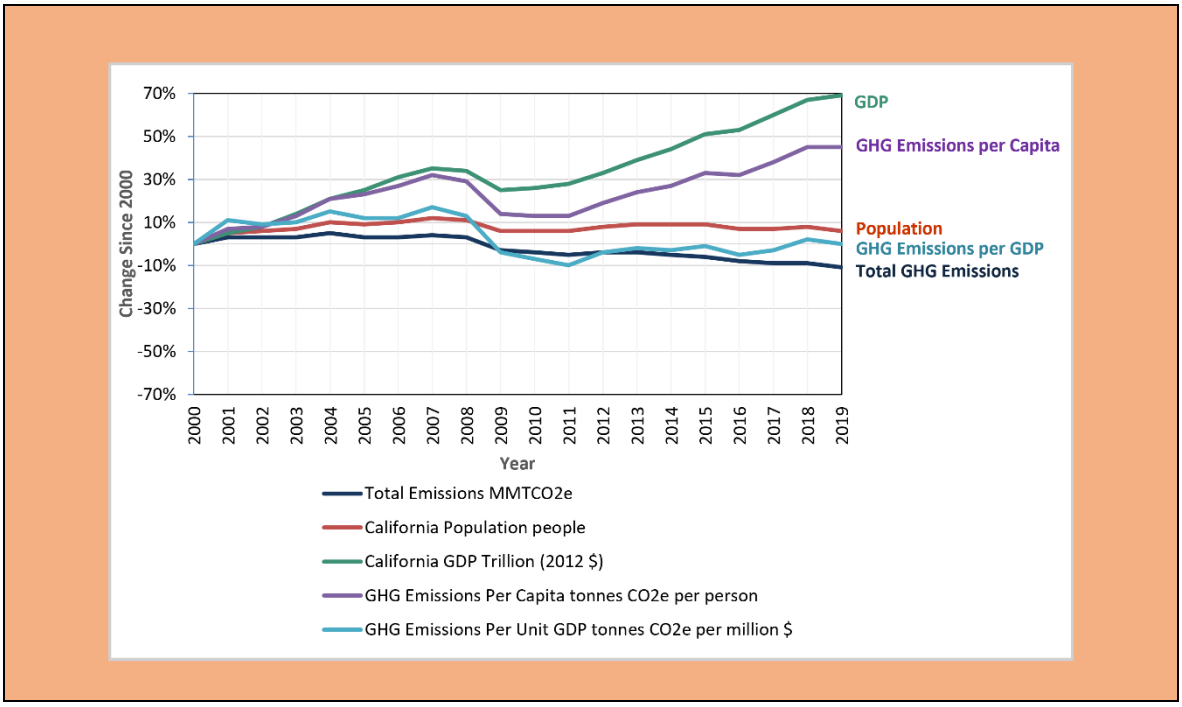


Figure 5. Change in California Gross Domestic Product, Population, and Greenhouse Gas Emissions since 2000

(Source: CARB 2021)

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 CARB adopted the first scoping plan in 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 AB 32 Scoping Plan and the subsequent updates contain the main strategies California will use to reduce GHG emissions.

Regional Plans

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).

The proposed project is within the jurisdiction of the Humboldt County Association of Governments, acting as the RTP agency. The 2017 RTP identifies short-term and long-term goals for GHG reduction strategies (e.g., improving facility for non-motorized transportation, installing electric vehicle charging stations) (County of Humboldt 2017a, 2017b).

Project Analysis

GHG emissions from transportation projects can be divided into those produced during operation 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 the combustion of petroleum-based products, like burning gasoline or diesel fuels 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.

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

The purpose of the proposed project is to rehabilitate culverts and would not increase the vehicle capacity of the roadway. This type of project generally causes minimal or no increase in operational GHG emissions. Because the project would not increase the number of travel lanes on SR 169, no increase in vehicle miles traveled (VMT) would occur due to construction of the project (Caltrans 2020b). While some GHG emissions during the construction period would be unavoidable, no increase in operational GHG emissions is expected.

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.

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

Construction is expected to begin in 2024 and last approximately 190 working days. The Caltrans Construction Emission Tool (CAL-CET 2020) was used to estimate average carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and hydrofluorocarbons (HFCs) emissions from construction activities. Table 8 summarizes estimates of average GHG emissions generated by on-site equipment for the project. The average carbon dioxide equivalent (CO_2e) produced during construction is estimated to be approximately 419 U.S. tons (380 metric tons) over approximately 190 working days.

Table 8. Estimates (US tons) of GHG Emissions During Construction

Construction Year	CO_2	CH_4	N_2O	HFCs	CO_2e *
2024	238	0.007	0.012	0.010	389.751
2025	14	0.000	0.001	0.001	29.098
Total	**252**	**0.008**[4]	**0.013**	**0.011**	**418.874**

* 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; and Section 14-9.02, Air Pollution Control, which requires contractors to comply with all air pollution control rules, regulations, ordinances, and statutes (Caltrans 2018). Certain common regulations, such as equipment idling restrictions, which reduce construction vehicle emissions also help reduce GHG emissions.

CEQA Conclusion

While the proposed project would result in GHG emissions during construction, it is anticipated the project would not result in any increase in operational GHG emissions (Caltrans 2021b). 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 impact would be less than significant.

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

[4] This figure includes rounding from the year 2025 that totals 0.008 US tons.

Greenhouse Gas Reduction Strategies

Statewide Efforts

In response to AB 32, 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, low-carbon and cleaner future, while maintaining a robust economy (CARB 2022).

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 identified five sustainability pillars in a 2015 report:

(1) Increasing the share of renewable energy in the State's energy mix to at least 50 percent,

(2) Reducing petroleum use by up to 50 percent by 2030,

(3) Increasing the energy efficiency of existing buildings by 50 percent by 2030,

(4) Reducing emissions of short-lived climate pollutants, and

(5) 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 Office of Planning and Research 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 [CalEPA] 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 Draft* for public comment in October 2021.

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 (2016), set an interim target to cut GHG emissions to 40 percent below 1990 levels by 2030. The following major initiatives are underway at Caltrans to help meet these targets.

Climate Action Plan for Transportation Investments

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 percent 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, health, and social equity 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 2021d).

Caltrans Strategic Plan

The Caltrans 2020–2024 Strategic Plan includes goals of stewardship, climate action, and equity. 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 the most vulnerable communities in developing and implementing Caltrans climate action activities (Caltrans 2021e).

Caltrans Policy Directives and Other Initiates

Caltrans Director's Policy 30 (DP-30) Climate Change (June 22, 2012) established a Department policy to ensure coordinated efforts to incorporate climate change into Departmental decisions and activities. *Caltrans Greenhouse Gas Emissions and Mitigation Report* (Caltrans 2020c) provides a comprehensive overview of Caltrans' emissions. The report documents and evaluates current Caltrans procedures and activities that track reduce GHG emissions and identifies additional opportunities for further reducing GHG emissions from Department-controlled emission sources, in support of Departmental and State goals.

Project-Level Greenhouse Gas Reduction Strategies

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

GHG-1: Caltrans Standard Specification "Air Quality" requires compliance by the contractor with all applicable laws and regulations related to air quality, including the North Coast Unified Air Quality Management District regulations and local ordinances.

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 construction activities adhere to the most recent emissions reduction regulations mandated by the California Air Resources Board (CARB).

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. Landscaping reduces surface warming and, through photosynthesis, decreases CO_2. This replanting would help offset any potential CO_2 emissions increase.

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

- Biological Resources Avoidance and Minimization Measure BR-4B is a Revegetation Plan and includes incorporating native plants and vegetation to the revegetation project design. Vegetation absorbs carbon dioxide from the atmosphere.

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. 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.

The *Fourth National Climate Assessment*, published in 2018, presents the foundational science and the "human welfare, societal, and environmental elements of climate change and variability for 10 regions and 18 national topics, with particular attention paid to observed and projected risks, impacts, consideration of risk reduction, and implications under different mitigation pathways."

The *U.S. DOT Policy Statement on Climate Adaptation* in June 2011 committed the federal Department of Transportation to "integrate consideration of climate change impacts and adaptation into the planning, operations, policies, and programs of DOT in order to ensure that taxpayer resources are invested wisely, and that transportation infrastructure, services and operations remain effective in current and future climate conditions" (U.S. DOT 2011).

FHWA Order 5520 (*Transportation System Preparedness and Resilience to Climate Change and Extreme Weather Events, December 15, 2014*) established FHWA policy 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 foster resilience to climate effects and sustainability at the federal, state, and local levels (FHWA 2019).

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) is the state's effort to "translate the state of climate science into useful information for action." It provides information that will help decision makers across sectors and at state, regional, and local scales protect and build the resilience of the state's people, infrastructure, natural systems, working lands, and waters. The State's approach recognizes that the consequences of climate change occur at the intersections of people, nature, and infrastructure. The Fourth Assessment reports that if no measures are taken to reduce GHG emissions by 2021 or sooner, the state is projected to experience a 2.7 to 8.l8 degrees Fahrenheit increase in average annual maximum daily temperatures. These increases would:

- impact agriculture, energy demand, natural systems, and public health,
- create a two-thirds decline in water supply from snowpack and water shortages that will impact agricultural production,

- result in a 77% increase in average area burned by wildfire, with consequences for forest health and communities, and

- include large-scale erosion of up to 67% of Southern California beaches and inundation of billions of dollars' worth of residential and commercial buildings due to sea level rise (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's airport is already at risk. Miles of coastal highways vulnerable to flooding in a 100-year storm event will triple to 3,70 by the year 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.

In 2008, then-governor Arnold Schwarzenegger recognized the need when he issued EO S-13-08, focused on sea level rise. Technical reports on the latest sea level rise science were first published in 2010 and updated in 2013 and 2017. The 2017 projections of sea level rise and new understanding of processes and potential impacts in California were incorporated into the *State of California Sea-Level Rise Guidance Update* in 2018. This EO also gave rise to the *California Climate Adaptation Strategy* (2009), updated in 2014 as *Safeguarding California: Reducing Climate Risk* (Safeguarding California Plan), which addressed the full range of climate change impacts and recommended adaptation strategies.

The Safeguarding California Plan was updated in 2018 and again in 2021 as the *California Climate Adaptation Strategy*, incorporating 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 2021 California Climate Adaptation Strategy include acting in partnership with California Native American Tribes, strengthening protections for climate-vulnerable communities that lack capacity and resources, nature-based climate solutions, use of best available climate science, and partnering and collaboration to best leverage resources (California Natural Resources Agency 2021).

EO B 30 15, signed in April 2015, requires state agencies to factor climate change into all planning and investment decisions. This EO recognizes that effects of climate change in addition to sea level rise also threaten California's infrastructure. At the direction of EO B-30-15, the Office of Planning and Research published *Planning and Investing for a Resilient*

California: A Guidebook for State Agencies in 2017, to encourage a uniform and systematic approach.

AB 2800 (Quirk 2016) created the multidisciplinary Climate-Safe Infrastructure Working Group to help actors throughout the state address the findings of California's Fourth Climate Change Assessment. It released its report, *Paying it Forward: The Path Toward Climate-Safe Infrastructure in California*, in 2018. The report provides guidance to agencies on how to address the challenges of assessing risk in the face of inherent uncertainties still posed by the best available science on climate change. It also examines how state agencies can use infrastructure planning, design, and implementation processes to address the observed and anticipated climate change impacts (Climate Change Infrastructure Working Group 2018).

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.

Project Adaptation Efforts

The project would not exacerbate the effects of climate change related to CEQA topics. However, the proposed project would include certain elements to prepare for increased precipitation, increased risk of wildfire, and hazards that may result from climate change, such as flooding, landslides, and road closures (Caltrans 2019).

Sea-Level Rise

The proposed project is outside the Coastal Zone and is not in an area subject to sea level rise. Accordingly, direct impacts to transportation facilities due to projected sea level rise are not expected.

Precipitation and Flooding

Culvert locations are in steep, forested terrain. Portions of SR 169 in the project area are within the Department of Water Resources Awareness Floodplain maps, particularly near Pecwan Creek and Cappell Creek (County of Humboldt 2021). The route within project limits parallels the Klamath River but is high above the riverbed in a Federal Emergency Management Agency (FEMA) Zone X floodplain, an "Area of Minimal Flood Hazard." These are areas outside the Special Flood Hazard Area and higher than the elevation of the 0.2-percent-annual-chance (500-year) flood (Caltrans 2021g). The Caltrans District 1 Climate Change Vulnerability Assessment (Caltrans 2019) maps show a potential increase of 10 to 30 percent in the 1-percent-annual-chance(100-year) precipitation in the project area.

For example, approximately half of the culverts in this project would be replaced with a larger diameter culvert than the existing culvert ("upsized"). Upsizing culverts is one way to prepare for increased flows that may occur due to future precipitation increases, since the lifespan of culverts can be 50 years or more. The project also proposes to add downdrains or rock slope protection (RSP) at certain locations to reduce erosion during extreme rainfall events. Project work would also stabilize slopes to lower chances of landslide on slopes at-risk from more frequent or intense wildfire and precipitation. The purpose of the project is to improve drainage systems to reduce the risk of localized flooding. Accordingly, the project would be resilient to future changes in precipitation and flooding.

Wildfire

The project would occur on exposed roadway in an area expected to have *Very High, High, and Moderate* wildfire hazard concerns through 2085 (Caltrans 2019). New culvert pipes would be steel to prevent damage in case of wildfire. Additionally, the culvert replacements would restore drainage to pre-failure condition, which would reduce the risk of flooding, slope instability, and landslides if future wildfires leave exposed slopes.

Caltrans Standard Specifications mandate fire prevention procedures, including a fire prevention plan, to avoid accidental fire starts during construction (Caltrans 2018). The project is therefore expected to be resilient to the risk of wildfire.

Temperature

The District Climate Change Vulnerability Assessment does not indicate temperature changes during the project's design life that would require adaptive changes in pavement design or maintenance practices (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?				✓

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project, as well as the Initial Site Assessment (Update) memo dated March 8, 2021 (Caltrans 2021f). Potential impacts to Hazards and Hazardous Materials are not anticipated because the project would not create a significant hazard to the public or environment, is not located near a school or airport, and is not on a list of hazardous sites. Emergency vehicles would be accommodated through any roadway closures. Additionally, if a wildland fire affected the area, work would stop, and evacuation routes would be accessible.

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: a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?				✓
Would the project: 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: c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: (i) result in substantial erosion or siltation on- or offsite;				✓
(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?			✓	
Would the project: d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?				✓

Question:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project: e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?				✓

Regulatory Setting

The primary laws and regulations governing hydrology and water quality for this project include:

- Federal Clean Water Act (CWA), 33 USC 1344
- Federal Executive Order for the Protection of Wetlands (EO 11990)
- State Sections 1600–1607 of the California Fish and Game Code (CFGC)

Environmental Setting

The project locations are within the Tectah Creek – Klamath River Watershed. The Tectah Creek – Klamath River Watershed has a drainage area of approximately 166,714 acres (Caltrans 2021g).

The Klamath River is the second largest river in California by discharge and drains an extensive watershed of approximately 16,000 square miles. The Klamath flows 257 miles from the arid desert of south-central Oregon, through the Cascade and Klamath Mountains to reach the temperate rainforest of the Pacific Coast and its confluence with the Pacific Ocean 16 miles south of Crescent City. There are four dams on the Klamath river, used for a combination of water delivery and hydroelectric generation. The Shasta, Salmon, Scott, and Trinity rivers are the major tributaries to the Klamath.

The Klamath River is listed on the Clean Water Act Section 303(d) list as impaired for cyanobacteria hepatoxic microcystins[5], organic enrichment/low dissolved oxygen, nutrients, sediment, and temperature. In 2010, the U.S. EPA approved the Klamath River Total Maximum Daily Loads (TMDLs) for Temperature, Dissolved Oxygen, Nutrients, and Microcystin impairments.

The above impairments have contributed to adverse impacts to the Klamath River, including declining anadromous salmonid populations. Bank erosion is identified as a source contributing to sediment impairment. Removal of riparian vegetation can contribute to temperature impairment. Disturbance of fine sediments within the channel may release nutrient-rich fine sediment, and therefore can contribute to microcystin impairment.

The Caltrans NPDES Permit No. CAS000003, describes the general requirements for all TMDLs and specific requirements or source controls for the applicable TMDLs, which are highlighted below.

- Riparian vegetation shall be protected and restored to the greatest extent feasible
- Provide effective shade near receiving waters

Maintain potential effective shade near receiving waters

No TMDL has been established, but source control measures for sediment include:

- Protecting and stabilizing hillsides
- Intercepting and filtering stormwater runoff
- Avoiding concentrated flows in natural channels and constructed drainages
- Avoiding and minimizing the modification of natural runoff flow patterns (i.e., hydromodification)

[5] Cyanobacteria, also known as blue-green algae, are a family of single-celled algae that live in water bodies such as ponds, lakes, reservoirs, and slow-moving streams when the water is warm and nutrients are available. Many cyanobacteria species can produce toxins known as microcystins. Microcystins primarily affect the liver of fish, birds and mammals, causing minor to widespread damage, depending on the amount of toxin absorbed. People swimming, waterskiing, or boating in contaminated water can be exposed to microcystins. Microcystins may also accumulate in fish that are caught and eaten by people (CalEPA 2009).

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?

This project would not violate any water quality standards or waste discharge requirements. The proposed project would comply with Clean Water Act Sections 303, 401, 402, and 404; Caltrans Statewide NPDES Storm Water Permit (Caltrans NPDES Permit Order 2012-0011-DWQ) (State Water Resources Control Board [SWRCB 2012]); and U.S. EPA National Pollutant Discharge Elimination System General Permit for Discharges from Construction Activities (Construction General Permit (CGP)) (U.S. EPA 2017). Caltrans requires the construction contractor prepare a project-specific stormwater pollution plan (WPCP or SWPPP), which identifies temporary construction site BMPs to reduce construction impacts on receiving water quality based on potential pollutants and pollutant sources; therefore, Caltrans has determined the project would have no impact.

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?

At some culvert replacement locations, active streams would require clear water diversions during construction (Caltrans 2021h). Temporary construction BMPs would be implemented to avoid any potential impacts from dewatering groundwater supplies. Construction would take place during the summer and fall months when flow through culverts is reduced or no water is flowing; therefore, Caltrans has determined the project would have no impact.

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?

The project is not expected to result in substantial erosion; however, may result in temporary increases in erosion and siltation. Increasing the diameter of culverts is anticipated to improve the channel condition by reducing the occurrence of flooding upstream of culverts and decreasing water velocities at the outlet of culverts (Caltrans 2021h). This would decrease erosion of the bed bank and channel both upstream and downstream of the culverts.

In locations with erosion at the outlet, rock slope protection (RSP) would be placed to act as a rock energy dissipator. This would alleviate erosion and decrease the amount of sediment delivered to the Klamath River. At some locations, the headwall would be replaced at the inlet of the culvert. This action could pose increased sediment discharge risks in addition to the culvert replacement. At some culvert replacement locations, active streams would require clear water diversions during construction. Due to the discountable impacts that could occur from sediment, Caltrans has determined that the project would have no impact.

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

The rate and amount of surface runoff is not anticipated to increase, therefore is not expected to result in flooding on- or off-site. Surface runoff is not anticipated to increase because there is not an increase of impervious surface proposed for the project. Therefore, Caltrans has determined the project would have no impact.

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

This project does not propose to increase impervious surface, therefore would not increase the amount of runoff water. At least half of the culvert sizes would increase by 6 to 12 inches in diameter, which increases the capacity of the drainage systems and reduces potential for flooding upstream of the culverts. In locations with erosion at the outlet, rock slope protection (RSP) would be placed to act as a rock energy dissipator. Since this would alleviate erosion by protecting against scour and would result in reduced sediment volumes delivered to the Klamath River over baseline levels, Caltrans has determined the project would have no impact.

(iv) impede or redirect flood flows?

The project would abandon the culvert at PM 33.44 and redirect the flow to the existing culvert location at PM 33.50 (Caltrans 2021h). The culverts are 0.06 mile (316.8 feet) apart, so the water flow would not be re-directed over a great distance. The existing 18 inch by 30 foot culvert at PM 33.50 would be replaced by a 24 inch by 30 foot culvert, upsizing the diameter of the culvert by 6 inches. Upsizing this culvert would increase the capacity of the drainage system and would accommodate the re-directed flow from the abandoned culvert at PM 33.44. The larger capacity of the new culvert at PM 33.50 would reduce flooding risks upstream of the culvert and decrease the velocity of water traveling through the culvert.

Additionally, RSP would be installed at the system's outlet, which would act as an energy dissipator and reduce the potential for erosion and sediment discharge to the Klamath River. By upsizing the culvert and installing RSP at the culvert outlet, potential impacts to water quality from abandoning the culvert at 33.44 and redirecting water flow to PM 33.50 would be minimized or avoided; thereby Caltrans has determined there would be a less than significant impact.

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

Since the project is not in flood hazard, tsunami, or seiche zones, Caltrans has determined the project would have no impact.

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

The project is not expected to result in long-term impacts to water quality. Potential temporary impacts related to construction activities would be minimized or avoided by following the requirements of the Caltrans NPDES, U.S. EPA, CGP, and Yurok Tribe WQCP, and would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan; therefore, Caltrans has determined the project would have no impact.

Mitigation Measures

Based on the determinations made in the CEQA Environmental Checklist, mitigation measures have not been proposed for this project.

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 because the proposed project would not physically divide an established community and the proposed project would not conflict with land use plans, policies, or regulations. The project would occur on and adjacent to existing roadway, and within the existing drainage system.

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 location of the proposed project, as well as California Department of Conservation Mines Online web application (Division of Mine Reclamation 2016). Potential impacts to Mineral Resources are not anticipated because mining locations are not within the project limits.

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 and description of the proposed project, as well as the Noise Analysis for the HUM-169 Rehab Culverts Project memo dated July 02, 2021 (Caltrans 2021i). Potential impacts to Noise are not anticipated because the project would not result in permanent increases in ambient noise levels. Excessive groundborne vibration and noise are not anticipated. The project is not within the vicinity of a private airstrip or an airport.

Temporary construction noise would primarily result from heavy equipment and truck traffic. Noise levels would not exceed 50 dBA Lmax at 50 feet of the jobsite between 9 p.m. and 6 a.m.

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 of the proposed project. Impacts to Population and Housing are not anticipated because the project would not add or subtract housing. The project would repair existing drainage facilities to "Good" condition, which would not induce population growth.

2.15. Public Services

Question:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services: Fire protection?				✓
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. Potential impacts to Public Services are not anticipated because the project would not construct new governmental facilities or alter existing facilities.

2.16. Recreation

Question:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project: a) 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?				✓
Does the project: b) 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. There are no public recreational facilities within or adjacent to the project site, and the project would not include any new recreational development. This drainage improvement project is not expected to impact recreational facilities, including parks.

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?			✓	

Regulatory Setting

The primary laws and regulations governing transportation and traffic are CEQA, 23 CFR 652, 49 CFR 27, 29 USC 794, and the Americans with Disabilities Act (42 USC § 12101).

Environmental Setting

The proposed project would be constructed on a remote segment of SR 169 in rural Humboldt County, which is entirely within the boundaries of the Yurok Tribe Reservation. In some areas, the roadway is 16 feet wide and does not accommodate two-way traffic. The route follows the Klamath River and is winding with steep cliffs on both sides. It is accessible from the south (SR 96 from Willow Creek), east (SR 96 from Orleans), and from the west (Bald Hills Road, at approximately PM 19.9). The route is a dead-end to the north.

Alternative routes in the area are in poor condition and many are overgrown with vegetation (County of Humboldt 2019). Due to the remote setting, narrow roadway, and frequently poor roadway conditions, the area is highly vulnerable to long response times during an emergency.

A draft transportation management plan was written for this project, and the plan will continue to be edited throughout the project planning phases (Caltrans 2022b).

Discussion of CEQA Environmental Checklist Question 2.17— Transportation and Traffic

a) Would the project conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?

The project would increase the lifespan of SR 169 by repairing drainage facilities that affect the roadway. The project would not make changes to the circulation system, including transit, roadway, bicycle, or pedestrian facilities.

Pedestrians, bicyclists, and motor vehicles would be accommodated at 10- to 20-minute intervals during one-way traffic control. During construction, SR 169 would occasionally be fully closed, due to the narrow width of the roadway. Full closures would last up to 7 hours; bicycles and pedestrians would not be permitted to pass.

Road closures would not occur during tribal ceremonies. In accordance with the American Indian Religious Freedom Act (42 USC 1996) and California Native American Graves Protection and Repatriation Act (NAGPRA) (PRC 5097.9), access to sites for ceremonial use shall not be restricted.

Caltrans recognizes that multiple projects in one area can create challenging delays for people who frequently use the road. Other Caltrans projects in the area that may cause transportation delays are listed below in Table 9. The current planned schedules are not expected to result in significant delays on SR 169.

Table 9. Other Planned Transportation Projects on SR 169

Project ID	County Route Post mile	Location	Type of Work	Estimated Construction Year	Estimated Delay
01-0H021	HUM-169-19.00/33.00	Near Pecwan	Storm damage repair	2023	5 minutes
01-0G140	HUM-169-27.57	Near Martin's Ferry	Bridge rail upgrade	2023	15 minutes
01-49330	HUM-169-21.00/27.30	Between Martin's Ferry and Mettah	Culvert replacement	2022	2-15 minutes

b) Would the project conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b)?

The project would not increase vehicle miles traveled (Caltrans 2020b) and would be consistent with CEQA guidelines. Therefore, Caltrans has determined the project would have no impact.

c) Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

An increase in road hazards due to new design features or incompatible uses is not anticipated because the project would not change the geometry of the road from the existing condition or create new uses on the road; therefore, Caltrans has determined the project would have no impact.

d) Would the project result in inadequate emergency access?

The project would improve drainage in the area which would reduce the likelihood of flooding during rain events. The project could have a long-term benefit due to a lowered risk of storm damage and reduce the risk of inadequate emergency access on SR 169.

The result of the project would not permanently decrease emergency access to the area. During construction, SR 169 would occasionally be fully closed due to the narrow width of the roadway. Local emergency response agencies would be notified in advance of closures, and emergency vehicles would be accommodated through construction. Full closures may last up to 7 hours (Caltrans 2022b).

If an emergency evacuation began during construction, contractors and Caltrans personnel would cooperate with the California Office of Emergency Services (Cal OES) California Highway Patrol (CHP), CAL FIRE, or the appropriate agency in charge to expedite evacuations.

During the school year, school buses must be accommodated to make their scheduled route stops and to ensure children are not late to school due to construction. Work windows would be arranged with the construction crew to schedule openings for school buses. Night work may occur to avoid longer daytime closures; therefore, Caltrans has determined the project would have a less than significant impact.

Mitigation Measures

Based on the determinations made in the CEQA Environmental Checklist, mitigation measures have not been proposed for this project.

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: 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 Resource 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 Survey Report and Area of Potential Effects Map dated December 15, 2021 (Caltrans 2021c). Potential impacts to Tribal Cultural Resources are not anticipated.

Archaeological and cultural studies were conducted by Caltrans staff and included background research, literature review, in-person field surveys, and field meetings with residents who live near SR 169. Additionally, consultation with the Yurok Tribe is ongoing, and Caltrans awaits the concurrence of the Tribal Historic Preservation Officer. To date, no concerns have been raised.

Caltrans would not begin construction until a YTED permit was received and conditions were agreed upon. Tribal monitors would be present for all ground-disturbing work, including upcoming wetland delineations.

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. Potential impacts to Utilities and Service Systems are not anticipated because the project would not construct new or expanded water, wastewater treatment, stormwater drainage, electric power, natural gas, or telecommunications facilities. The proposed project would rehabilitate existing culverts and drainages to good condition.

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 or lands classified as very high fire hazard severity zones, would the project: 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?				✓

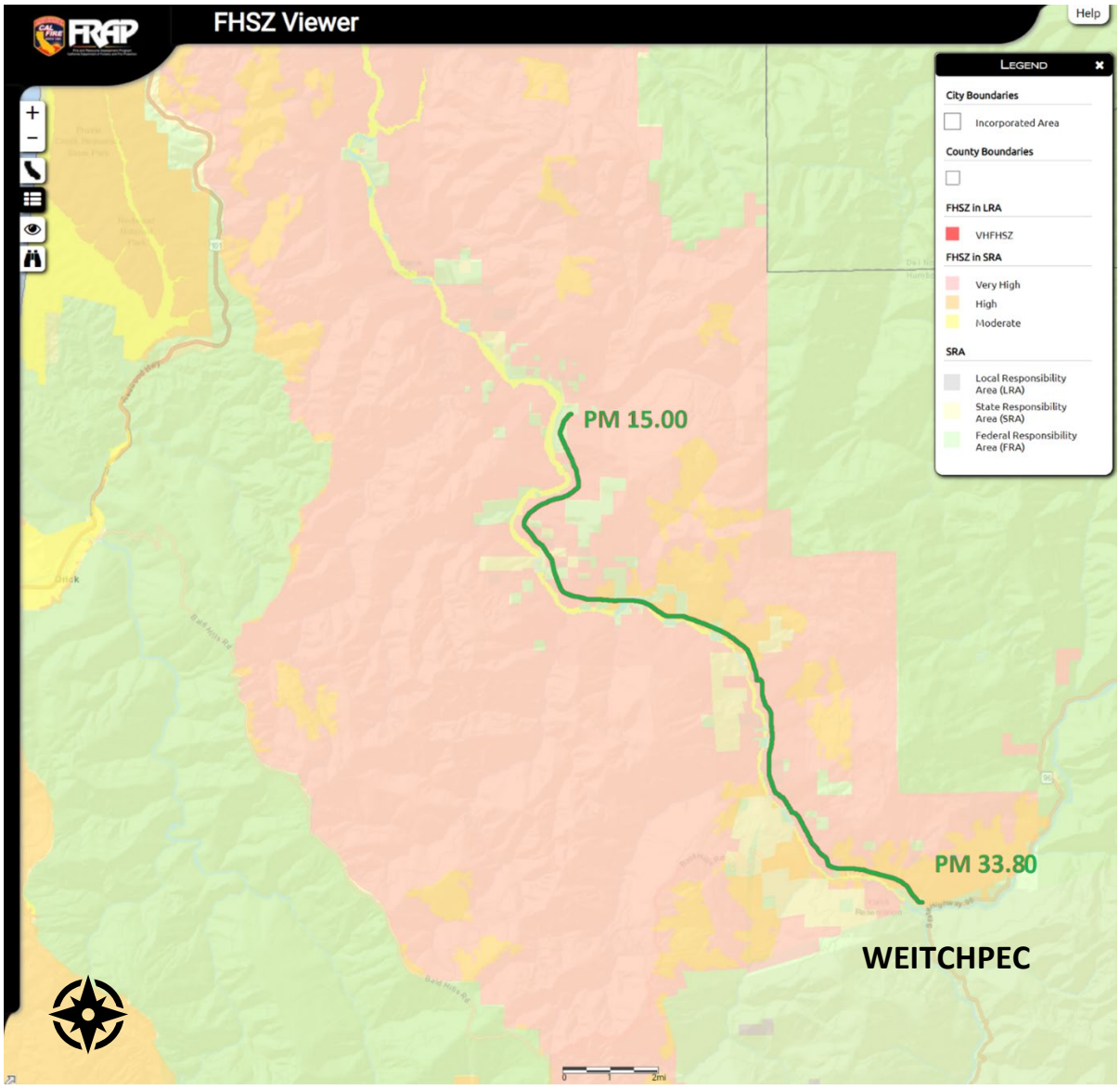
Regulatory Setting

The primary law governing wildfire is CEQA. Senate Bill 1241 requires the Office of Planning and Research, the 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.

Environmental Setting

The project is proposed for an area with zones classified as *Very High, High, and Moderate* hazard severity (CAL FIRE 2021). The SR 169 corridor is shown as a green line on the map, following the east bank of the Klamath River (Figure 6).

Figure 6. Map of Fire Hazard Severity Zones near Project Area



Discussion of CEQA Environmental Checklist Question 2.20—Wildfire

If located in or near State Responsibility Areas or lands classified as very high fire hazard severity zones, would the project:

a) Substantially impair an adopted emergency response plan or emergency evacuation plan?

If an emergency occurred during construction or maintenance of this project, Caltrans staff and contractors would cooperate with the agencies in charge of the incident, such as California Office of Emergency Services (Cal OES), California Department of Forestry and Fire Protection (CAL FIRE), and California Highway Patrol (CHP). The roadway would be opened for emergency vehicles and evacuations. Caltrans staff and contractors would leave the project area if it were unsafe.

The project is needed to repair deteriorating or failing drainage systems to prevent erosion and potential roadway embankment failure. As a result of the proposed project, the drainage system would be restored to pre-failure condition, which would reduce the risk of flooding, slope instability, and landslides that could otherwise close the roadway for extended periods of time; therefore, Caltrans has determined the project would have a less than significant impact.

b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

The proposed culvert replacements would not expose nearby residents or structures to increased risk of wildfire or pollutants, or exacerbate wildfire risk; therefore, Caltrans has determined the project would have no impact.

c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or may result in temporary or ongoing impacts to the environment?

The proposed culvert replacements would not require further infrastructure or maintenance that could exacerbate fire risk or result in ongoing impacts to the environment; therefore, Caltrans has determined the project would have no impact.

d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

The culvert replacements would restore drainage to pre-failure condition, which would reduce the risk of flooding, slope instability, and landslides. Downdrains and rock slope protection would be installed at certain locations to reduce erosion during extreme rainfall or runoff and to reduce risk to people or structures; therefore, Caltrans has determined the project would have no impact.

Mitigation Measures

Based on the determinations made in the CEQA Environmental Checklist, mitigation measures have not been proposed for the project.

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

California Environmental Quality Act of 1970 (CEQA) requires preparation of an Environmental Impact Report (EIR) when certain specific impacts may result from construction or implementation of a project. The analysis indicated the potential impacts associated with this project would not require an EIR. Mandatory Findings of Significance are not required for projects where an EIR has not been prepared. Caltrans has determined that no impacts are expected.

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 (§ 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." The proposed project would not create new development, change land use, or change the community character of the area. The project would restore the existing drainage system and prolong the lifespan of the vital highway in a rural Yurok tribal community. Given this, 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 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, consultations with the Yurok Tribe, and field meetings with property owners as requested. 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.

Table 10. Coordination with Owners of Tribal Allotment Lands

Date	Personnel	Notes
April 13, 2021	**Whitney Petrey**, Caltrans Native American Coordinator **David Adams**, Caltrans Right of Way Agent **Glen Moore II and family members**	Field visit conducted to discuss questions about this project and learn from Yurok tribal members.
November 30, 2021	**W. Petrey**, Caltrans Native American Coordinator **Dicky Myers**	Field visit conducted to discuss questions about this project and learn from Yurok tribal members.

Table 11. Agency Coordination and Professional Contacts

Date	Personnel	Notes
November 16, 2021	**Hilary (Sundeen) Hodson**, Caltrans Biologist **Mike Kelly**, NMFS Liaison	Caltrans sent project details to NMFS Liaison to discuss PBO use for project.
November 30, 2021	**H. Hodson**, Caltrans Biologist M. Kelly, NMFS	NMFS confirmed the Category 2 PBO would be appropriate for this project.
December 7, 2021	**H. Hodson**, Caltrans Biologist Greg Schmidt, USFWS Liaison	USFWS confirmed the project (as scoped) would not affect habitat suitability.
January 7, 2022	**H. Hodson**, Caltrans Biologist **Stephanie Frederickson**, Caltrans Senior Resource Liaison **G. Schmidt**, USFWS Liaison	Caltrans confirmed the PLOC would be used for this project.
March 15, 2022	**H. Hodson**, Caltrans Biologist **Mike Van Hattem**, CDFW Biologist	Caltrans sent project details and federal consultation information to CDFW.

Table 12. Agency Coordination with Yurok Tribe

Date	Personnel	Notes
September 25, 2020	**Whitney Petrey**, Native American Coordinator **Tim Keefe**, Senior Environmental Planner for Cultural Resources North **Joseph James**, Yurok Tribe Chairman **Rosie Clayburn**, Yurok THPO	Caltrans sent a letter to initiate Section 106 consultation with the Yurok Tribe.
March 29, 2021	Caltrans Yurok Tribe	Caltrans discussed this project with the Yurok Tribe during a quarterly meeting.
March 29, 2021	**W. Petrey**, Native American Coordinator **R. Clayburn**, Yurok THPO	Caltrans visited ceremony locations with Yurok THPO to discuss resource protection measures.
April 9, 2020	**W. Petrey**, Native American Coordinator **R. Clayburn**, Yurok THPO	Caltrans requested records from the Yurok Information Center.
October 12, 2021	**W. Petrey**, Native American Coordinator **R. Clayburn**, Yurok THPO	Caltrans made a second request for records from the Yurok Information Center.
December 21, 2021	**W. Petrey**, Native American Coordinator **R. Clayburn**, Yurok THPO	Caltrans submitted the Archaeological Survey Report (ASR) to the Yurok THPO, seeking a “no effects” concurrence.
January 7, 2022	**W. Petrey**, Native American Coordinator **R. Clayburn**, Yurok THPO	Yurok THPO informed Caltrans that ASR document review would be reassigned due to staffing changes.
February 23, 2022	**Cari Williams**, Caltrans Environmental Coordinator **Louisa McCovey**, YTEP Director **Matt Hanington**, YTEP Water Division Director	Caltrans requested information regarding the Yurok Tribe’s preferences for resource protection fencing types on the reservation.
March 18, 2022	**W. Petrey**, Native American Coordinator **R. Clayburn**, Yurok THPO	Caltrans re-submitted the Archaeological Survey Report (ASR) to the Yurok THPO, seeking a “no effects” concurrence.

Chapter 4. List of Preparers

The following individuals performed the environmental work on the project:

California Department of Transportation, District 1

Lena Ashley	Design Senior
Phlora Barbash	Landscape Architect (Visual Impact Assessment)
Chase Brewster	Wild and Scenic Rivers Coordinator (Wild and Scenic Rivers Memo)
Youngil Cho	Air Quality and Noise Specialist (Air, Noise, Greenhouse Gas, and Energy Analyses)
René Dewees	Design Support (Draft Project Report preparation)
Julie East	Senior Environmental Planner
Christian Figueroa	Hazardous Waste and Paleontology Coordinator (Initial Site Assessment Update)
Amanda Haas	Water Quality Coordinator (Water Quality Assessment)
Paul Hailey	Transportation Engineer (Transportation Management Plan)
Jacob Hilliard	Unmanned Aircraft Systems Pilot
Hilary Hodson	Biologist (Natural Environment Study review)
Fariar Kohzad	Hydraulics Engineer (Hydraulics Report, Floodplain Evaluation Report)
Brandon Larsen	Environmental Office Chief (Proposed Negative Declaration signature)
Dave Melendrez	Project Manager
Dana Michels	Water Quality Specialist (Environmental Document preparation)

Whitney Petrey	Archaeologist and Native American Coordinator (Archaeological Survey Report)
Tom Phillips	Project Engineer (Draft Project Report)
Andrea Poteet	Revegetation Specialist
Julie Price	Associate Environmental Planner (Peer Reviewer)
Karen Radford	Technical Editor (QA/QC Reviewer)
Sheri Rodriguez	District Traffic Manager (Transportation Management Plan)
Cari Williams	Environmental Coordinator (Environmental Document preparation, Vehicle Miles Traveled Memo)

Stantec Consulting Services, Inc.

Sara Cortez	Senior Biologist, Task Order Manager
Chariss Femino	Associate Biologist, Natural Environment Study preparation

Chapter 5. Distribution List

Federal and State Agencies

Michael van Hattem
California Department of Fish and Wildlife
619 2nd Street
Eureka, CA 95501

California Transportation Commission
1120 N Street MS, 12
Sacramento, CA 95814

Mike Kelly
National Marine Fisheries Service
1655 Heindon Road
Arcata, CA 95521

Dan Breen
United States Army Corps of Engineers
1455 Market Street #16
San Francisco, CA 94103

Greg Schmidt
United States Fish and Wildlife Service
1655 Heindon Road
Arcata, CA 95521

Regional/County/Local Agencies

County Clerk's Office, Humboldt County
825 5th Street
Eureka, CA 95502

Humboldt County Association of Governments
611 I Street, Suite B
Eureka, CA 95501

Local Elected Officials

Steve Madrone, 5th District County Supervisor
825 5th Street, Room 11
Eureka, CA 95501

Interested Groups, Organizations, and Individuals

Yurok Tribal Office
190 Klamath Boulevard
PO Box 1027
Eureka, CA 95548

Yurok Tribal Office
Highway 96
Weitchpec, CA 95546

Kim Yerton Memorial Library
370 Loop Road
Hoopa, CA 95546

Thomas H. Kuchel Visitor Center
Hwy 101
Orick CA 95555

Stone Lagoon Visitor Center
15336 US 101
Trinidad, CA 95570

Chapter 6. References

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Appendix A. Project Layouts (see below)

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	HUM	SR-169	VAR	01	51

DESIGN STUDY

REGISTERED CIVIL ENGINEER DATE

ONLY

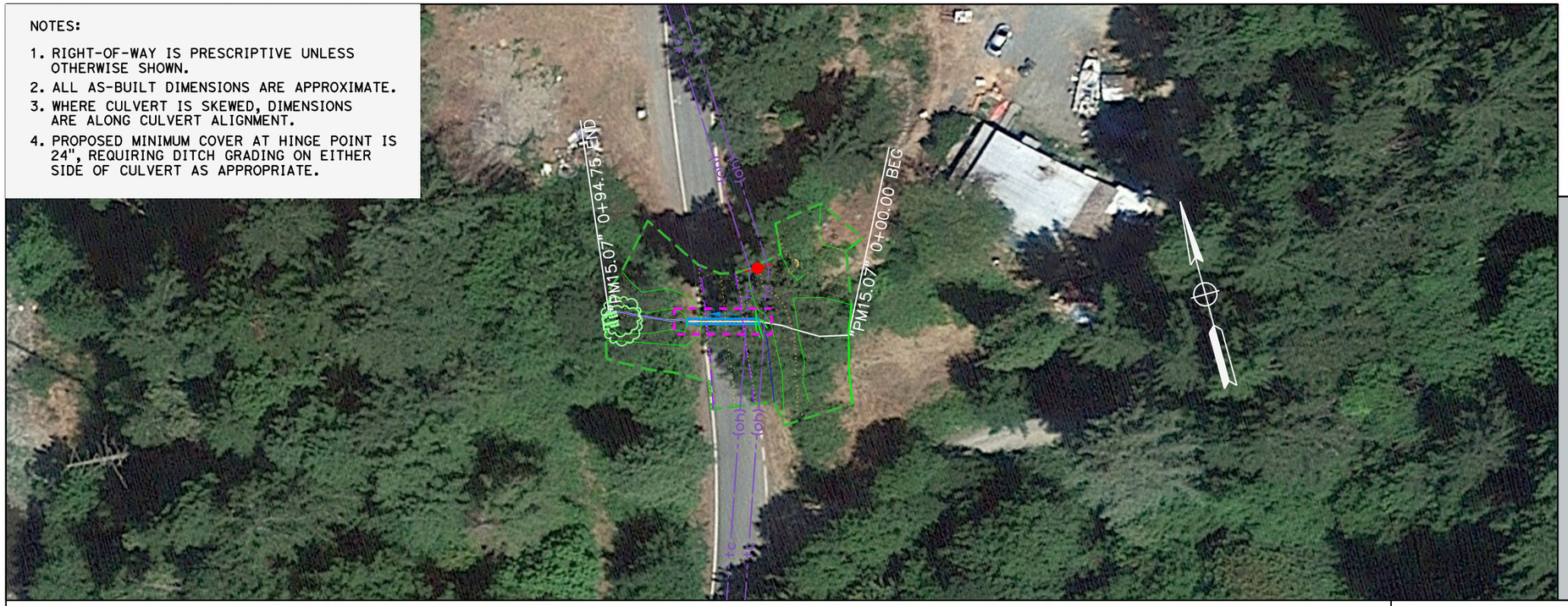
PLANS APPROVAL DATE

Thomas Phillips
No. C64633
Exp.06/30/23
CIVIL
REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTES:

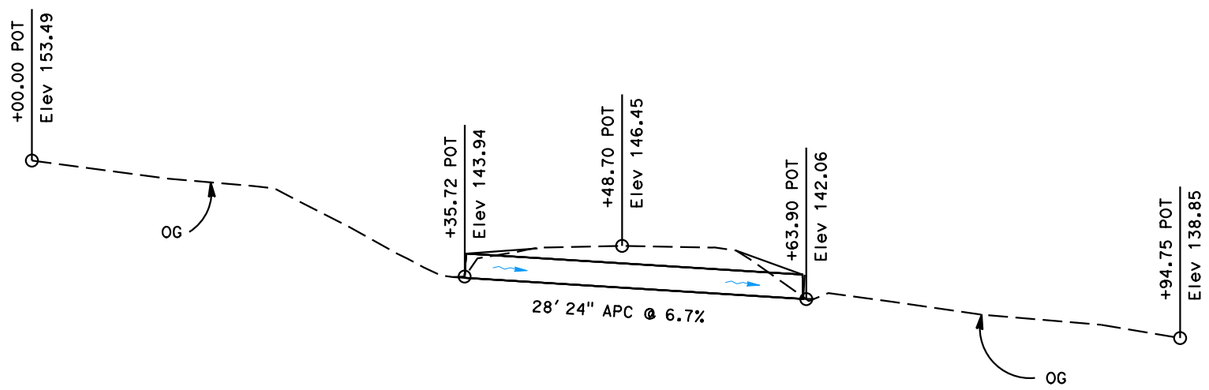
1. RIGHT-OF-WAY IS PRESCRIPTIVE UNLESS OTHERWISE SHOWN.
2. ALL AS-BUILT DIMENSIONS ARE APPROXIMATE.
3. WHERE CULVERT IS SKEWED, DIMENSIONS ARE ALONG CULVERT ALIGNMENT.
4. PROPOSED MINIMUM COVER AT HINGE POINT IS 24", REQUIRING DITCH GRADING ON EITHER SIDE OF CULVERT AS APPROPRIATE.



LEGEND

- APPROXIMATE R/W
- FLOW DIRECTION
- NEW CULVERT
- PRIVATE WATER LINE
- POTENTIAL STAGING AREA
- TCE
- PERMANENT EASEMENT
- ESL
- TOPOGRAPHIC SURFACE BOUNDARY

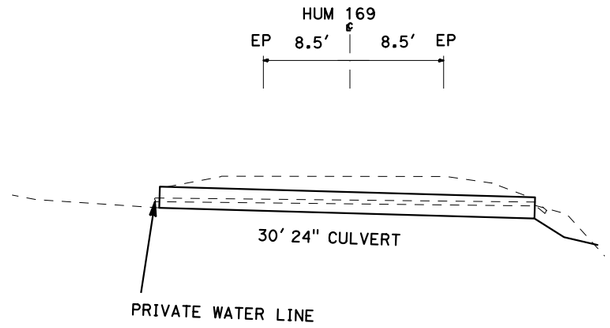
PROPOSED DESIGN



PM 15.07
CROSS SECTION

NO SCALE

AS-BUILT



REHAB CULVERTS
HUM-169-PM 15.07/33.75
01-0H4100 EFIS 0117000169

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY: Farlar Kohzad
CHECKED BY: Rene DeWees, Farlar Kohzad
FUNCTIONAL SUPERVISOR: Lena Ashley

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION DATE PLOTTED => 6-JAN-2022
00-00-00 TIME PLOTTED => 08:28

BORDER LAST REVISED 7/2/2010

USERNAME => s151816
DGN FILE => 01-0H410 Preliminary Designs.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0313

PROJECT NUMBER & PHASE 01170001690

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	HUM	SR-169	VAR	02	51

DESIGN STUDY

REGISTERED CIVIL ENGINEER DATE

ONLY

PLANS APPROVAL DATE

Thomas Phillips
No. C64633
Exp.06/30/23
CIVIL
REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA

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NOTES:

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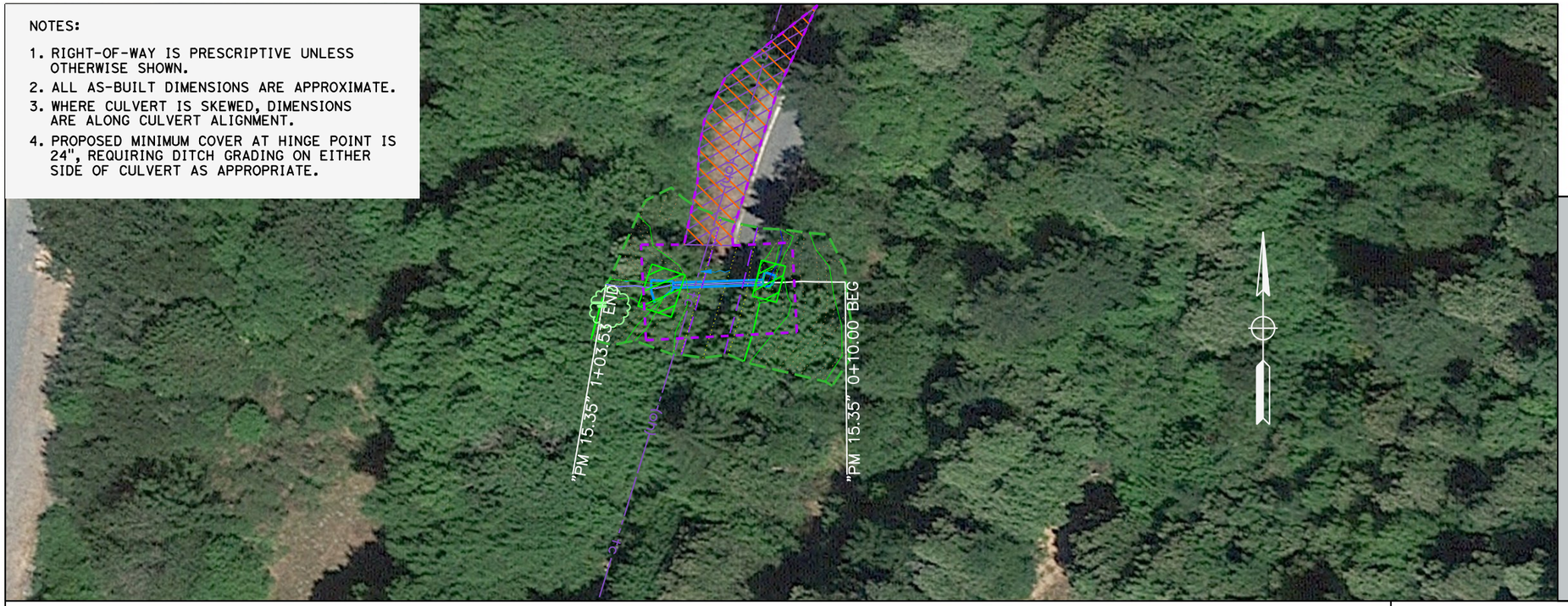
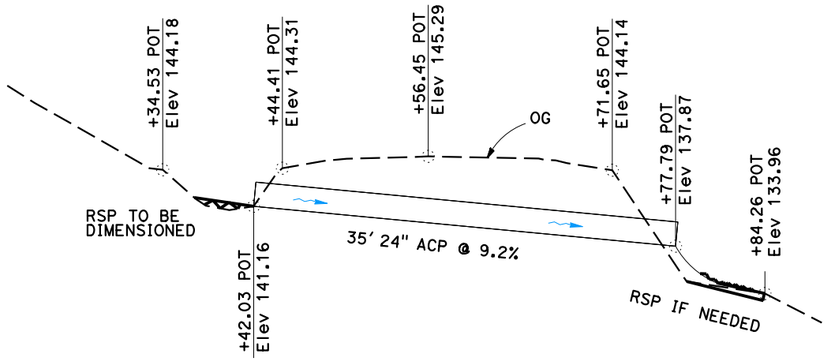


LEGEND

- APPROXIMATE R/W
- FLOW DIRECTION
- NEW CULVERT
- PRIVATE WATER LINE
- POTENTIAL STAGING AREA
- TCE
- PERMANENT EASEMENT
- ESL
- TOPOGRAPHIC SURFACE BOUNDARY

PROPOSED DESIGN

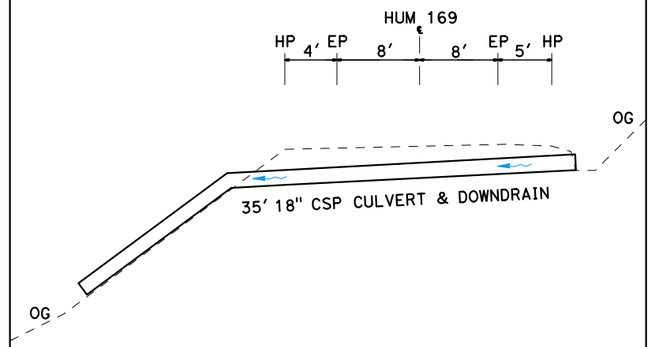


PM 15.35

CROSS SECTION

NO SCALE

AS-BUILT



REHAB CULVERTS
HUM-169-PM 15.07/33.75
01-0H4100 EFIS 0117000169

LAST REVISION DATE PLOTTED => 6-JAN-2022
00-00-00 TIME PLOTTED => 08:33

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY: Farlar Kohzad
CHECKED BY: Rene DeWees, Farlar Kohzad
FUNCTIONAL SUPERVISOR: Lena Ashley

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

BORDER LAST REVISED 7/2/2010

USERNAME => s151816
DGN FILE => 01-0H410 Preliminary Designs.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0313

PROJECT NUMBER & PHASE 01170001690

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	HUM	SR-169	VAR	03	51

DESIGN STUDY

REGISTERED CIVIL ENGINEER DATE

ONLY

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Thomas Phillips
No. C64633
Exp.06/30/23
CIVIL
STATE OF CALIFORNIA

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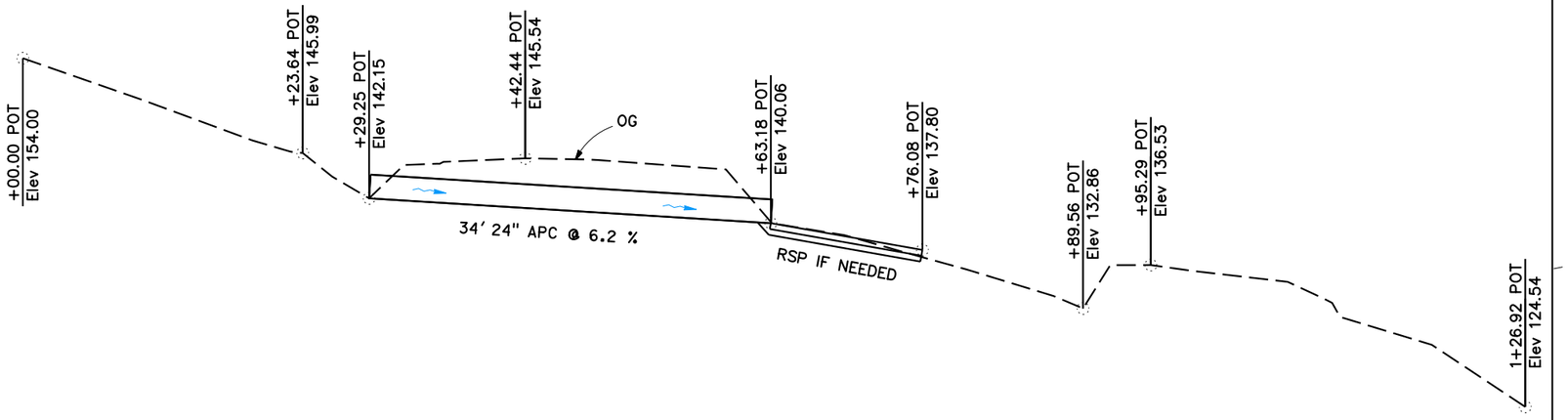
LEGEND

- APPROXIMATE R/W
- FLOW DIRECTION
- NEW CULVERT
- PRIVATE WATER LINE
- POTENTIAL STAGING AREA
- TCE
- PERMANENT EASEMENT
- ESL
- TOPOGRAPHIC SURFACE BOUNDARY

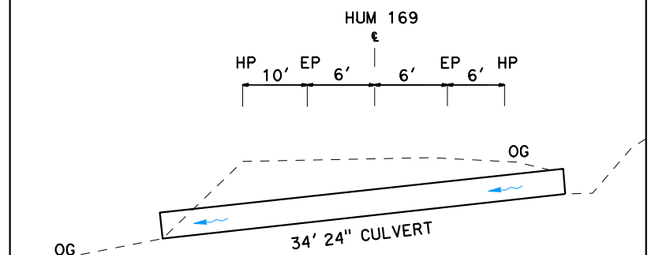
PROPOSED DESIGN



PM 15.51
CROSS SECTION

NO SCALE

AS-BUILT



REHAB CULVERTS
HUM-169-PM 15.07/33.75
01-0H4100 EFIS 0117000169

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY: Farlar Kohzad
CHECKED BY: Rene DeWees, Farlar Kohzad
FUNCTIONAL SUPERVISOR: Lena Ashley

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

LAST REVISION DATE PLOTTED => 6-JAN-2022
00-00-00 TIME PLOTTED => 08:39

BORDER LAST REVISED 7/2/2010

USERNAME => s151816
DGN FILE => 01-0H410 Preliminary Designs.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0313

PROJECT NUMBER & PHASE 01170001690

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	HUM	SR-169	VAR	04	51

DESIGN STUDY

REGISTERED CIVIL ENGINEER DATE

ONLY

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Thomas Phillips
No. C64633
Exp.06/30/23
CIVIL
STATE OF CALIFORNIA

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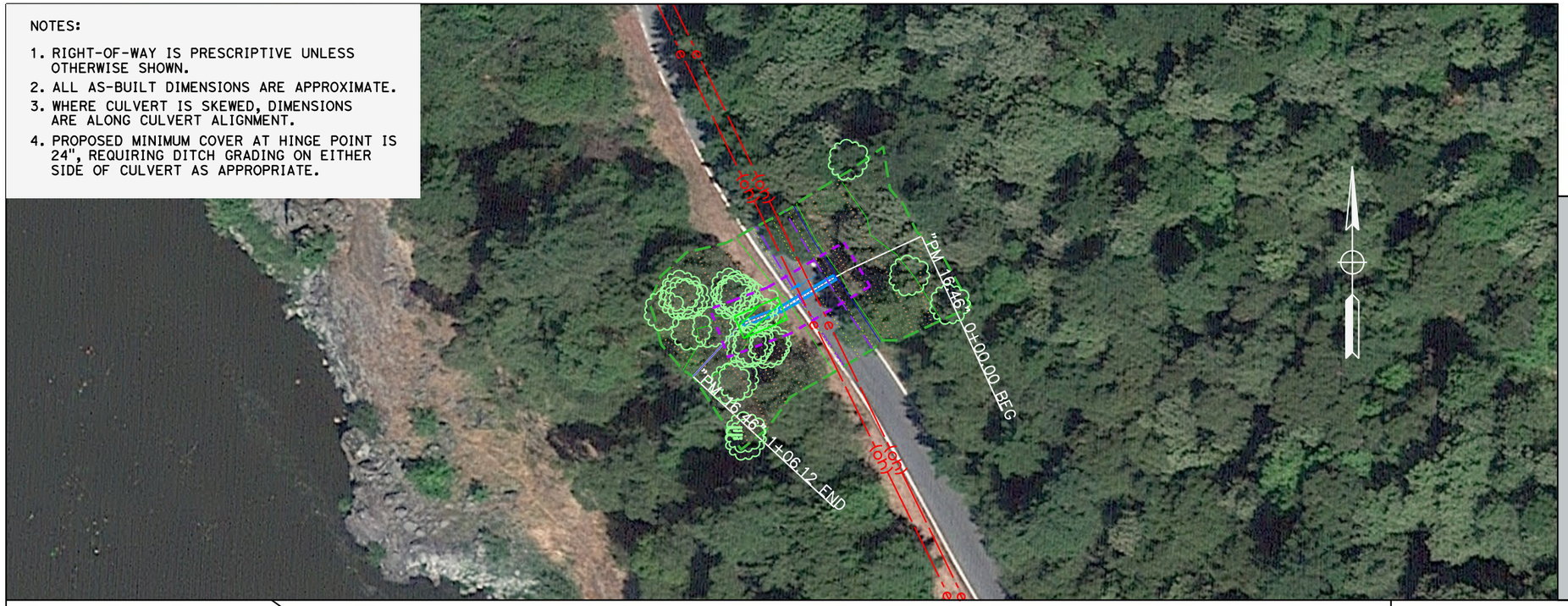
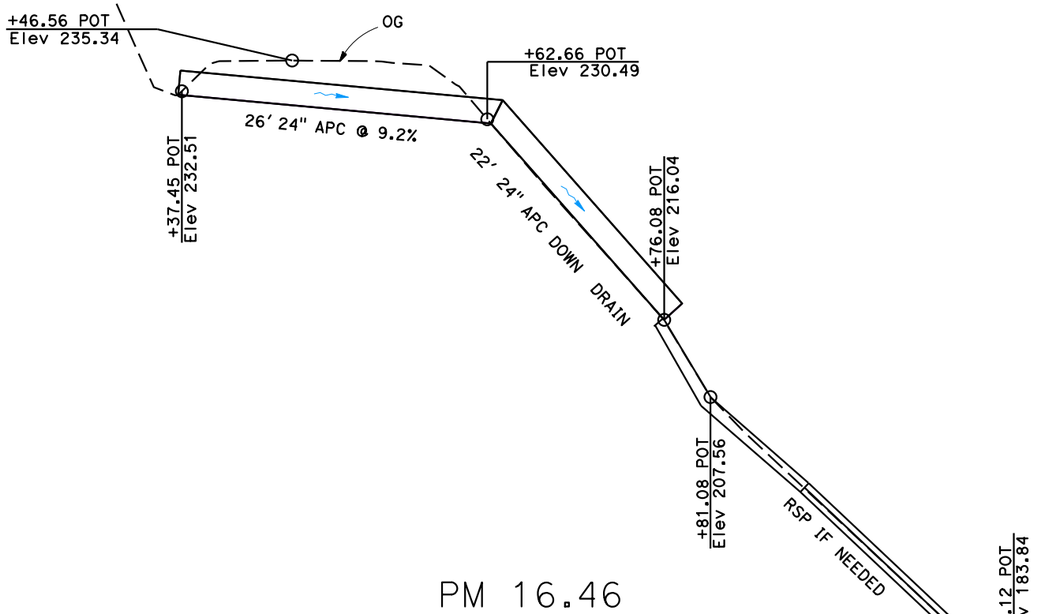


LEGEND

- APPROXIMATE R/W
- FLOW DIRECTION
- NEW CULVERT
- PRIVATE WATER LINE
- POTENTIAL STAGING AREA
- TCE
- PERMANENT EASEMENT
- ESL
- TOPOGRAPHIC SURFACE BOUNDARY

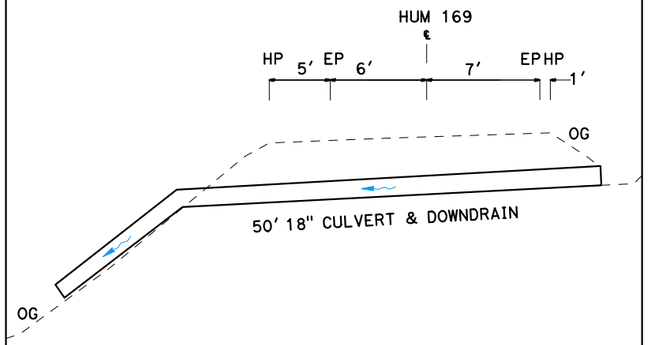
PROPOSED DESIGN



PM 16.46
CROSS SECTION

NO SCALE

AS-BUILT



REHAB CULVERTS
HUM-169-PM 15.07/33.75
01-0H4100 EFIS 0117000169

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

FUNCTIONAL SUPERVISOR: Lena Ashley

CALCULATED-DESIGNED BY: Farlar Kohzad
CHECKED BY: Rene DeWees, Farlar Kohzad

REVISED BY | DATE REVISED

LAST REVISION | DATE PLOTTED => 6-JAN-2022 | TIME PLOTTED => 08:43 | 00-00-00

BORDER LAST REVISED 7/2/2010 | USERNAME => s151816 | DGN FILE => 01-0H410 Preliminary Designs.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0313 | PROJECT NUMBER & PHASE 01170001690

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	HUM	SR-169	VAR	05	51

DESIGN STUDY

REGISTERED CIVIL ENGINEER DATE

ONLY

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Thomas Phillips
No. C64633
Exp.06/30/23
CIVIL
STATE OF CALIFORNIA

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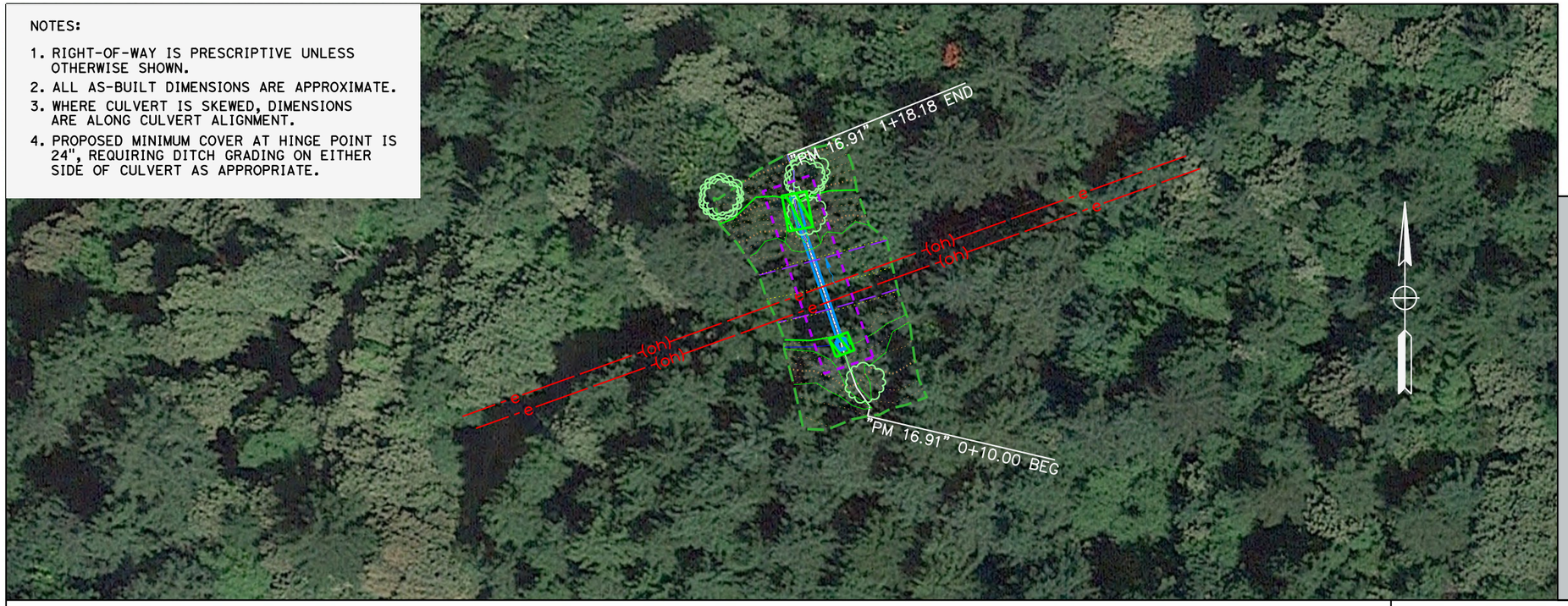
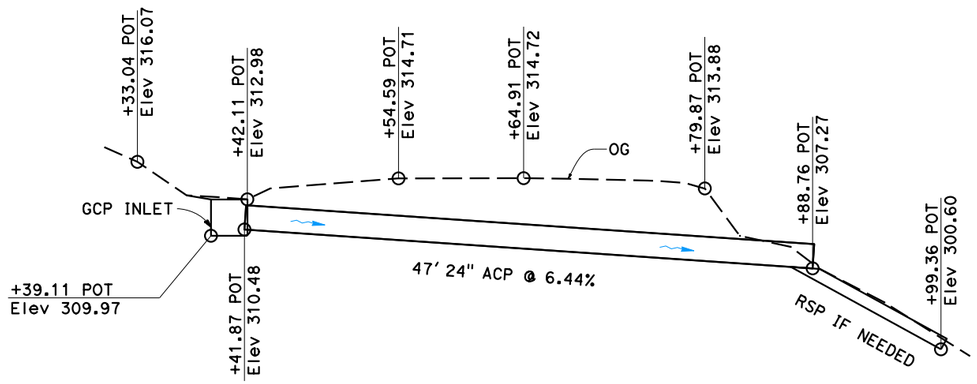


LEGEND

- APPROXIMATE R/W
- FLOW DIRECTION
- NEW CULVERT
- PRIVATE WATER LINE
- POTENTIAL STAGING AREA
- TCE
- PERMANENT EASEMENT
- ESL
- TOPOGRAPHIC SURFACE BOUNDARY

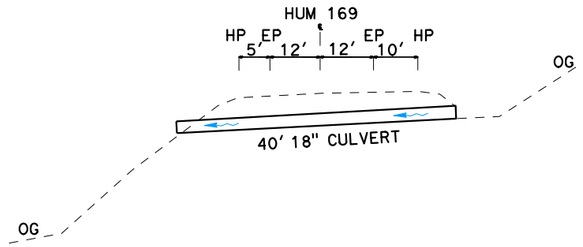
PROPOSED DESIGN



PM 16.91
CROSS SECTION

NO SCALE

AS-BUILT



REHAB CULVERTS
HUM-169-PM 15.07/33.75
01-0H4100 EFIS 0117000169

CALCULATED-DESIGNED BY	Farlar Kohzad
CHECKED BY	Rene DeWees, Farlar Kohzad
REVISED BY	
DATE REVISED	
FUNCTIONAL SUPERVISOR	Lena Ashley

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

LAST REVISION DATE PLOTTED => 6-JAN-2022
00-00-00 TIME PLOTTED => 08:47

BORDER LAST REVISED 7/2/2010

USERNAME => s151816
DGN FILE => 01-0H410 Preliminary Designs.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0313

PROJECT NUMBER & PHASE 01170001690

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	HUM	SR-169	VAR	06	51

DESIGN STUDY

REGISTERED CIVIL ENGINEER DATE

ONLY

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Thomas Phillips
No. C64633
Exp.06/30/23
CIVIL
STATE OF CALIFORNIA

NOTES:

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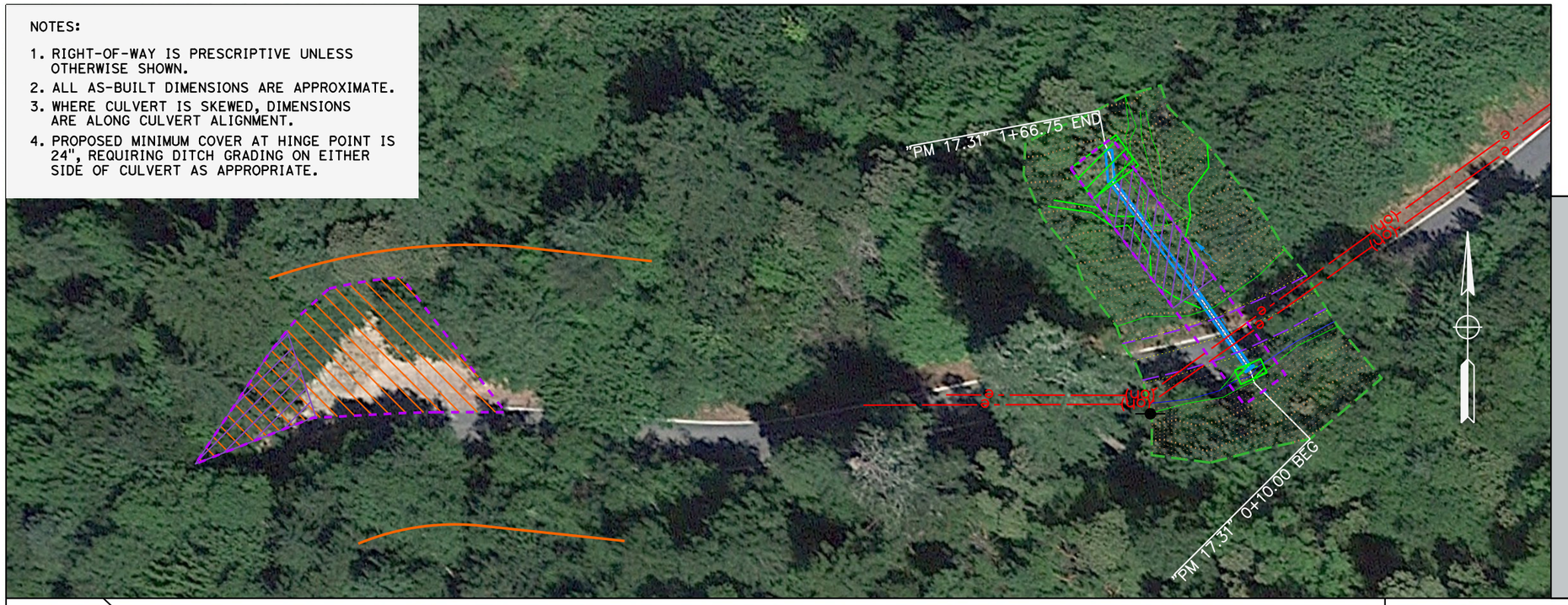
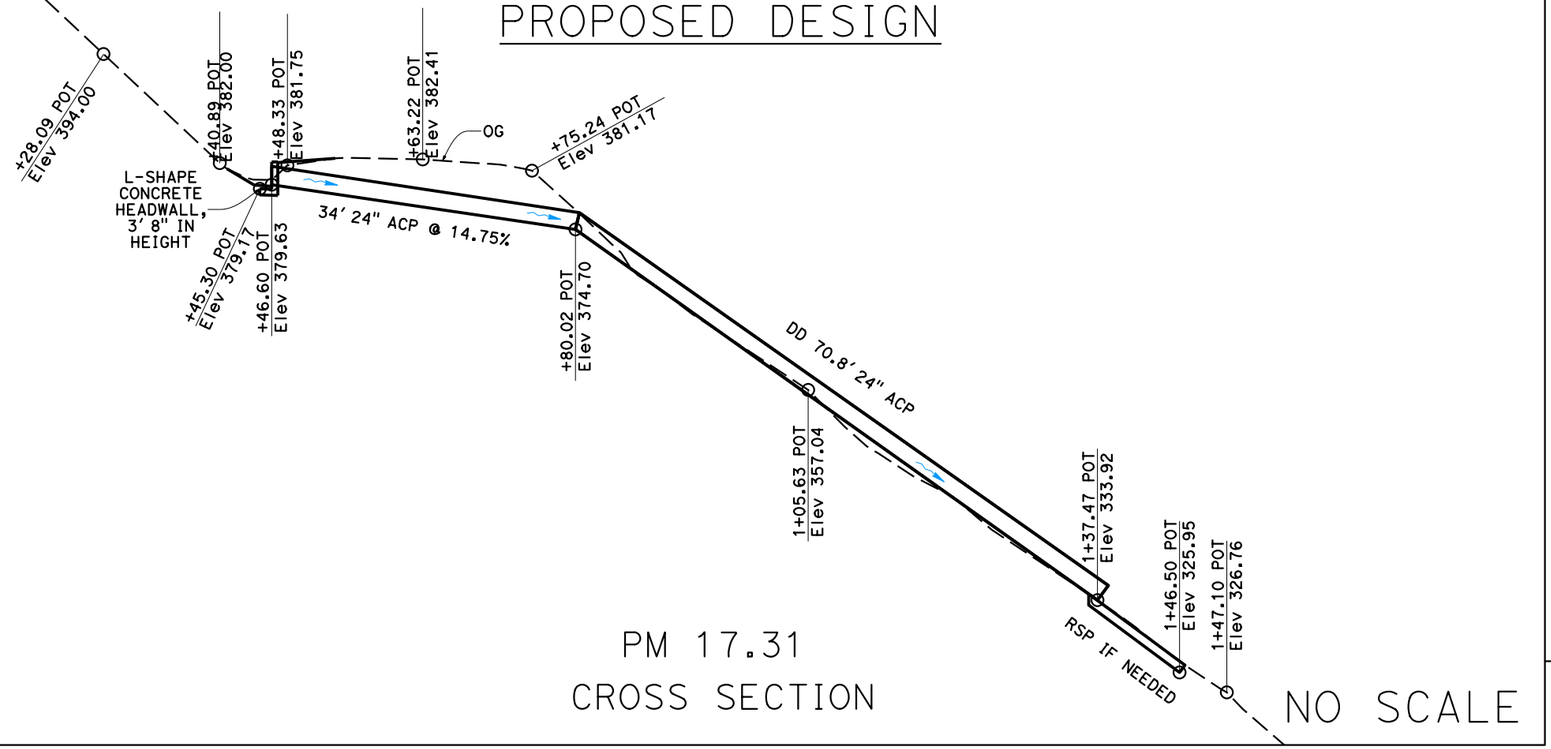


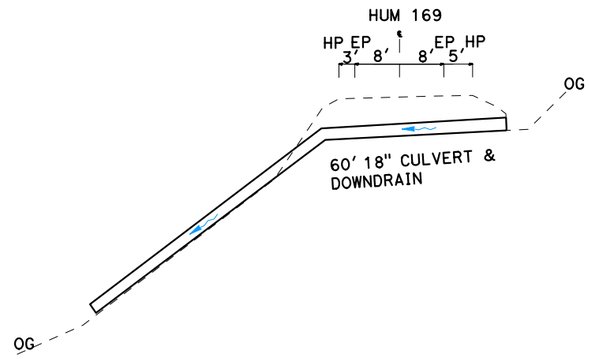
PROPOSED DESIGN



PM 17.31
CROSS SECTION

NO SCALE

AS-BUILT



REHAB CULVERTS
HUM-169-PM 15.07/33.75
01-0H4100 EFIS 0117000169

REVISED BY	
DATE REVISED	
CALCULATED-DESIGNED BY	Farlar Kohzad
CHECKED BY	Rene DeWees, Farlar Kohzad
FUNCTIONAL SUPERVISOR	Lena Ashley

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

LAST REVISION 00-00-00
DATE PLOTTED => 6-JAN-2022
TIME PLOTTED => 08:51

BORDER LAST REVISED 7/2/2010

USERNAME => s151816
DGN FILE => 01-0H410 Preliminary Designs.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0313

PROJECT NUMBER & PHASE 01170001690

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	HUM	SR-169	VAR	07	51

DESIGN STUDY

REGISTERED CIVIL ENGINEER DATE

ONLY

PLANS APPROVAL DATE

Thomas Phillips
No. C64633
Exp.06/30/23
CIVIL
REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA

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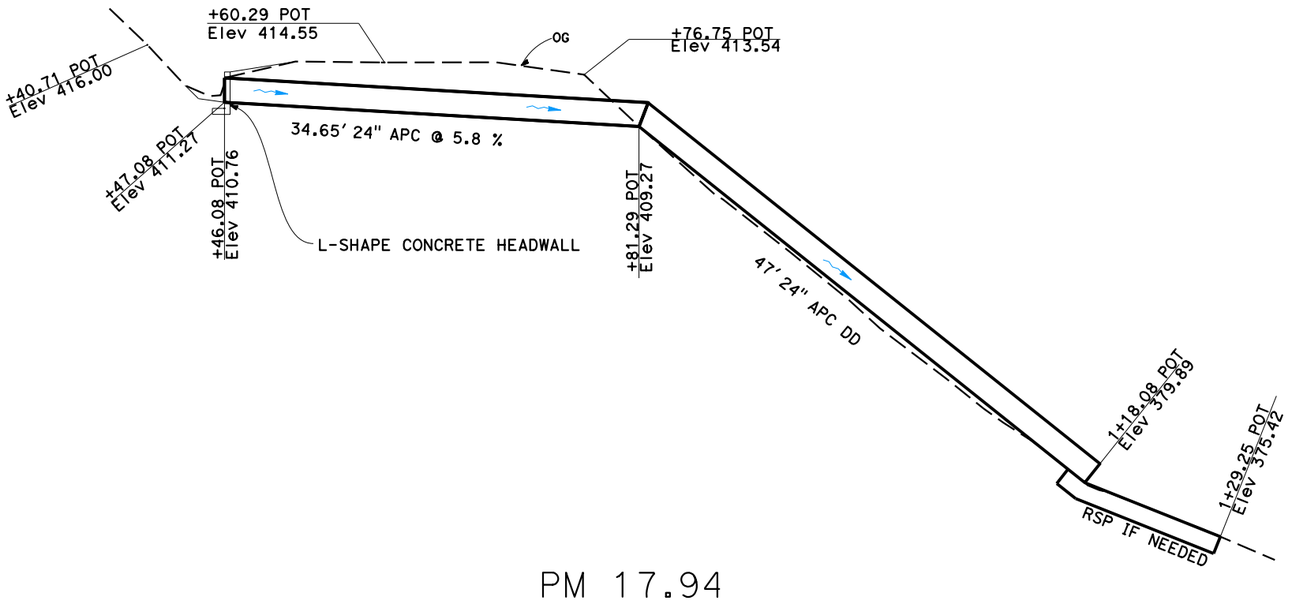
LEGEND

- APPROXIMATE R/W
- FLOW DIRECTION
- NEW CULVERT
- PRIVATE WATER LINE
- POTENTIAL STAGING AREA
- TCE
- PERMANENT EASEMENT
- ESL
- TOPOGRAPHIC SURFACE BOUNDARY

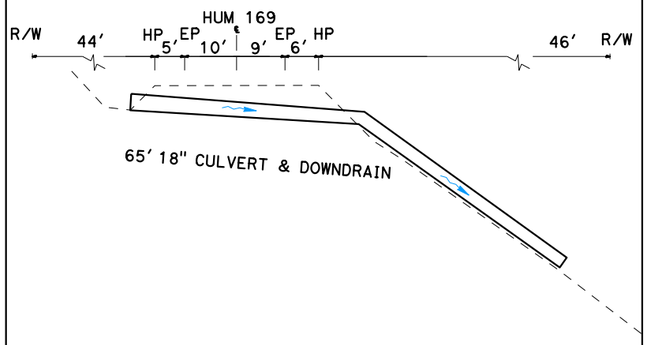
PROPOSED DESIGN



PM 17.94
CROSS SECTION

NO SCALE

AS-BUILT



REHAB CULVERTS
HUM-169-PM 15.07/33.75
01-0H4100 EFIS 0117000169

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY: Farlar Kohzad
CHECKED BY: Rene DeWees, Farlar Kohzad
FUNCTIONAL SUPERVISOR: Lena Ashley

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION: DATE PLOTTED => 6-JAN-2022
00-00-00 TIME PLOTTED => 09:23

BORDER LAST REVISED 7/2/2010

USERNAME => s151816
DGN FILE => 01-0H410 Preliminary Designs.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0313

PROJECT NUMBER & PHASE 01170001690

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	HUM	SR-169	VAR	08	51

DESIGN STUDY

REGISTERED CIVIL ENGINEER DATE

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PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Thomas Phillips
No. C64633
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- FLOW DIRECTION
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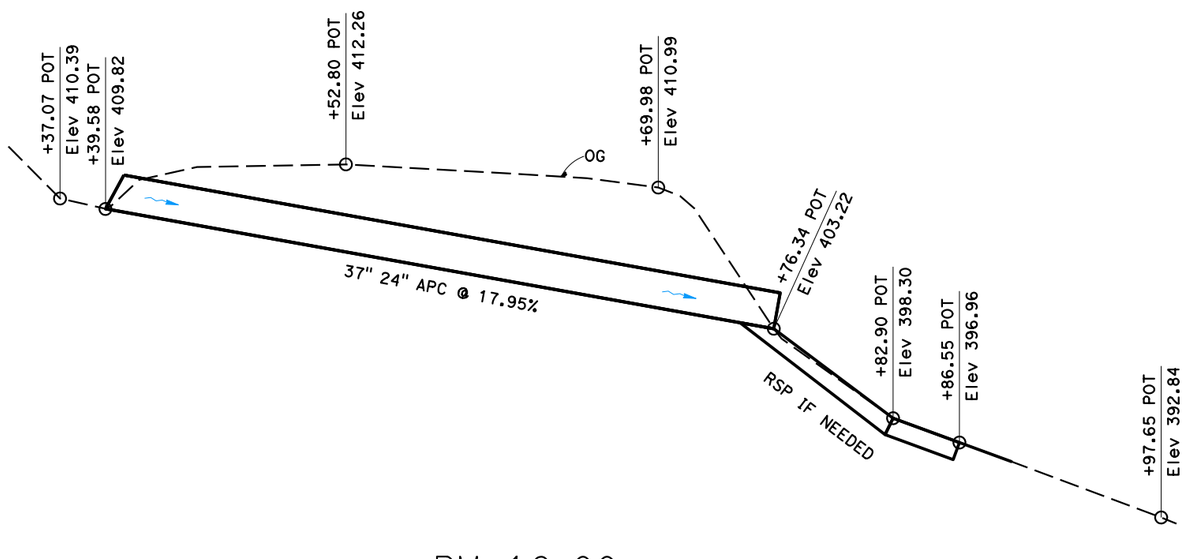
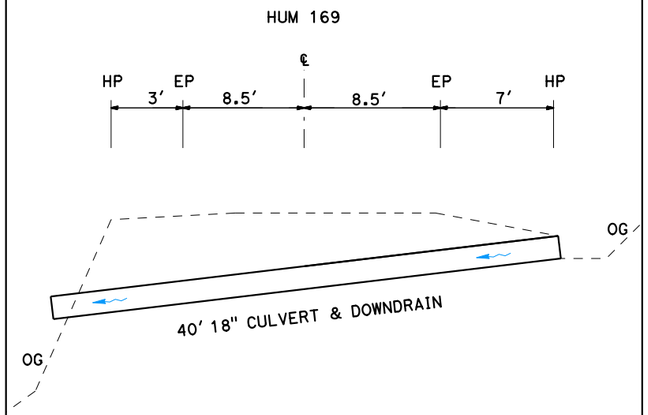
PROPOSED DESIGN



PM 18.00
CROSS SECTION

NO SCALE

AS-BUILT



REHAB CULVERTS
HUM-169-PM 15.07/33.75
01-0H4100 EFIS 0117000169

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY: Farlar Kohzad
CHECKED BY: Rene DeWees, Farlar Kohzad
FUNCTIONAL SUPERVISOR: Lena Ashley

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION DATE PLOTTED => 6-JAN-2022
00-00-00 TIME PLOTTED => 08:56

BORDER LAST REVISED 7/2/2010 | USERNAME => s151816 | DGN FILE => 01-0H410 Preliminary Designs.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0313 | PROJECT NUMBER & PHASE 01170001690

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	HUM	SR-169	VAR	09	51

DESIGN STUDY

REGISTERED CIVIL ENGINEER DATE

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PLANS APPROVAL DATE

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Thomas Phillips
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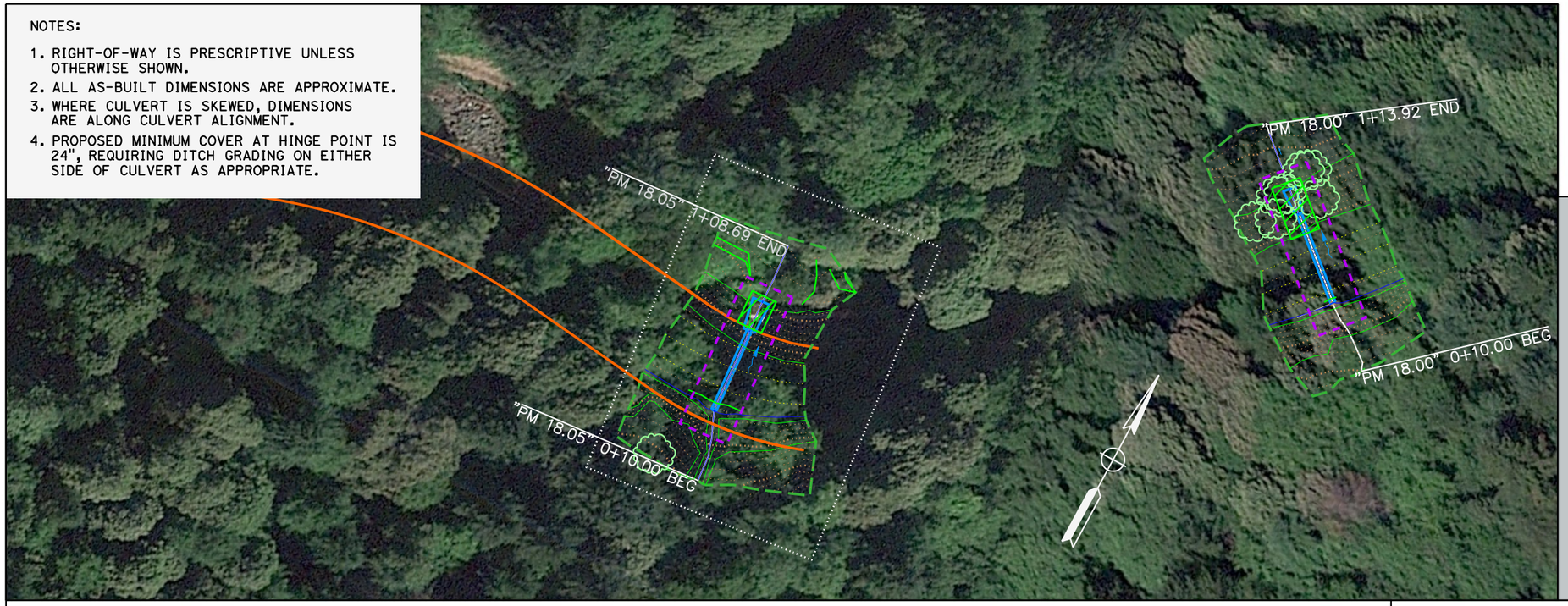
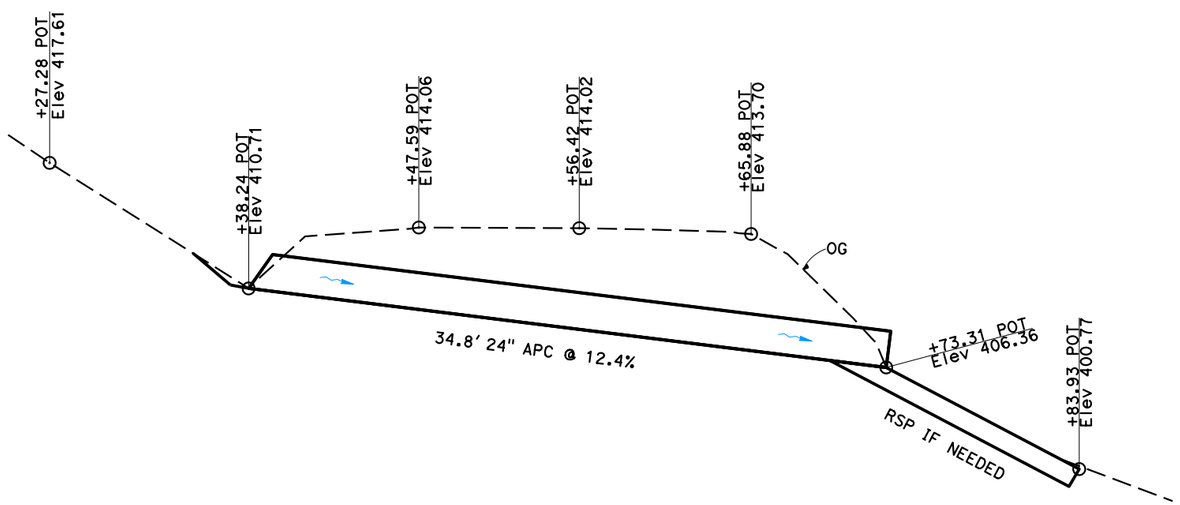


LEGEND

- APPROXIMATE R/W
- FLOW DIRECTION
- NEW CULVERT
- PRIVATE WATER LINE
- POTENTIAL STAGING AREA
- TCE
- PERMANENT EASEMENT
- ESL
- TOPOGRAPHIC SURFACE BOUNDARY

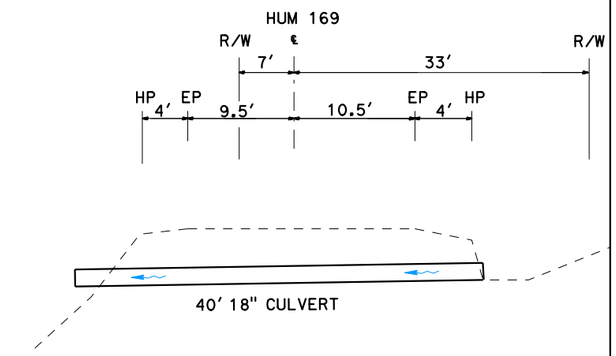
PROPOSED DESIGN



PM 18.05
CROSS SECTION

NO SCALE

AS-BUILT



REHAB CULVERTS
HUM-169-PM 15.07/33.75
01-0H4100 EFIS 0117000169

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY: Farlar Kohzad
CHECKED BY: Rene DeWees, Farlar Kohzad
FUNCTIONAL SUPERVISOR: Lena Ashley

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION 00-00-00 | DATE PLOTTED => 6-JAN-2022 | TIME PLOTTED => 09:29

BORDER LAST REVISED 7/2/2010 | USERNAME => s151816 | DGN FILE => 01-0H410 Preliminary Designs.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0313 | PROJECT NUMBER & PHASE 01170001690

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	HUM	SR-169	VAR	10	51

DESIGN STUDY

REGISTERED CIVIL ENGINEER DATE

ONLY

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Thomas Phillips
No. C64633
Exp.06/30/23
CIVIL
STATE OF CALIFORNIA

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NOTES:

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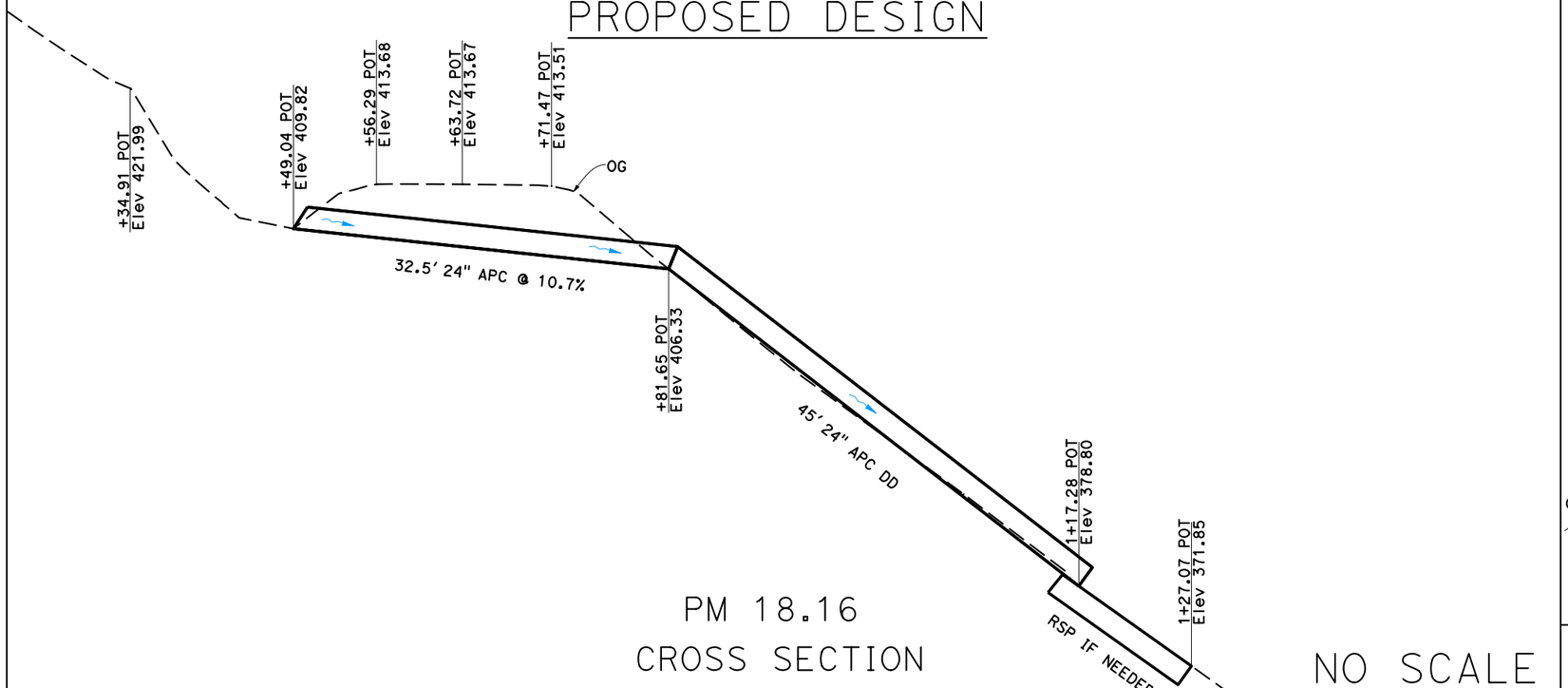
4. PROPOSED MINIMUM COVER AT HINGE POINT IS 24", REQUIRING DITCH GRADING ON EITHER SIDE OF CULVERT AS APPROPRIATE.

LEGEND

- APPROXIMATE R/W
- FLOW DIRECTION
- NEW CULVERT
- PRIVATE WATER LINE
- POTENTIAL STAGING AREA
- TCE
- PERMANENT EASEMENT
- ESL
- TOPOGRAPHIC SURFACE BOUNDARY

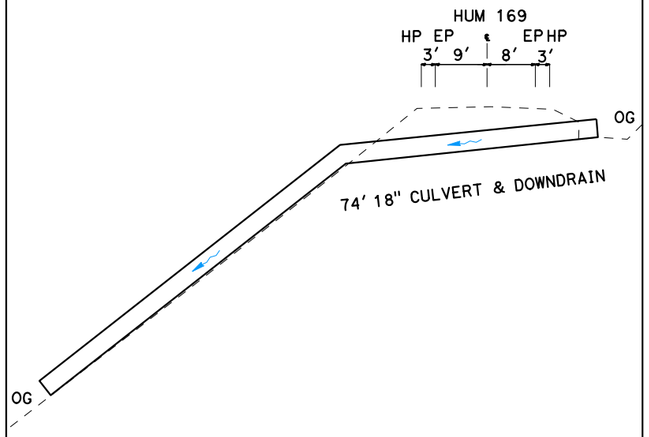
PROPOSED DESIGN



PM 18.16
CROSS SECTION

NO SCALE

AS-BUILT



REHAB CULVERTS
HUM-169-PM 15.07/33.75
01-0H4100 EFIS 0117000169

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY: Farlar Kohzad
CHECKED BY: Rene DeWees, Farlar Kohzad
FUNCTIONAL SUPERVISOR: Lena Ashley

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION: 00-00-00
DATE PLOTTED => 6-JAN-2022
TIME PLOTTED => 09:33

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	HUM	SR-169	VAR	11	51

DESIGN STUDY

REGISTERED CIVIL ENGINEER DATE

ONLY

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Thomas Phillips
No. C64633
Exp.06/30/23
CIVIL
STATE OF CALIFORNIA

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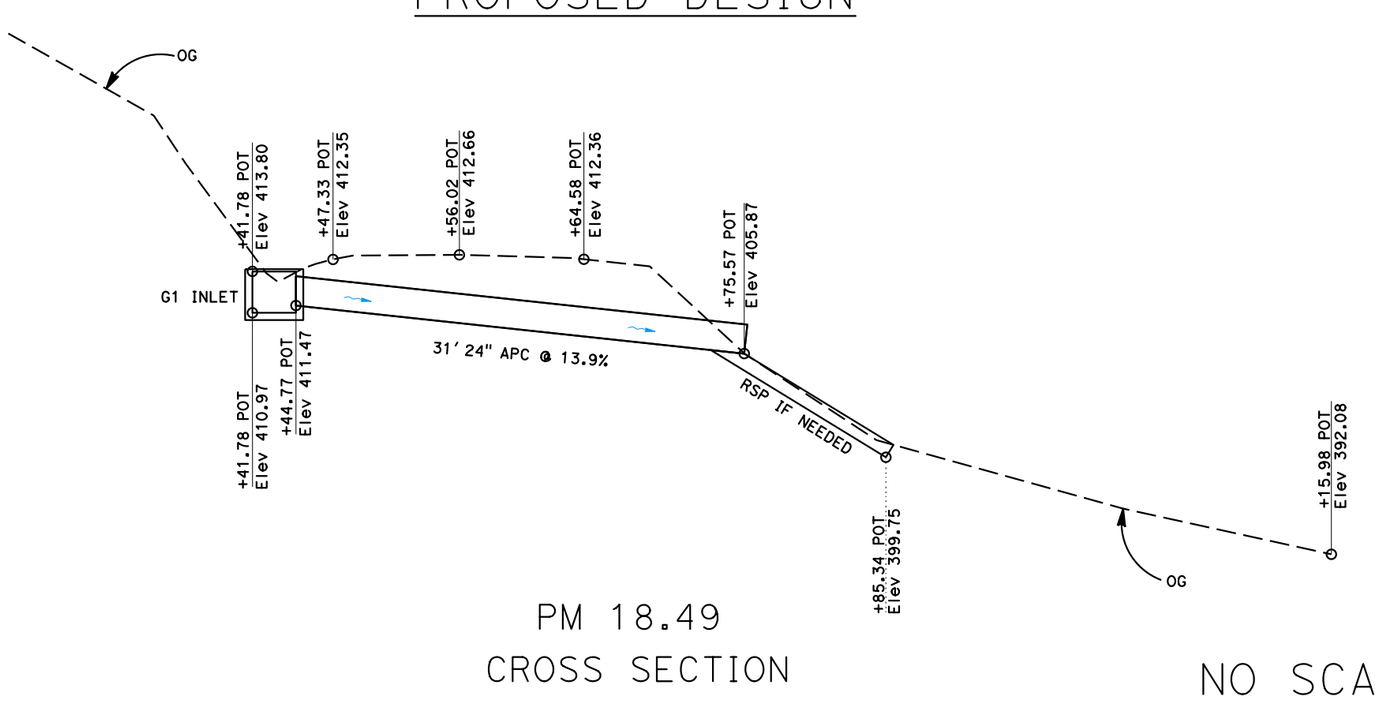
PROPOSED DESIGN



PM 18.49
CROSS SECTION

NO SCALE

AS-BUILT

REHAB CULVERTS
HUM-169-PM 15.07/33.75
01-0H4100 EFIS 0117000169

REVISED BY			
DATE REVISED			
CALCULATED-DESIGNED BY	Farlar Kohzad		
CHECKED BY	Rene DeWees, Farlar Kohzad		
FUNCTIONAL SUPERVISOR	Lena Ashley		

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION 00-00-00
DATE PLOTTED => 6-JAN-2022
TIME PLOTTED => 09:38

BORDER LAST REVISED 7/2/2010
USERNAME => s151816
DGN FILE => 01-0H410 Preliminary Designs.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 0313
PROJECT NUMBER & PHASE 01170001690

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	HUM	SR-169	VAR	12	51

DESIGN STUDY

REGISTERED CIVIL ENGINEER DATE

ONLY

PLANS APPROVAL DATE

Thomas Phillips
No. C64633
Exp.06/30/23
CIVIL
STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER

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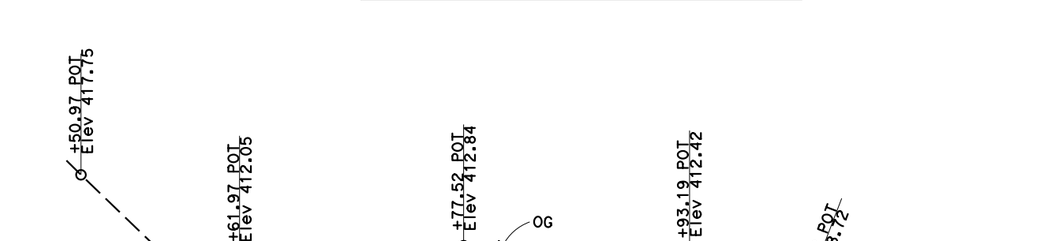
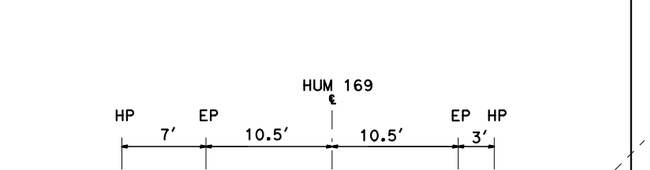


PM 18.59
CROSS SECTION

NO SCALE

AS-BUILT



REHAB CULVERTS
HUM-169-PM 15.07/33.75
01-0H4100 EFIS 0117000169

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY: Farlar Kohzad
CHECKED BY: Rene DeWees, Farlar Kohzad
FUNCTIONAL SUPERVISOR: Lena Ashley

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION 00-00-00
DATE PLOTTED => 6-JAN-2022
TIME PLOTTED => 09:43

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	HUM	SR-169	VAR	13	51

DESIGN STUDY

REGISTERED CIVIL ENGINEER DATE

ONLY

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Thomas Phillips
No. C64633
Exp.06/30/23
CIVIL
STATE OF CALIFORNIA

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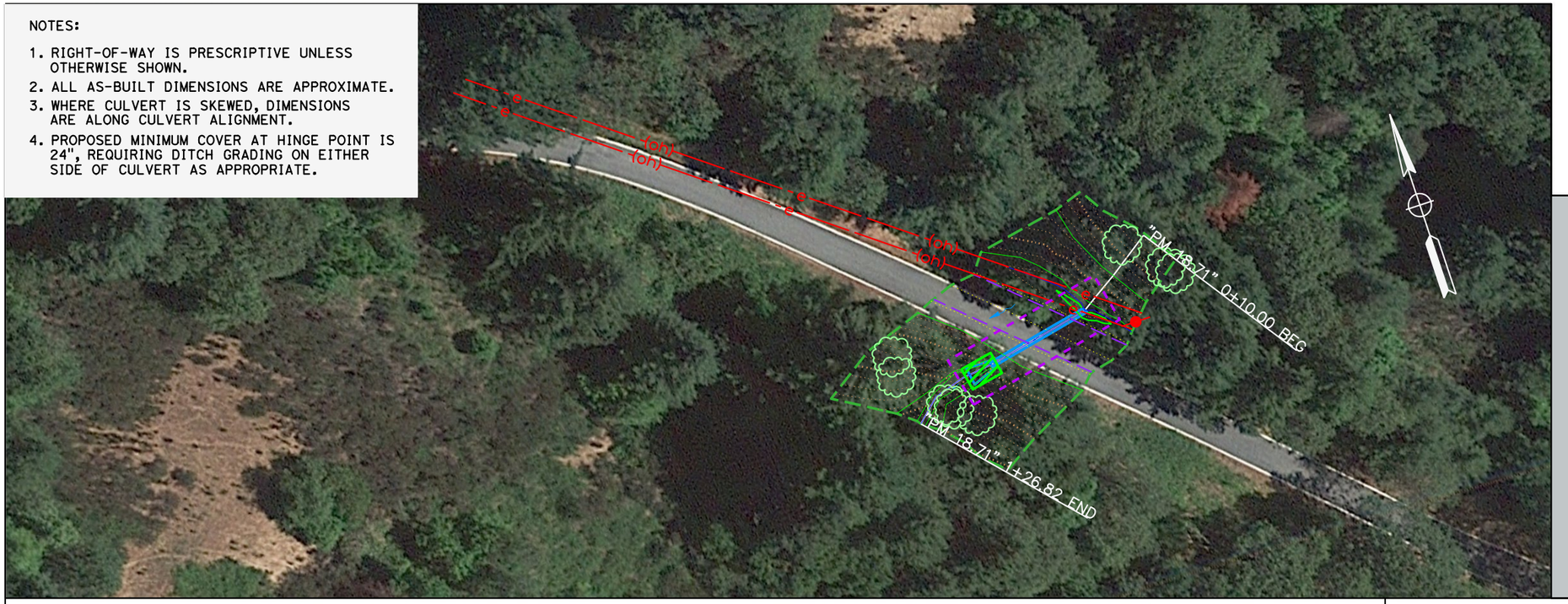
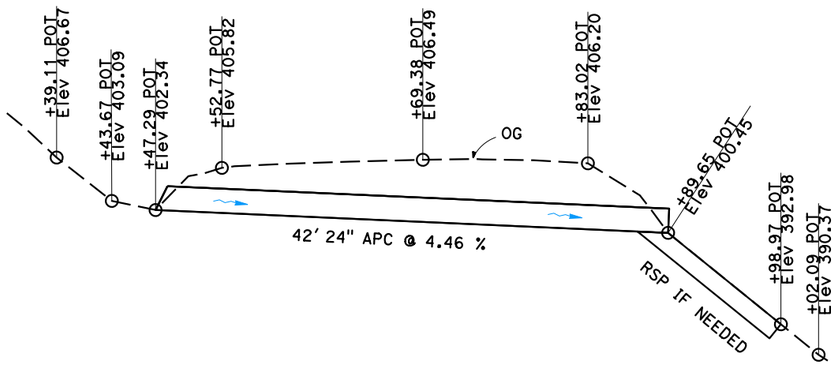


LEGEND

- APPROXIMATE R/W
- FLOW DIRECTION
- NEW CULVERT
- PRIVATE WATER LINE
- POTENTIAL STAGING AREA
- TCE
- PERMANENT EASEMENT
- ESL
- TOPOGRAPHIC SURFACE BOUNDARY

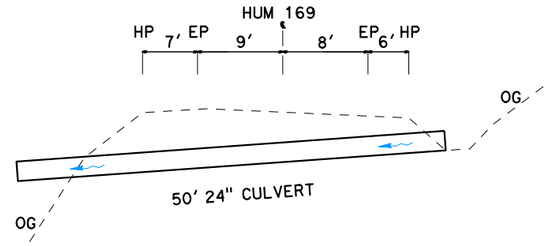
PROPOSED DESIGN



PM 18.71
CROSS SECTION

NO SCALE

AS-BUILT



REHAB CULVERTS
HUM-169-PM 15.07/33.75
01-0H4100 EFIS 0117000169

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY: Farlar Kohzad
CHECKED BY: Rene DeWees, Farlar Kohzad
FUNCTIONAL SUPERVISOR: Lena Ashley

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION 00-00-00 | DATE PLOTTED => 6-JAN-2022 | TIME PLOTTED => 09:47

BORDER LAST REVISED 7/2/2010 | USERNAME => s151816 | DGN FILE => 01-0H410 Preliminary Designs.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0313 | PROJECT NUMBER & PHASE 01170001690

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	HUM	SR-169	VAR	14	51

DESIGN STUDY

REGISTERED CIVIL ENGINEER DATE

ONLY

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Thomas Phillips
No. C64633
Exp.06/30/23
CIVIL
STATE OF CALIFORNIA

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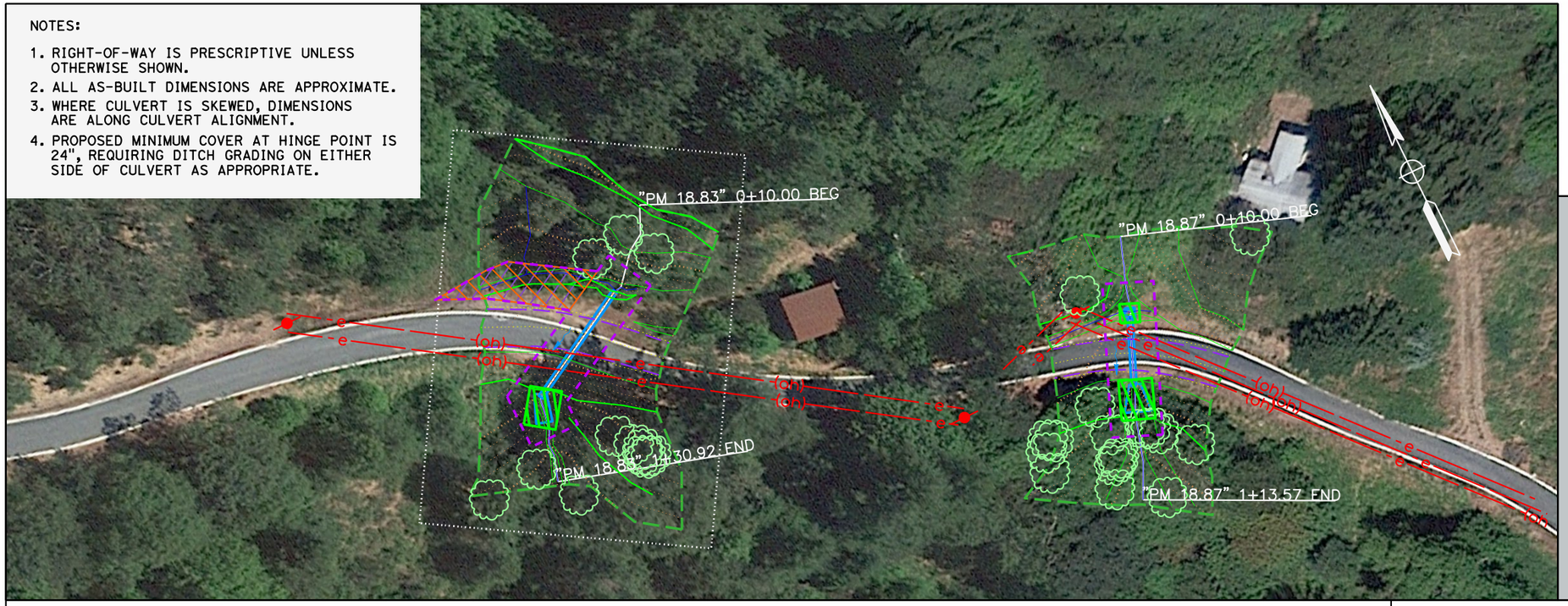
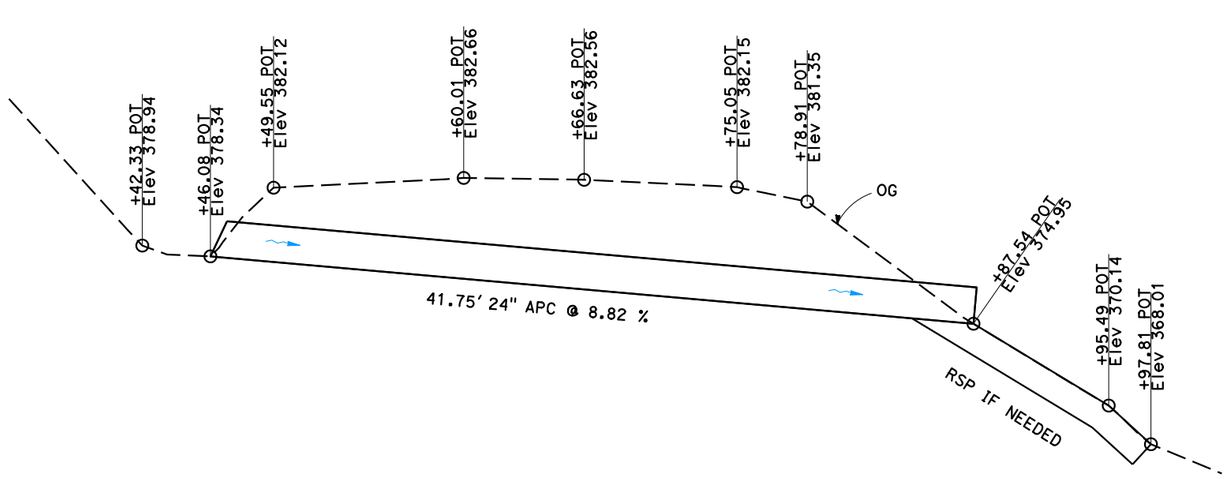


LEGEND

- APPROXIMATE R/W
- FLOW DIRECTION
- NEW CULVERT
- PRIVATE WATER LINE
- POTENTIAL STAGING AREA
- TCE
- PERMANENT EASEMENT
- ESL
- TOPOGRAPHIC SURFACE BOUNDARY

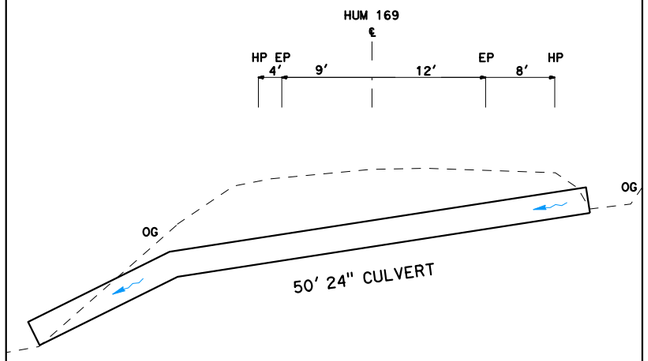
PROPOSED DESIGN



PM 18.83
CROSS SECTION

NO SCALE

AS-BUILT



REHAB CULVERTS
HUM-169-PM 15.07/33.75
01-0H4100 EFIS 0117000169

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

FUNCTIONAL SUPERVISOR: Lena Ashley

CALCULATED-DESIGNED BY: Farlar Kohzad
CHECKED BY: Rene DeWees, Farlar Kohzad

REVISED BY | DATE REVISED

LAST REVISION DATE PLOTTED => 6-JAN-2022
00-00-00 TIME PLOTTED => 09:51

BORDER LAST REVISED 7/2/2010

USERNAME => s151816
DGN FILE => 01-0H410 Preliminary Designs.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0313

PROJECT NUMBER & PHASE 01170001690

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	HUM	SR-169	VAR	15	51

DESIGN STUDY

REGISTERED CIVIL ENGINEER DATE

ONLY

PLANS APPROVAL DATE

Thomas Phillips
No. C64633
Exp.06/30/23
CIVIL
REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA

NOTES:

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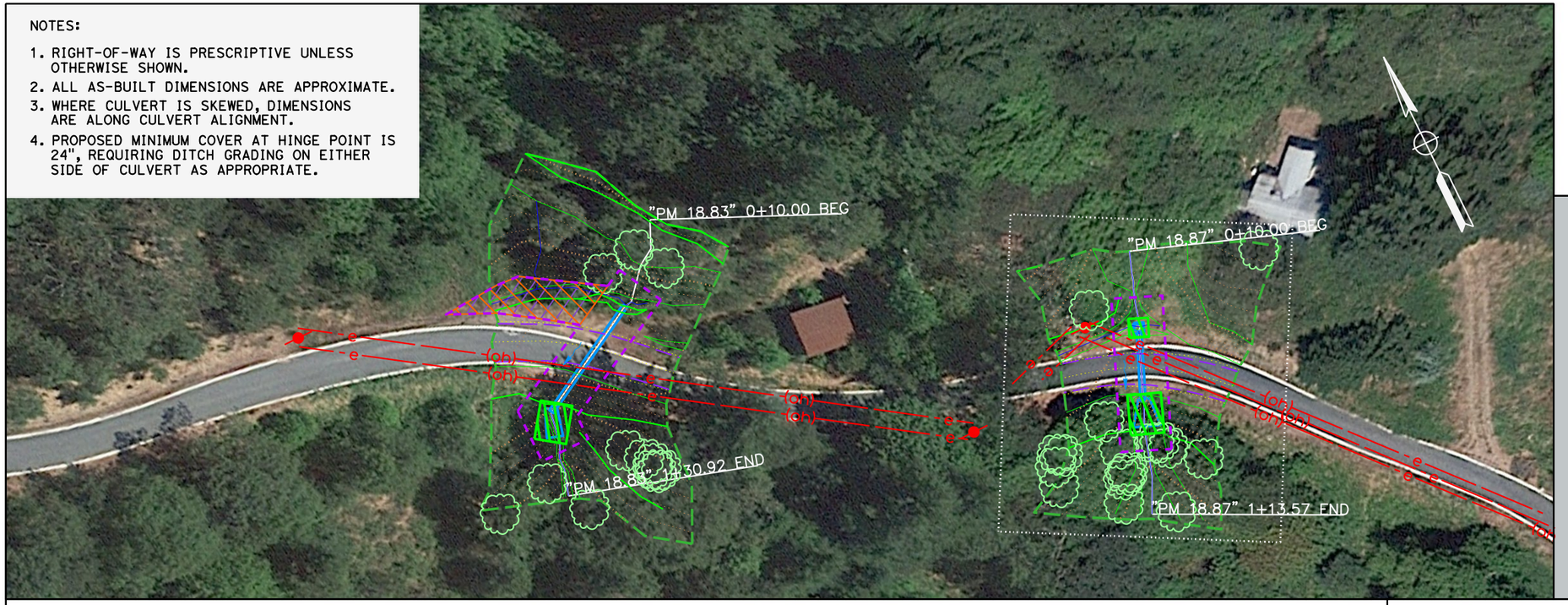
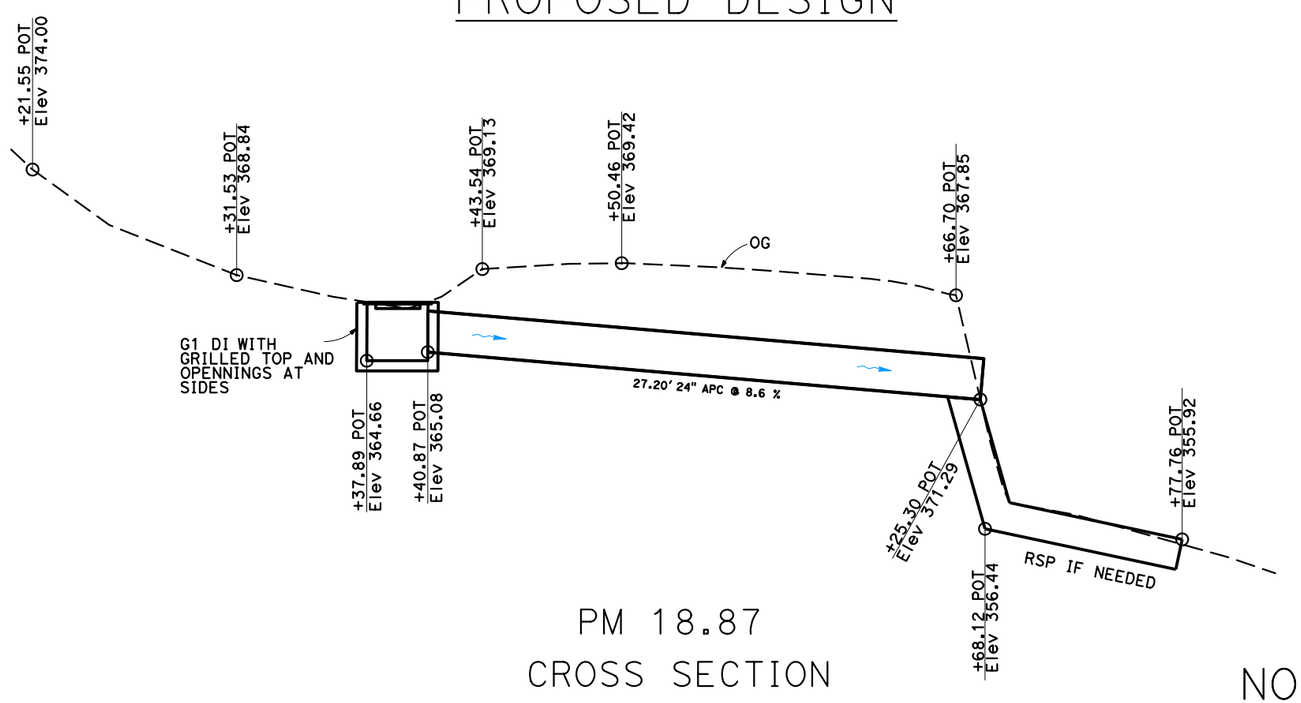


LEGEND

- APPROXIMATE R/W
- FLOW DIRECTION
- NEW CULVERT
- PRIVATE WATER LINE
- POTENTIAL STAGING AREA
- TCE
- PERMANENT EASEMENT
- ESL
- TOPOGRAPHIC SURFACE BOUNDARY

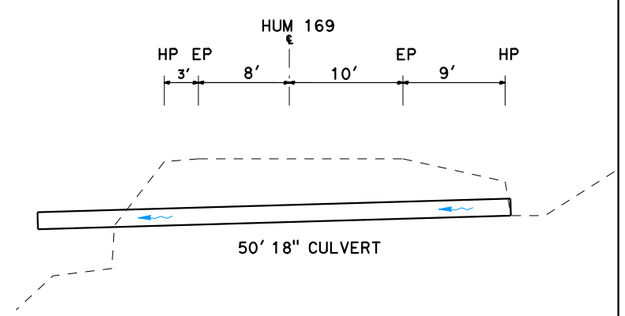
PROPOSED DESIGN



PM 18.87
CROSS SECTION

NO SCALE

AS-BUILT



REHAB CULVERTS
HUM-169-PM 15.07/33.75
01-0H4100 EFIS 0117000169

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY: Farlar Kohzad
CHECKED BY: Rene DeWees, Farlar Kohzad
FUNCTIONAL SUPERVISOR: Lena Ashley

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

LAST REVISION DATE PLOTTED => 6-JAN-2022
00-00-00 TIME PLOTTED => 09:55

BORDER LAST REVISED 7/2/2010 | USERNAME => s151816 | DGN FILE => 01-0H410 Preliminary Designs.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0313 | PROJECT NUMBER & PHASE 01170001690

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	HUM	SR-169	VAR	16	51

DESIGN STUDY

REGISTERED CIVIL ENGINEER DATE

ONLY

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Thomas Phillips
No. C64633
Exp.06/30/23
CIVIL
STATE OF CALIFORNIA

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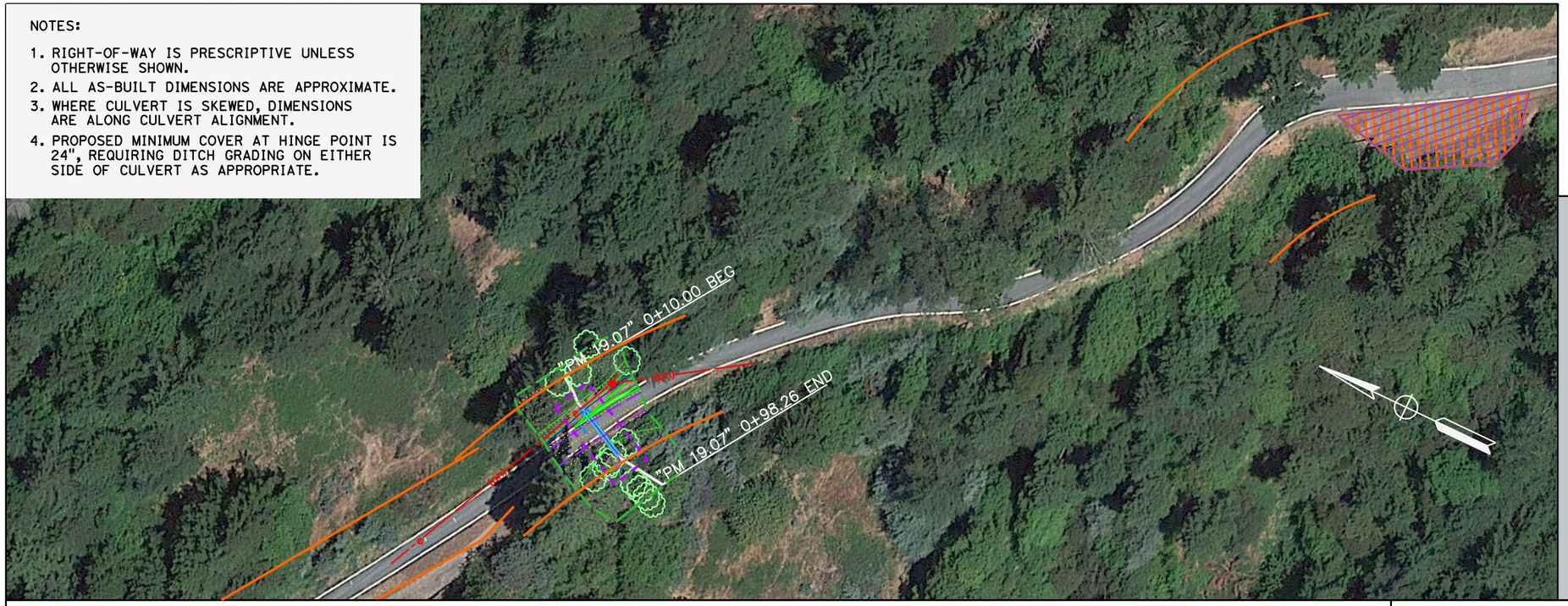
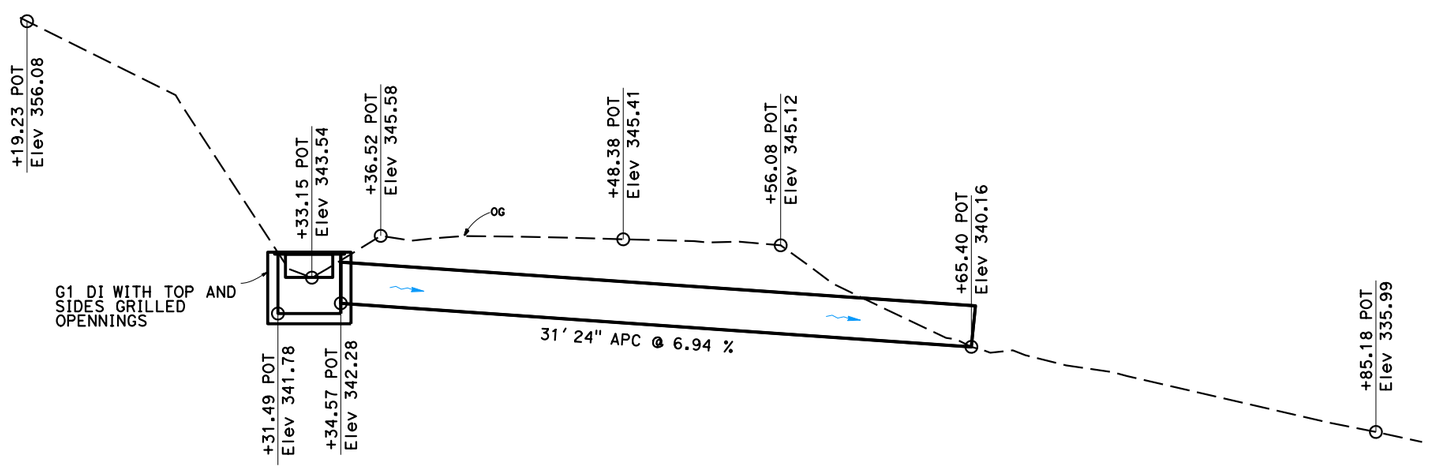


LEGEND

- APPROXIMATE R/W
- FLOW DIRECTION
- NEW CULVERT
- PRIVATE WATER LINE
- POTENTIAL STAGING AREA
- TCE
- PERMANENT EASEMENT
- ESL
- TOPOGRAPHIC SURFACE BOUNDARY

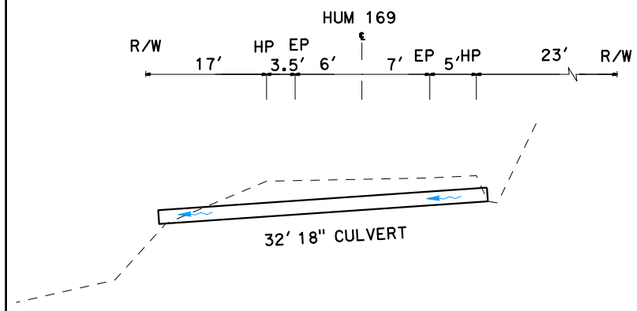
PROPOSED DESIGN



PM 19.07
CROSS SECTION

NO SCALE

AS-BUILT



REHAB CULVERTS
HUM-169-PM 15.07/33.75
01-0H4100 EFIS 0117000169

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY: Farlar Kohzad
CHECKED BY: Rene DeWees, Farlar Kohzad
FUNCTIONAL SUPERVISOR: Lena Ashley

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION DATE PLOTTED => 6-JAN-2022
00-00-00 TIME PLOTTED => 10:04

BORDER LAST REVISED 7/2/2010

USERNAME => s151816
DGN FILE => 01-0H410 Preliminary Designs.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0313

PROJECT NUMBER & PHASE 01170001690

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	HUM	SR-169	VAR	17	51

DESIGN STUDY

REGISTERED CIVIL ENGINEER DATE

ONLY

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Thomas Phillips — No. C64633 — Exp.06/30/23 — CIVIL — STATE OF CALIFORNIA

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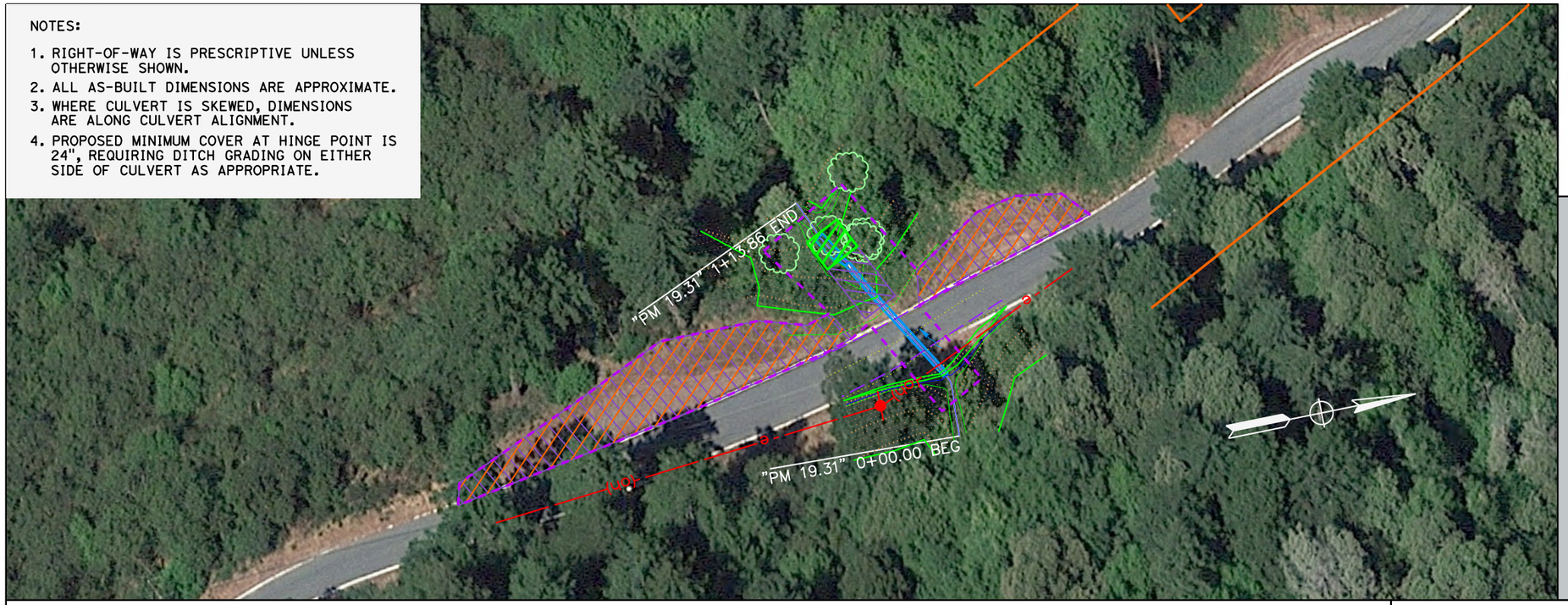
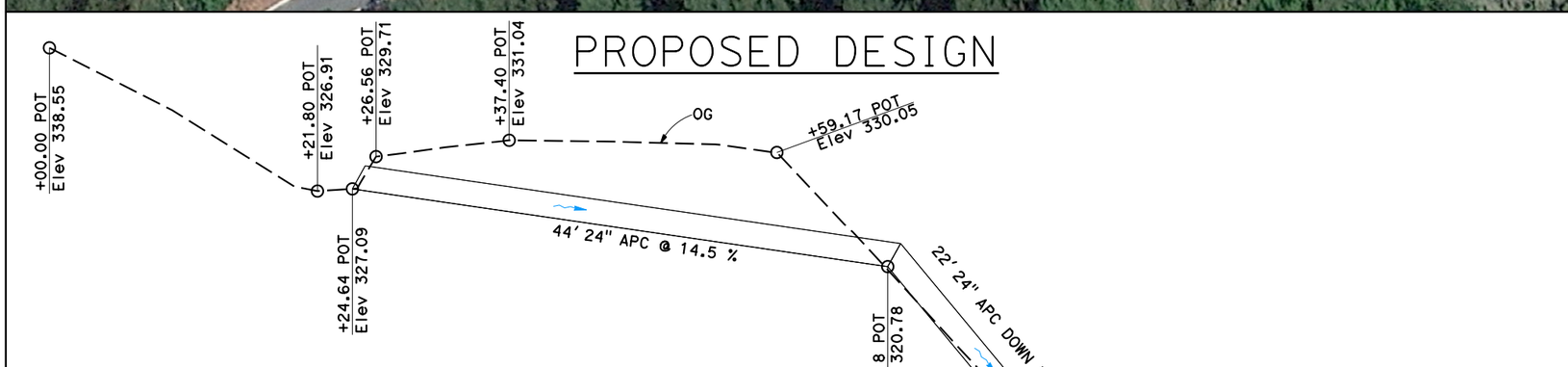


LEGEND

- APPROXIMATE R/W
- FLOW DIRECTION
- NEW CULVERT
- PRIVATE WATER LINE
- POTENTIAL STAGING AREA
- TCE
- PERMANENT EASEMENT
- ESL
- TOPOGRAPHIC SURFACE BOUNDARY

PROPOSED DESIGN

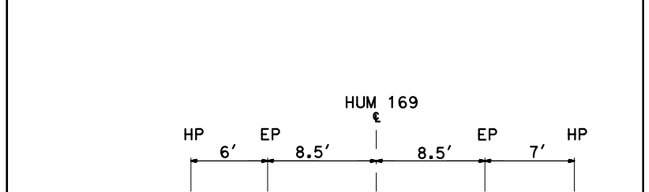


PM 19.31

CROSS SECTION

NO SCALE

AS-BUILT



REHAB CULVERTS
HUM-169-PM 15.07/33.75
01-0H4100 EFIS 0117000169

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

FUNCTIONAL SUPERVISOR: Lena Ashley

CALCULATED-DESIGNED BY: Farlar Kohzad

CHECKED BY: Rene DeWees, Farlar Kohzad

DATE REVISED	REVISED BY

LAST REVISION: DATE PLOTTED => 6-JAN-2022; 00-00-00 TIME PLOTTED => 10:08

BORDER LAST REVISED 7/2/2010

USERNAME => s151816

DGN FILE => 01-0H410 Preliminary Designs.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0313

PROJECT NUMBER & PHASE 01170001690

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	HUM	SR-169	VAR	18	51

DESIGN STUDY

REGISTERED CIVIL ENGINEER DATE

ONLY

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Thomas Phillips
No. C64633
Exp.06/30/23
CIVIL
STATE OF CALIFORNIA

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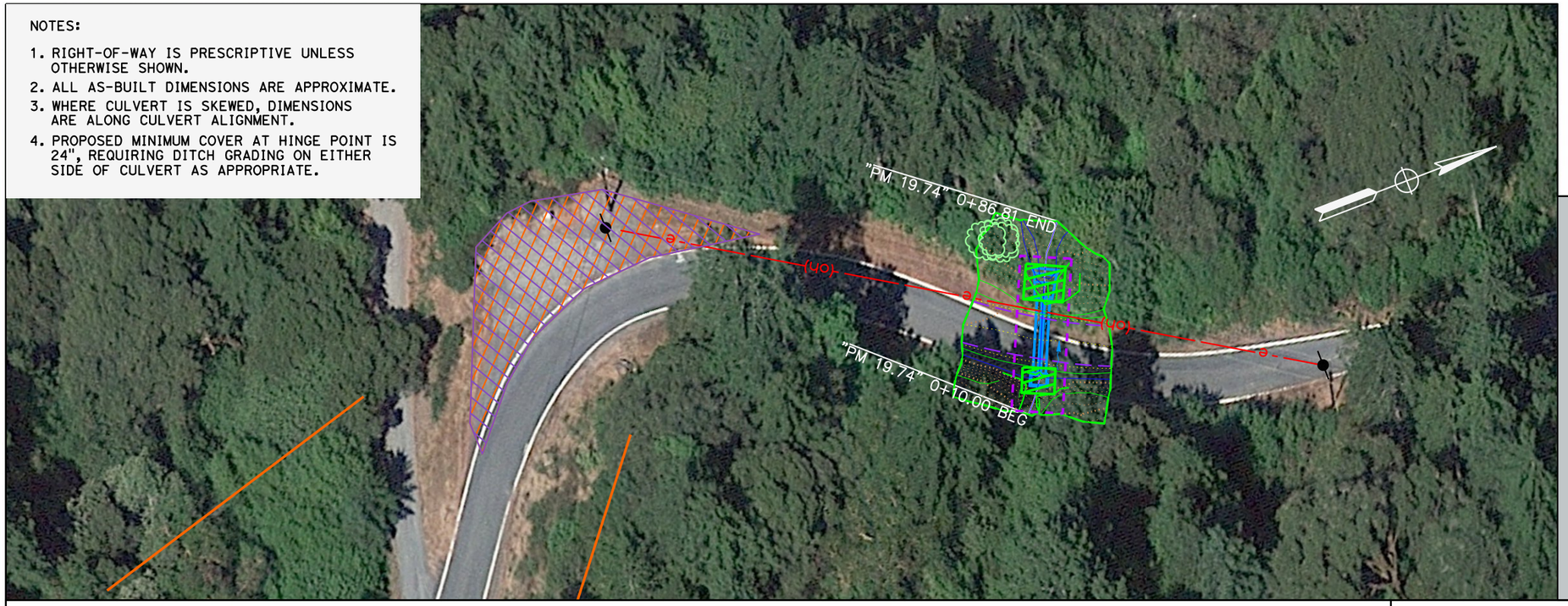
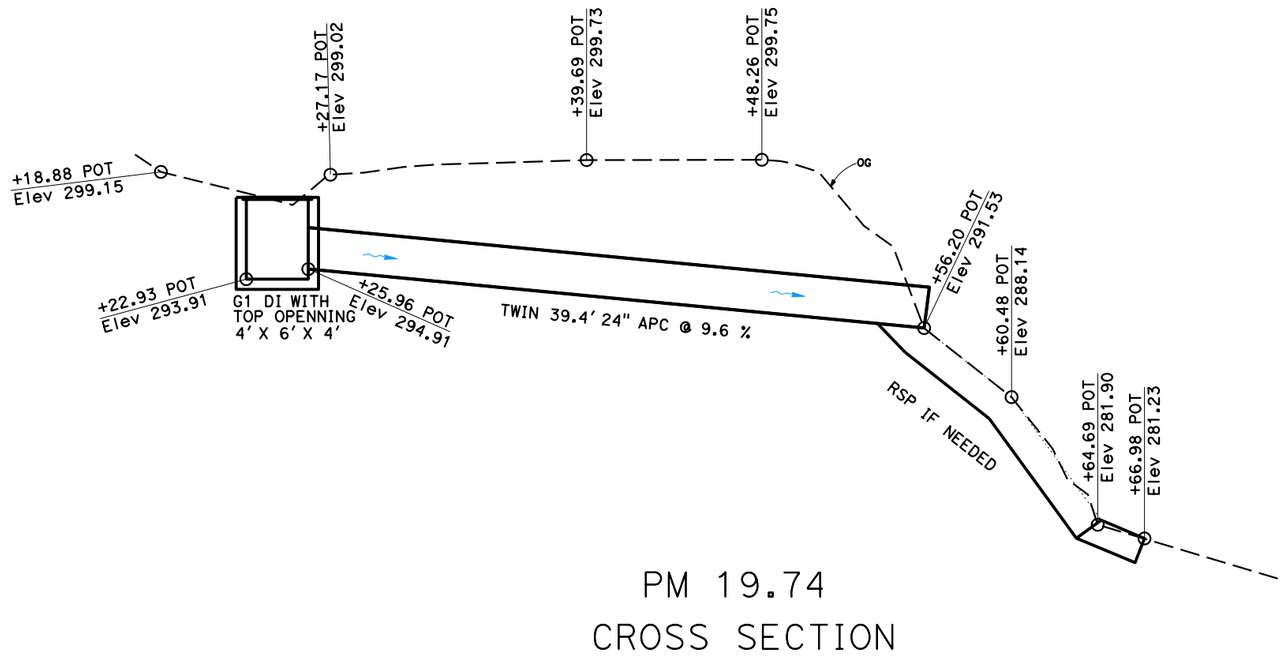


LEGEND

- APPROXIMATE R/W
- FLOW DIRECTION
- NEW CULVERT
- PRIVATE WATER LINE
- POTENTIAL STAGING AREA
- TCE
- PERMANENT EASEMENT
- ESL
- TOPOGRAPHIC SURFACE BOUNDARY

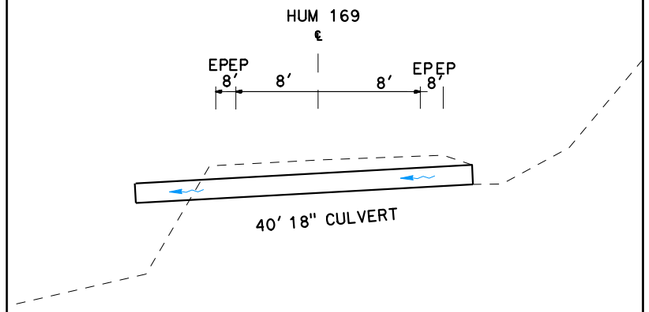
PROPOSED DESIGN



PM 19.74
CROSS SECTION

NO SCALE

AS-BUILT



REHAB CULVERTS
HUM-169-PM 15.07/33.75
01-0H4100 EFIS 0117000169

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY: Farlar Kohzad
CHECKED BY: Rene DeWees, Farlar Kohzad
FUNCTIONAL SUPERVISOR: Lena Ashley

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION DATE PLOTTED => 6-JAN-2022
00-00-00 TIME PLOTTED => 10:12

BORDER LAST REVISED 7/2/2010 | USERNAME => s151816 | DGN FILE => 01-0H410 Preliminary Designs.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0313 | PROJECT NUMBER & PHASE 01170001690

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	HUM	SR-169	VAR	19	51

DESIGN STUDY

REGISTERED CIVIL ENGINEER DATE

ONLY

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Thomas Phillips
No. C64633
Exp.06/30/23
CIVIL
STATE OF CALIFORNIA

NOTES:

1. RIGHT-OF-WAY IS PRESCRIPTIVE UNLESS OTHERWISE SHOWN.
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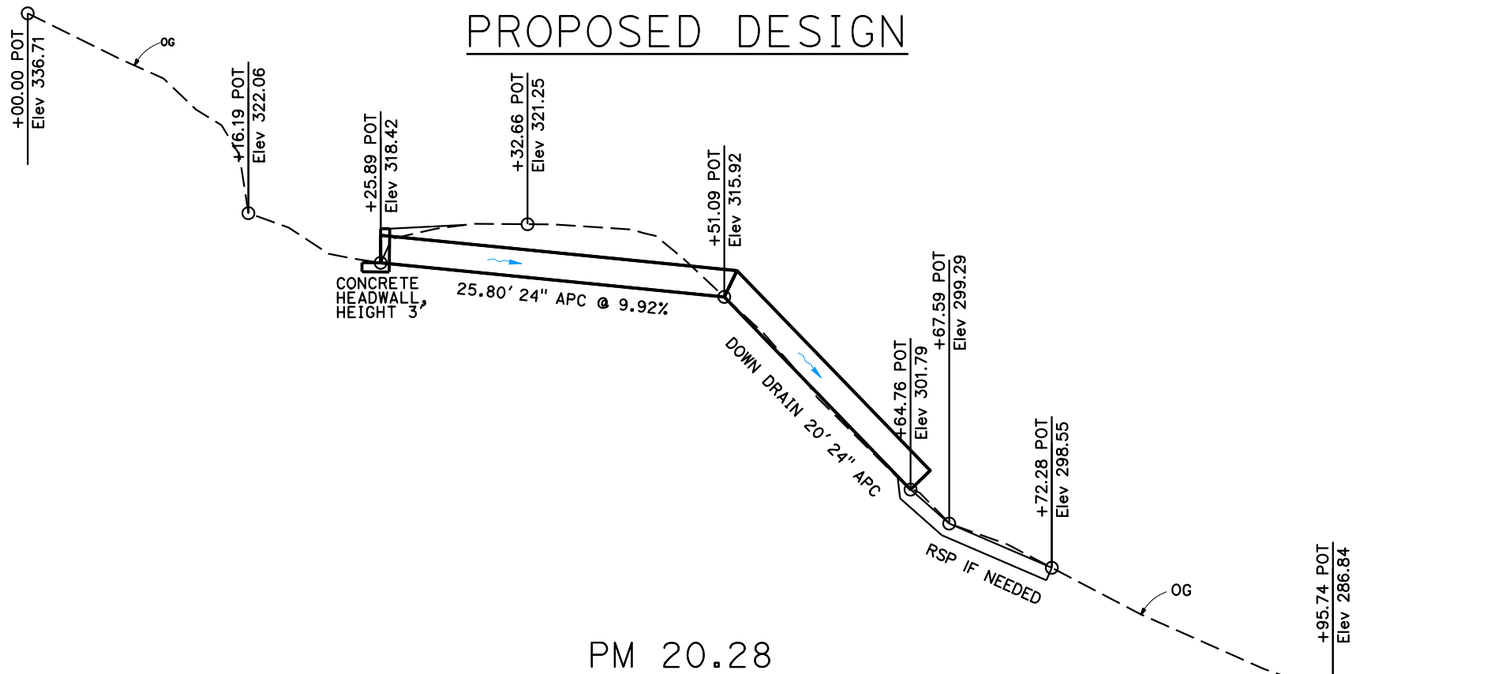
4. PROPOSED MINIMUM COVER AT HINGE POINT IS 24", REQUIRING DITCH GRADING ON EITHER SIDE OF CULVERT AS APPROPRIATE.

LEGEND

- APPROXIMATE R/W
- FLOW DIRECTION
- NEW CULVERT
- PRIVATE WATER LINE
- POTENTIAL STAGING AREA
- TCE
- PERMANENT EASEMENT
- ESL
- TOPOGRAPHIC SURFACE BOUNDARY

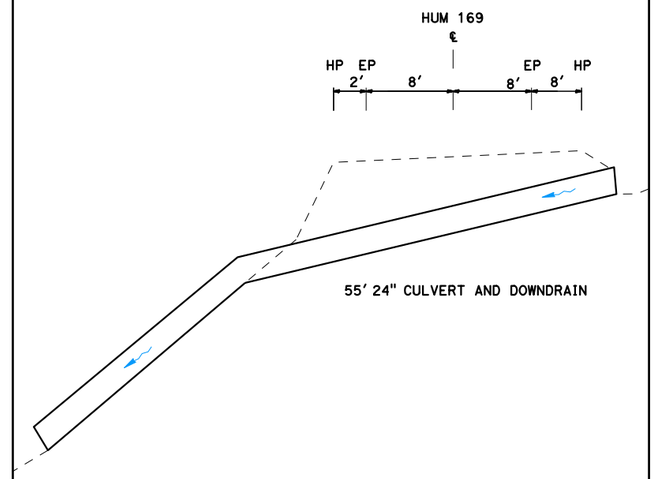
PROPOSED DESIGN



PM 20.28
CROSS SECTION

NO SCALE

AS-BUILT



REHAB CULVERTS
HUM-169-PM 15.07/33.75
01-0H4100 EFIS 0117000169

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
FUNCTIONAL SUPERVISOR: Lena Ashley
CALCULATED-DESIGNED BY: Farlar Kohzad
CHECKED BY: Rene DeWees, Farlar Kohzad
REVISED BY
DATE REVISED

LAST REVISION DATE PLOTTED => 7-JAN-2022
TIME PLOTTED => 13:20
00-00-00

BORDER LAST REVISED 7/2/2010
USERNAME => s151816
DGN FILE => 01-0H410 Preliminary Designs.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 0313
PROJECT NUMBER & PHASE 01170001690

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	HUM	SR-169	VAR	20	51

DESIGN STUDY

REGISTERED CIVIL ENGINEER DATE

ONLY

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Thomas Phillips — No. C64633 — Exp.06/30/23 — CIVIL — STATE OF CALIFORNIA

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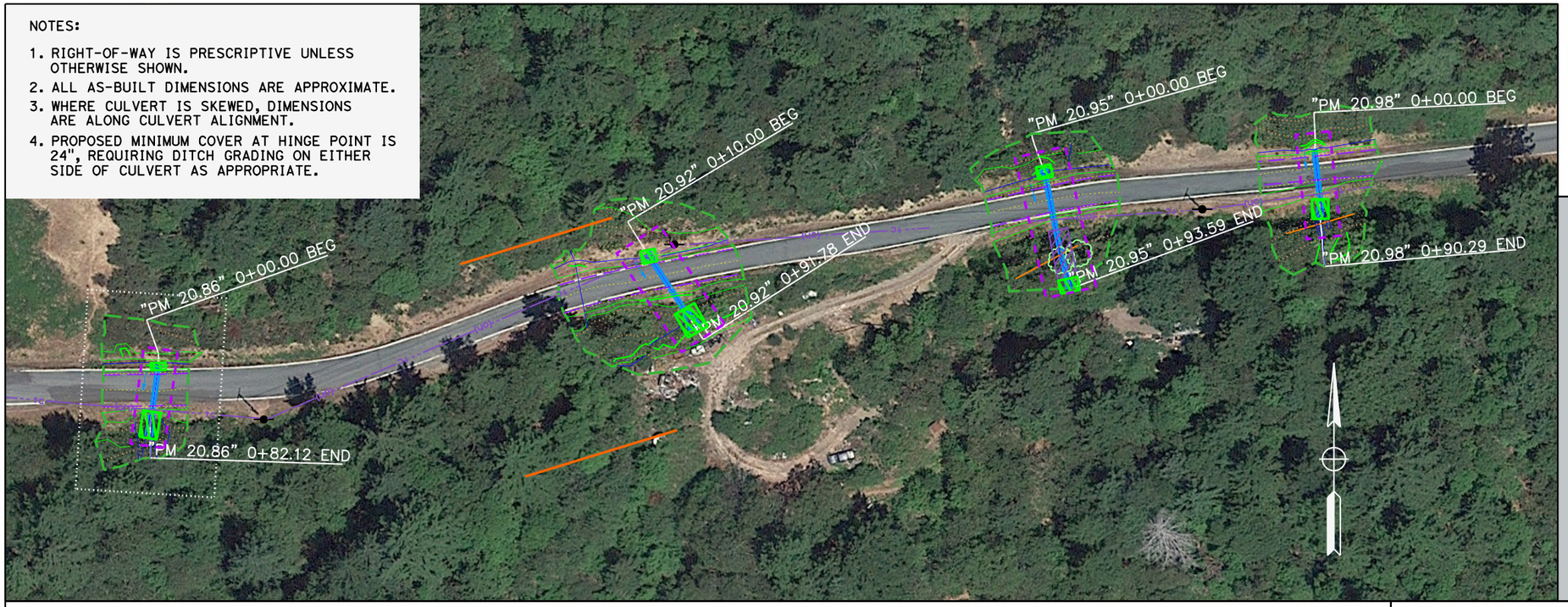
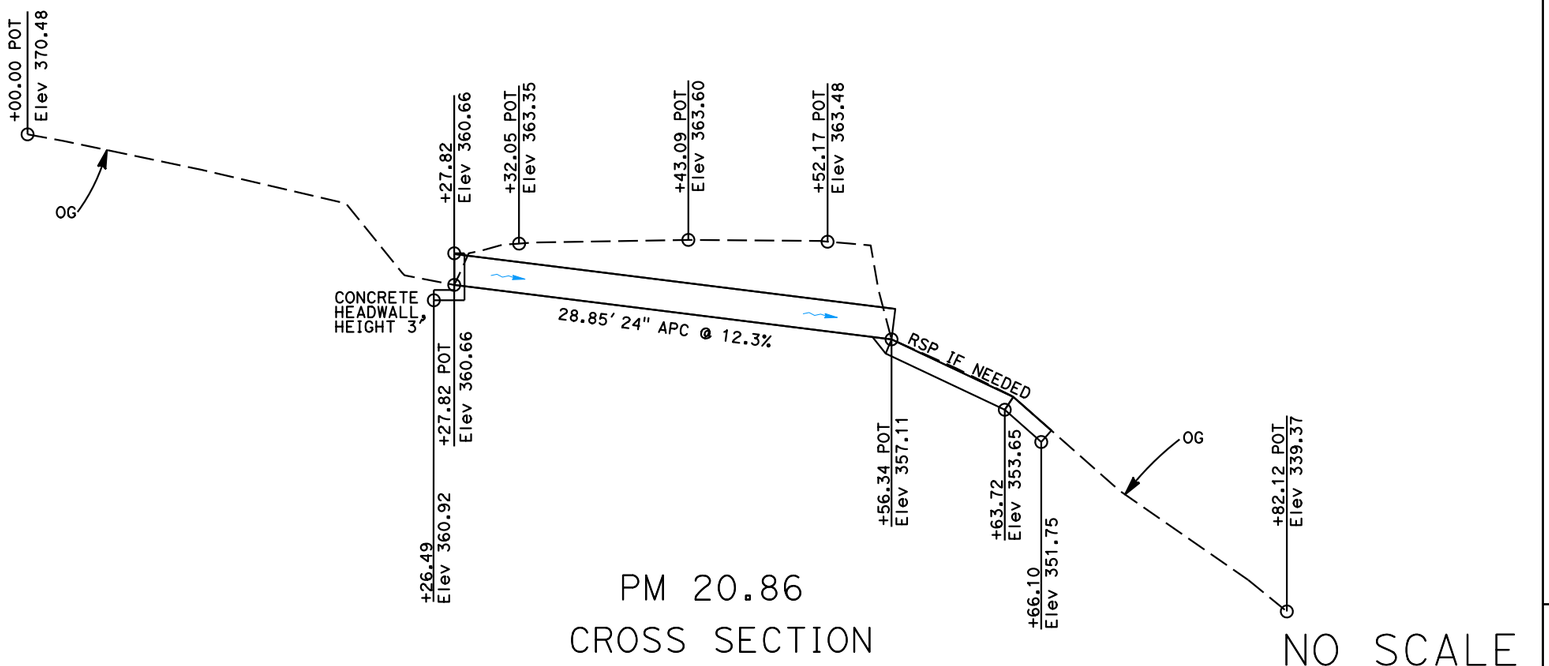


LEGEND

- APPROXIMATE R/W
- FLOW DIRECTION
- NEW CULVERT
- PRIVATE WATER LINE
- POTENTIAL STAGING AREA
- TCE
- PERMANENT EASEMENT
- ESL
- TOPOGRAPHIC SURFACE BOUNDARY

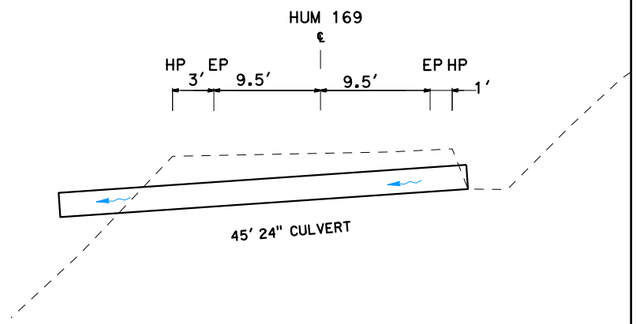
PROPOSED DESIGN



PM 20.86
CROSS SECTION

NO SCALE

AS-BUILT



REHAB CULVERTS
HUM-169-PM 15.07/33.75
01-0H4100 EFIS 0117000169

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

FUNCTIONAL SUPERVISOR: Lena Ashley

CALCULATED-DESIGNED BY: Farlar Kohzad

CHECKED BY: Rene DeWees, Farlar Kohzad

REVISED BY | DATE REVISED

LAST REVISION | DATE PLOTTED => 6-JAN-2022
00-00-00 | TIME PLOTTED => 10:28

BORDER LAST REVISED 7/2/2010

USERNAME => s151816
DGN FILE => 01-0H410 Preliminary Designs.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0313

PROJECT NUMBER & PHASE 01170001690

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	HUM	SR-169	VAR	21	51

DESIGN STUDY

REGISTERED CIVIL ENGINEER DATE

ONLY

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Thomas Phillips
No. C64633
Exp.06/30/23
CIVIL
STATE OF CALIFORNIA

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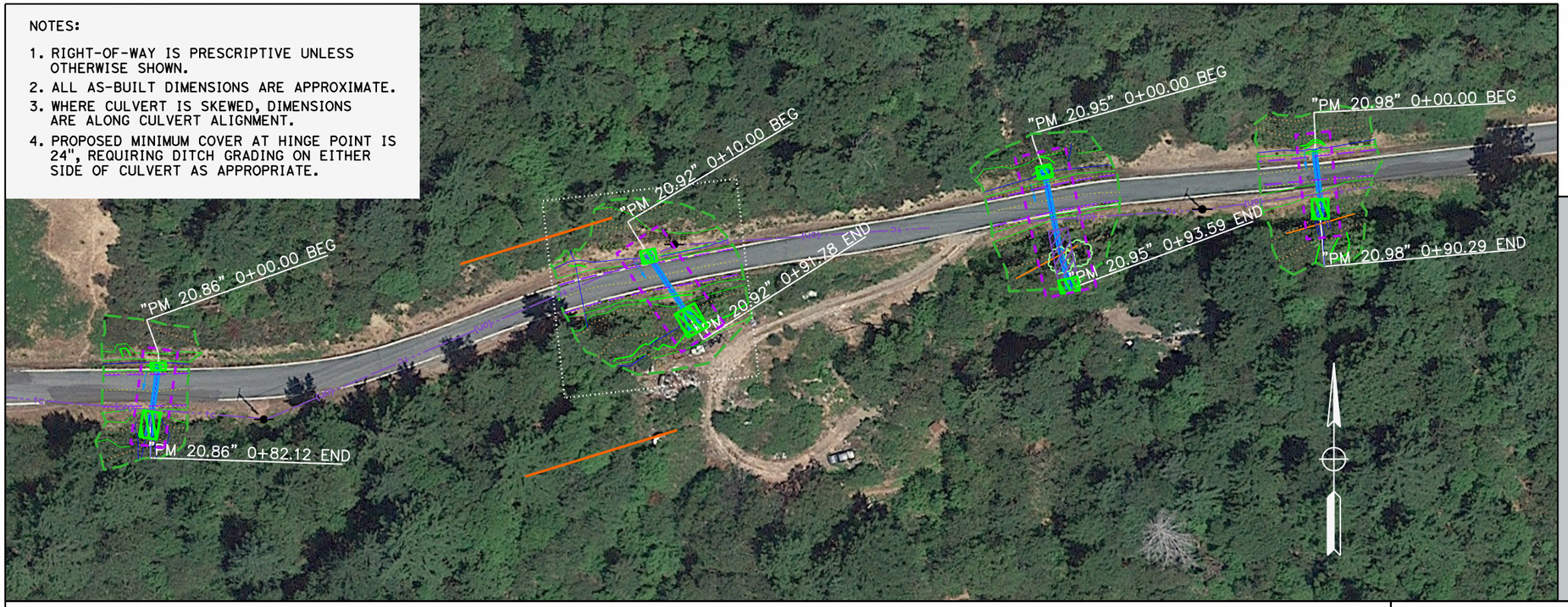
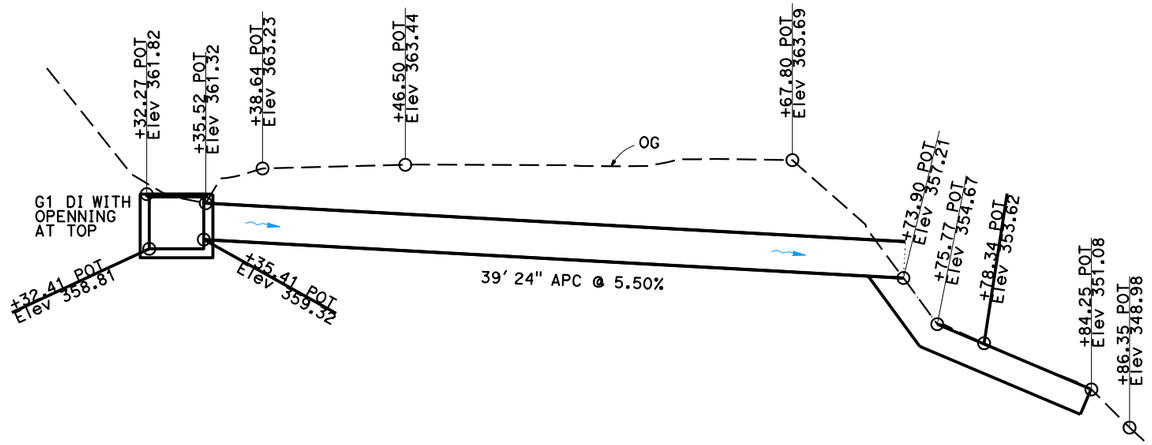


LEGEND

- APPROXIMATE R/W
- FLOW DIRECTION
- NEW CULVERT
- PRIVATE WATER LINE
- POTENTIAL STAGING AREA
- TCE
- PERMANENT EASEMENT
- ESL
- TOPOGRAPHIC SURFACE BOUNDARY

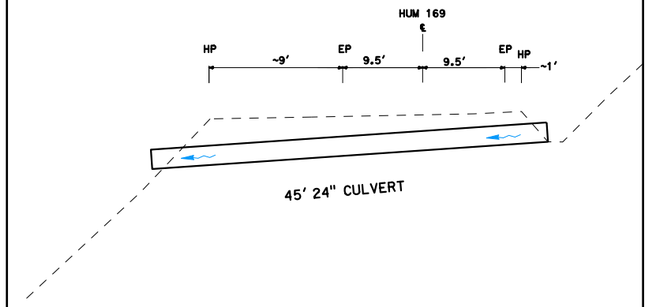
PROPOSED DESIGN



PM 20.92
CROSS SECTION

NO SCALE

AS-BUILT



REHAB CULVERTS
HUM-169-PM 15.07/33.75
01-0H4100 EFIS 0117000169

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

FUNCTIONAL SUPERVISOR: Lena Ashley

CALCULATED-DESIGNED BY: Farlar Kohzad

CHECKED BY: Rene DeWees, Farlar Kohzad

REVISED BY | DATE REVISED

LAST REVISION | DATE PLOTTED => 6-JAN-2022 | TIME PLOTTED => 10:25 | 00-00-00

BORDER LAST REVISED 7/2/2010

USERNAME => s151816
DGN FILE => 01-0H410 Preliminary Designs.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0313

PROJECT NUMBER & PHASE 01170001690

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	HUM	SR-169	VAR	22	51

DESIGN STUDY

REGISTERED CIVIL ENGINEER DATE

ONLY

PLANS APPROVAL DATE

Thomas Phillips No. C64633 Exp.06/30/23 CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

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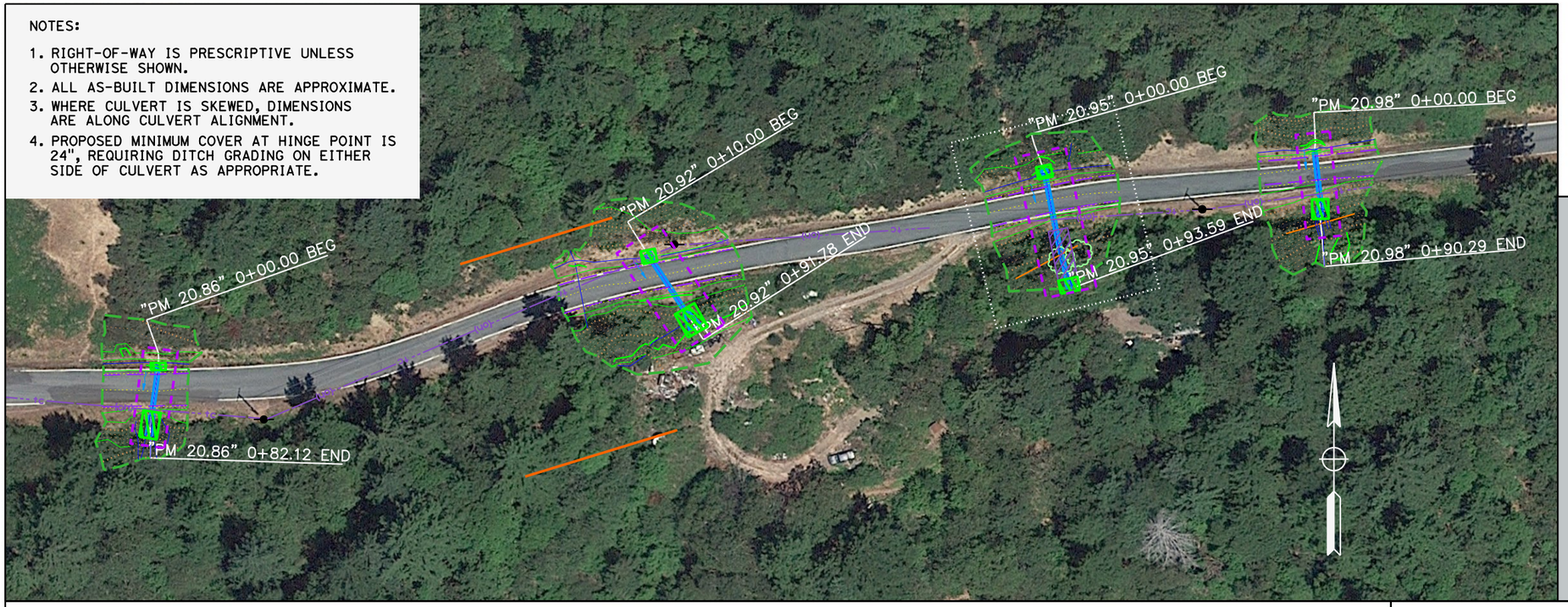
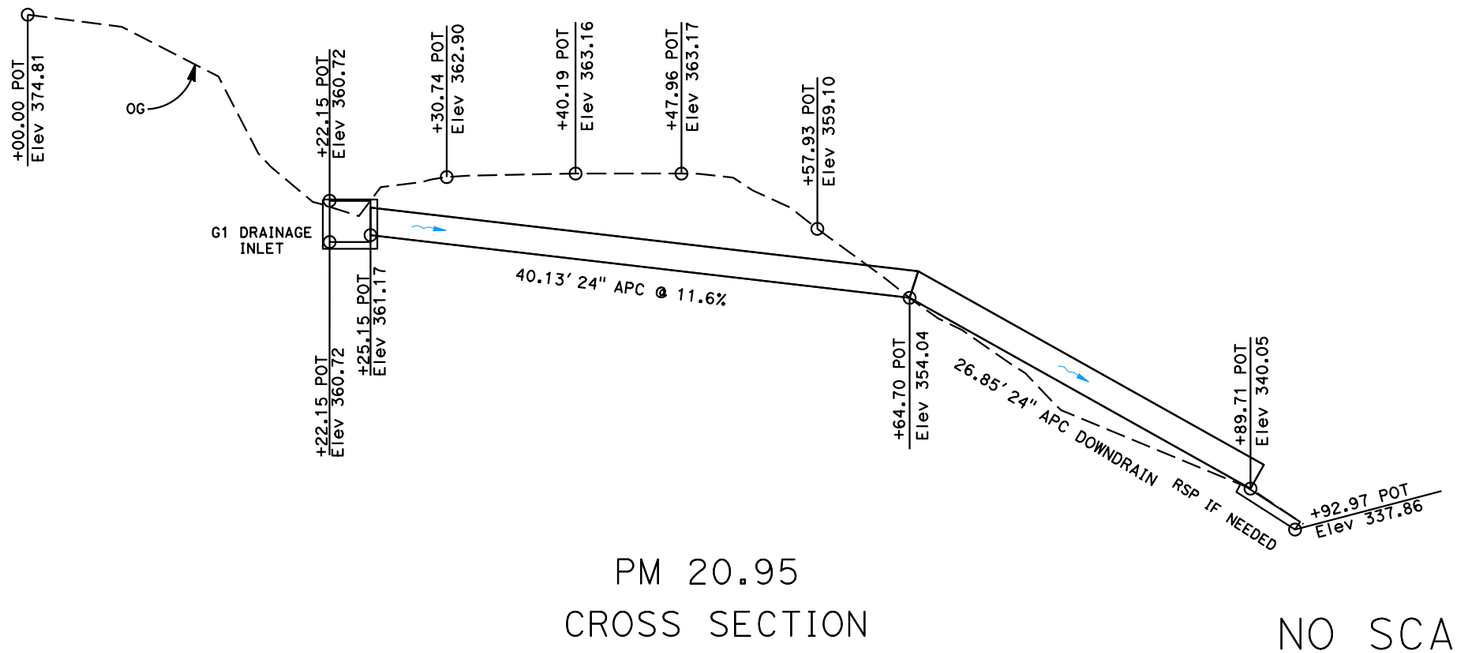


LEGEND

- APPROXIMATE R/W
- FLOW DIRECTION
- NEW CULVERT
- PRIVATE WATER LINE
- POTENTIAL STAGING AREA
- TCE
- PERMANENT EASEMENT
- ESL
- TOPOGRAPHIC SURFACE BOUNDARY

PROPOSED DESIGN

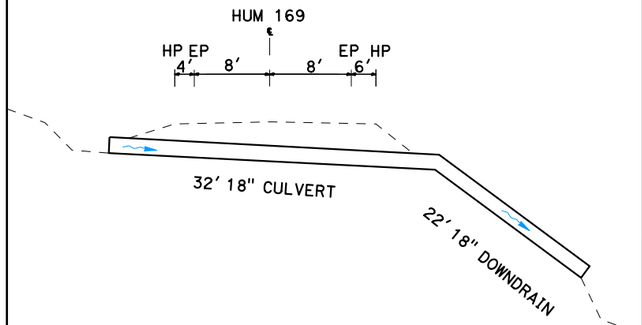


PM 20.95

CROSS SECTION

NO SCALE

AS-BUILT



REHAB CULVERTS
HUM-169-PM 15.07/33.75
01-0H4100 EFIS 0117000169

REVISED BY | DATE REVISED

CALCULATED-DESIGNED BY: Farlar Kohzad
CHECKED BY: Rene DeWees, Farlar Kohzad

FUNCTIONAL SUPERVISOR: Lena Ashley

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

LAST REVISION DATE PLOTTED => 12-JAN-2022
00-00-00 TIME PLOTTED => 14:46

BORDER LAST REVISED 7/2/2010

USERNAME => s151816
DGN FILE => 01-0H410 Preliminary Designs.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0313

PROJECT NUMBER & PHASE 01170001690

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	HUM	SR-169	VAR	23	51

DESIGN STUDY

REGISTERED CIVIL ENGINEER DATE

ONLY

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Thomas Phillips
No. C64633
Exp.06/30/23
CIVIL
STATE OF CALIFORNIA

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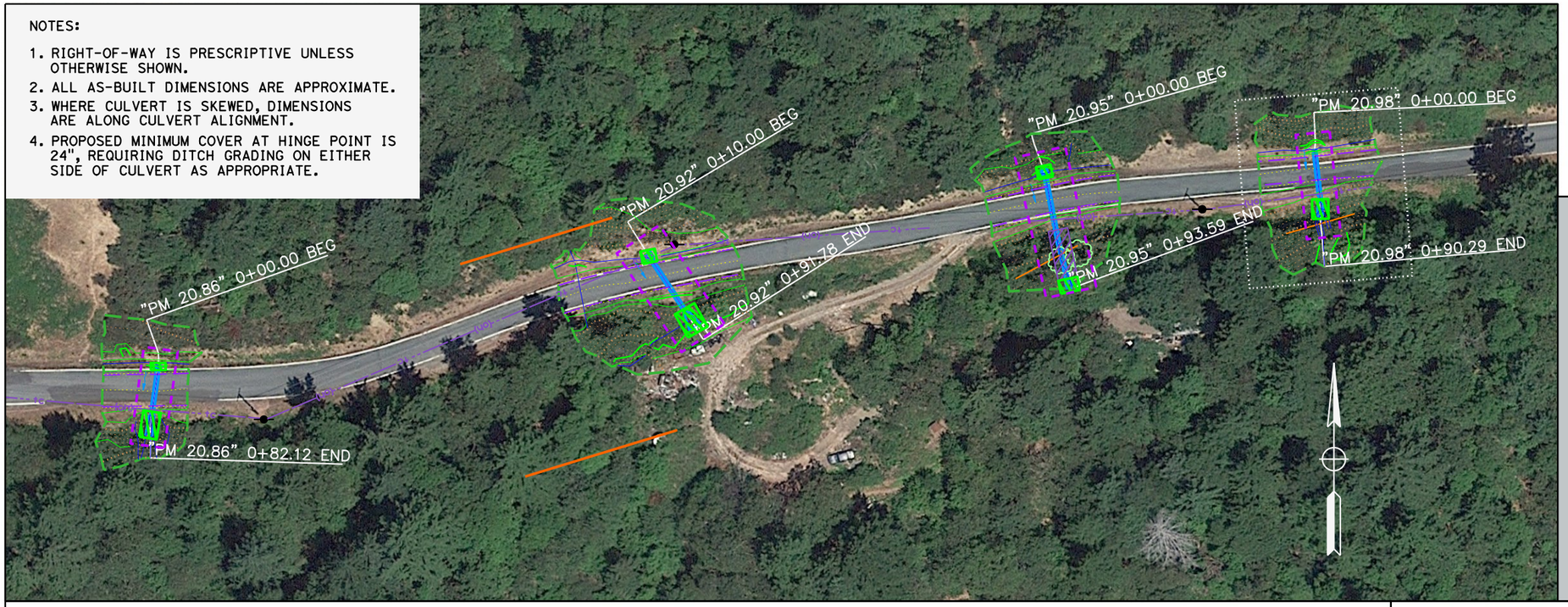
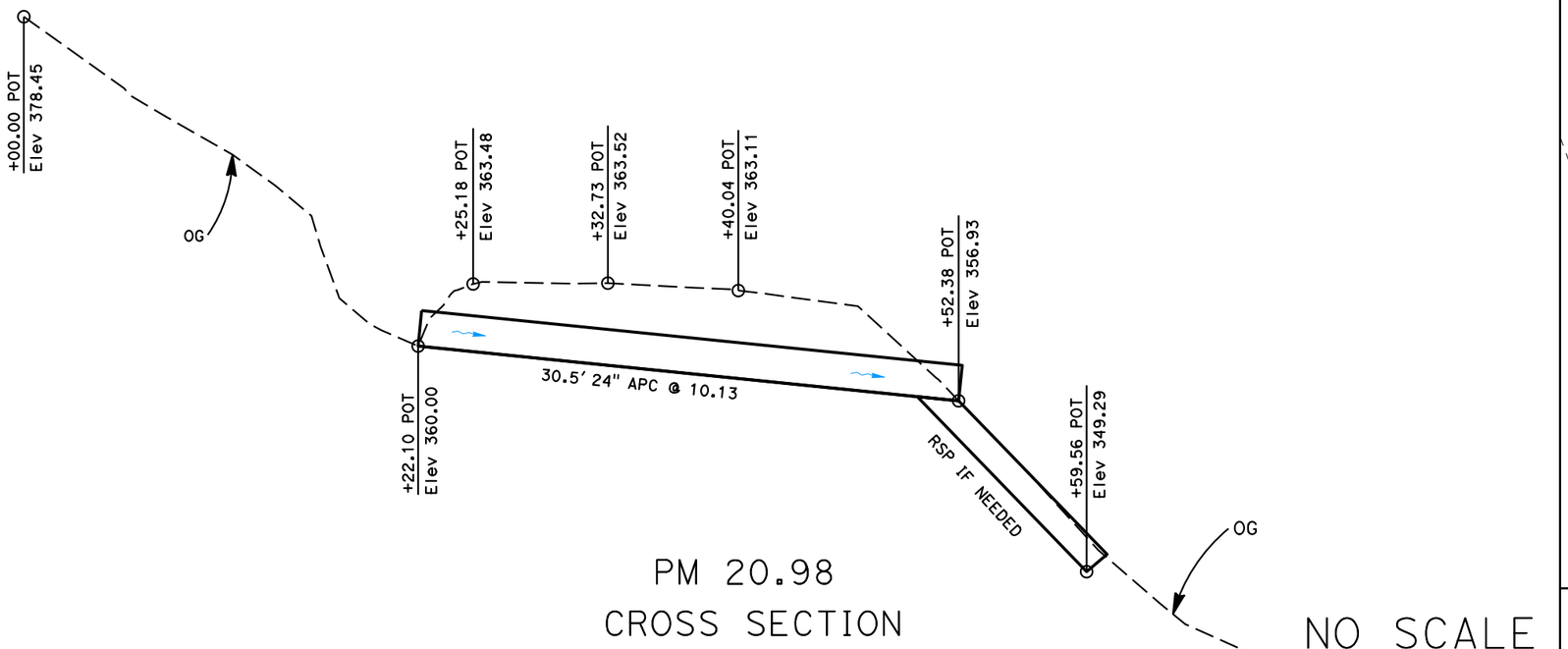


LEGEND

- APPROXIMATE R/W
- FLOW DIRECTION
- NEW CULVERT
- PRIVATE WATER LINE
- POTENTIAL STAGING AREA
- TCE
- PERMANENT EASEMENT
- ESL
- TOPOGRAPHIC SURFACE BOUNDARY

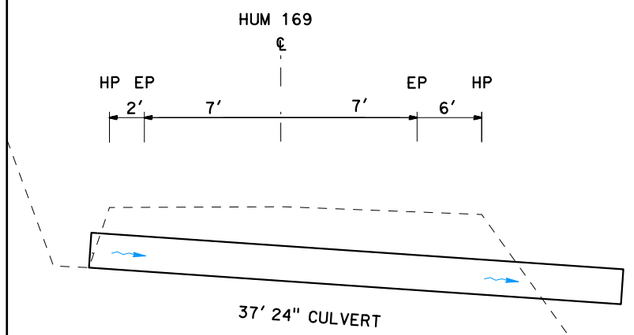
PROPOSED DESIGN



PM 20.98
CROSS SECTION

NO SCALE

AS-BUILT



REHAB CULVERTS
HUM-169-PM 15.07/33.75
01-0H4100 EFIS 0117000169

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY: Farlar Kohzad
CHECKED BY: Rene DeWees, Farlar Kohzad
FUNCTIONAL SUPERVISOR: Lena Ashley

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION DATE PLOTTED => 6-JAN-2022
00-00-00 TIME PLOTTED => 10:37

BORDER LAST REVISED 7/2/2010

USERNAME => s151816
DGN FILE => 01-0H410 Preliminary Designs.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0313

PROJECT NUMBER & PHASE 01170001690

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	HUM	SR-169	VAR	24	51

DESIGN STUDY

REGISTERED CIVIL ENGINEER DATE

ONLY

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Thomas Phillips
No. C64633
Exp.06/30/23
CIVIL
STATE OF CALIFORNIA

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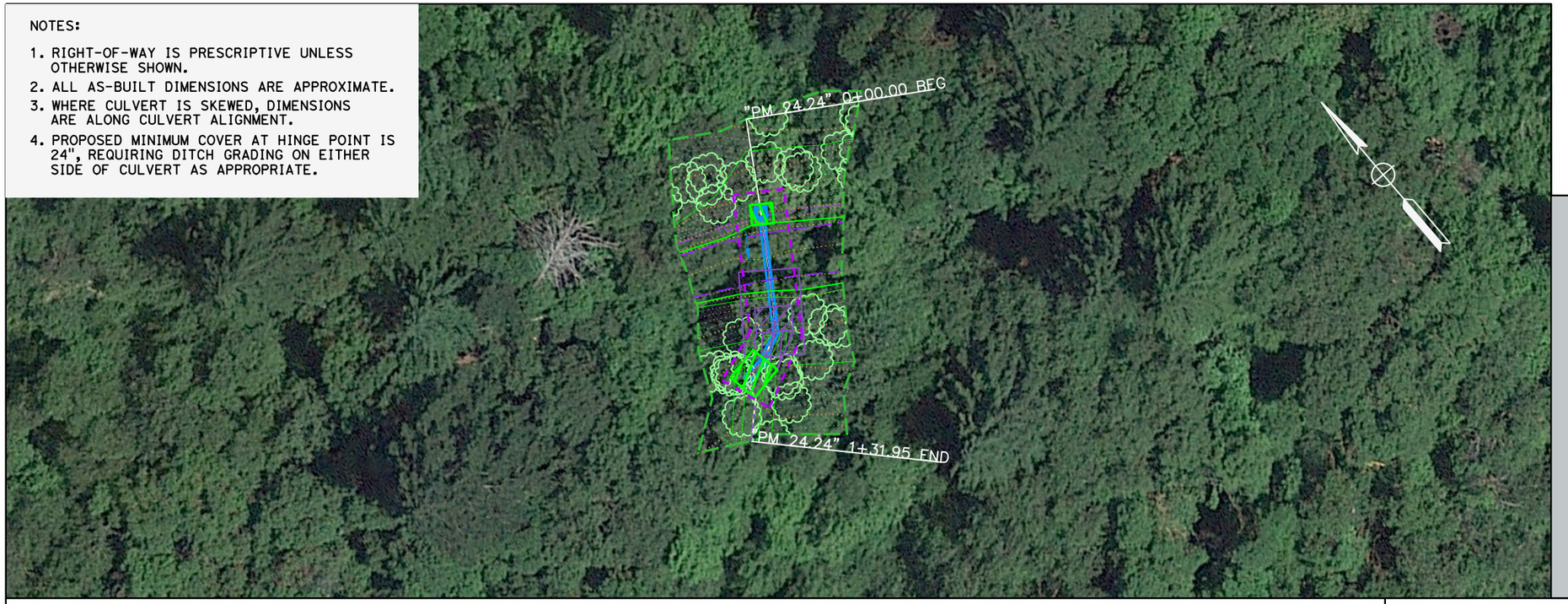
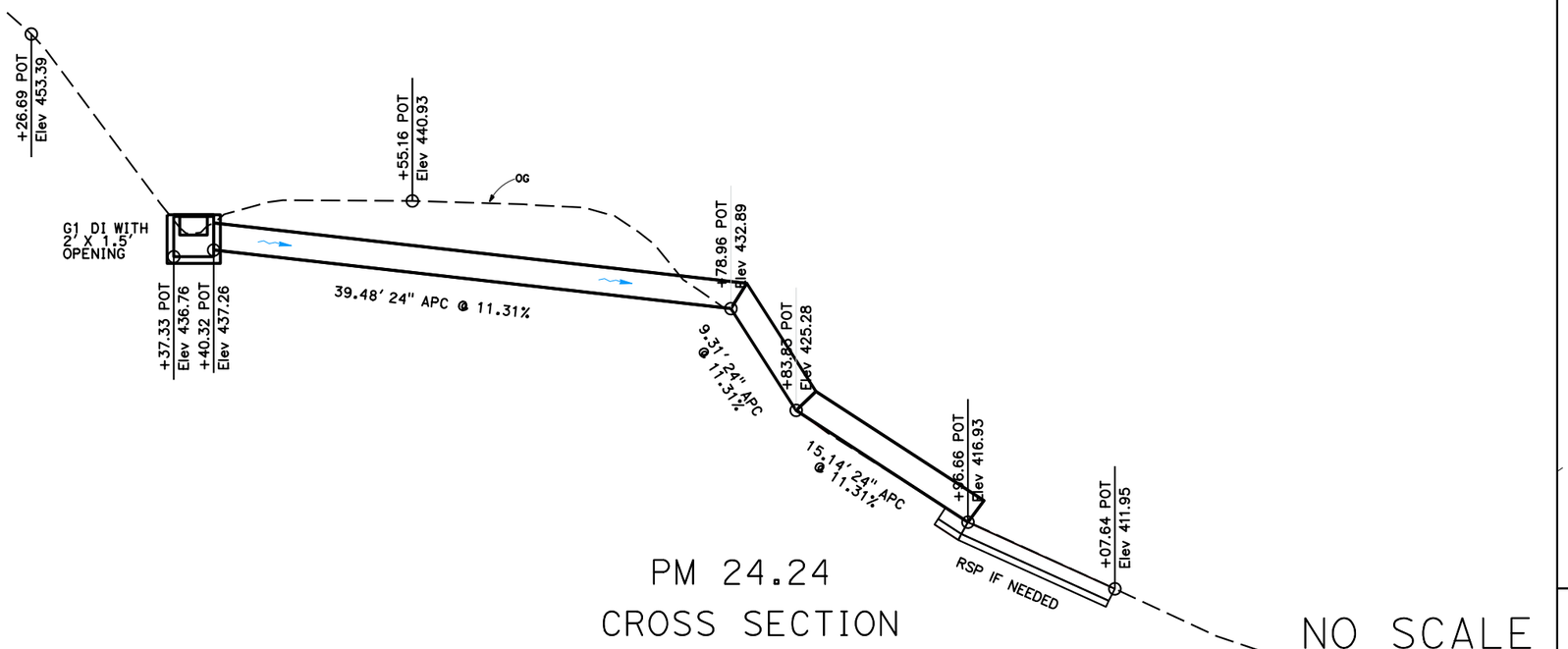


LEGEND

- APPROXIMATE R/W
- FLOW DIRECTION
- NEW CULVERT
- PRIVATE WATER LINE
- POTENTIAL STAGING AREA
- TCE
- PERMANENT EASEMENT
- ESL
- TOPOGRAPHIC SURFACE BOUNDARY

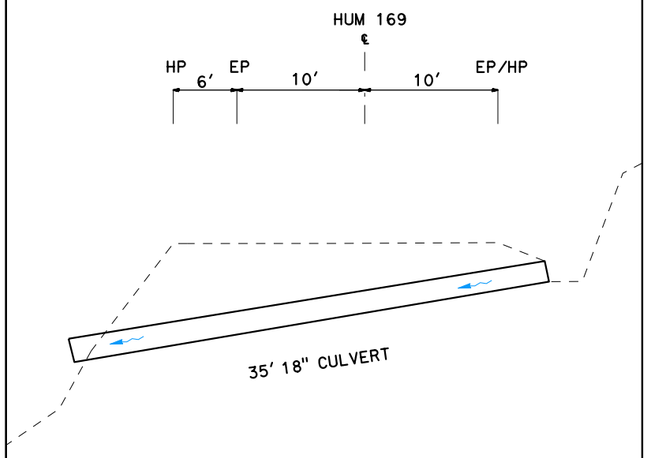
PROPOSED DESIGN



PM 24.24
CROSS SECTION

NO SCALE

AS-BUILT



REHAB CULVERTS
HUM-169-PM 15.07/33.75
01-0H4100 EFIS 0117000169

REVISED BY	
DATE REVISED	
CALCULATED-DESIGNED BY	Farlar Kohzad
CHECKED BY	Rene DeWees, Farlar Kohzad
FUNCTIONAL SUPERVISOR	Lena Ashley

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

LAST REVISION DATE PLOTTED => 6-JAN-2022
LAST REVISION TIME PLOTTED => 10:39
00-00-00

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	HUM	SR-169	VAR	25	51

DESIGN STUDY

REGISTERED CIVIL ENGINEER DATE

ONLY

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Thomas Phillips
No. C64633
Exp.06/30/23
CIVIL
STATE OF CALIFORNIA

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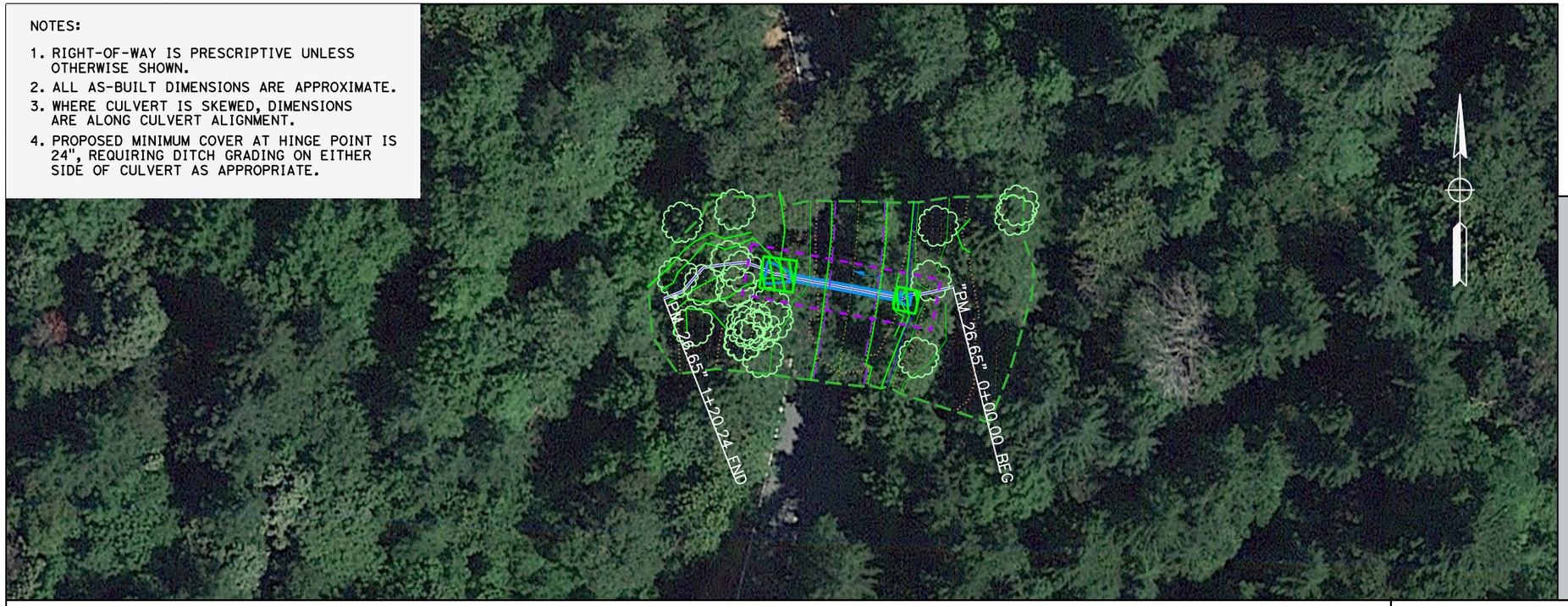
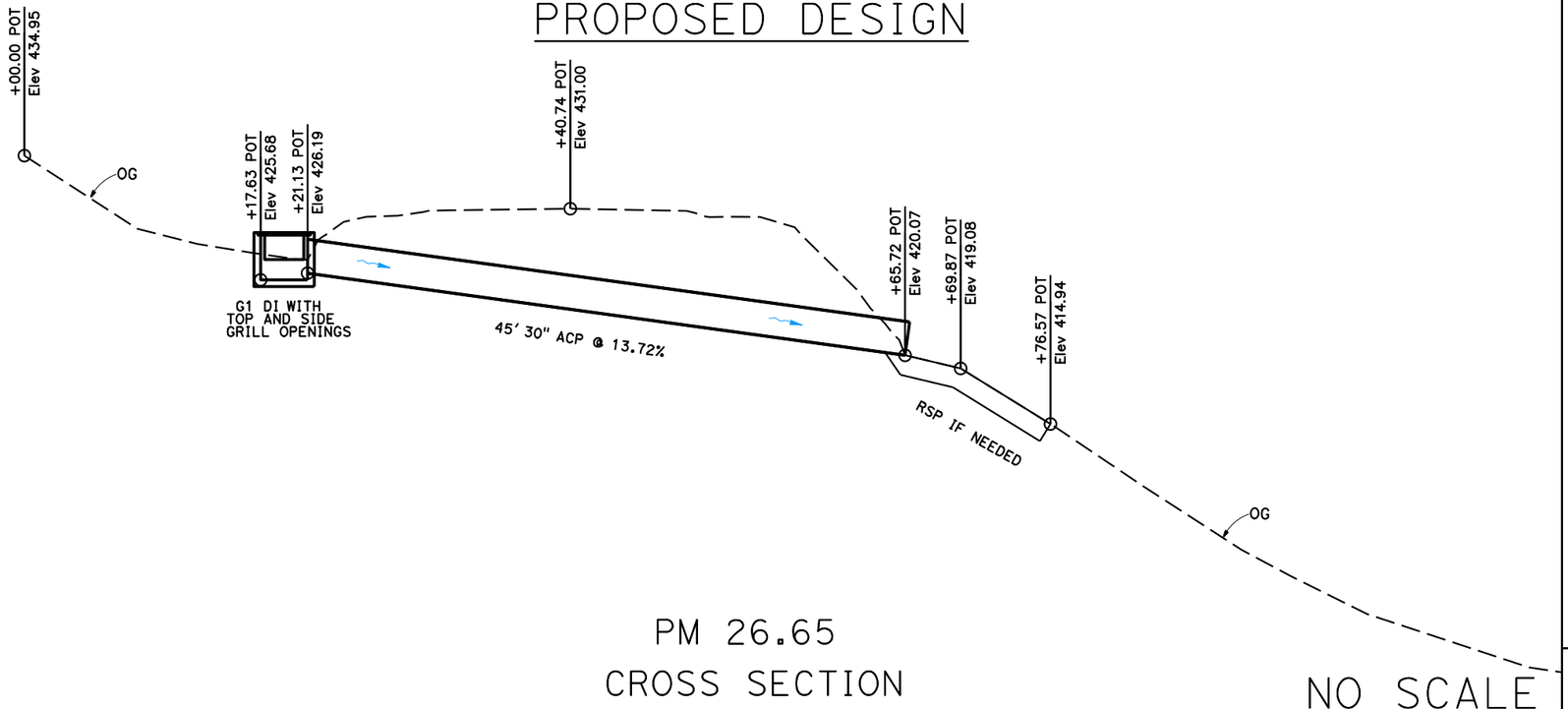


LEGEND

- APPROXIMATE R/W
- FLOW DIRECTION
- NEW CULVERT
- PRIVATE WATER LINE
- POTENTIAL STAGING AREA
- TCE
- PERMANENT EASEMENT
- ESL
- TOPOGRAPHIC SURFACE BOUNDARY

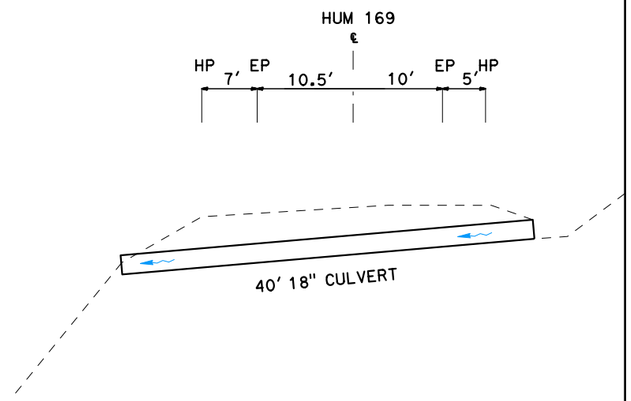
PROPOSED DESIGN



PM 26.65
CROSS SECTION

NO SCALE

AS-BUILT



REHAB CULVERTS
HUM-169-PM 15.07/33.75
01-0H4100 EFIS 0117000169

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY
CHECKED BY
Farlar Kohzad
Rene DeWees, Farlar Kohzad

FUNCTIONAL SUPERVISOR
Lena Ashley

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

LAST REVISION DATE PLOTTED => 12-JAN-2022
00-00-00 TIME PLOTTED => 14:50

BORDER LAST REVISED 7/2/2010

USERNAME => s151816
DGN FILE => 01-0H410 Preliminary Designs.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0313

PROJECT NUMBER & PHASE 01170001690

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	HUM	SR-169	VAR	26	51

DESIGN STUDY

REGISTERED CIVIL ENGINEER DATE

ONLY

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Thomas Phillips
No. C64633
Exp.06/30/23
CIVIL
STATE OF CALIFORNIA

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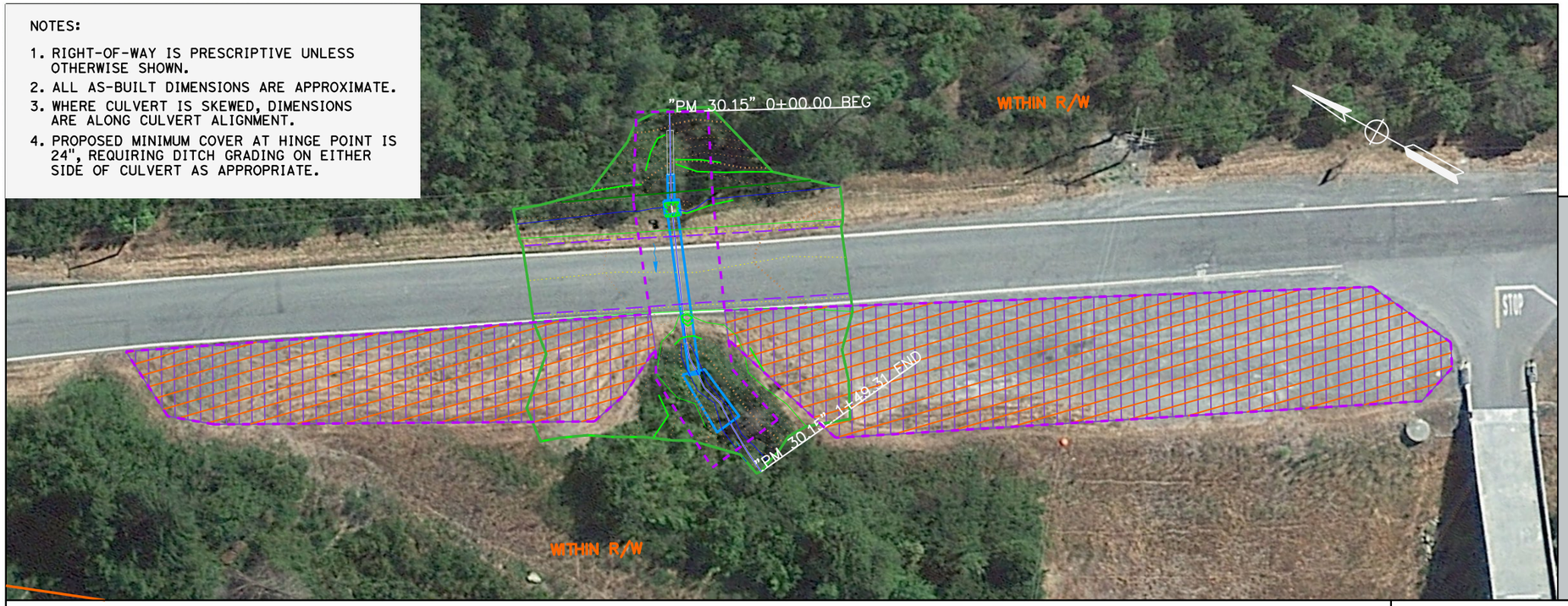

LEGEND

- APPROXIMATE R/W
- FLOW DIRECTION
- NEW CULVERT
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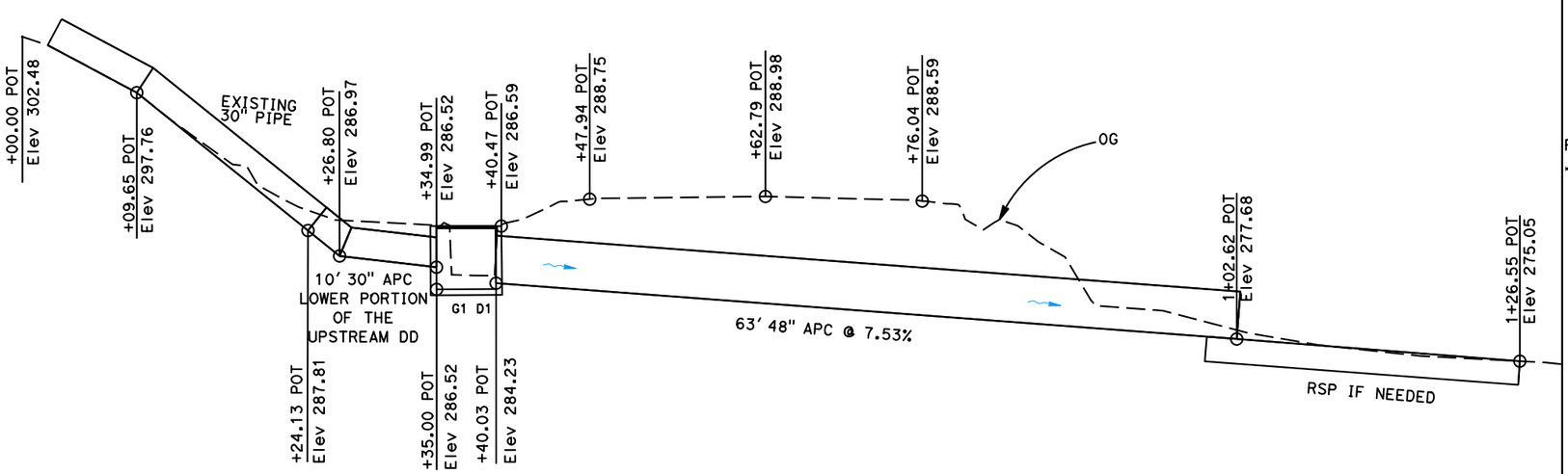
- POTENTIAL STAGING AREA
- TCE
- PERMANENT EASEMENT
- ESL
- TOPOGRAPHIC SURFACE BOUNDARY

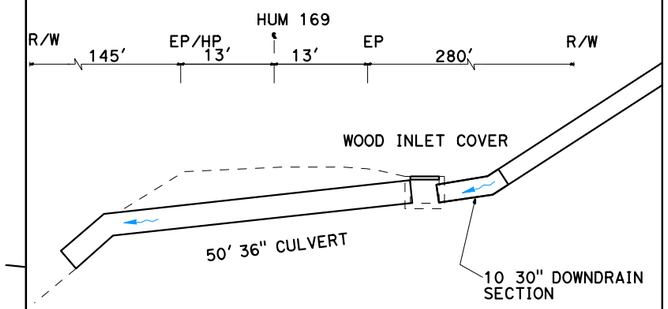
PROPOSED DESIGN



PM 30.15
CROSS SECTION

NO SCALE

AS-BUILT



REHAB CULVERTS
HUM-169-PM 15.07/33.75
01-0H4100 EFIS 0117000169

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY: Farlar Kohzad
CHECKED BY: Rene DeWees, Farlar Kohzad
FUNCTIONAL SUPERVISOR: Lena Ashley

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION DATE PLOTTED => 6-JAN-2022
00-00-00 TIME PLOTTED => 10:49

BORDER LAST REVISED 7/2/2010

USERNAME => s151816
DGN FILE => 01-0H410 Preliminary Designs.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0313

PROJECT NUMBER & PHASE 01170001690

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	HUM	SR-169	VAR	27	51

DESIGN STUDY

REGISTERED CIVIL ENGINEER DATE

ONLY

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Thomas Phillips
No. C64633
Exp.06/30/23
CIVIL
STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

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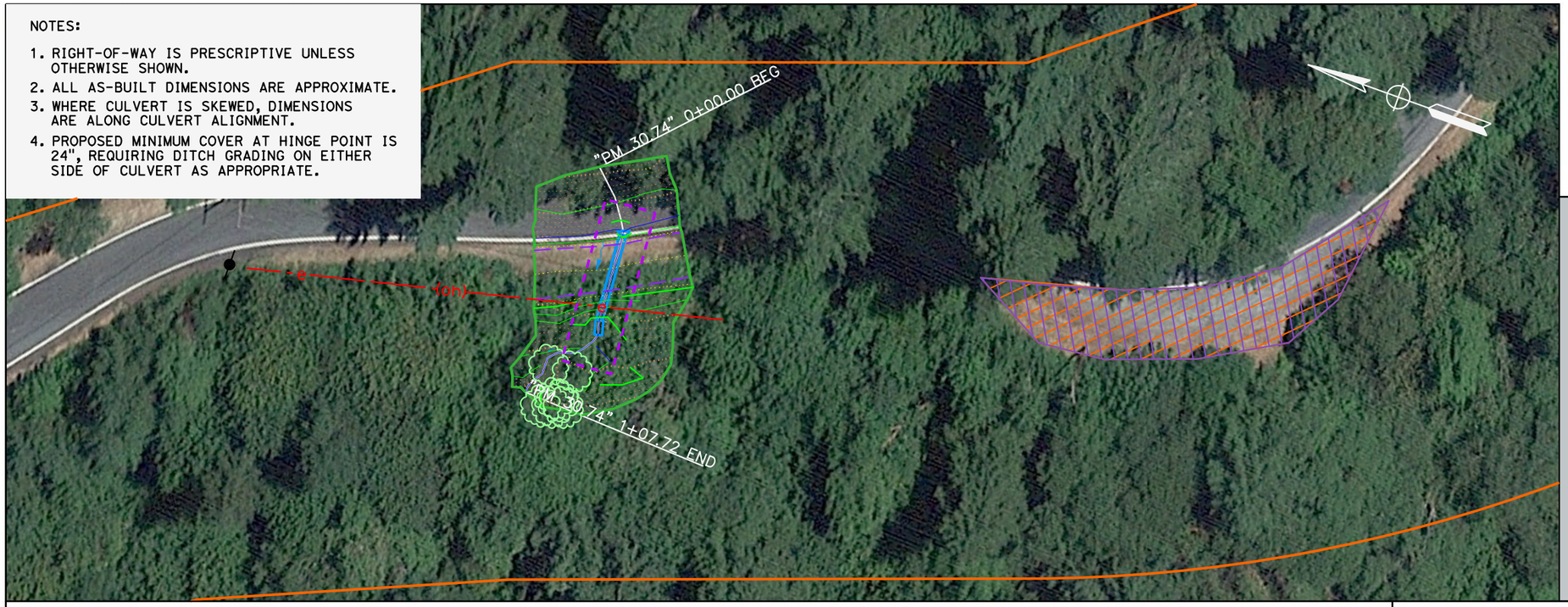
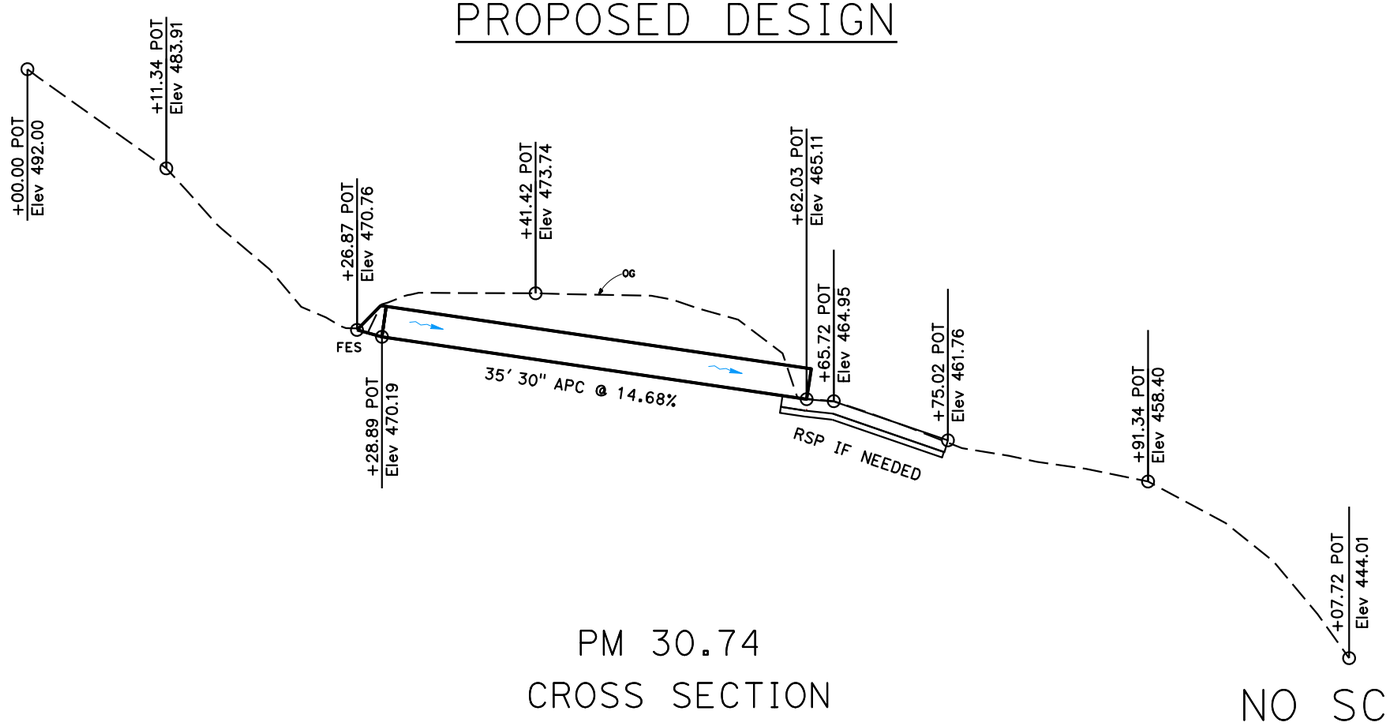


LEGEND

- APPROXIMATE R/W
- FLOW DIRECTION
- NEW CULVERT
- PRIVATE WATER LINE
- POTENTIAL STAGING AREA
- TCE
- PERMANENT EASEMENT
- ESL
- TOPOGRAPHIC SURFACE BOUNDARY

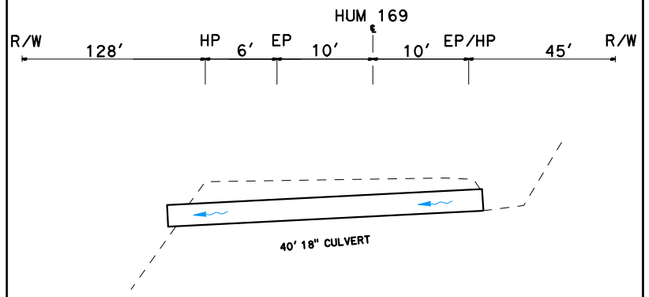
PROPOSED DESIGN



PM 30.74
CROSS SECTION

NO SCALE

AS-BUILT



REHAB CULVERTS
HUM-169-PM 15.07/33.75
01-0H4100 EFIS 0117000169

CALCULATED-DESIGNED BY	CHECKED BY	FUNCTIONAL SUPERVISOR	REVISED BY	DATE REVISED
Farlar Kohzad	Rene DeWees, Farlar Kohzad	Lena Ashley		

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

LAST REVISION 00-00-00 | DATE PLOTTED => 6-JAN-2022 | TIME PLOTTED => 10:52

BORDER LAST REVISED 7/2/2010 | USERNAME => s151816 | DGN FILE => 01-0H410 Preliminary Designs.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0313 | PROJECT NUMBER & PHASE 01170001690

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	HUM	SR-169	VAR	28	51

DESIGN STUDY

REGISTERED CIVIL ENGINEER DATE

ONLY

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Thomas Phillips
No. C64633
Exp.06/30/23
CIVIL
STATE OF CALIFORNIA

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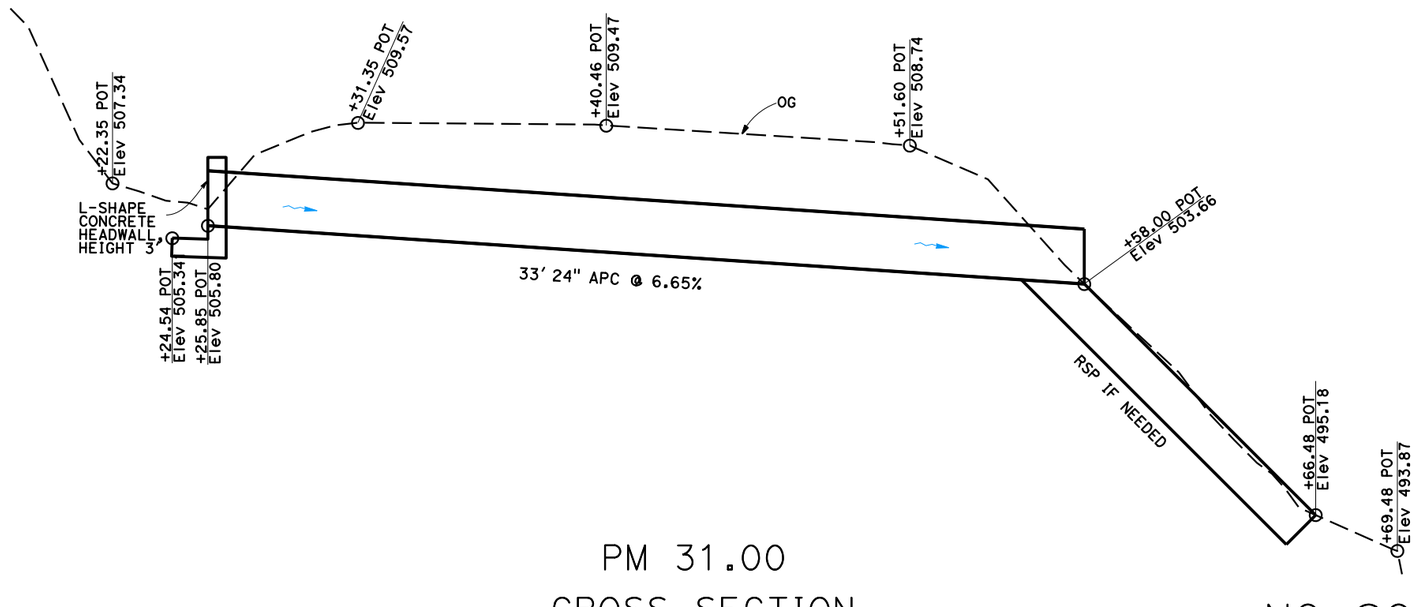
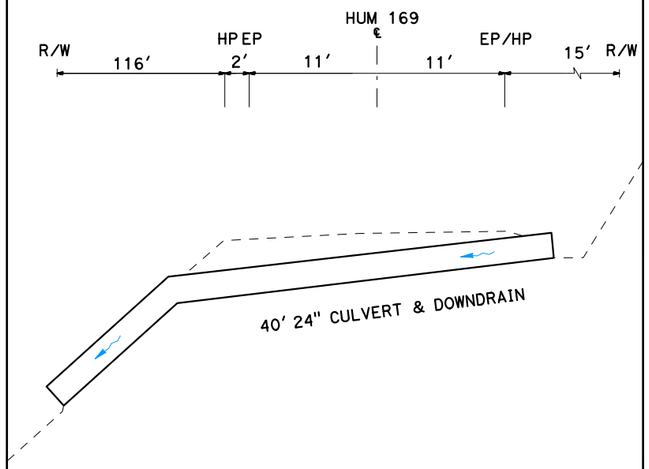
PROPOSED DESIGN



PM 31.00
CROSS SECTION

NO SCALE

AS-BUILT



REHAB CULVERTS
HUM-169-PM 15.07/33.75
01-0H4100 EFIS 0117000169

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY: Farlar Kohzad
CHECKED BY: Rene DeWees, Farlar Kohzad
FUNCTIONAL SUPERVISOR: Lena Ashley

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION DATE PLOTTED => 6-JAN-2022
00-00-00 TIME PLOTTED => 11:19

BORDER LAST REVISED 7/2/2010

USERNAME => s151816
DGN FILE => 01-0H410 Preliminary Designs.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0313

PROJECT NUMBER & PHASE 01170001690

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	HUM	SR-169	VAR	29	51

DESIGN STUDY

REGISTERED CIVIL ENGINEER DATE

ONLY

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Thomas Phillips
No. C64633
Exp.06/30/23
CIVIL
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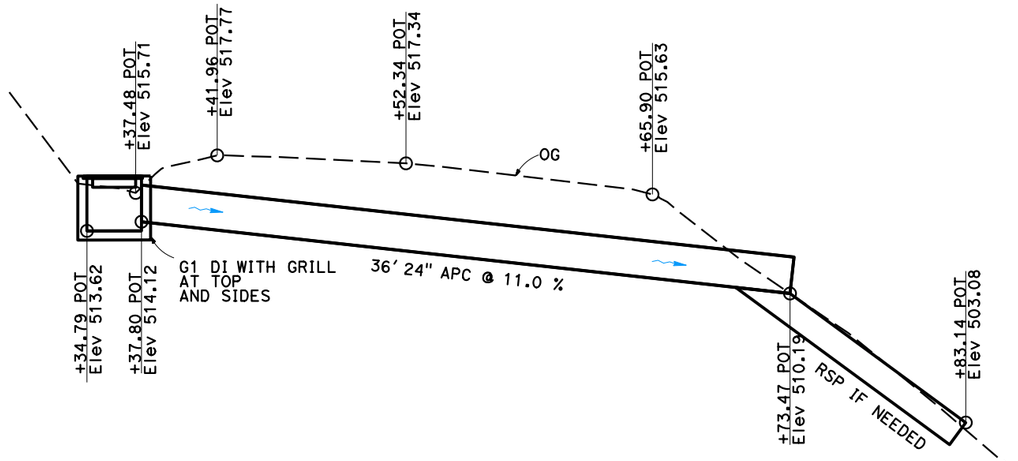
LEGEND

- APPROXIMATE R/W
- FLOW DIRECTION
- NEW CULVERT
- PRIVATE WATER LINE
- POTENTIAL STAGING AREA
- TCE
- PERMANENT EASEMENT
- ESL
- TOPOGRAPHIC SURFACE BOUNDARY

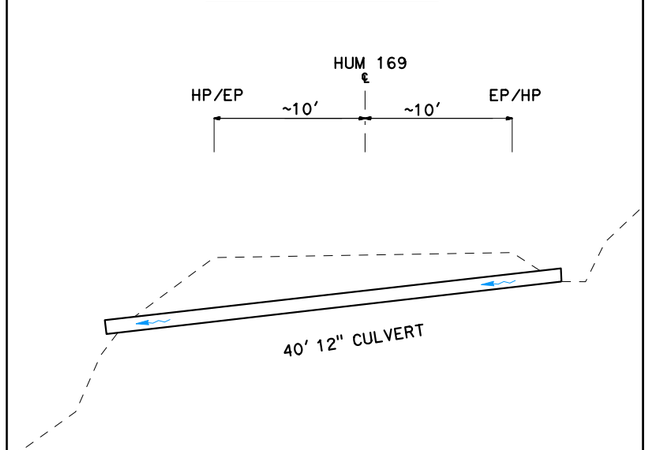
PROPOSED DESIGN



PM 31.26
CROSS SECTION

NO SCALE

AS-BUILT



REHAB CULVERTS
HUM-169-PM 15.07/33.75
01-0H4100 EFIS 0117000169

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY: Farlar Kohzad
CHECKED BY: Rene DeWees, Farlar Kohzad
FUNCTIONAL SUPERVISOR: Lena Ashley

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION 00-00-00
DATE PLOTTED => 6-JAN-2022
TIME PLOTTED => 10:59

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	HUM	SR-169	VAR	30	51

DESIGN STUDY

REGISTERED CIVIL ENGINEER DATE

ONLY

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Thomas Phillips
No. C64633
Exp.06/30/23
CIVIL
STATE OF CALIFORNIA

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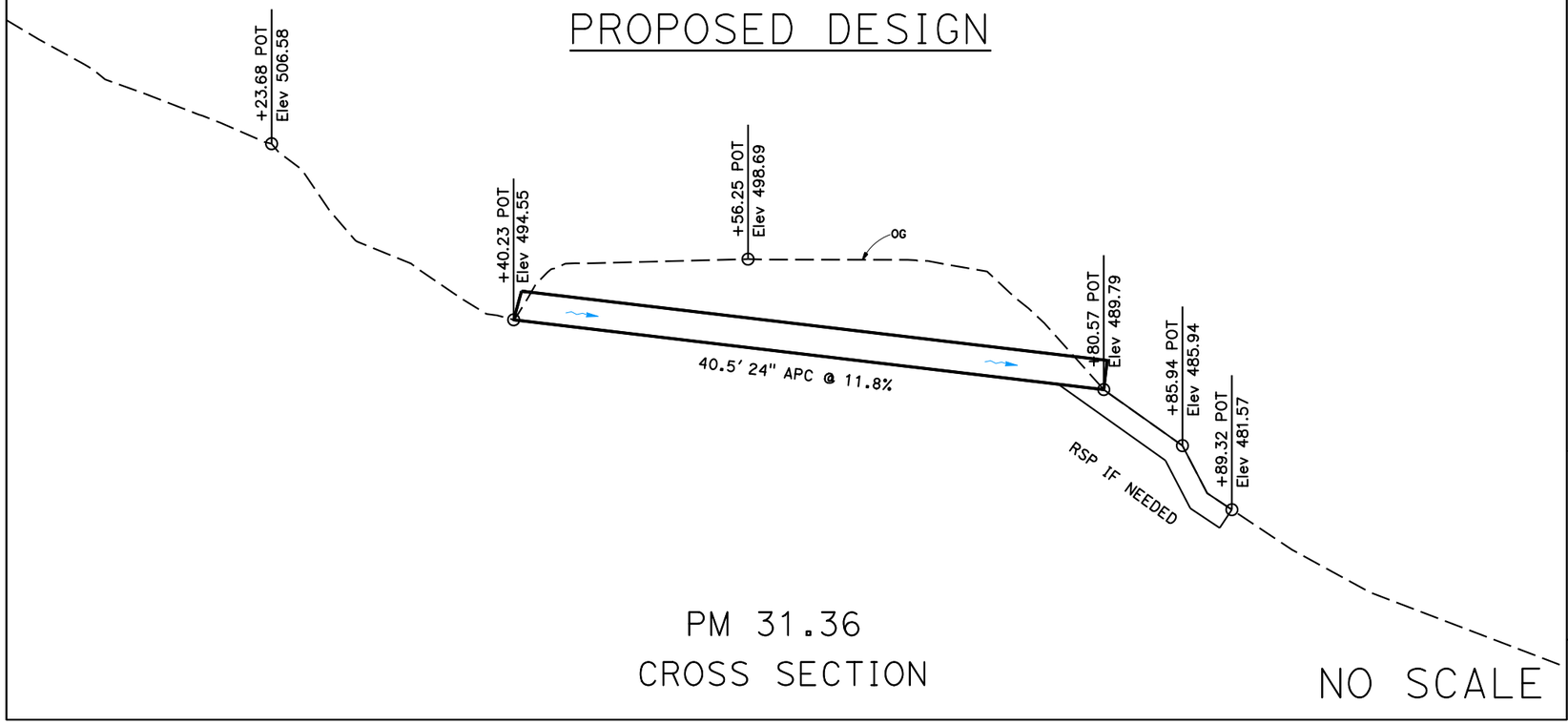
- APPROXIMATE R/W
- FLOW DIRECTION
- NEW CULVERT
- PRIVATE WATER LINE
- POTENTIAL STAGING AREA
- TCE
- PERMANENT EASEMENT
- ESL
- TOPOGRAPHIC SURFACE BOUNDARY

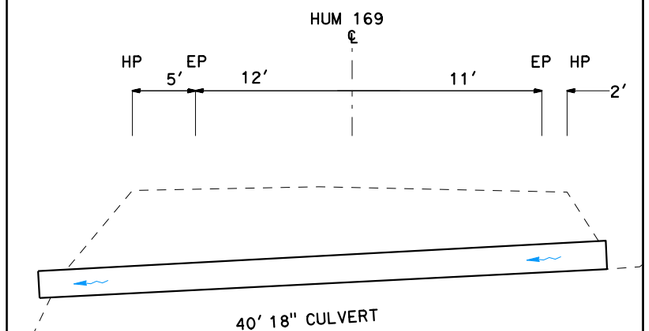
PROPOSED DESIGN



PM 31.36
CROSS SECTION

NO SCALE

AS-BUILT



REHAB CULVERTS
HUM-169-PM 15.07/33.75
01-0H4100 EFIS 0117000169

REVISED BY | DATE REVISED

CALCULATED-DESIGNED BY: Fariar Kohzad
CHECKED BY: Rene DeWees, Fariar Kohzad

FUNCTIONAL SUPERVISOR: Lena Ashley

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION | DATE PLOTTED => 6-JAN-2022
00-00-00 | TIME PLOTTED => 11:11

BORDER LAST REVISED 7/2/2010 | USERNAME => s151816 | DGN FILE => 01-0H410 Preliminary Designs.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0313 | PROJECT NUMBER & PHASE 01170001690

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	HUM	SR-169	VAR	31	51

DESIGN STUDY

REGISTERED CIVIL ENGINEER DATE

ONLY

PLANS APPROVAL DATE

Thomas Phillips
No. C64633
Exp.06/30/23
CIVIL
REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA

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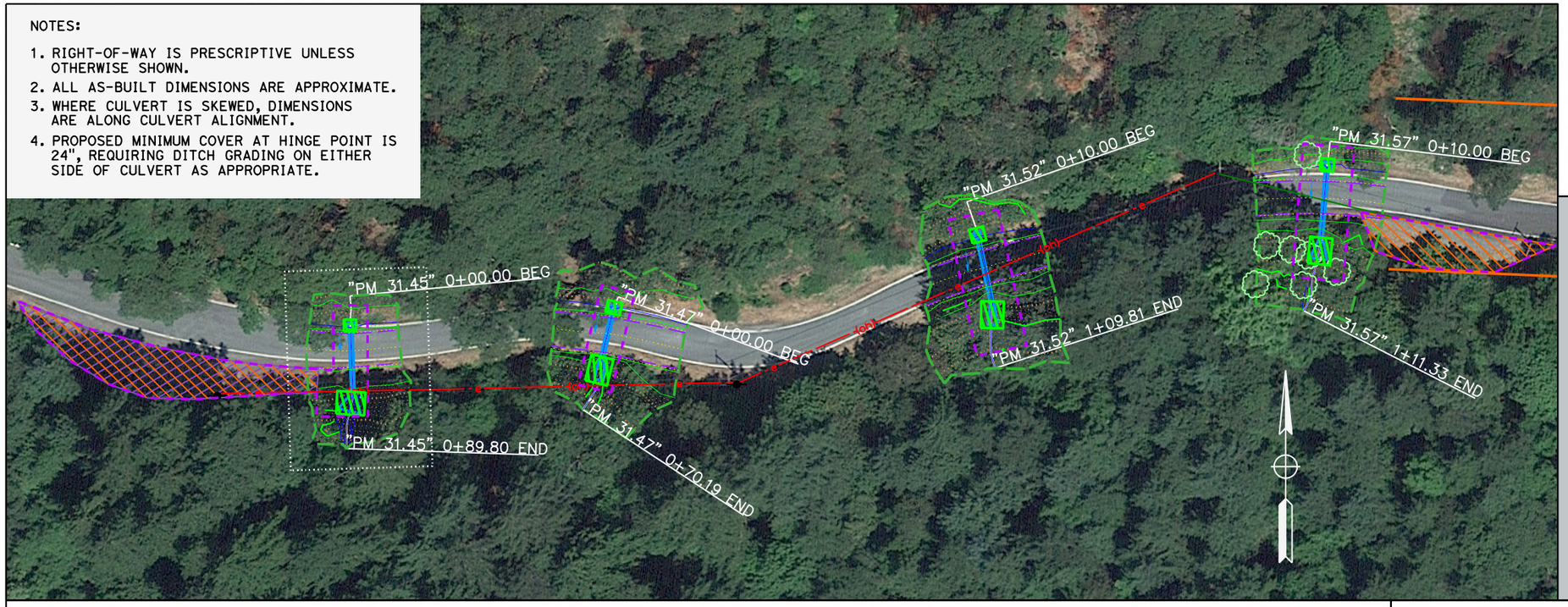
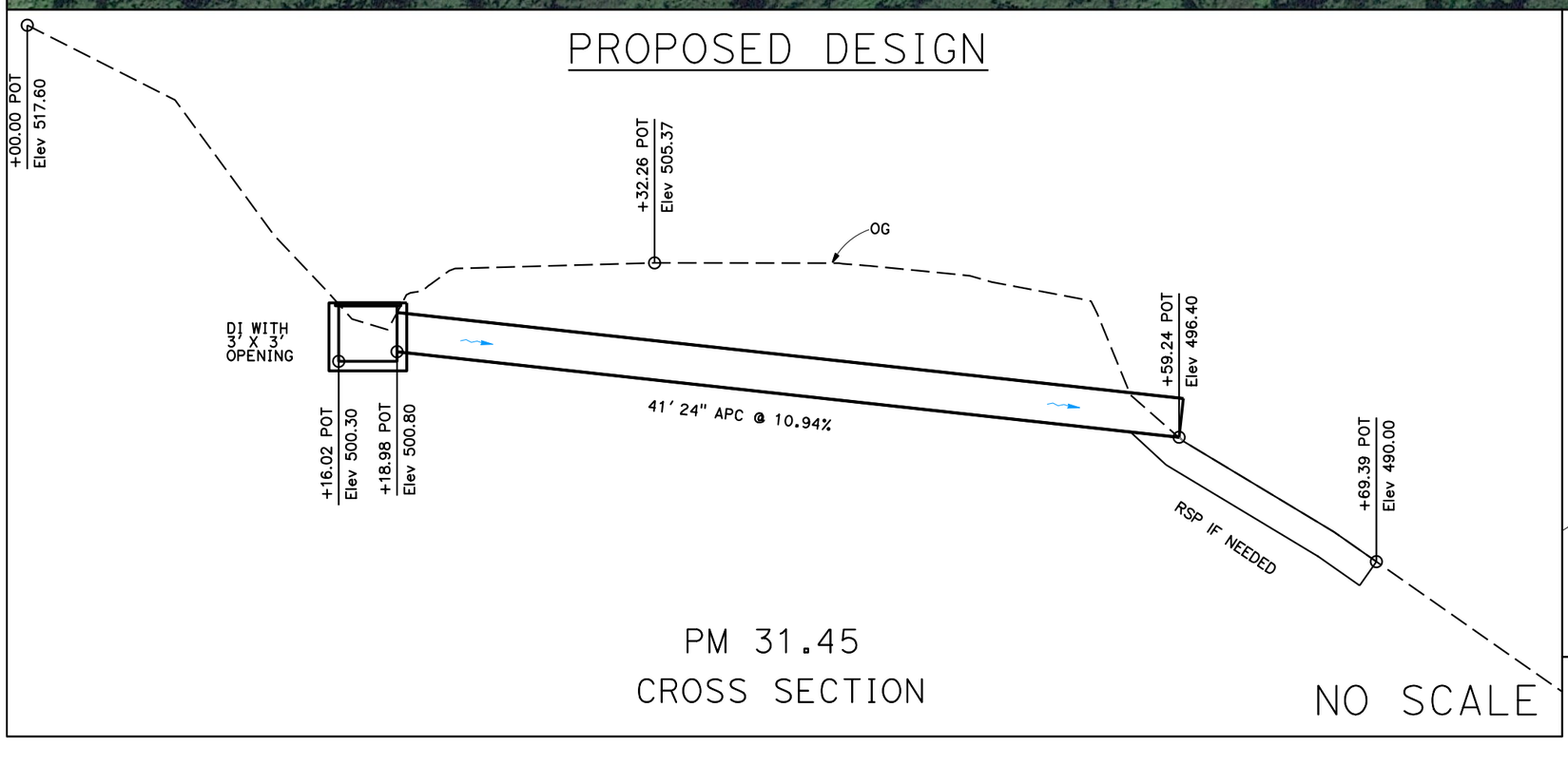


LEGEND

- APPROXIMATE R/W
- FLOW DIRECTION
- NEW CULVERT
- PRIVATE WATER LINE
- POTENTIAL STAGING AREA
- TCE
- PERMANENT EASEMENT
- ESL
- TOPOGRAPHIC SURFACE BOUNDARY

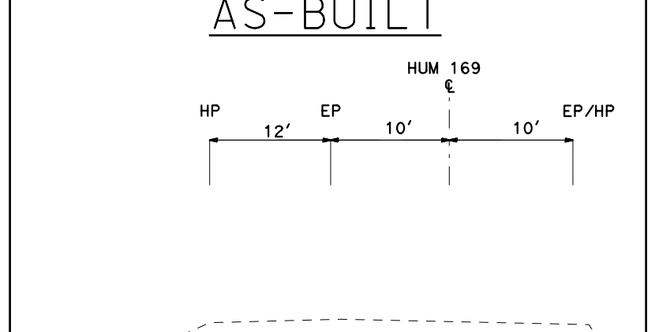
PROPOSED DESIGN



PM 31.45
CROSS SECTION

NO SCALE

AS-BUILT



REHAB CULVERTS
HUM-169-PM 15.07/33.75
01-0H4100 EFIS 0117000169

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY: Farlar Kohzad
CHECKED BY: Rene DeWees, Farlar Kohzad
FUNCTIONAL SUPERVISOR: Lena Ashley

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION DATE PLOTTED => 6-JAN-2022
TIME PLOTTED => 11:15
00-00-00

BORDER LAST REVISED 7/2/2010

USERNAME => s151816
DGN FILE => 01-0H410 Preliminary Designs.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0313

PROJECT NUMBER & PHASE 01170001690

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	HUM	SR-169	VAR	32	51

DESIGN STUDY

REGISTERED CIVIL ENGINEER DATE

ONLY

PLANS APPROVAL DATE

Thomas Phillips
No. C64633
Exp.06/30/23
CIVIL
REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA

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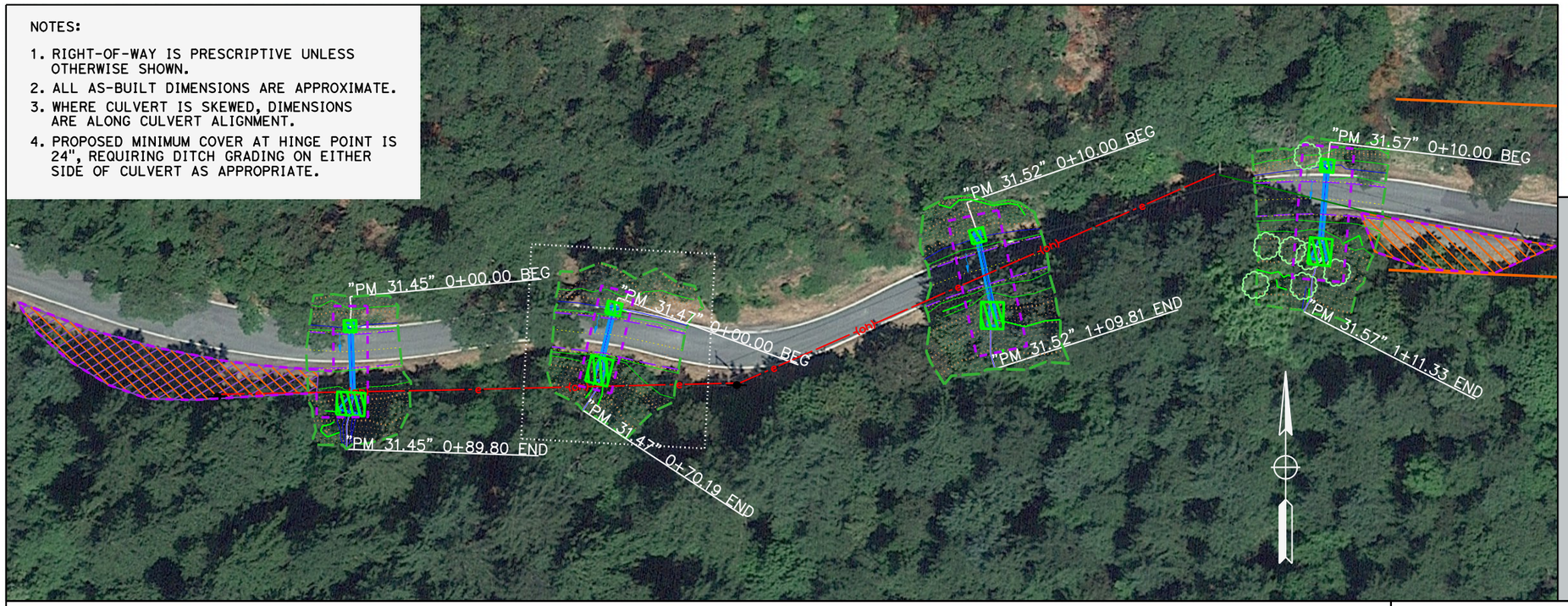
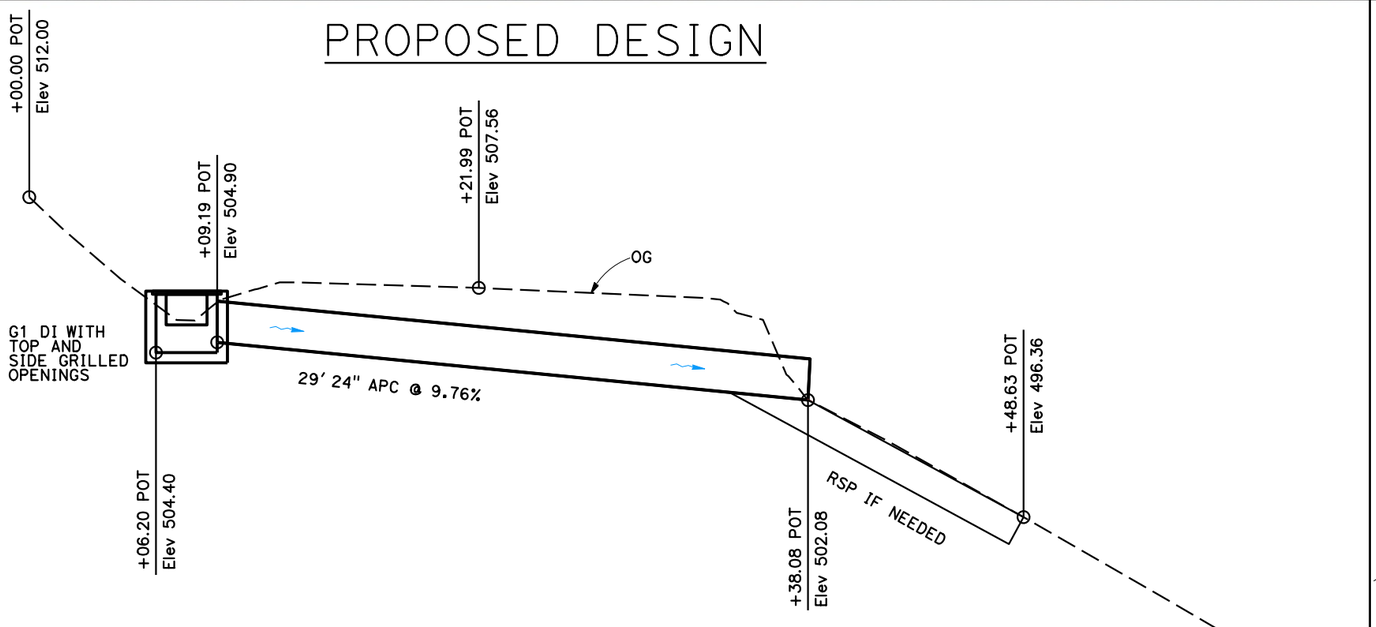


LEGEND

- APPROXIMATE R/W
- FLOW DIRECTION
- NEW CULVERT
- PRIVATE WATER LINE
- POTENTIAL STAGING AREA
- TCE
- PERMANENT EASEMENT
- ESL
- TOPOGRAPHIC SURFACE BOUNDARY

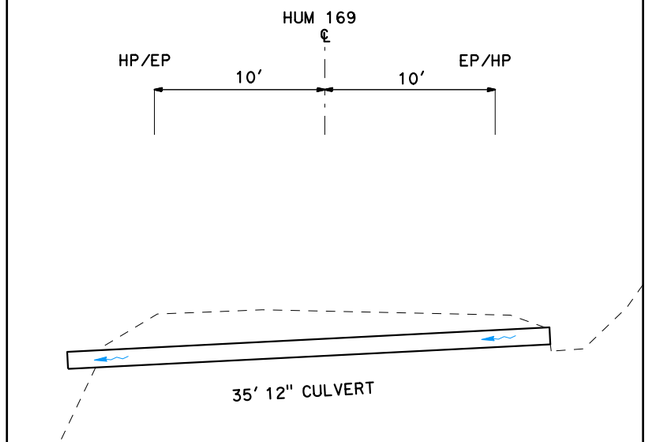
PROPOSED DESIGN



PM 31.47
CROSS SECTION

NO SCALE

AS-BUILT



REHAB CULVERTS
HUM-169-PM 15.07/33.75
01-0H4100 EFIS 0117000169

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY: Farlar Kohzad
CHECKED BY: Rene DeWees, Farlar Kohzad
FUNCTIONAL SUPERVISOR: Lena Ashley

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION DATE PLOTTED => 6-JAN-2022
TIME PLOTTED => 11:21
00-00-00

BORDER LAST REVISED 7/2/2010 | USERNAME => s151816 | DGN FILE => 01-0H410 Preliminary Designs.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0313 | PROJECT NUMBER & PHASE 01170001690

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	HUM	SR-169	VAR	33	51

DESIGN STUDY

REGISTERED CIVIL ENGINEER DATE

ONLY

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Thomas Phillips
No. C64633
Exp.06/30/23
CIVIL
STATE OF CALIFORNIA

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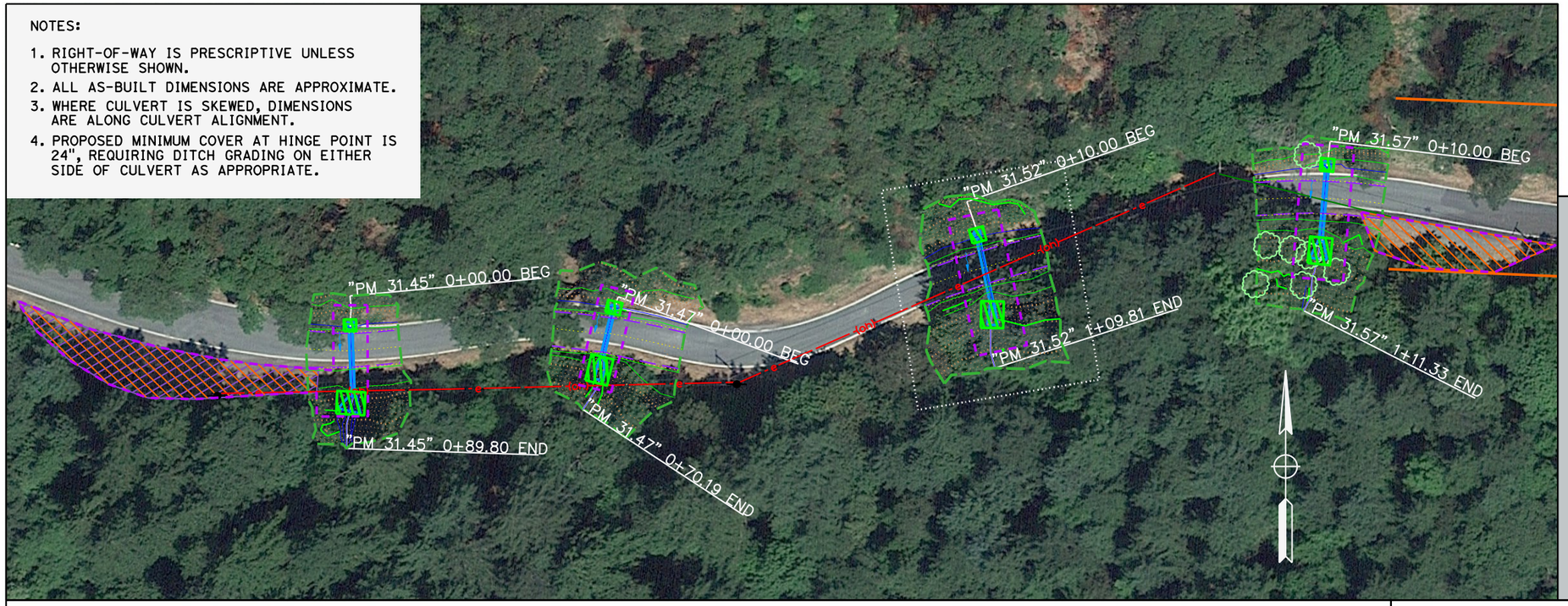
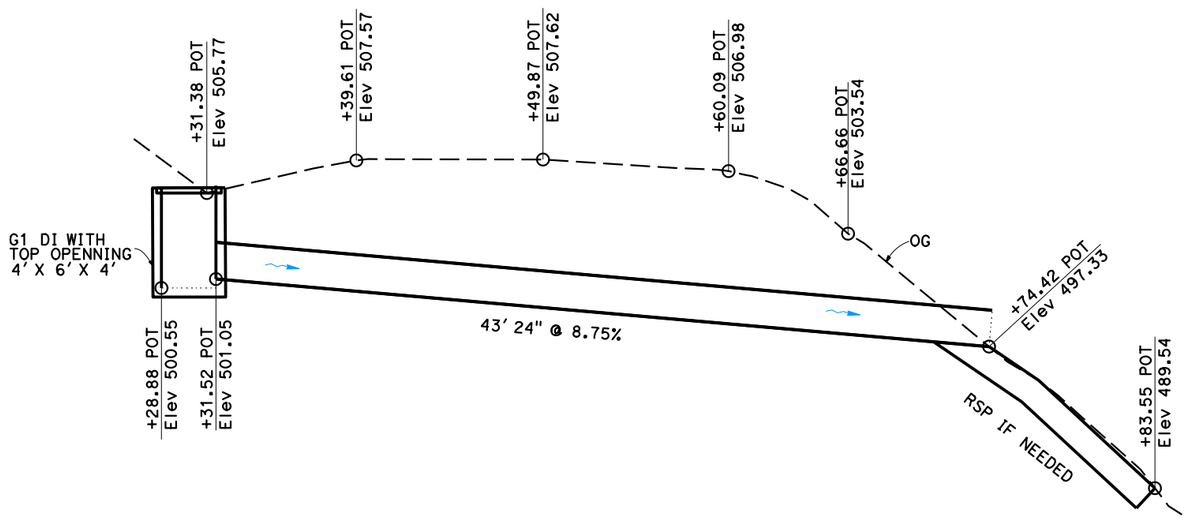


LEGEND

- APPROXIMATE R/W
- FLOW DIRECTION
- NEW CULVERT
- PRIVATE WATER LINE
- POTENTIAL STAGING AREA
- TCE
- PERMANENT EASEMENT
- ESL
- TOPOGRAPHIC SURFACE BOUNDARY

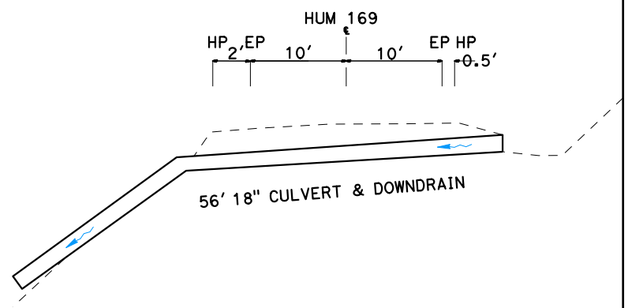
PROPOSED DESIGN



PM 31.52
CROSS SECTION

NO SCALE

AS-BUILT



REHAB CULVERTS
HUM-169-PM 15.07/33.75
01-0H4100 EFIS 0117000169

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY: Fariar Kohzad
CHECKED BY: Rene DeWees, Fariar Kohzad
FUNCTIONAL SUPERVISOR: Lena Ashley

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION DATE PLOTTED => 6-JAN-2022
00-00-00 TIME PLOTTED => 11:24

BORDER LAST REVISED 7/2/2010 | USERNAME => s151816 | DGN FILE => 01-0H410 Preliminary Designs.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0313 | PROJECT NUMBER & PHASE 01170001690

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	HUM	SR-169	VAR	34	51

DESIGN STUDY

REGISTERED CIVIL ENGINEER DATE

ONLY

PLANS APPROVAL DATE

Thomas Phillips
No. C64633
Exp.06/30/23
CIVIL
REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA

NOTES:

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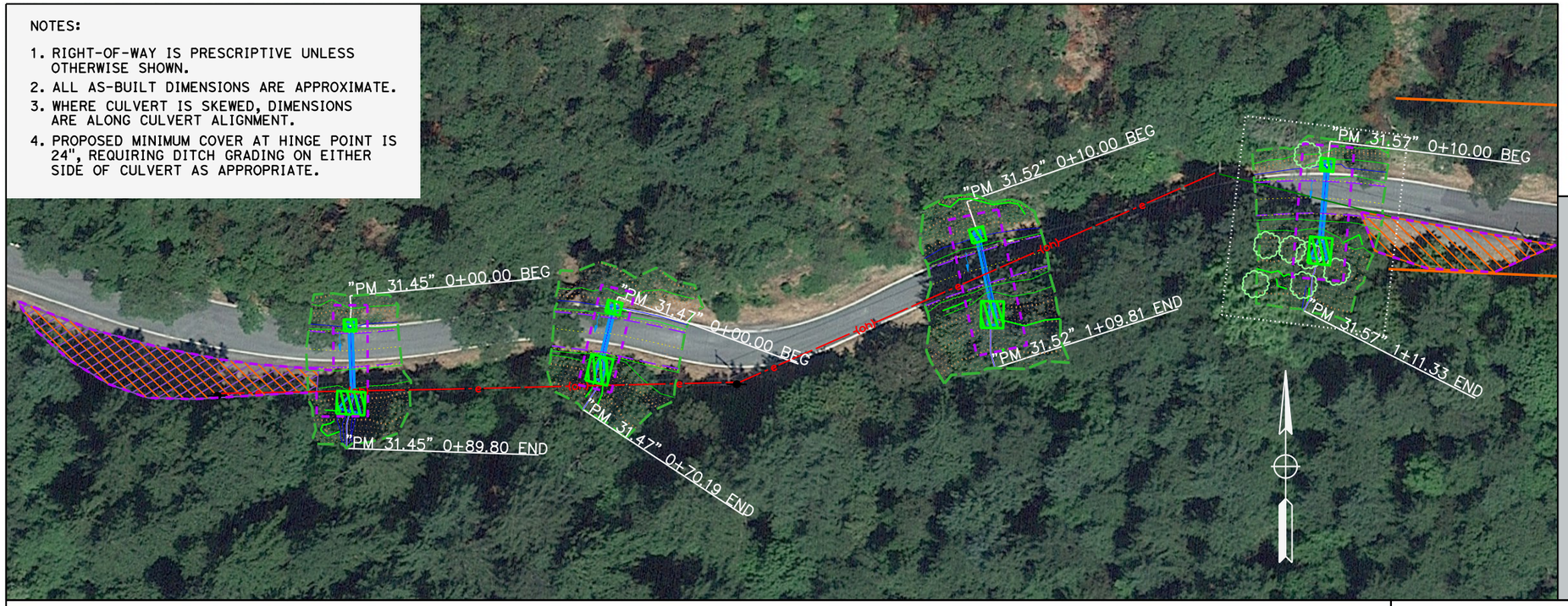
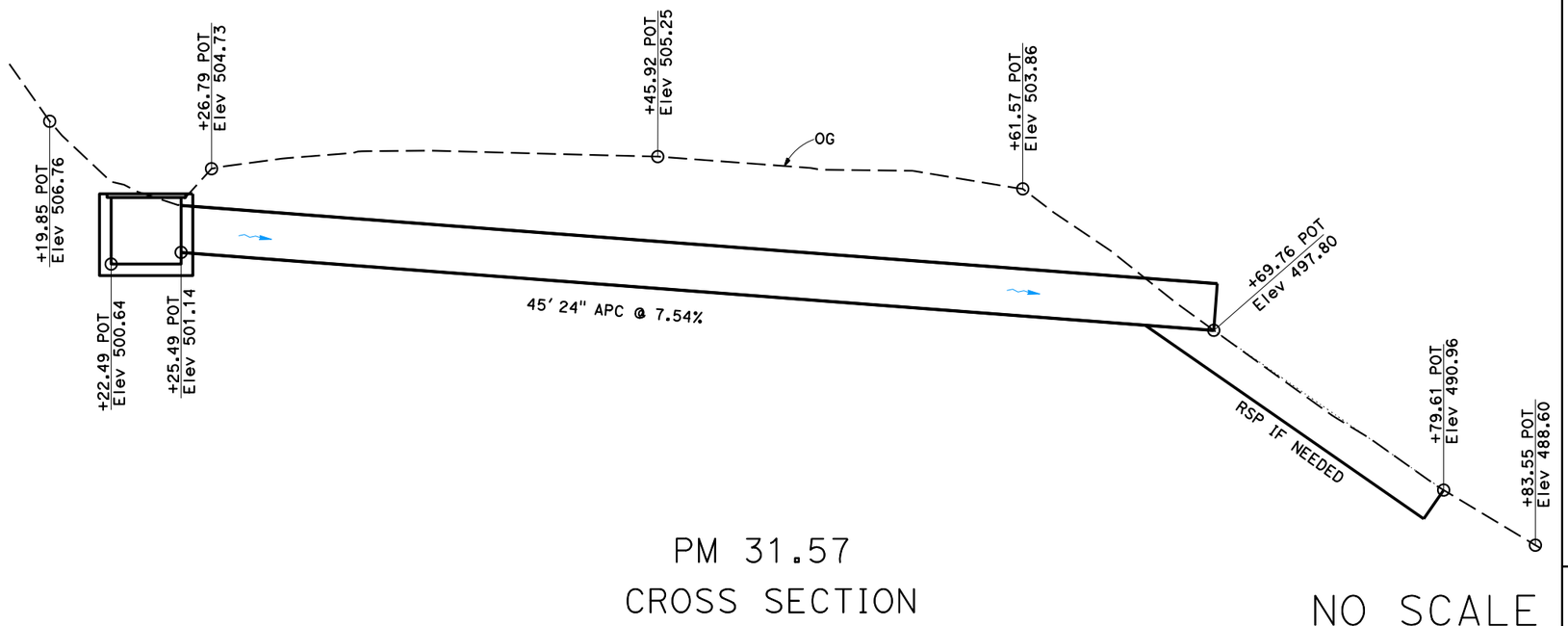


LEGEND

- APPROXIMATE R/W
- FLOW DIRECTION
- NEW CULVERT
- PRIVATE WATER LINE
- POTENTIAL STAGING AREA
- TCE
- PERMANENT EASEMENT
- ESL
- TOPOGRAPHIC SURFACE BOUNDARY

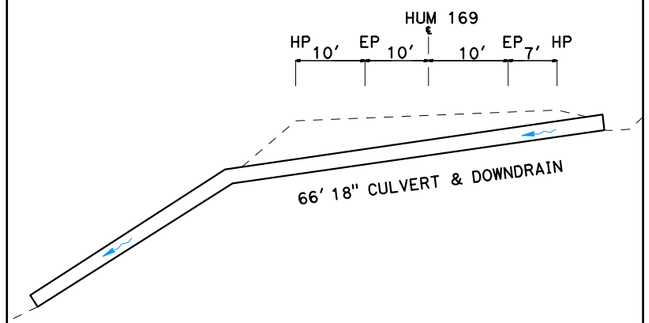
PROPOSED DESIGN



PM 31.57
CROSS SECTION

NO SCALE

AS-BUILT



REHAB CULVERTS
HUM-169-PM 15.07/33.75
01-0H4100 EFIS 0117000169

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY: Farlar Kohzad
CHECKED BY: Rene DeWees, Farlar Kohzad
FUNCTIONAL SUPERVISOR: Lena Ashley

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

LAST REVISION DATE PLOTTED => 6-JAN-2022
LAST REVISION TIME PLOTTED => 11:27
00-00-00

BORDER LAST REVISED 7/2/2010

USERNAME => s151816
DGN FILE => 01-0H410 Preliminary Designs.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0313

PROJECT NUMBER & PHASE 01170001690

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	HUM	SR-169	VAR	35	51

DESIGN STUDY

REGISTERED CIVIL ENGINEER DATE

ONLY

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Thomas Phillips
No. C64633
Exp.06/30/23
CIVIL
STATE OF CALIFORNIA

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LEGEND

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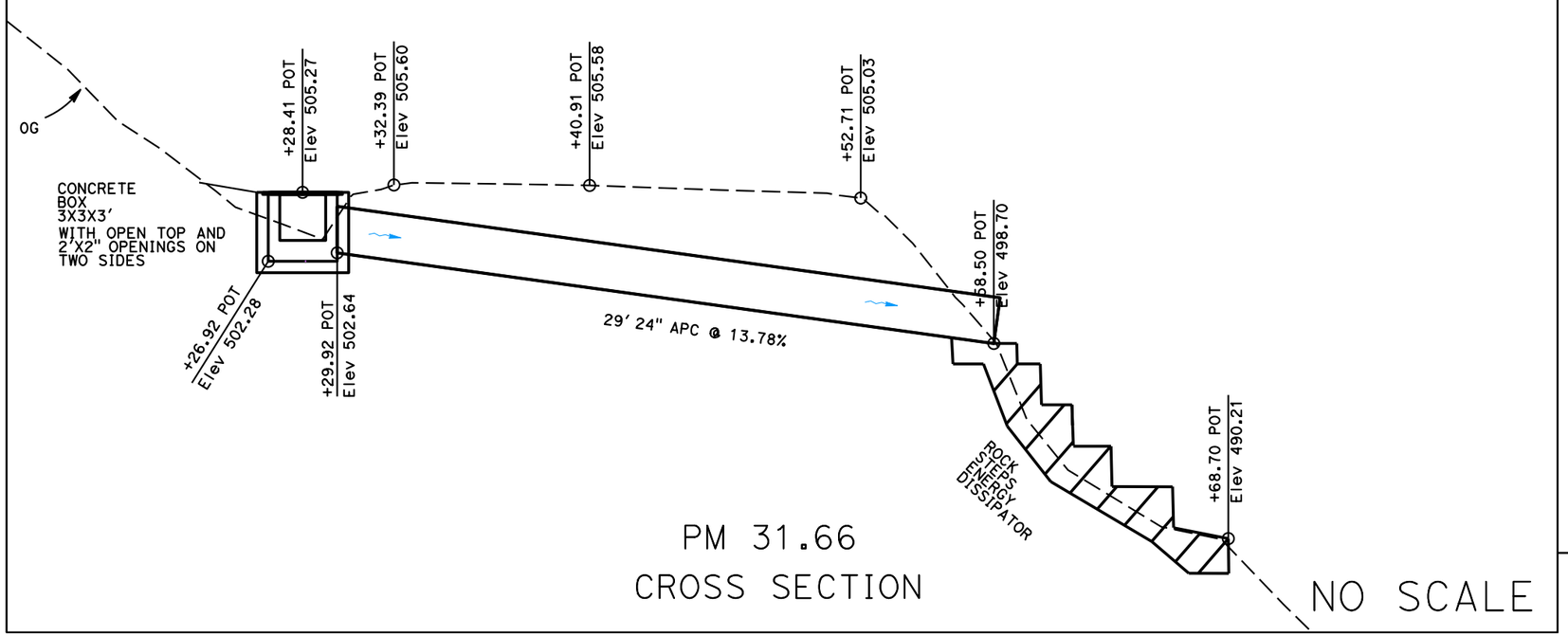
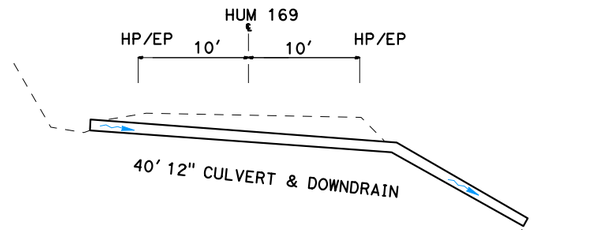
PROPOSED DESIGN



PM 31.66
CROSS SECTION

NO SCALE

AS-BUILT



REHAB CULVERTS
HUM-169-PM 15.07/33.75
01-0H4100 EFIS 0117000169

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

FUNCTIONAL SUPERVISOR: Lena Ashley

CALCULATED-DESIGNED BY: Farlar Kohzad
CHECKED BY: Rene DeWees, Farlar Kohzad
REVISED BY
DATE REVISED

LAST REVISION DATE PLOTTED => 6-JAN-2022
00-00-00 TIME PLOTTED => 11:30

BORDER LAST REVISED 7/2/2010

USERNAME => s151816
DGN FILE => 01-0H410 Preliminary Designs.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0313

PROJECT NUMBER & PHASE 01170001690

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	HUM	SR-169	VAR	36	51

DESIGN STUDY

REGISTERED CIVIL ENGINEER DATE

ONLY

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Thomas Phillips
No. C64633
Exp.06/30/23
CIVIL
STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTES:

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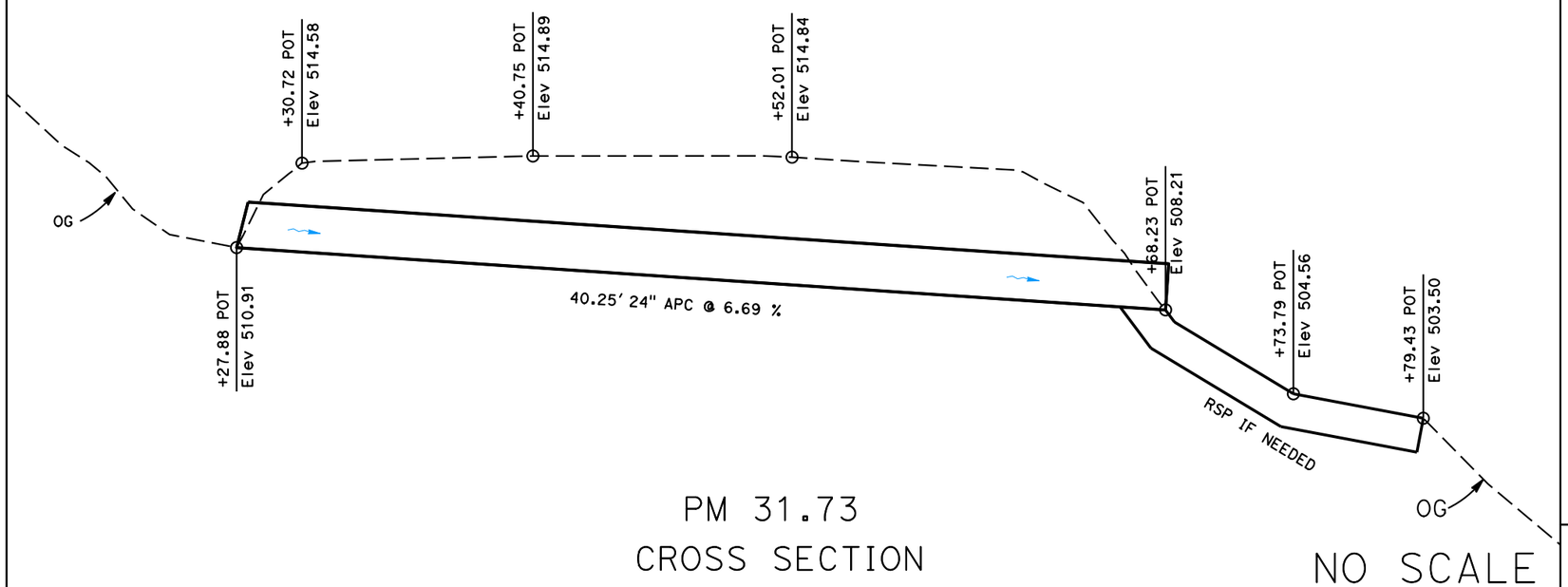
2. ALL AS-BUILT DIMENSIONS ARE APPROXIMATE.
3. WHERE CULVERT IS SKEWED, DIMENSIONS ARE ALONG CULVERT ALIGNMENT.
4. PROPOSED MINIMUM COVER AT HINGE POINT IS 24", REQUIRING DITCH GRADING ON EITHER SIDE OF CULVERT AS APPROPRIATE.

LEGEND

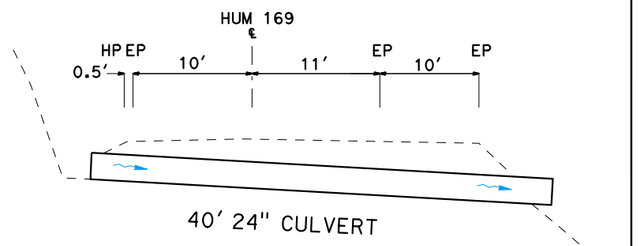
- APPROXIMATE R/W
- FLOW DIRECTION
- NEW CULVERT
- PRIVATE WATER LINE
- POTENTIAL STAGING AREA
- TCE
- PERMANENT EASEMENT
- ESL
- TOPOGRAPHIC SURFACE BOUNDARY

PROPOSED DESIGN



PM 31.73
CROSS SECTION
NO SCALE

AS-BUILT



REHAB CULVERTS
HUM-169-PM 15.07/33.75
01-0H4100 EFIS 0117000169

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY: Farlar Kohzad
CHECKED BY: Rene DeWees, Farlar Kohzad
FUNCTIONAL SUPERVISOR: Lena Ashley

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION DATE PLOTTED => 6-JAN-2022
00-00-00 TIME PLOTTED => 11:33

BORDER LAST REVISED 7/2/2010
USERNAME => s151816
DGN FILE => 01-0H410 Preliminary Designs.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 0313
PROJECT NUMBER & PHASE 01170001690

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	HUM	SR-169	VAR	37	51

DESIGN STUDY

REGISTERED CIVIL ENGINEER DATE

ONLY

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Thomas Phillips
No. C64633
Exp.06/30/23
CIVIL
STATE OF CALIFORNIA

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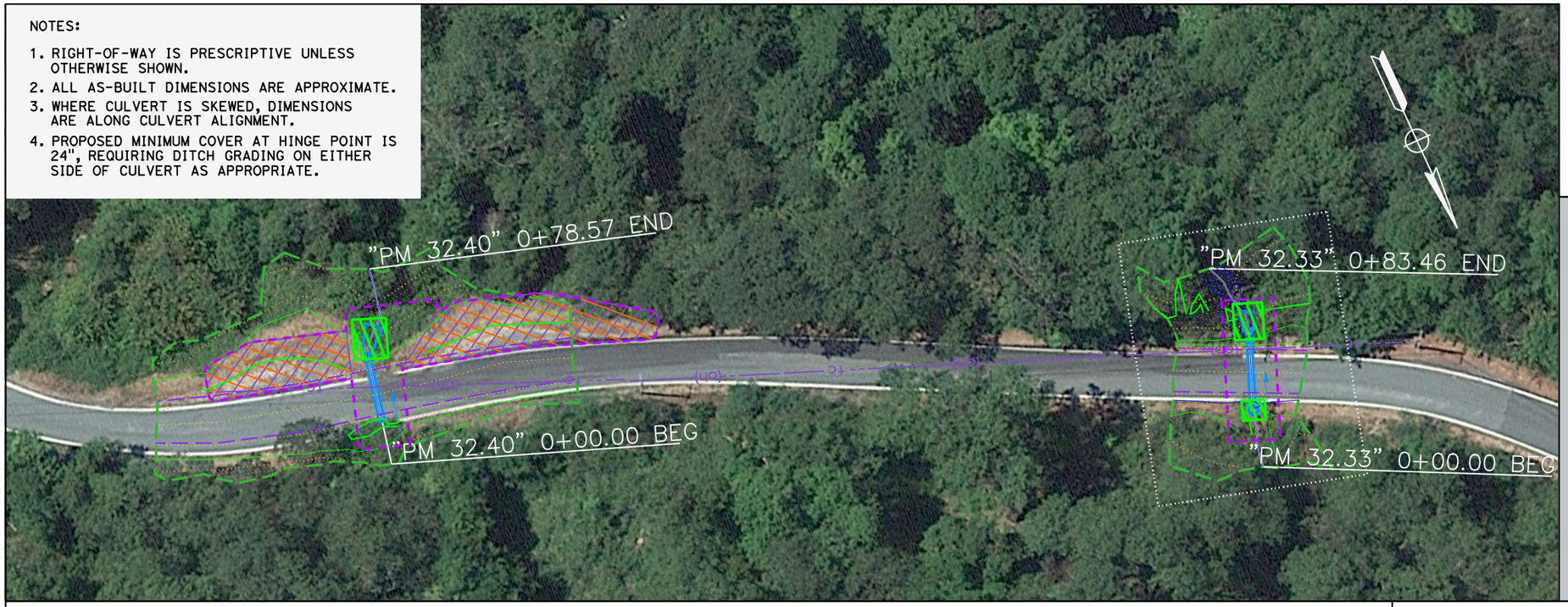
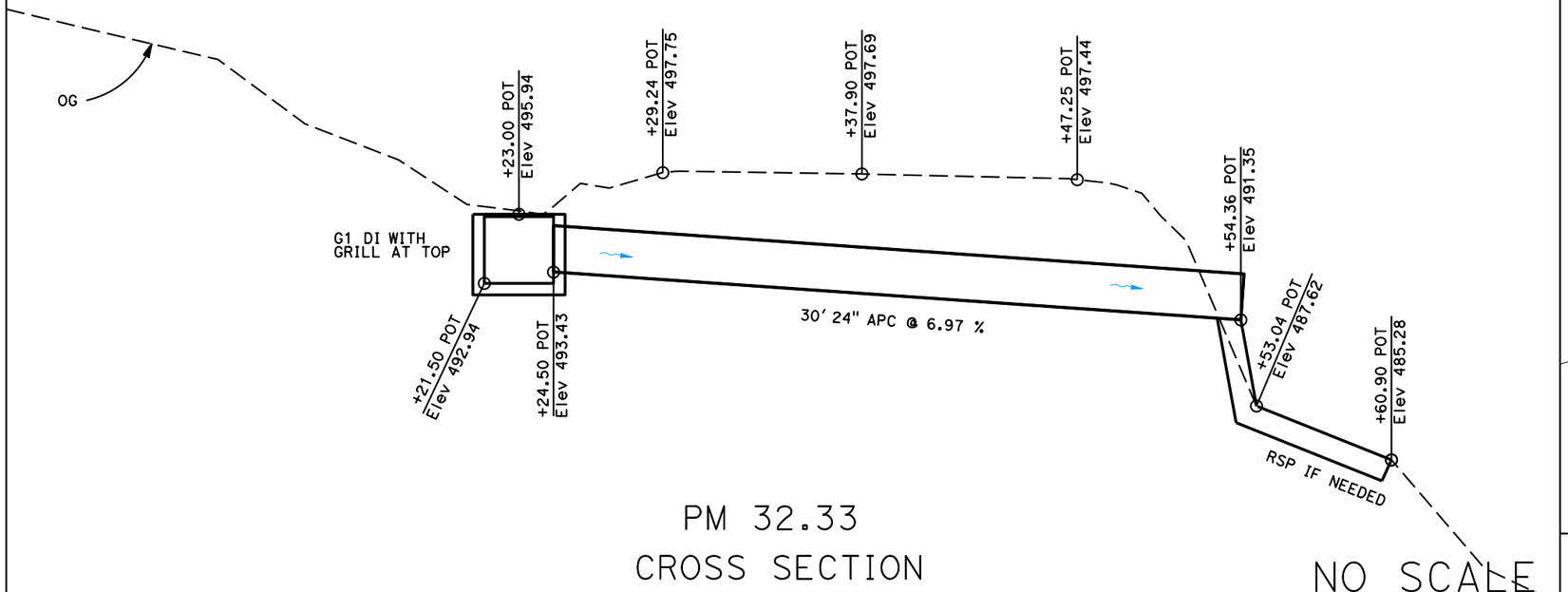


LEGEND

- APPROXIMATE R/W
- FLOW DIRECTION
- NEW CULVERT
- PRIVATE WATER LINE
- POTENTIAL STAGING AREA
- TCE
- PERMANENT EASEMENT
- ESL
- TOPOGRAPHIC SURFACE BOUNDARY

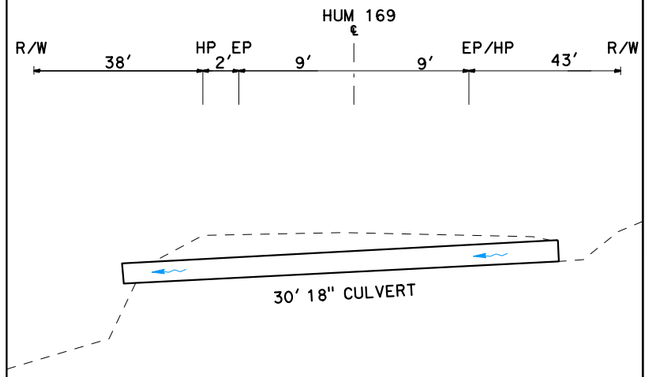
PROPOSED DESIGN



PM 32.33
CROSS SECTION

NO SCALE

AS-BUILT



REHAB CULVERTS
HUM-169-PM 15.07/33.75
01-0H4100 EFIS 0117000169

CALCULATED-DESIGNED BY	CHECKED BY	REVISED BY	DATE REVISED
Farlar Kohzad	Rene DeWees, Farlar Kohzad		

FUNCTIONAL SUPERVISOR: Lena Ashley

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

LAST REVISION DATE PLOTTED => 6-JAN-2022
00-00-00 TIME PLOTTED => 11:37

BORDER LAST REVISED 7/2/2010

USERNAME => s151816
DGN FILE => 01-0H410 Preliminary Designs.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0313

PROJECT NUMBER & PHASE 01170001690

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	HUM	SR-169	VAR	38	51

DESIGN STUDY

REGISTERED CIVIL ENGINEER DATE

ONLY

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Thomas Phillips
No. C64633
Exp.06/30/23
CIVIL
STATE OF CALIFORNIA

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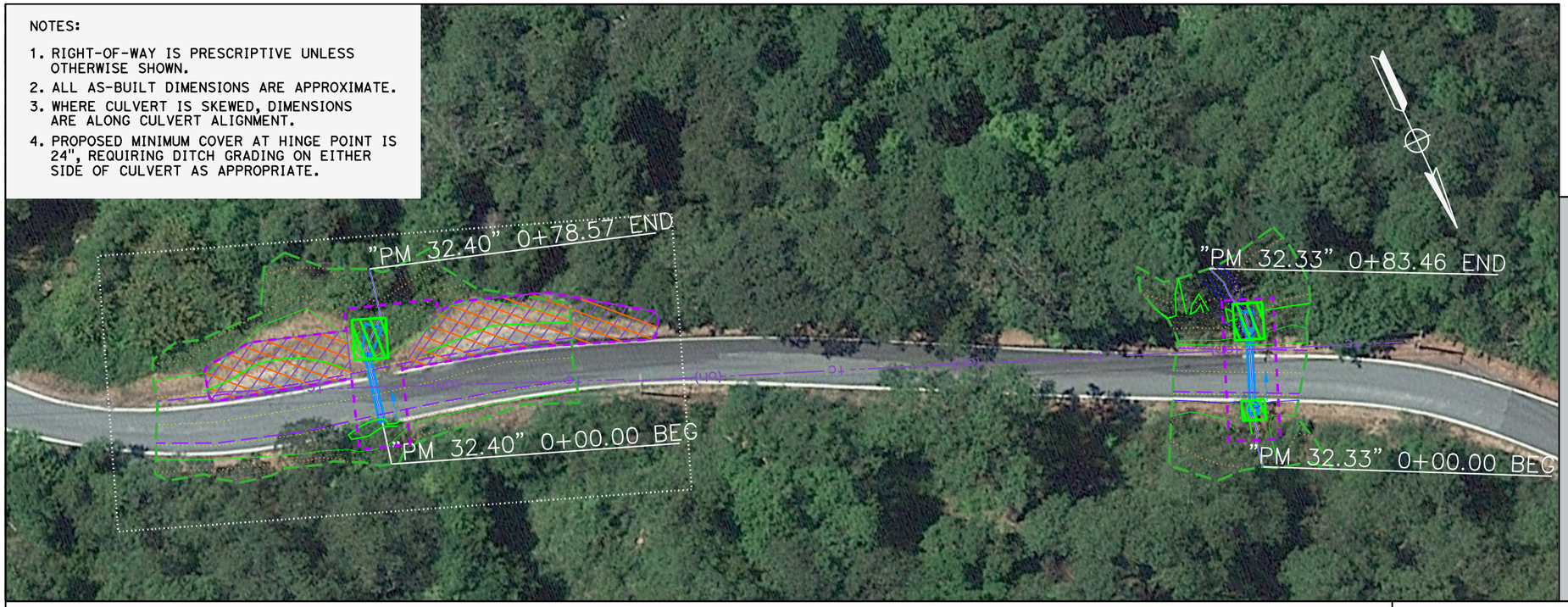
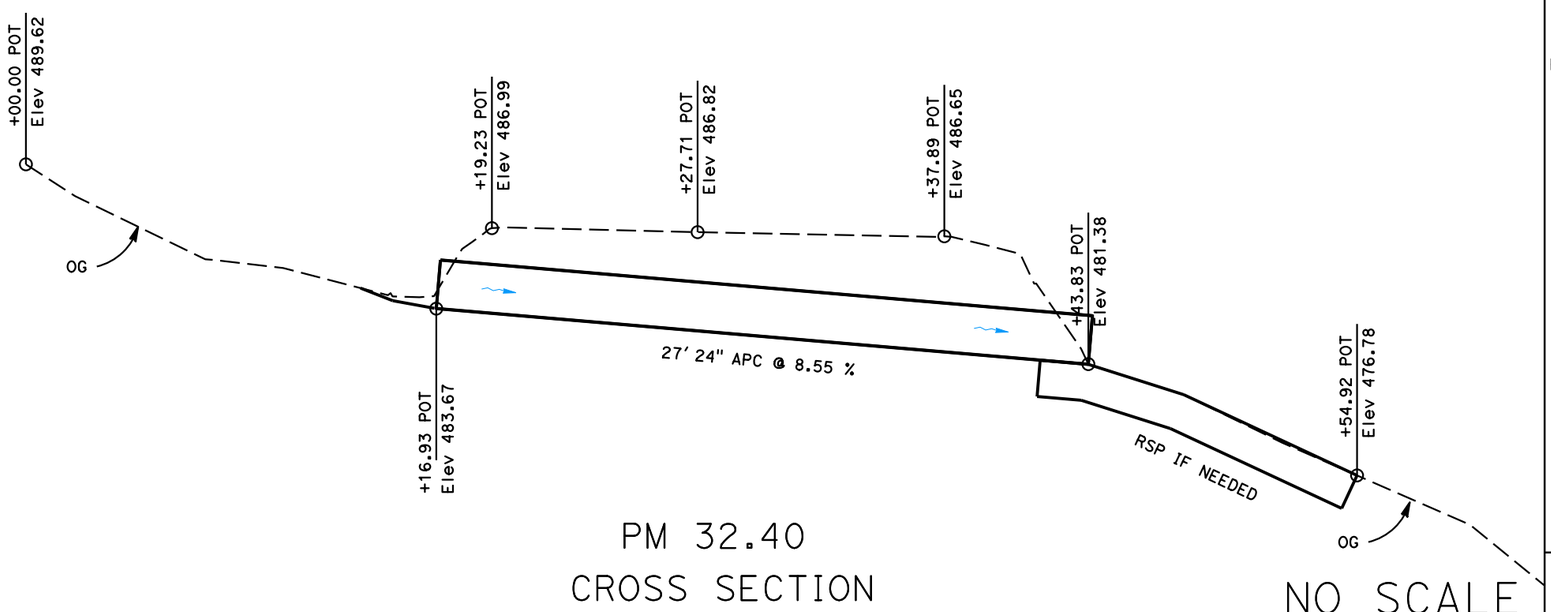


LEGEND

- APPROXIMATE R/W
- FLOW DIRECTION
- NEW CULVERT
- PRIVATE WATER LINE
- POTENTIAL STAGING AREA
- TCE
- PERMANENT EASEMENT
- ESL
- TOPOGRAPHIC SURFACE BOUNDARY

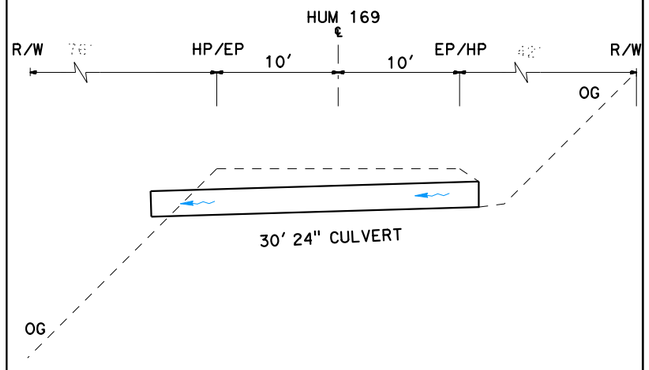
PROPOSED DESIGN



PM 32.40
CROSS SECTION

NO SCALE

AS-BUILT



REHAB CULVERTS
HUM-169-PM 15.07/33.75
01-0H4100 EFIS 0117000169

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY: Farlar Kohzad
CHECKED BY: Rene DeWees, Farlar Kohzad
FUNCTIONAL SUPERVISOR: Lena Ashley

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION DATE PLOTTED => 6-JAN-2022
00-00-00 TIME PLOTTED => 11:40

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	HUM	SR-169	VAR	39	51

DESIGN STUDY

REGISTERED CIVIL ENGINEER DATE

ONLY

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Thomas Phillips
No. C64633
Exp.06/30/23
CIVIL
STATE OF CALIFORNIA

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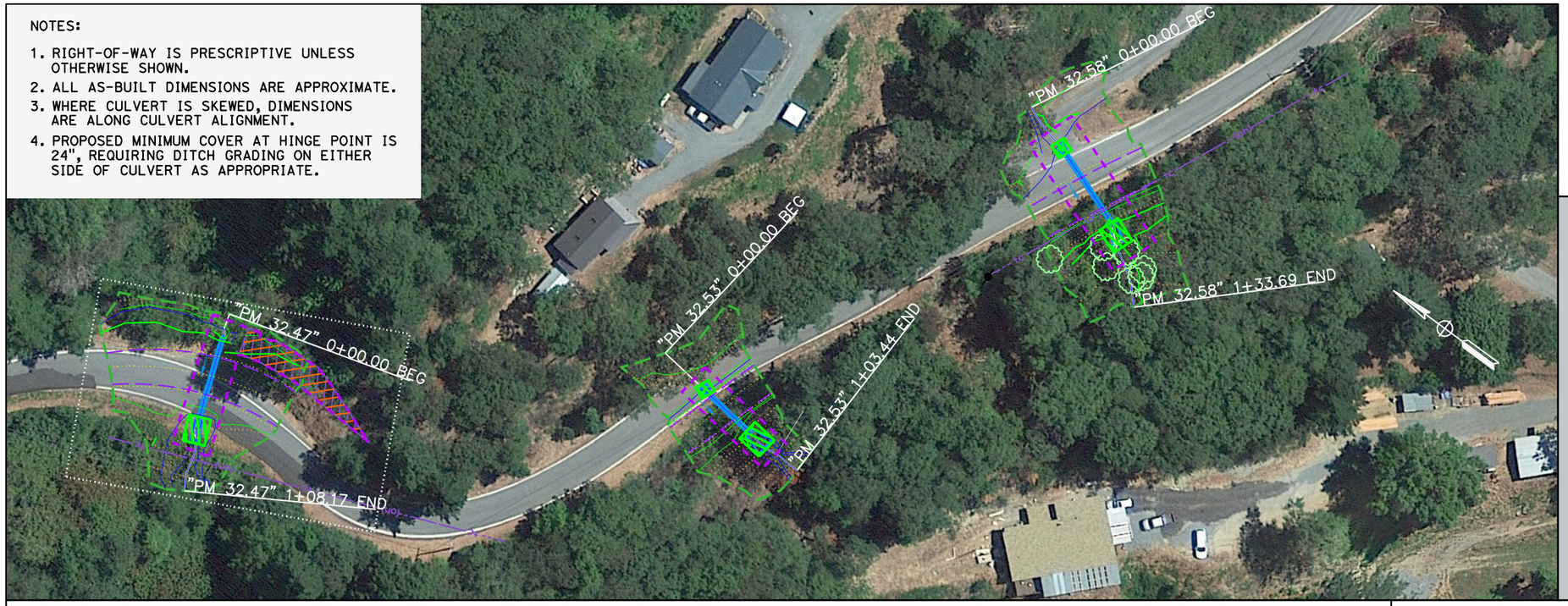
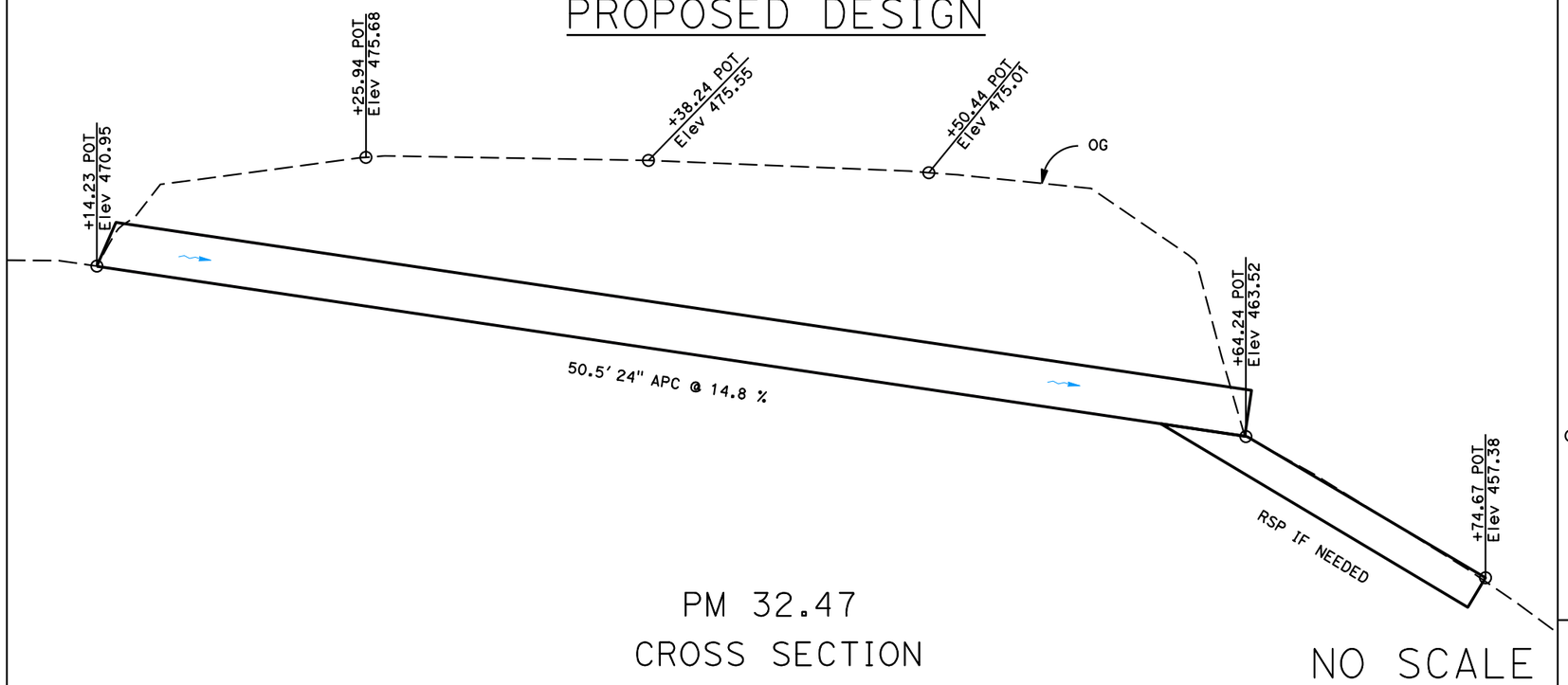


LEGEND

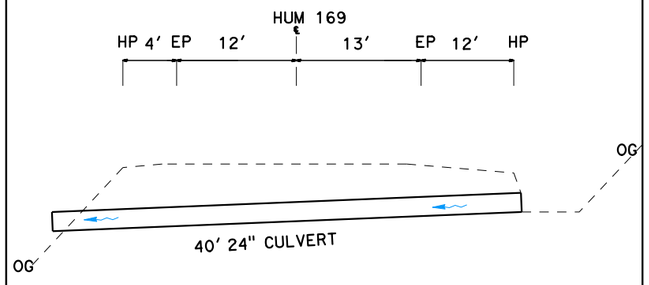
- APPROXIMATE R/W
- FLOW DIRECTION
- NEW CULVERT
- PRIVATE WATER LINE
- POTENTIAL STAGING AREA
- TCE
- PERMANENT EASEMENT
- ESL
- TOPOGRAPHIC SURFACE BOUNDARY

PROPOSED DESIGN



PM 32.47
CROSS SECTION
NO SCALE

AS-BUILT



REHAB CULVERTS
HUM-169-PM 15.07/33.75
01-0H4100 EFIS 0117000169

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY: Farlar Kohzad
CHECKED BY: Rene DeWees, Farlar Kohzad
FUNCTIONAL SUPERVISOR: Lena Ashley

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION: DATE PLOTTED => 6-JAN-2022
00-00-00 TIME PLOTTED => 11:46

BORDER LAST REVISED 7/2/2010 | USERNAME => s151816 | DGN FILE => 01-0H410 Preliminary Designs.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0313 | PROJECT NUMBER & PHASE 01170001690

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	HUM	SR-169	VAR	40	51

DESIGN STUDY

REGISTERED CIVIL ENGINEER DATE

ONLY

PLANS APPROVAL DATE

Thomas Phillips
No. C64633
Exp.06/30/23
CIVIL
REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

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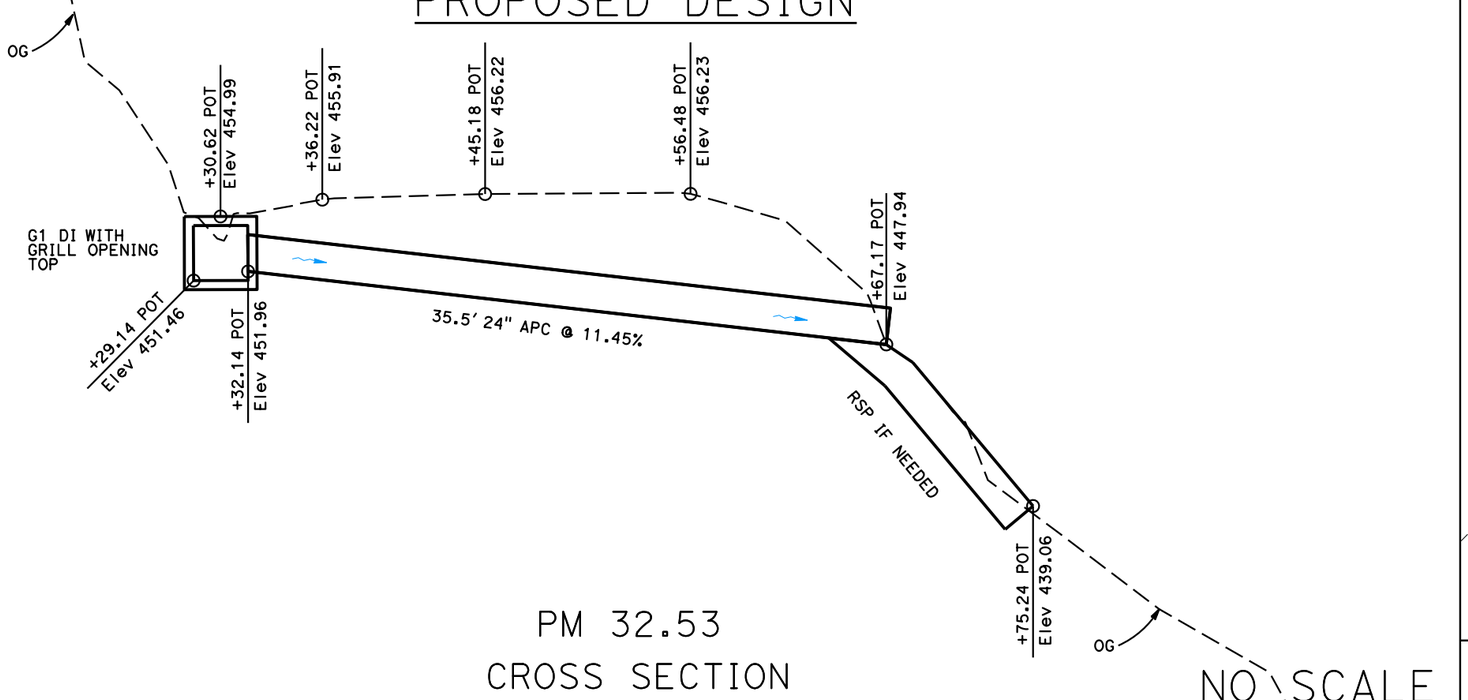
LEGEND

- APPROXIMATE R/W
- FLOW DIRECTION
- NEW CULVERT
- PRIVATE WATER LINE
- POTENTIAL STAGING AREA
- TCE
- PERMANENT EASEMENT
- ESL
- TOPOGRAPHIC SURFACE BOUNDARY

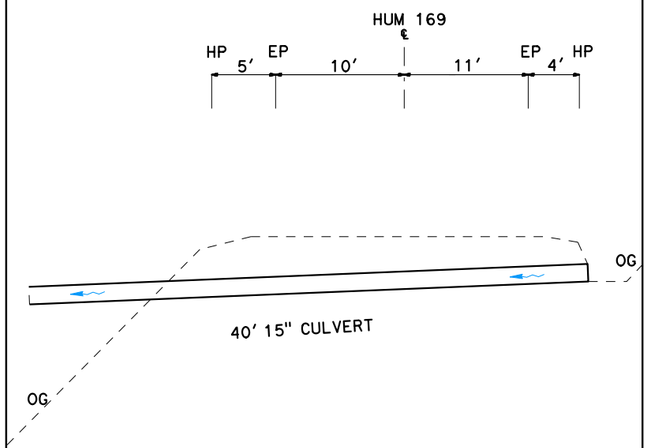
PROPOSED DESIGN



PM 32.53
CROSS SECTION

NO SCALE

AS-BUILT



REHAB CULVERTS
HUM-169-PM 15.07/33.75
01-0H4100 EFIS 0117000169

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY: Farlar Kohzad
CHECKED BY: Rene DeWees, Farlar Kohzad
FUNCTIONAL SUPERVISOR: Lena Ashley

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION: DATE PLOTTED => 6-JAN-2022
00-00-00 TIME PLOTTED => 11:50

BORDER LAST REVISED 7/2/2010 | USERNAME => s151816 | DGN FILE => 01-0H410 Preliminary Designs.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0313 | PROJECT NUMBER & PHASE 01170001690

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	HUM	SR-169	VAR	41	51

DESIGN STUDY

REGISTERED CIVIL ENGINEER DATE

ONLY

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Thomas Phillips
No. C64633
Exp.06/30/23
CIVIL
STATE OF CALIFORNIA

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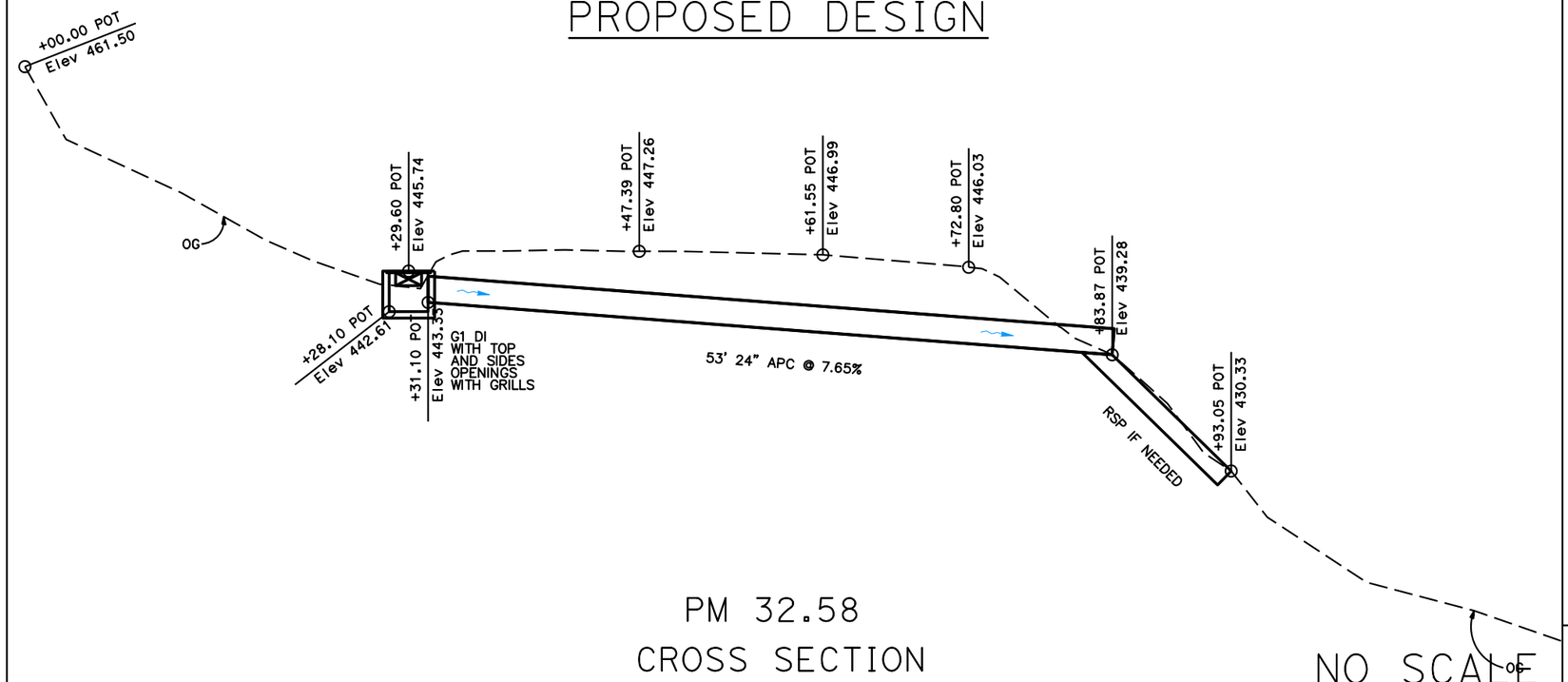
LEGEND

- APPROXIMATE R/W
- FLOW DIRECTION
- NEW CULVERT
- PRIVATE WATER LINE
- POTENTIAL STAGING AREA
- TCE
- PERMANENT EASEMENT
- ESL
- TOPOGRAPHIC SURFACE BOUNDARY

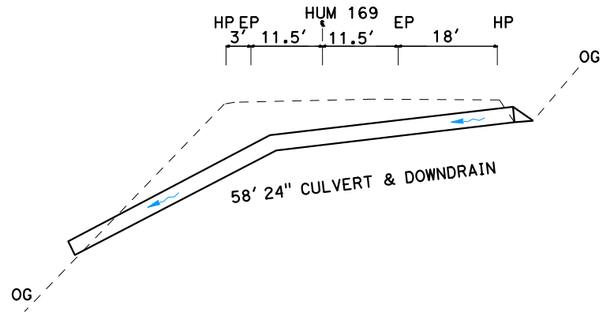
PROPOSED DESIGN



PM 32.58
CROSS SECTION

NO SCALE

AS-BUILT



REHAB CULVERTS
HUM-169-PM 15.07/33.75
01-0H4100 EFIS 0117000169

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

FUNCTIONAL SUPERVISOR: Lena Ashley

CALCULATED-DESIGNED BY: Farlar Kohzad

CHECKED BY: Rene DeWees, Farlar Kohzad

REVISED BY | DATE REVISED

LAST REVISION | DATE PLOTTED => 6-JAN-2022
00-00-00 | TIME PLOTTED => 11:53

BORDER LAST REVISED 7/2/2010

USERNAME => s151816
DGN FILE => 01-0H410 Preliminary Designs.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0313

PROJECT NUMBER & PHASE 01170001690

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	HUM	SR-169	VAR	42	51

DESIGN STUDY

REGISTERED CIVIL ENGINEER DATE

ONLY

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Thomas Phillips
No. C64633
Exp.06/30/23
CIVIL
STATE OF CALIFORNIA

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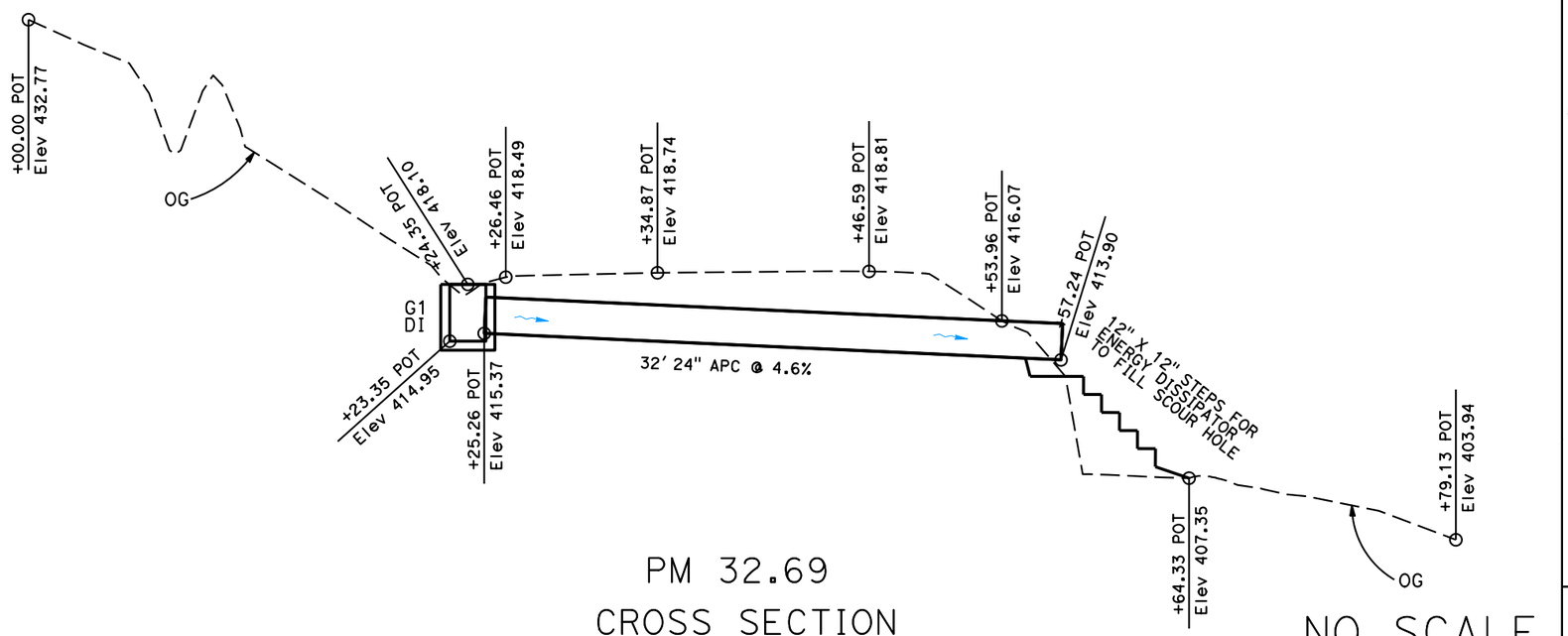
LEGEND

- APPROXIMATE R/W
- FLOW DIRECTION
- NEW CULVERT
- PRIVATE WATER LINE
- POTENTIAL STAGING AREA
- TCE
- PERMANENT EASEMENT
- ESL
- TOPOGRAPHIC SURFACE BOUNDARY

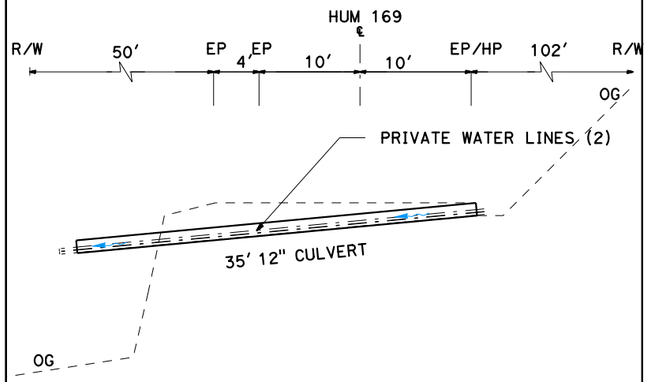
PROPOSED DESIGN



PM 32.69
CROSS SECTION

NO SCALE

AS-BUILT



REHAB CULVERTS
HUM-169-PM 15.07/33.75
01-0H4100 EFIS 0117000169

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY: Farlar Kohzad
CHECKED BY: Rene DeWees, Farlar Kohzad
FUNCTIONAL SUPERVISOR: Lena Ashley

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

LAST REVISION: DATE PLOTTED => 6-JAN-2022
00-00-00 TIME PLOTTED => 11:57

BORDER LAST REVISED 7/2/2010

USERNAME => s151816
DGN FILE => 01-0H410 Preliminary Designs.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0313

PROJECT NUMBER & PHASE 01170001690

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	HUM	SR-169	VAR	43	51

DESIGN STUDY

REGISTERED CIVIL ENGINEER DATE

ONLY

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Thomas Phillips — No. C64633 — Exp.06/30/23 — CIVIL — STATE OF CALIFORNIA

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LEGEND

- APPROXIMATE R/W
- FLOW DIRECTION
- NEW CULVERT
- PRIVATE WATER LINE
- POTENTIAL STAGING AREA
- TCE
- PERMANENT EASEMENT
- ESL
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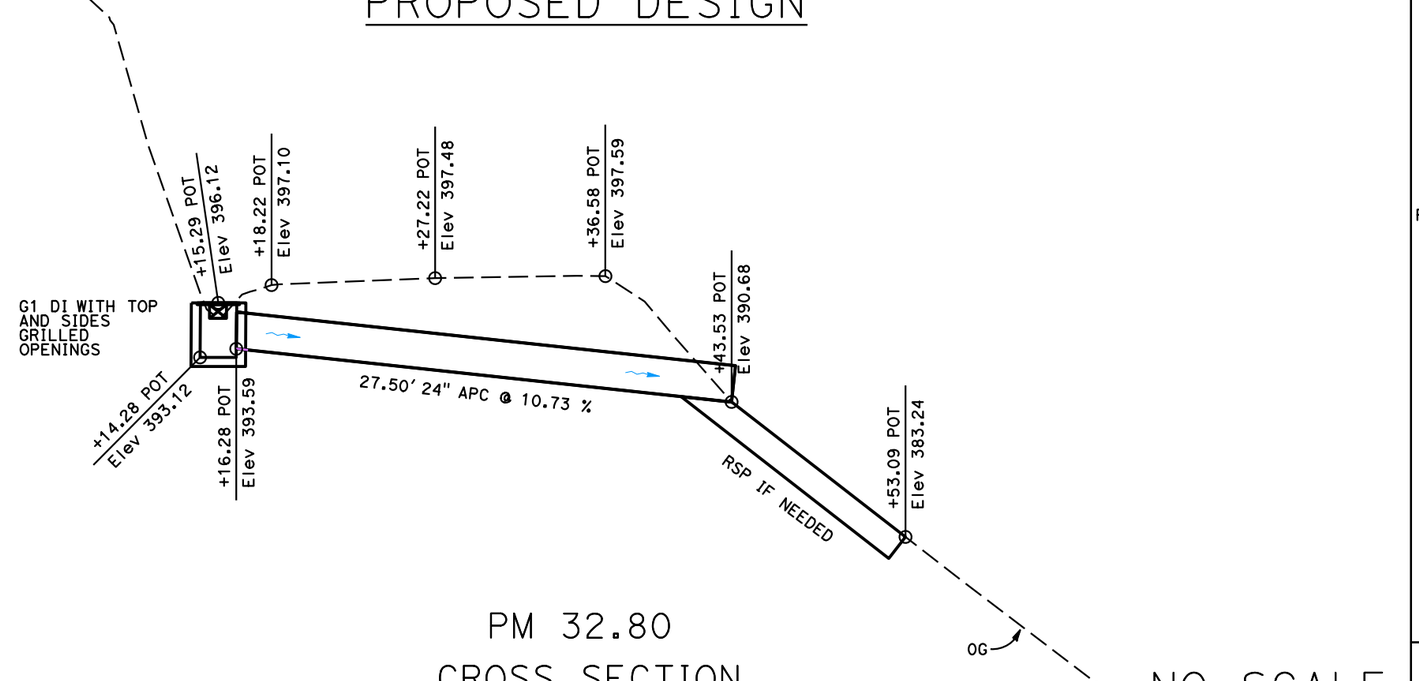
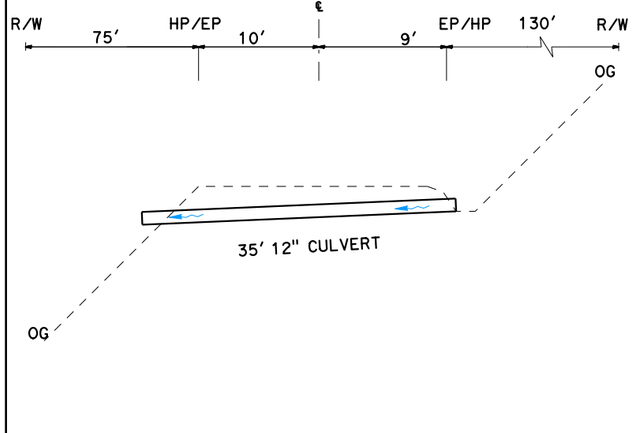
PROPOSED DESIGN



PM 32.80
CROSS SECTION

NO SCALE

AS-BUILT



REHAB CULVERTS
HUM-169-PM 15.07/33.75
01-0H4100 EFIS 0117000169

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY: Fariar Kohzad
CHECKED BY: Rene DeWees, Fariar Kohzad
FUNCTIONAL SUPERVISOR: Lena Ashley

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION 00-00-00
DATE PLOTTED => 6-JAN-2022
TIME PLOTTED => 12:00

BORDER LAST REVISED 7/2/2010
USERNAME => s151816
DGN FILE => 01-0H410 Preliminary Designs.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 0313
PROJECT NUMBER & PHASE 01170001690

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	HUM	SR-169	VAR	44	51

DESIGN STUDY

REGISTERED CIVIL ENGINEER DATE

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PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Thomas Phillips
No. C64633
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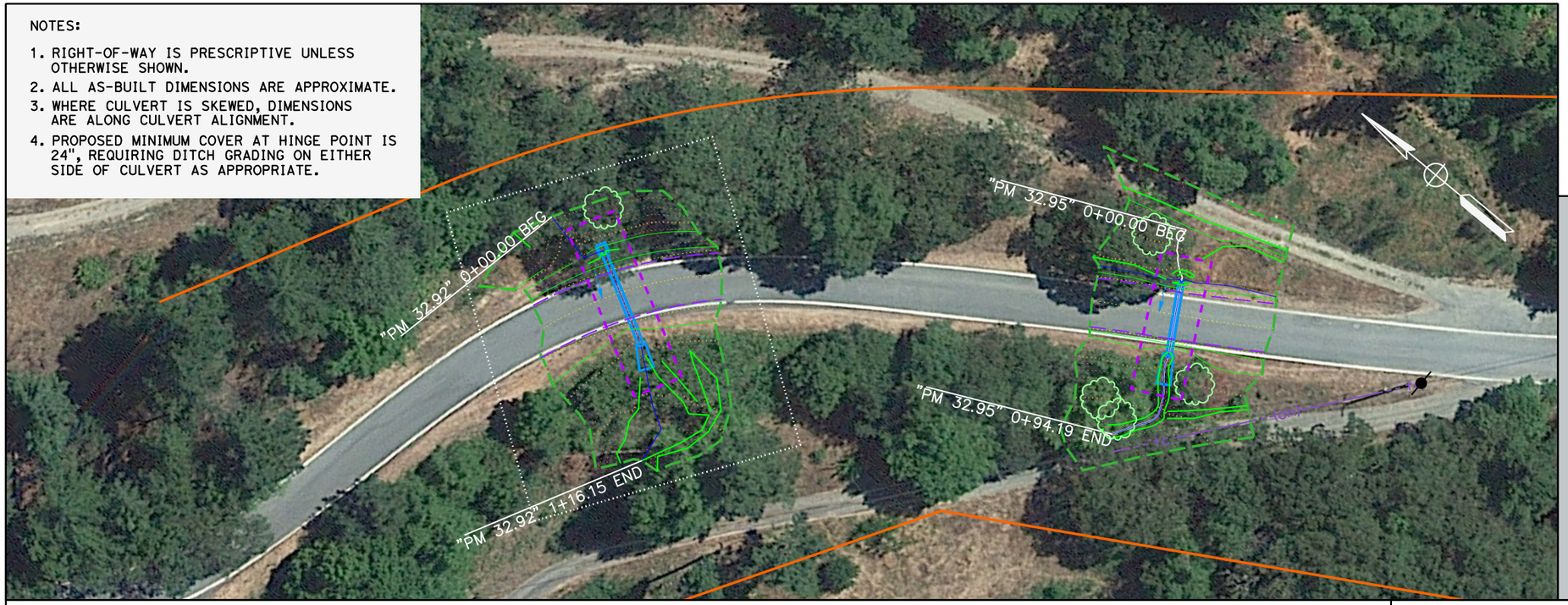
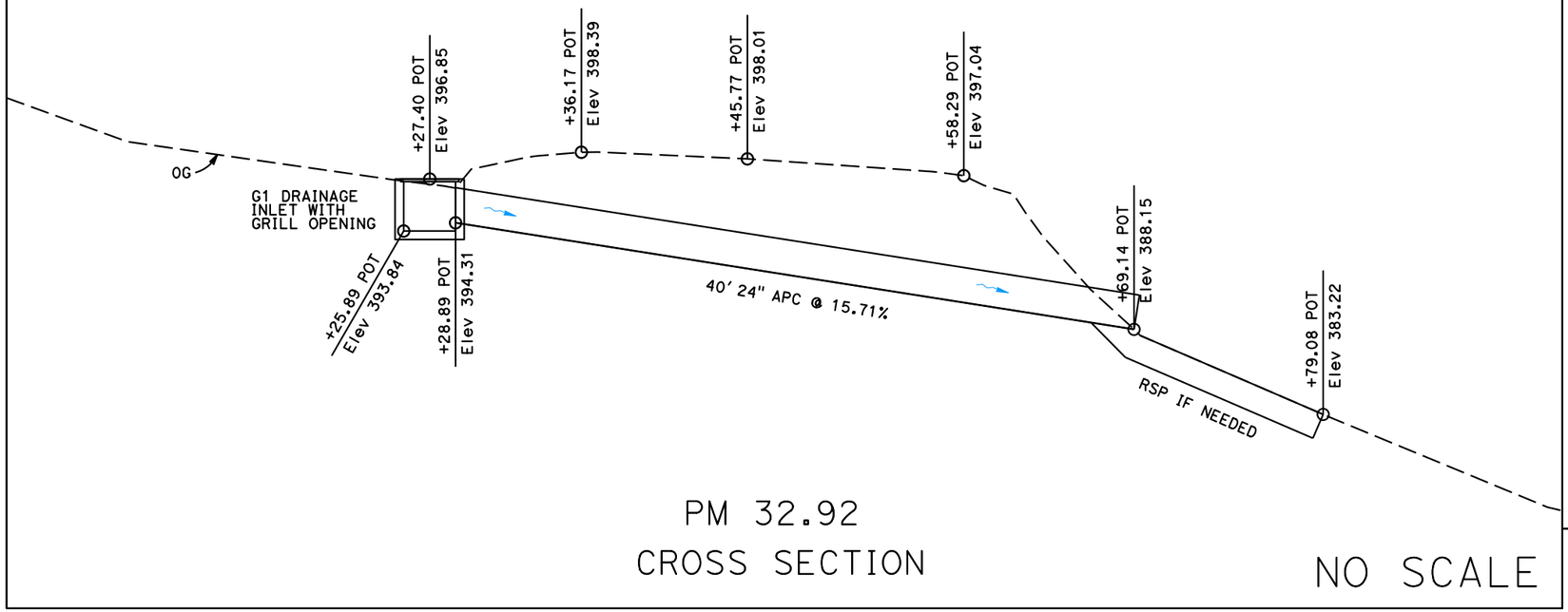


LEGEND

- APPROXIMATE R/W
- FLOW DIRECTION
- NEW CULVERT
- PRIVATE WATER LINE
- POTENTIAL STAGING AREA
- TCE
- PERMANENT EASEMENT
- ESL
- TOPOGRAPHIC SURFACE BOUNDARY

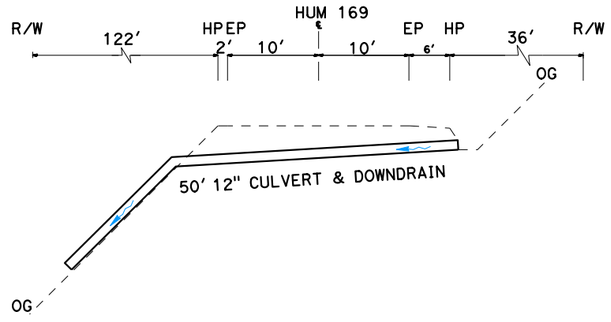
PROPOSED DESIGN



PM 32.92
CROSS SECTION

NO SCALE

AS-BUILT



REHAB CULVERTS
HUM-169-PM 15.07/33.75
01-0H4100 EFIS 0117000169

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY	Farlar Kohzad
CHECKED BY	Rene DeWees, Farlar Kohzad

FUNCTIONAL SUPERVISOR: Lena Ashley

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

LAST REVISION DATE PLOTTED => 6-JAN-2022
00-00-00 TIME PLOTTED => 12:05

BORDER LAST REVISED 7/2/2010

USERNAME => s151816
DGN FILE => 01-0H410 Preliminary Designs.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0313

PROJECT NUMBER & PHASE 01170001690

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	HUM	SR-169	VAR	45	51

DESIGN STUDY

REGISTERED CIVIL ENGINEER DATE

ONLY

PLANS APPROVAL DATE

Thomas Phillips No. C64633 Exp.06/30/23 CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

NOTES:

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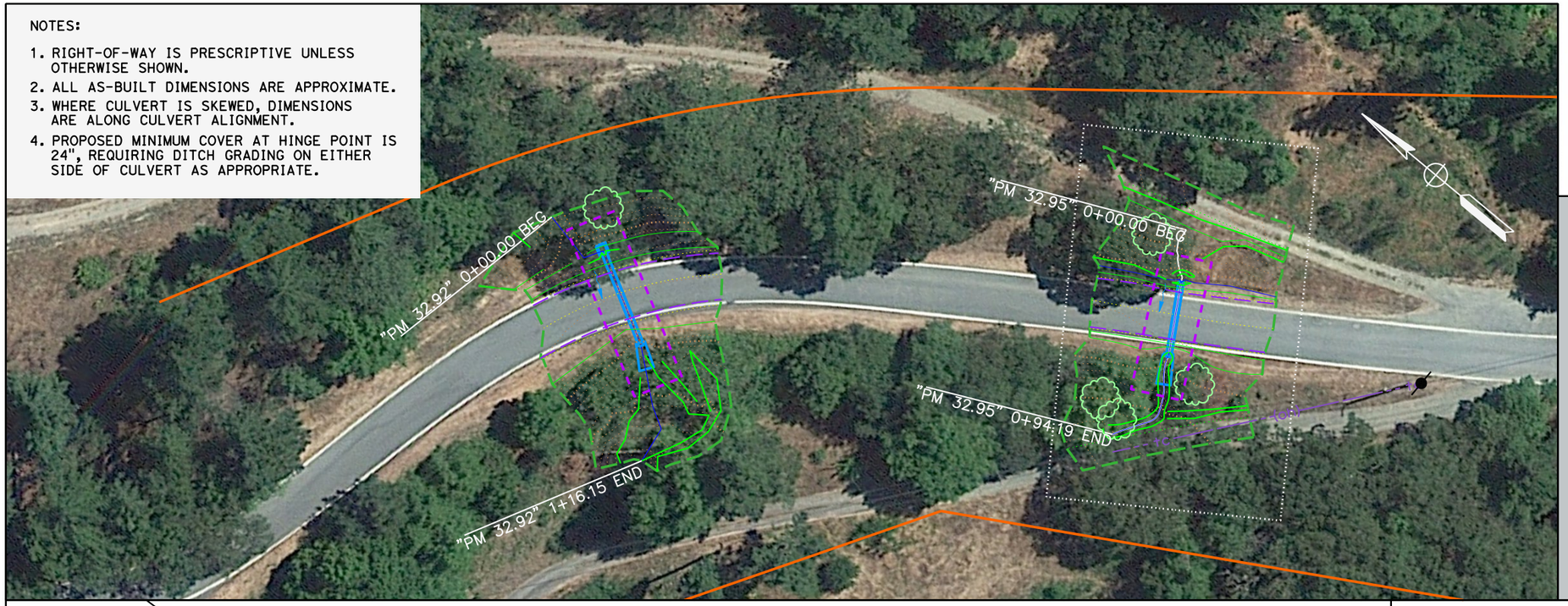
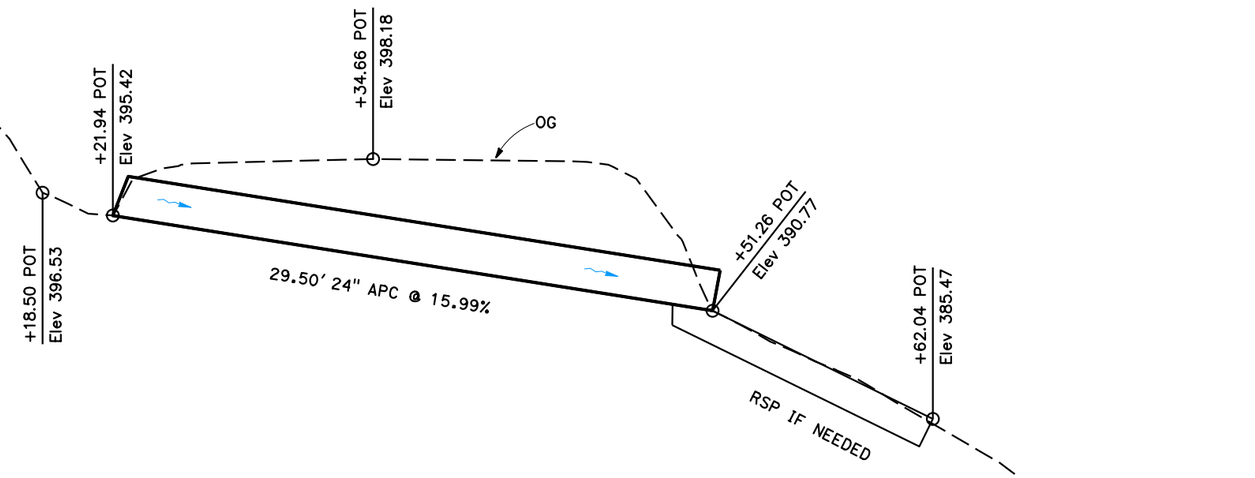


LEGEND

- APPROXIMATE R/W
- FLOW DIRECTION
- NEW CULVERT
- PRIVATE WATER LINE
- POTENTIAL STAGING AREA
- TCE
- PERMANENT EASEMENT
- ESL
- TOPOGRAPHIC SURFACE BOUNDARY

PROPOSED DESIGN

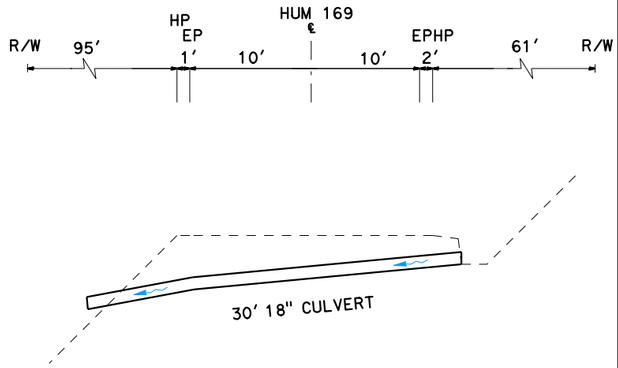


PM 32.95

CROSS SECTION

NO SCALE

AS-BUILT



REHAB CULVERTS
HUM-169-PM 15.07/33.75
01-0H4100 EFIS 0117000169

CALCULATED-DESIGNED BY	CHECKED BY	REVISED BY	DATE REVISED
Fariar Kohzad	Rene DeWees, Fariar Kohzad		

FUNCTIONAL SUPERVISOR: Lena Ashley

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

LAST REVISION DATE PLOTTED => 6-JAN-2022
00-00-00 TIME PLOTTED => 12:08

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	HUM	SR-169	VAR	46	51

DESIGN STUDY

REGISTERED CIVIL ENGINEER DATE

ONLY

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Thomas Phillips
No. C64633
Exp.06/30/23
CIVIL
STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

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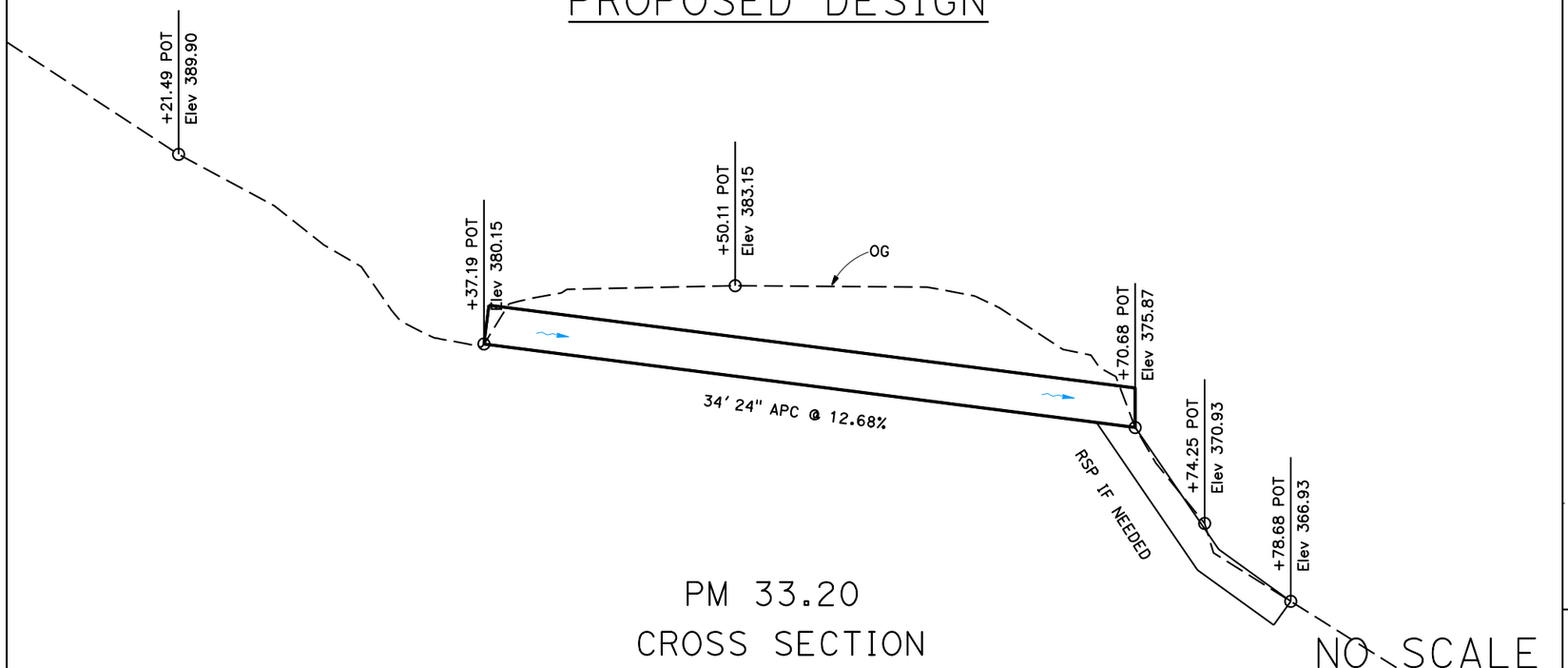
LEGEND

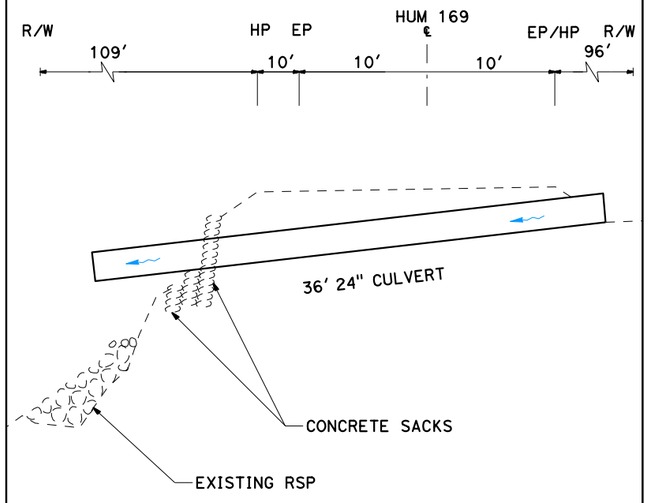
- APPROXIMATE R/W
- FLOW DIRECTION
- NEW CULVERT
- PRIVATE WATER LINE
- POTENTIAL STAGING AREA
- TCE
- PERMANENT EASEMENT
- ESL
- TOPOGRAPHIC SURFACE BOUNDARY

PROPOSED DESIGN



PM 33.20
CROSS SECTION
NO SCALE

AS-BUILT



REHAB CULVERTS
HUM-169-PM 15.07/33.75
01-0H4100 EFIS 0117000169

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY: Fariar Kohzad
CHECKED BY: Rene DeWees, Fariar Kohzad
FUNCTIONAL SUPERVISOR: Lena Ashley

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION 00-00-00 | DATE PLOTTED => 6-JAN-2022 | TIME PLOTTED => 12:11

BORDER LAST REVISED 7/2/2010 | USERNAME => s151816 | DGN FILE => 01-0H410 Preliminary Designs.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0313 | PROJECT NUMBER & PHASE 01170001690

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	HUM	SR-169	VAR	47	51

DESIGN STUDY

REGISTERED CIVIL ENGINEER DATE

ONLY

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Thomas Phillips
No. C64633
Exp.06/30/23
CIVIL
STATE OF CALIFORNIA

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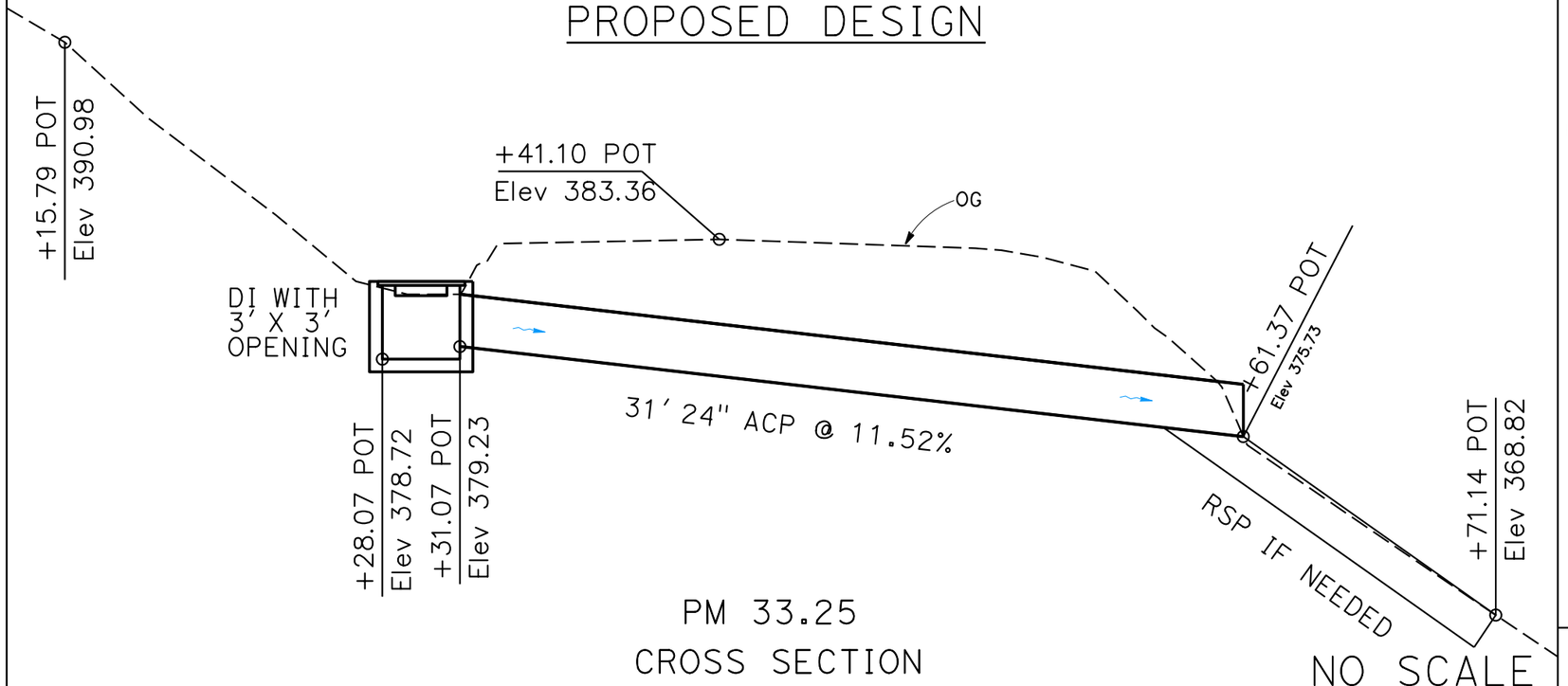
LEGEND

- APPROXIMATE R/W
- FLOW DIRECTION
- NEW CULVERT
- PRIVATE WATER LINE
- POTENTIAL STAGING AREA
- TCE
- PERMANENT EASEMENT
- ESL
- TOPOGRAPHIC SURFACE BOUNDARY

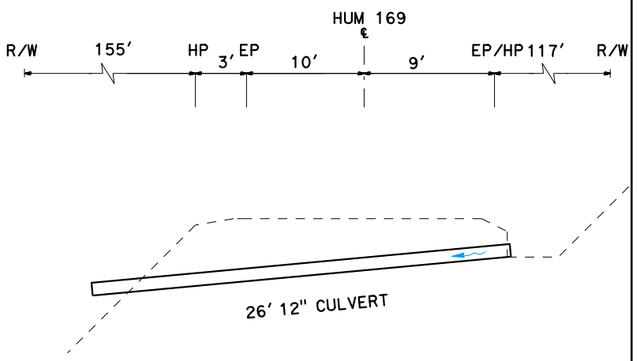
PROPOSED DESIGN



PM 33.25
CROSS SECTION

NO SCALE

AS-BUILT



REHAB CULVERTS
HUM-169-PM 15.07/33.75
01-0H4100 EFIS 0117000169

CALCULATED-DESIGNED BY	Fariar Kohzad
CHECKED BY	Rene DeWees, Fariar Kohzad
FUNCTIONAL SUPERVISOR	Lena Ashley
REVISED BY	
DATE REVISED	

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

LAST REVISION 00-00-00 | DATE PLOTTED => 6-JAN-2022 | TIME PLOTTED => 12:16

BORDER LAST REVISED 7/2/2010 | USERNAME => s151816 | DGN FILE => 01-0H410 Preliminary Designs.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0313 | PROJECT NUMBER & PHASE 01170001690

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	HUM	SR-169	VAR	48	51

DESIGN STUDY

REGISTERED CIVIL ENGINEER DATE

ONLY

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Thomas Phillips
No. C64633
Exp.06/30/23
CIVIL
STATE OF CALIFORNIA

NOTES:

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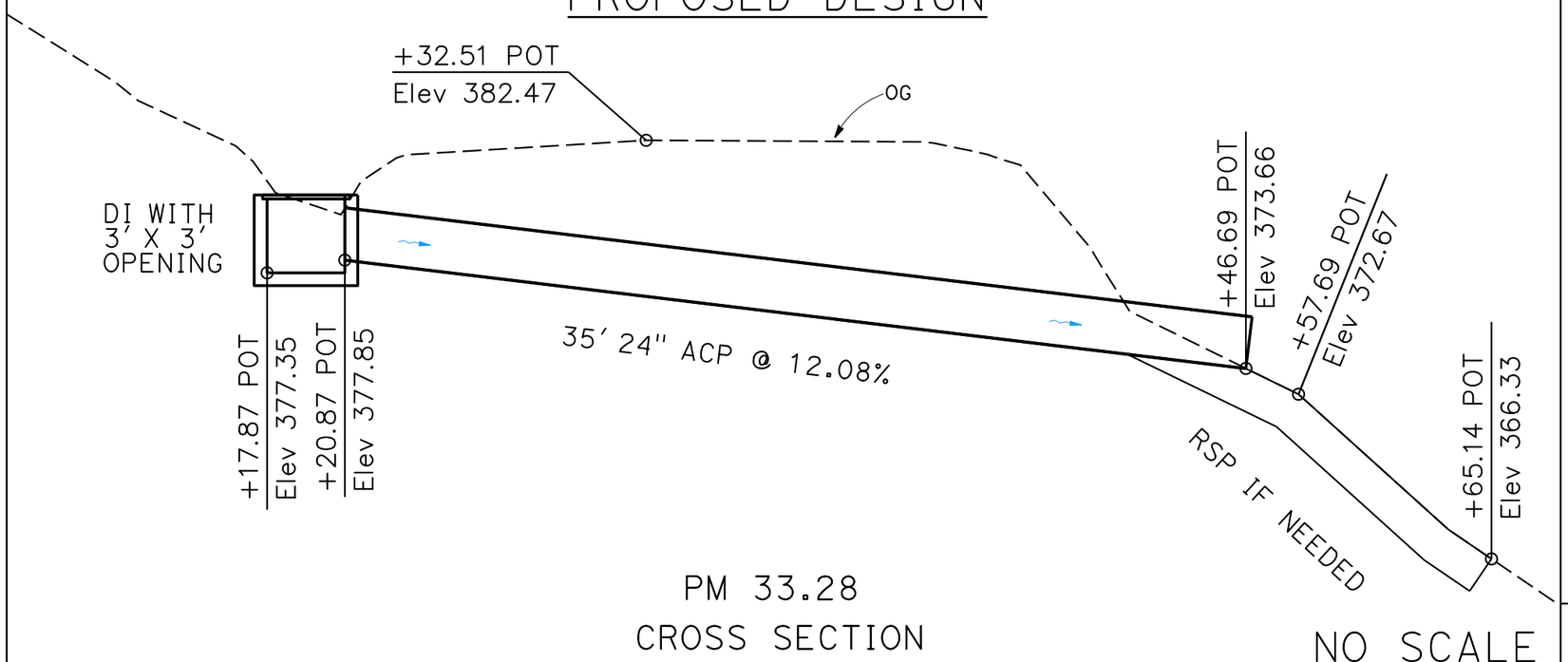
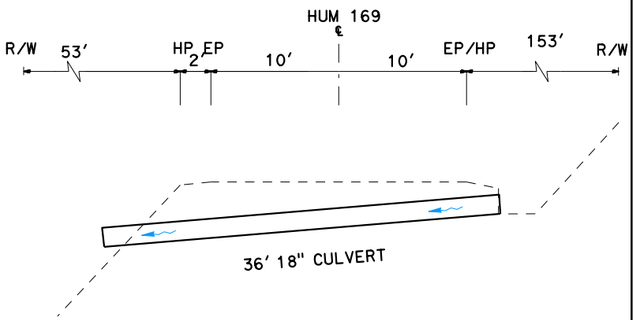
LEGEND

- APPROXIMATE R/W
- FLOW DIRECTION
- NEW CULVERT
- PRIVATE WATER LINE
- POTENTIAL STAGING AREA
- TCE
- PERMANENT EASEMENT
- ESL
- TOPOGRAPHIC SURFACE BOUNDARY

PROPOSED DESIGN



AS-BUILT



REHAB CULVERTS
HUM-169-PM 15.07/33.75
01-0H4100 EFIS 0117000169

CALCULATED-DESIGNED BY	Fariar Kohzad
CHECKED BY	Rene DeWees, Fariar Kohzad
FUNCTIONAL SUPERVISOR	Lena Ashley
REVISED BY	
DATE REVISED	

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

LAST REVISION DATE PLOTTED => 6-JAN-2022
00-00-00 TIME PLOTTED => 12:19

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	HUM	SR-169	VAR	49	51

DESIGN STUDY

REGISTERED CIVIL ENGINEER DATE

ONLY

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Thomas Phillips
No. C64633
Exp.06/30/23
CIVIL
STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

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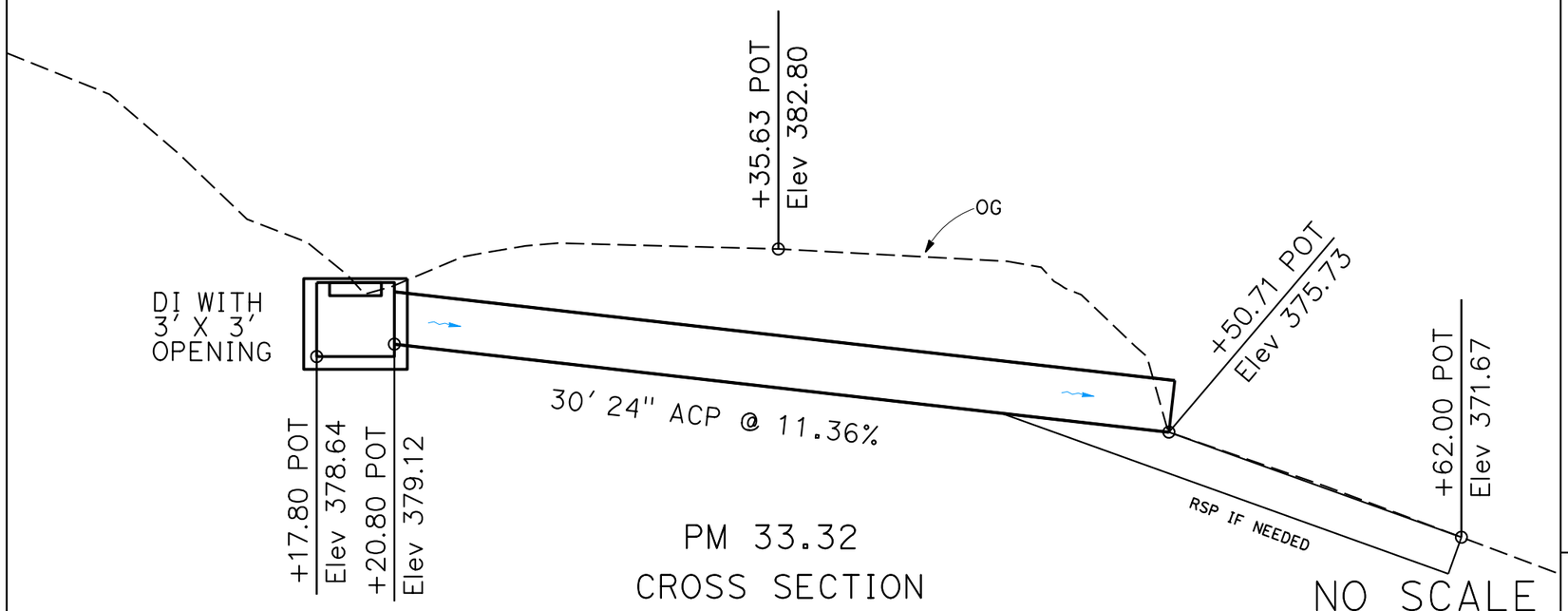
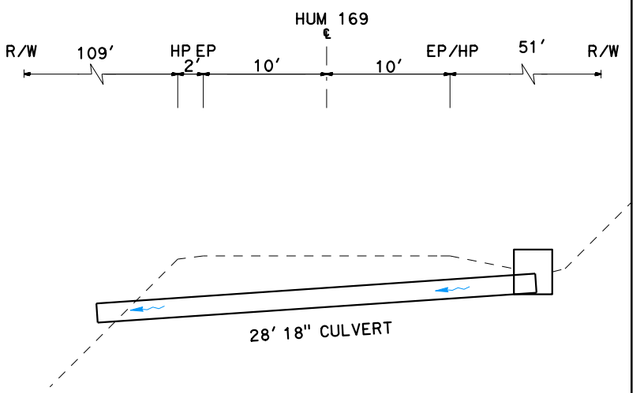
LEGEND

- APPROXIMATE R/W
- FLOW DIRECTION
- NEW CULVERT
- PRIVATE WATER LINE
- POTENTIAL STAGING AREA
- TCE
- PERMANENT EASEMENT
- ESL
- TOPOGRAPHIC SURFACE BOUNDARY

PROPOSED DESIGN



AS-BUILT



REHAB CULVERTS
HUM-169-PM 15.07/33.75
01-0H4100 EFIS 0117000169

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

FUNCTIONAL SUPERVISOR: Lena Ashley
CALCULATED-DESIGNED BY: Farlar Kohzad
CHECKED BY: Rene DeWees, Farlar Kohzad
REVISED BY
DATE REVISED

LAST REVISION DATE PLOTTED => 6-JAN-2022
00-00-00 TIME PLOTTED => 12:23

BORDER LAST REVISED 7/2/2010
USERNAME => s151816
DGN FILE => 01-0H410 Preliminary Designs.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 0313
PROJECT NUMBER & PHASE 01170001690

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	HUM	SR-169	VAR	50	52

DESIGN STUDY

REGISTERED CIVIL ENGINEER DATE

ONLY

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Thomas Phillips
No. C64633
Exp.06/30/23
CIVIL
STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

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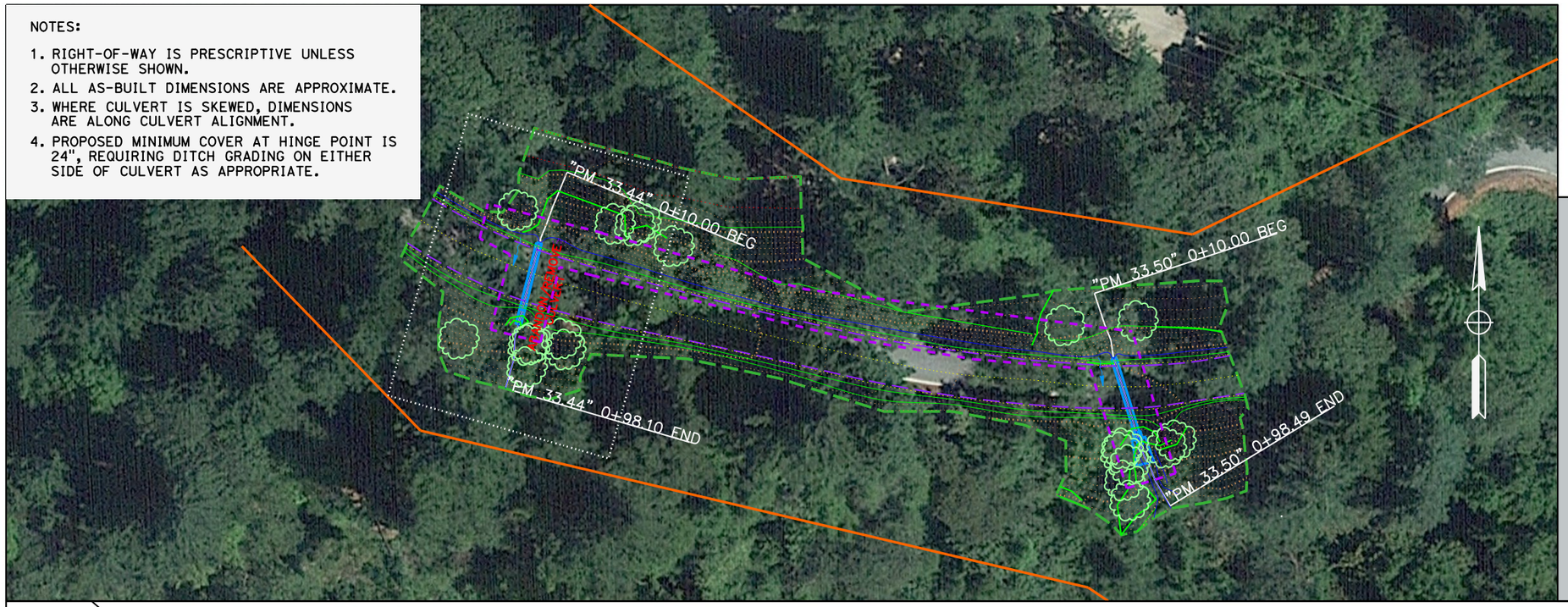
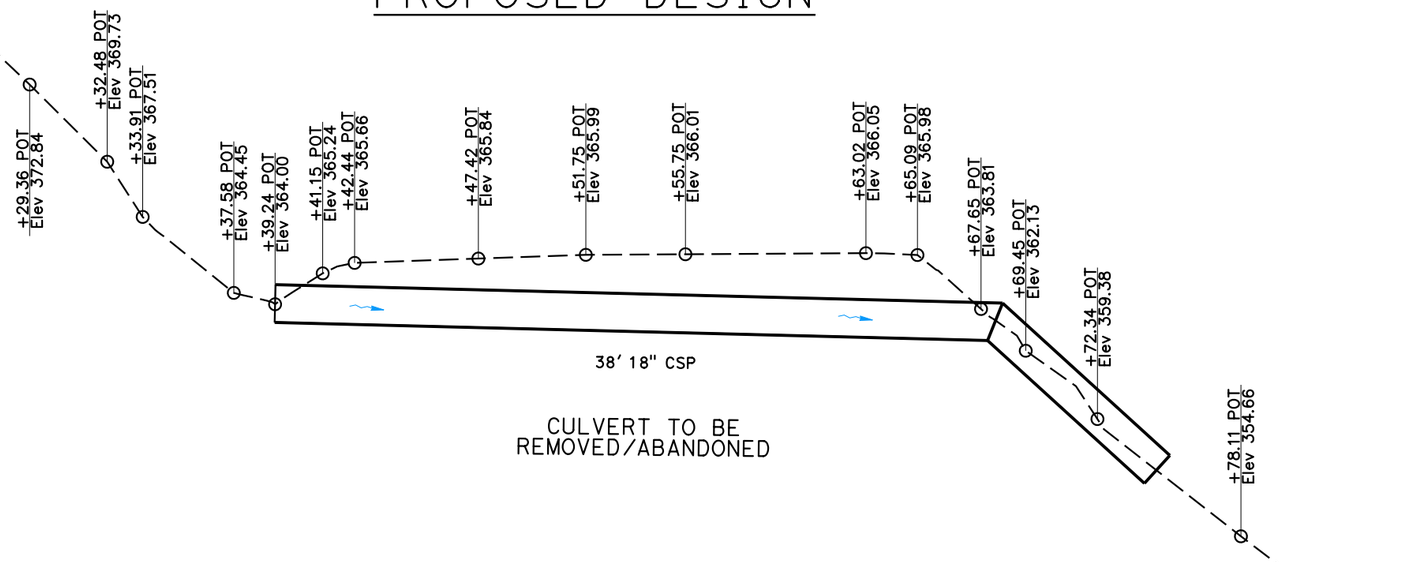


LEGEND

- APPROXIMATE R/W
- FLOW DIRECTION
- NEW CULVERT
- PRIVATE WATER LINE
- POTENTIAL STAGING AREA
- TCE
- PERMANENT EASEMENT
- ESL
- TOPOGRAPHIC SURFACE BOUNDARY

PROPOSED DESIGN



PM 33.44
CROSS SECTION

NO SCALE

REHAB CULVERTS
HUM-169-PM 15.07/33.75
01-0H4100 EFIS 0117000169

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

FUNCTIONAL SUPERVISOR: Lena Ashley

CALCULATED-DESIGNED BY: Farlar Kohzad
CHECKED BY: Rene DeWees, Farlar Kohzad

REVISED BY | DATE REVISED

LAST REVISION | DATE PLOTTED => 16-MAR-2022
00-00-00 | TIME PLOTTED => 16:09

BORDER LAST REVISED 7/2/2010

USERNAME => s151816
DGN FILE => 01-0H410 Preliminary Designs.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0313

PROJECT NUMBER & PHASE 01170001690

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	HUM	SR-169	VAR	50	51

DESIGN STUDY

REGISTERED CIVIL ENGINEER DATE

ONLY

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Thomas Phillips
No. C64633
Exp.06/30/23
CIVIL
STATE OF CALIFORNIA

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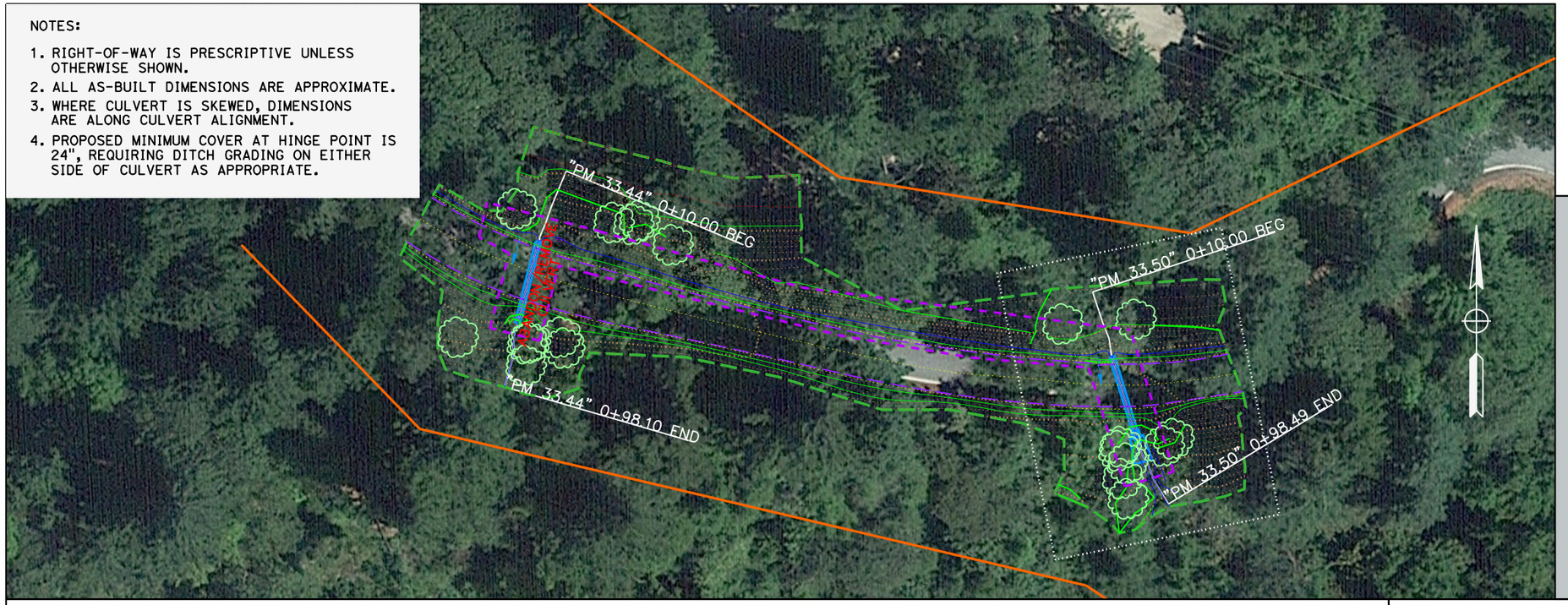
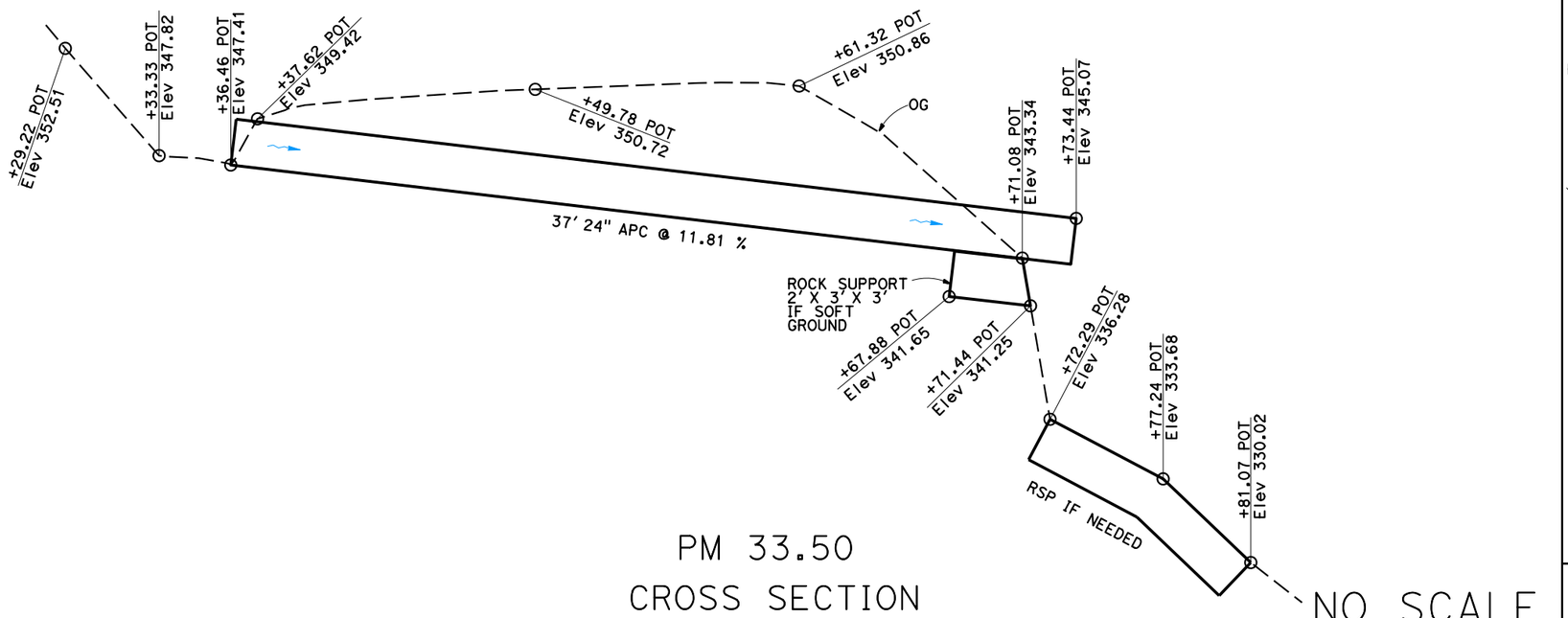


LEGEND

- APPROXIMATE R/W
- FLOW DIRECTION
- NEW CULVERT
- PRIVATE WATER LINE
- POTENTIAL STAGING AREA
- TCE
- PERMANENT EASEMENT
- ESL
- TOPOGRAPHIC SURFACE BOUNDARY

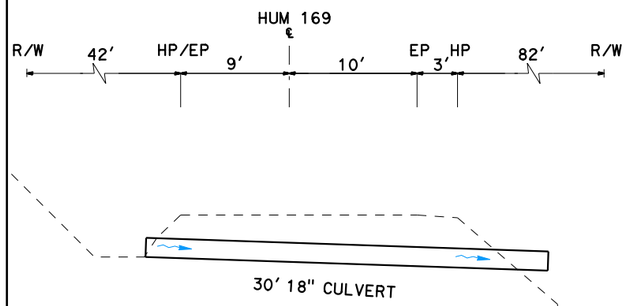
PROPOSED DESIGN



PM 33.50
CROSS SECTION

NO SCALE

AS-BUILT



REHAB CULVERTS
HUM-169-PM 15.07/33.75
01-0H4100 EFIS 0117000169

CALCULATED-DESIGNED BY	Farlar Kohzad
CHECKED BY	Rene DeWees, Farlar Kohzad
REVISED BY	
DATE REVISED	
FUNCTIONAL SUPERVISOR	Lena Ashley

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

LAST REVISION DATE PLOTTED => 7-JAN-2022
00-00-00 TIME PLOTTED => 13:39

BORDER LAST REVISED 7/2/2010

USERNAME => s151816
DGN FILE => 01-0H410 Preliminary Designs.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0313

PROJECT NUMBER & PHASE 01170001690

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	HUM	SR-169	VAR	51	51

DESIGN STUDY

REGISTERED CIVIL ENGINEER DATE

ONLY

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Thomas Phillips
No. C64633
Exp.06/30/23
CIVIL
STATE OF CALIFORNIA

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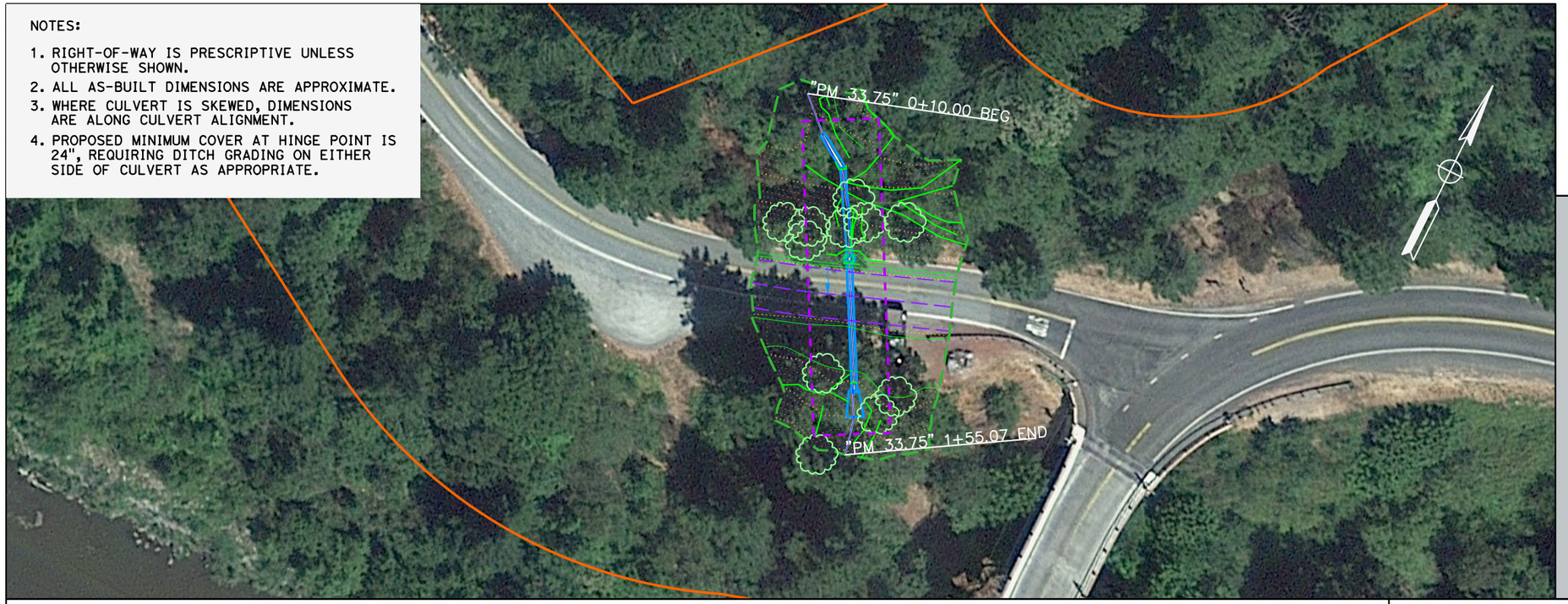
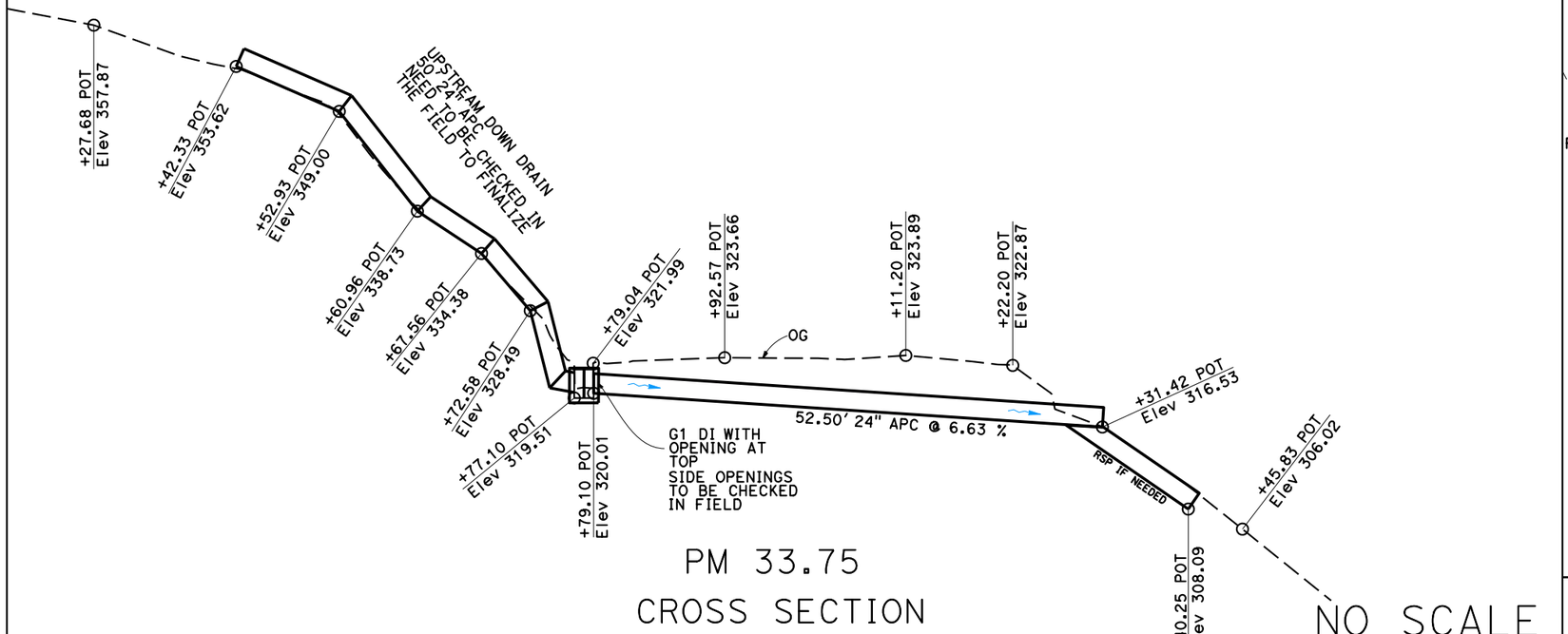


LEGEND

- APPROXIMATE R/W
- FLOW DIRECTION
- NEW CULVERT
- PRIVATE WATER LINE
- POTENTIAL STAGING AREA
- TCE
- PERMANENT EASEMENT
- ESL
- TOPOGRAPHIC SURFACE BOUNDARY

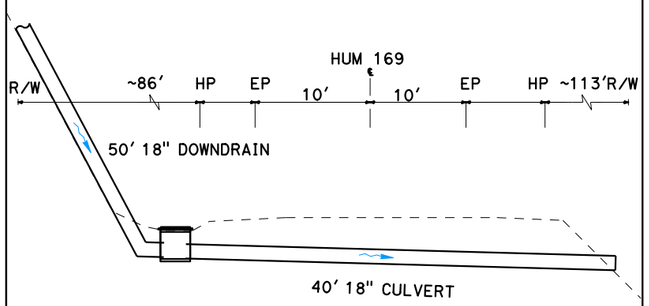
PROPOSED DESIGN



PM 33.75
CROSS SECTION

NO SCALE

AS-BUILT



REHAB CULVERTS
HUM-169-PM 15.07/33.75
01-0H4100 EFIS 0117000169

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY: Farlar Kohzad
CHECKED BY: Rene DeWees, Farlar Kohzad
FUNCTIONAL SUPERVISOR: Lena Ashley

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

LAST REVISION: DATE PLOTTED => 6-JAN-2022
00-00-00 TIME PLOTTED => 12:29

BORDER LAST REVISED 7/2/2010

USERNAME => s151816
DGN FILE => 01-0H410 Preliminary Designs.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0313

PROJECT NUMBER & PHASE 01170001690

Appendix B. Title VI Policy Statement

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DEPARTMENT OF TRANSPORTATION
OFFICE OF THE DIRECTOR
P.O. BOX 942873, MS-49
SACRAMENTO, CA 94273-0001
PHONE (916) 654-6130
FAX (916) 653-5776
TTY 711
www.dot.ca.gov

Making Conservation a California Way of Life.

November 2019

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."*

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

For information or guidance on how to file a complaint, or obtain more information regarding Title VI, please contact the Title VI Branch Manager at (916) 324-8379 or visit the following web page: https://dot.ca.gov/programs/business-and-economic-opportunity/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 Business and Economic Opportunity, at 1823 14th Street, MS-79, Sacramento, CA 95811; (916) 324-8379 (TTY 711); or at Title.VI@dot.ca.gov.

Toks Omishakin
Director

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

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Appendix C. USFWS, NMFS, CNDDB, CNPS, Species List

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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: December 03, 2021
Consultation Code: 08EACT00-2022-SLI-0075
Event Code: 08EACT00-2022-E-00198
Project Name: HUM-169 Rehab Culvert Project

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 ECOS-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 ECOS-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:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

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 Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

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

Project Summary

Consultation Code: 08EACT00-2022-SLI-0075
Event Code: Some(08EACT00-2022-E-00198)
Project Name: HUM-169 Rehab Culvert Project
Project Type: TRANSPORTATION
Project Description: The purpose of this project is to rehabilitate 52 existing drainage systems to good condition at various locations along State Route (SR) 169 in Humboldt County. The project is needed to repair deteriorating or failing drainage systems to prevent erosion and potential roadway embankment failure.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@41.269621,-123.78529098861368,14z

Counties: Humboldt County, California

Endangered Species Act Species

There is a total of 6 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* There is **proposed** critical habitat for this species. Your location overlaps the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/9081	Threatened

Birds

NAME	STATUS
Marbled Murrelet *Brachyramphus marmoratus* Population: U.S.A. (CA, OR, WA) There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/4467	Threatened
Northern Spotted Owl *Strix occidentalis caurina* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/1123	Threatened
Western Snowy Plover *Charadrius nivosus nivosus* Population: Pacific Coast population DPS-U.S.A. (CA, OR, WA), Mexico (within 50 miles of Pacific coast) There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/8035	Threatened
Yellow-billed Cuckoo *Coccyzus americanus* Population: Western U.S. DPS There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/3911	Threatened

Insects

NAME	STATUS
Monarch Butterfly *Danaus plexippus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

Critical habitats

There is 1 critical habitat wholly or partially within your project area under this office's jurisdiction.

NAME	STATUS
Pacific Marten, Coastal Distinct Population Segment *Martes caurina* https://ecos.fws.gov/ecp/species/9081#crithab	Proposed

Quad Name **Weitchpec**
Quad Number **41123-B6**

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) -
sDPS Green Sturgeon (T) -

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 -

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) -
Olive Ridley Sea Turtle (T/E) -
Leatherback Sea Turtle (E) -
North Pacific Loggerhead Sea Turtle (E) -

ESA Whales

Blue Whale (E) -
Fin Whale (E) -
Humpback Whale (E) -
Southern Resident Killer Whale (E) -
North Pacific Right Whale (E) -
Sei Whale (E) -
Sperm Whale (E) -

ESA Pinnipeds

Guadalupe Fur Seal (T) -
Steller Sea Lion Critical Habitat -

Essential Fish Habitat

Coho EFH - **X**
Chinook Salmon EFH - **X**
Groundfish EFH -
Coastal Pelagics EFH -
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 -
MMPA Pinnipeds -

Quad Name **French Camp Ridge**
Quad Number **41123-B7**

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) -
sDPS Green Sturgeon (T) -

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 -

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) -
Olive Ridley Sea Turtle (T/E) -
Leatherback Sea Turtle (E) -
North Pacific Loggerhead Sea Turtle (E) -

ESA Whales

Blue Whale (E) -
Fin Whale (E) -
Humpback Whale (E) -
Southern Resident Killer Whale (E) -
North Pacific Right Whale (E) -
Sei Whale (E) -
Sperm Whale (E) -

ESA Pinnipeds

Guadalupe Fur Seal (T) -
Steller Sea Lion Critical Habitat -

Essential Fish Habitat

Coho EFH - **X**
Chinook Salmon EFH - **X**
Groundfish EFH -
Coastal Pelagics EFH -
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 -
MMPA Pinnipeds -

Quad Name **Johnsons**
Quad Number **41123-C7**

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) -
sDPS Green Sturgeon (T) -

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 -

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) -
Olive Ridley Sea Turtle (T/E) -
Leatherback Sea Turtle (E) -
North Pacific Loggerhead Sea Turtle (E) -

ESA Whales

Blue Whale (E) -
Fin Whale (E) -
Humpback Whale (E) -
Southern Resident Killer Whale (E) -
North Pacific Right Whale (E) -
Sei Whale (E) -
Sperm Whale (E) -

ESA Pinnipeds

Guadalupe Fur Seal (T) -
Steller Sea Lion Critical Habitat -

Essential Fish Habitat

Coho EFH - **X**
Chinook Salmon EFH - **X**
Groundfish EFH -
Coastal Pelagics EFH -
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 -
MMPA Pinnipeds -

CALIFORNIA DEPARTMENT OF FISH and WILDLIFE **RareFind**

Query Summary:
Quad IS (Johnsons (4112337) OR French Camp Ridge (4112327) OR Weitchpec (4112326) OR Fish Lake (4112336) OR Hupa Mountain (4112317) OR Hoopa (4112316) OR Tish Tang Point (4112315) OR Ah Pah Ridge (4112348) OR Bark Shanty Gulch (4112345) OR Panther Creek (4112318) OR Bald Hills (4112328) OR Blue Creek Mtn. (4112347) OR Lonesome Ridge (4112346) OR Holter Ridge (4112338) OR Orleans (4112335) OR Hopkins Butte (4112325))

Print Close

CNDDB Element Query Results

Scientific Name	Common Name	Taxonomic Group	Element Code	Total Occs	Returned Occs	Federal Status	State Status	Global Rank	State Rank	CA Rare Plant Rank	Other Status	Habitats
Accipiter gentilis	northern goshawk	Birds	ABNKC12060	433	3	None	None	G5	S3	null	BLM_S-Sensitive, CDF_S-Sensitive, CDFW_SSC-Species of Special Concern, IUCN_LC-Least Concern, USFS_S-Sensitive	North coast coniferous forest, Subalpine coniferous forest, Upper montane coniferous forest
Ancotrema voyanum	hooded lancetooth	Mollusks	IMGAS36130	173	15	None	None	G1G2	S1S2	null	null	Oldgrowth, Riparian forest, Talus slope
Anomobryum julaceum	slender silver moss	Bryophytes	NBMUS80010	13	1	None	None	G5?	S2	4.2	null	Broadleaved upland forest, Lower montane coniferous forest, North coast coniferous forest
Antrozous pallidus	pallid bat	Mammals	AMACC10010	420	1	None	None	G4	S3	null	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, IUCN_LC-Least Concern, USFS_S-Sensitive, WBWG_H-High Priority	Chaparral, Coastal scrub, Desert wash, Great Basin grassland, Great Basin scrub, Mojavean desert scrub, Riparian woodland, Sonoran desert scrub, Upper montane coniferous forest, Valley & foothill grassland
Aplodontia rufa humboldtiana	Humboldt mountain beaver	Mammals	AMAFA01017	28	2	None	None	G5TNR	SNR	null	null	Coastal scrub, Redwood, Riparian forest
Arborimus pomo	Sonoma tree vole	Mammals	AMAFF23030	222	8	None	None	G3	S3	null	CDFW_SSC-Species of Special Concern, IUCN_NT-Near Threatened	North coast coniferous forest, Oldgrowth, Redwood
Ardea herodias	great blue heron	Birds	ABNGA04010	156	7	None	None	G5	S4	null	CDF_S-Sensitive, IUCN_LC-Least Concern	Brackish marsh, Estuary, Freshwater marsh, Marsh & swamp, Riparian forest, Wetland
Ascaphus truei	Pacific tailed frog	Amphibians	AAABA01010	491	86	None	None	G4	S3S4	null	CDFW_SSC-Species of Special Concern, IUCN_LC-Least Concern	Aquatic, Klamath/North coast flowing waters, Lower montane coniferous forest, North coast coniferous forest, Redwood, Riparian forest
Astragalus umbraticus	Bald Mountain milk-vetch	Dicots	PDFAB0F990	33	26	None	None	G4	S2	2B.2	null	Cismontane woodland, Lower montane coniferous forest
Atractelmis wawona	Wawona riffle beetle	Insects	IICOL58010	80	1	None	None	G3	S1S2	null	null	Aquatic
Bombus caliginosus	obscure bumble bee	Insects	IIHYM24380	181	1	None	None	G4?	S1S2	null	IUCN_VU-Vulnerable	null

Bombus occidentalis	western bumble bee	Insects	IIHYM24250	306	4	None	None	G2G3	S1	null	USFS_S-Sensitive	null
Bombus suckleyi	Suckley's cuckoo bumble bee	Insects	IIHYM24350	4	1	None	None	GU	S1	null	null	null
Bonasa umbellus	ruffed grouse	Birds	ABNLC11010	5	4	None	None	G5	S3S4	null	CDFW_WL-Watch List, IUCN_LC-Least Concern	North coast coniferous forest, Riparian forest, Upper montane coniferous forest
Brachyramphus marmoratus	marbled murrelet	Birds	ABNNN06010	110	5	Threatened	Endangered	G3	S2	null	CDF_S-Sensitive, IUCN_EN-Endangered, NABCI_RWL-Red Watch List	Lower montane coniferous forest, Oldgrowth, Redwood
Calamagrostis crassiglumis	Thurber's reed grass	Monocots	PMPOA17070	15	1	None	None	G3Q	S2	2B.1	null	Coastal scrub, Freshwater marsh, Marsh & swamp, Wetland
Cardamine angulata	seaside bittercress	Dicots	PDBRA0K010	38	11	None	None	G4G5	S3	2B.1	null	Lower montane coniferous forest, North coast coniferous forest, Wetland
Carex hystericina	porcupine sedge	Monocots	PMCYP036D0	4	1	None	None	G5	S2	2B.1	null	Freshwater marsh, Marsh & swamp, Wetland
Carex praticola	northern meadow sedge	Monocots	PMCYP03B20	14	3	None	None	G5	S2	2B.2	null	Meadow & seep, Wetland
Coptis laciniata	Oregon goldthread	Dicots	PDRAN0A020	122	19	None	None	G4?	S3?	4.2	null	Meadow & seep, North coast coniferous forest, Wetland
Cornus canadensis	bunchberry	Dicots	PDCOR01040	11	1	None	None	G5	S2	2B.2	null	Bog & fen, Meadow & seep, North coast coniferous forest
Corynorhinus townsendii	Townsend's big-eared bat	Mammals	AMACC08010	635	1	None	None	G4	S2	null	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, IUCN_LC-Least Concern, USFS_S-Sensitive, WBWG_H-High Priority	Broadleaved upland forest, Chaparral, Chenopod scrub, Great Basin grassland, Great Basin scrub, Joshua tree woodland, Lower montane coniferous forest, Meadow & seep, Mojavean desert scrub, Riparian forest, Riparian woodland, Sonoran desert scrub, Sonoran thorn woodland, Upper montane coniferous forest, Valley & foothill grassland
Cottus klamathensis polyporus	Lower Klamath marbled sculpin	Fish	AFC4E02153	20	4	None	None	G4T2T4	S2S4	null	CDFW_SSC-Species of Special Concern	Aquatic
Cypseloides niger	black swift	Birds	ABNUA01010	46	1	None	None	G4	S2	null	CDFW_SSC-Species of Special Concern, IUCN_LC-Least Concern, NABCI_YWL-Yellow Watch List, USFWS_BCC-Birds of Conservation Concern	null
Emys marmorata	western pond turtle	Reptiles	ARAAD02030	1404	1	None	None	G3G4	S3	null	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, IUCN_VU-Vulnerable, USFS_S-Sensitive	Aquatic, Artificial flowing waters, Klamath/North coast flowing waters, Klamath/North coast standing waters, Marsh & swamp, Sacramento/San

												Joaquin flowing waters, Sacramento/San Joaquin standing waters, South coast flowing waters, South coast standing waters, Wetland
Entosphenus similis	Klamath River lamprey	Fish	AFBAA02140	14	1	None	None	G3G4Q	S3	null	AFS_TH-Threatened, CDFW_SSC-Species of Special Concern, USFS_S-Sensitive	Aquatic, Klamath/North coast flowing waters
Epilobium oreganum	Oregon fireweed	Dicots	PDONA060P0	62	1	None	None	G2	S2	1B.2	USFS_S-Sensitive	Bog & fen, Lower montane coniferous forest, Meadow & seep, Ultramafic, Upper montane coniferous forest, Wetland
Erythronium oregonum	giant fawn lily	Monocots	PMLIL0U0C0	37	11	None	None	G4G5	S2	2B.2	null	Cismontane woodland, Meadow & seep, Ultramafic
Erythronium revolutum	coast fawn lily	Monocots	PMLIL0U0F0	172	37	None	None	G4G5	S3	2B.2	null	Bog & fen, Broadleaved upland forest, North coast coniferous forest, Wetland
Gilia capitata ssp. pacifica	Pacific gilia	Dicots	PDPLM040B6	91	7	None	None	G5T3	S2	1B.2	null	Chaparral, Coastal bluff scrub, Coastal prairie, Valley & foothill grassland
Gonidea angulata	western ridged mussel	Mollusks	IMBIV19010	157	10	None	None	G3	S1S2	null	null	Aquatic
Haliaeetus leucocephalus	bald eagle	Birds	ABNKC10010	329	3	Delisted	Endangered	G5	S3	null	BLM_S-Sensitive, CDF_S-Sensitive, CDFW_FP-Fully Protected, IUCN_LC-Least Concern, USFS_S-Sensitive, USFWS_BCC-Birds of Conservation Concern	Lower montane coniferous forest, Oldgrowth
Helminthoglypta hertleini	Oregon shoulderband	Mollusks	IMGASC2280	16	1	None	None	G3Q	S1S2	null	null	Riparian forest, Talus slope
Helminthoglypta talmadgei	Trinity shoulderband	Mollusks	IMGASC2630	21	3	None	None	G2	S2	null	null	Limestone, Lower montane coniferous forest, Riparian forest
Iliamna latibracteata	California globe mallow	Dicots	PDMAL0K040	40	13	None	None	G2G3	S2	1B.2	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden, USFS_S-Sensitive	Chaparral, Lower montane coniferous forest, North coast coniferous forest, Riparian scrub
Juncus dudleyi	Dudley's rush	Monocots	PMJUN01390	12	1	None	None	G5	S1	2B.3	null	Lower montane coniferous forest, Wetland
Klamath/North Coast Fall/Winter Run Chinook Salmon River	Klamath/North Coast Fall/Winter Run Chinook Salmon River	Inland Waters	CARB2332CA	2	2	None	None	GNR	SNR	null	null	null
Klamath/North Coast Interior Headwater Fishless Stream	Klamath/North Coast Interior Headwater Fishless Stream	Inland Waters	CARB2220CA	3	2	None	None	GNR	SNR	null	null	null
Klamath/North Coast Rainbow Trout Stream	Klamath/North Coast Rainbow Trout Stream	Inland Waters	CARB2312CA	9	2	None	None	GNR	SNR	null	null	null
Kopsiopsis hookeri	small groundcone	Dicots	PDORO01010	21	4	None	None	G4?	S1S2	2B.3	null	North coast coniferous forest

Lasionycteris noctivagans	silver-haired bat	Mammals	AMACC02010	139	1	None	None	G3G4	S3S4	null	IUCN_LC-Least Concern, WBWG_M-Medium Priority	Lower montane coniferous forest, Oldgrowth, Riparian forest
Lewisia cotyledon var. heckneri	Heckner's lewisia	Dicots	PDPOR04052	41	1	None	None	G4T3	S3	1B.2	BLM_S-Sensitive, SB_UCSC-UC Santa Cruz	Lower montane coniferous forest
Lomatium martindalei	Coast Range lomatium	Dicots	PDAPI1B140	9	1	None	None	G5	S2	2B.3	null	Coastal bluff scrub, Lower montane coniferous forest, Meadow & seep, Ultramafic
Lycopodium clavatum	running-pine	Ferns	PPLYC01080	120	9	None	None	G5	S3	4.1	null	Lower montane coniferous forest, Marsh & swamp, North coast coniferous forest, Wetland
Margaritifera falcata	western pearlshell	Mollusks	IMBIV27020	78	8	None	None	G4G5	S1S2	null	null	Aquatic
Martes caurina humboldtensis	Humboldt marten	Mammals	AMAJF01012	44	12	Threatened	Endangered	G4G5T1	S1	null	CDFW_SSC-Species of Special Concern, USFS_S-Sensitive	North coast coniferous forest, Oldgrowth, Redwood
Mielichhoferia elongata	elongate copper moss	Bryophytes	NBMUS4Q022	20	1	None	None	G5	S3S4	4.3	USFS_S-Sensitive	Cismontane woodland
Monotropa uniflora	ghost-pipe	Dicots	PDMON03030	115	9	None	None	G5	S2	2B.2	null	Broadleaved upland forest, North coast coniferous forest
Montia howellii	Howell's montia	Dicots	PDPOR05070	123	7	None	None	G3G4	S2	2B.2	null	Meadow & seep, North coast coniferous forest, Vernal pool, Wetland
Myotis evotis	long-eared myotis	Mammals	AMACC01070	139	2	None	None	G5	S3	null	BLM_S-Sensitive, IUCN_LC-Least Concern, WBWG_M-Medium Priority	null
Oenothera wolfii	Wolf's evening-primrose	Dicots	PDONA0C1K0	29	2	None	None	G2	S1	1B.1	SB_BerrySB-Berry Seed Bank	Coastal bluff scrub, Coastal dunes, Coastal prairie
Oncorhynchus clarkii clarkii	coast cutthroat trout	Fish	AFCHA0208A	45	4	None	None	G5T4	S3	null	AFS_VU-Vulnerable, CDFW_SSC-Species of Special Concern, USFS_S-Sensitive	Aquatic, Klamath/North coast flowing waters
Oncorhynchus mykiss irideus pop. 36	summer-run steelhead trout	Fish	AFCHA0213B	20	3	None	Candidate Endangered	G5T4Q	S2	null	CDFW_SSC-Species of Special Concern	Aquatic, Klamath/North coast flowing waters, Sacramento/San Joaquin flowing waters
Oncorhynchus tshawytscha pop. 30	chinook salmon - upper Klamath and Trinity Rivers ESU	Fish	AFCHA02056	6	1	Candidate	Candidate Endangered	G5T3Q	S2	null	CDFW_SSC-Species of Special Concern, USFS_S-Sensitive	Aquatic, Klamath/North coast flowing waters
Packera bolanderi var. bolanderi	seacoast ragwort	Dicots	PDAST8H0H1	72	1	None	None	G4T4	S2S3	2B.2	null	Coastal scrub, North coast coniferous forest
Pandion haliaetus	osprey	Birds	ABNKC01010	504	36	None	None	G5	S4	null	CDF_S-Sensitive, CDFW_WL-Watch List, IUCN_LC-Least Concern	Riparian forest
Pekania pennanti	Fisher	Mammals	AMAJF01020	555	53	None	None	G5	S2S3	null	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, USFS_S-Sensitive	North coast coniferous forest, Oldgrowth, Riparian forest
Piperia candida	white-flowered rein orchid	Monocots	PMORC1X050	222	16	None	None	G3	S3	1B.2	null	Broadleaved upland forest, Lower montane coniferous forest, North coast coniferous

												forest, Ultramafic
Plethodon elongatus	Del Norte salamander	Amphibians	AAAAD12050	151	52	None	None	G4	S3	null	CDFW_WL-Watch List, IUCN_NT-Near Threatened	Oldgrowth
Pomatiopsis chacei	marsh walker	Mollusks	IMGASJ9030	6	1	None	None	G1	S1	null	null	null
Prosartes parvifolia	Siskiyou bells	Monocots	PMLIL0R014	14	1	None	None	G2	S2	1B.2	USFS_S-Sensitive	Lower montane coniferous forest, Upper montane coniferous forest
Ptilidium californicum	Pacific fuzzwort	Bryophytes	NBHEP2U010	177	13	None	None	G4G5	S3S4	4.3	BLM_S-Sensitive	Lower montane coniferous forest, Upper montane coniferous forest
Rana aurora	northern red-legged frog	Amphibians	AAABH01021	292	7	None	None	G4	S3	null	CDFW_SSC-Species of Special Concern, IUCN_LC-Least Concern, USFS_S-Sensitive	Klamath/North coast flowing waters, Riparian forest, Riparian woodland
Rana boylii	foothill yellow-legged frog	Amphibians	AAABH01050	2476	43	None	Endangered	G3	S3	null	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, IUCN_NT-Near Threatened, USFS_S-Sensitive	Aquatic, Chaparral, Cismontane woodland, Coastal scrub, Klamath/North coast flowing waters, Lower montane coniferous forest, Meadow & seep, Riparian forest, Riparian woodland, Sacramento/San Joaquin flowing waters
Rhyacotriton variegatus	southern torrent salamander	Amphibians	AAAAJ01020	416	120	None	None	G3G4	S2S3	null	CDFW_SSC-Species of Special Concern, IUCN_LC-Least Concern, USFS_S-Sensitive	Lower montane coniferous forest, Oldgrowth, Redwood, Riparian forest
Rorippa columbiae	Columbia yellow cress	Dicots	PDBRA27060	26	1	None	None	G3	S2	1B.2	USFS_S-Sensitive	Alkali playa, Lower montane coniferous forest, Meadow & seep, Vernal pool, Wetland
Sanicula tracyi	Tracy's sanicle	Dicots	PDAPI1Z0K0	80	1	None	None	G4	S4	4.2	USFS_S-Sensitive	Cismontane woodland, Lower montane coniferous forest, Upper montane coniferous forest
Schoenoplectus subterminalis	water bulrush	Monocots	PMCYP0Q1G0	32	1	None	None	G4G5	S3	2B.3	IUCN_LC-Least Concern	Bog & fen, Marsh & swamp, Wetland
Sedum flavidum	pale yellow stonecrop	Dicots	PDCRA0A0L2	67	4	None	None	G3	S3	4.3	null	Broadleaved upland forest, Chaparral, Cismontane woodland, Lower montane coniferous forest, Ultramafic, Upper montane coniferous forest
Sidalcea malviflora ssp. patula	Siskiyou checkerbloom	Dicots	PDMAL110F9	60	2	None	None	G5T2	S2	1B.2	null	Coastal bluff scrub, Coastal prairie, North coast coniferous forest
Sidalcea oregana ssp. eximia	coast checkerbloom	Dicots	PDMAL110K9	19	3	None	None	G5T1	S1	1B.2	null	Lower montane coniferous forest, Meadow & seep, North coast coniferous forest, Wetland
Silene hookeri	Hooker's catchfly	Dicots	PDCAR0U2M0	31	6	None	None	G4	S2	2B.2	null	Chaparral, Cismontane woodland, Lower montane

												coniferous forest, Ultramafic
Thaleichthys pacificus	eulachon	Fish	AFCHB04010	10	1	Threatened	None	G5	S2	null	null	Aquatic, Klamath/North coast flowing waters
Thermopsis robusta	robust false lupine	Dicots	PDFAB3Z0D0	104	64	None	None	G2	S2	1B.2	USFS_S-Sensitive	Broadleaved upland forest, North coast coniferous forest, Ultramafic
Upland Douglas Fir Forest	Upland Douglas Fir Forest	Forest	CTT82420CA	15	1	None	None	G4	S3.1	null	null	North coast coniferous forest
Usnea longissima	Methuselah's beard lichen	Lichens	NLLEC5P420	206	2	None	None	G4	S4	4.2	BLM_S-Sensitive	Broadleaved upland forest, North coast coniferous forest, Oldgrowth, Redwood
Vespericola karokorum	Karok hesperian	Mollusks	IMGASA4040	22	21	None	None	G2	S2	null	IUCN_DD-Data Deficient	Riparian forest

Appendix D. Wild and Scenic Rivers

Scientific Name	Common Name	Family	Lifeform	Blooming Period	Global Rank	State Rank	CRPR
Allium siskiyouense	Siskiyou onion	Alliaceae	perennial bulbiferous herb	(Apr)May-Jul	G4	S4	4.3
Anomobryum julaceum	slender silver moss	Bryaceae	moss	N/A	G5?	S2	4.2
Antennaria suffrutescens	evergreen everlasting	Asteraceae	perennial stoloniferous herb	Jan-Jul	G4	S3	4.3
Arnica cernua	serpentine arnica	Asteraceae	perennial rhizomatous herb	Apr-Jul	G5	S4	4.3
Arnica spathulata	Klamath arnica	Asteraceae	perennial rhizomatous herb	May-Aug	G3?	S3	4.3
Astragalus umbraticus	Bald Mountain milk-vetch	Fabaceae	perennial herb	May-Aug	G4	S2	2B.2
Buxbaumia viridis	green shield-moss	Buxbaumiaceae	moss	N/A	G3G4	S2	2B.2
Calamagrostis crassiglumis	Thurber's reed grass	Poaceae	perennial rhizomatous herb	May-Aug	G3Q	S2	2B.1
Cardamine angulata	seaside bittercress	Brassicaceae	perennial herb	(Jan)Mar-Jul	G4G5	S3	2B.2
Carex hystericina	porcupine sedge	Cyperaceae	perennial rhizomatous herb	May-Jun	G5	S2	2B.1
Carex praticola	northern meadow sedge	Cyperaceae	perennial herb	May-Jul	G5	S2	2B.2
Chrysosplenium glechomifolium	Pacific golden saxifrage	Saxifragaceae	perennial herb	Feb-Jun	G5?	S3	4.3
Collomia tracyi	Tracy's collomia	Polemoniaceae	annual herb	Jun-Jul	G4	S4	4.3
Coptis laciniata	Oregon goldthread	Ranunculaceae	perennial rhizomatous herb	(Feb)Mar-May(Sep-Nov)	G4?	S3?	4.2
Cornus unalaschkensis	bunchberry	Cornaceae	perennial rhizomatous herb	May-Jul	G5	S2	2B.2
Cypripedium californicum	California lady's-slipper	Orchidaceae	perennial rhizomatous herb	Apr-Aug(Sep)	G4	S4	4.2
Cypripedium fasciculatum	clustered lady's-slipper	Orchidaceae	perennial rhizomatous herb	Mar-Aug	G4	S4	4.2
Cypripedium montanum	mountain lady's-slipper	Orchidaceae	perennial rhizomatous herb	Mar-Aug	G4	S4	4.2
Dicentra formosa ssp. oregana	Oregon bleeding heart	Papaveraceae	perennial herb	Apr-May	G5T4	S3	4.2
Epilobium oreganum	Oregon fireweed	Onagraceae	perennial herb	Jun-Sep	G2	S2	1B.2
Epilobium septentrionale	Humboldt County fuchsia	Onagraceae	perennial herb	Jul-Sep	G4	S4	4.3
Eriogonum ternatum	ternate buckwheat	Polygonaceae	perennial herb	Jun-Aug	G4	S4	4.3
Erythronium citrinum var. citrinum	lemon-colored fawn lily	Liliaceae	perennial bulbiferous herb	Mar-May	G4T3T4	S3	4.3
Erythronium oregonum	giant fawn lily	Liliaceae	perennial herb	Mar-Jun(Jul)	G4G5	S2	2B.2
Erythronium revolutum	coast fawn lily	Liliaceae	perennial bulbiferous herb	Mar-Jul(Aug)	G4G5	S3	2B.2
Eucephalus glabratus	Siskiyou aster	Asteraceae	perennial herb	Jun-Sep	G4	S3	4.3
Gilia capitata ssp. pacifica	Pacific gilia	Polemoniaceae	annual herb	Apr-Aug	G5T3	S2	1B.2
Hemizonia congesta ssp. tracyi	Tracy's tarplant	Asteraceae	annual herb	(Mar)May-Oct	G5T4	S4	4.3
Iliamna latibracteata	California globe mallow	Malvaceae	perennial herb	Jun-Aug	G2G3	S2	1B.2
Iris tenax ssp. klamathensis	Orleans iris	Iridaceae	perennial rhizomatous herb	Apr-May	G4G5T4	S4	4.3
Juncus dudleyi	Dudley's rush	Juncaceae	perennial herb	Jul-Aug	G5	S1	2B.3
Kopsiopsis hookeri	small groundcone	Orobanchaceae	perennial rhizomatous herb (parasitic)	Apr-Aug	G4?	S1S2	2B.3
Leptosiphon acicularis	bristly leptosiphon	Polemoniaceae	annual herb	Apr-Jul	G4?	S4?	4.2
Leptosiphon grandiflorus	large-flowered leptosiphon	Polemoniaceae	annual herb	Apr-Aug	G3G4	S3S4	4.2
Lewisia cotyledon var. heckneri	Heckner's lewisia	Montiaceae	perennial herb	May-Jul	G4T3	S3	1B.2
Lewisia cotyledon var. howellii	Howell's lewisia	Montiaceae	perennial herb	Apr-Jul	G4T4Q	S3	3.2
Lewisia kelloggii ssp. hutchisonii	Hutchison's lewisia	Montiaceae	perennial herb	(Apr)May-Aug	G3G4T3Q	S3	3.2
Lilium bolanderi	Bolander's lily	Liliaceae	perennial bulbiferous herb	Jun-Jul	G4	S3S4	4.2
Lilium kelloggii	Kellogg's lily	Liliaceae	perennial bulbiferous herb	May-Aug	G3	S3	4.3
Lilium pardalinum ssp. vollmeri	Vollmer's lily	Liliaceae	perennial bulbiferous herb	(Jun)Jul-Aug	G5T4	S3	4.3

Scientific Name	Common Name	Family	Lifeform	Blooming Period	Global Rank	State Rank	CRPR
Lilium rubescens	redwood lily	Liliaceae	perennial bulbiferous herb	Apr-Aug(Sep)	G3	S3	4.2
Listera cordata	heart-leaved twayblade	Orchidaceae	perennial herb	Feb-Jul	G5	S4	4.2
Lomatium martindalei	Coast Range lomatium	Apiaceae	perennial herb	May-Jun(Aug)	G5	S2	2B.3
Lomatium tracyi	Tracy's lomatium	Apiaceae	perennial herb	May-Jun	G4	S4	4.3
Lupinus tracyi	Tracy's lupine	Fabaceae	perennial herb	(May)Jun-Jul	G4	S3	4.3
Lycopodium clavatum	running-pine	Lycopodiaceae	perennial rhizomatous herb	Jun-Aug(Sep)	G5	S3	4.1
Micranthes marshallii	Marshall's saxifrage	Saxifragaceae	perennial rhizomatous herb	Mar-Aug	G5	S3	4.3
Mielichhoferia elongata	elongate copper moss	Mielichhoferiaceae	moss	N/A	G5	S3S4	4.3
Mitellastra caulescens	leafy-stemmed mitrewort	Saxifragaceae	perennial rhizomatous herb	(Mar)Apr-Oct	G5	S4	4.2
Monotropa uniflora	ghost-pipe	Ericaceae	perennial herb (achlorophyllous)	Jun-Aug(Sep)	G5	S2	2B.2
Montia howellii	Howell's montia	Montiaceae	annual herb	(Feb)Mar-May	G3G4	S2	2B.2
Oenothera wolfii	Wolf's evening-primrose	Onagraceae	perennial herb	May-Oct	G2	S1	1B.1
Packera bolanderi var. bolanderi	seacoast ragwort	Asteraceae	perennial rhizomatous herb	(Jan-Apr)May-Jul(Aug)	G4T4	S2S3	2B.2
Packera macounii	Siskiyou Mountains ragwort	Asteraceae	perennial herb	Jun-Jul	G5?	S3	4.3
Piperia candida	white-flowered rein orchid	Orchidaceae	perennial herb	(Mar)May-Sep	G3	S3	1B.2
Pityopus californicus	California pinefoot	Ericaceae	perennial herb (achlorophyllous)	(Mar-Apr)May-Aug	G4G5	S4	4.2
Pleuropogon refractus	nodding semaphore grass	Poaceae	perennial rhizomatous herb	(Mar)Apr-Aug	G4	S4	4.2
Prosartes parvifolia	Siskiyou bells	Liliaceae	perennial bulbiferous herb	May-Sep	G2	S2	1B.2
Ptilidium californicum	Pacific fuzzwort	Ptilidiaceae	liverwort	May-Aug	G4G5	S3S4	4.3
Ribes laxiflorum	trailing black currant	Grossulariaceae	perennial deciduous shrub	Mar-Jul(Aug)	G5?	S3	4.3
Rorippa columbiae	Columbia yellow cress	Brassicaceae	perennial rhizomatous herb	May-Sep	G3	S2	1B.2
Sanicula tracyi	Tracy's sanicle	Apiaceae	perennial herb	Apr-Jul	G4	S4	4.2
Schoenoplectus subterminalis	water bulrush	Cyperaceae	perennial rhizomatous herb (aquatic)	Jun-Aug(Sep)	G4G5	S3	2B.3
Sedum flavidum	pale yellow stonecrop	Crassulaceae	perennial herb	(May)Jun-Jul	G3	S3	4.3
Sedum laxum ssp. heckneri	Heckner's stonecrop	Crassulaceae	perennial herb	Jun-Jul	G5T4Q	S4	4.3
Sidalcea elegans	Del Norte checkerbloom	Malvaceae	perennial rhizomatous herb	May-Jul	G4?	S2?	3.3
Sidalcea malachroides	maple-leaved checkerbloom	Malvaceae	perennial herb	(Mar)Apr-Aug	G3	S3	4.2
Sidalcea malviflora ssp. patula	Siskiyou checkerbloom	Malvaceae	perennial rhizomatous herb	(Mar)May-Aug	G5T2	S2	1B.2
Sidalcea oregana ssp. eximia	coast checkerbloom	Malvaceae	perennial herb	Jun-Aug	G5T1	S1	1B.2
Silene hookeri	Hooker's catchfly	Caryophyllaceae	perennial herb	(Mar)May-Jul	G4	S2	2B.2
Sulcaria badia	grooved beard lichen	Parmeliaceae	fruticose lichen (epiphytic)	N/A	G3	S3	4.2
Tauschia glauca	glaucous tauschia	Apiaceae	perennial herb	Apr-Jun	G4	S4	4.3
Thermopsis robusta	robust false lupine	Fabaceae	perennial rhizomatous herb	May-Jul	G2	S2	1B.2
Tiarella trifoliata var. trifoliata	trifoliate laceflower	Saxifragaceae	perennial rhizomatous herb	(May)Jun-Aug	G5T5	S2S3	3.2
Trillium ovatum ssp. oettingeri	Salmon Mountains wakerobin	Melanthiaceae	perennial herb	Feb-Jul	G5T4	S4	4.2
Usnea longissima	Methuselah's beard lichen	Parmeliaceae	fruticose lichen (epiphytic)	N/A	G4	S4	4.2
Veratrum insolitum	Siskiyou false-hellebore	Melanthiaceae	perennial herb	Jun-Aug	G4	S4	4.3

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Projects affecting Wild and Scenic Rivers are subject to the National Wild and Scenic Rivers Act (16 United States Code [USC] 1271) and the California Wild and Scenic Rivers Act (California Public Resources Code [PRC] Section 5093.50 et seq.). There are three possible Wild and Scenic River Designations:

Wild: Undeveloped, with river access by trail only.

Scenic: Undeveloped, with occasional river access by road.

Recreational: Some development is allowed with road access.

The Klamath River is designated as Recreational, and the administering agency is the National Park Service (NPS). Activities associated with the project would include rehabilitating and replacing existing culverts, installing downdrains, and constructing temporary water diversions. Consultation with NPS resulted in a concurrence of "*no permanent effect*" on the water quality, free-flowing characteristics of the river, or its Outstandingly Remarkable Values. Concurrence was dated November 9, 2021.

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United States Department of the Interior

NATIONAL PARK SERVICE
Interior Regions 8, 9, 10, and 12
333 Bush Street, Suite 500
San Francisco, CA 94104-2828

IN REPLY REFER TO:

November 9, 2021

Cari Williams
California Department of Transportation
North Region Environmental
Eureka, CA 95501

Re: HUM 169 proposed culvert rehabilitation project.

Dear Ms. Williams:

Thank you for the opportunity to review California Department of Transportation (Caltrans) project in Humboldt County on SR 169 that proposes rehabilitation at 52 culvert locations that are categorized in "poor" and "fair" condition. The Klamath River is a component of the National WSR System and Section 7 of the WSR Act prohibits federal agencies from "assist[ing] by loan grant, license, or otherwise in the construction of any water resources project that would have a direct and adverse effect on the values for which such river was established."

The National Park Service (NPS) is the federal administering agency for this section of the Klamath River with responsibility for making Section 7 determinations. The NPS is responsible for making sure that any project that meets these criteria on a designated river does not have any direct and adverse impacts on the river's free-flow, water, quality, or outstandingly remarkable values (ORVs).

The NPS has reviewed the proposed project description, project maps and other documents provided by Caltrans. The 52 culvert rehabilitation locations all appear to be at least 50 feet from the ordinary high-water mark with no construction activities in the bed and banks of the Klamath River. If at any point, the scope of this project should change, you would be required to notify the NPS for additional evaluation.

Please implement the following best practice measures:

- Avoid/minimize impacts to wetlands or floodplains: install erosion-control devices to protect rivers from sediment during construction and inspect/maintain throughout the duration of the project.

- Use construction materials that blend with the natural setting (e.g., use matching color, texture, and/or shape).
- Restore the site to as natural a condition as possible immediately following construction. Where revegetation is needed, use native plant materials commonly found in the area and plant in a random fashion to avoid a plantation appearance.

If you have any further questions, please contact Steve Bowes at Stephen_Bowes@nps.gov or Barbara Rice at 415-308-4976.

Sincerely,

Barbara Rice

Barbara Rice, Program Manager
Rivers, Trails and Conservation and Hydropower Assistance Programs