CULVERT REHABILITATION AND FISH PASSAGE PROJECT

INITIAL STUDY

with Negative Declaration
and Final Section 4(f) Determination



MENDOCINO COUNTY, CALIFORNIA

DISTRICT 1 – MEN – 128 — Post Miles 0.0 to 50.5

01-0K680 / 0120000134

Prepared by the
State of California Department of Transportation

Caltrans

June 2025



General Information About This Document

What is in this document?

The California Department of Transportation (Caltrans) has prepared this Initial Study with Negative Declaration (IS/ND) which examines the potential environmental effects of the proposed Culvert Rehabilitation and Fish Passage Project on State Route 128 in Mendocino County, California. Caltrans is the lead agency under the California Environmental Quality Act (CEQA). This document tells you why the project is being proposed, how the existing environment could be affected by the project, the potential impacts of the project, and proposed avoidance, minimization, and/or mitigation measures.

The IS/ND circulated to the public for thirty days between November 18, 2024, and December 20, 2024. Comments received during this period are included in Appendix E. Elsewhere throughout this document, a vertical line in the margin indicates a change made since the draft document circulation. Minor editorial changes and clarifications have not been so indicated. Additional copies of this document and related technical studies are available upon request at: Caltrans District 1 Office, 1656 Union Street, Eureka, CA 95501. This document may be downloaded at the following website:

https://dot.ca.gov/caltrans-near-me/district-3/d3-programs/d3-environmental/d3-environmental-docs/d3-mendocino-county.

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CULVERT REHABILITATION
AND FISH PASSAGE PROJECT

Rehabilitate drainages and provide fish passage
on State Route 128 in Mendocino County from Post Miles 0.0 to 50.5

INITIAL STUDY

With Negative Declaration
and Final Section 4(f) Determination

Submitted Pursuant to:

State: Division 13, California Public Resources Code

THE STATE OF CALIFORNIA
Department of Transportation

06/20/2025
Date of Approval

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NEGATIVE DECLARATION

Pursuant to: Division 13, California Public Resources Code

SCH Number: 2024110567

Project Description

The California Department of Transportation (Caltrans) proposes the Culvert Rehabilitation and Fish Passage Project on State Route 128 between Post Miles 0.0 and 50.5 in Mendocino County. The purpose of the project is to rehabilitate existing drainage systems and remediate one fish passage barrier.

Determination

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

The proposed project would have *No Effect* on:

- 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
- Transportation
- Tribal Cultural Resources
- Utilities and Service Systems
- Wildfire
- Mandatory Findings of Significance

The proposed project would have *Less than Significant Impacts* on

- Aesthetics
- Biological Resources
- Greenhouse Gases
- Hydrology and Water Quality

Liza Walker

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

06/20/2025
Date

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Acronyms and Abbreviated Terms

Acronym/Abbreviation	Description
AB	Assembly Bill
ABMPs	Additional Best Management Practices
ACE	Areas of Conservation Emphasis
ADL	Aerially Deposited Lead
APE	Area of Potential Effects
ASR	Archaeological Survey Report
ATP	Active Transportation Plan
BC	Black Carbon
BMPs	Best Management Practices
BO	Biological Opinion
BSA	Biological Study Area
CAFE	Corporate Average Fuel Economy
CAL-CET	Caltrans Construction Emissions Tool
CAL FIRE	California Department of Forestry and Fire Protection
Cal/OSHA	California Occupational Safety and Health Administration
Caltrans	California Department of Transportation
CAPTI	Climate Action Plan for Transportation Infrastructure
CARB	California Air Resources Board
CC ESU	California Coastal Evolutionarily Significant Unit
CCC ESU	Central California Coast Evolutionarily Significant Unit
CCE	Climate Change and the Environment (MCOG)
CCR	California Code of Regulations
CDP	Coastal Development Permit
CDFW	California Department of Fish and Wildlife
CEQ	(White House) Council on Environmental Quality
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFGC	California Fish and Game Code
CFR	Code of Federal Regulations
CGP	Construction General Permit
CH_4	methane
CWHR	California Wildlife Habitat Relationships
CIA	Cumulative Impact Analysis
CIP	Cast-in-Place
CNPS	California Native Plant Society
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent

Acronym/Abbreviation	Description
CRPR	California Rare Plant Rank
CSP	Corrugated Steel Pipe
CTP	California Transportation Plan
CWA	Clean Water Act
CZ	Coastal Zone
dB	decibels
DBH	Diameter-at-Breast-Height
DED	Draft Environmental Document
Department	Caltrans
DO	Dissolved Oxygen
DOT	Department of Transportation
DP	Director's Policy
DPS	Distinct Population Segment
DSA	Disturbed Soil Area
DWQ	Department of Water Quality
DWR	Department of Water Resources
ECL	Environmental Construction Liaison
EFH	Essential Fish Habitat
EIR	Environmental Impact Report
EO(s)	Executive Order(s)
EPA	Environmental Protection Agency
ESA	Endangered Species Act
ESA(s)	Environmentally Sensitive Area(s)
ESHA(s)	Environmentally Sensitive Habitat Area(s)
ESL	Environmental Study Limits
ESM	Engineered Streambed Material
ESU	Evolutionarily Significant Unit
ºF	degrees Fahrenheit
FED	Final Environmental Document
FESA	Federal Endangered Species Act
FHSZ	Fire Hazard Severity Zone (CAL FIRE)
FHWA	Federal Highway Administration
GHG	greenhouse gas
GWP	Global Warming Potential
H&SC	Health & Safety Code
HA	Hydrologic Area
HDPE	High-density polyethylene
HFCs	hydrofluorocarbons
HGM	Hydrogeomorphic
HPSR	Historical Properties Survey Report
HSA	Hydrologic Sub-Area

Acronym/Abbreviation	Description
HU	Hydrologic Unit
IPaC	Information for Planning and Consultation
IS	Initial Study
IS/ND	Initial Study / Negative Declaration
LF	Linear Feet
LSAA	Lake and Streambed Alteration Agreement
LWD	Large woody debris
MBTA	Migratory Bird Treaty Act
MCOG	Mendocino Council of Governments
MLD	Most Likely Descendent
MMT	million metric tons
MND	Mitigated Negative Declaration
MPO	Metropolitan Planning Organization
MSA	Magnuson-Stevens Fishery Conservation and Management Act
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAGPRA	Native American Graves Protection and Repatriation Act of 1990
NAHC	Native American Heritage Commission
NC DPS	Northern California Distinct Population Segment
NCRWQCB	North Coast Regional Water Quality Control Board
ND	Negative Declaration
NEPA	National Environmental Policy Act
NES	Natural Environment Study
NHTSA	National Highway Traffic and Safety Administration
NMFS	National Marine Fisheries Service
NNI	Net New Impervious area
NOA	Naturally Occurring Asbestos
NOAA	National Oceanic and Atmospheric Administration
NOx	Nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
O_3	ozone
OHM	Ordinary High Water
OHV	Off-Highway Vehicle
OHWM	Ordinary High Water Mark
OPC	Ocean Protection Council
OPR	Governor's Office of Planning and Research
PAD	Passage Assessment Database
PBFs	Physical and Biological Features
PBO	Programmatic Biological Opinion
PCEs	Primary Constituent Elements

Acronym/Abbreviation	Description
PDT	Project Development Team
PG&E	Pacific Gas and Electric
PIR	Project Initiation Report
PLOC	Programmatic Letter of Concurrence
PM(s)	Post Mile(s)
$PM_{10}/PM_{2.5}$	Particular Matter
Porter-Cologne Act	Porter-Cologne Water Quality Control Act
PPDG	Project Planning and Design Guide
Project	Culvert Rehabilitation and Fish Passage Project
PIR	Project Initiation Report
PPDG	Project Planning and Design Guide
PRC	(California) Public Resources Code
PS&E	Plans, Specifications and Estimates
PSI	Preliminary Site Investigation
PTE	Permit to Enter
RCB	Reinforced Concrete Box
RCP	Representative Concentration Pathways 8.5 Emissions Scenario
RCNM	Road Construction Noise Model
RED	Rock Energy Dissipators
RIS	Replaced Impervious Surface
RL	Reporting Limit
ROE	Right of Entry
ROW	Right of Way
RSP	Rock Slope Protection (also known as riprap)
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCS	Sustainable Communities Strategy
SER	Caltrans Standard Environmental Reference
SF_6	sulfur hexafluoride
SHPO	State Historic Preservation Officer
SHS	State Highway System
SLR	Sea Level Rise
SNC(s)	Sensitive Natural Community(ies)
SPCC Plan	Spill Prevention, Control, and Countermeasures Plan
SR	State Route
SRA	State Responsibility Area
SRZ	Structural Root Zone
SS	Caltrans Standard Specification
SSC	Species of Special Concern
SSP	Caltrans Standard Special Provision

Acronym/Abbreviation	Description
STIP	State Transportation Improvement Program
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TCE	Temporary Construction Easement
THPO	Tribal Historic Preservation Officer
THVF	Temporary High Visibility Fencing
TMDLs	Total Maximum Daily Loads
TMP	Transportation Management Plan
UEW	Utility Engineering Workgroup
U.S. or US	United States
U.S. 101 or US 101	U.S. (United States) Highway 101
USACE	United States Army Corps of Engineers
USC	United States Code
U.S. DOT	U.S. Department of Transportation
U.S. EPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
VIA	Visual Impact Assessment
VMT	Vehicle Miles Traveled
VOC	Volatile Organic Compounds
WOTUS	Waters of the U.S.
WPCP	Water Pollution Control Program
WQAR	Water Quality Assessment Report
WQOs	Water Quality Objectives
WRCC	Western Regional Climate Center
WPT	Western pond turtle
ZEV	Zero Emissions Vehicle



CHAPTER 1. PROPOSED PROJECT

1.1 Introduction/Project History

The California Department of Transportation (Caltrans), in conjunction with the Federal Highway Administration, proposes the Culvert Rehabilitation and Fish Passage Project. The project is located on State Route (SR) 128 in Mendocino County, between Post Miles (PM) 0.0 and 50.5 (Figure 1). This project proposes to rehabilitate drainage facilities at 103 locations and includes one fish passage location. SR 128 is an east-west route that operates as a rural two-lane highway and as a main street for the unincorporated communities within Anderson Valley. In District 1, SR 128 travels from its junction with SR 1, approximately 20 miles south of the city of Fort Bragg, to the Sonoma County line just north of Cloverdale. This segment of SR 128 travels through predominantly forested lands, including the Navarro River Redwoods State Park, until it reaches rural settlements, agricultural lands, and the rural town of Boonville in the Anderson Valley. It then travels through the Mendocino Range as it leaves Mendocino County. Drainage work is needed to maintain the integrity and function of this portion of SR 128. A Project Initiation Report (PIR) was signed on June 28, 2021.

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

1.2 Purpose and Need

Purpose

The purpose of this project is to rehabilitate existing drainage systems and remediate a fish passage barrier.

Need

This project is needed to repair deteriorating drainage systems in order to prevent erosion and potential roadway embankment failure. Additionally, conditions resulting in a barrier to fish passage exist within the project limits. This barrier prevents fish access to habitat that is necessary for survival and spawning during various life stages.

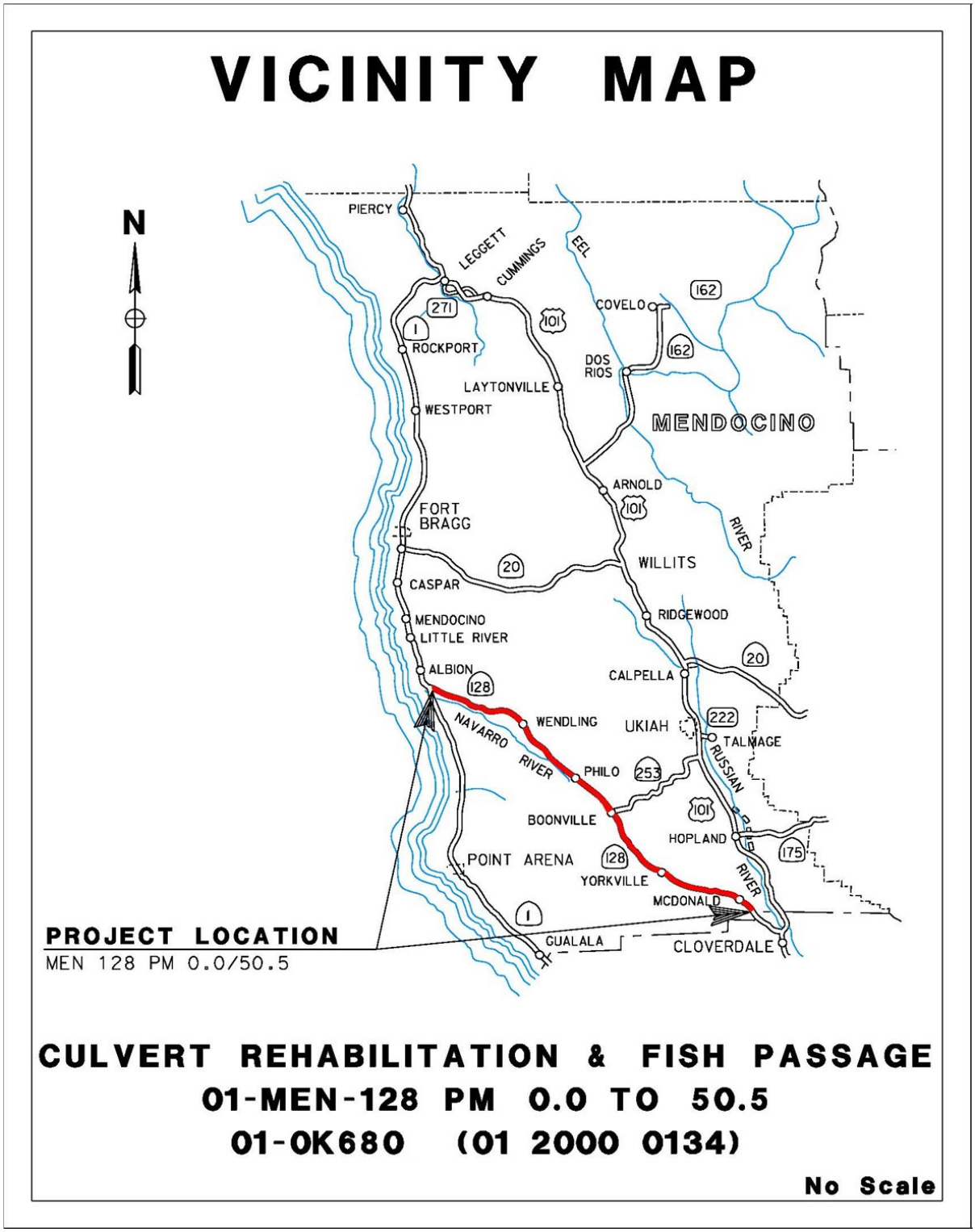


Figure 1. Project Vicinity

1.3 Project Description

The proposed project is located on SR 128 in Mendocino County between Post Miles (PM) 0.0 and 50.5 (Figure 1). The project proposes to replace drainage facilities at 103 locations and includes the replacement of one culvert with a bridge to remediate a fish passage barrier. Current project layouts can be found in Appendix A.

Proposed improvements would include:

- Cut and cover replacement at 91 locations
- Liner installation of 4 culverts with high-density polyethylene (HDPE)
- Invert pave 5 reinforced box culverts (RCB)
- Cast-in-Place (CIP) replacement of 2 RCB culverts
- Replace one culvert with a full span bridge at Mustard Gulch

Total improvements would include 7,973 linear feet (LF) of drainage system rehabilitation. This would include improvements to 5,117 LF of jurisdictional waters and one fish passage location. The culvert at PM 7.27, Mustard Gulch, will be replaced with a bridge to allow for fish passage.

There are 400 working days anticipated for the project. Construction would be conducted over two seasons beginning in 2027 and continuing through 2028. The working days are divided among the 102 locations with 5 to 20 working days estimated per location, with the exception of bridge construction at Mustard Gulch. There are currently 258 working days proposed for construction of the bridge, which would be completed in one season.

Preconstruction and Site Preparation

Site preparation would include delineating construction work areas, installing temporary high visibility fencing (THVF) around sensitive habitats and known cultural resource areas, implementing Best Management Practices (BMPs) in accordance with the project's Stormwater Plan, and removing vegetation.

Staging may occur on the paved roadway, and on paved and unpaved shoulders and pull-outs near work locations. Potential construction staging locations would occur at each location and within the existing Caltrans right of way (ROW). Additional staging areas are included at PM 24.55 (approximately 0.67 acres) and PM 30.00 (approximately 1.8 acres).

It may be necessary to construct temporary access to culverts that are proposed for lining, invert paving, or CIP method. Once all work is completed, the temporary access roads would be removed, and the embankments restored and revegetated.

Any work in the channel would be restricted to a work window between June 15th and October 15th. Prior to construction, water, if present, would be temporarily diverted. The contractor would be required to provide Caltrans an Aquatic Species Relocation Plan (as part of the Construction Site Dewatering and Diversion Plan) for approval prior to any clear water diversion within the project area.

Tree Removal

Some locations would require tree removal for access roads or for culvert rehabilitation. As many as 28 trees may be removed. These estimates will be refined as designs are developed. These trees would be removed in compliance with the Migratory Bird Treaty Act.

Cut and Cover Installation

The cut-and-cover culvert replacement method, which is proposed at a majority of the project locations (91), would dig a trench to remove the existing culvert, place the new culvert, then cover the impacted area to restore the roadway (Table 1). Work using this method would be completed from the roadway utilizing a traffic lane closure. If water is present at the time of construction, then a clear water diversion would occur ensuring water remains outside of the work area during culvert replacement. Culvert headwalls would be replaced or constructed as needed. Outlets would be armored as needed, possibly with rock slope protection (RSP). Downdrains would be replaced where applicable. Work would occur from the roadway and minimal vegetation would be removed, as required for culvert placement.

Table 1. Culverts Proposed for Cut and Cover

Note: *culverts with a 0 for the existing diameter or length will be new. A 0 in the proposed column indicates the culvert will not be replaced.

Post Mile (PM)	Existing Diameter (ft)	Proposed Diameter (ft)	Existing Length (ft)	Proposed Length (ft)
0.03	1.5	*0.0	74.64	0.00
0.04	0.0	2.0	0.00	81.30
0.18	2.0	2.0	70.25	70.30
0.40	1.0	2.0	52.57	52.60
0.43	1.0	2.0	42.24	42.20
0.50	1.0	2.0	44.47	44.50
0.59	1.0	2.0	36.12	36.10
1.02	1.5	2.0	35.71	35.70
1.94	1.0	2.0	35.56	35.60
1.99	1.5	2.0	40.17	40.20
2.11	1.5	2.0	40.47	40.50
2.29	1.5	2.0	40.82	40.80
2.43	1.0	2.0	42.75	42.80
2.59	1.0	2.0	39.32	45.50
6.81	2.0	2.0	64.27	47.10
7.01	2.0	2.0	50.96	51.00
8.82	1.5	2.0	42.32	45.90
10.08	2.0	2.0	43.73	43.70
10.47	3.0	3.0	53.22	53.20
10.64	2.0	2.0	49.31	49.30
10.77	2.0	2.0	100.60	100.60
12.30	1.5	2.0	61.47	61.50
12.46	2.0	2.0	66.67	66.70
12.99	2.0	2.0	52.32	52.30
13.15	1.5	2.0	43.34	50.00
13.53	1.5	2.0	46.66	50.00
13.81	1.5	2.0	44.36	47.50
15.37	4.0	4.0	54.72	54.70
15.46	1.5	2.0	44.61	49.60

Post Mile (PM)	Existing Diameter (ft)	Proposed Diameter (ft)	Existing Length (ft)	Proposed Length (ft)
15.68	1.5	2.0	45.17	46.40
17.56	2.0	2.0	51.60	51.60
17.62	2.0	2.0	46.59	46.60
17.91A	1.5	2.0	54.67	54.70
17.91B	1.5	2.0	47.78	47.80
18.00A	1.5	2.0	43.50	43.50
18.00B	1.5	2.0	20.20	20.20
18.00C	1.5	2.0	93.70	93.70
19.05	3.0	4.0	143.91	143.90
19.63A	1.5	2.0	127.91	127.90
19.63B	3.0	4.0	152.33	152.30
19.63C	3.0	4.0	70.07	70.10
20.18	2.0	2.0	60.50	60.50
20.68	1.5	2.0	55.09	55.10
20.75A	3.0	3.0	115.5	115.50
20.75B	0.0	3.0	34.00	34.00
23.75	2.0	2.0	19.29	19.30
23.80	1.5	2.0	52.24	52.20
24.00	1.5	2.0	66.38	66.40
24.26	2.0	2.0	109.81	109.80
24.77	1.5	2.0	64.84	64.80
26.51A	4.0	4.0	120.44	119.00
26.51B	4.0	4.0	36.52	36.50
26.72	2.0	2.0	86.77	86.80
30.25	2.0	2.0	92.59	92.60
30.33	1.5	2.0	81.57	80.00
30.43	1.5	2.0	64.28	64.30
30.49	2.0	2.0	110.8	110.80
31.43A	2.0	2.0	46.42	46.40
31.43B	2.0	0.0	26.55	0.00
31.50A	2.0	2.0	64.99	65.00

Post Mile (PM)	Existing Diameter (ft)	Proposed Diameter (ft)	Existing Length (ft)	Proposed Length (ft)
31.50B	2.0	0.0	26.32	0.0 0
31.64A	2.0	2.0	57.61	57.60
31.64B	2.0	2.0	34.65	33.00
31.64C	2.0	2.0	13.60	13.20
31.64D	1.0	1.5	6.40	6.80
32.08	2.0	3.0	68.02	68.0
32.72	2.0	2.0	51.16	51.20
33.29A	1.5	2.0	96.84	96.80
33.29B	1.0	2.0	25.15	0.00
33.47A	1.5	2.0	158.1	100.00
33.47B	2.0	2.0	0.00	56.00
33.62	1.5	2.0	70.66	70.70
33.63	2.0	2.0	97.88	97.90
34.48	1.5	2.0	54.00	100.00
35.27	1.5	2.0	56.88	56.90
35.45	1.5	2.0	40.25	40.30
35.79A	1.5	0.0	3.10	0.00
35.79B	1.5	2.0	98.38	100.00
36.41	1.5	2.0	84.74	83.00
36.56	1.5	2.0	164.87	103.13
36.71A	1.5	2.0	42.72	42.70
36.71B	1.5	0.0	12.00	0.00
36.71C	1.5	2.0	45.14	45.10
36.79	1.5	2.0	38.48	38.50
37.92	1.5	2.0	44.96	45.00
38.45	2.0	2.0	73.00	73.00
39.46	2.0	2.0	72.88	55.00
40.02	1.5	2.0	40.36	40.40
40.41A	1.5	2.0	33.28	0.00
40.41B	1.5	2.0	40.00	85.00
40.88	1.5	2.0	33.38	33.40

Post Mile (PM)	Existing Diameter (ft)	Proposed Diameter (ft)	Existing Length (ft)	Proposed Length (ft)
43.30	3.0	3.5	50.11	50.10
44.47	1.5	2.0	56.83	56.80
44.57	1.5	2.0	39.01	39.00
45.79	1.5	2.0	55.84	55.80
46.37	1.5	2.0	38.22	38.20
46.43	1.5	2.0	39.94	39.90
46.53	5.0	5.0	106.88	99.00
46.68A	1.5	2.0	23.01	0.00
46.68B	1.5	2.0	63.23	48.30
46.88	1.5	2.0	38.43	38.40
47.48	1.5	2.0	40.03	40.00
47.57	2.5	2.5	65.92	63.00
47.69	2.0	2.0	66.86	59.00
47.84	1.5	2.0	40.02	40.00
48.16	1.5	2.0	43.21	43.20
48.40	1.5	2.0	43.82	43.80
49.04	2.0	2.0	51.26	51.30
49.34	1.5	2.0	50.97	51.00
50.04	3.0	3.5	72.90	72.90
50.14	1.5	2.0	60.34	60.30

Liner Installation

Rehabilitation at four locations would consist of a trenchless method by culvert lining (Table 2). This method involves inserting a lightweight, flexible and durable liner (high-density polyethylene (HDPE) liner) into the existing culvert. The new pipe is pulled through the existing host pipe (either a corrugated steel pipe (CSP) or a reinforced concrete box (RCB)) and a cement slurry is pumped in to fill existing voids or washouts in or around the existing culverts. The grout secures the liner pipe in place. The locations would require access on the inlet and/or outlet side for liner installation. Each of the liners would be approximately the same length as the existing culvert.

Table 2. Culverts Proposed for Liner Installation

Post Mile	Existing Diameter (ft)	Proposed HDPE Diameter (ft)	Existing Length (ft)	Proposed Length (ft)
24.65	2.5 CSP	2.3	97.91	97.9
26.07	4.5 x 5 RCB	4.0	226.62	226.6
27.76	5.5 CSP	4.0	189.76	189.8
35.54	5.0 CSP	4.0	168.07	168.1

Invert Paving

Five existing reinforced concrete box (RCB) or corrugated steel pipe (CSP) culverts are proposed for invert paving (Table 3). A layer of steel reinforcement or wire mesh is placed in the invert and attached to the existing culvert bottom. Concrete or mortar (depending on the culvert material) is then placed in the invert to a thickness typically ranging from 5 inches to 13 inches. The length of invert paving would be the length of the existing culvert.

Table 3. Culverts Proposed for Invert Paving

Post Mile	Existing Width x Height (ft)	Existing Length (ft)
32.34	4 x 4 RCB	206.09
32.77	10 x 8 RCB	155.63
32.98	4 x 4 RCB	104.71
33.12	3 x 3 RCB	101.25
43.67	4.5 x 4.5 CSP	50.0

Cast-in-Place Reinforced Concrete Box Culvert Installation

At two locations, Cast-in-Place (CIP) reinforced concrete box (RCB) culverts are proposed. At PM 38.21, the existing 24-inch-diameter, double barrel, corrugated steel pipe (CSP) would be excavated and removed from the roadway. The existing RSP at the outlet would be removed. A 4-foot-wide by 2-foot-tall RCB would be formed and poured at the existing culvert location. Concrete headwalls would also be constructed at the inlet and outlet. This would be done using the half-width construction method.

At PM 45.09, the existing 8-foot-wide by 4-foot-tall RCB would be excavated and removed from the roadway. A 12-foot-wide by 8-foot-tall RCB would be formed and poured at the existing culvert location. Wingwalls would be constructed at the inlet and outlet and RSP would be placed at the outlet. Cable railing would be installed. To mimic a natural channel, two-foot-deep Engineered Streambed Material (ESM) would be placed on the bottom of the RCB. Cable railing would be constructed along the roadway. This would be done using the half-width construction method.

Work would occur from the roadway and minimal vegetation would be removed.

Bridge Construction at Mustard Gulch PM 7.27

The existing 4-foot-wide by 4-foot-tall reinforced concrete box culvert at Mustard Gulch, PM 7.27, would be replaced with a 34-foot-long, CIP reinforced concrete slab bridge. The proposed bridge would be 36 feet wide consisting of two 12-foot-wide lanes, two 4-foot-wide shoulders, and two Type 85 concrete barrier railings. Test Level 3 crash cushions would be installed at each corner of the railings. The bridge would be supported by CIP diaphragm abutments, CIP wingwalls and driven H-piles. Construction is proposed to be completed in one season. Construction would be completed via the half-width construction method with one way-controlled traffic.

Approximately 13 second-growth redwood trees would need to be removed to accommodate the proposed structure. These include a clump of 8 trees at the inlet, a clump of 4 trees at the outlet, and 1 additional single redwood tree.

Site Cleanup

After completion, all materials used for the temporary access roads and construction would be completely removed from the site. The site would then be restored to a natural setting by regrading and applying permanent erosion control Best Management Practices or revegetating with native plants, as required by the final approved revegetation and erosion control plans.

1.4 Proposed Alternatives

No-Build (No-Action) Alternative

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

1.5 Comparison of Alternatives

The No-Build Alternative and one Build Alternative were considered for the proposed project. Various drainage system design strategies were considered throughout the development of the project; however, these design considerations do not change the scope of the project to rehabilitate and/or replace the drainage systems. Rather, the rehabilitation strategies at each location were refined based on hydraulic conditions, environmental resources, and other considerations. Under the No-Build Alternative, no alterations to the existing conditions would occur and the proposed improvements would not be implemented. The No-Build Alternative would maintain the facility in its current condition and would not meet the purpose and need of the project.

1.6 Permits and Approvals Needed

The following permits, licenses, agreements, and certifications (PLACs) are required for project construction (Table 4).

Table 4. Agency, Permit/Approval Needed and Status

Agency	PLACs	Status
California Department of Fish and Wildlife (CDFW)	1602 Agreement for Lake and Streambed Alteration	Obtain after Final Environmental Document (FED) approval
Regional Water Quality Control Board (RWQCB)	Clean Water Act Section 401 Water Quality Certification	Obtain after FED approval
U.S. Army Corps of Engineers (USACE)	Section 404 Authorization (Nationwide Permit)	Obtain after FED approval
U.S. Fish and Wildlife Service (USFWS)	Section 7 Consultation for Threatened and Endangered Species	Consultation was initiated after Draft Environmental Document (DED)
National Marine Fisheries Service (NMFS)	Section 7 Consultation for Threatened and Endangered Species, Critical Habitat, and Essential Fish Habitat	Consultation was initiated after DED
California State Parks	Scientific Collection Permit	Obtained June 28, 2023
California State Parks	Section 4(f)	Obtained May 21, 2025
Mendocino County	Coastal Development Permit-Local	Obtain after FED approval
California Coastal Commission (CCC)	Coastal Development Permit-State	Obtain after FED approval

For projects that have federal funds involved, Section 4(f) of the U.S. Department of Transportation (USDOT) Act of 1966 prohibits the Federal Transit Administration and other USDOT agencies from using land from publicly owned parks, recreation areas (including recreational trails), wildlife and water fowl refuges, or public and private historic properties, unless there is no feasible and prudent alternative to that use and the action includes all possible planning to minimize harm to the property resulting from such a use. This project has federal funds and would require the temporary use of a Section 4(f) resource. See Appendix D for more information.

1.7 Standard Measures and Best Management Practices Included in All Alternatives

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

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

Aesthetics Resources

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

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

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

AR-4: Where feasible, construction lighting would be temporary, and directed specifically on the portion of the work area actively under construction.

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

Biological Resources

BR-1: General

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

BR-2: Animal Species

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

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

C. 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.

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

E. 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.

F. 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.

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

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

   No human activities (including use of drones) would occur within a visual line-of-sight of 328 feet (100 meters) or less from a known nest site (USFWS 2020), or from unsurveyed suitable nesting habitat containing potential murrelet nest trees within 328 feet (100 meters) of proposed activities or, for NSO, from unsurveyed suitable nesting/roosting habitat containing potential owl nest trees. These visual disturbance restrictions would be lifted after September 15; after which the USFWS considers visual disturbance as having “no effect” on nesting adults or dependent young. The 328-foot (100 meters) visual disturbance distance may be reduced or eliminated through technical assistance with the USFWS if site-specific information suggests that ambient visual disturbance within the action area is already high enough to likely preclude species from nesting within 328 feet (100 meters) of the project footprint, or vegetation near the roadway is sufficiently dense to shield the view from habitat farther from the roadway.

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

J. A preconstruction survey for western pond turtle (WPT) would be conducted by a qualified biologist if work begins during the species critical egg laying period (March–August). If any WPT nests are observed in the project footprint, consultation with CDFW would be initiated, and an appropriate course of action would be carried out with guidance from CDFW.

BR-3: Invasive Species

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

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

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

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

A. Seasonally appropriate, pre-construction floristic 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 2018b).

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

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

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

BR-5: Wetlands and Other Waters

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

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

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

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

Cultural Resources

CR-1: Caltrans would coordinate with the Hopland Rancheria, Sherwood Valley Band of Pomo Indians, Coyote Valley Rancheria, and the Manchester Point Arena Band of Pomo Tribes and incorporate measures to protect tribal resources, including potential work windows associated with tribal ceremonies.

CR-2: If cultural materials are discovered during construction, work activity within a 60-foot radius of the discovery would be stopped and the area secured until a qualified archaeologist can assess the nature and significance of the find in consultation with the State Historic Preservation Officer (SHPO).

CR-3: If human remains and related items are discovered on private or State land, they would be treated in accordance with State Health and Safety Code (H&SC) § 7050.5. Further disturbances and activities would cease in any area or nearby area suspected to overlie remains, and the County Coroner contacted. Pursuant to California Public Resources Code (PRC) § 5097.98, if the remains are thought to be Native American, the coroner would notify the Native American Heritage Commission (NAHC) who would then notify the Most Likely Descendent (MLD).

Human remains and related items discovered on federally-owned lands would be treated in accordance with the Native American Graves Protection and Repatriation Act of 1990 (NAGPRA) (23 USC 3001). The procedures for dealing with the discovery of human remains, funerary objects, or sacred objects on federal land are described in the regulations that implement NAGPRA 43 CFR Part 10. All work in the vicinity of the discovery shall be halted and the administering agency's archaeologist would be notified immediately. Project activities in the vicinity of the discovery would not resume until the federal agency complies with the 43 CFR Part 10 regulations and provides notification to proceed.

Geology, Seismic/Topography, and Paleontology

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

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

Greenhouse Gas Emissions

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

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

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

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

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

GHG-6: Pedestrian and bicycle access would be maintained on State Route 128 during project activities.

Hazardous Waste and Material

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

HW-2: When identified as containing hazardous levels of lead, traffic stripes would be removed and disposed of in accordance with Caltrans Standard Special Provision "Remove Traffic Stripes and Pavement Markings Containing Lead" (SSP 84-9.03B).

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."

HW-4: If asbestos-containing material is removed during this project, it would be removed and disposed of in accordance with Standard Special Provisions (SSP) 14-11.10 Naturally Occurring Asbestos and SSP 14–11.16 Asbestos-containing Construction Materials in Bridges".

Traffic and Transportation

TT-1: Pedestrian and bicycle access would be maintained during construction.

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) will be prepared for 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 128 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 range of *moderate to high to very high* CAL FIRE Fire Hazard Severity Zone (FHSZ). The contractor would be required to submit a jobsite Fire Prevention Plan as required by Cal/OSHA before starting job site activities. In the event of an emergency or wildfire, the contractor would cooperate with fire prevention authorities.

Water Quality and Stormwater Runoff

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

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

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

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

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

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

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

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

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

Additional Best Management Practices (ABMPs)

In addition to the BMPs listed above, the following Additional Best Management Practices (ABMPs) associated with project-specific actions are outlined in the now expired 2013 NMFS and Caltrans Programmatic Biological Opinion which details appropriate Additional BMPs that would be applicable to this project and are included as protective measures on this project. Other project specific AMMs would be applied as required through Section 7 consultation (NOAA 2013) and would be implemented as applicable (note that the numbering is reflected from the original reference):

Project Action-1: Operate construction equipment and vehicles

- ABMP-1.1: Equipment will be operated during the least sensitive diurnal, seasonal, and meteorological periods relative to the potential effects on listed species and habitat if feasible.
- ABMP-1.3: Equipment will be inspected daily for leaks and completely cleaned of any external petroleum products, hydraulic fluid, coolants, and other deleterious materials prior to operating equipment.
- ABMP-1.4: A Spill Prevention, Control, and Countermeasures (SPCC) Plan will be developed for each project that requires the operation of construction equipment and vehicles. The SPCC Plan will be kept on-site during construction and the appropriate materials and equipment will also be on-site during construction to ensure the SPCC Plan can be implemented. Personnel will be knowledgeable in the use and deployment of the materials and equipment so response to an accidental spill will be timely.

Project Action -2: Use of temporary lighting for night construction activities

- ABMP-2.1: Maintenance and construction activities will be avoided at night to the extent practicable.
- ABMP-2.2: When night work cannot be avoided, disturbance of listed species will be avoided and minimized by restricting substantial use of temporary lighting to the least sensitive seasonal and meteorological windows.
- ABMP-2.3: Lights on work areas will be shielded and focused to minimize lighting of listed-species habitat.

Project Action -3: Maintain and fuel construction equipment and vehicles

- ABMP-1.3; 1.4; and
- ABMP-3.1: Maintenance and fueling of construction equipment and vehicles will occur at least 50 feet (15 meters) from the ordinary high water mark (OHWM) or the edge of sensitive habitats (e.g., wetlands).

Project Action-5: Temporarily or permanently store sediment and debris, and pavement, petroleum products, concrete, and other construction materials

- ABMP-1.4; and ABMP-3.1

Project Action-7: Treat and discharge water conveyed from the construction area

- ABMP-7.1: Water pumped from areas isolated from surface water to allow construction to occur in the dry [season] will be discharged to an upland area providing overland flow and infiltration before returning to stream. Upland areas may include sediment basins of sufficient size to allow infiltration rather than overflow or adjacent dry gravel/sand bars if the water is clean and no visible plume of sediment is created downstream of the discharge.
- ABMP-7.2: A NMFS-approved fish biologist will be on site to observe dewatering activities and to capture/rescue any fish observed in an isolated area during dewatering activities.

Project Action-10: Remove and disturb upland, riparian, and wetland vegetation

- ABMP-1.4; and
- ABMP-10.1: Trees as identified in any special contract provisions or as directed by the project engineer will be preserved.
- ABMP-10.2: Hazard trees greater than 24-inches diameter-at-breast-height (DBH) will be removed only by direction of the project engineer.
- ABMP-10.3: Trees will be felled in such a manner as not to injure standing trees and other plants to the extent practicable.
- ABMP-10.4: Environmentally Sensitive Areas will be fenced to prevent encroachment of equipment and personnel into wetlands, riparian areas, stream channels and banks, and other sensitive habitats.
- ABMP-10.5: Vegetation will be mowed to a height greater than 4 inches.
- ABMP-10.6: Soil compaction will be minimized by using equipment that can reach over sensitive areas and minimizes the pressure exerted on the ground.
- ABMP-10.7: Where soil compaction is unintended, compacted soils will be loosened after heavy construction activities are complete.
- ABMP-10.8: Where vegetation removal is temporary to support construction activities, native species will be re-established that are specific to the project location and that comprise a diverse community of woody and herbaceous plants.

Project Action-11: Grade and establish temporary and permanent staging/storage areas for sediment, debris, and construction materials and equipment

- ABMP-1.4; 10.4; 10.7; 10.8; and
- ABMP-11.1: Storage areas will disturb less than 2.5 acres of vegetated or currently undisturbed area.
- ABMP-11.2: Storage areas will not disturb wetlands or other special status plant communities.

- ABMP-11.3: For permanent storage areas that have been filled to capacity with sediment and debris, the final configuration will conform to natural contours (elevations, profile, and gradient) of surrounding terrain and native plant species will be established that are specific to the project location and comprise a diverse community of woody and herbaceous plants.

Project Action-13: Grade temporary access roads, traffic detours, and staging and work areas

- ABMP-10.4; 10.7; 10.8; and
- ABMP-13.1: Temporary access and detours will be located a minimum of 50 feet from the OHWM and other sensitive habitats (i.e., wetlands).

Project Action-14: Operate construction equipment and vehicles in the stream channel

- ABMP-14.1; 14.5; and 14.8: With the exception of instances when impacts of dewatering are expected to exceed the impacts of equipment or vehicle operation in the wetted channel, construction equipment and vehicles will not operate in anadromous waters unless the channel is dewatered or otherwise dry. In rare instances when impacts of dewatering are expected to exceed the impacts of equipment or vehicle operation in the wetted channel, relocation and exclusion of listed fish from the area will be implemented prior to operating in the wetted channel.
- ABMP-14.2: Existing roadways and stream crossings will be used for temporary access roads whenever reasonable and safe.
- ABMP-14.3: The number of access and egress points and total area affected by vehicle operation will be minimized; disturbed areas will be located to reduce damage to existing native aquatic vegetation, substantial large woody debris, and spawning gravel.
- ABMP-14.4: Cleaning of culverts and bridge abutments and piers, and placement of RSP and other bank protection will be from the top of the bank or bridge.

- ABMP-14.6: Except for streams identified by NMFS, USFWS, and CDFW as not supporting spawning habitat, all in-water activities will be conducted outside the spawning and incubation season for listed fish species, where such species occur, or to periods identified in cooperation with NMFS, USFWS, and CDFW to accommodate site-specific conditions.
- ABMP-14.7: Modified or disturbed portions of streams, banks, and riparian areas will be restored as nearly as possible to natural and stable contours (elevations, profile, and gradient).

Project Action-15: Remove and disturb aquatic vegetation, stream sediment, and large woody debris (LWD)

- ABMP-10.4; 10.8; 14.1; 14.2; 14.3; 14.5; 14.6; 14.7; and
- ABMP-15.1: Stream width, depth, velocity, and slope that provide upstream and downstream passage of adult and juvenile fish will be preserved according to current NMFS and CDFW guidelines and criteria or as developed in cooperation with NMFS and CDFW to accommodate site-specific conditions.
- ABMP-15.2: Temporary fills, cofferdams, and diversion cofferdams that are left in stream channels will be composed of washed, rounded, spawning-sized gravel between 0.4 to 4 inches in diameter; gravel in contact with flowing water will be left in place, modified (i.e., manually spread out using had tools if necessary) to ensure adequate fish passage for all life stages, and then allowed to disperse naturally by high winter flows; materials placed above the ordinary high water mark must be clean washed rock or contained to prevent material conveyance to the stream or mixing with clean gravel.

Project Action-16: Remove and disturb aquatic vegetation, stream sediment, and large woody debris (LWD)

- ABMP-10.4; 14.1; 14.5; 14.6; 14.7; 15.2; and
- ABMP-16.1: Disturbance and removal of aquatic vegetation will be minimized.
- ABMP-16.2: The limits of disturbance will be identified; native vegetation, stream channel substrate, and large woody debris disturbed outside these limits should be replaced if damaged.

- ABMP-16.3: The minimum amount of wood, sediment and gravel, and other natural debris will be removed using hand tools, where feasible, only as necessary to maintain and protect culvert and bridge function, ensure suitable fish passage conditions, and minimize disturbance of the streambed.
- ABMP-16.4: Large woody debris (LWD) subject to damage or removal will be retained and replaced on site after project completion as long as such action would not jeopardize infrastructure or private property or create a liability for Caltrans. LWD not replaced on-site will be stored or offered to other entities for use in other mitigation/restoration projects where feasible.
- ABMP-16.5: Disturbed areas will be minimized by locating temporary work areas to avoid patches of native aquatic vegetation, substantial LWD, and spawning gravel.
- ABMP-16.6: Where vegetation removal is temporary to support construction activities, native species will be re-established that are specific to the project location and that comprise a diverse community of aquatic plants.
- ABMP-16.7: Where spawning gravel is removed temporarily to facilitate construction, it will be stored adjacent to the site then placed back in the channel post-construction at approximately pre-project depth and gradient.
- ABMP-16.8: Excavated material will not be stored or stockpiled in the channel. Any excavated material that will not be placed back in the channel or on the bank after construction will be end-hauled to an approved disposal site.
- ABMP-16.9: Gravel and LWD excavated from the channel that is temporarily stockpiled for reuse in the channel will be stored in a manner that prevents mixing with stream flows.
- ABMP-14.7: Modified or disturbed portions of streams, banks, and riparian areas will be restored as nearly as possible to natural and stable contours (elevations, profile, and gradient).

Project Action-17: Install temporary cofferdams and diversion cofferdams

- ABMP-10.4; 14.5; 14.6; 14.7; 15.1; 15.2; and
- ABMP-17.1: Cofferdams and diversion cofferdams will affect no more of the stream channel than is necessary to support completion of the maintenance or construction activity.
- ABMP-17.2: Immediately upon completion of in-channel work, temporary fills, cofferdams, diversion cofferdams, and other in-channel structures that will not remain in the stream, i.e., clean, spawning-sized gravel, will be removed in a manner that minimizes disturbance to downstream flows and water quality.
- ABMP-17.3: All structures and imported materials placed in the stream channel or on the banks during construction that are not designed to withstand high flows will be removed before such flows occur. Large woody debris (LWD) excavated from the channel that is temporarily stockpiled for reuse in the channel will be stored in a manner that prevents mixing with stream flows.

Project Action-18: Temporarily redirect stream flow

- ABMP-7.2; 10.4; 14.5; 14.6; 14.7; 15.1; and
- ABMP-18.1: The extent of stream channel dewatering will be limited to the minimum necessary to support construction activities. Monitoring of the stream diversion will occur periodically each day such devices are in operation to ensure proper function.
- ABMP-18.2: Construction of a temporary channel will proceed from the downstream to the upstream end of the channel.
- ABMP-18.3: Flow will not be diverted from the stream channel until the temporary channel is complete and all applicable soil stabilization/control measures are in place.
- ABMP-18.4: Flow will be diverted the minimum distance necessary to isolate the construction area.
- ABMP-18.5: Water will be released or pumped downstream at an appropriate rate to maintain downstream flows at all times and the outlet of all diversions shall be positioned such that the discharge of water does not result in bank erosion or channel scour and maintains pre-project hydraulic conditions.

Project Action-20: Install permanent and temporary rock slope protection (RSP), sheet piles, and retaining walls

- ABMP-20.1: Extension of existing areas of stream bank RSP or other bank protection (e.g., sheet piles) will be avoided and the extent of bank and channel armoring will be limited to the minimum necessary to protect essential infrastructure.
- ABMP-20.2: Threatened infrastructure will be relocated to maintain or reestablish natural stream sediment processes to the extent feasible.
- ABMP-20.3: Bank stabilization will incorporate bioengineering solutions consistent with site-specific engineering requirements.
- ABMP-20.4: Where RSP is necessary, native riparian vegetation and/or LWD in RSP will be incorporated.
- ABMP-20.5: The embankment toe will not extend farther into the active channel than the existing embankment.
- ABMP-20.6: RSP, sheet piles, and other erosion control materials will be pre-washed to remove sediment and/or contaminants.
- ABMP-20.7: Temporary material storage piles (e.g., RSP) will not be placed in the 100 year floodplain during the rainy season (October 15 through May 31), unless material can be relocated within (i.e., before) 12 hours of the onset of a storm.

Project Action-21: Place concrete and concrete slurry seal coat in cofferdams, footing and bridge forms, culvert bedding, and other applications

- ABMP-1.4; and
- ABMP-21.1: When concrete is poured to construct bridge footings or other infrastructure in the vicinity of flowing water, work must be conducted to prevent contact of wet concrete with water (e.g., within a cofferdam). Concrete or concrete slurry will not come into direct contact with flowing water.

Project Action-22: Remove culverts

- ABMP-10.4; 14.1; 14.5; 14.6; 15.1.

Project Action-23: Clean, retrofit, or install culverts

- ABMP-10.4; 14.1; 14.5; 14.6; 14.7; 15.1; 17.2; 17.3; 20.1; 20.3; 20.4; 20.6; 20.7; and
- ABMP-23.1: Stream flow through new and replacement culverts, bridges, and over existing stream gradient control structures must meet the velocity depth, and other passage criteria for salmonid streams as described by the current National Marine Fisheries Service (NMFS) and CDFW guidelines or as developed in cooperation with NMFS and CDFW to accommodate site- specific conditions.
- ABMP-23.2: Culverts may be replaced with small bridges.
- ABMP-23.3: Scour holes at the base of bridge piers or abutments and culvert inlets and outlets will be repaired by placing no more riprap (rock slope protection [RSP]) than is necessary to mitigate the scour.

Project Action-28: Capture, handle, exclude, salvage, and relocate listed species

- ABMP-28.1: If individuals of listed species may be present and subject to potential injury or mortality from construction activities, a qualified biologist will conduct a pre-construction visual survey (i.e., bank observations).
- ABMP-28.2: Caltrans shall retain a qualified biologist with expertise in the areas of anadromous salmonid biology, including handling, collecting, and relocating salmonids, salmonid/habitat relationships and biological monitoring of salmonids. Caltrans shall ensure that all biologists working on a site-specific project will be qualified to conduct fish collections in a manner which minimizes all potential risks to listed salmonids.
- ABMP-28.3: When listed species are present and it is determined they could be injured or killed by construction activities, a qualified project biologist will identify appropriate methods for capture, handling, exclusion, and relocation of individuals that could be affected.

- ABMP-28.4: Where listed species cannot be captured, handled, excluded, or relocated (e.g., salmonid redd), actions that could injure or kill individual organisms will be avoided or delayed until the species leaves the affected area or the organism reaches a stage that can be captured, handled, excluded, or relocated.
- ABMP-28.5: The project biologist will conduct, monitor, and supervise all capture, handling, exclusion, and relocation activities; ensure that sufficient personnel are available for safe and efficient collection of listed species; and ensure that proper training of personnel has been conducted in identification and safe capture and handling of listed species.
- ABMP-28.6: Electrofishing may be utilized when other standard fish capture methods are likely to be ineffective or other methods fail to remove all fish from the site; the project biologist must have appropriate training and experience in electrofishing techniques and all electrofishing must be conducted according to the NMFS Guidelines for Electrofishing Waters Containing Salmonids Listed under the Endangered Species Act (NMFS 2000).
- ABMP-28.7: Individual organisms will be relocated the shortest distance possible to habitat unaffected by construction activities.
- ABMP-28.8: Within occupied habitat, capture, handling, exclusion, and relocation activities will be completed no earlier than 48 hours before construction begins to minimize the probability that listed species will recolonize the affected areas.
- ABMP-28.9: Within temporarily drained stream channel areas, salvage activities will be initiated before or at the same time as stream area draining and completed within a time frame necessary to avoid injury and mortality of listed species.
- ABMP-28.10: For projects that involve in-water activities, the project biologist will continuously monitor in-water activities (e.g., placement of cofferdams, dewatering of isolated areas) for the purpose of removing and relocating any listed species that were not detected or could not be removed and relocated prior to construction.
- ABMP-28.11: The project biologist will be present at the work site until all listed species have been removed and relocated.

- ABMP-28.12: The project biologist will maintain detailed records of the species, numbers, life stages, and size classes of listed species observed, collected, relocated, injured, and killed; as well as recording the date and time of each activity or observation.

Project Action-29: Implement BMPs

- ABMP-29.2: Before construction activities begin, the project environmental coordinator or biologist will discuss the implementation of the required BMPs with the maintenance crew or construction resident engineer and contractor and identify and document environmentally sensitive areas and potential occurrence of listed species.
- BMP-29.5: Non-compliance with BMPs and unanticipated effects on listed species will be reported to the resident engineer or maintenance supervisor immediately.

1.8 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 (NMFS) and the United States Fish and Wildlife Service (USFWS)—in other words, species protected by the Federal Endangered Species Act).



CHAPTER 2. CEQA ENVIRONMENTAL CHECKLIST

Environmental Factors Potentially Affected

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

Potential Impact Area	Impacted: Yes / No
Aesthetics	**Yes**
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	No
Tribal Cultural Resources	No
Utilities and Service Systems	No
Wildfire	No
Mandatory Findings of Significance	No

The CEQA Environmental Checklist identifies physical, biological, social, and economic factors that might be affected by the proposed project. In many cases, background studies performed in connection with the project will indicate there are no impacts to a particular resource. A "NO IMPACT" answer in the last column of the checklist reflects this determination. The words "significant" and "significance" used throughout the CEQA Environmental Checklist are only related to potential impacts pursuant to CEQA. The questions in the CEQA Environmental Checklist are intended to encourage the thoughtful assessment of impacts and do not represent thresholds of significance.

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

Project Impact Analysis Under CEQA

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

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

Definitions of Project Parameters

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

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

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

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

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

Biological Study Area (BSA): The BSA encompasses the ESL plus any areas outside of the ESL that could be potentially affected by a project (e.g., noise, visual, Coastal Zone, etc.). Depending on resources in the area, a project could have multiple BSAs. Each BSA should be identified and defined. If the project is within the Coastal Zone, this area would also include the required 100-foot buffer.

The Biological Study Area (BSA) varies for different resources addressed in this document where ground disturbance may occur, and an appropriate buffer, as required, to analyze effects to adjacent biological resources stemming from potential auditory or visual disturbance and water quality impacts. For this study, there are four sizes of BSA:

- BSA #1 – Within the Coastal Zone = 100-foot ESL buffer
- BSA #2 – Butterfly BSA = 330-foot ESL buffer
- BSA #3 – Outside the Coastal Zone = 50-foot ESL buffer
- BSA #4 – for Auditory Impacts to NSO and MAMU = 0.25-acre ESL buffer

BSA Within the Coastal Zone

BSA #1, as defined within the Coastal Zone (CZ), includes the ESL and a 100-foot buffer around the ESL where standard environmental assessments for sensitive resources (habitats, plants, wildlife, wetlands, rivers/creeks, etc.) are conducted. The potential for both direct and indirect impacts is considered when determining the BSA. For example, several sensitive wildlife species could be vulnerable to indirect impacts outside the construction footprint resulting from increased noise or vibration during construction. Likewise, sensitive plants could be impacted by changes in solar exposure or surface and subsurface hydrology.

This 100-foot Coastal Zone buffer around the construction footprint is used to evaluate potential presence of and impacts to Environmentally Sensitive Habitat Areas (ESHAs) for the Mendocino County Coastal Development Permit (CDP).

ESHA: Defined under the Mendocino County General Plan Coastal Element as "*any areas in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments*" (County of Mendocino 2024). Section 20.496.010 of the Mendocino County Coastal Zoning Code goes on to further define ESHAs to include "*anadromous fish streams, sand dunes, rookeries and marine mammal haul-out areas, wetlands, riparian areas, areas of pygmy vegetation which contain species of rare or endangered plants and habitats of rare and endangered plants and animals.*"

Other potential ESHAs within the project BSA include potentially jurisdictional Other Waters (intermittent and perennial streams, and ephemeral waters), sensitive natural communities, populations of listed butterfly host plants identified within the BSA, and potential overwinter roosting habitat for monarch butterfly.

Although all direct temporary and permanent impacts associated with this project are expected to occur within the project's construction limits, the ESHA analysis ensures consideration of indirect impacts and unanticipated impacts adjacent to the construction limits.

Butterfly BSA

When assessing potential impacts to protected species, a butterfly BSA (BSA #2) was determined, in part, using USFWS considerations for endangered butterflies, which include a 330-foot survey buffer for Behren's silverspot butterfly and lotis blue butterfly.

BSA Outside the Coastal Zone

The BSA, as defined within the Coastal Zone (CZ) (BSA #3), includes the ESL and a 100-foot buffer around the ESL where standard environmental assessments for sensitive resources (habitats, plants, wildlife, wetlands, rivers/creeks, etc.) are conducted. The potential for both direct and indirect impacts is considered when determining the BSA. For example, several sensitive wildlife species could be vulnerable to indirect impacts outside the construction footprint resulting from increased noise or vibration during construction. Likewise, sensitive plants could be impacted by changes in solar exposure or surface and subsurface hydrology.

The BSA as defined outside of the CZ includes the ESL and a 50-foot buffer outside of the ESL, which covers sensitive plant communities, aquatic features, and rare plants. Potential for presence of special status species and sensitive natural communities was assessed through database records review and field surveys.

BSA for Auditory Impacts

The BSA for auditory impacts (BSA #4) contains the ESL and any additional areas that could be affected by the noise of construction, which includes a 0.25-mile buffer around the construction area for airborne noise and the extent of potential underwater noise transmittal upstream and downstream from Post Mile 7.27 at Mustard Gulch, where a culvert will be replaced with a full span bridge. The limits of the BSA were determined, in part, by using the *USFWS Guidance: Estimating the Effects of Auditory and Visual Disturbance to Northern Spotted Owl and Marbled Murrelets in Northwestern California* (USFWS 2020), and the *Water Quality Assessment* for the proposed project (Caltrans 2024i). The “project area” referenced in this document describes the area where construction activities would occur within the ESL that are likely to be directly impacted.

2.1 Aesthetics

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

Regulatory Setting

The California Environmental Quality Act (CEQA) establishes it is the policy of the state to take all action necessary to provide the people of the state "with…enjoyment of *aesthetic*, natural, scenic and historic environmental qualities" (California Public Resources Code [PRC] Section 21001[b]). California Streets and Highways Code Section 92.3 directs Caltrans to use drought resistant landscaping and recycled water when feasible, and incorporate native wildflowers and native and climate-appropriate vegetation into the planting design when appropriate.

Affected Environment

The proposed project is on a 2-lane, undivided highway located between State Route (SR) 1 and SR 128 junction and the Mendocino and Sonoma county line. This section of SR 128 traverses a section of the Northern California Coast Range between the Pacific Ocean and U.S. Highway 101 in the town of Cloverdale. Land development between Cloverdale and the town of Navarro is mostly rural residential with ranches and wineries located along the highway corridor. Much of the corridor between Navarro and SR 1 is forested and undeveloped. The traveling public is provided sweeping views of coastal mountains and valleys where oak and conifer woodlands give way to grasslands and scrublands.

The project is within the Coastal Franciscan Redwood Forest ecoregion which extends through Mendocino County from just south of the King Range to just south of the Russian River in Sonoma County. Unlike the conifer-dominated forests to the north, these central redwood forests typically are more a mixture of conifers and hardwoods. Vegetation includes a multi-story canopy of redwood, Douglas-fir, tanoak, bigleaf maple, evergreen shrubs, and various grasses. In the southern parts of the region, there are more coast live oaks and grassland savannas that are intermixed with denser areas of forest. The near-coastal part of the region that is influenced more by fog has more redwoods and similarities to ecoregions to the north. The landscape within the project area is characterized by redwood forest, rural valleys and mountains, grassland hills, oak woodlands, vineyards, agriculture, and small communities.

Environmental Consequences

Roadway reconstruction work for culvert replacement/rehabilitation would not alter the visual quality of the site and would still be compatible with the existing visual character of the project corridor. The change in visual quality and visual character from the highway would be low. The pavement surface would visually appear new in areas of culvert work. Due to the distance and vegetative buffer between construction work and neighboring viewers, there would be very minimal views of construction work. Since there is typically varied and dense vegetation along the project corridor, the minor removal of vegetation to construct the proposed culverts would have no adverse change to visual resources in the area once surrounding vegetation has regrown and filled in the drainage locations.

Proposed staging areas that are visible to viewers are within previously disturbed areas and their use is not anticipated to result in substantial changes to the visual environment.

During construction, highway users would have views of heavy construction equipment, construction signs and other equipment used for traffic control and material related to roadway construction. Because of construction work, traveling speeds would be reduced, which would result in greater exposure to visual impacts for highway users. These temporary visual impacts are considered part of the general construction landscape.

There would be little to no visual change as a result of the project. The overall visual impact of the project is low.

Avoidance, Minimization and/or Mitigation Measures

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

Discussion of CEQA Environmental Checklist Question 2.1—Aesthetics

"**No Impact**" determinations were made for Questions a), c), and d) listed within the CEQA Environmental Checklist Aesthetics section. Determinations were based on the scope, description, and locations of the proposed project, as well as the *Visual Impact Assessment Memorandum* dated April 2, 2024 (Caltrans 2024h).

See below for further discussion of the "Less Than Significant Impact" determination made for Question b).

b) Would the project substantially damage scenic resources, including, but not limited to trees, rock outcroppings, and historic buildings, within a state scenic highway?

Less than Significant Impact. The entire length of SR 128 is eligible for designation as a State Scenic Highway. Under the Scenic Highway Element of the County's General Plan, many visual elements viewed from the project corridor are considered scenic resources within the county, including Navarro River Redwoods State Park, rural-open grazing or grassland, rural-intensive cultivation (usually orchards or vineyards), inland hills, river views, valleys and ridges, small rural communities, and natural wildlife and wildlife habitats.

At most locations, roadway construction for culvert replacement/rehabilitation would not alter the visual quality of the site and would still be compatible with the existing visual character of the project corridor. The pavement surface would visually appear new in areas of culvert work. Since there is typically varied and dense vegetation along the project corridor, the minor removal of vegetation to construct the proposed culverts would have no adverse change to visual resources in the area once surrounding vegetation has regrown and filled in the drainage locations.

At PM 7.27, approximately thirteen (13) redwood trees would be removed to construct the proposed bridge at Mustard Gulch. A clump of eight (8) redwood trees would be removed at the inlet and a clump of four (4) redwood trees would be removed at the outlet (Figure 2). In addition, one individual redwood tree would also be removed (Figure 3). The trees scoped for removal are few and confined to the inlet and outlet of the existing culvert. As a result, there would be a more open area adjacent to the new bridge and views of the creek downstream would be increased. The surrounding redwood forest is considered a large scenic and visual resource. Because the trees anticipated for removal do not have a specifically unique quality or character that makes them stand out compared to surrounding trees, it is not anticipated that there would be a high level of resource change associated with tree removal.



Figure 2. Redwood Trees Proposed for Removal at Mustard Gulch



Figure 3. Single Redwood Tree Proposed for Removal at Mustard Gulch

Channel grading work at Mustard Gulch (PM 7.27) would result in a wider creek channel near the new bridge. There would be a minor change in land massing that would slightly alter the character of this location; however, the work would be compatible with the existing conditions, and changes to the channel would be visually consistent with its present condition. Visual resources would be enhanced as there would be increased views of the creek. Based on this, it was determined there would be a "Less than Significant Impact."

2.2 Agriculture and Forest Resources

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

Question	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project: a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				✓
Would the project: b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				✓
Would the project: c) Conflict with existing zoning for, or cause rezoning of forest land (as defined by Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?				✓

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, description, and location of the proposed project. The project proposes to replace and/or rehabilitate existing culverts on State Route 128, as well as remediate a fish passage barrier at Mustard Gulch (PM 7.27) by replacing a culvert with a bridge.

Prime farmland and unique farmland exist along portions of SR 128. However, none of the farmland is proposed to be converted to non-agricultural use as a result of this project. There is no conflict with existing zoning for agricultural use or a Williamson Act contract. There is no conflict with existing zoning for timberland or timberland zoned Timberland Production, nor will the project cause rezoning of forest land. Therefore, potential impacts to agriculture and forest resources are not anticipated.

2.3 Air Quality

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations.

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

"**No Impact**" determinations in this section are based on the scope, description, and location of the proposed project, as well as the *Air Quality and Noise Analysis Memorandum* dated May 9, 2024 (Caltrans 2024a). Mendocino County is categorized as an attainment/unclassified area for all current National Ambient Air Quality Standards (NAAQS); therefore, transportation conformity requirements do not apply.

The proposed project is a non-capacity increasing project. This project would not change traffic volume, fleet mix, speed or any other factor that would cause an increase in emissions relative to the No-Build Alternative. This project would not cause an increase in operation emissions; therefore, long-term effects to air quality are not anticipated.

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

Potential impacts to air quality are not anticipated because long-term effects to air quality are not anticipated and short-term effects would be temporary and limited to the immediate area surrounding the construction site. Additionally, the project would not expose sensitive receptors (children, elderly, asthmatics and others who are at heightened risk of negative health outcomes due to exposure to air pollution) to substantial pollutant concentrations or result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

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?			✓	
Would the project: e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				✓

Question	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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 and Animal Species, including Threatened and Endangered Species and Invasive Species. Threatened and endangered special status plant and animal species, including USFWS and NMFS candidate species, CDFW Fully Protected (FP) species, Species of Special Concern (SSC), and California Native Plant Society (CNPS) rare plants, are covered in the respective Plant and Animal sections.

The following sections rely on Chapter 4 of the project *Natural Environment Study* (NES) (Caltrans 2024d).

Natural Communities

In this section, the focus is on biological communities, not individual plant or animal species. CDFW maintains a list of Sensitive Natural Communities (SNCs). SNCs are those natural communities that are of limited distribution statewide or within a county or region and are often vulnerable to environmental effects of projects. These communities may or may not contain special status taxa or their habitat. This section also includes information on wildlife corridors, fish passage, and habitat fragmentation. Wildlife corridors are areas of habitat used by wildlife for seasonal or daily migration. Habitat fragmentation involves the potential for dividing sensitive habitat and thereby lessening its biological value.

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

Wetlands and Other Waters

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

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

Plant Species

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

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

Animal Species

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

- 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
- Senate Bill 857- Fish Passage: Caltrans North Region Implementation Plan 2007
- 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–16 USC Section 1531, et seq. See also 50 CFR Part 402
- CESA–California Fish and Game Code Section 2050, et seq.
- CESA–California Fish and Game Code Section 2080
- CEQA–California Public Resources Code, Sections 21000–21177
- Magnuson-Stevens Fishery Conservation and Management Act, as amended–16 USC Section 1801

Invasive Species

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

Affected Environment

A Natural Environment Study (NES) (Caltrans 2024d) was prepared for the project. Caltrans coordinated with fisheries biologists and water quality specialists, as well as agency personnel from USACE, USFWS, NMFS, CDFW, North Coast Regional Water Quality Control Board (NCRWQCB), and State Parks. See Chapter 3 for a summary of these coordination efforts and professional contacts. The following information relies on the Natural Environment Study.

Project biologists conducted initial background research by compiling a comprehensive list of special status species and sensitive natural communities that may be present within the ESL and BSA. Special status plant and animal species and sensitive habitats that may occur within the BSA were determined, in part, by

reviewing natural resource agency databases, literature and other relevant sources. The following resources were reviewed:

- USFWS Information for Planning and Consultation (IPaC) database species list for the project area [last updated August 23, 2024] (USFWS 2024b) (APPENDIX C).
- NMFS species list for the project area within the Elk, Navarro, Cold Spring, Philo, Boonville, Ornbaun Valley, Yorkville, Hopland, and Coverdale quads [last updated August 23, 2024] (NMFS 2024) (APPENDIX C).
- CDFW-CNDDB RareFind occurrence records for the following quads: Albion, Elk, Navarro, Bailey Ridge, Cold Spring, Philo, Boonville, Zeni Ridge, Ornbaun Valley, Yorkville, Hopland, Big Foot Mtn., Cloverdale [last updated August 24, 2024] (CDFW 2024a) (APPENDIX C).
- California Native Plant Society (CNPS) occurrence records for the following quads: Albion, Elk, Navarro, Bailey Ridge, Cold Spring, Philo, Boonville, Zeni Ridge, Ornbaun Valley, Yorkville, Hopland, Big Foot Mtn., Cloverdale [last updated August 23, 2024] (CNPS 2024) (APPENDIX C).
- The Natural Resources Conservation Service (NRCS) Web Soil Survey data was used to map the soils in the project area (USDA-NRCS 2023) [Accessed December 2023]
- National Wetlands Inventory (NWI) Wetlands Mapper for the project area (USFWS 2024a) [accessed August 2024]
- U.S. Geological Survey (USGS) 7.5-minute topographic maps (USFWS 2024b) [accessed August 2024]
- National Hydrography Dataset (USGS 2024) [accessed August 2024]

SENSITIVE NATURAL COMMUNITIES

Sensitive Natural Communities (SNCs), as defined by CDFW, are vegetation alliances and associations with a state rarity ranking of S1 (critically imperiled), S2 (imperiled), or S3 (vulnerable). SNCs are not defined by the presence of special status plant species; they typically comprise several common, native species that together form an assemblage that is considered rare. CDFW has not yet provided state rarity rankings for all associations. Those associations not yet ranked, but considered sensitive, are included in the current CDFW Natural Communities List. Communities with a state ranking of S4 (apparently secure) or S5 (secure) are not considered sensitive.

The following sensitive natural communities are present within the project Environmental Study Limits:

- Douglas-fir (*Pseudotsuga menziesii*)–Tanoak (*Notholithocarpus densiflorus*) Forest and Woodland Alliance
- Redwood (*Sequoia sempervirens*) Forest and Woodland Alliance

Douglas-fir – Tanoak Forest and Woodland Alliance

The Douglas-fir (*Pseudotsuga menziesii*)–Tanoak (*Notholithocarpus densiflorus*) Forest and Woodland Alliance (G3/S3) is considered a SNC. The alliance occurs on moist, well-drained soils, typically on slopes. In the project area, mixed evergreen forest is interspersed with redwood forest along the Navarro River, becoming more predominant over redwood trees toward the inland limit of the forested area, and extending throughout the project area on more mesic sites. At the western end of Anderson Valley, this community type is interspersed with vineyards. Douglas-fir is dominant (30 percent relative cover) with scattered bigleaf maple (*Acer macrophyllum)*, black oak (*Quercus kelloggii*), California bay (*Umbellularia californica)*, interior live oak (*Quercus wislizeni)*, Oregon oak (*Quercus garryana)*, Pacific madrone (*Arbutus menziesii)*, and tanoak (*Notholithocarpus densiflorus)*. This native alliance overlaps some of the ESL outside of the Coastal Zone.

Redwood Forest and Woodland Alliance

The Redwood (*Sequoia sempervirens*) Forest and Woodland Alliance (G3/S3) is considered a SNC. The alliance is characterized by coast redwood (*Sequoia sempervirens*) as the dominate tree species. Other trees present include Douglas-fir, grand fir (*Abies grandis*), red alder (*Alnus rubra*), and tanoak. Shrubs, ferns and herbaceous flowering plants in the understory include common species of the redwood forest such as California blackberry (*Rubus ursinus*), California huckleberry (*Vaccinium ovatum*), red elderberry (*Sambucus racemosa*), salal (*Gaultheria shallon*), thimbleberry (*Rubus parviflorus*), and western sword fern (*Polystichum munitum*).

This native alliance overlaps some of the ESL outside of the Coastal Zone. Coast redwood is dominant (30 percent relative cover) with scattered Douglas-fir, grand fir, red alder, and tanoak. The tree stratum includes understory shrubs, ferns, and herbaceous flowering plants including California blackberry, California huckleberry, red elderberry, salal, thimbleberry, and western sword fern.

Habitat Connectivity / Fish Passage

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

The CDFW Areas of Conservation Emphasis (ACE) is a tool that utilizes a compilation of statewide spatial information on items such as biodiversity, rarity, significant habitats, and connectivity to produce a ranking of an area's connectivity importance (CDFW 2024b). The areas are assigned to one of five ACE connectivity classes and accompanying ranks, indicating the relative importance of each area to providing opportunities for the movement and dispersal of organisms critical to maintaining healthy populations and species survival. Connectivity Rank 5 is considered a high priority for conservation and Connectivity Rank 1 is considered a limited conservation opportunity (CDFW 2024b).

The ACE ranking varies throughout the project area, with some ESLs occurring in areas of known importance for connectivity. This includes portions of SR 128 near Navarro River Redwoods State Park and Yorkville, which are ranked as conservation planning linkages (Connectivity Rank 4), and the southeastern portion of the project area (PMs 44.57 to 50.14), which is ranked as irreplaceable and essential corridors (Connectivity Rank 5) (CDFW 2024b).

The Navarro River itself is a migration corridor for aquatic and terrestrial species. It also provides rearing habitat for juvenile anadromous fish species and foraging habitat for terrestrial animals. Other aquatic and terrestrial wildlife may utilize the tributaries and small drainages and migrate through the culverts, which can provide refugia and safe passage under road systems for wildlife.

WETLANDS AND OTHER WATERS

USACE regulates Waters of the U.S. under Section 404 of the Clean Water Act (CWA) and Section 10 of the Rivers and Harbor Act. Waters of the U.S. include essentially all surface waters, such as navigable waters and their tributaries, interstate waters and their tributaries, most natural lakes, wetlands adjacent to these waters, and impoundments of these waters. This may include lakes, rivers, streams (including intermittent and ephemeral streams), natural ponds, mudflats, playa lakes, sloughs, wet meadows, swamps, bottomland hardwood wetlands, and other kinds of watercourses, wetlands, and aquatic areas. The term “Other Waters of the U.S.” is sometimes used simply to describe those jurisdictional waters (such as streams and other aquatic sites) that do not meet the definition of “wetlands.”

At the state level, wetlands and waters are regulated primarily by the Regional Water Quality Control Boards (RWQCBs) and the CDFW. Sections 1600–1607 of the California Fish and Game Code require any agency that proposes a project that will substantially divert or obstruct the natural flow of or substantially change the bed or bank of a river, stream, or lake to notify CDFW before beginning construction. If CDFW determines the project may substantially and adversely affect fish or wildlife resources, a Lake and Streambed Alteration Agreement (LSAA) will be required. CDFW jurisdictional limits are usually defined by the tops of the stream or lake banks, or the outer edge of riparian vegetation, whichever is wider. Wetlands under jurisdiction of the USACE may or may not be included in the area covered by a Streambed Alteration Agreement obtained from the CDFW.

The RWQCB regulates discharges of fill and dredged material into Waters of the State under Section 401 of the CWA and the Porter-Cologne Water Quality Control Act. This program protects all waters in its regulatory scope, but has special responsibility for wetlands, riparian areas, and headwaters because these water bodies have high resource value, are vulnerable to filling, and are not systematically protected by other programs. The program encourages basin- or landscape-level analysis and protection of functions of wetlands, riparian areas, and headwater streams, including pollutant removal, floodwater retention, and habitat connectivity. The RWQCB is involved with protection of special status species and regulation of hydro-modification effects.

A preliminary assessment of aquatic features was conducted during the wildlife habitat assessment surveys performed in April and May 2021. Further investigations were conducted in January and April of 2024. Features identified in the ESL include Other Waters comprising perennial, intermittent, and ephemeral drainages. These features are considered sensitive aquatic resources given they may be regulated under the USACE CWA Section 404, RWQCB CWA Section 401, Porter-Cologne Water Quality Control Act, and/or CDFW Fish and Game Code Section 1600, respectively. The preliminary amounts of each feature type and additional details of the survey findings are provided below in Table 5.

Table 5. List of Potential Aquatic Resources and Riparian within the Environmental Study Limits

Feature Name	Post Mile (PM)	Cowardin[1] (Vegetation)[2]	HGM class[3]	Isolated	Area (Acres)	Length (feet)	Width (feet)
Wetlands							
WET-001	0.18	PSS	Coastal	No	0.01	—	—
WET-002	0.40	PSS/PEM	Coastal, Depressional	No	0.02	—	—
WET-003	0.43	PSS/PEM	Coastal, Depressional	No	0.02	—	—
WET-004	0.50	PSS	Coastal	No	0.01	—	—
WET-005	1.02	PSS	Coastal, Riverine	No	0.02	—	—
WET-006	2.43	PEM	Depressional, Riverine	No	0.01	—	—

Feature Name	Post Mile (PM)	Cowardin[1] (Vegetation)[2]	HGM class[3]	Isolated	Area (Acres)	Length (feet)	Width (feet)
WET-007	15.37	PEM	Depressional, Riverine	No	0.01	—	—
WET-008	15.46	PEM	Depressional, Riverine	No	0.01	—	—
WET-009	30.25	PEM	Depressional, Riverine	No	0.01	—	—
WET-010	32.08	PEM	Depressional, Riverine	No	0.02	—	—
Total Wetlands within ESL 0.14 Acre							
Other Waters							
OW_001	0.18	R6	Riverine	No	0.006	120	2
OW_002	0.40	R6	Riverine	No	0.002	103	1
OW_003	2.29	R6	Riverine	No	0.003	91	1.5
OW_004	7.27	R4SB	Riverine	No	0.011	121	4
OW_005	10.47	R6	Riverine	No	0.007	103	3
OW_006	10.64	R6	Riverine	No	0.005	99	2
OW_007	12.46	R6	Riverine	No	0.005	117	2
OW_008	12.99	R6	Riverine	No	0.005	102	2
OW_009	13.15	R6	Riverine	No	0.003	93	1.5
OW_010	13.81	R6	Riverine	No	0.003	94	1.5
OW_011	15.37	R4SB	Riverine	No	0.010	105	4
OW_012	15.46	R6	Riverine	No	0.003	95	1.5
OW_013	17.56	R6	Riverine	No	0.005	102	2
OW_014	18.00	R6	Riverine	No	0.007	207	1.5
OW_015	19.05	R4SB	Riverine	No	0.013	194	3
OW_016	19.63	R4SB	Riverine	No	0.014	202	3
OW_017	19.63	R4SB	Riverine	No	0.008	120	3
OW_018	20.18	R6	Riverine	No	0.005	111	2
OW_019	23.80	R6	Riverine	No	0.004	102	1.5
OW_020	24.26	R6	Riverine	No	0.007	160	2
OW_021	24.65	R4SB	Riverine	No	0.008	148	2.5
OW_022	26.07	R4SB	Riverine	No	0.029	277	4.5
OW_023	26.51	R4SB	Riverine	No	0.016	170	4
OW_024	26.51	R4SB	Riverine	No	0.008	87	4
OW_025	27.76	R4SB	Riverine	No	0.030	240	5.5
OW_026	30.25	R6	Riverine	No	0.007	143	2

Feature Name	Post Mile (PM)	Cowardin[1] (Vegetation)[2]	HGM class[3]	Isolated	Area (Acres)	Length (feet)	Width (feet)
OW_027	30.33	R6	Riverine	No	0.005	132	1.5
OW_028	30.43	R6	Riverine	No	0.004	114	1.5
OW_029	30.49	R4SB	Riverine	No	0.007	161	2
OW_030	31.43	R6	Riverine	No	0.005	119	2
OW_031	31.50	R6	Riverine	No	0.006	141	2
OW_032	31.64	R6	Riverine	No	0.007	156	2
OW_033	32.08	R4SB	Riverine	No	0.008	118	3
OW_034	32.34	R4SB	Riverine	No	0.024	256	4
OW_035	32.72	R6	Riverine	No	0.005	101	2
OW_036	32.77	R4SB	Riverine	No	0.038	206	8
OW_037	32.98	R4SB	Riverine	No	0.014	155	4
OW_038	33.12	R4SB	Riverine	No	0.010	151	3
OW_039	33.29	R6	Riverine	No	0.005	147	1.5
OW_040	33.47	R6	Riverine	No	0.007	205	1.5
OW_041	33.63	R6	Riverine	No	0.007	148	2
OW_042	35.27	R6	Riverine	No	0.004	107	1.5
OW_043	35.54	R4SB	Riverine	No	0.025	218	5
OW_044	38.21	R6	Riverine	No	0.008	165	2
OW_045	38.45	R6	Riverine	No	0.006	123	2
OW_046	39.46	R6/R4SB	Riverine	No	0.006	133	2
OW_047	40.02	R6	Riverine	No	0.003	90	1.5
OW_048	43.30	R4SB	Riverine	No	0.007	100	3
OW_049	43.67	R4SB	Riverine	No	0.023	110	9
OW_050	44.47	R6	Riverine	No	0.004	107	1.5
OW_051	44.57	R6	Riverine	No	0.003	89	1.5
OW_052	45.09	R4SB	Riverine	No	0.009	94	4
OW_053	46.37	R6	Riverine	No	0.003	88	1.5
OW_054	46.53	R4SB	Riverine	No	0.018	157	5
OW_055	46.68	R6	Riverine	No	0.005	142	1.5
OW_056	46.88	R6	Riverine	No	0.003	88	1.5
OW_057	47.48	R6	Riverine	No	0.003	90	1.5
OW_058	47.57	R6/R4SB	Riverine	No	0.007	116	2.5
OW_059	47.69	R6	Riverine	No	0.005	117	2
OW_060	47.84	R6	Riverine	No	0.003	90	1.5
OW_061	48.16	R6	Riverine	No	0.003	93	1.5
OW_062	48.40	R6	Riverine	No	0.003	94	1.5
OW_063	50.04	R6	Riverine	No	0.008	123	3

Feature Name	Post Mile (PM)	Cowardin[1] (Vegetation)[2]	HGM class[3]	Isolated	Area (Acres)	Length (feet)	Width (feet)
Total Other Waters 0.535 Acre, 8,349 Feet Length, 162.5 Feet Width							
Riparian							
RIP_001	7.27	RP (Redwood/ Fern)	Riverine	No	0.50	—	—
RIP_002	10.08	RP (Alder)	Riverine	No	0.04	—	—
RIP_003	12.99	RP (Redwood/Bay Laurel)	Riverine	No	0.08	—	—
RIP_004	15.37	RP (Oak/Willow)	Riverine	No	0.02	—	—
RIP_005	15.46	RP (Oak/Willow)	Riverine	No	0.03	—	—
RIP_006	19.05	RP (Oak)	Riverine	No	0.10	—	—
RIP_007	26.07	RP (Oak/Willow)	Riverine	No	0.20	—	—
RIP_008	27.76	RP (Oak)	Riverine	No	0.20	—	—
RIP_009	32.08	RP (Oak)	Riverine	No	0.03	—	—
RIP_010	32.77	RP (Bay Laurel/Madrone /Cedar/Douglas Fir)	Riverine	No	0.10	—	—
RIP_011	33.12	RP (Cedar/Willow)	Riverine	No	0.05	—	—
RIP_012	35.54	RP (Bay Laurel/ Wood Fern/Maple)	Riverine	No	0.10	—	—
RIP_013	39.46	RP (Madrone/Oak)	Riverine	No	0.03	—	—
RIP_014	43.30	RP (Oak/Willow)	Riverine	No	0.02	—	—
RIP_015	43.67	RP (Oak)	Riverine	No	0.02	—	—
RIP_016	45.09	RP (Bay Laurel)	Riverine	No	0.10	—	—
Total Riparian 1.62 Acres							
Total Aquatic Resources 2.295 Acres =2.30* ***table has been rounded and numbers will vary**							

[1] Cowardin classification codes (Cowardin et al., 1979):
RP = Riparian PSS = Palustrine Scrub-Shrub PEM = Palustrine Emergent Wetland
R6 = Riverine, Ephemeral R4SB = Riverine, Intermittent, Streambed

[2] (Vegetation) = Generalized Dominant Riparian Vegetation

[3] Hydrogeomorphic (HGM)

INVASIVE SPECIES

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

All non-native plant species observed within the ESL during botanical surveys were reviewed to determine their status according to the ratings in the California Invasive Plant Inventory produced by California Invasive Plant Council (Cal-IPC) (Cal-IPC 2023). Cal-IPC categorizes non-native invasive plants into three categories of overall negative ecological impact in California: high, moderate, limited. Non-native plants were also reviewed to determine whether any plants are on the California Department of Food and Agriculture list of Noxious Weeds (California Department of Food and Agriculture 2021). Table 6 below lists the invasive plant species observed within the ESL during the 2023 botanical survey.

Table 6. Invasive Plant Species observed within Environmental Study Limits

Scientific Name	Common Name	Cal-IPC Rating[1]
Anthoxanthum odoratum	Sweet vernal grass	high
Avena barbata	Slender wild oat	high
Avena fatua	Wild oat grass	high
Brassica nigra	Black mustard	high
Brassica rapa	Field mustard	high
Briza maxima	Rattlesnake grass	high
Bromus diandrus	Ripgut grass	limited
Bromus hordeaceus	Soft chess	limited
Bromus tectorum	Cheat grass or Downy chess	limited
Carduus pycnocephalus	Italian thistle	limited
Centaurea solstitialis	Yellow star-thistle	limited
Cirsium vulgare	Bull thistle	limited
Conium maculatum	Poison hemlock	limited
Cynodon dactylon	Bermudagrass	limited
Cynosurus echinatus	Bristly dogtail grass	limited
Delairea odorata	Cape ivy	limited
Digitalis purpurea	Purple foxglove	limited
Dipsacus fullonum	Wild teasel	limited

Scientific Name	Common Name	Cal-IPC Rating[1]
Erodium cicutarium	Redstem filaree	moderate
Festuca arundinacea	Tall fescue	moderate
Festuca myuros	Rattail sixweeks grass	moderate
Foeniculum vulgare	Fennel	moderate
Geranium dissectum	Cut-leaved geranium	moderate
Hedera helix	English ivy	moderate
Helminthotheca echioides	Bristly ox-tongue	moderate
Holcus lanatus	Common velvet grass	moderate
Hordeum murinum	Wall barley	moderate
Hypericum perforatum subsp. *perforatum*	Klamathweed	moderate
Medicago polymorpha	California burclover	moderate
Mentha pulegium	Pennyroyal	moderate
Plantago lanceolata	English plantain	moderate
Ranunculus repens	Creeping buttercup	moderate
Raphanus sativus	Wild radish	moderate
Rubus armeniacus	Himalayan blackberry	moderate
Rumex acetosella	Sheep sorrel	moderate
Rumex crispus	Curly dock	moderate
Senecio minimus	Coastal burnweed	moderate
Silybum marianum	Milk thistle	moderate
Torilis arvensis	Tall sock-destroyer	moderate
Vinca major	Greater periwinkle	moderate

Notes:

[1]California Invasive Plant Council (Cal-IPC) Ratings:

High: These species have severe ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal and establishment. Most are widely distributed ecologically.

Moderate: These species have substantial and apparent—but generally not severe—ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal, though establishment is generally dependent upon ecological disturbance. Ecological amplitude and distribution may range from limited to widespread.

Limited: These species are invasive, but their ecological impacts are minor on a statewide level or there was not enough information to justify a higher score. Their reproductive biology and other attributes result in low to moderate rates of invasiveness. Ecological amplitude and distribution are generally limited, but these species may be locally persistent and problematic.

PLANT SPECIES

The plants listed below are of special concern based on (1) federal, state, or local laws regulating their development; (2) limited distributions; and/or (3) the habitat requirements of special status plants or animals occurring on-site. Based on a review of pertinent literature, the queries made to USFWS, CDFW-CNDDB databases and the CNPS Rare Plant Inventory, 84 special status plants were identified as potentially occurring within the ESL. The status of each special status plant species was verified using the *Special Vascular Plants, Bryophytes, and Lichens List* (CDFW 2024c) and the *State and Federally Listed Endangered, Threatened and Rare Plants of California* (CDFW 2024d). For each species, habitat requirements were assessed and compared to the habitats within the ESL and immediate vicinity. For this review, all regionally occurring FESA and/or CESA plant species identified within the Environmental Study Limits are included in Appendix F, regardless of whether the ESL provides potential habitat.

Five federal and/or state listed species identified in the database queries for the project study area do have potential habitat within the ESL and potentially could be impacted by the project, therefore are discussed in their own sections further below:

- Contra Costa goldfields (*Lasthenia conjugens*) — FE/--/1B.1
- Humboldt County milk-vetch (*Astragalus agnicidus*) — --/SE/1B.1
- North Coast semaphore grass (*Pleuropogon hooverianus*) — --/ST/1B.1
- Roderick's fritillary (*Fritillaria roderickii*) — --/SE/1B.1
- Showy Indian clover (*Trifolium amoenum*) — FE/--/1B.1

The following species *do have suitable habitat* within the ESL; however, based on seasonally appropriate botanical surveys were not observed. There would be ***no effect/no impact*** to these California Rare Plant Rank (CRPR) species (these species have no federal or state listing status); thus, these species are not discussed further.

- Angel's hair lichen (*Ramalina thrausta*)
- Baker's goldfields (*Lasthenia californica* ssp. *bakeri*)
- Bare monkeyflower (*Erythranthe nudata*)
- Beaked tracyina (*Tracyina rostrata*)
- Bearded jewelflower (*Streptanthus barbiger*)
- Bolander's reed grass (*Calamagrostis bolanderi*)
- Brassy bryum (*Bryum chryseum*)
- Brewer's milk-vetch (*Astragalus breweri*)
- Bristly leptosiphon (*Leptosiphon aureus*)
- Bristly sedge (*Carex comosa*)
- Broad-lobed leptosiphon (*Leptosiphon latisectus*)
- California pinefoot (*Pityopus californicus*)
- California sedge (*Carex californica*)
- Coast fawn lily (*Erythronium revolutum*)
- Coast lily (*Lilium maritimum*)
- Cobb Mountain lupine (*Lupinus sericatus*)
- Colusa layia (*Layia septentrionalis*)
- Congested-headed hayfield tarplant (*Hemizonia congesta* ssp. *congesta*)
- Franciscan onion (*Allium peninsulare* var. *franciscanum*)
- Fringed false-hellebore (*Veratrum fimbriatum*)
- Great burnet (*Sanguisorba officinalis*)
- Harlequin lotus (*Hosackia gracilis*)

- Hoffman's bristly jewelflower (*Streptanthus glandulosus* ssp. *hoffmanii*)
- Humboldt County fuchsia (*Epilobium septentrionale*)
- Koch's cord moss (*Entosthodon kochii*)
- Konocti manzanita (*Arctostaphylos manzanita* ssp. *elegans*)
- Leafy-stemmed mitrewort (*Mitellastra caulescens*)
- Maple-leaved checkerbloom (*Sidalcea malachroides*)
- Mendocino Coast paintbrush (*Castilleja mendocinensis*)
- Methuselah's beard lichen (*Usnea longissima*)
- Minute pocket moss (*Fissidens pauperculus*)
- Mountain lady's-slipper (*Cypripedium montanum*)
- Oregon goldthread (*Coptis laciniata*)
- Oval-leaved viburnum (*Viburnum ellipticum*)
- Pacific gilia (*Gilia capitata* ssp. *pacifica*)
- Pacific golden saxifrage (*Chrysosplenium glechomifolium*)
- Point Reyes ceanothus (*Ceanothus gloriosus* var. *gloriosus*)
- Pygmy manzanita (*Arctostaphylos nummularia* ssp. *mendocinoensis*)
- Redwood lily (*Lilium rubescens*)
- Rincon Ridge ceanothus (*Ceanothus confusus*)
- Running-pine (*Lycopodium clavatum*)
- Santa Cruz clover (*Trifolium buckwestiorum*)
- Serpentine bird's-beak (*Cordylanthus tenuis* ssp. *brunneus*)
- Serpentine collomia (*Collomia diversifolia*)
- Serpentine reed grass (*Calamagrostis ophitidis*)
- Siskiyou checkerbloom (*Sidalcea malviflora* ssp. *patula*)
- Small groundcone (*Kopsiopsis hookeri*)
- Streamside daisy (*Erigeron biolettii)*

- Swamp harebell (*Eastwoodiella californica*)
- Tracy's tarplant (*Hemizonia congesta* ssp. *tracyi*)
- White-flowered rein orchid (*Piperia candida*)
- Woolly-headed gilia (*Gilia capitata* ssp. *tomentosa*)
- Woolly-headed lessingia *(Lessingia hololeuca)*

Based on seasonally appropriate botanical surveys, it was determined that for the following federal and/or state listed (FESA and CESA) and CRPR plant species, as there was *no suitable habitat* and the species were not observed within the ESL, there would be ***no effect/no impact*** to these species and they are not discussed further:

- Blasdale's bent grass (*Agrostis blasdalei)*
- Bluff wallflower (*Erysimum concinnum)*
- Bolander's beach pine (*Pinus contorta* ssp. *bolanderi)*
- Burke's goldfields (*Lasthenia burkei)–federal and state endangered*
- Coast iris *(Iris longipetala)*
- Coastal bluff morning-glory (*Calystegia purpurata* ssp. *saxicola*)
- Deceiving sedge (*Carex saliniformis)*
- Glory brush (*Ceanothus gloriosus* var. *exaltatus)*
- Green shield-moss (*Buxbaumia viridis)*
- Guggolz's harmonia (*Harmonia guggolziorum)*
- Howell's manzanita (*Arctostaphylos hispidula*)
- Lassics lupine (*Lupinus constancei*)*–federal and state endangered*
- Monterey clover (*Trifolium trichocalyx)–federal and state endangered*
- Mt. Saint Helena morning glory (*Calystegia collina* ssp. *oxyphylla)*
- Oregon coast paintbrush (*Castilleja litoralis*)
- Perennial goldfields *(Lasthenia californica* ssp. *macrantha)*
- Point Reyes checkerbloom (*Sidalcea calycosa* ssp. *rhizomata)*

- Purple stemmed checkerbloom (*Sidalcea malviflora* ssp. *purpurea)*
- Pygmy cypress (*Hesperocyparis pygmaea)*
- Raiche's manzanita (*Arctostaphylos stanfordiana* ssp. *raichei)*
- Rattan's leptosiphon (*Leptosiphon rattanii)*
- Sea watch *(Angelica lucida)*
- Serpentine cryptantha (*Cryptantha dissita)*
- Short-leaved evax (*Hesperevax sparsiflora* var. *brevifolia)*
- St. Helena fawn lily (*Erythronium helenae*)

Contra Costa Goldfields

Contra Costa goldfields, listed as federally endangered (FE) with a CRPR of 1B.1, is endemic (limited) to California. Contra Costa goldfields is an annual herb in the sunflower tribe (*Heliantheae*) of the sunflower family (*Asteraceae*) that grows from 4 to 15 inches tall. The opposite leaves are sometimes divided into segments. Each plant bears one to several all-yellow flowerheads. Contra Costa goldfields grow in vernal pools, swales, and other depressions in open grassland and woodland communities, often in alkaline soils. It grows in basalt, claypan, and volcanic ash flow vernal pool types (Baye 2000), usually at elevations of 6 to 200 feet. It blooms from March through June, depending on environmental conditions (CDFW 2024a; CNPS 2024a). Common associates include Italian ryegrass (*Lolium multiflorum*), popcorn flower (*Plagiobothrys* spp.), brass buttons (*Cotula coronopifolia*), valley downingia (*Downingia pulchella*), Beethistle (*Eryngium articulatum*), smooth goldfields (*Lasthenia glaberrima*), little mousetail (*Myosurus minimus*), and California semaphore grass (*Pleuropogon californicus*) (CNPS 2024).

Botanical surveys were completed within the project area in 2023 for Contra Costa goldfields. Although some of the ESL may support suitable habitat for this species, no individuals were observed within the ESL during botanical surveys.

Humboldt County Milk-Vetch

Humboldt County milk-vetch, listed as state endangered (SE) with a CRPR of 1B.1, is endemic (limited) to California. Humboldt County milk-vetch is a perennial herb in the pea family (*Fabaceae*) that blooms from May through August with white blooms typical of a vetch, and bend sharply back as the flowers age. Humboldt County milk-vetch grow in open soil in woodlands, broadleafed upland forest and North Coast coniferous forest, favoring disturbed areas, openings, and is sometimes found roadside (CDFW 2024a; CNPS 2024a). Threats include biocides, erosion/runoff, foot traffic/trampling, grazing, logging, non-native plant impacts, off-highway vehicle (OHV) activity, road/trail construction/maintenance, and brush clearing.

Botanical surveys were completed within the project area in 2023 for Humboldt County milk-vetch. Although some of the ESL may support suitable habitat for this species, no individuals were observed within the ESL during botanical surveys.

North Coast Semaphore Grass

North Coast semaphore grass is state threatened (ST) and has a CRPR of 1B.1. North Coast semaphore grass is a tall perennial bunchgrass, with upright flowering stems that grow more than 36 inches tall and occasionally bend downwards. The plant is likely to be found between 35 to 2,200 feet in elevation and flowers typically appear in late April, May, and June. North Coast semaphore grass has been found growing in meadow openings within forests or woodlands that are typically saturated with standing water during the winter months and receive partial shade from adjacent trees. It is generally only found at disjunct locations in Marin, Sonoma, and Mendocino counties (CalFlora 2024). To date, there are only 21 known occurrences of North Coast semaphore grass in the California Natural Diversity Database that are presumed to still exist.

Botanical surveys were completed within the project area in 2023 for North Coast semaphore grass. Although some of the ESL may support suitable habitat for this species, no individuals were observed within the ESL.

Roderick's Fritillary

Roderick's fritillary is a SE species with a CRPR of 1B.1. Roderick's fritillary is a perennial bulbiferous lily that is native to California, and endemic (limited) to California. It is thought to be found in coastal bluff scrub, coastal prairie, valley and foothill grassland habitats. It blooms March through May and is found from 50 to 1,310 feet. Flowers are dark brown to purple, green-purple, or yellow-green, nodding, 0.7 to 1.6 inches, narrowly ovoid (egg-shaped). The species is thought to be found in Mendocino County (CalFlora 2024).

Botanical surveys were completed within the project area in 2023. Although some of the ESL may support suitable habitat for Roderick's fritillary, no individuals were observed within the ESL during botanical surveys.

Showy Indian Clover

Showy Indian clover (*Trifolium amoenum*) is a federal endangered (FE) species with a CRPR of 1B.1. This plant is an annual herb in the pea family that produces large, purple, white-tipped flowers from April to June, and typically is found in elevations less than 1,020 feet. The species presents with two forms: an "erect" plant and a "prostrate" (shorter) plant. The hairy stems vary from 4 to 24 inches tall. As is typical for clovers, the leaves consist of a long leafstalk with three leaflets that meet at a central point. Each leaflet is broadly egg-shaped. The individual flowers, which are narrow and pea-like, are approximately 0.5 inch long and are purple with white tips. Many flowers are aggregated into a conspicuous, rounded head. This species has been found in coastal scrub areas and grasslands in moist, heavy soils (CalFlora 2024).

Botanical surveys were completed within the project area in 2023 for Showy Indian clover. Although some of the ESL may support suitable habitat for this species, no individuals were observed within the ESL during botanical surveys.

ANIMAL SPECIES

"Special Animals" is a broad term used to refer to all the animal taxa tracked by USFWS, NMFS, and the CDFW–CNDDB, regardless of their legal or protection status. The Special Animals List includes species, subspecies, Distinct Population Segments (DPS), or Evolutionarily Significant Units (ESU) where at least one of the following conditions applies (CDFW 2024e):

- Officially listed or proposed for listing under state and/or federal endangered species acts
- Taxa considered by the California Department of Fish and Wildlife to be a Species of Special Concern (SSC)
- Taxa which meet the criteria for listing, even if not currently included on any list, as described in Section 15380 of the California Environmental Quality Act Guidelines
- Taxa that are biologically rare, very restricted in distribution, or declining throughout their range, but not currently threatened with extirpation
- Population(s) in California that may be peripheral to the major portion of a taxon's range but are threatened with extirpation in California
- Taxa closely associated with a habitat that is declining in California at a significant rate (e.g., wetlands, riparian, vernal pools, old-growth forests, desert aquatic systems, native grasslands, valley shrubland habitats, etc.)
- Taxa designated as a special status, sensitive, or declining species by other state or federal agencies, or a non-governmental organization (NGO), and determined by the CNDDB to be rare, restricted, declining, or threatened across their range in California

Based on queries to the USFWS, NMFS, and CDFW-CNDDB databases, those special status species where the project BSA is out of the geographical range of the species, there is no suitable habitat (which would presume presence), or were not observed or anticipated to be present within the project study area, are listed below. As there would be ***no effects/no impacts*** to these species, they are not discussed further in this report.

- American goshawk *(Accipiter atricapillus*)
- Tricolored blackbird *(Agelaius tricolor)*
- Western snowy plover *(Charadrius nivosus nivosus)*–Pacific Coast DPS
- Yellow-billed cuckoo (*Coccyzus americanus occidentalis)*–Western U.S. DPS
- Green sturgeon (*Acipenser medirostris*) pop. 1
- Steelhead *(Oncorhynchus mykiss irideus)*–Central California Coast DPS (Pop. 8)
- Tidewater goby (*Eucyclogobius newberryi*)
- Point Arena mountain beaver (*Aplodontia rufa nigra*)
- Southern Resident killer whale *(Orcinus orca)*
- Behren's silverspot butterfly (*Speyeria zerene behrensii*)
- Lotis blue butterfly (*Lycaeides argyrognomon lotis*)

Table 8 indicates those special status animal species which could potentially occur within the ESL/BSA and therefore could potentially be impacted by project construction. The animals indicated below in Table 7 are of special concern based on (1) federal, state or local laws regulating their development; (2) limited distributions; and/or (3) the presence of habitat required by the special status animal occurring on-site. There is potentially suitable habitat for several special status animal species within or adjacent to the project areas.

Table 7. Findings of Special Status Animal Species that May Potentially Occur within the Project Study Limits

Common Name	*Scientific Name*	Status Federal/State	Effect/Impact Finding	Effect Finding for Critical Habitat or EFH (if applicable
AMPHIBIANS/REPTILES				
California giant salamander	*Dicamptodon ensatus*	--/SSC	--/no substantial impact	N/A
Foothill yellow-legged frog–North Coast DPS	*Rana boylii (Pop. 1)*	--/SSC	--/no substantial impact	N/A

Common Name	*Scientific Name*	Status Federal/State	Effect/Impact Finding	Effect Finding for Critical Habitat or EFH (if applicable
Northern red-legged frog	*Rana aurora*	--/SSC	--/no substantial impact	N/A
Northwestern pond turtle	*Emys marmorata*	FPT/SSC	*USFWS Conference Report/no impact	N/A
Pacific tailed frog	*Ascaphus truei*	--/SSC	--/no substantial impact	N/A
Red-bellied newt	*Taricha rivularis*	--/SSC	--/no substantial impact	N/A
Southern torrent salamander	*Rhyacotriton variegatus*	--/SSC	--/no substantial impact	N/A
BIRDS				
Bald eagle	*Haliaeetus leucocephalus*	FP/SE	No effect/no "take"	N/A
Grasshopper sparrow	*Ammodramus savannarum*	--/SSC	--/no impact	N/A
Marbled murrelet	*Brachyramphus marmoratus*	FT/SE	May affect, but is not likely to adversely affect/ no "take"	No effect to CH
Northern spotted owl	*Strix occidentalis caurina*	FT/ST	May affect, but is not likely to adversely affect/ no "take"	No effect to CH
White-tailed kite	*Elanus leucurus*	--/FP	--/no impact	N/A
FISH				
Chinook salmon-California Coastal ESU	*Oncorhynchus tshawytscha (Pop. 17)*	FT/--	May affect and is likely to adversely affect/--	May affect and is likely to adversely affect EFH and CH
Coho salmon-Central California Coast ESU	*Oncorhynchus kisutch (Pop. 4)*	FE/SE	May affect and is likely to adversely affect/ "take"	May affect and is likely to adversely affect EFH and CH
Northern coastal roach	*Hesperoleucus venustus navarroensis*	--/SSC	--/no impact	N/A
Steelhead-Northern California DPS winter run	*Oncorhynchus mykiss irideus (Pop. 49)*	FT/SSC	May affect and is likely to adversely affect/may impact	May affect and is likely to adversely affect CH
MAMMALS				
Pallid bat	*Antrozous pallidus*	--/SSC	--/no impact	N/A
Sonoma tree vole	*Arborimus pomo*	--/SSC	--/no impact	N/A

Common Name	*Scientific Name*	Status Federal/State	Effect/Impact Finding	Effect Finding for Critical Habitat or EFH (if applicable
Townsend's big-eared bat	*Corynorhinus townsendii*	--/SSC	--/no impact	N/A
INVERTEBRATES				
Monarch butterfly	*Danaus plexippus*	FC/--	No effect/--	N/A
Western bumble bee	*Bombus occidentalis*	--/SCE	--/no impact	N/A

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

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

FULLY PROTECTED AND SPECIES OF SPECIAL CONCERN

AMPHIBIANS

California Giant Salamander

California giant salamander (*Dicamptodon ensatus*) is a CDFW Species of Special Concern (SSC) that primarily inhabits mesic oak woodlands and coniferous forests from southern Mendocino County to Santa Cruz County and inland to Lake County. In the southern portion of this species range, they can be found in chaparral habitats (Thomson et al., 2016). This species is mainly terrestrial but requires aquatic habitat including cold permanent and semipermanent streams for breeding and larval development (Petranka 1998). Females return to breeding streams during the rainy season in fall and spring. They can lay around 70 eggs and females may guard the eggs until they hatch. Adults and juveniles utilize upland habitats for dispersal from breeding sites and can travel on the surface or underneath leaf litter, logs, and boulders.

Although focused species amphibian surveys were not conducted specifically for California giant salamander, an aquatic resources survey was performed to identify suitable aquatic habitat within the ESL. Suitable habitat for this species occurs within some of the drainages and adjacent habitats associated with several culverts within the ESL. There are two CNDDB occurrences of California giant salamander

within 5 miles of the project (CDFW 2024a). The closest occurrence is dated 1984 and is located approximately 3.97 miles southwest of the ESL (PM 33.63) (CDFW 2024a).

Foothill Yellow-Legged Frog

Foothill yellow-legged frog (*Rana boylii*)–North Coast Distinct Population Segment (DPS) is a CDFW SSC that primarily inhabits partly shaded streams and rivers with shallow, flowing water and at least some cobble-sized substrate (Hayes and Jennings, 1988). In-stream riffles appear to be an important habitat component. Breeding and oviposition (egg laying) occur at the margins of relatively wide and shallow channel sections (Thomson et al., 2016). Adults and juveniles use riparian and upland areas immediately adjacent to aquatic habitats. Fall/winter refugia are generally characterized by small tributary streams with perennial water where frogs can forage and avoid mortality caused by flooding (CDFW 2018a). 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 (CDFW 2018a). One study in Tehama County found Foothill yellow-legged frogs rarely go beyond 39 feet (12 meters) from the channel during any time of the year (Bourque 2008).

Although focused species amphibian surveys were not conducted specifically for Foothill yellow-legged frog, an aquatic resources survey was performed to identify suitable aquatic habitat within the ESL. Suitable habitat for this species occurs within some of the drainages and adjacent habitats associated with several culverts within the ESL. There are 97 CNDDB occurrences of Foothill yellow-legged frog within 5 miles of the project (CDFW 2024a), seven of which are located within the ESL, dated 1955 to 2003 (CDFW 2024a).

Northern Red-Legged Frog

Northern red-legged frog (*Rana aurora*), a CDFW SSC, primarily inhabits quiet, permanent pools of streams, marshes, and occasionally ponds (Shaffer et al., 2004). This species generally requires permanent or near permanent pools for larval development, which takes 11 to 20 weeks (Storer 1925; Calef 1973). Northern red-legged frog is highly aquatic with little movement away from streamside habitats. They breed January to July (peak in February) in the south, and March to July in the

north. Females lay 750 to 4,000 eggs in clusters up to ten across, attached to vegetation 2–6 inches (7–15 centimeters) below the surface (Stebbins 1954).

Although focused species amphibian surveys were not conducted specifically for Northern red-legged frog, an aquatic resources survey was performed to identify suitable aquatic habitat within the ESL. Suitable habitat for this species occurs within some of the drainages and adjacent habitats associated with several culverts within the ESL. There are 11 CNDDB occurrences of Northern red-legged frog within 5 miles of the project (CDFW 2024a). The closest occurrence is dated 2015 and is located on the right bank of the Navarro River, approximately 0.33-mile northwest from the ESL (PM 0.03) (CDFW 2024a).

Pacific Tailed Frog

The Pacific tailed frog (*Ascaphus truei*), CDFW SSC, is an endemic species of the Pacific Northwest. It inhabits perennial streams within Douglas-fir, redwood, late seral (i.e., forests with secondary successional growth but dominated by natural species), and mature conifer forests (Pacific Forest Trust 2018). Pacific tailed frogs are restricted to swift, perennial streams of low temperature in densely vegetated, steep-walled valleys (Nussbaum et al., 1983). Intermittent streams are unsuitable, and tailed frogs avoid marshes, wetlands, and slow sandy streams (Daugherty and Sheldon, 1982). Although habitat for tailed frogs has primarily been found in mature and old-growth coniferous forests (Bury 1968; Bury and Corn, 1988; Welsh 1990), they have also been found in young forests. During dry periods, frogs are restricted to the stream bed; however, during moist periods, individuals have been collected up to 40 feet (12 meters) from streams (Thomson et al., 2016).

Although focused species amphibian surveys were not conducted specifically for Pacific tailed frog, an aquatic resources survey was performed to identify suitable aquatic habitat within the ESL. Suitable habitat for this species occurs within some of the drainages and adjacent habitats associated with several culverts within the ESL. There are 15 CNDDB occurrences of Pacific tailed frog within 5 miles of the project (CDFW 2024a). The closest occurrence is dated 2011 and is located along Marsh Gulch, approximately 0.25-mile south from the ESL (PM 2.59) (CDFW 2024a).

Red-Bellied Newt

Red-bellied newt (*Taricha rivularis*), a CDFW SSC, primarily inhabits redwood forest habitat, using streams for breeding habitat and adjacent upland habitat (underground within redwood root channels) as upland habitat. Red-bellied newts require rapid streams with rocky substrate for breeding and larval development (Zeiner et al., 1990). Individuals may travel a mile or more to and from a breeding stream site. Individuals can travel overland to streams during fall rain events and return back to terrestrial habitat in the spring months where aestivation (dormancy) occurs during summer months (Zeiner et al., 1990).

Although focused species amphibian surveys were not conducted specifically for red-bellied newt, an aquatic resources survey was performed to identify suitable aquatic habitat within the ESL. Suitable habitat for this species occurs within some of the drainages and adjacent habitats associated with several culverts within the ESL. There are 12 CNDDB occurrences of red-bellied newt within 5 miles of the project (CDFW 2024a), two of which occur within the ESL, dated from 1947 and 1953 (CDFW 2024a).

Southern Torrent Salamander

Southern torrent salamander (*Rhyacotriton variegatus*), a CDFW SSC, occurs in coastal forests of Northwestern California from the Oregon border south to Point Arena in Mendocino County (Jennings and Hayes, 1994). Southern torrent salamanders are found primarily in cold, well-shaded permanent streams and spring seepages with coarse rocky substrates (Behler and King, 1979; Thomson et al., 2016) and in redwood, Douglas-fir, mixed conifer, montane riparian, and montane hardwood-conifer habitats (Stebbins 1951; Anderson 1968). The elevational range for this species extends from near sea level to about 3,937 feet (1,200 meters) (Jennings and Hayes, 1994). Key habitat features include loose gravel and cobble substrates as the species has been documented to be sensitive to fine sediment load (Thomson et al., 2016). Adults may use adjacent riparian and forest habitat in the wet season (Thomson et al., 2016), although this species is generally restricted to moist areas as it has highly reduced lungs and relies on its skin surface to take in oxygen (Stebbins 1951).

Estimates of abundance have shown Southern torrent salamander to be more abundant in late-seral forests (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) (Thomson et al., 2016).

Although focused species amphibian surveys were not conducted specifically for Southern torrent salamander, an aquatic resources survey was performed to identify suitable aquatic habitat within the ESL. Suitable habitat for this species occurs within some of the drainages and adjacent habitats associated with several culverts within the ESL. There are six CNDDB occurrences of Southern torrent salamander within 5 miles of the project (CDFW 2024a); the closest occurrence is approximately 0.09-mile southwest from the ESL (PM 2.29) located on the left bank of the Navarro River and is dated from 2004 (CDFW 2024a).

BIRDS

MIGRATORY BIRDS/MIGRATORY BIRD TREATY ACT

The Federal Migratory Bird Treaty Act (MBTA) (15 USC 703-711), Title 50 Code of Federal Regulations (CFR) Part 21 and 50 CFR Part 10, the California Fish and Game Code (CFGC) Sections 3503, 3513, 3800, and AB 2627 protect migratory birds, their occupied nests, and their eggs from disturbance or destruction. The MBTA provides protection in part by restricting the disturbance of nests during the bird nesting season.

Potential project-related impacts to migratory birds would be avoided by restricting vegetation removal to the period outside of the bird breeding season (September 16 through January 31). If vegetation removal is required between February 1 and September 15, a nesting bird survey would be conducted by a qualified biologist within five days prior to 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 appropriate buffer would be delineated around each active nest, and construction activities would be excluded from these areas.

Grasshopper Sparrow

The grasshopper sparrow (*Ammodramus savannarum*) is a CDFW Species of Special Concern (SSC). This small sparrow occurs across North America and ranges from southern Canada south to Ecuador. One of the 12 recognized subspecies of grasshopper sparrow (*A. s. perpallidus*) breeds in California in counties west of the Sierras (Shuford and Gardali, 2008). Grasshopper sparrows arrive in California in mid-March to establish breeding grounds in a variety of grassland habitats. They show a preference for dry, dense grasslands, especially those with a variety of grasses and tall forbs in which to take cover, and scattered shrubs which they use for singing perches (Dobkin and Granholm, 2008). They build nests using grasses and forbs in slight depressions on the ground that are hidden by overhanging clumps of vegetation. Egg laying begins in April and the female lays about 3 to 6 eggs which incubate for about two weeks. The young leave the nest in about 9 days although yet not fully fledged. Pairs may raise two or three broods a year. Nesting season is over by mid-July (Dobkin and Granholm, 2008).

There are no CNDDB occurrences of grasshopper sparrow within 5 miles of the project (CDFW 2024a).

White-Tailed Kite

The white-tailed kite (*Elanus leucurus*) is a CDFW fully protected species and occurs throughout California, west of the Sierra Nevada. White-tailed kites nest on loosely piled sticks lined with grasses, straw, or rootlets (California Wildlife Habitat Relationships [CWHR] 2005). Nests are constructed near the top of dense oak, willow, or other tree stands located near open habitat for foraging. Primary foraging habitat includes open grasslands, meadows, pastures, and emergent wetlands. Prey includes voles and other small, diurnal mammals, and sometimes other birds, reptiles, amphibians, or insects. Active breeding occurs from February to October, with peak breeding occurring from May to August (CWHR 2005). White-tailed kites are year-round residents in California and generally stay within one mile of an active nest.

There is one CNDDB occurrence of white-tailed kite within 5 miles of the project, located approximately 0.75-mile north of the ESL (PM 1.02) and dated from 2006 (CDFW 2024a).

FISH

Northern Coastal Roach

Northern coastal roach (*Hesperoleucus venustus* ssp*. navarroensis*) is a CDFW SSC, with their status being of High Concern. Northern coastal roach generally inhabit small warm streams. They are also sometimes found in larger cooler streams and are restricted to the Navarro River and Russian River basins. Roach are found in a wide variety of habitats in the Russian River, including the main river where there is cover (e.g., fallen trees) to protect them from predators. They are most abundant in tributaries with clear, well-oxygenated water, dominant substrates of cobble and boulder, and shallow depths (average 10-50 cm) with pools up to 3.28 feet (1 meter) deep. In the Russian River mainstem, roach are most common around the mouths of tributaries (Moyle et al., 2015).

Multiple culvert locations on the project convey perennial streams, some of which may support the northern coastal roach. Northern coastal roach are presumed to be within the greater Navarro Watershed, and CNDDB lists occurrences within the following sub-basins: Mainstem Navarro, North Fork Navarro, and Rancheria Creek Basins. The Navarro Watershed Restoration Plan also lists northern coastal roach occurrences within the Indian Creek Basin (NCRWQCB 2000), and it is likely safe to assume that Anderson Creek Basin is at least temporarily occupied as well.

There is one documented location in the CNDDB where northern coastal roach falls within the BSA on Little North Fork Navarro at PM 12.50; however, there is no work occurring at that location. There are no recorded occurrences within any of the perennial streams where work is occurring, nor are there recorded occurrences in the upper Russian Basin where the project occurs.

MAMMALS

Pallid Bat

Pallid bats are considered an SSC by CDFW. The pallid bat is a locally common species of low elevations in California. It occurs throughout California except for the high Sierra Nevada from Shasta to Kern counties, and the northwestern corner of the state from Del Norte and western Siskiyou County to northern Mendocino County. They occupy a wide variety of habitats, including grasslands, shrublands, woodlands, and forests from sea level up through mixed conifer forests. The species is most common in open, dry habitats with rocky areas for roosting. They are generally yearlong residents in most of the range and do not migrate. This species roosts during the day in caves, crevices, mines, and occasionally in hollow trees and buildings. Roosts must protect bats from high temperatures. Bats move deeper into cover if temperatures rise. Night roosts may be in more open sites, such as porches and open buildings. Few hibernation sites are known, but pallid bat probably use rock crevices. Maternity colonies form in early April and may have a dozen to 100 individuals. Males may roost separately or in the nursery colony. This species does drink water but can live further away from water sources due to relatively good urine-concentrating ability in comparison to other bats. This species prefers rocky outcrops, cliffs, and crevices with access to open habitats for foraging (Harris 2000a).

There is one CNDDB occurrence of pallid bat within 5 miles of the project (CDFW 2024a), located approximately 4.23 miles northeast the ESL (PM 49.04) and dated from 1927 (CDFW 2024a).

Sonoma Tree Vole

Sonoma tree vole (*Arborimus pomo*) is a CDFW SSC distributed along the north coast of California from Sonoma County to the Oregon border, being more or less restricted to the fog belt. It is reported to be rare to uncommon throughout its range, but the difficulty of locating nests and capturing individuals makes abundance difficult to assess. Sonoma tree voles occur in old-growth and other forests, mainly Douglas-fir, redwood, and montane mixed hardwood-conifer habitats.

Sonoma tree voles feed on needles of Douglas-fir and grand fir (*Abies grandis*). Needles and twigs are gathered primarily at night and are either consumed on site or brought to the nest where the needle resin ducts are removed and the remainder is

eaten. The resin ducts may be used to line the nest cup. Young, tender needles are often eaten entirely. Food may be stored, and the tender bark of terminal twigs may be eaten as well.

Nests of Douglas-fir needles are constructed in trees, preferably tall trees. Nests may be situated on the whorl of the limbs against a trunk or at outer limits of branches. In young, second-growth Douglas-fir, the broken tops of trees frequently are used for nesting (Maser et al., 1981). The Sonoma tree vole breeds year-round, but most breeding is from February through September. Litter size ranges from one to four, with an average of two. There are one or more litters per year, and two litters of different ages may occupy a nest at the same time. Young are cared for by the female only. Weaning occurs at 30 to 40 days (Maser et al., 1981).

Townsend's Big-Eared Bat

Townsend's big-eared bats are considered SSC by CDFW. Townsend's big-eared bat is found throughout California, but the details of its distribution are not well known. This species is found in all but subalpine and alpine habitats and may be found at any season throughout its range. Once considered common, Townsend's big-eared bat now is considered uncommon in California.

It is most abundant in mesic habitats. Townsend's big-eared bats use manufactured structures (mines, bridges, tunnels, old buildings) and basal hollows in old-growth trees for maternity roosts. They require caves, mines, tunnels, buildings, or other human-made structures for roosting. They may use separate sites for night, day, hibernation, or maternity roosts. Hibernation sites are cold, but not below freezing. Individuals may move within the hibernaculum to find suitable temperatures. Maternity roosts are warm and are found in caves, tunnels, mines, and buildings (Harris 2000b). Roosting sites are the most important limiting resource. Small clusters or groups (usually fewer than 100 individuals) of females and young form the maternity colony.

There are four CNDDB occurrences of Townsend's big-eared bat within 5 miles of the project (CDFW 2024a). The closest occurrence is located approximately 0.59-mile southwest of the ESL (PM 0.03) and dated from 2008 (CDFW 2024a).

THREATENED AND ENDANGERED SPECIES

REPTILES

Northwestern Pond Turtle

The Northwestern pond turtle (*Emys marmorata*) is a Proposed Threatened species under FESA and a CDFW SSC. Western pond turtles range throughout the state of California, from the coast and 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 (Hayes and Jennings, 1988). The project area is within the range of the Northwestern pond turtle.

The Northwestern 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 in-stream woody debris, or floating logs, to regulate their temperature throughout the day (Holland 1994). In addition to appropriate aquatic habitat, these turtles require an upland oviposition (egg laying) site in the vicinity of the aquatic habitat, often within 656 feet (200 meters) 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 they may return active and in the water throughout the year (Jennings and Hayes, 1994). Year-round activity of Northwestern pond turtle is most often observed along a watercourse (Jennings and Hayes, 1994). Upland hibernacula may include any type of crack, hole, or object that a turtle seeking cover might squeeze into or burrow underneath.

Although focused species surveys were not conducted specifically for Northwestern pond turtle, an aquatic resources survey was performed to identify suitable aquatic habitat within the ESL. Suitable aquatic and upland habitats were found to be present in multiple locations within the ESL. The ESL supports habitat that is situated within 900 feet of suitable aquatic habitat (e.g., intermittent and perennial streams) and where the banks are not too steep. Vegetated communities with adequate leaf litter and soft soils could provide upland oviposition sites for Northwestern pond turtle.

There are 3 CNDDB occurrences of Northwestern pond turtle within 5 miles of the project. The closest occurrence is dated 1999 and is located at a stock pond, approximately 1.6 miles northeast from the ESL (PM 50.14) (CDFW 2024a).

BIRDS

Bald Eagle

Though the bald eagle (*Haliaeetus leucocephalus*) was delisted from federal status, it is still considered state endangered. It also remains federally protected by the Bald and Golden Eagle Protection Act (16 USC § 668). Bald eagles typically nest in large trees within one mile of fishable waters, within or directly adjacent to forests with large trees that provide suitable nesting structures (Buehler 2000). Active breeding occurs February through August. Bald eagles are known to feed on a wide variety of fish, small mammals, amphibians, reptiles, and small birds. They are also documented to scavenge for food and eat carrion. In Mendocino County, bald eagles are strongly tied to open water and undisturbed shorelines. River corridors and estuaries attract scattered individuals thought to be migrants, or otherwise nonresident, from October to March (Hunter et al., 2005).

Although focused species surveys were not conducted specifically for bald eagle, a reconnaissance survey and habitat assessment were performed for all wildlife to determine potential for occurrence. Suitable habitat for this species occurs within some of the drainages and adjacent habitats associated with several culverts within the ESL.

There is one CNDDB occurrence of bald eagle within 5 miles of the project, dated from 2000 (CDFW 2024a), which is located within the ESL (PM 34.48).

Marbled Murrelet

The marbled murrelet (MAMU) (*Brachyramphus marmoratus*) is a federal threatened and state endangered species with over 3.6 million acres of critical habitat designated in the combined states of Washington, Oregon, and California (USFWS 1997). This small seabird spends most of its life at sea where it forages by diving for fish and invertebrates, located approximately 0.5 to 1 mile from the shoreline (USFWS 1997). There have been occasional sightings of these birds on rivers and inland lakes (USFWS 2008).

MAMU forage in the ocean, primarily within a few miles of shore, and fly inland to nest in mature conifers. They roost and nest high up in conifer trees including coastal redwood, Douglas-fir, mountain hemlock (*Tsuga mertensiana*), Sitka spruce (*Picea sitchensis*), western hemlock (*Tsuga heterophylla*), and western red cedar (*Thuja plicata*). This species will choose conifer trees located in mature and old-growth forests that have large core areas of old-growth, low amounts of forest fragmentation, moderate to high canopy closure, and proximity to the marine environments (USFWS 2008).

Their breeding range extends from Bristol Bay, Alaska, south to northern Monterey Bay, California, and nests have been found as far as 50 miles inland (USFWS 1997). Outside of breeding season, they are found in a similar range but are more loosely dispersed, having been found as far south as San Diego County.

Nests are not constructed but consist of a depression or cup made of moss, lichen, or debris on a large conifer tree limb. The female nests only once a year and lays a single egg. Nesting season begins in mid-March and extends through late September, with incubation lasting approximately 30 days and fledging an additional 28 days (USFWS 1997). The breeding pair share egg incubation and, once the egg is hatched, adults fly to and from ocean feeding areas throughout the day, with the highest amount of activity during dusk and dawn. Juvenile marbled murrelets don't reach sexual maturity until their second year and most likely don't lay eggs until their third year.

During the March to September breeding season, MAMU typically fly along river corridors for their morning and evening nest visits. Major factors attributed to their decline are (1) loss of nesting habitat due to commercial timber harvest and forest management practices, (2) poor reproductive habitat due to habitat fragmentation and predation, and (3) mortality from net fisheries and oil spills (USFWS 1997).

The primary constituent elements (PCE) of critical habitat for MAMU are individual trees with potential nesting platforms, forested areas within 0.5 mile of individual trees with potential nesting platforms, and a canopy height of at least one-half the site-potential tree height (USFWS 2022).

There is one CNDDB occurrence of marbled murrelet within 5 miles of the project near Post Mile 0.0 along Mendocino County State Route 1 (CDFW 2024a).

Northern Spotted Owl

The northern spotted owl (NSO) (*Strix occidentalis caurina*) is a federal and state threatened species. NSO occur in the southern Cascade Range of northern California, to the Klamath Mountains, and down the Coast Ranges through Marin County. NSO generally have large home ranges and use large tracts of land containing significant acreage of older forest to meet their biological needs. Median annual home range size varies from 985 acres (0.7-mile radius) in the California Coast Redwood Region to 3,410 acres (1.3 miles radius) in the California Coast Mixed Conifer Zone or California Cascades. Within the home range, there is a core area of concentrated use (approximately 20 percent of the home range) during the breeding season (Bingham and Noon, 1997). The attributes of superior NSO nesting and roosting habitat typically include a moderate-to-high canopy closure (60 to 80 percent); a multi-layered, multi-species canopy with large overstory trees; a high incidence of large trees with deformities (large cavities, broken tops, mistletoe infections, and debris accumulation); large accumulations of fallen trees and other debris; and sufficient open space below the canopy for flight (Gutiérrez et al., 1995).

Activity centers are NSO detections or a location or point within the core use area that represent this central location. NSO typically forages in forested habitats near a permanent water source. The owls search for food sources from a perch and then swoop or pounce on prey in vegetation or on the ground. In northwestern California, NSO individuals inhabit dense, old-growth, multi-layered mixed conifer, coast redwood (*Sequoia sempervirens*) and Douglas-fir forests, from sea level up to approximately 7,600 feet. In Douglas-fir habitats, the home range for NSO is 1.3 miles. LaHaye and Gutierrez (1999) found that in northwestern California, NSO nest primarily in broken tops, cavities, or on platforms (e.g., mistletoe brooms) of Douglas-fir (83 percent) and redwoods (9 percent), with a mean minimum diameter at breast height of 46.9 inches. However, NSO in northwestern California have also nested in smaller diameter trees that contain the proper structural elements.

There are many CNDDB occurrence of Northern spotted owl within 5 miles of the project (CDFW 2024a). There are nests, young, pairs, and many activity centers mainly from PM 0.0 through PM 14.0 and PM 35.0 through PM 37.0.

FISH

Chinook Salmon – California Coastal ESU

The Chinook salmon (*Oncorhynchus tshawytscha*)–California Coastal Evolutionarily Significant Unit (ESU) (Pop. 17) was federally listed as a threatened species on September 16, 1999 (64 FR 50394). Their threatened status was reaffirmed August 15, 2011 (76 FR 50447). This ESU contains the most southerly Coastal Chinook salmon runs (CDFW 2016). Critical habitat was designated in 2005 and it encompasses various reaches of rivers and streams in Humboldt, Trinity, Mendocino, Sonoma, Lake, Glenn, Colusa, and Tehama counties. Designated critical habitat and EFH is present within the BSA in the Russian River.

The physical and biological features (PBFs) identified at the time of designation were:

(1) Freshwater spawning sites with water quantity and quality conditions and substrate supporting spawning, incubation, and larval development.

(2) Freshwater rearing sites with:

(i) Water quantity and floodplain connectivity to form and maintain physical habitat conditions and support juvenile growth and mobility;

(ii) Water quality and forage to support juvenile development; and

(iii) Natural cover such as shade, submerged and overhanging large wood, log jams and beaver dams, aquatic vegetation, large rocks and boulders, side channels, and undercut banks.

(3) Freshwater migration corridors free of obstruction and excessive predation with water quantity and quality conditions and natural cover to support juvenile and adult mobility and survival.

(4) Estuarine areas free of obstruction and excessive predation with:

(i) Water quality, water quantity, and salinity conditions supporting juvenile and adult physiological transitions between fresh- and salt water;

(ii) natural cover such as submerged and overhanging large wood, aquatic vegetation, large rocks and boulders, side channels; and

(iii) Juvenile and adult forage, including aquatic invertebrates and fishes, supporting growth and maturation.

The California Coastal Chinook ESU occurs from Redwood Creek in Humboldt County to the Russian River in Sonoma County (CDFW 2016). Historically, this ESU comprised 38 populations (32 fall-run and 6 spring-run); however, the spring-run populations are thought to be extirpated (Bjorkstedt et al., 2005; CDFW 2016; NMFS 2016). Spring-run populations previously occurred in the Mad River and North Fork and Middle Fork of the Eel River before they were extirpated (Bjorkstedt et al., 2005). Current population abundance data is limited, although fall-run populations still occur in watersheds in the northern portion of the ESU's range, which includes Redwood Creek, Little River, Mad River, Humboldt Bay tributaries, upper and lower Eel River, Bear River, and Mattole River. Infrequent reports of the species have also been reported in Ten Mile River, Noyo River, and Navarro River, and populations in Big River, Garcia River, and Gualala River may be at risk of extinction (Spence et al., 2008).

The Chinook salmon–California Coastal ESU are fall-run, ocean-type fish that usually enter rivers from August to January. These fall-run Chinook salmon typically enter fresh water at an advanced stage of maturity, move rapidly to their spawning areas on the main stem or lower tributaries of rivers, and spawn within a few weeks of freshwater entry (Healey 1991). Run timing is, in part, a response to river flow characteristics, with most spawning occurring in November and December. They typically spawn in the lower reaches of rivers and tributaries at elevations of 200–1,000 feet.

Juveniles typically begin out-migrating to the ocean shortly after emerging. Freshwater residence, including outmigration, usually ranges from 2 to 4 months. After emergence, Chinook salmon fry seek out areas behind fallen trees, back eddies, undercut banks, and other areas of bank cover. As they grow larger, their habitat preferences change (Everest and Chapman, 1972). Juveniles move away from stream margins and begin to use deeper water areas with slightly faster water velocities but continue to use available cover to minimize the risk of predation and reduce energy expenditure.

Chinook salmon require cool, clean freshwater with continual, unconstrained flows for spawning and rearing juveniles (NMFS 2016). General freshwater habitat requirements include loose, sediment-free gravel for spawning; pools and in-stream cover for juvenile developments; and unimpaired passage from spawning areas to the ocean (Moyle 2002; NMFS 2016).

Female salmon deposit their eggs in nests (redds) that are dug in the gravel on stream bottoms, and adults die after spawning (Moyle 2002; NMFS 2016).

Coho Salmon – Central California Coast ESU

The coho salmon (*Oncorhynchus kisutch*)–Central California Coast (CCC) ESU is a federal and state endangered species. Coho salmon was originally listed as threatened under the Endangered Species Act in 1996 (61 FR 56138). In 2005, following a reassessment of its status and after applying NMFS' Hatchery Listing Policy, the ESU was reclassified as endangered and listed several conservation hatchery programs associated with the ESU (70 FR 37159). In 1995, the California Fish and Game Commission issued a finding that coho salmon south of San Francisco to Monterey Bay warranted listing as endangered under CESA. CCC coho salmon are generally found in small coastal streams and larger rivers; most commonly in Northern California, where they are found in streams associated with low gradient reaches of tributary streams. This provides suitable spawning area for the species from November to January. Within the ESL, there is Critical Habitat (CH) and Essential Fish Habitat (EFH) present for this species (CDFW 2024e).

Habitat requirements of CCC coho salmon are similar to other coho salmon. Timing of stream flows is critically important to CCC coho salmon, which need cold water at specific times to support successful spawning and juvenile survival. Severe high flow events that occur early in winter (December, January) can scour holding pools, move large woody cover, open lagoon mouths for migration, and generally improve coho habitat, while similar flood events later in the season (February, March) can wash away redds and eggs or flush juvenile CCC coho out of over-wintering habitat such as pools, side channels, or estuaries.

Coho salmon spend approximately the first half of their life cycle rearing and feeding in streams and small freshwater tributaries. Spawning habitat consists of small streams with stable gravel substrates. These fish need cold, clean freshwater streams to lay their eggs, along with side channels and floodplains where young fish can find food and hide from predators. The remainder of their life cycle is spent foraging in estuarine and marine waters of the Pacific Ocean.

Steelhead – Northern California DPS Winter-Run

The steelhead (*Oncorhynchus mykiss irideus*)–Northern California (NC) DPS-*winter run* (Pop. 49) is federally threatened and a CDFW SSC. Critical habitat and Essential Fish Habitat for steelhead–Northern California DPS occurs in the Navarro River and tributaries within the BSA.

The steelhead–Northern California DPS is distributed from the western slopes of the Sierra Nevada and into the waters that drain to the Pacific Ocean. Spawning typically occurs in gravel river bottoms and stream tributaries (CDFW 2024a). Steelhead in the Northern California DPS spend one to two years rearing and feeding in streams and rivers. Spawning habitat consists of small streams with stable gravel substrates. These fish need cold, clean freshwater streams to lay their eggs, along with side channels and floodplains where young fish can find food and hide from predators. The remainder of their life cycle is spent foraging in estuarine and marine waters of the Pacific Ocean. NC steelhead begin spawning migration between November and April and are generally referred to as winter steelhead (Burgner et al., 1992).

CRITICAL HABITAT

Under the Endangered Species Act (ESA), critical habitat (CH) is designated for the survival and recovery of species listed as threatened or endangered. The regulations identify primary constituent elements (PCEs) as including, but not limited to: ‘‘roost sites, nesting grounds, spawning sites, feeding sites, seasonal wetland or dryland, water quality or quantity, host species or plant pollinator, geological formation, vegetation type, tide, and specific soil types.’’ NMFS biologists developed a list of PCEs that are essential to the species’ conservation and based on the unique life history of salmon and steelhead and their biological needs (70 FR 52488, 2005).

The original federal designations of critical habitat often use the term Primary Constituent Element(s) or Essential Features. The new critical habitat regulations (81 FR 7414, 2016) replace this term with Physical or Biological features (PBFs). The shift in terminology does not change the approach used in conducting a “destruction or adverse modification” analysis, which is the same regardless of whether the original designation identified primary constituent elements, physical or biological features, or essential features. In this report, we use the term PBF to mean PCE or Essential Feature, as appropriate for the specific critical habitat.

The PBFs identified for Pacific Salmon (Chinook, coho, steelhead) at the time of designation were:

1. Freshwater spawning sites with water quantity and quality conditions and substrate supporting spawning, incubation, and larval development.

2. Freshwater rearing sites with:

   i. Water quantity and floodplain connectivity to form and maintain physical habitat conditions and support juvenile growth and mobility;

   ii. Water quality and forage to support juvenile development; and

   iii. Natural cover such as shade, submerged and overhanging large wood, log jams and beaver dams, aquatic vegetation, large rocks and boulders, side channels, and undercut banks.

3. Freshwater migration corridors free of obstruction and excessive predation with water quantity and quality conditions and natural cover to support juvenile and adult mobility and survival.

4. Estuarine areas free of obstruction and excessive predation with:

   i. Water quality, water quantity, and salinity conditions supporting juvenile and adult physiological transitions between fresh- and saltwater;

   ii. natural cover such as submerged and overhanging large wood, aquatic vegetation, large rocks and boulders, side channels; and

   iii. juvenile and adult forage, including aquatic invertebrates and fishes, supporting growth and maturation.

Critical habitat for the following species exists in multiple locations within the ESL along Navarro River.

- Chinook salmon (*Oncorhynchus tshawytscha*)–California Coastal ESU (Pop. 17)
- Coho salmon (*Oncorhynchus kisutch*)–Central California Coast ESU
- Steelhead (*Oncorhynchus mykiss irideus*)–Northern California DPS *winter run* (Pop. 49)

Critical habitat for the following species does not exist within the ESL due to the lack of anadromy as a result of the barrier Warm Springs Dam on Dry Creek, tributary to the Russian River:

- Steelhead (*Oncorhynchus mykiss irideus*)–Central California Coast DPS (Pop. 8)

ESSENTIAL FISH HABITAT

Under the Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat is designated for all federally managed fish. The Magnuson-Stevens Fishery Conservation and Management Act (MSA), defines essential fish habitat (EFH) as "...those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity. Essential Fish Habitat (EFH) for Pacific Coast salmon (Chinook and coho salmon) includes 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 Chinook and coho salmon primarily consists of four major components: (1) spawning and incubation; (2) juvenile rearing; (3) juvenile migration corridors; and (4) adult migration corridors.

Chinook salmon and coho salmon habitat in the Navarro River watersheds are protected under the Magnuson-Stevens Fishery Conservation and Management Act (MSA), as amended. Those waters and substrate that are necessary to Chinook and coho salmon for spawning, breeding, feeding, or growth to maturity are included as EFH. The Navarro River and tributaries within the BSA support EFH for Chinook salmon and coho salmon. However, only one culvert, located at PM 7.27 (Mustard Gulch), is accessible to salmonids and therefore may support one or more of the major components to freshwater EFH for Pacific Coast Salmon. While juvenile coho salmon have been observed at Mustard Gulch, no focused surveys have been conducted. Caltrans is assuming potential access to Mustard Gulch by CC Chinook salmon, CCC coho salmon, and steelhead–Northern California DPS; all of which are known to occur in the Navarro River approximately 100 yards downstream of the culvert.

Although listed in the NMFS species list, Coastal Pelagic EFH and Groundfish EFH are not present within the ESL or BSA.

INVERTEBRATES

Monarch Butterfly

The monarch butterfly (*Danaus plexippus*) is a federal candidate for listing under the FESA. California is home to both breeding, migrating, and overwintering populations of the migratory monarch butterfly. The USFWS received a petition to list the monarch on December 31, 2014, and began the process of soliciting information consistent with the requirement on the FESA ("Service Review"). To date, the USFWS has completed the analysis of the petition to list and determined that listing the monarch under FESA is Warranted, but Precluded; therefore, the species currently has no legal protection under FESA status but would be treated as a Candidate Species as though proposed for listing. Currently, the monarch butterfly is not listed under the CESA; however, CDFW does classify the species as a special status invertebrate with a "S2/S3" ranking, meaning that it has a moderate to high "risk of extirpation in the state" (CDFW 2024a).

The distribution of monarchs throughout California depends on the season and the location. Monarchs are well known for their long-distance migrations and during the spring and summer months can be found almost anywhere in the state. In early September, West Coast migrants, those butterflies typically found to the west of the Continental Divide, begin to migrate to suitable overwintering sites. Monarchs seek out overwintering sites with specific microclimate conditions, including dappled sunlight, high humidity, wind protection, and an absence of freezing temperatures or high winds. For these reasons, most overwintering sites along the Pacific Coast are within 1.5 miles of the Pacific Ocean. Monarchs often return to the same overwintering sites yearly, but exact roost locations may change over the season and annually, based on regional and individual site conditions. Other important factors in determining overwintering site locations include the presence of available water and abundance of fall or winter-blooming flowers because nearby nectar sources may be needed to maintain lipid levels necessary for spring migration. Tree species used for roosting are variable; blue gum eucalyptus (*Eucalyptus globulus*) is commonly used, possibly more for the availability of nectar from winter-blooming eucalyptus flowers more than any particular structural uniqueness.

Aggregations of overwintering monarchs generally persist through January or into February. In February and March, the surviving monarchs breed at the overwintering site before dispersing to inland habitats.

Monarch butterflies across North America have been dramatically declining since the early 1960s; the Western monarch population in particular has undergone a staggering decline in the last decade, with a current population hovering at 1% (30,000) of the approximately 10 million individuals observed in the 1980s (Shultz et al., 2017).

Ultimately, habitat loss and forest degradation at overwintering locations in California may certainly impact monarchs on a local scale; however, this is not the main driving factor in the precipitous decline of this species across North America. Threats to monarchs are currently thought to come from a multitude of incremental changes in land use and agricultural practices in the U.S. and declining host plant availability (Boyle et al., 2019), as well as climate change, nectar limitation, degradation of forest habitats across overwintering grounds (Saunders et al., 2019), pollution, increased parasite loads, and additional stressors that have yet to be quantified or described (Agrawal 2019). Specific interactions and a clear understanding of how synergistic combinations of variables might be driving the decline of this unique species have yet to be fully understood.

Although focused species surveys were not conducted specifically for Monarch butterfly, a reconnaissance survey was performed for all wildlife to determine potential for occurrence. Suitable foraging habitat for these species occurs within the ESL, which includes flowering native and non-native plants.

There are no CNDDB occurrences for monarch butterflies within 5 miles of the project (CDFW 2024a).

Western Bumble Bee

The Western bumble bee (*Bombus occidentalis*) is a state candidate endangered species that is native to the Western U.S. and Canada. It is considered critically imperiled in the state (CDFW S1 species) because of extreme rarity (often five or fewer populations) or because of factors such as very steep population declines, making it especially vulnerable to extirpation from the state. This bumble bee is associated with several plant genera including *Melilotus, Cirsium, Lupinus, Trifolium, Centaurea, and Eriogonum* (CDFW 2024c). Queens of this species emerge from

hibernation in late January and select a nest site in an existing hole in the ground (such as an abandoned rodent hole). The queen gathers pollen and nectar and stores them in wax containers. She then lays 8 to 16 eggs that hatch into larvae and tends to them until they spin cocoons, pupate, and emerge as workers. Once they emerge, the queen stops foraging and devotes her time to egg laying. The first workers appear in early March and the drones and new queens emerge by the end of April. The colony dissolves in late October when the old queen, workers, and drones die. The new queens mate and dig holes in which they will hibernate through the winter.

Although focused species surveys were not conducted specifically for Western bumble bee, a reconnaissance survey was performed for all wildlife to determine potential for occurrence. Suitable foraging habitat for these species occurs within the ESL, which includes flowering native and non-native plants.

There are two CNDDB occurrences of Western bumble bee within 5 miles of the project (CDFW 2024a), one of which occurs within the ESL (PM 12.3) and is dated from 1963 (CDFW 2024a).

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

Contra Costa Goldfields and Showy Indian Clover

Based on the botanical survey results and the lack of recorded occurrences within the ESLs, Contra Costa goldfields and Showy Indian clover are not expected to occur within the ESLs or be impacted by the project.

Per FESA, Caltrans anticipates the project would have ***no effect*** on Contra Costa goldfields or Showy Indian clover.

Humboldt County milk vetch, North Coast semaphore grass and Roderick's fritillary

Based on the botanical survey results and the lack of recorded occurrences within the ESLs, Humboldt County milk vetch, North Coast semaphore grass and Roderick's fritillary are not expected to occur within the ESLs or be impacted by the project.

Per CESA, as project activities are not anticipated to impact Humboldt County milk vetch, North Coast semaphore grass or Roderick's fritillary, no "***take***" would occur.

ANIMAL SPECIES

AMPHIBIANS AND REPTILES

California giant salamander, Foothill yellow-legged frog, Northern red-legged frog, Pacific tailed frog, red-bellied newt, and Southern torrent salamander

In work areas adjacent to or within the drainages, special status amphibians could accidentally be crushed or run over by construction equipment. They could also become trapped in trenches excavated for culvert work. Standard measures and Best Management Practices (Section 1.7) that include pre-construction surveys and relocation, if found, would minimize these potential impacts.

Project construction could degrade water quality (e.g., by increasing sediment loads associated with ground disturbance or by accidentally spilling fuels, oils, or other construction-related fluids into or near waters) where culvert work would occur. Degraded water quality could harm all life stages if they are in or downstream of work areas. Standard Measures and Best Management Practices (Section 1.7) to protect water quality would avoid and minimize these potential impacts.

In-water work would occur during the dry season (June 15 to October 15) when culverts are dry or flow is low, and amphibians are less likely to be in the work area. Caltrans would implement the appropriate standard measures to protect water quality (Section 1.7) to minimize effects on aquatic species. Temporarily disturbed areas would be restored to their pre-project conditions to the greatest extent practicable, which would facilitate revegetation of native plant species and minimize temporary impacts to the stream bank and channel. Pre-construction surveys would

be completed by a biological monitor and an Aquatic Species Relocation Plan, or equivalent, would be prepared.

As CDFW Species of Special Concern, with implementation of the Standard Measures and Best Management Practices (Section 1.7), the project would have ***no substantial impact*** on California giant salamander, Foothill yellow-legged frog, Northern red-legged frog, Pacific tailed frog, red-bellied newt, and Southern torrent salamander.

Grasshopper Sparrow and White-tailed Kite

There are no known nests within the ESL. If necessary, pre-construction nesting surveys would be conducted during the nesting season prior to tree removal.

As CDFW Species of Special Concern, Caltrans has determined the project would have ***no impact*** on American goshawk and grasshopper sparrow.

Per CESA, the project would have no "***take***" of white-tailed kite.

FISH

Northern Coastal Roach

Northern coastal roach are not anticipated to be present within the perennial streams where work is occurring. There are no recorded occurrences within any of the perennial streams where work is occurring, nor are there recorded occurrences in the upper Russian Basin where the project occurs. Additionally, all work areas would be completed in the dry season or with a clear water diversion if water is present.

As a CDFW Species of Special Concern, Caltrans has determined there would be ***no impact*** to northern coastal roach.

MAMMALS

Pallid Bat and Townsend's Big-Eared Bat

No known Pallid or Townsend's bat maternity roosts or other colonial night roosts would be removed or altered during project activities. All vegetation removal would occur outside of the maternity season to ensure no impacts would occur to any potentially unidentified maternity roosts. Impacts to bat species are not anticipated

given the seasonal timing of impacts. The project would not impact bat species populations or impact nursery sites.

As CDFW Species of Special Concern, Caltrans anticipates this project would have ***no impact*** on Pallid bat or Townsend's big-eared bat.

Sonoma Tree Vole

While there are trees slated for removal within this project, none are considered Sonoma tree vole habitat. Also, no Douglas-fir trees, which is Sonoma tree voles' main source of food, would be removed.

As a CDFW Species of Special Concern, Caltrans anticipates this project would have ***no impact*** on Sonoma tree vole.

THREATENED AND ENDANGERED SPECIES

Northwestern Pond Turtle

Due to the limited habitat disturbance, short-term nature of the activities, and the implementation of Standard Measures and Best Management Practices (Section 1.7), culvert work is not anticipated to have an impact on this species.

Per FESA, Caltrans may pursue a USFWS Conference Report for Northwestern pond turtle in the event this species becomes listed prior to or during construction.

As a CDFW SSC, with implementation of the Standard Measures and Best Management Practices (Section 1.7), the project would have ***no impact*** on Northwestern pond turtle.

Bald Eagle

There are no known nests within one mile of the BSA. Prior to tree removal, pre-construction nesting surveys would be conducted during the nesting season and before construction activities occur.

Per FESA, Caltrans anticipates the project would have ***no effect*** on bald eagle.

Per CESA, Caltrans anticipates the project would have no *"**take**"* of bald eagle.

Marbled Murrelet

Potential auditory and visual impacts on marbled murrelet (MAMU) were evaluated using USFWS guidance *Estimating the Effects of Auditory and Visual Disturbance to Northern Spotted Owls and Marbled Murrelets in Northwestern California* (USFWS 2020) and *Re-initiation of Informal Consultation for the California Department of Transportation's Routine Maintenance and Repair Activities, and Small Projects Program for Districts 1 and 2* (USFWS 2022).

Potential airborne sound levels generated by the project were evaluated using the Federal Highway Administration (FHWA) Road Construction Noise Model (RCNM) (FHWA 2006) to determine the maximum and average noise levels anticipated during each phase of construction (Table 8). Daytime ambient sound levels within the ESL along SR 128 were estimated as *High* (81-90 decibels [dB]) and are generally characterized by high-speed vehicle traffic, including recreational vehicles, large trucks, buses, and loud motorcycles. Sound levels for equipment used in project activities were estimated as *Moderate* (71-80 dB) to *High* (81-90 dB) (Table 8).

Table 8. Potential Construction Equipment and Noise Levels

Measured Sound Source	"Standardized" Value dB at 50 ft[1]	Relative Sound Level
Excavator	81[2]	High
Backhoe	84	High
Backhoe with jackhammer attachment	90	High
Skip loader/ Loader (high end)	87	High
Paver (high end)	89	High
Roller (high end)	80	Moderate
Pickup Truck (driving)	71	Moderate
Measured Sound Source	**"Standardized" Value dB at 50 ft[1]**	**Relative Sound Level**
Pavement Striper	85	High
Dump truck	85	High

Measured Sound Source	"Standardized" Value dB at 50 ft[1]	Relative Sound Level
Welder	73	Moderate
Generator (high end)	84	High
Drill rig (high end)	88	High
Auger drill rig	85	High
Excavator	81[2]	High
Jackhammer	89[2]	High
Compactor (high end)	82	High
Concrete truck (high end)	85	High
Concrete pump	82	High
Crane (high end)	88	High
Chainsaw	85	High
Pneumatic Chipper	95	Very High
Pile driver (low end)	95	Very High

[1] All values are based on USFWS (2020) unless otherwise indicated.

[2] Average dB based on FHWA (2006)

While MAMU is not assumed to be present within the BSA, total absence cannot be determined without protocol-level surveys. Within the majority of the project, action-generated sound levels are not anticipated to exceed the maximum of 90 decibels overall within 0.25 mile (1,320 feet) of suitable marbled murrelet nesting habitat during the majority of the murrelet nesting season (March 24 through August 19) (USFWS 2020). Additionally, there would be no night work between August 20 and September 15. Lastly, no human activities would occur within a visual line-of-sight of 328 feet (100 meters) or less from a nest (USFWS 2020). The Programmatic Letter of Concurrence (PLOC) issued by the USFWS (USFWS 2022) would be used for Section 7 consultation for potential effects to MAMU for all locations except PM 7.27.

For the Mustard Gulch location at PM 7.27, action-generated sound levels are anticipated to exceed the threshold of 90 dB during MAMU nesting season. A separate Letter of Concurrence would be prepared for this location.

Per FESA, Caltrans anticipates the project ***may affect, but is not likely to adversely affect*** MAMU and would have ***no effect*** on MAMU critical habitat. Further consultation with USFWS is required at PM 7.27 (Mustard Gulch) to determine schedule of potential noise-exceeding activities during MAMU nesting season.

Per CESA, as project activities are not anticipated to harm MAMU, "***take***" is not expected.

Northern Spotted Owl

Potential auditory and visual impacts on Northern spotted owl (NSO) were evaluated using USFWS guidance *Estimating the Effects of Auditory and Visual Disturbance to Northern Spotted Owls and Marbled Murrelets in Northwestern California* (USFWS 2020) and *Re-initiation of Informal Consultation for the California Department of Transportation's Routine Maintenance and Repair Activities, and Small Projects Program for Districts 1 and 2* (USFWS 2022).

Potential airborne sound levels generated by the project were evaluated using the Federal Highway Administration (FHWA) Road Construction Noise Model (RCNM) (FHWA 2017) to determine the maximum and average noise levels anticipated during each phase of construction (Table 9). Daytime ambient sound levels within the ESL along SR 128 were estimated as *High* (81-90 decibels [dB]) and are generally characterized by high-speed vehicle traffic, including recreational vehicles, large trucks, buses, and loud motorcycles. Sound levels for equipment used in project activities were estimated as *Moderate* (71-80 dB) to *High* (81-90 dB) (Table 9).

NSO is assumed to be present within the BSA along multiple locations. For the majority of the project, the PLOC will be used to prevent adverse effects to NSO. During technical assistance with Caltrans' USFWS liaison to discuss tree removal within NSO habitat, it was determined that the limited amount of tree removal would not constitute an adverse effect on NSO and led to an agreement that the project would result in *no effect* to critical habitat for NSO.

Within the majority of the project, action-generated sound levels are not anticipated to exceed the maximum of 90 decibels overall within 0.25 mile (1,320 feet) of suitable spotted owl nesting/roosting habitat during the majority of the nesting season (February 1 to July 9) (USFWS 2020). No human activities would occur within a visual line-of-sight of 328 feet (100 meters) or less from a nest (USFWS 2020). The Programmatic Letter of Concurrence (PLOC) issued by the USFWS (USFWS 2022) would be used for Section 7 consultation for potential effects to NSO for all locations except PM 7.27.

For the Mustard Gulch bridge location at PM 7.27, action-generated sound levels are anticipated to exceed the threshold of 90 dB during NSO nesting season. A separate Letter of Concurrence would be prepared for this location.

Per FESA, Caltrans anticipates the project ***may affect, but is not likely to adversely affect*** NSO and would have ***no effect*** on NSO critical habitat. Further consultation with USFWS is required for PM 7.27 to determine schedule of potential noise-exceeding activities during NSO nesting season.

Per CESA, project activities are not anticipated to harm NSO, and "***take***" is not anticipated.

Chinook Salmon–California Coastal ESU, Coho Salmon–Central California Coast ESU, Steelhead–Northern California DPS Winter-Run

This section describes and evaluates the potential for impacts of proposed culvert repair/replacement activities on fish and fish habitat related to water quality degradation, general construction noise and visual disturbance, injury or mortality from in-water construction activities (installation of stream diversions) and fish capture/relocation, effects on fish passage, and habitat impacts.

At PM 7.27 (Mustard Gulch), in-water work would occur June 15–October 15 when CC Chinook, CCC coho salmon, and NC steelhead are expected to be present. With this in-water work restriction, the project is not anticipated to encounter adult salmonids, and only a minimal number of juveniles. Due to the potential need to dewater the project area, juvenile salmonids may need to be relocated. The project would also remove some riparian vegetation at the inlet and outlet of the culvert and, depending on the construction method, may have hydroacoustic impacts.

Clear Water Diversion and Electrofishing

The temporary clear water diversion system that may be needed for construction at Mustard Gulch may require fish capture and relocation using electrofishing. Electrofishing can harm individual fish, less in smaller sized fish (0.7% in fish >250 mm) and greater injury in larger fish (11.2% in fish >250 mm) (McMichael et al., 1998). The diversion itself could temporarily restrict the movement of rearing juvenile coho salmon, potentially making them more vulnerable to stress and predation; however, avoids the late fall-winter migration period for adult salmon that may pass through the project area to spawn, and most of the spring-early summer smolt out-migration. It is extremely unlikely for any salmonids to be present above the culvert during the work period due to the low water levels, as well as the culvert acting as a barrier to fish passage.

Any impacts would be minimized by implementation of a contractor-prepared Construction Site Dewatering and Diversion Plan and included Aquatic Species Relocation Plan.

Noise and Visual Disturbance

Construction activities may cause behavioral responses to stress associated with noise and visual disturbance of juvenile salmon and steelhead present during the in-stream work period between June 15 and October 15. Noise impacts could also occur in the form of hydroacoustic sound, depending on the bridge construction scenario. Hydroacoustic impacts would vary widely depending on the size of the dewatered area and amount of flow within Mustard Gulch at the time of construction.

Negative effects to CC Chinook salmon, CCC coho salmon, and NC DPS steelhead from construction noise and visual disturbance would be minimized through implementation of the Standard Measures and BMPs identified in Sections 1.7 and the ABMPs from the PBO.

If salmonids are present in the project area, potential impacts from noise and visual disturbance would likely be minor and short term, and unlikely to result in injury or mortality of fish. Exposure of individual fish to increased noise disturbance is expected to be minimal, and those fish that are exposed could readily relocate to nearby suitable habitat downstream of the project site.

Water Quality Impacts

Potential water quality impacts from project construction include turbidity and sedimentation and discharge of pollutants. Pollutants in highway runoff, or from construction operations, can result in the mobilization of sediment both during and after construction. With implementation of Caltrans' Standard Measures and Best Management Practices (Section 1.7) and ABMPs from the PBO, potential water quality impacts and their effects on salmonids would be considered negligible because the impacts would be short-term, temporary, and limited to the construction period.

Turbidity and Sedimentation

Increases in suspended sediment or turbidity can affect water quality, which in turn can affect fish health and behavior. Salmonids typically avoid areas of higher suspended sediment, which means they displace themselves from their preferred habitat to seek areas with less suspended sediment. Fish unable to avoid suspended sediment can experience negative effects; the severity of which increases as a function of the sediment concentration and exposure time (Newcombe and Jensen, 1996; Bash et al., 2001). Suspended sediment and turbidity generally do not acutely affect aquatic organisms unless they reach extremely high levels. At levels reaching 25 mg/L, suspended sediment can adversely affect the physiology and behavior of aquatic organisms and may suppress photosynthetic activity at the base of food webs, affecting aquatic organisms either directly or indirectly (Alabaster and Lloyd, 1982). While benthic communities can normally withstand short-term increases in suspended sediment, small increases over longer or continuous durations can affect the quantity and composition of aquatic invertebrates (i.e., prey species) and reduce the production of aquatic plants (Robertson et al., 2006).

With implementation of Caltrans' the Standard Measures and Best Management Practices (Section 1.7) and ABMPs from the PBO, potential water quality impacts and their effects on salmonids would be considered negligible because the impacts would be temporary and limited to the construction period. The proposed project is not likely to result in significant excursions of suspended sediment and turbidity relative to baseline conditions that would result in acute physical or behavioral effects on individual salmonids. The work would be conducted during the dry season (June 15 to October 15) which avoids the most vulnerable periods of adult

and smolt migration and coincides with the period when juvenile salmonid populations are lowest. Disturbed soil areas would be seeded and mulched in accordance with Caltrans standard measures to control erosion and sedimentation and minimize long-term water quality impacts.

Pollutants Associated with Stormwater Runoff and Accidental Spills

During construction, a risk would exist for accidental release of oil, grease, wash water, solvents, drilling fluid, or other construction materials into the water. However, with implementation of Caltrans' Standard Measures and Best Management Practices identified in Section 1.7, which include provisions for the proper handling, storage, and disposal of contaminants, localized degradation of water quality from construction-related spills is unlikely. The standard measures are expected to sufficiently restrict any discharged pollutants to the immediate area; therefore, chemical contamination of the project watercourses as a result of construction operations is unlikely to occur and the potential effects to salmonids are discountable. There would not be an increase in pollutant loading from roadway runoff due to traffic over the existing condition as the proposed project is not intended to generate an increase in traffic volume. This area is also located within forested habitat with no surrounding impermeable surfaces creating a natural vegetated buffer between the state route and watercourses.

Habitat Modification

Riparian vegetation influences the quality of salmonid habitat, affecting cover, food, instream habitat complexity, streambank stability, and temperature regulation. Instream woody material usually originates from riparian trees and provides cover and habitat complexity within the stream by providing shade and moderating water temperatures in both summer and winter, providing a filter that reduces the transport of fine sediment to the stream, and the roots provide streambank stability. Riparian vegetation also influences the food chain of a stream, providing organic detritus and terrestrial insects (Meehan and Bjornn, 1991).

Riparian vegetation in the form of two clusters of redwood trees at the inlet and outlet of the culvert at Mustard Gulch is anticipated to be removed to facilitate construction of the bridge at this location. There are other minor riparian impacts to non-anadromous streams; however, their downstream effects to the Navarro River would be considered negligible or immeasurable. To minimize the effects of riparian vegetation removal, only the minimum amount of vegetation would be removed as

needed to conduct work, and Standard Measures and Best Management Practices (Section 1.7) and ABMPs would be implemented.

Dewatering the project area may also temporarially cause physical changes to the water column, disrupt feeding, delay migration, or flush fish from suitable habitat, potentially making them more vulnerable to predation. These stressors could have measurable temporary impacts to Freshwater Rearing and Migration PBFs of critical habtait.

The project is not anticipated to have a substantial adverse impact to the functional values of existing riparian habitat, salmonid rearing and/or freshwater migration corridor for salmonids. The project would not result in long term changes to the water chemistry or physical characteristics (e.g., substrate and flow) of the river after construction is complete. Therefore, no long-term impacts on fish or other aquatic organisms are anticipated.

Impacts at Mustard Gulch (PM 7.27) are expected to be offset by construction of a full span bridge which would improve fish passage for all salmonid life stages. Upon completion of the project, the long-term benefits of creating upstream access to habitat and restoring the channel to natural flow through a full span bridge solution would outweigh any temporary impacts to habitat during construction.

Per FESA, due to the need to potentially handle juvenile salmonids at Mustard Gulch, temporary impacts to Freshwater Rearing and Migration PBFs, and the potential hydroacoustic impact, Caltrans has determined the project ***may affect and is likely to adversely affect*** the following species:

- Chinook salmon–California Coastal ESU and designated CH and EFH
- Coho salmon–Central California Coast ESU and designated CH and EFH
- Steelhead– Northern California DPS and designated CH

Per CESA, Caltrans has determined the project would potentially result in "***take***" of coho salmon–Central California Coast ESU.

As a CDFW Species of Special Concern, Caltrans has determined the project would potentially impact steelhead–Northern California DPS winter-run.

Monarch Butterfly

The project anticipates only temporary impacts for potential foraging habitat for monarch butterfly. Road edges are routinely disturbed by activity along the road edge which is cleared and maintained.

Per FESA, Caltrans has determined there would be ***no effect*** to Monarch butterfly.

Western Bumble Bee

Ground disturbance for this project would not occur during the hibernation period of bumble bees and would primarily be along heavily disturbed areas (i.e., roadsides), or within temporarily flooded areas that do not support overwintering (i.e., Mustard Gulch, PM 7.27). Road edges are routinely disturbed by activity along the road edge, which is cleared and maintained. Since the ESL does not contain potential overwintering nesting areas, bumble bees are not anticipated to be affected by this project.

Per CESA, there would be no "***take***" of western bumble bee.

Given the above, it was determined the project would have a "***Less Than Significant Impact***" in response to CEQA Environmental Checklist Question 2.4 a). Based on the determinations made in the CEQA Environmental Checklist, no mitigation measures are proposed.

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?***

Sensitive Natural Communities

The BSA supports several natural communities of special concern, including SNCs and riparian habitat. Local and state agencies consider SNCs to be those vegetation types/natural communities with state rankings of S1–S3.

Douglas-fir and Tanoak Forest and Woodland Alliance

The proposed project would have no impact on the Douglas-Fir and Tanoak Forest and Woodland Alliance.

Project design features and construction methods, which includes Caltrans' Standard Measures and BMPs (Section 1.7), would reduce potential impacts on SNCs. No cumulative impacts are anticipated because no direct or permanent impacts would occur, and potential indirect impacts are minimized.

Redwood Forest and Woodland Alliance

The proposed project would have no substantial impact on the Redwood Forest and Woodland Alliance because the forest areas within the ESL are second-growth forest (not pristine), are logged regularly (Mendocino Redwood Company) and, because of the proximity of the road corridor, the forest areas along the road are influenced by edge effects and habitat fragmentation.

Approximately 0.10 acre of Coast Redwoods (13 redwoods) would need to be removed at Mustard Gulch (PM 7.27) to construct the full span bridge for this project. This vegetation is part of the Coast Redwood Forest and Woodland Alliance. However, the loss of 0.10 acre of these trees would not have a substantial effect on the overall quality, characteristics, or structure of the 2.5 acres of surrounding second-growth Coast Redwood Forest Alliance that exists within the ESL at PM 7.27. A Revegetation Plan would be prepared to address the removal of vegetation where applicable within the project area. Additionally, Standard Measures and Best Management Practices would be utilized to prevent erosion.

Project design features and construction methods, including Caltrans' Standard Measures and BMPs (Section 1.7), would reduce potential impacts on SNCs. No cumulative impacts are anticipated because no direct or permanent impacts would occur, and potential indirect impacts would be minimized.

Riparian Habitat

Riparian vegetation in the form of two clusters of redwood trees (as discussed in the SNC section above) at the inlet and outlet of the culvert at Mustard Gulch (PM 7.27) is anticipated to be removed in order to facilitate construction of the bridge at this location. There are other minor riparian impacts to non-anadromous streams, however their downstream effects to the Navarro River would be negligible or

immeasurable. Potential temporary impacts to riparian habitat total 0.024 acre and permanent impacts total 0.005 acre (Table 9).

Table 9. Potential Temporary and Permanent Impacts to Riparian Habitat

Feature Name	PM	Cowardin Type	Temporary Impacts			Permanent Impacts		
			Length (linear feet)	Area (square feet)	Acres	Length (linear feet)	Area (square feet)	Acres
RIP_001	7.27	RP	-	500	0.011	-	200	0.005
RIP_006	19.05	RP	-	150	0.003	-	0	0
RIP_006	43.67	RP	-	200	0.005	-	0	0
RIP_007	45.09	RP	-	200	0.005	-	0	0
Total Impacts: Temporary 1,050 Square Feet, 0.024 Acre, Permanent 200 Square Feet, 0.005 Acre								

*Table has been rounded and totals may vary.

To minimize the effects of riparian vegetation removal, only the minimum amount of vegetation would be removed as needed to conduct work, and Standard Measures and Best Management Practices (Section 1.7) and ABMPs would be implemented. Any debris and sediment would be contained within the project site and disposed appropriately off-site. Wetland and riparian areas temporarily impacted by construction would be restored to pre-existing conditions once construction is complete. Caltrans would also implement a program of invasive weed control in all areas of soil disturbance due to construction to improve habitat for native species in and adjacent to disturbed soil areas within the project limits. A Revegetation Plan would be prepared to revegetate riparian areas temporarily impacted by the project.

Invasive Species

Invasive species may be introduced to new areas or spread through the work sites by the tires and tracks of construction equipment. They may also recruit naturally and robustly following soil disturbance, outcompeting native species. To reduce the spread of invasive species, construction equipment would be inspected and cleaned during construction to remove invasive species and/or pathogens. Additionally, all disturbed areas would be seeded with native herbaceous species and weed-free mulch would be applied post construction. It is expected that the potential for colonization of the area by invasive species would be greatly reduced and native

vegetation would be better able to colonize along with other native species. Caltrans Standard Measures and Best Management Practices (Section 1.7) would be implemented to ensure invasive species would not proliferate and would not present adverse impacts to natural communities.

Given the above, it was determined the project would have a "***Less Than Significant Impact***" in response to CEQA Environmental Checklist Question 2.4 b). Based on the determinations made in the CEQA Environmental Checklist, no mitigation measures are proposed.

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

The proposed project would have temporary and permanent impacts on wetlands and Other Waters of the State. The amounts of each feature type and additional details are provided below in Tables 10 and 11.

Total wetland impacts (Table 10) include temporary impacts of 0.046 acre and permanent impacts of 0.015 acre.

Table 10. Potential Temporary and Permanent Impacts to Wetlands

Feature Name	PM	Cowardin Type	Temporary Impacts			Permanent Impacts		
			Length (linear feet)	Area (square feet)	Acres	Length (linear feet)	Area (square feet)	Acres
WET_001	0.18	PSS	-	0	0	-	0	0
WET_002	0.40	PSS/PEM	-	400	0.009	-	72	0.002
WET_003	0.43	PSS/PEM	-	400	0.009	-	72	0.002
WET_004	0.50	PSS	-	200	0.005	-	72	0.002

Feature Name	PM	Cowardin Type	Temporary Impacts			Permanent Impacts		
			Length (linear feet)	Area (square feet)	Acres	Length (linear feet)	Area (square feet)	Acres
WET_005	1.02	PSS	-	200	0.005	-	72	0.002
WET_006	2.43	PEM	-	200	0.005	-	72	0.002
WET_007	15.37	PEM	-	200	0.005	-	162	0.004
WET_008	15.46	PEM	-	200	0.005	-	72	0.002
WET_009	30.25	PEM	-	200	0.005	-	72	0.002
WET_010	32.08	PEM	-	0	0	-	0	0
Total Impacts: Temporary 2000 Square Feet, 0.046 Acre*, Permanent 666 Square Feet, 0.015 Acre*								

*Table has been rounded and totals may vary.

Total waters impacts (Table 11 below) include temporary impacts to jurisdictional waters of 7,629 linear feet or 0.506 acre and permanent impacts of 2,387 linear feet, or 0.055 acre. However, total water credits to jurisdictional waters (Table 12 below) include 1,108 linear feet, or 0.130 acre. The water credits are calculated when culverts that convey jurisdictional waters are upsized or daylighted. Water credits are used to offset potential permanent impacts to waters. There are currently 27 jurisdictional locations proposed to be upsized via the cut and cover method. One double barrel CSP and one RCB will be replaced with larger RCBs. Additionally, the existing culvert at PM 7.27 will be removed and replaced with a bridge.

Table 11. Potential Temporary and Permanent Impacts to Waters

Feature Name	PM	Cowardin Type	Temporary Impacts			Permanent Impacts		
			Length (linear feet)	Area (square feet)	Acres	Length (linear feet)	Area (square feet)	Acres
OW_001	0.18	R6	100	201	0.005	6	12	<0.001
OW_002	0.40	R6	85	85	0.002	12	12	<0.001
OW_003	2.29	R6	71	106	0.002	24	36	0.001
OW_004	7.27	R4SB	371	1,484	0.034	0	0	<0.001
OW_005	10.47	R6	83	250	0.006	15	45	0.001
OW_006	10.64	R6	86	173	0.004	12	24	0.001
OW_007	12.46	R6	99	197	0.005	14	27	0.001
OW_008	12.99	R6	84	169	0.004	2	3	<0.001
OW_009	13.15	R6	82	123	0.003	20	30	0.001
OW_010	13.81	R6	78	116	0.003	27	41	0.001
OW_011	15.37	R4SB	85	339	0.008	18	72	0.002
OW_012	15.46	R6	82	122	0.003	17	26	0.001
OW_013	17.56	R6	84	167	0.004	26	51	0.001
OW_014	18.00	R6	195	292	0.007	4	5	<0.001
OW_015	19.05	R4SB	174	522	0.012	31	92	0.002
OW_016	19.63	R4SB	184	553	0.013	7	20	<0.001
OW_017	19.63	R4SB	102	306	0.007	7	20	<0.001
OW_018	20.18	R6	94	188	0.004	0	0	<0.001
OW_019	23.80	R6	84	126	0.003	12	18	<0.001
OW_020	24.26	R6	143	287	0.007	0	0	<0.001
OW_021	24.65	R4SB	151	377	0.009	14	35	0.001
OW_022	26.07	R4SB	284	1,279	0.029	24	108	0.002

Feature Name	PM	Cowardin Type	Temporary Impacts			Permanent Impacts		
			Length (linear feet)	Area (square feet)	Acres	Length (linear feet)	Area (square feet)	Acres
OW_023	26.51	R4SB	160	642	0.015	5	18	<0.001
OW_024	26.51	R4SB	72	288	0.007	5	18	<0.001
OW_025	27.76	R4SB	247	1,360	0.031	0	0	<0.001
OW_026	30.25	R6	125	249	0.006	14	27	0.001
OW_027	30.33	R6	115	173	0.004	2	2	<0.001
OW_028	30.43	R6	84	126	0.003	14	20	<0.001
OW_029	30.49	R4SB	143	286	0.007	14	27	0.001
OW_030	31.43	R6	124	249	0.006	14	27	0.001
OW_031	31.50	R6	151	303	0.007	12	24	0.001
OW_032	31.64	R6	138	276	0.006	12	24	0.001
OW_033	32.08	R4SB	100	300	0.007	0	0	<0.001
OW_034	32.34	R4SB	238	952	0.022	0	0	<0.001
OW_035	32.72	R6	85	170	0.004	12	24	0.001
OW_036	32.77	R4SB	186	1485	0.034	0	0	<0.001
OW_037	32.98	R4SB	135	539	0.012	0	0	<0.001
OW_038	33.12	R4SB	131	394	0.009	18	54	0.001
OW_039	33.29	R6	131	196	0.005	24	36	0.001
OW_040	33.47	R6	185	278	0.006	24	36	0.001
OW_041	33.63	R6	130	260	0.006	2	3	<0.001
OW_042	35.27	R6	89	133	0.003	14	21	<0.001
OW_043	35.54	R4SB	218	1,090	0.025	0	0	<0.001
OW_044	38.21	R6	146	292	0.007	1	1	<0.001
OW_045	38.45	R6	105	210	0.005	14	27	0.001

Feature Name	PM	Cowardin Type	Temporary Impacts			Permanent Impacts		
			Length (linear feet)	Area (square feet)	Acres	Length (linear feet)	Area (square feet)	Acres
OW_046	39.46	R6/R4SB	105	210	0.005	42	83	0.002
OW_047	40.02	R6	72	109	0.002	12	18	<0.001
OW_048	43.30	R4SB	82	246	0.006	25	74	0.002
OW_049	43.67	R4SB	100	900	0.021	61	549	0.013
OW_050	44.47	R6	87	130	0.003	0	0	<0.001
OW_051	44.57	R6	69	104	0.002	0	0	<0.001
OW_052	45.09	R4SB	76	303	0.007	39	156	0.004
OW_053	46.37	R6	68	102	0.002	24	36	0.001
OW_054	46.53	R4SB	147	734	0.017	24	120	0.003
OW_055	46.68	R6	122	183	0.004	24	36	0.001
OW_056	46.88	R6	68	103	0.002	12	18	<0.001
OW_057	47.48	R6	70	105	0.002	12	18	<0.001
OW_058	47.57	R6/R4SB	99	247	0.006	18	45	0.001
OW_059	47.69	R6	105	209	0.005	12	24	0.001
OW_060	47.84	R6	70	105	0.002	12	18	<0.001
OW_061	48.16	R6	73	110	0.003	0	0	<0.001
OW_062	48.40	R6	74	111	0.003	12	18	<0.001
OW_063	50.04	R6	103	309	0.007	36	108	0.002
Total Impacts: Temporary 7,629 Linear Feet, 22,033 Square Feet, 0.506 Acre* Permanent 858 Linear Feet, 2,387 Square Feet, and 0.055 Acre*								

*Table has been rounded and totals may vary.

Table 12. Waters Credits

Feature Name	PM	Cowardin Type	Work to be conducted	Credits		
				Length Credit (linear feet)	Area Credit (square feet)	Acres Credit
OW_002	0.40	R6	Upsize CSP	26	53	0.001
OW_003	2.29	R6	Upsize CSP	20	20	0.000
OW_004	7.27	R4SB	CSP to Bridge	71	284	0.007
OW_009	13.15	R6	Upsize CSP	25	35	0.001
OW_010	13.81	R6	Upsize CSP	24	28	0.001
OW_012	15.46	R4SB	Upsize CSP	25	32	0.001
OW_014	18.00	R6	Upsize CSP	79	79	0.002
OW_015	19.05	R4SB	Upsize CSP	72	144	0.003
OW_016	19.63	R4SB	Upsize CSP	76	152	0.003
OW_017	19.63	R4SB	Upsize CSP	35	70	0.002
OW_019	23.80	R6	Upsize CSP	26	26	0.001
OW_027	30.33	R6	Upsize CSP	40	38	0.001
OW_028	30.43	R6	Upsize CSP	32	32	0.001
OW_039	33.29	R6	Upsize CSP	48	48	0.001
OW_040	33.47	R6	Upsize CSP	78	78	0.002
OW_042	35.27	R6	Upsize CSP	28	28	0.001
OW_044	38.21	R6	Upsize CSP	58	117	0.003
OW_047	40.02	R6	Upsize CSP	20	20	<0.001
OW_048	43.30	R4SB	Upsize CSP	25	25	0.001
OW_049	43.67	R4SB	Double CSP to RCB	25	1,292	0.030
OW_050	44.47	R6	Upsize CSP	28	28	0.001
OW_051	44.57	R6	Upsize CSP	20	20	<0.001
OW_052	45.09	R4SB	Upsize RCB	22	2,800	0.064
OW_053	46.37	R6	Upsize CSP	19	19	0.000
OW_055	46.68	R6	Upsize CSP	46	46	0.001

Feature Name	PM	Cowardin Type	Work to be conducted	Credits		
				Length Credit (linear feet)	Area Credit (square feet)	Acres Credit
OW_056	46.88	R6	Upsize CSP	19	19	<0.001
OW_057	47.48	R6	Upsize CSP	20	20	<0.001
OW_060	47.84	R6	Upsize CSP	20	20	<0.001
OW_061	48.16	R6	Upsize CSP	22	22	<0.001
OW_062	48.40	R6	Upsize CSP	22	22	0.001
OW_063	50.04	R6	Upsize CSP	36	36	0.001
Total Waters Credits: 1,108 Linear Feet*, 5,655 Square Feet*, and 0.130 Acre						

*Table has been rounded and totals may vary.

Impacts on jurisdictional waters and riparian vegetation would be minimized with incorporation of the Standard Measures and BMPs identified in Section 1.7. BMPs include treatment controls, soil stabilization practices, and weather-appropriate scheduling. Temporary high-visibility fencing (THVF) would be used to protect sensitive areas and limit ground disturbance, and debris containment plans would be implemented to ensure construction debris does not enter adjacent waters.

Any debris and sediment would be contained within the project site and disposed appropriately off-site. Wetland and riparian areas temporarily impacted by construction would be restored to pre-existing conditions once construction is complete. Caltrans would also implement a program of invasive weed control in all areas of soil disturbance caused by construction to improve habitat for native species in and adjacent to disturbed soil areas within the project limits. A Revegetation Plan would be prepared to revegetate riparian areas temporarily impacted by the project.

Given the above, it was determined the project would have a "***Less Than Significant Impact***" in response to CEQA Environmental Checklist Question 2.4 c). Based on the determinations made in the CEQA Environmental Checklist, no mitigation measures are proposed.

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?

The Navarro River is a migration corridor for aquatic and terrestrial species. It also provides rearing habitat for juvenile anadromous fish species and foraging habitat for terrestrial animals. Aquatic and terrestrial wildlife may utilize the tributaries and small drainages and migrate through the culverts. Culverts can provide refugia and safe passage under road systems for wildlife.

FISH SPECIES

Based on record search results, it is presumed that the Chinook salmon–California Coastal DPS, coho salmon–Central California Coast ESU, Northern coastal roach and steelhead–Northern California DPS-*winter run* may occur within the BSA.

The Navarro River and its tributaries are considered essential fish habitat (EFH) for Chinook salmon (*Oncorhynchus tshawytscha*)–California Coastal ESU (Pop. 17), coho salmon (*Oncorhynchus kisutch*)–Central California Coast ESU (Pop. 4), and steelhead (*Oncorhynchus mykiss irideus*)–Northern California DPS (Pop. 49)-*winter run*.

Most of the project culvert locations are within perennial, intermittent, and ephemeral streams that are located upslope from the Navarro River and are non-fish bearing locations. All but one of the drainage locations in the project are on a steep grade or have natural downstream barriers that are not accessible to salmonids. Mustard Gulch is the only known location currently accessible to salmonids.

The existing culvert at Mustard Gulch is considered a top priority location for Caltrans District 1 fish passage remediation. As part of the project design, Caltrans would improve fish passage at Mustard Gulch (PM 7.27). On July 18, 2023, Caltrans Environmental and Hydraulics and CDFW staff completed stream channel measurements at Mustard Gulch. These were collected at a reference channel reach upstream of the Mustard Gulch road-stream crossing. The collected measurements provide a basis of design that meet both the hydrologic and

geomorphic functions of the creek as well as addressing fish passage. The average active channel width was 5.2 feet (averaged over 5 channel measurement locations). The bankfull channel width was 7.0 feet (averaged over 5 channel measurement locations). At a minimum, regulatory agencies would require a road-stream crossing to span at least 1.5 times the bankfull width. Therefore, 1.5 times the bankfull width would result in a structure span of at least 10.5 feet minimum. CDFW requires unimpeded fish passage through road-stream crossings in order to meet all fish passage hydraulic requirements for both juvenile and adult salmonids. The proposed 34-foot-long bridge is considered a full span solution and would facilitate the geomorphic functions of the creek, as well as meet the fish passage requirements.

Aside from the culvert at PM 7.27, there were 9 additional locations that were investigated for fish passage: PMs 15.73, 27.76, 32.08, 32.34, 32.98, 35.54, 43.30, 43.67, and 45.09. Assessments of these locations were completed in September 2024 and were not found to be barriers to anadromy. These assessments have been submitted to the Passage Assessment Database (PAD) for QA/QC and the PAD will be updated to reflect the findings.

WILDLIFE SPECIES

Aquatic and terrestrial wildlife may utilize the tributaries and small drainages and migrate through the culverts. Culverts can provide refugia and safe passage under road systems for wildlife if used, though their regularity of use, especially for smaller culverts is relatively unknown. If we assume wildlife species are using culverts to migrate, then the project would be considered a net benefit from baseline conditions due to the culvert upsizing at approximately 31 locations. The culvert at PM 45.09 is being replaced with a larger box culvert in order to better facilitate wildlife crossing.

INVASIVE SPECIES

This project would not have an impact on species migration as related to invasive species. The Standard Measures and BMPs in Section 1.7, BR-3: Invasive Species would minimize the potential impacts. Only native seed mixes would be used for erosion control, if needed. A large portion of the culvert work is on paved surfaces and would not increase invasive species in the project area.

Given the above, it was determined the project would have a "***Less Than Significant Impact***" in response to CEQA Environmental Checklist Question 2.4 d). Based on the determinations made in the CEQA Environmental Checklist, no mitigation measures are proposed.

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 does not conflict with any local policies or ordinances protecting biological resources. Given this, it was determined the project would have a "***No Impact***" in response to CEQA Environmental Checklist Question 2.4 e).

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

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

The project does not conflict the provisions of an adopted Habitat a Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. Given this, it was determined the project would have a "***No Impact***" in response to CEQA Environmental Checklist Question 2.4 f).

2.5 Cultural Resources

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

"**No Impact**" determinations in this section are based on the scope, description, and location of the proposed project, as well as the *Archaeological Survey Report* (ASR) and the *Historic Properties Survey Report* (HPSR) dated October 23, 2024 (Caltrans 2024b and 2024c).

The studies for this undertaking were carried out in a manner consistent with Caltrans' regulatory responsibilities under Section 106 of the National Historic Preservation Act (36 CFR Part 800) and pursuant to the January 2014 *First Amended Programmatic Agreement among the Federal Highway Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and the California Department of Transportation Regarding Compliance with Section 106 of the National Historic Preservation Act* (Section 106 PA), as well as under Public Resources Code 5024 and pursuant to the January 2015 *Memorandum of Understanding Between the California Department of Transportation and the California State Historic Preservation Office Regarding Compliance with Public Resources Code Section 5024 and Governor's Executive Order W-26-92*, amended 2019 (5024 MOU) as applicable.

In accordance with Attachment 3 of the Section 106 PA, the project's Area of Potential Effects (APE) and archaeological survey area were established to encompass the maximum limits of all potential ground-disturbing construction activities associated with the proposed work including, but not limited to, all existing and proposed new right of way, temporary construction easements, utility relocations, access roads, and equipment storage areas. The final APE for the project was established in August 2024 by the archaeologist and the Project Manager.

The identification process included Native American and Native American Heritage Commission consultation; literature and records reviews at the Northwest Information Center, the Caltrans Cultural Resources Database, Document Retrieval System, North Region Data Library, Middle Mile Broadband Network efforts, and at other repositories of historical materials; and an intensive pedestrian survey of the APE. The results of the identification process found five archaeological sites in the approximately 92-acre APE. Results of the pedestrian survey found that none of these known archaeological sites will be affected by the project. Additionally, the survey revealed three of the known archaeological sites will require protection by an Environmentally Sensitive Area (ESA) Plan.

The Archaeological Survey Report, included literature review, record searches, and consultation with Tribes conducted for the Culvert Rehabilitation and Fish Passage Project, concluded that within the APE there are no cultural resources that would be affected. Due to the proximity of the present-day Redwood Valley Rancheria and Coyote Valley Band of Pomo Indians reservations, they are the most likely to be concerned with this project; however, at this time they have not expressed any concerns.

If previously unidentified cultural materials are unearthed during construction, it is Caltrans' policy that work be halted in that area until a qualified archaeologist can assess the significance of the find. Additional archaeological surveys will be needed if project limits are extended beyond the present survey limits.

The Caltrans project archaeologist has determined this undertaking has no potential to affect historical properties. Therefore, potential impacts to cultural resources are not anticipated.

2.6 Energy

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

"**No Impact**" determinations in this section are based on the scope, description, and location of the proposed project as well as the *Air Quality and Noise Analysis Memorandum* dated May 9, 2024 (Caltrans 2024a).

As such, this project would not result in changes in traffic volumes, vehicle mix, or any other factor that would cause an increase in energy consumption of the project from that of the No-Build Alternative. Additionally, the proposed project does not include maintenance activities which would result in an increase in long-term energy consumption. Rehabilitation/replacement of the drainage systems would lengthen intervals between maintenance activities; therefore, energy used on maintenance would be less than the No-Build Alternative. Potential impacts to energy are not anticipated because the proposed work would not increase capacity nor relieve congestion. Additionally, the project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

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 wastewater disposal systems where sewers are not available for the disposal of wastewater?				✓
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, description, and location of the proposed project, as well as the *Paleontological Identification Report* dated June 26, 2024 (Caltrans 2024e).

The purpose of the Paleontological Identification Report is to provide technical information and to review the proposed project in sufficient detail to determine to what extent the proposed project potentially may affect paleontological resources. Paleontological resources, or fossils, are afforded protection by environmental legislation set forth under the California Environmental Quality Act (CEQA) and the National Environmental Policy Act of 1969 (NEPA). According to the published geologic maps, the project area is underlain by Holocene alluvium, Holocene landslide deposits, Pleistocene nonmarine terrace deposits, Plio-Pleistocene nonmarine, undivided Cretaceous marine deposits, Jurassic Franciscan Complex, and Jurassic serpentinized ultramafic rocks (Jennings and Strand, 1960; Wagner and Bortugno, 1982). A records search of the Paleobiology Database was conducted for any known fossil occurrences within the project limits. No fossil occurrences were identified in the records search within the project limits. There is low potential for excavations associated with culvert replacement and the fish passage project to impact paleontological resources.

Earthquake hazard zones are areas defined by three distinct type of geologic ground failures which include fault rupture, liquefaction, and earthquake-induced landslides. SR 128 from Post Miles 0.0 to 50.5 is not within an earthquake hazard zone. Additionally, the project would not result in substantial soil erosion or the loss of topsoil. The project does not propose the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater. Therefore, potential impacts to geology and soils are not anticipated.

2.8 Greenhouse Gas Emissions

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

Climate Change

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

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

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

Regulatory Setting

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

FEDERAL

To date, no nationwide numeric mobile-source GHG reduction targets have been established; however, federal agencies are mandated to consider the effects of climate change in their environmental reviews.

The NEPA (42 United States Code [USC] Part 4332) is the basic national charter for protection of the environment which establishes policy, sets goals, and provides direction for carrying out the policy. NEPA requires federal agencies to assess the environmental effects of their proposed actions prior to making a decision on the action or project. In May 2024, the White House Council on Environmental Quality (CEQ) issued the National Environmental Policy Act Implementing Regulations Revisions Phase 2 (89 Fed. Reg. 35442). The CEQ regulations do not establish numeric thresholds of significance, but mandate that federal agencies consider the effects of climate change in their environmental reviews, including direct, indirect, and cumulative impacts. The CEQ regulations further require that agencies quantify greenhouse gas emissions, where feasible, from the proposed action and alternatives. The regulations also direct agencies to identify reasonable alternatives that reduce climate change-related effects.

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

Early efforts by the federal government to improve fuel economy and energy efficiency to address climate change and its associated effects include The Energy Policy and Conservation Act of 1975 (42 USC Section 6201); and Corporate Average Fuel Economy (CAFE) Standards. The U.S. Department of Transportation's National Highway Traffic and Safety Administration (NHTSA) sets and enforces corporate average fuel economy (CAFE) standards for on-road motor vehicles sold in the United States. The U.S. Environmental Protection Agency (U.S. EPA) calculates average fuel economy levels for manufacturers, and also sets related GHG emissions standards for vehicles under the Clean Air Act. 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. Department of Transportation [U.S. DOT] 2014). These standards are periodically updated and published through the federal rulemaking process.

STATE

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

In 2005, EO S-3-05 initially set a goal to reduce California's GHG emissions to 80 percent below year 1990 levels by 2050, with interim reduction targets. Later EOs and Assembly and Senate bills refined interim targets and codified the emissions reduction goals and strategies. The CARB was directed to create a climate change scoping plan and implement rules to achieve "real, quantifiable, cost-effective

reductions of greenhouse gases." Ongoing GHG emissions reduction was also mandated in Health and Safety Code (H&SC) Section 38551(b). In 2022, the California Climate Crisis Act was passed, establishing state policy to reduce statewide human-caused GHG emissions by 85 percent below 1990 levels, achieve net zero GHG emissions by 2045, and achieve and maintain negative emissions thereafter.

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

Environmental Setting

The proposed project is in Mendocino County on SR 128 from Post Mile 0.0 to 50.5. This section of SR 128 traverses a section of the Northern California Coast Range between the Pacific Ocean and U.S. Highway 101 in the town of Cloverdale.

Per the Western Regional Climate Center (WRCC), there are three climate stations adjacent to the project location: Cloverdale 1 S (041837), Boonville HMS (040973), and FT Bragg (043164). The monthly climate summaries report the average annual precipitation at the project location is about 38 inches. Most rainfall occurs between the months of October and April. The average annual maximum temperature ranges from 65.7 to 91.2 degrees Fahrenheit, and the average annual minimum temperature ranges from 37.7 to 38.3 degrees Fahrenheit (WRCC, 2024a, 2024b and 2024c). The project area has a warm-summer Mediterranean climate, with warm and dry summers and mild winters. There are 326 days in the growing season, which is defined as the number of days that have a 50 percent probability of air temperatures at 28ºF or higher (NOAA 2023).

Terrain within the project area varies along SR 128, with most of the terrain consisting of moderate to steep slopes. Several culverts have a relatively level topography while others occur on moderate to steep slopes descending and ascending from SR 128. The project locations occur at elevations between 30 and 1,312 feet above mean sea level. The adjacent mountains and slopes support drainages that flow into the culvert systems.

Much of the corridor of SR 128 between SR 1 on the coast (PM 0.0) and the town of Navarro (PM 14.2) is forested and undeveloped and a portion is within the Navarro River Redwoods State Park. Land development between Navarro and Cloverdale in Sonoma County (SON 128 PM 4.8) is mostly rural residential with ranches and wineries located along the highway corridor. SR 128 is the main transportation route to and through the area for both passenger and commercial vehicles. The nearest alternate route is SR 20, approximately 17 miles to the north. Traffic counts are low, and SR 128 is rarely congested. The Mendocino Council of Governments (MCOG) guides transportation development in the project area. The Mendocino County General Plan Circulation, Safety, and Traffic (County of Mendocino 2020) and the 2022 Regional Transportation Plan & Active Transportation Plan (MCOG 2022) elements address GHGs in the project area.

GHG INVENTORIES

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

NATIONAL GHG INVENTORY

The annual GHG inventory submitted by the U.S. EPA to the United Nations provides a comprehensive accounting of all human-produced sources of GHGs in the United States. Total national GHG emissions from all sectors in 2022 were 5,489.0 million metric tons (MMT), factoring in deductions for carbon sequestration in the land sector. (Land Use, Land Use Change, and Forestry provide a carbon sink equivalent to 15% of total U.S. emissions in 2022 [U.S. EPA 2024a].) While total GHG emissions in 2022 were 17% below 2005 levels, they increased by 1% over 2021 levels. Of these, 80% were CO_2, 11% were CH_4, and 6% were N_2O; the balance consisted of fluorinated gases. From 1990 to 2022, CO_2 emissions decreased by only 2% (U.S. EPA 2024a).

The transportation sector's share of total GHG emissions increased to 28% in 2022 and remains the largest contributing sector (Figures 4–6). Transportation activities accounted for 37% of all CO_2 emissions from fossil fuel combustion in 2022. This is a decrease of 0.5% from 2021 (U.S. EPA 2024a, 2024b).

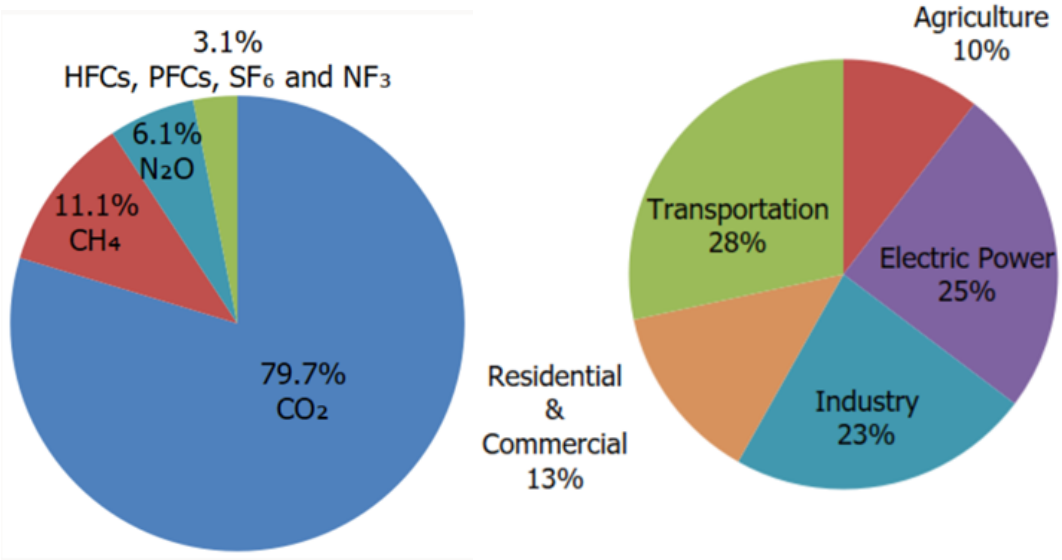


Figure 4. U.S. 2022 Greenhouse Gas Emissions

(Source: U.S. EPA 2024b)

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. Transportation emissions remain the largest contributor to GHG emissions in the state (Figure 5) (CARB 2023). Overall statewide GHG emissions declined from 2000 to 2021 despite growth in population and state economic output (Figure 6).

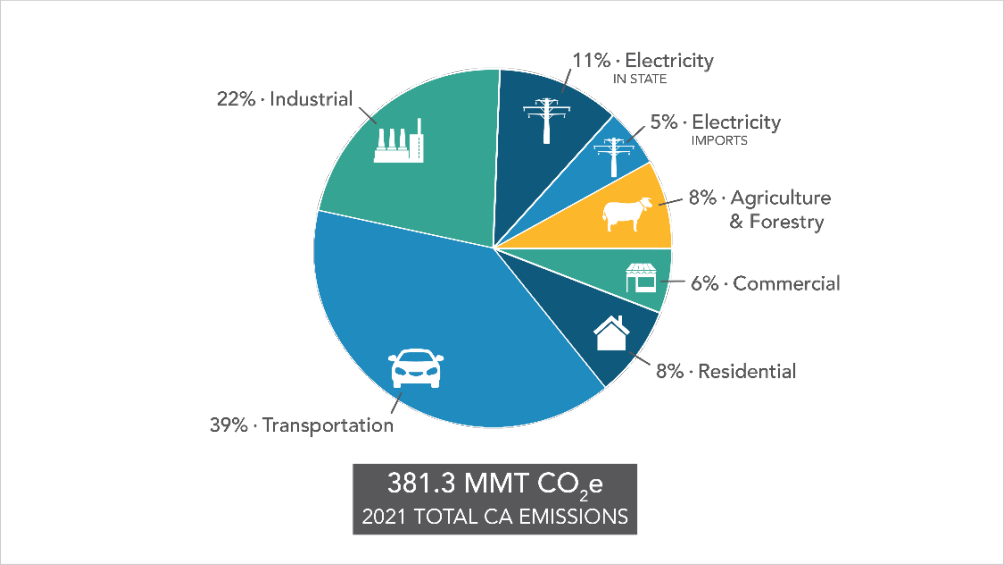


Figure 5. California 2021 Greenhouse Gas Emissions by Economic Sector

(Source: CARB 2023)

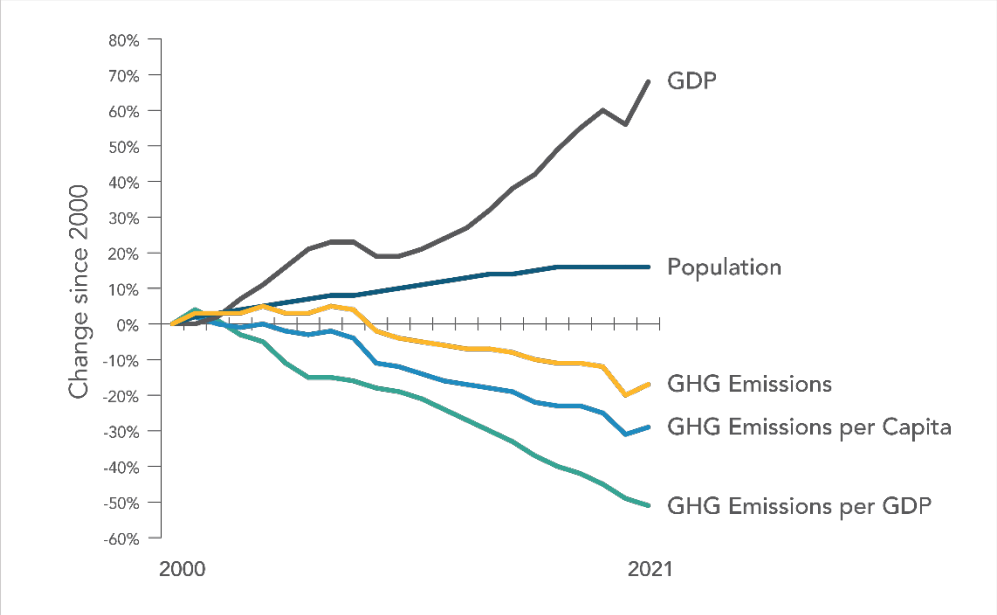


Figure 6. Change in California Gross Domestic Product (GDP), Population, and GHG Emissions since 2000

(Source: CARB 2022a)

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

REGIONAL PLANS

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

The project area is not within the jurisdiction of an MPO and therefore not subject to CARB GHG reduction targets. However, the Mendocino Council of Governments (MCOG) is responsible for the region's Regional Transportation Plan (RTP) and Active Transportation Plan (ATP) for the project area. The 2022 Regional Transportation Plan & Active Transportation Plan (MCOG 2022) includes policies on Climate Change and the Environment (CCE). The goal of the CCE policies is to build a combination of transportation facilities that, when evaluated as a group, will result in improved air quality, reduced transportation-related air toxins and greenhouse gas emissions, reduced vehicle miles traveled (VMT), and a more resilient multi-modal transportation network in Mendocino County. The RTP identifies expanded transit use, improving streets/roads efficiency, and expanding non-motorized travel opportunities as some strategies to reduce GHG generation. In the Mendocino County General Plan (County of Mendocino 2020), Policy RM-51 acknowledges the real challenge of climate change and will implement existing strategies to reduce greenhouse gas emissions and incorporate future measures that the State adopts in the coming years.

Some of the action items under the policy include: 1) create a GHG reduction plan for the county's unincorporated areas that sets specific reduction strategies and targets to meet; and 2) reduce Mendocino County's GHG emissions by adopting measures that reduce fossil fuel energy resources consumption. Additional regional and local GHG reduction strategies are included in Table 13 below.

Table 13. Regional and Local Greenhouse Gas Reduction Plans

Title	GHG Reduction Policies or Strategies
Policies on Climate Change and the Environment (CCE 2) in the Mendocino Council of Governments (MCOG) 2022 Regional Transportation Plan & Active Transportation Plan (Final Adopted February 7, 2022)	• CCE 2.1: Evaluate transportation projects based on their ability to reduce Mendocino County's transportation-related greenhouse gas emissions and reduce vehicle miles traveled. • CCE 2.2: Prioritize transportation projects which lead to reduced greenhouse gas emissions and reduced vehicle miles traveled and prioritize projects that can mitigate for VMT increasing projects. • CCE 2.3: Monitor new technologies and opportunities to implement energy efficient and nonpolluting transportation infrastructure. • CCE 2.4: Continue to consider bicycle transportation, pedestrian, and transit projects for funding in the State Transportation Improvement Program (STIP). • CCE 2.5: Continue administrative, planning, and funding support for the Region's transit agency, Mendocino Transit Authority. • CCE 2.6: Continue to encourage private and public investment in a countywide electric vehicle charging station network and seek funding to fill gaps in the network; and continue to participate in multi-agency planning efforts to expand EV charging station network. • CCE 2.7: Continue to update MCOG's Zero Emissions Vehicle (ZEV) Regional Readiness Plan, as needed. • CCE: 2.8 Continue to seek mobility solutions for remote rural areas of the County unable to be served by traditional transit service due to remoteness and low population density.

Title	GHG Reduction Policies or Strategies
	• CCE: 2.9: Work with public health agencies and walking and biking groups to encourage more extensive walking and biking for transportation purposes, in support of reducing GHG. • CCE: 2.10: Support prioritization of transportation projects that result in reduction of Vehicle Miles Travel (VMT) and greenhouse gas (GHG) emissions. • CCE: 2.11: Support Mendocino Transit Authority's efforts to diversify fleet size, and work toward an all-electric public transit fleet, as feasible.
Mendocino County General Plan (adopted August 2009; Revised 2020)	• Action Item RM-45.1: Implement transit, bicycle, and pedestrian oriented land use and site design strategies. • Policy RM-46: Encourage the use of alternative fuels, energy sources, and advance technologies that result in fewer airborne pollutants

Project Analysis

GHG emissions from transportation projects can be divided into those produced during operation and use of the State Highway System (SHS) (operational emissions) and those produced during construction. The primary GHGs produced by the transportation sector are CO_2, CH_4, N_2O, and HFCs. CO_2 emissions are a product of burning gasoline or diesel fuel in internal combustion engines, along with relatively small amounts of CH_4 and N_2O. A small amount of HFC emissions related to refrigeration is also included in the transportation sector. (GHGs differ in how much heat each traps in the atmosphere, called global warming potential, or GWP. CO_2 is the most important GHG, so amounts of other gases are expressed relative to CO_2, using a metric called "carbon dioxide equivalent", or CO_2e. The global warming potential of CO_2 is assigned a value of 1, and the GWP of other gases is assessed as multiples of CO_2.)

The CEQA Guidelines generally address greenhouse gas emissions as a cumulative impact due to the global nature of climate change (Public Resources Code § 21083(b)(2)). As the California Supreme Court explained, "because of the global scale of climate change, any one project's contribution is unlikely to be significant by

itself." (Cleveland National Forest Foundation *v.* San Diego Assn. of Governments (2017) 3 Cal.5th 497, 512.) In assessing cumulative impacts, it must be determined if a project's incremental effect is "cumulatively considerable" (CEQA Guidelines Sections 15064(h)(1) and 15130).

To make this determination, the incremental impacts of the project must be compared with the effects of past, current, and probable future projects. Although climate change is ultimately a cumulative impact, not every individual project that emits greenhouse gases must necessarily be found to contribute to a significant cumulative impact on the environment.

Operational Emissions

Non-Capacity-Increasing Projects

The purpose of the proposed project is to replace and/or rehabilitate existing drainage systems and remediate a fish passage barrier. The project 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 128, no increase in vehicle miles traveled (VMT) would occur. 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. While construction GHG emissions are only produced for a short time, they have long-term effects in the atmosphere, so cannot be considered "temporary" in the same way as criteria pollutants that subside after construction is completed.

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

Construction is anticipated to begin in 2028 and occur over approximately 400 working days. Construction GHG would result in generation of short-term, construction-related GHG emissions. Construction GHG emissions consist of emissions produced as a result of material processing, emissions produced by onsite construction equipment, and emissions arising from traffic delays and detours due to construction. These emissions would be generated at different levels through the construction phase. The CAL-CET2021 v1.0.2 was used to estimate average CO_2, CH_4, N_2O, Black Carbon (BC), and hydrofluorocarbon-134a (HFC-134a) emissions from construction activities. Table 15 summarizes estimated GHG emissions generated by on-site equipment for the project. The total CO_2e produced during construction is estimated to be 797 US tons (equivalent to 723 metric tons).

Table 14. CAL-CET Estimates of GHG Emissions (US tons) During Construction

Construction Year	CO_2	CH_4	N_2O	BC	HFC-134a	CO_2e*
2028	745	0.014	0.036	0.022	0.022	797

* 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 HFC134a by its global warming potential (GWP). Each GWP of CO_2, CH_4, N_2O, and HFC-134a is 1, 25, 298, 460 and 1,430, respectively.

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. The proposed project does not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing 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.

Greenhouse Gas Reduction Strategies

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

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

1) Increasing the share of renewable energy in the State's energy mix to at least 50 percent by 2030
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 OPR 2015).

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

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

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

CALTRANS ACTIVITIES

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

Climate Action Plan For Transportation Infrastructure

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

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 2021b).

Caltrans Policy Directives And Other Initiates

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

PROJECT-LEVEL GREENHOUSE GAS REDUCTION STRATEGIES

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

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

- Additionally, a Transportation Management Plan will be utilized to minimize traffic delays. To the extent feasible, construction traffic will be scheduled and routed to reduce congestion and related air quality impacts caused by idling vehicles during peak travel times.

Adaptation Strategies

Reducing GHG emissions is only one part of an approach to addressing climate change. Caltrans must plan for the effects of climate change on the state's transportation infrastructure and strengthen or protect the facilities from damage. Climate change is expected to produce increased variability in precipitation, rising temperatures, rising sea levels, variability in storm surges and their intensity, and in the frequency and intensity of wildfires. Flooding and erosion can damage or wash out roads; longer periods of intense heat can buckle pavement and railroad tracks; storm surges, combined with a rising sea level, can inundate highways. Wildfire can directly burn facilities and indirectly cause damage when rain falls on denuded slopes that landslide after a fire. Effects will vary by location and may, in the most extreme cases, require a facility be relocated or redesigned. Furthermore, the combined effects of transportation projects and climate stressors can exacerbate the impacts of both on vulnerable communities in a project area. Accordingly, Caltrans must consider these types of climate stressors in how highways are planned, designed, built, operated, and maintained.

FEDERAL EFFORTS

Under NEPA Assignment, Caltrans is obligated to comply with all applicable federal environmental laws and FHWA NEPA regulations, policies, and guidance.

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

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

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

STATE EFFORTS

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

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

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

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

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

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

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

CALTRANS ADAPTATION EFFORTS

Caltrans Vulnerability Assessments

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

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

Caltrans Sustainability Programs

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

Project Adaptation Efforts

Standard Measures and BMPs (Section 1.7) will benefit GHG reduction efforts. These include 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, use of a TMP to minimize vehicle delays and idling emissions, and 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. A Revegetation Plan would be prepared to address the replanting efforts.

Sea Level Rise

A Sea-Level Rise analysis is required for projects in the Coastal Zone that require approval of a Coastal Development Permit or amendment. This project would require such clearance under the California Coastal Act. There are 13 proposed culvert locations located within the Coastal Zone, from PM 0.03 to PM 2.59.

The project is located along SR 128 from PM 0.0 to 50.5 in Mendocino County. SR 128 runs adjacent to the Navarro River for approximately 12 miles, from the mouth of the Navarro River (PM 0.0) to PM 12.72. From there, SR 128 reaches rural settlements, agricultural lands, and the rural town of Boonville in Anderson Valley. SR 128 has historically been closed between PMs 0.0 and 11.6 during high tide and heavy rain events due to flooding of the Navarro River.

A sea level rise risk assessment was conducted to determine the potential for inundation of the project area due to sea level rise. The projects design life is approximately 40 to 50 years. Using the State of California Sea Level Rise Guidance 2018 Update (2018b), potential sea level rise impacts to the project area were evaluated under different scenarios. The most likely (66 percent probability) range of sea level rise by 2080 at this location (based on the nearest tide gage) is 1.0 to 2.2 feet under a high emissions scenario (Representative Concentration Pathways [RCP] 8.5 - often referred to as a “business as usual” scenario). There is a 1-in-200 chance, or 0.5 percent probability, that sea level rise meets or exceeds 4.3 feet by 2080. Under the highest potential emissions scenario (H++), sea-level could rise as much as 6.4 feet by 2080. However, the probability that sea level rise will reach 5 feet by 2080 is 0.2 percent (note this calculation excludes the H++ scenario).

Visualization using the NOAA Sea-Level Rise viewer indicates that the project locations would not be inundated if sea-level rose by as much as 6 feet (Figure 7). With a potential sea level rise of 6 feet, the Navarro River would rise slightly and reach approximately PM 3.6 (shown in blue in Figure 7).

The areas from PM 3.6 to approximately PM 5.2 would be considered low-lying areas (shown in green in Figure 5). Even with a sea level rise of 6 feet, SR 128 itself is not anticipated to be inundated at any location within the project area. However, heavy rains and high tide events will likely continue to require the road closures due to flooding in the area.



Figure 7. 6 feet Sea Level Rise within Project Study Area from NOAA Sea Level Rise Viewer
Source: NOAA 2024

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

Precipitation and Flooding

The Caltrans Climate Change Vulnerability Assessment for District 1 (Caltrans 2019) mapped potential changes in the 100-year storm precipitation event throughout the district. The 100-year storm event is a metric commonly used in the design of culverts. The projections are based on the RCP 8.5 Emissions Scenario.

The mapping indicates a percentage increase in precipitation range from 0% to as much as 9.9% between 2025 and 2085 in the project area within Mendocino County. Heavier precipitation and extreme weather events, such as the 100-year flood (a 100-year flood is a flood event that has a 1 in 100 chance of being equaled or exceeded in any given year), may occur as a result of climate change. Many location-specific variables make it difficult to calculate exactly how precipitation change would affect flood flows at a given site. Of the 103 drainages proposed for rehabilitation and/or replacement, 19 of these are within the 100-year floodplain.

The proposed project would replace existing deteriorated culverts with larger pipe sizes, where needed. Increasing the diameter of culverts is anticipated to reduce the occurrence of flooding upstream of culverts and decrease water velocities at the outlet of culverts. This would decrease erosion of the bed, bank and channel both upstream and downstream of the culverts. The rate and volume of stormwater discharged to adjacent waterbodies would be controlled by using rock energy dissipators (RED). The proposed project would improve the drainage facilities to better protect the roadways compared to existing conditions.

Wildfire

The proposed project area is within the CAL FIRE State Responsibility Area (SRA). The project is within *moderate, high,* and *very high* Fire Hazard Severity Zones. The moderate zone for fire severity is from the coast at PM 0.0 to approximately PM 7.8. From there, the project is within the ranges of high to very high fire severity. The project proposes to replace and/or rehabilitate existing drainage systems. Certain adaptation measures will be incorporated into the project. These include utilizing metal or concrete in the drainage systems and installing steel posts for any guardrail that will be replaced or installed. Drainage capacity can be increased or protected by upsizing culverts, particularly in post-fire conditions. The project would replace or rehabilitate existing drainage structures and would not result in changes to the highway facilities or environment that could exacerbate fire risk.

The project would include Caltrans Standard Specification 7-1.02M(2) for fire protection, which includes the development of a Fire Protection Plan to minimize the risk of starting a wildfire during construction.

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 (Climate Change Vulnerability Assessments for District 1 (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* (ISA) that was prepared on February 17, 2023 (Caltrans 2023b).

A Preliminary Site Investigation (PSI) was conducted in November 2022 to determine the presence of Naturally Occurring Asbestos (NOA). In this investigation the unpaved shoulders within the project area were evaluated. The PSI found that NOA was identified within the project limits and was reported to contain chrysotile asbestos at less than the laboratory reporting limit (RL) of 0.25%. Therefore, native earthen material generated within the project limits can be reused or disposed of without restrictions with regard to NOA. However, since NOA was detected at less than the laboratory RL of 0.25%, it is recommended that the contractor performing soil disturbance activities implement standard asbestos worker protection measures during construction/maintenance activities to minimize potential releases of NOA to air (dust control) and surface waters (stormwater discharge).

Aerially Deposited Lead (ADL), which is commonly found in all highway shoulders, may be at levels that requires special handling of excess material within the project area. However, based on a previous ADL site investigation within the project limits, concentrations of lead are considered to be at unregulated concentrations.

The project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. The project is not within an airport land use plan and would not result in a safety hazard or excessive noise for people residing or working in the project area. All emergency response agencies in the project area would be notified of the project construction schedule and would have access to SR 128 throughout the entirety of construction. The project would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.

The ISA found that the project work site is not on the Hazardous Waste and Substances Site List (Cortese List) and that the project has only minor hazardous waste issues. Therefore, potential impacts to hazards and hazardous materials are not anticipated.

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 groundwater 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 off-site;			✓	
(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;			✓	
(iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or			✓	
(iv) impede or redirect flood flows?			✓	

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

Regulatory Setting

The primary laws and regulations governing hydrology and water quality include:

- Federal: Clean Water Act (CWA)–33 USC 1344
- Federal: Executive Order for the Protection of Wetlands–EO 11990
- State: California Fish and Game Code (CFGC)–Sections 1600–1607
- State: Porter-Cologne Water Quality Control Act– Sections 13000 et seq.

Affected Environment

This 50.5-mile drainage project lies within District 1 in Mendocino County on SR 128 between Post Miles (PM) 0.0 and 50.5. It begins at the junction of SR 128 and SR 1 on the coast near the mouth of the Navarro River and continues east through predominantly forested lands, including Navarro River Redwoods State Park. It extends through the unincorporated community of Navarro, and rural settlements and agricultural lands of Anderson Valley. It continues through the communities of Philo, Boonville, Yorkville and ends approximately a half mile before the Mendocino/Sonoma county line.

According to Caltrans *Water Quality Planning Tool* (2024j), the project is located within two different watersheds: from PM 0.0 to PM 40.6, the project is in the Mendocino Coast Hydrologic Unit (HU), Navarro River Hydrologic Area (HA), Hydrologic Sub-Area (HSA) #113.50 and from PM 40.6 to PM 50.5 the project is

within the Russian River HU, Middle Russian River HA, Warm Springs HSA #114.24 and Geyserville HSA #114.25.

In the northern part of the project, from PM 0.0 to 40.6, the project discharges to Rancheria Creek, which joins Navarro River near Philo and eventually discharges to the Pacific Ocean. The southern section, from PM 40.6 to 50.5, discharges directly to Dry Creek, which converges with the Russian River and discharges to the Pacific Ocean.

According to the California Department of Water Resources (DWR), the project is located with the Anderson Valley Groundwater Basin (1-019) and Navarro River Valley Groundwater Basin (1-046). According to GeoTracker (SWRCB 2024), groundwater depths within the project limit range from 3 to 42 feet.

Extending from PM 0.00 to approximately PM 13.00, and at locations PM 23.3 and PM 28.3, there is a 1% annual chance for a flood hazard. In addition, the entire length of the project is within a high-risk receiving water watershed territory and is considered to have a high receiving water risk.

Environmental Consequences

The NCRWQCB Basin Plan (NCRWQCB 2018) lists the existing and potential beneficial uses for Navarro River HA #113.50, Warm Springs HSA #114.24 and Geyserville HSA #114.25.

Navarro River HA #113.50

- *Existing* – municipal and domestic supply (MUN); agricultural supply (AGR); industrial service supply (IND); groundwater recharge (GWR); freshwater replenishment (FRSH); navigation (NAV); water contact recreation (REC-1); non-contact water recreation (REC-2); commercial and sport fishing (COMM); cold freshwater habitat (COLD); wildlife habitat (WILD); rare, threatened, or endangered species (RARE); migration of aquatic organisms (MIGR); spawning, reproduction, and/or early development (SPWN); and estuarine habitat (EST).
- *Potential* - industrial process supply (PRO); hydropower generation (POW); and aquaculture (AQUA).

Warm Springs HSA #114.24

- *Existing* – MUN; AGR; IND; GWR; FRSH; NAV; POW; REC-1; REC-2; COMM; warm freshwater habitat (WARM); COLD; WILD; RARE; MIGR; SPWN; and AQUA.
- *Potential* - PRO.

Geyserville HSA #114.25

- Existing – MUN; AGR; IND; GWR; FRSH; NAV; REC-1; REC-2; COMM; WARM; COLD; WILD; RARE; MIGR; SPWN;
- Potential - PRO; POW; shellfish harvesting (SHELL); and AQUA.

The NCRWQCB Basin Plan (NCRWQCB 2018) has established Water Quality Objectives (WQOs) to protect beneficial uses of receiving waters in the project area. Narrative and numeric WQOs for surface waters within the North Coast Region are established for a variety of constituents. Table 16 summarizes the numerical WQOs for dissolved oxygen (DO) in the North Coast Region.

Table 15. Water Quality Objectives for Dissolved Oxygen from the North Coast RWQCB 2018

Beneficial Use	Daily Minimum Objective (Mg/L)	7-day Moving Average Objective (mg/L)[1]
WARM	5.0	6.0
COLD[2]	6.0	8.0
SPWN[3]	9.0	11.0

[1] A 7-day moving average is calculated by taking the average of each set of seven consecutive daily averages.

[2] Water quality objectives designed to protect COLD-designated waters are based on the aquatic life-based requirements of salmonids but apply to all waters designated in Table 2-1 of the Basin Plan as COLD regardless of the presence or absence of salmonids.

[3] Water quality objectives designed to protect SPWN-designated waters apply to all fresh waters designated in Table 2-1 of the Basin Plan as SPWN in those reaches and during those periods of time when spawning, egg incubations, and larval development are occurring or have historically occurred. The period of spawning, egg incubations, and emergence generally occur in the North Coast Region between the dates of September 15 and June 4.

The *2020/2022 California Integrated Report* (CWA Section 303[d] List and 305 [b] Report) (SWRCB 2022) lists the Mendocino Coast HU, Navarro River HA as being impaired for nickel, sedimentation/siltation, and water temperature. The total maximum daily load (TMDL) for nickel has a scheduled TMDL completion date of 2031. The source of the nickel is unknown.

The sedimentation/siltation and water temperature TMDLs were approved by the U.S. EPA in 2000. Per the U.S. EPA's *Navarro River TMDLs for Temperature and Sediment (December 2000 Final)* (U.S. EPA 2000), the causes of increased temperature include direct solar radiation during summer, human-induced activities which decrease streamside (riparian) vegetation, reduced stream flow, or change in channel morphology. The sources of the sedimentation/siltation are human activities, roads, and vineyards (U.S. EPA 2000). The Caltrans MS4 Permit identifies general requirements for TMDLs and specific TMDL control requirements for temperature and sediment in Section D3, D5.6 and D5.7 of Attachment D, respectively.

The *2020/2022 California Integrated Report* (SWRCB 2022) also lists the Russian River HU, Russian River HA, Geyserville HSA as being impaired for aluminum diazinon, indicator bacteria, sedimentation/siltation, specific conductivity, and water temperature. The scheduled completion dates for these TMDLs are as follows:

- Aluminum, special conductivity and water temperature: 2031
- Diazinon and sedimentation/siltation: 2025
- Indicator bacteria: 2020

The sources for sedimentation and water temperature are flow alteration/regulation/modification and removal of riparian vegetation, while the sources for aluminum, diazinon, indicator bacteria, and specific conductivity are unknown.

The Russian River HU, Russian River HA, Warm Springs HSA are listed as being impaired for sedimentation/siltation and water temperature. The TMDLs for sedimentation/siltation and water temperature have a scheduled TMDL completion date of 2025 and 2024, respectively. The source for sedimentation is flow alteration/regulation/modification and removal of riparian vegetation and for water temperature is unknown.

Avoidance, Minimization and Mitigation Measures

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

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

"**No Impact**" determinations were made for ***Questions b) and e)*** listed within the CEQA Environmental Checklist Hydrology and Water Quality section. Determinations were based on the scope, description, and locations of the proposed project, as well as the *Water Quality Assessment Report* (Caltrans 2024i) and the *Stormwater Data Report* (Caltrans 2024g).

See below for further discussion of the **"Less Than Significant Impact"** determinations made for ***Questions a), c) and d)*.**

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

Temporary, short-term increases in turbidity to receiving waters could occur during construction. Soil erosion, especially during heavy rainfall, can increase the suspended solids, dissolved solids, and organic pollutants in stormwater runoff generated within the project limits. The potential for turbidity impacts is specifically of concern from construction-related activities. These activities can potentially contribute to temporary increases in turbidity. These conditions would persist until the completion of construction activities. During construction, there is potential for accidental release of oil, grease, wash water, solvents, cement, sanitary waste (which could be seen as a visible film, coating on the surface, or floating material), and other construction materials to receiving waters. Materials and wastes could be tracked off-site by vehicles, deposited onto roads, and eventually picked up and transported into waterways. Temporary impacts to water quality could occur during culvert improvements and relevant roadway activities. Permanent and temporary Standard Measures and BMPs which are routinely used would be included to protect water quality (Section 1.7). The project does not propose any activities or uses likely to permanently degrade surface or ground water quality. Based on this, it was determined that there would be a "Less than Significant 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?

Within the project limits along SR 128 in Mendocino County, the Caltrans District 1 Work Plan (Caltrans 2023a) does not indicate the presence of erosion-prone slopes. Temporary increases in suspended particulates and turbidity during storm events may occur due to disturbed soil in close proximity to receiving water bodies. Any potential short-term impacts would be addressed using various construction site temporary Standard Measures and BMPs (Section 1.7).

Temporary, short-term increases in temperature and decreases to DO in receiving waters could occur during construction. Soil erosion, especially during heavy rainfall, can increase the suspended solids, dissolved solids, and organic pollutants in stormwater runoff generated within the project limits. The increase in pollutants could then increase the temperature and decrease the DO levels in the receiving water bodies. These conditions would persist until the completion of construction activities, as well as the implementation of long-term erosion control measures. Temporary and permanent Standard Measures and BMPs which are routinely used would be used to protect water quality from temperature and DO impacts.

Potential permanent impacts related to increased temperature and decreased DO may result from fill material and removal of vegetation. These permanent impacts would be minimal and addressed by the implementation of standard erosion control practices and other permanent project features, such as tree replacement and revegetation efforts.

The total Disturbed Soil Area (DSA) is approximately 13.71 acres. However, utilizing the quarter mile rule, as stated in the National Pollutant Discharge Elimination System (NPDES) General Permit for Discharges for Construction Activity, results in the DSA equaling 0.99 acres. The quarter mile rule is applied where discrete construction projects within a larger common plan of development are located at least 1/4 mile apart and the area between the projects is not being disturbed. Thus, each individual location can be treated as a separate plan of development. The DSA was calculated by summing the areas of exposed, erodible soil that were within the

construction limits and that resulting from construction activities. For this project, DSA elements include the fish passage, staging areas, culverts, and rock slope protection. The DSA across the project limits would not result in substantial erosion or siltation on- or off-site with the incorporation of the Standard Measures and BMPs (Section 1.7). Based on this, it was determined that there would be a “Less than Significant Impact”.

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

The existing impervious area includes the roadway area within the post mile limits. The Net New Impervious area (NNI) is approximately 0.015 acres. Per Section 4, Step 7 of the Caltrans Project Planning and Design Guide (PPDG), June 2023, the NNI is the total post-project impervious area minus the pre-project impervious area. The NNI area includes the minor area at the fish passage location where the width of the roadway is expanded due to replacing an existing culvert under the roadway with a bridge. The average width of the existing roadway at PM 7.27 is 25 feet; the proposed bridge width would be 36 feet. This change in width multiplied by the length of the proposed bridge would be the NNI area. The Replaced Impervious Surface (RIS) is approximately 0.053 acres. The RIS was calculated by adding the areas that are described by the PPDG as any activity that removes impervious materials and exposes the underlying soil or pervious subgrade during construction. The RIS area includes the section of the bridge that replaces the existing roadway. The RIS area also includes the replacement of the existing roadway at locations PM 43.67 and PM 45.09 in which box culverts are proposed.

The project proposes to increase the amount of impervious area. Based on this increase, it is anticipated the project would have a negligible effect on downstream flow. Increased flow velocity and volumes will be quantified and mitigated during the Plans, Specifications and Estimates (PS&E) phase of the project. The project Drainage Report, once completed, will evaluate options to reduce runoff to pre-project conditions. The project would preserve the existing vegetation on the slope and other related surroundings to the maximum extent practicable in accordance with any environmental permits/agreements.

New slopes and DSA would be stabilized and vegetated in accordance with plans approved by the District Landscape Architect. The stabilization process should also integrate features that will increase the site perviousness to the degree practicable.

This project is subject to the treatment threshold requirements of the North Coast Regional Water Quality Control Board (NCRWQCB). A Clean Water Act Section 401 Water Quality Certification from the NCRWQCB and a Clean Water Act Section 404 permit will be required. The NCRWQCB 401 permit threshold is 5,000 square feet. Therefore, the 0.015 acres, or 653.4 square feet of NNI will not require permanent post-construction stormwater treatment BMPs per the Regional Water Board's request. Based on this, it was determined that there would be a "Less than Significant 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?

The project is not anticipated to create or replace more than 5,000 square feet of impervious area. However, the project is anticipated to discharge to Waters of the U.S. and is required to comply with the Section 401 permit. The 401 Certification stipulates stormwater treatment measures may be needed for projects that discharge to a waterbody listed as impaired on the CWA 303(d) list. Therefore, the project could be required to implement post-construction stormwater controls, which would be evaluated during the PS&E phase. The treatment controls would address potential post-construction stormwater impacts by reducing pollutant loads in runoff prior to reaching receiving water downstream. Treatment controls, such as low-impact development measures, would be located and sized in accordance with the Caltrans PPDG (2023c) and the Caltrans MS4 permit, prioritizing treatment types that infiltrate, harvest, reuse, and/or evapotranspire stormwater runoff.

The existing damaged culverts deliver sediment to the Navarro River, an impaired water body, that exceeds the Total Maximum Daily Load (TMDL) for sediment. As stated above, the Net New Impervious area (NNI) is approximately 0.015 acres and would therefore not create or contribute a significant amount of runoff in relation to the existing conditions. Based on this, it was determined that there would be a "Less than Significant Impact".

(iv) impede or redirect flood flows?

Culvert rehabilitation associated with this project would include replacing 91 culverts via cut and cover, lining 5 culverts with HDPE, replacing 2 culverts with CIP reinforced concrete boxes, and paving 4 inverts. Additionally, the existing box culvert at PM 7.27 would be replaced with a bridge. This project is needed to repair the deteriorating drainage systems to prevent erosion and potential roadway embankment failure. A majority of the culverts would be replaced via the cut and cover method and in the same location. Culvert lining and invert paving would be completed within the existing drainage system. As such, the proposed work is not anticipated to impede or redirect flood flows. Based on this, it was determined that there would be a "Less than Significant Impact".

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

Extending from PM 0.00 to approximately PM 13.00, and at locations PM 23.3 and PM 28.3, there is a 1% annual chance for a flood hazard. In addition, the entire length of the project is within a high-risk receiving water watershed territory and is considered to have a high receiving water risk.

The project is anticipated to discharge to Waters of the U.S. and therefore is required to comply with the Section 401 permit. The 401 Certification stipulates stormwater treatment measures may be needed for projects that discharge to a waterbody listed as impaired on the CWA 303(d) list. Therefore, the project could be required to implement post-construction stormwater controls, which would be evaluated during the PS&E phase. The treatment controls would address potential post-construction stormwater impacts by reducing pollutant loads in runoff prior to reaching receiving water downstream. Treatment controls, such as low-impact development measures, would be located and sized in accordance with the Caltrans PPDG (2023c) and the Caltrans MS4 permit, prioritizing treatment types that infiltrate, harvest, reuse, and/or evapotranspire stormwater runoff. Additionally, temporary and permanent Standard Measures and BMPs (Section 1.7) that are routinely used and specifically relate to water quality would be implemented. Therefore, it is anticipated there would not be a risk of release of pollutants during construction. Based on this, it was determined there would be a "***Less than Significant Impact***".

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 replacement and rehabilitation of the drainages would not physically divide an established community or cause an 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.

2.12 Mineral Resources

Question:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project: a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				✓
Would the project: b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				✓

"**No Impact**" determinations in this section are based on the scope, description, and location of the proposed project.

Potential impacts to mineral resources are not anticipated due to mineral resources not being present within the project area. Additionally, the replacement and/or rehabilitation of existing drainage systems as proposed would not result in the loss of known mineral resources, nor would the project 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.

2.13 Noise

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

"**No Impact**" determinations in this section are based on the scope, description, and location of the proposed project, as well as the *Air Quality and Noise Analysis Memorandum* dated May 9, 2024 (Caltrans 2024a).

Title 23, Part 772 of the Code of Federal Regulations (23 CFR 772) provides procedures for preparing operational and construction noise studies and evaluating noise abatement considered for Federal and Federal-aid highway projects. Under 23 CFR 772.7, projects are categorized as Type I, Type II, or Type III projects. The proposed project does not construct a new highway in a new location or substantially change the vertical or horizontal alignments and does not include any other activities discussed in the definition of a Type I project.

A Type II project involves construction of noise abatement on an existing highway with no changes to highway capacity or alignment. This project is not a noise abatement project.

This project meets the criteria for a Type III project as defined in 23 CFR 772. Traffic volumes, composition and speeds would remain the same in the build and No-Build condition. Traffic noise impacts are not anticipated, and a detailed noise study report is not required.

During construction, noise from construction activities may intermittently dominate the noise environment in the immediate area of construction. Noise generated by construction activities would be a function of the noise levels generated by individual pieces of construction equipment, the type and amount of equipment operating at any given time, the timing and duration of construction activities, and the proximity of nearby sensitive receptors (children, elderly, asthmatics and others who are at heightened risk of negative health outcomes due to exposure to air pollution). Construction noise would primarily result from the operation of heavy construction equipment and arrival and departure of heavy-duty trucks. Construction noise levels would vary on a day-to-day basis during each phase of construction depending on the specific task being completed but would be temporary.

The project is not expected to generate excessive groundborne vibration or groundborne noise. Vibration levels could be perceptible and cause disturbances at residences near the project area during operation of heavy equipment, such as vibratory rollers. However, these effects would be short-term and intermittent and would cease once construction is completed.

Noise associated with construction is controlled by Caltrans Standard Specification Section 14-8.02: Noise Control. In addition to the Standard Specifications, construction noise can be minimized through the following measures: limit operation of pile driver, jackhammer, concrete saw, pneumatic tools and demolition equipment to daytime hours; notify residents within 500 feet of the project area at least two weeks prior to the start of nighttime construction. The project is not located within the vicinity of a private airstrip or an airport land use plan or within two miles of a public airport or public use airport, and would not expose people residing or working in the project area to excessive noise levels. Therefore, potential impacts to noise are not anticipated.

2.14 Population and Housing

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

"**No Impact**" determinations in this section are based on the scope, description, and location of the proposed project.

The project proposes to replace and/or rehabilitate existing drainage systems and culverts and would not induce unplanned population growth, either directly or indirectly. The project would not involve the acquisition of land occupied by homes or residences and would not result in displacement of people or housing. Therefore, potential impacts to population and housing are not anticipated.

2.15 Public Services

Question	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: 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, as well as the *Transportation Management Plan Data Sheet* dated February 8, 2021 (Caltrans 2021c).

Although there would be temporary traffic delays during construction, including reversing traffic control with flagging and a temporary signal at PM 7.27, all emergency response agencies in the project area would be notified of the project construction schedule and would have access to SR 128 throughout the entirety of construction. No full road closures are anticipated for this project.

Additionally, Caltrans contract specifications require the contractor to notify local authorities at least 10 days prior to the start of job activities. These authorities include Anderson Valley Unified School District, CAL FIRE Mendocino Unit-Boonville, County of Mendocino Transportation Department, and Mendocino Transit Authority (MTA).

The proposed project to repair and/or rehabilitate existing drainage systems would not result in an increased demand for space in schools, parks, or public facilities in the area. Access to schools would not be affected because the Transportation Management Plan would ensure school bus routes are not impeded. As such, potential impacts on public services are not anticipated.

2.16 Recreation

Question	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				✓
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				✓

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project.

The proposed project would replace and/or rehabilitate existing drainage systems on SR 128. There are several campgrounds along SR 128, and a portion of the project area is within the Navarro River Redwoods State Park (between Post Miles 1.78 and 12.60). However, the project, as proposed, would not result in an increased use of these campgrounds, the existing neighborhood parks, or other recreational facilities in the project vicinity. The proposed project also would not require the construction or expansion of recreational facilities. Therefore, potential impacts to recreation are not anticipated.

2.17 Transportation

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

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project, as well as the *Transportation Management Plan Data Sheet* dated February 8, 2021 (Caltrans 2021c).

The project proposes to replace and/or rehabilitate existing drainages along SR 128. The fish passage location at PM 7.27 (Mustard Gulch) would include 4-foot-wide shoulders to accommodate bicyclists and pedestrians at the new bridge. The project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities. Because the project would not increase vehicle miles traveled, it does not conflict with CEQA Guidelines § 15064.3, subdivision (b). Also, the project does not propose changes to geometric design feature (e.g., sharp curves or dangerous intersections) or incorporate incompatible uses (e.g., farm equipment). During the entirety of construction, bicyclists and emergency vehicles would be accommodated. Anticipated traffic control measures would include reversing traffic control with

flagging, reversing traffic control with a temporary signal system, and 10-minute intermittent road closure during culvert replacement. Therefore, potential impacts to transportation are not anticipated.

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 Resources Code § 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.				✓

"**No Impact**" determinations in this section are based on the scope, description, and location of the proposed project, as well as the *Archaeological Survey Report* (ASR) and the *Historic Properties Survey Report* (HPSR) dated October 23, 2024 (Caltrans 2024b and 2024c).

The ASR included literature review, record searches, and consultation with tribes conducted for the Culvert Rehabilitation and Fish Passage Project. The ASR concluded that within the APE there are no tribal cultural resources that would be affected. The project area is located within the Anderson Valley community in Mendocino County from Post Miles 0.00 to 50.50. Due to the proximity of the present-day Redwood Valley Rancheria and Coyote Valley Band of Pomo Indians reservations, they are the most likely to be concerned with this project; however, at this time they have not expressed any concerns.

The Native American Heritage Commission (NAHC) was contacted on August 31, 2022, by a Caltrans archaeologist with a request for a consultation list of tribes, groups, and individuals who have expressed an interest in the project and for a review of the Sacred Lands File for any potential sacred sites within the project vicinity. While waiting for the NAHC's response, the Chairperson and Tribal Historic Preservation Officer (THPO) from Hopland Rancheria, Sherwood Valley Band of Pomo Indians, Coyote Valley Rancheria, and Manchester Point Arena Band of Pomo were sent Section 106 Consultation letters on September 13, 2022. The NAHC responded on October 28, 2022, indicating positive results for sacred sites identified in the project area or vicinity. A list was provided of Native American tribes, groups, and individuals for consultation purposes pursuant to Section 106. On March 29, 2023, the project archaeologist sent Section 106 consultation letters to the tribes, groups, and individuals identified by the NAHC. There have not been any tribal responses regarding this project; however, consultation will remain ongoing and continue for the life of the project.

Based on the above, potential impacts to tribal cultural resources are not anticipated.

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. In the project initiation phase, potential utilities conflicts were identified. There may be buried AT&T facilities present at 11 culvert locations. At approximately 25 culvert locations, there may be PG&E overhead utility conflicts.

In the next phase of the project, the Utility Engineering Workgroups are responsible for determining the location of existing utilities, creating location maps, and conducting potholing activities at those locations to determine if the project has a potential conflict with utilities. Once the potential conflicts are determined, a plan will be developed to address these conflicts.

It is not anticipated that the project would 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. As this is a culvert repair and rehabilitation project, a water supply would not be needed, there would not be wastewater treatment impacts, and solid waste would not be generated. Therefore, potential impacts to utilities and service systems are not anticipated.

2.20 Wildfire

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

Senate Bill 1241 required the Governor's Office of Planning and Research 9 (OPR), the California Natural Resources Agency, and the California Department of Forestry and Fire Protection (CAL FIRE) to develop amendments to the "CEQA Environmental Checklist" for the inclusion of questions related to fire hazard impacts for projects located on lands classified as *very high* Fire Hazard Severity Zones. The 2018 updates to the CEQA Guidelines expanded this to include projects "near" these *very high* Fire Hazard Severity Zones.

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project.

The proposed project area is within the CAL FIRE State Responsibility Area (SRA). The project is within *moderate, high,* and *very high* Fire Hazard Severity Zones. The moderate zone (yellow) for fire hazard severity is from the coast at PM 0.0 to approximately PM 7.8. From there, the project is within the ranges of high (orange) to very high (red) fire hazard severity zones (Figure 8). Although the project is located within high to very high zones, the project would replace or rehabilitate existing drainage systems and would not result in changes to the highway facilities or environment that could exacerbate fire risk.

Certain wildfire adaptation measures will be incorporated into the project. These include utilizing metal or concrete in the drainage systems and installing steel posts for any guardrail that will be replaced or installed. Drainage capacity can be increased or protected by upsizing culverts, particularly in post-fire conditions. The proposed project would not impair an adopted emergency response plan or emergency evacuation plan, exacerbate wildfire risks, or expose people or structures to wildfire risks. Therefore, potential impacts to wildfire are not anticipated.

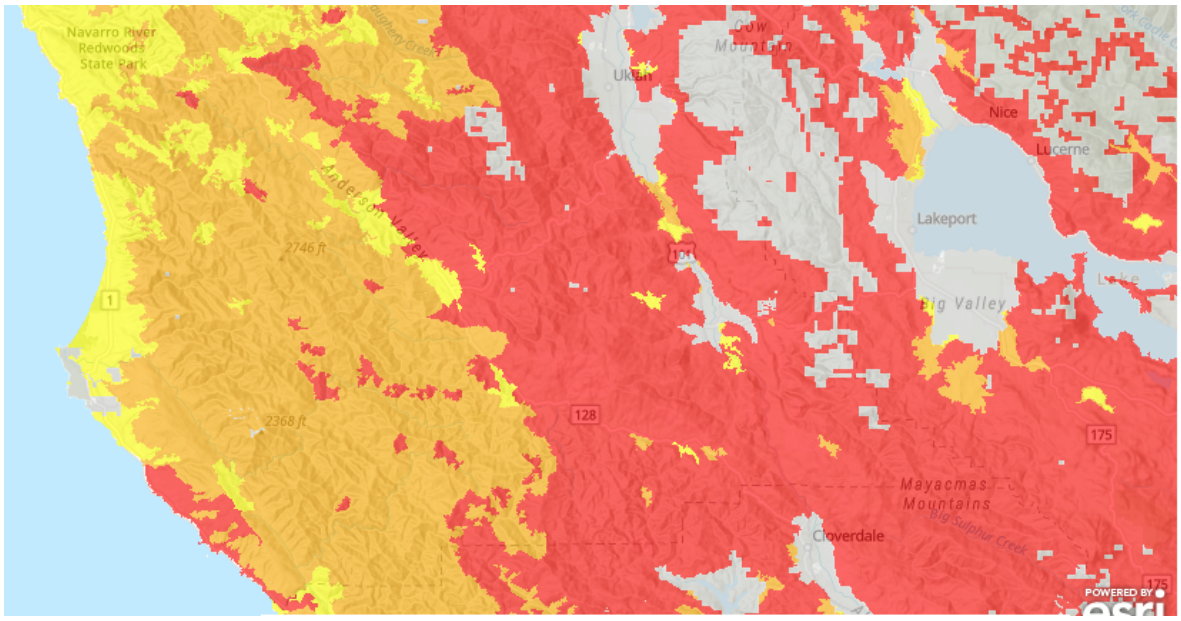


Figure 8. State Route 128 within range of CAL FIRE Fire Hazard Severity Zones

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

The 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. Project analyses indicated that 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.

2.22 Cumulative Impacts

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

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

Per Section 15130 of CEQA, a Cumulative Impact Analysis (CIA) discussion is only required in "…situations where the cumulative effects are found to be significant." This project proposes to replace and/or rehabilitate existing drainage systems and remediate a fish passage barrier. There will not be "significant" direct, indirect, or cumulative impacts on any resource as a result of this project. 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 and tribal consultation and public participation for this project have been accomplished through a variety of formal and informal methods, including Project Development Team (PDT) meetings and interagency coordination meetings. This chapter summarizes the results of Caltrans' efforts to identify, address, and resolve project-related issues through early and continuing coordination.

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

Coordination with Resource Agencies

Table 16 below represents the resource agency coordination date, personnel and purpose of the coordination.

Table 16. Agency Coordination and Professional Contacts

Date	Personnel	Purpose of Coordination
July 18, 2023	Rick Macala (CDFW) Greg O'Connell (CDFW) Fariar Kohzad (Caltrans) Susan Leroy (Caltrans) Zack Larsen (Caltrans) Laurel Osborn (Caltrans)	Field meeting with CDFW to assess fish passage location at Post Mile 7.27 (Mustard Gulch).
December 5, 2023	USFWS Arcata Office Rose Dana (Caltrans)	Request for federally listed species list/consultation with USFWS.
August 8, 2024	Terra Fuller (State Parks) Rose Dana (Caltrans) Laurel Osborn (Caltrans) Navid Bahramian (Caltrans)	Field meeting with California State Parks to discuss the fish passage location at PM 7.27.
August 21, 2024	Greg Schmidt (USFWS) Rose Dana (Caltrans)	Consultation and technical assistance regarding MAMU and NSO.
August 23, 2024	USFWS Arcata Office Rose Dana (Caltrans)	Request for federally listed species list .

Date	Personnel	Purpose of Coordination
August 23, 2024	NMFS West Coast Region Office Rose Dana (Caltrans)	Request for federally listed aquatic species list.

Coordination with Property Owners

Permits to Enter (PTE) were obtained from 17 property owners at 12 locations in order to complete the required environmental studies for ESL locations outside of the existing right of way.

According to the Right of Way Datasheet completed on July 29, 2024 (Caltrans 2024f), Temporary Construction Easements (TCE) and drainage easements may be required at 45 parcels, totaling approximately 4.41 acres. Coordination with property owners will continue once appraisal maps and utility conflict maps are received and the project is in the design phase.

Additionally, there are 14 drainage locations within California State Parks. However, other than the work at PM 7.27 (Mustard Gulch), all work would occur within the existing state right of way. A Right of Entry (ROE) would be required from California State Parks (Navarro River Redwoods State Park) for the work proposed at PM 7.27 (Mustard Gulch).

Circulation

A draft of this document was circulated for public review from November 8, 2024 to December 20, 2024.

CHAPTER 4. LIST OF PREPARERS

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

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CHAPTER 6. REFERENCES

Agrawal, Anurag A. 2019. Advances in understanding the long-term population decline of monarch butterflies. Proceedings of the National Academy of Sciences USA; 116(17):8093-8095.

Alabaster, J. S. and R. Lloyd. 1982. Water Quality Criteria for Freshwater Fish. Second Edition. FAO, Butterworths. 361 pp.

Anderson, J. D. 1968. Rhyacotriton, and R. olympicus. Cat. Am. Amphibians and Reptiles 68.1-68.2.

Bash, J., Berman, C. H. and Bolton, S., 2001. Effects of turbidity and suspended solids on salmonids. University of Washington Water Center.

Baye, P. 2000. Electronic mail to Ellen Cypher, Endangered Species Recovery Program, Bakersfield, California. 1 page.

Behler, J. L., and F. W. King. 1979. The Audubon Society Field Guide to North American Reptiles and Amphibians. Alfred Knopf, New York. 743 pp.

Bingham, B. B. and B. R. Noon. 1997. Migration of habitat "Take": application to habitat conservation planning. Conservation Biology 11(1):127-139.

Bjorkstedt, E. P., B. C. Spence, J. C. Garza, D. G. Hankin, D. Fuller, W. E. Jones, J. J. Smith, and R. Macedo. 2005. An Analysis of Historical Population Structure for Evolutionary Significant Units of Chinook Salmon, Coho Salmon, and Steelhead in the North-Central California Coast Recovery Domain. NOAA Technical Memorandum, NOAA-TM-NMFS-SWFSC-382.

Bourque, R. 2008. Spatial ecology of an inland population of the foothill yellow-legged frog (*Rana boylii*) in Tehama County, California. Arcata, CA: Humboldt State University. 93 p. M.S. thesis.

Boyle, J. H., H. J. Dalgleish, J. R. Puzey. 2019. Monarch butterfly and milkweed declines substantially predate the use of genetically modified crops. Proceedings of the National Academy of Sciences, USA; 116:3006-3011.

Buehler, D. A. 2000. Bald Eagle (*Haliaeetus leucocephalus*). In The Birds of North America, No. 564 (A. Poole and F. Gill, eds.). The Birds of North America Online. Ithaca, New York.

Burgner, R. L., J. T. Light, L. Margolis, T. Okazaki, A. Tautz, and S. Ito. 1992. Distribution and origins of steelhead trout (*Oncorhynchus mykiss*) in offshore waters of the north Pacific Ocean. International North Pacific Fisheries Commission Bulletin 51:1-92.

Bury, R. Bruce. 1968. The distribution of Ascaphus truei in California. Herpetologica, 24: 39-46. Accessed December 2023.

Bury, R. B., and P. S. Corn. 1988. Douglas-fir forests in the Oregon and Washington Cascades: relation of the herpetofauna to stand age and moisture. *In:* Szaro, R. C., K. E. Severson, and D. R. Patton, (eds.). Management of Amphibians, Reptiles, and Small Mammals in North America. USDA For. Serv. Gen. Tech. Rept. RM-166. pp. 11-20. https://www.fs.fed.us/rm/pubs_rm/rm_gtr166.pdf. Accessed December 2023.

Calef, G. W. 1973. Natural mortality of tadpoles in a population of Rana aurora. Ecology 54:741-758.

CalFlora: Information on California plants for education, research and conservation. [web application]. 2024. Berkeley, California: The CalFlora Database [a nonprofit organization]. Available: URL: http://www.calflora.org/. [Accessed: August 2024]

California Air Resources Board (ARB). 2008. *Climate Change Scoping Plan Appendices. Volume II: Analysis and Documentation*. Appendix I, p. I-19. December. https://ww3.arb.ca.gov/cc/scopingplan/document/scopingplandocument.htm. Accessed: June 14, 2024.

_____. 2021. *SB 375 Regional Plan Climate Targets*. https://ww2.arb.ca.gov/our-work/programs/sustainable-communities-program/regional-plan-targets. Accessed: June 14, 2024.

_____. 2022a. *2022 Scoping Plan for Achieving Carbon Neutrality*. Executive Summary. https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan/2022-scoping-plan-documents. Accessed: June 14, 2024.

_____. 2022b. *Climate Change*. https://ww2.arb.ca.gov/our-work/topics/climate-change. Accessed: June 14, 2024.

_____. 2023. *California Greenhouse Gas Emissions Inventory Data–2023 Edition, 2000-2021*. https://ww2.arb.ca.gov/ghg-inventory-data. Accessed: June 14, 2024.

California Department of Fish and Wildlife. 2016. California Department of Fish and Wildlife Plan for Assessment and Management of California Coastal Chinook Salmon. CDFW Fisheries Administrative Report 2016-02.

_____. 2018a. Considerations for Conserving the Foothill Yellow-legged Frog, California Department of Fish and Wildlife; May 14, 2018. http://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=157562. Accessed December 2023.

_____. 2018b. *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities*. https://wildlife.ca.gov/Conservation/Survey-Protocols#377281280-plants

_____. 2022. Aquatic Invasive Species Cleaning/Decontamination Protocol (Northern Region). https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=43333. Accessed October 2024.

_____. 2024a. California Natural Diversity Database - RareFind 5 for commercial subscribers. https://wildlife.ca.gov/Data/CNDDB. Accessed January 2024.

_____. 2024b. Areas of Conservation Emphasis Online Viewer. https://apps.wildlife.ca.gov/ace/. Accessed January 2024.

_____. 2024c. Special Vascular Plants, Bryophytes, and Lichens List. https://wildlife.ca.gov/Data/CNDDB/Plants-and-Animals. Accessed January 2024.

_____. 2024d. State and Federally Listed Endangered, Threatened, and Rare Plants of California. https://wildlife.ca.gov/Data/CNDDB. Accessed January 2024.

_____. 2024e. State and Federally Listed Endangered and Threatened Animals of California. https://wildlife.ca.gov/Data/CNDDB/Plants-and-Animals. Accessed January 2024.

California Department of Food and Agriculture. 2021. California Noxious Weeds. https://www.cdfa.ca.gov/plant/IPC/encycloweedia/weedinfo/winfo_table-sciname.html. Accessed December 2023.

California Department of Transportation (Caltrans). 2019. *Caltrans Climate Change Vulnerability Assessments*. District 1 Technical Report. Prepared by WSP. https://dot.ca.gov/programs/transportation-planning/2019-climate-change-vulnerability-assessments.

_____. 2020. *Caltrans Greenhouse Gas Emissions and Mitigation Report*. Final. August. Prepared by ICF, Sacramento, CA. https://dot.ca.gov/programs/public-affairs/mile-marker/summer-2021/ghg. Accessed: November 13, 2023.

_____. 2021a. *California Transportation Plan* 2050. February. https://dot.ca.gov/programs/transportation-planning/division-of-transportation-planning/state-planning-equity-and-engagement/california-transportation-plan. Accessed: November 13, 2023.

_____. 2021b. *Caltrans 2020-2024 Strategic Plan.* https://storymaps.arcgis.com/stories/f190b9755a184b268719dac9a11153f7. Accessed: November 13, 2023.

_____. 2021c. Transportation Management Plan Data Sheet. Eureka, CA: unpublished.

_____. 2023a. *District 1 Work Plan*.

_____. 2023b. Initial Site Assessment. Eureka, CA: unpublished.

_____. 2023c. *Caltrans Project Planning and Design Guide (PPDG)*.

_____. 2023d. *Sustainable Operations at Caltrans–Sustainability Roadmap.* https://dot.ca.gov/programs/esta/sustainable-caltrans. Accessed: November 13, 2023.

_____. 2024a. Air Quality and Noise Analysis Memorandum. Eureka, CA: unpublished.

_____. 2024b. Archaeological Survey Report. Eureka, CA: unpublished.

_____. 2024c. Historic Properties Survey Report. Eureka, CA: unpublished.

_____. 2024d. Natural Environment Study. Eureka, CA: unpublished.

_____. 2024e. Paleontological Identification Report. Eureka, CA: unpublished.

_____. 2024f. Right of Way Datasheet. Eureka, CA: unpublished.

_____. 2024g. Stormwater Data Report. Eureka, CA: unpublished.

_____. 2024h. Visual Impact Assessment Memorandum. Eureka, CA: unpublished.

_____. 2024i. Water Quality Assessment Report. Eureka, CA: unpublished.

_____. 2024j. Water Quality Planning Tool. http://svctenvims.dot.ca.gov/wqpt/wqpt.aspx. Accessed: March 27, 2024.

California Environmental Protection Agency. 2015. *California Climate Strategy–An Integrated Plan for Addressing Climate Change.*

California Governor's Office of Planning and Research (OPR). 2015. *A Strategy for California @ 50 Million*. November. https://opr.ca.gov/planning/environmental-goals/. Accessed: November 13, 2023.

California Invasive Plant Council (Cal-IPC). 2023. The Cal-IPC Inventory. https://www.cal-ipc.org/plants/inventory/. Accessed December 2023.

CalFlora: Information on California plants for education, research and conservation. [web application]. 2024. Berkeley, California: The CalFlora Database [a nonprofit organization]. Available: URL: http://www.calflora.org/. [Accessed: August 2024]

California Native Plant Society (CNPS) (Rare Plant Program). 2024. Inventory of Rare and Endangered Plants of California (online edition, v9-01 1.5). Website http://www.rareplants.cnps.org. Accessed January 2024.

California Natural Resources Agency. 2022. *Nature-Based Climate Solutions: Natural and Working Lands Climate Smart Strategy.* https://resources.ca.gov/Initiatives/Expanding-Nature-Based-Solutions. Accessed: November 13, 2023.

_____. 2023. *California Climate Adaptation Strategy.* https://resources.ca.gov/Initiatives/Building-Climate-Resilience/2021-State-Adaptation-Strategy-Update. Accessed: November 13, 2023.

California Ocean Protection Council. 2022. *State Agency Sea-Level Rise Action Plan for California.* February. https://www.opc.ca.gov/climate-change/sea-level-rise-2/. Accessed: November 13, 2023.

California State Transportation Agency. 2021. *Climate Action Plan for Transportation Infrastructure (CAPTI).* https://calsta.ca.gov/subject-areas/climate-action-plan. Accessed: November 13, 2023.

California Wildlife Habitat Relationships (CWHR). 2005. Life History Account of White-Tailed Kite (Elanus leucurus). California Department of Fish and Wildlife. California Interagency Wildlife Task Group. https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=1659&inline=1. Accessed January 2024.

Climate-Safe Infrastructure Working Group. 2018. *Paying it Forward: The Path Toward Climate-Safe Infrastructure in California*. September. https://resources.ca.gov/CNRALegacyFiles/docs/climate/ab2800/AB2800_Climate-SafeInfrastructure_FinalNoAppendices.pdf. Accessed: November 13, 2023.

County of Mendocino. 2020. *Mendocino County General Plan.* https://www.mendocinocounty.gov/government/planning-building-services/plans/mendocino-county-general-plan. Accessed June 5, 2024.

_____. 2024. Mendocino Code of Ordinances; Coastal Zoning Code; CHAPTER 20.496 – Environmentally Sensitive Habitat and Other Resources Areas.

https://library.municode.com/ca/mendocino_county/codes/code_of_ordinances?nodeId=MECOCO_TIT20ZOOR_DIVIIIMECOCOZOCO_CH20.496ENSEHAOTREAR_S20.496.010PU.

Cowardin, L. M., Carter, V., Golet, F., and LaRoe, E. 1979. Classification of Wetlands and Deepwater Habitats of the United States. U.S. Department of the Interior. U.S. Fish and Wildlife Service. FWS/OBS-79/31.

Daugherty, C. H., and A. C. Sheldon. 1982. Age specific movements of the frog Ascaphus truei. Herpetologica, 38:468474. https://www.jstor.org/stable/3892177?seq=1#metadata_info_tab_contents. Accessed December 2023.

Dobkin, D. and S. Granholm. 2008. Grasshopper Sparrow. In Wildlife Habitat Relationships System. California Interagency Wildlife Task Group Database. Version 8.1. California Department of Fish and Wildlife. https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=2163&inline=1. Accessed January 2024.

Everest, F. H., and D. W. Chapman. 1972. Habitat selection and spatial interaction by juvenile Chinook salmon and steelhead trout. Journal of the Fisheries Research Board of Canada. 29:91-100.

Federal Highway Administration (FHWA). 2006. U.S. Department of Transportation Construction Noise Handbook. https://rosap.ntl.bts.gov/view/dot/8837/dot_8837_DS1.pdf. Accessed October 2024.

_____. 2022. *Sustainability*. https://www.fhwa.dot.gov/environment/sustainability/resilience/. Accessed: November 13, 2023.

_____. No date. *Sustainable Highways Initiative*. https://www.fhwa.dot.gov/environment/sustainability/initiative/. Accessed: November 13, 2023.

Gutierrez, R. J., A. B. Franklin, and W. S. LaHaye. 1995. Spotted owl (Strix occidentalis). In A. Poole and F. Gill, editors. The Birds of North America 179. Washington, D.C., USA.

Harris, J., Brown P., Alley, D., and R. Duke. 2000a. Pallid bat Fact Sheet: Distribution, abundance, and seasonality. California Wildlife Habitat Relationships System, California Department of Fish and Wildlife, California Interagency Wildlife Task Group. https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=2349. Accessed October 2024.

_____. 2000b. Townsend's big-eared bat Fact Sheet: Distribution, abundance, and seasonality. California Wildlife Habitat Relationships System, California Department of Fish and Wildlife, California Interagency Wildlife Task Group. https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=2347. Accessed October 2024.

Hayes, M. P. and M. R. Jennings. 1988. Habitat correlates of the distribution of California red-legged frog (Rana aurora draytonii) and foothill yellow-legged frog (Rana boylii): implications for management. *In:* Szaro, R.C.; Severson, K.E.; Patton, D.R., tech. coords. Proceedings of a symposium on the management of amphibians, reptiles, and small mammals in North America, Gen. Tech. Rep. RM-GTR-166. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Forest and Range Experiment Station: 144–158.

Healey, M. C., 1991. Life history of Chinook salmon (*Oncorhynchus tshawytscha*). In: Groot, C., Margolis, L. (Eds.), Pacific Salmon Life Histories. UBC Press, Vancouver, BC, pp. 311e391.

Holland, D. C. 1994. The Western pond turtle: habitat and history. Unpublished final report, U. S. Dept. of Energy, Portland, Oregon.

Hunter, J. E., D. Fix, G. A. Schmidt, and J. C. Power. 2005. Atlas of the Breeding Birds of Humboldt County, California. Redwood Region Audubon Society. Eureka, CA.

Jennings, M. R., and M. P. Hayes. 1994. Amphibian and reptiles species of special concern in California. California Department of Fish and Game, Inland Fisheries Division, Rancho Cordova, California.

Jennings, C. W. and Strand, R. G. 1960. Geologic Map of California, Olaf P. Jenkins Edition Ukiah Sheet.

LaHaye, W. S. and R . J. Gutiérrez. 1999. Nest Sites and Nesting Habitat of The Northern Spotted Owl in Northwestern California. Condor 101(2):324-330.

Maser, C., B. R. Mate, J. F. Franklin, and C. T. Dyrness. 1981. Natural history of Oregon coast mammals. Pac. Northwest For. And Range Exp. Sta., USDA, For. Serv., Gen. Tech. Rep., PNW-133. 496pp.

McMichael, G. A., A. L. Fritts, and T. N. Pearsons. 1998. Electrofishing injury to stream salmonids; injury assessment at the sample, reach, and stream scales. North American Journal of Fisheries Management, 18(4), pp.894-904.

Meehan, T. C., and Bjornn W. R. 1991. Influences of forest and rangeland management on salmonid fishes and their habitats. American Fisheries Society Special Publ. 19, Bethesda, Maryland.

Mendocino Council of Governments (MCOG). 2022. *2022 Mendocino County Regional Transportation Plan & Active Transportation Plan.* https://www.mendocinocog.org/files/653d21e36/2022+RTP-ATP+Feb+2022-Final+Adopted.pdf. Accessed June 5, 2024.

Moyle, P. B. 2002. *Inland fishes of California*: University of California Press, Berkeley, CA 502p.

Moyle, P. B., R. M. Quiñones, J. V. Katz and J. Weaver. 2015. Russian River Roach (Lavinia symmetricus ssp.) Account in Fish Species of Special Concern in California. Sacramento: California Department of Fish and Wildlife. https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=104365&inline

National Marine Fisheries Service (NMFS). 2000. Guidelines for Electrofishing Waters Containing Salmonids Listed Under the Endangered Species Act. https://media.fisheries.noaa.gov/dam-migration/electro2000.pdf. Accessed October 2024.

_____. 2016. Final Coastal Multispecies Recovery Plan: California Coastal Chinook Salmon, Northern California Steelhead, and Central California Coast Steelhead. U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service.

_____. 2024. NMFS California Species List Tool website. http://www.westcoast.fisheries.noaa.gov/maps_data/california_species_list_tools.html. Accessed January 2024.

National Oceanic and Atmospheric Administration (NOAA). October 18, 2013. *NMFS and Caltrans Programmatic Biological Opinion.* United States Department of Commerce, National Oceanic and Atmospheric Science. Letter to: Amy Bailey, Chief California Department of Transportation, Division of Environmental Analysis, Biological Studies and Technical Analysis Office; and Lieutenant Colonel John K. Baker, Commander and District Engineer, United State Army Corps of Engineers, San Francisco District Headquarters.

_____. 2022. *2022 Sea Level Rise Technical Report.* https://oceanservice.noaa.gov/hazards/sealevelrise/sealevelrise-tech-report.html. Accessed: November 13, 2023.

_____. 2023. Boonville, California, 2000 to 2023. Applied Climate Information System. Regional Climate Center. https://agacis.rcc-acis.org/?fips=06013. Accessed December 2023.

Newcombe, C. P. and Jensen, J. O., 1996. Channel suspended sediment and fisheries: a synthesis for quantitative assessment of risk and impact. North American Journal of Fisheries Management, 16(4), pp.693-727.

North Coast Regional Water Quality Control Board (NCRWQCB). 2000. Navarro River Watershed Technical Support Document for the Total Maximum Daily Load for Sediment and Temperature. Access August 2024: https://www.waterboards.ca.gov/northcoast/water_issues/programs/tmdls/navarro_river/navarrotsd.pdf

_____. 2018. *Water Quality Control Plan for the North Coast Region*.

Nussbaum, R. A., E. Brodie, and T. Storm. 1983. Amphibians and reptiles of the Pacific Northwest. University of Idaho Press, Moscow, Idaho. 322 pp.

Pacific Forest Trust. 2018 Pacific Tailed Frog. https://www.pacificforest.org/species/pacific-tailed-frog/ Accessed December 2023.

Petranka, J. W. 1998. Salamanders of the United States and Canada. Washington and London: Smithsonian Institution Press.

Robertson, E. L., 2006. Investigating the cause (s) of benthic macroinvertebrate community impairment downstream of two Saskatchewan uranium operations (Doctoral dissertation, University of Saskatchewan).

Saunders, S. P., Ries, L., Neupane, N., Ramirez, M. I., Garcia-Serrano, E., Rendon-Salinas, E., et al. 2019. Multiscale seasonal factors drive the size of winter monarch colonies. Proceedings of the National Academy of Sciences (PNAS U.S.A). 116, 8609–8614.

Shaffer, H. B., G. M. Fellers, S. R. Voss, J. C. Oliver and G. B. Pauly. 2004. Species boundaries, phylogeography and conservation genetics of the red-legged frog (Rana aurora/draytonii) complex. Molecular Ecology 13:2667-2677.

Shuford, W. D., and T. Gardali. 2008. California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California. Studies of Western Birds 1. Western Field Ornithologists, Camarillo, California, and California Department of Fish and Game, Sacramento. https://wildlife.ca.gov/Conservation/SSC/Birds#book. Accessed January 2024.

Shultz, C. B., Brown, L. M., Pelton, E., Crone, E. E. 2017. Citizen science monitoring demonstrates dramatic declines of monarch butterflies in western North America. Biological Conservation: 214:343-346.

Spence, B. C., E. P. Bjorkstedt, J. C. Carlos, J. J. Smith, D. G. Hankin, D. Fuller, W. W. Jones, R. Macedo, T. H. Williams, and E. Mora. 2008. A Framework for Assessing the Viability of Threatened and Endangered Salmon and Steelhead in the North-Central California Coast Recovery Domain Unit. NOAA Technical Memorandum, NOAA-TM-NMFS-SWFSC423.

State of California. 2018a. *California's Fourth Climate Change Assessment.* http://www.climateassessment.ca.gov/. Accessed: November 13, 2023.

_____. 2018b. Sea-Level Rise Guidance Update. https://www.opc.ca.gov/webmaster/ftp/pdf/agenda_items/20180314/Item3_Exhibit-A_OPC_SLR_Guidance-rd3.pdf. Accessed: August 6, 2024.

State Water Resources Control Board (SWRCB). 2022. *2020/2022 California Integrated Report (Clean Water Act Section 303[d] List/305[b] Report).*

_____. 2024. GeoTracker. https://geotracker.waterboards.ca.gov. Accessed: March 27, 2024.

Stebbins, R. C. 1951. Amphibians of western North America. Univ. California Press, Berkeley. 538 pp.

_____. 1954. Amphibians and reptiles of western North America. McGraw-Hill, New York. 536pp.

Storer, T. I. 1925. A synopsis of the Amphibia of California. Univ. Calif. Publ. Zool. 27:1-342.

Thomson R. C., A. N. Wright, H. B. Shaffer. 2016. California amphibian and reptile species of special concern. University of California Press, Oakland, CA. 390 pp.

U.S. Department of Agriculture (USDA)–Natural Resources Conservation Service (NRCS). 2023. Web soil survey. Soil Survey of Mendocino County, California, Western Part and Soil Survey of Mendocino County, Eastern Part, and Trinity County, Southwestern Part, California. https://www.nrcs.usda.gov/conservation-basics/natural-resource-concerns/soil/soil-surveys-by-state. Accessed December 2023.

U.S. Department of Transportation (U.S. DOT). 2014. *Corporate Average Fuel Economy (CAFE) Standards*. https://www.transportation.gov/mission/sustainability/corporate-average-fuel-economy-cafe-standards. Accessed: November 13, 2023.

_____. 2023. *Climate Action*. January. https://www.transportation.gov/priorities/climate-and-sustainability/climate-action. Accessed: November 13, 2023.

U.S. Environmental Protection Agency (U.S. EPA). 2000. *Navarro River TMDLs for Temperature and Sediment (December 2000 Final)*.

_____. 2024a. *Data Highlights*. Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2022. https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks. Accessed: June 14, 2024.

_____. 2024b. *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2022*. https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks. Accessed: June 14, 2024.

U.S. Fish and Wildlife Service (USFWS). 1997. Recovery Plan for the threatened marbled murrelet (*Brachyramphus marmoratus*) in Washington, Oregon and California. Portland, Oregon, 203 pp.

_____. 2008. Endangered and threatened wildlife and plants; designation of critical habitat for the marble murrelet (*Brachyramphus marmoratus*). Federal Register, Vol. 73 No. 45: 12067-12068. March 6, 2008.

_____. 2020. *Revised Transmittal on Guidance–Estimating the Effects of Auditory and Visual Disturbance to Northern Spotted Owl and Marbled Murrelets in Northwestern California*. Technical Guidance prepared by USFWS for the California Department of Transportation.

_____. 2022. Reinitiation of Informal Consultation for the California Department of Transportation's Routine Maintenance and Repair Activities, and Small Projects Program for Districts 1 and 2; Programmatic Letter of Concurrence (PLOC). Project Code 2022-0062929. Arcata Fish and Wildlife Office.

_____. 2024a. National Wetlands Inventory. Available: http://www.fws.gov/wetlands/. Accessed January 2022.

_____. 2024b. Information for Planning and Consultation. Available online at https://ecos.fws.gov/ipac/. Accessed January 2024.

U.S. Geological Survey. 2024. National Hydrography Dataset. https://www.usgs.gov/national-hydrography/national-hydrography-dataset. Accessed January 2024.

U.S. Global Change Research Program. 2023. *Fifth National Climate Assessment.* https://nca2023.globalchange.gov/chapter/front-matter/. Accessed: November 21, 2023.

Wagner, D. L. and Bortugno, E. J. 1982. Geologic Map of the Santa Rosa Quadrangle, California, 1:250,000. Regional Geologic Map Series, Santa Rosa Quadrangle - Map No. 2A

Welsh, H. H., Jr. 1990. Relictual amphibians and old-growth forests. Conservation Biology, 4:309-319. https://www.fs.fed.us/psw/publications/welsh/welsh9.pdf. Accessed December 2023.

Western Regional Climate Center (WRCC). 2024a. Cloverdale 1 S (041837). https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca1837. Accessed: March 25, 2024.

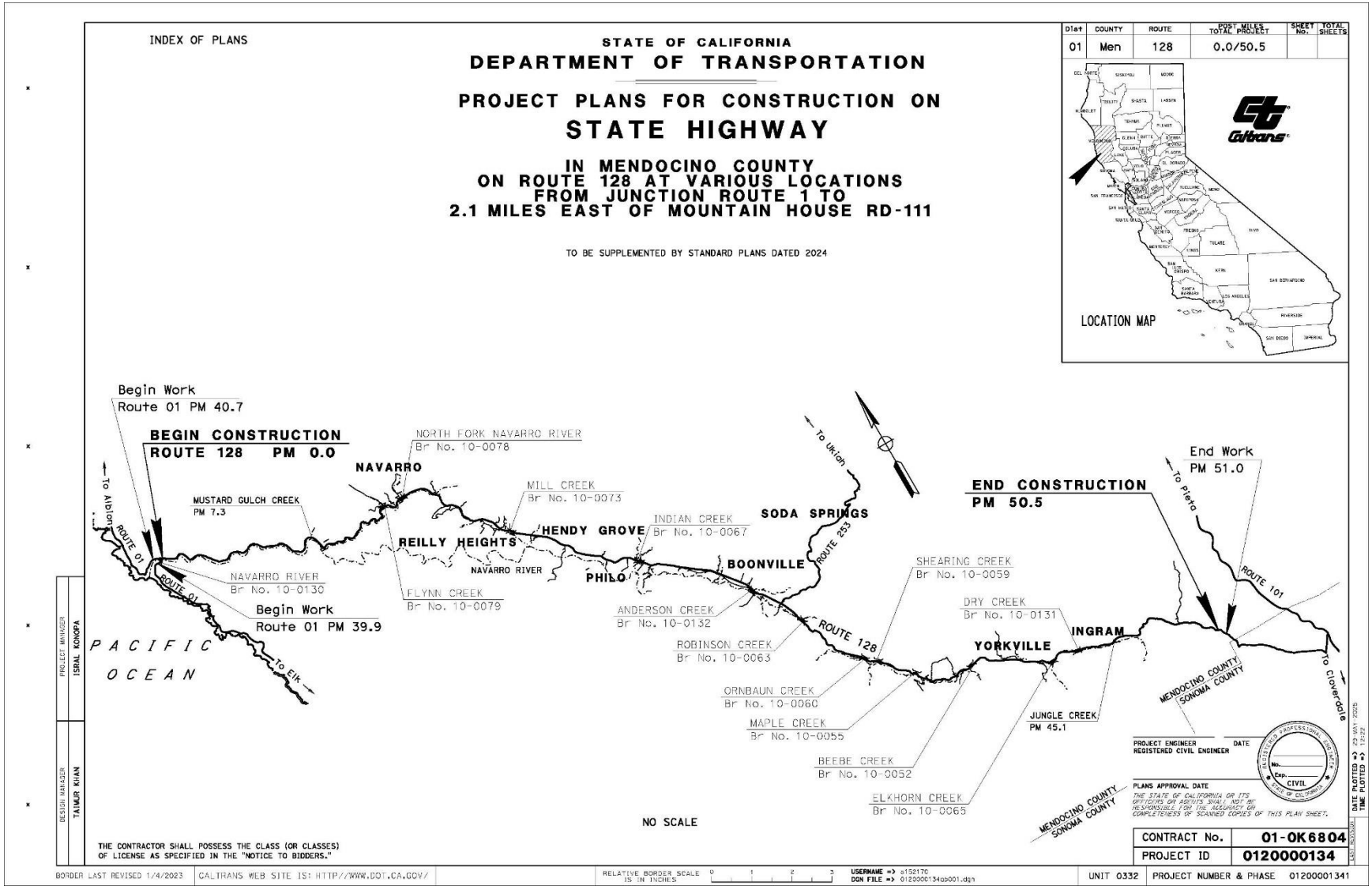
_____. 2024b. Boonville HMS (040973). https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca0973. Accessed: March 25, 2024.

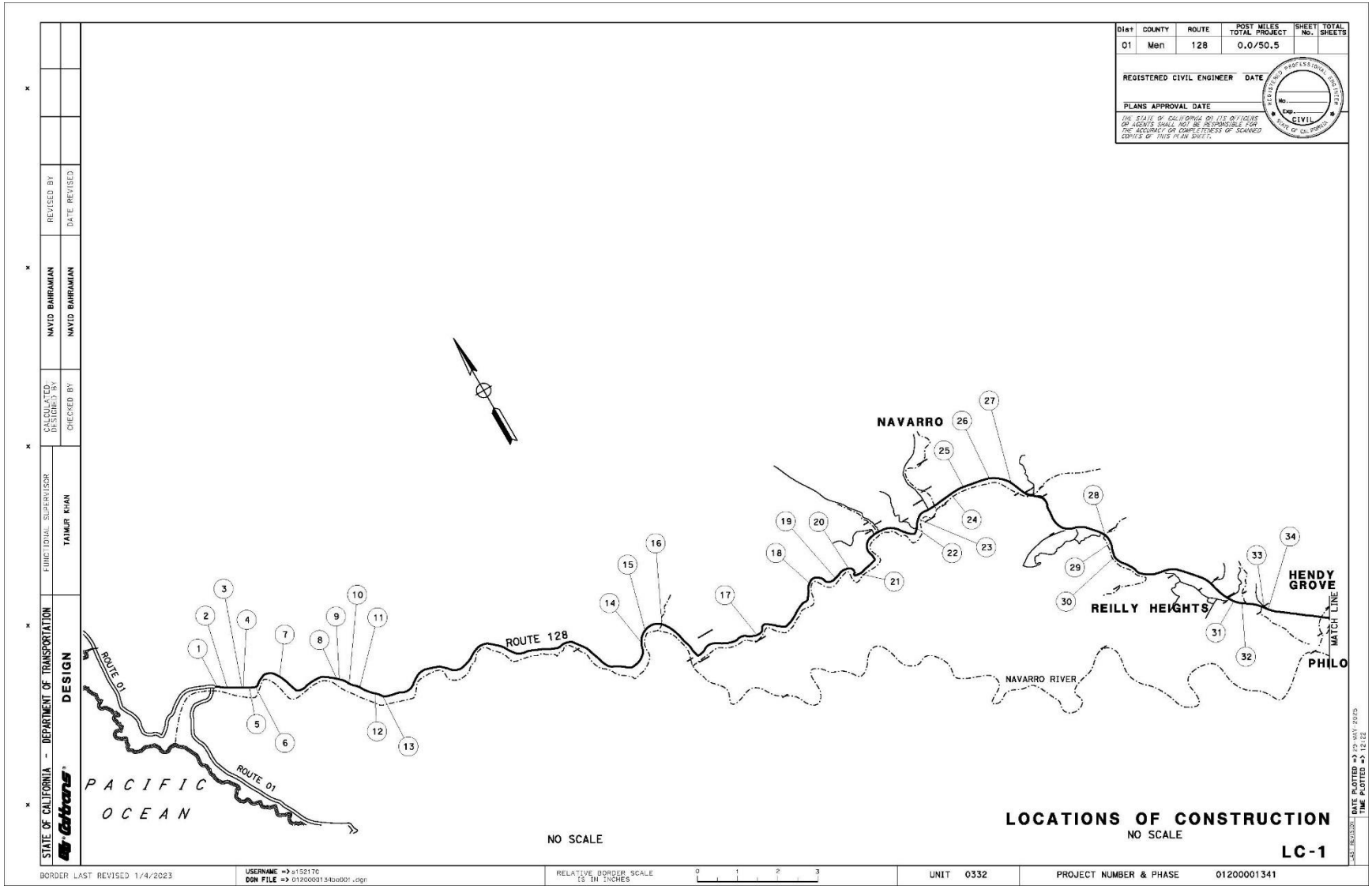
_____. 2024c. FT Bragg (043164). https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca3164. Accessed: March 25, 2024.

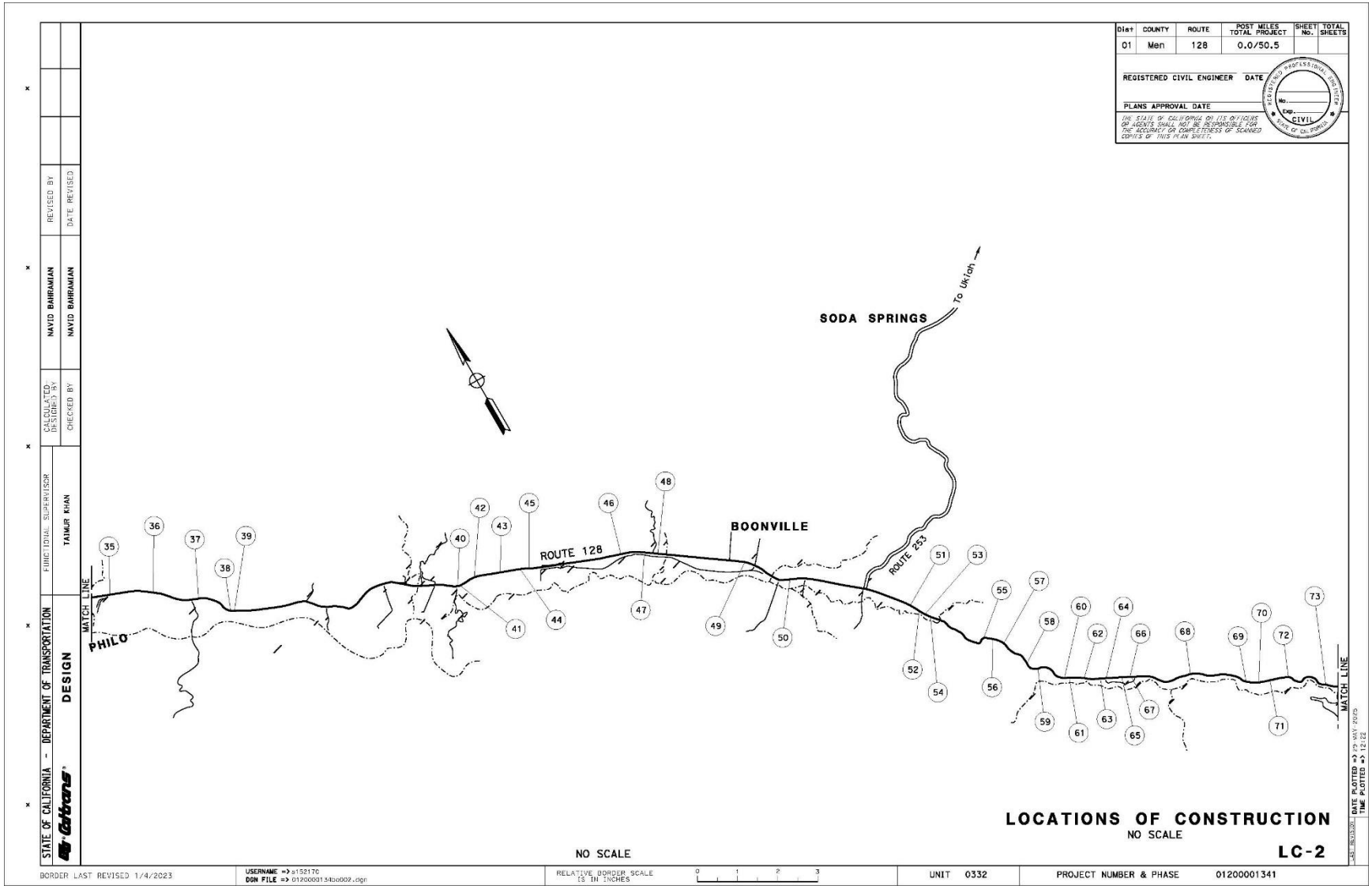
Zeiner, D. C., W. F. Laudenslayer, Jr., K. E. Mayer, and M. White, eds. 1990. California's wildlife. Volume I. Amphibians and reptiles. Sacramento: California Department of Fish and Game.

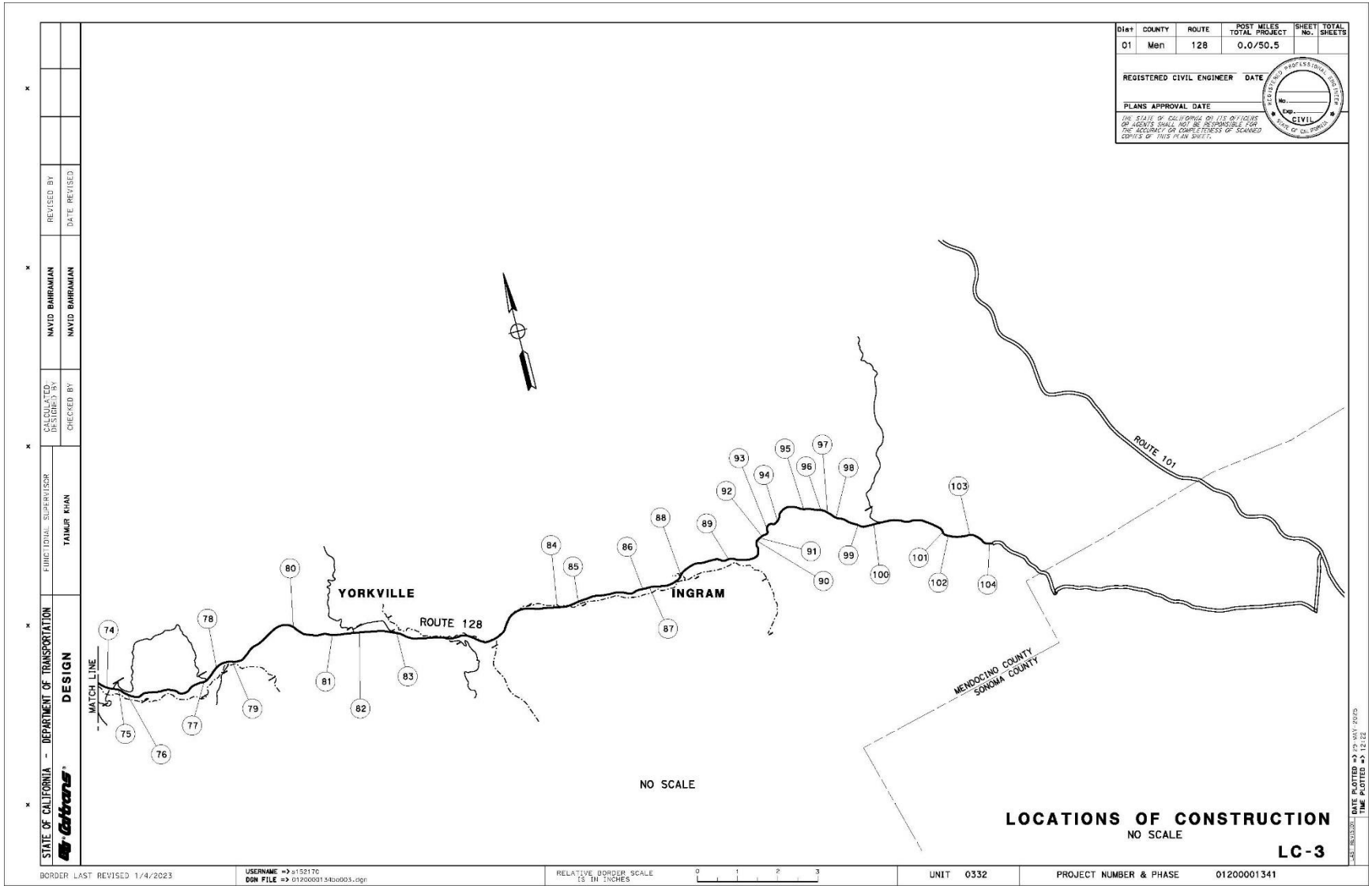
Appendix A. Project Layouts

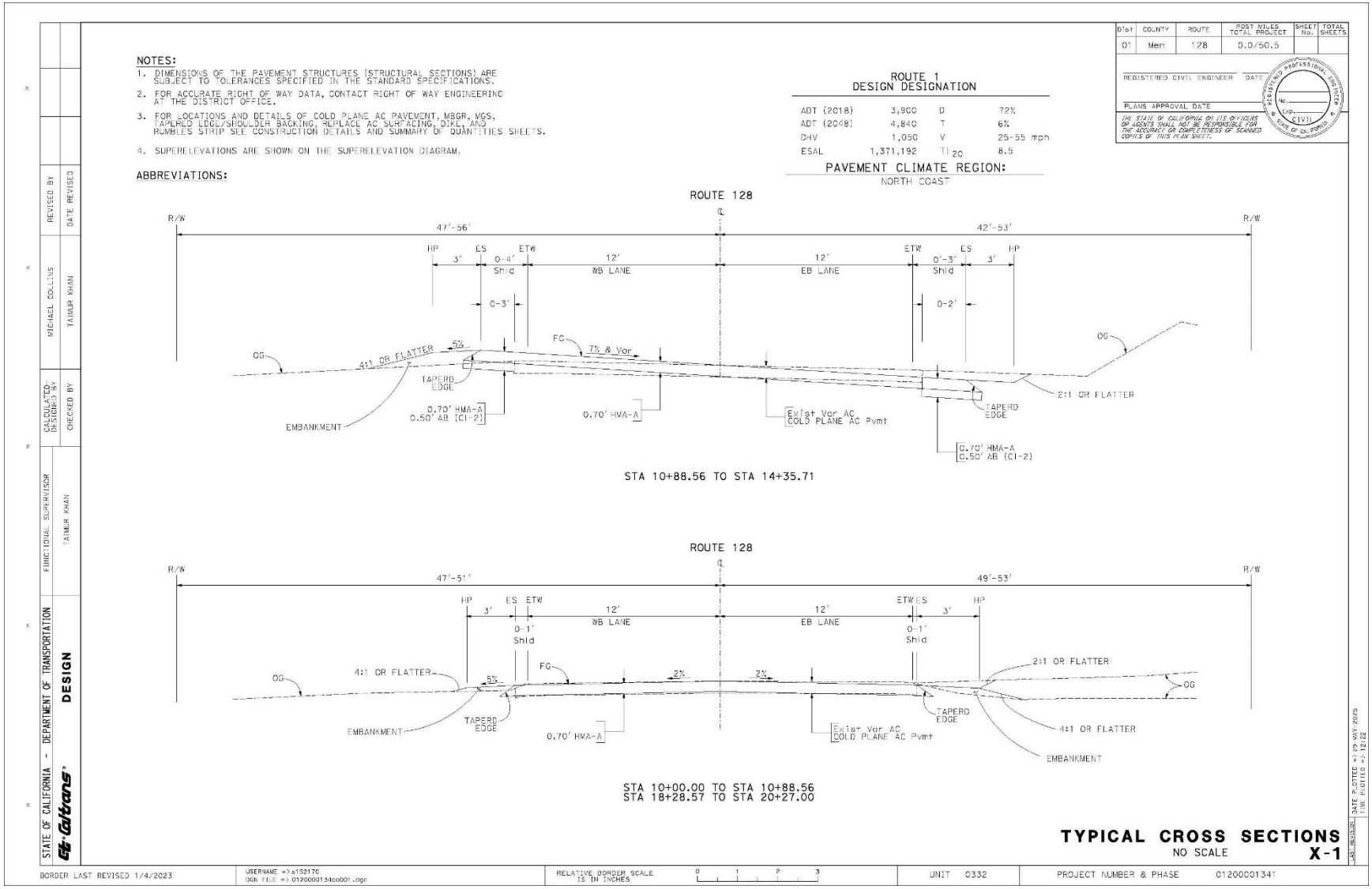



INDEX OF PLANS
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
PROJECT PLANS FOR CONSTRUCTION ON
STATE HIGHWAY
IN MENDOCINO COUNTY
ON ROUTE 128 AT VARIOUS LOCATIONS
FROM JUNCTION ROUTE 1 TO
2.1 MILES EAST OF MOUNTAIN HOUSE RD-111
TO BE SUPPLEMENTED BY STANDARD PLANS DATED 2024
Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS
01 | Men | 128 | 0.0/50.5
LOCATION MAP
Begin Work
Route 01 PM 40.7
BEGIN CONSTRUCTION
ROUTE 128 PM 0.0
NORTH FORK NAVARRO RIVER
Br No. 10-0078
NAVARRO
MILL CREEK
Br No. 10-0073
MUSTARD GULCH CREEK
PM 7.3
To Albion
ROUTE 01
INDIAN CREEK
Br No. 10-0067
HENDY GROVE
REILLY HEIGHTS
NAVARRO RIVER
PHILO
SODA SPRINGS
To Ukiah
ROUTE 253
BOONVILLE
END CONSTRUCTION
PM 50.5
End Work
PM 51.0
To Pieta
ROUTE 101
NAVARRO RIVER
Br No. 10-0130
FLYNN CREEK
Br No. 10-0079
Begin Work
Route 01 PM 39.9
ROUTE 01
SHEARING CREEK
Br No. 10-0059
DRY CREEK
Br No. 10-0131
ANDERSON CREEK
Br No. 10-0132
ROBINSON CREEK
Br No. 10-0063
ROUTE 128
INGRAM
YORKVILLE
PACIFIC
OCEAN
To Elk
ORNBAUN CREEK
Br No. 10-0060
MAPLE CREEK
Br No. 10-0055
JUNGLE CREEK
PM 45.1
MENDOCINO COUNTY
SONOMA COUNTY
To Cloverdale
BEEBE CREEK
Br No. 10-0052
ELKHORN CREEK
Br No. 10-0065
MENDOCINO COUNTY
SONOMA COUNTY
NO SCALE
PROJECT ENGINEER
REGISTERED CIVIL ENGINEER
DATE
PLANS APPROVAL DATE
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.
PROJECT MANAGER ISRAL KONOPA
DESIGN MANAGER TAIMUR KHAN
THE CONTRACTOR SHALL POSSESS THE CLASS (OR CLASSES) OF LICENSE AS SPECIFIED IN THE "NOTICE TO BIDDERS."
CONTRACT No. 01-0K6804
PROJECT ID 0120000134
BORDER LAST REVISED 1/4/2023
CALTRANS WEB SITE IS: HTTP://WWW.DOT.CA.GOV/
RELATIVE BORDER SCALE IS IN INCHES
USERNAME => s152170
DGN FILE => 0120000134ab001.dgn
UNIT 0332
PROJECT NUMBER & PHASE 01200001341
DATE PLOTTED => 29 MAY 2025
TIME PLOTTED => 13:22


Dist
01
COUNTY
Men
ROUTE
128
POST MILES TOTAL PROJECT
0.0/50.5
SHEET No.
TOTAL SHEETS
REGISTERED CIVIL ENGINEER
DATE
PLANS APPROVAL DATE
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.
REGISTERED PROFESSIONAL ENGINEER
No.
EXP.
CIVIL
STATE OF CALIFORNIA
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/DESIGNED BY
CHECKED BY
NAVID BAHRAMIAN
NAVID BAHRAMIAN
REVISED BY
DATE REVISED
NAVARRO
HENDY GROVE
REILLY HEIGHTS
MATCH LINE
PHILO
ROUTE 128
ROUTE 01
ROUTE 01
NAVARRO RIVER
PACIFIC OCEAN
NO SCALE
LOCATIONS OF CONSTRUCTION
NO SCALE
LC-1
DATE PLOTTED => 29 MAY 2025
TIME PLOTTED => 12:22
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USERNAME => s152170
DGN FILE => 01200001341bo001.dgn
RELATIVE BORDER SCALE IS IN INCHES
UNIT 0332
PROJECT NUMBER & PHASE 01200001341


SODA SPRINGS
To Ukiah
BOONVILLE
ROUTE 128
ROUTE 253
MATCH LINE
PHILO
MATCH LINE
LOCATIONS OF CONSTRUCTION
NO SCALE
LC-2
NO SCALE
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/DESIGNED BY
NAVID BAHRAMIAN
CHECKED BY
NAVID BAHRAMIAN
REVISED BY
DATE REVISED
Dist
COUNTY
ROUTE
POST MILES TOTAL PROJECT
SHEET No.
TOTAL SHEETS
01
Men
128
0.0/50.5
REGISTERED CIVIL ENGINEER
DATE
PLANS APPROVAL DATE
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.
REGISTERED PROFESSIONAL ENGINEER
No.
EXP.
CIVIL
STATE OF CALIFORNIA
DATE PLOTTED => 29 MAY 2025
TIME PLOTTED => 12:22
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RELATIVE BORDER SCALE IS IN INCHES
0 1 2 3
UNIT 0332
PROJECT NUMBER & PHASE 01200001341


Dist
01
COUNTY
Men
ROUTE
128
POST MILES TOTAL PROJECT
0.0/50.5
SHEET No.
TOTAL SHEETS
REGISTERED CIVIL ENGINEER DATE
PLANS APPROVAL DATE
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.
REGISTERED PROFESSIONAL ENGINEER
No.
EXP.
CIVIL
STATE OF CALIFORNIA
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/DESIGNED BY
CHECKED BY
NAVID BAHRAMIAN
NAVID BAHRAMIAN
REVISED BY
DATE REVISED
YORKVILLE
INGRAM
ROUTE 128
ROUTE 101
MATCH LINE
MENDOCINO COUNTY
SONOMA COUNTY
NO SCALE
LOCATIONS OF CONSTRUCTION
NO SCALE
LC-3
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TIME PLOTTED => 12:22
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USERNAME => s152170
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RELATIVE BORDER SCALE IS IN INCHES
0 1 2 3
UNIT 0332
PROJECT NUMBER & PHASE 01200001341


NOTES:
1. DIMENSIONS OF THE PAVEMENT STRUCTURES (STRUCTURAL SECTIONS) ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.
2. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
3. FOR LOCATIONS AND DETAILS OF COLD PLANE AC PAVEMENT, MBGR, WGS, TAPERED EDGE/SHOULDER BACKING, REPLACE AC SURFACING, DIKE, AND RUMBLES STRIP SEE CONSTRUCTION DETAILS AND SUMMARY OF QUANTITIES SHEETS.
4. SUPERELEVATIONS ARE SHOWN ON THE SUPERELEVATION DIAGRAM.
ABBREVIATIONS:
ROUTE 1
DESIGN DESIGNATION
ADT (2018) 3,900 D 72%
ADT (2048) 4,840 T 6%
DHV 1,050 V 25-55 mph
ESAL 1,371,192 TI 20 8.5
PAVEMENT CLIMATE REGION:
NORTH COAST
Dist 01 COUNTY Men ROUTE 128 POST MILES TOTAL PROJECT 0.0/50.5 SHEET No. TOTAL SHEETS
REGISTERED CIVIL ENGINEER DATE
PLANS APPROVAL DATE
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.
REGISTERED PROFESSIONAL ENGINEER
CIVIL
STATE OF CALIFORNIA
ROUTE 128
R/W
47'-56'
42'-53'
HP
ES
ETW
3'
0-4' Shld
12' WB LANE
12' EB LANE
0'-3' Shld
0-3'
0-2'
OG
4:1 OR FLATTER
5%
FG
7% & Var
TAPERD EDGE
0.70' HMA-A
0.50' AB (Cl 2)
EMBANKMENT
Exist Var AC COLD PLANE AC Pvmt
2:1 OR FLATTER
STA 10+88.56 TO STA 14+35.71
ROUTE 128
R/W
47'-51'
49'-53'
ETWES
0-1' Shld
2%
STA 10+00.00 TO STA 10+88.56
STA 18+28.57 TO STA 20+27.00
TYPICAL CROSS SECTIONS
NO SCALE
X-1
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR TAIMUR KHAN
CALCULATED/DESIGNED BY MICHAEL COLLINS
CHECKED BY TAIMUR KHAN
REVISED BY
DATE REVISED
DATE PLOTTED => 29 MAY 2025
TIME PLOTTED => 12:22
BORDER LAST REVISED 1/4/2023
USERNAME => s152170
DGN FILE => 01200001340001.dgn
RELATIVE BORDER SCALE IS IN INCHES
UNIT 0332
PROJECT NUMBER & PHASE 01200001341

NOTES:
1. DIMENSIONS OF THE PAVEMENT STRUCTURES (STRUCTURAL SECTIONS) ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.
2. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
3. FOR LOCATIONS AND DETAILS OF COLD PLANE AC PAVEMENT, MBGR, WGS, TAPERED EDGE/SHOULDER BACKING, REPLACE AC SURFACING, DIKE, AND RUMBLES STRIP SEE CONSTRUCTION DETAILS AND SUMMARY OF QUANTITIES SHEETS.
4. SUPERELEVATIONS ARE SHOWN ON THE SUPERELEVATION DIAGRAM.

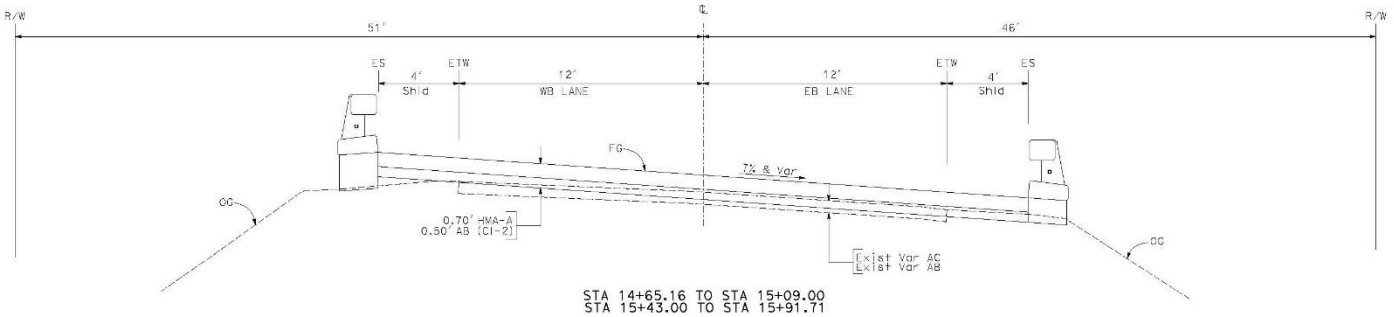
ABBREVIATIONS:

ROUTE 1
DESIGN DESIGNATION

ADT (2018)	3,900	D	72%
ADT (2048)	4,840	T	6%
DHV	1,050	V	25-55 mph
ESAL	1,371,192	T_{20}	8.5

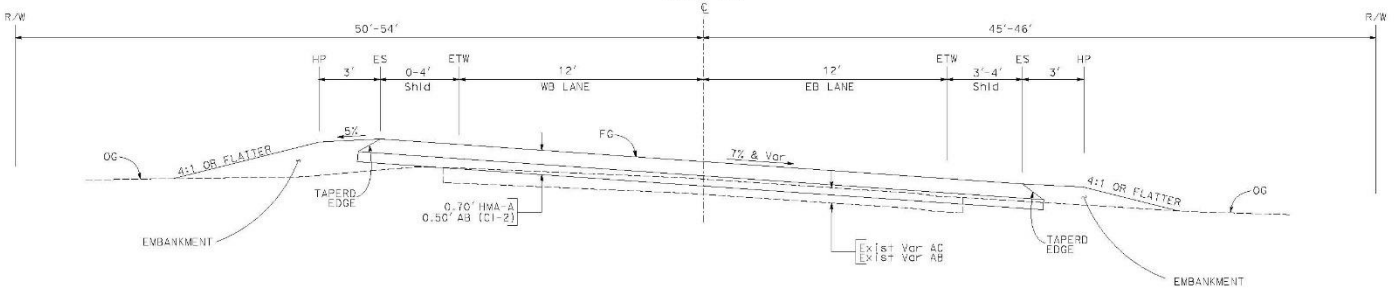
PAVEMENT CLIMATE REGION:
NORTH COAST

ROUTE 128



STA 14+65.16 TO STA 15+09.00
STA 15+43.00 TO STA 15+91.71

ROUTE 128



STA 14+35.71 TO STA 14+65.16
STA 15+91.71 TO STA 16+10.59

TYPICAL CROSS SECTIONS
NO SCALE
X-2

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	128	0.0/50.5		

REGISTERED CIVIL ENGINEER DATE
PLANS APPROVAL DATE
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.
REGISTERED PROFESSIONAL ENGINEER STATE OF CALIFORNIA CIVIL

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DESIGN
FUNCTIONAL SUPERVISOR: TAIMUR KHAN
CALCULATED/DESIGNED BY: MICHAEL COLLINS
CHECKED BY: TAIMUR KHAN
REVISED BY
DATE REVISED

BORDER LAST REVISED 1/4/2023
USERNAME => s152170
DGN FILE => 01200001341cc002.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 0332
PROJECT NUMBER & PHASE 01200001341
DATE PLOTTED => 29 MAY 2025
TIME PLOTTED => 12:22

NOTES:

1. DIMENSIONS OF THE PAVEMENT STRUCTURES (STRUCTURAL SECTIONS) ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.
2. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
3. FOR LOCATIONS AND DETAILS OF COLD PLANE AC PAVEMENT, MBGR, WGS, TAPERED EDGE/SHOULDER BACKING, REPLACE AC SURFACING, DIKE, AND RUMBLES STRIP SEE CONSTRUCTION DETAILS AND SUMMARY OF QUANTITIES SHEETS.
4. SUPERELEVATIONS ARE SHOWN ON THE SUPERELEVATION DIAGRAM.

ABBREVIATIONS:

ROUTE 1
DESIGN DESIGNATION

ADT (2018)	3,900	D	72%
ADT (2048)	4,840	T	6%
DHV	1,050	V	25-55 mph
ESAL	1,371,192	TI_{20}	8.5

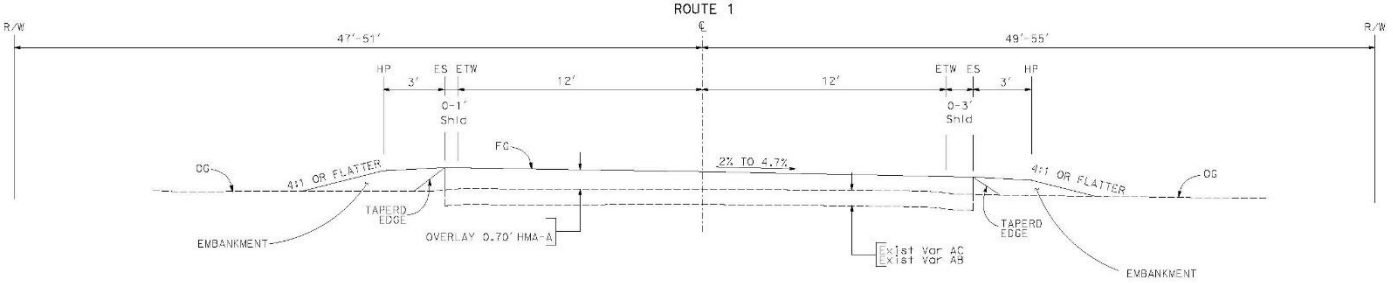
PAVEMENT CLIMATE REGION:
NORTH COAST

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	128	0.0/50.5		

REGISTERED CIVIL ENGINEER DATE
PLANS APPROVAL DATE
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.

REGISTERED PROFESSIONAL ENGINEER — No. — CIVIL — STATE OF CALIFORNIA

ROUTE 1



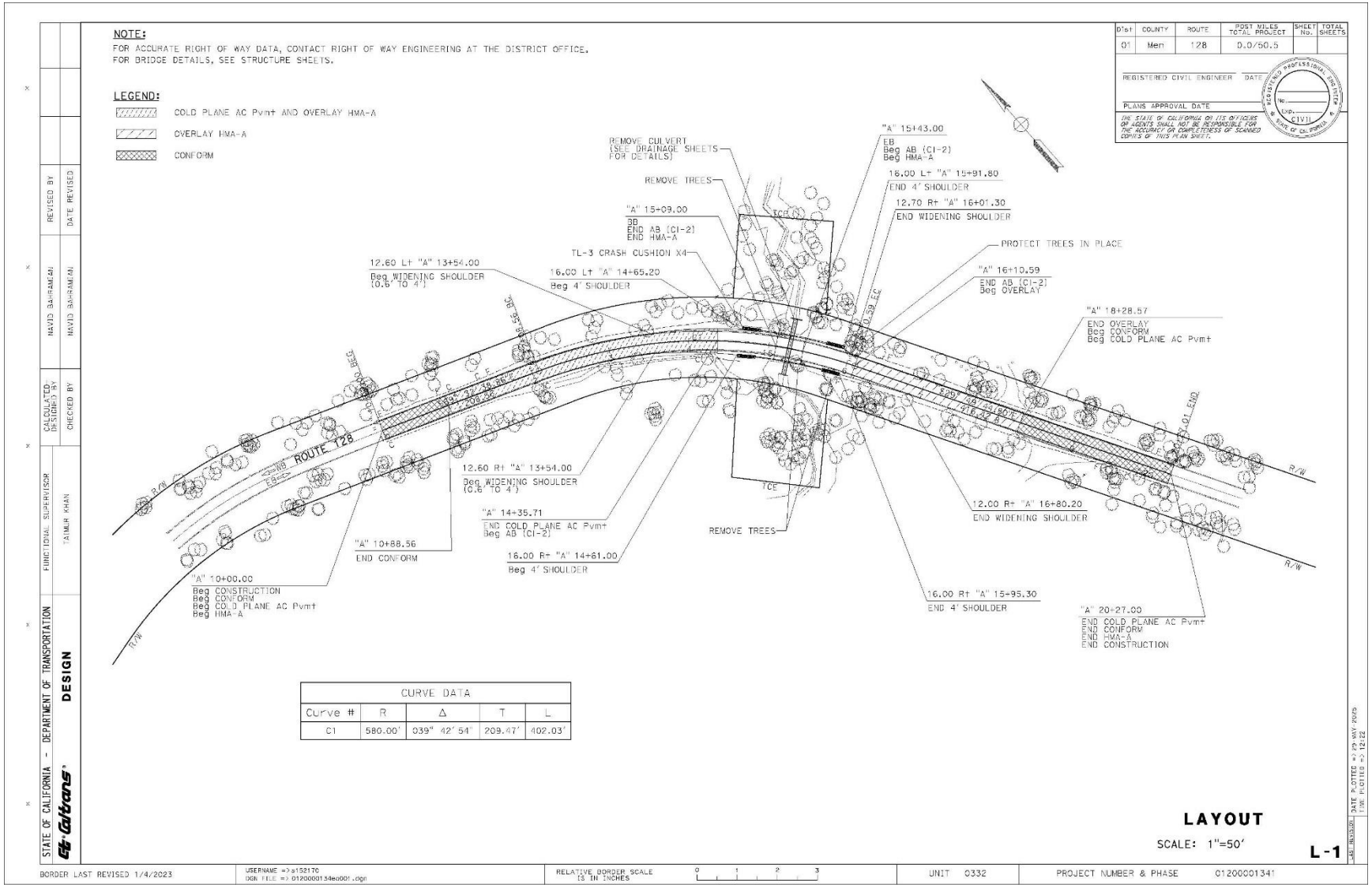
STA 16+10.59 TO STA 18+28.57

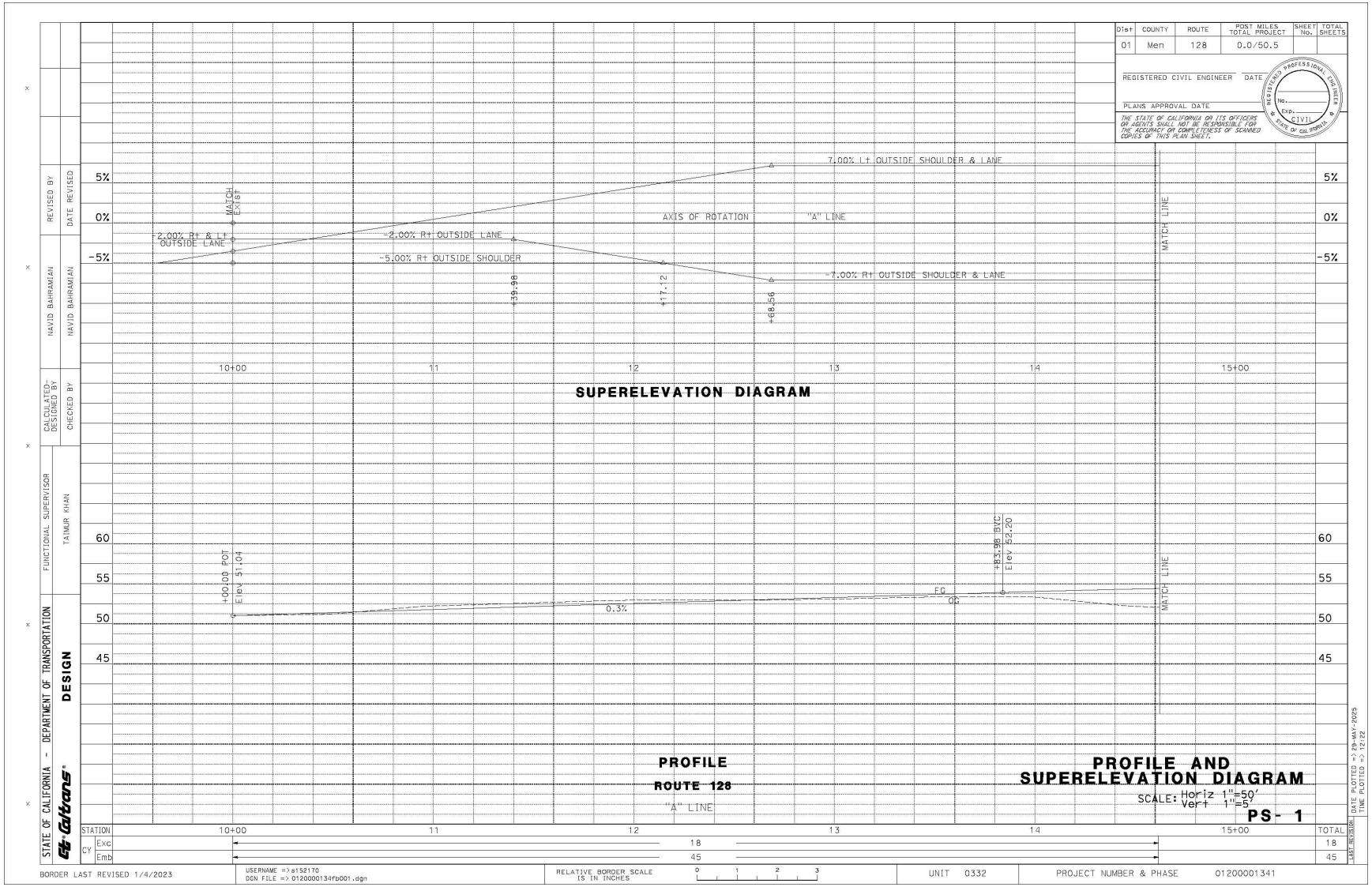
TYPICAL CROSS SECTIONS
NO SCALE
X-3

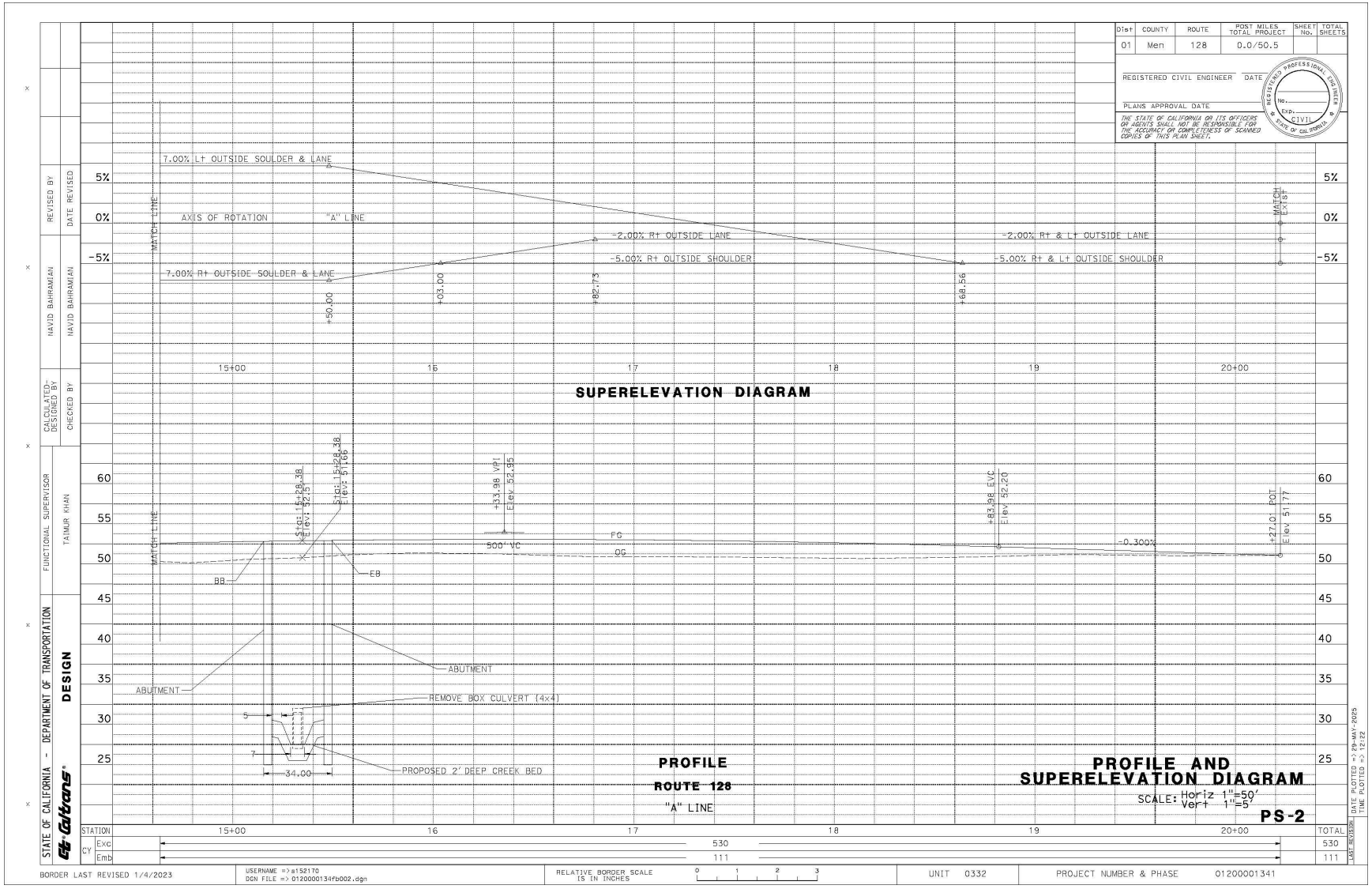
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DESIGN
FUNCTIONAL SUPERVISOR: TAIMUR KHAN
CALCULATED/DESIGNED BY: MICHAEL COLLINS
CHECKED BY: TAIMUR KHAN
REVISED BY
DATE REVISED

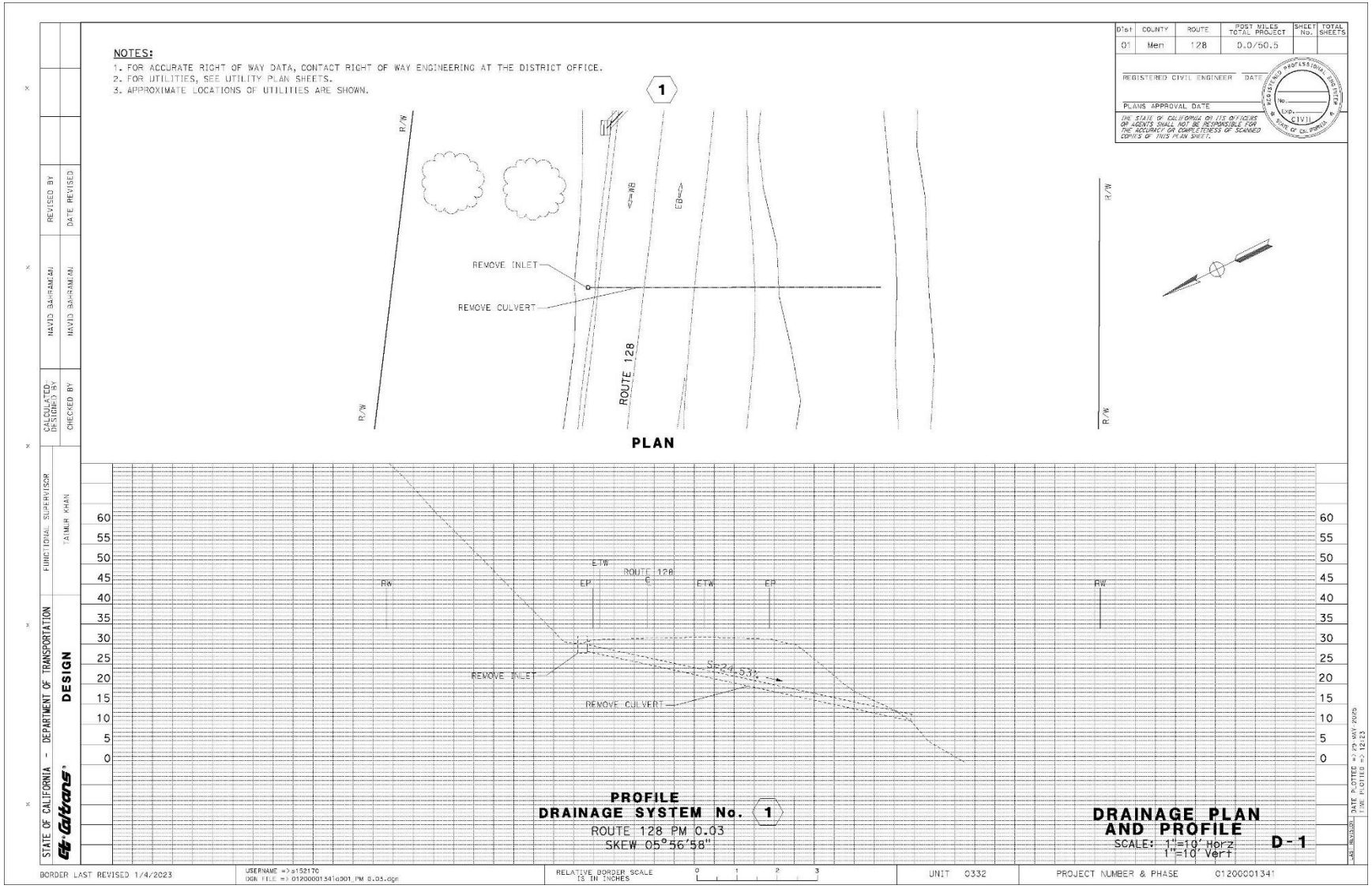
DATE PLOTTED => 29 MAY 2025
TIME PLOTTED => 12:22

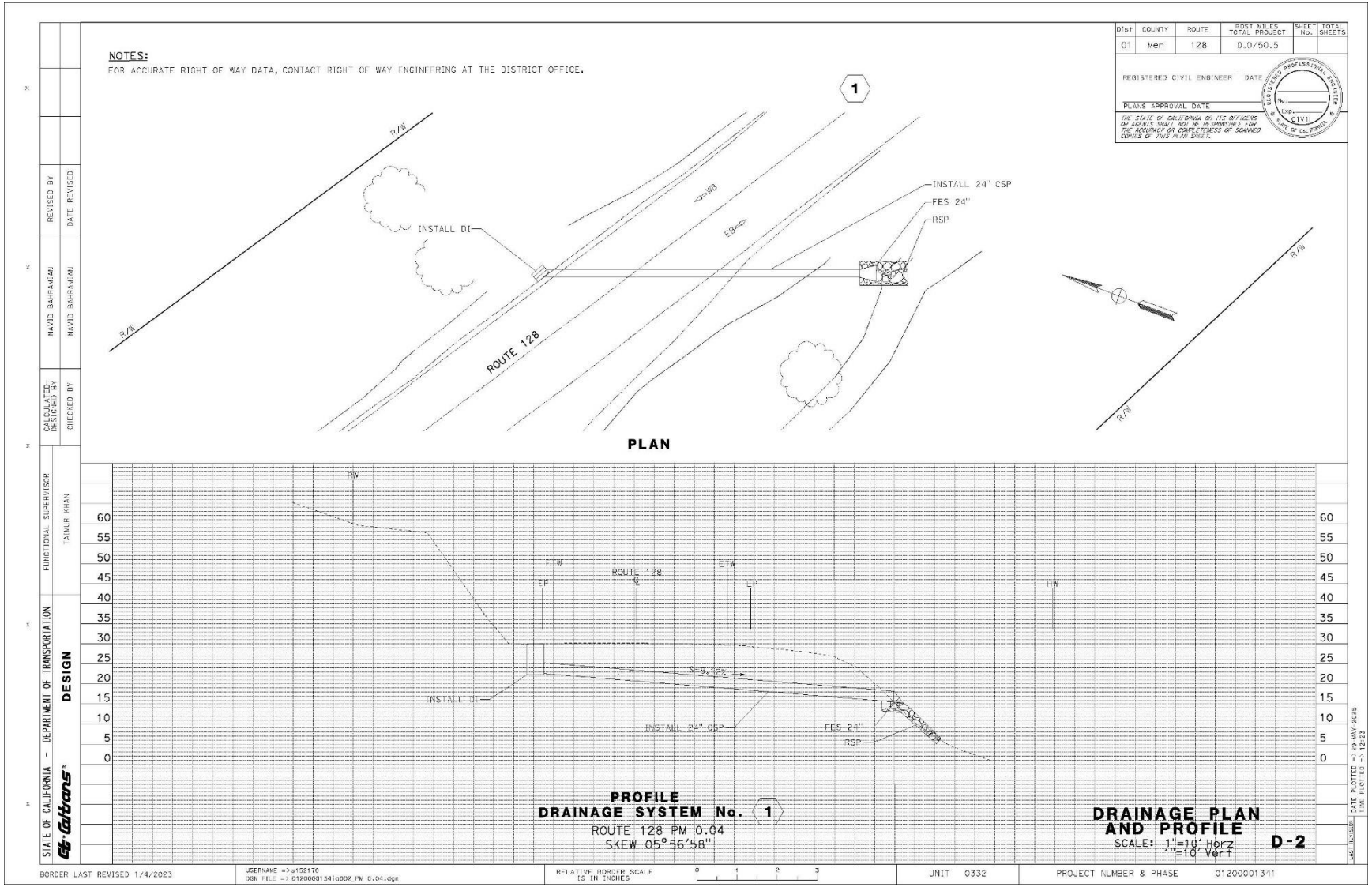
BORDER LAST REVISED 1/4/2023
USERNAME => s152170
DGN FILE => 01200001341cs003.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 0332
PROJECT NUMBER & PHASE 01200001341

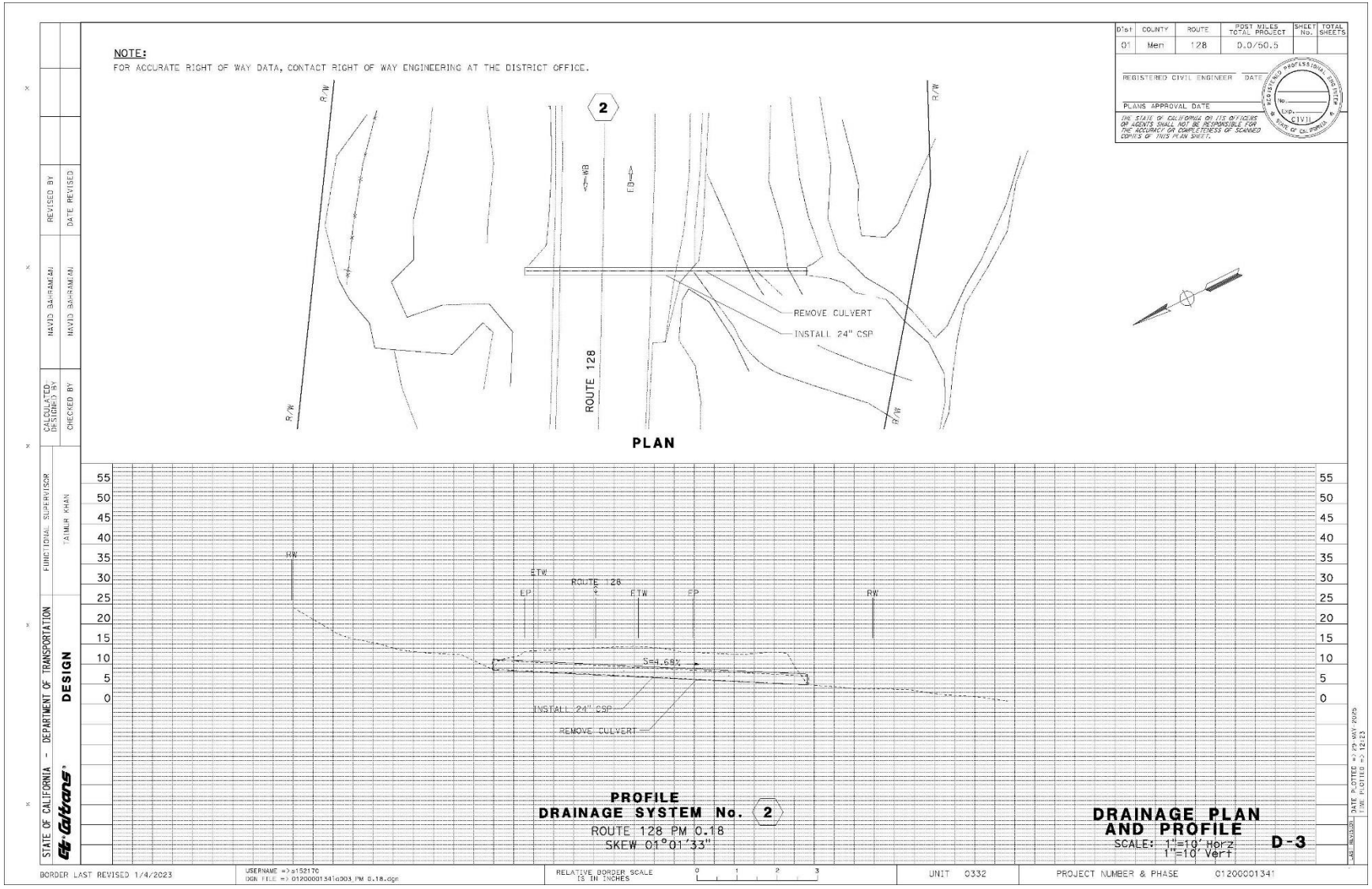

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
FOR BRIDGE DETAILS, SEE STRUCTURE SHEETS.
LEGEND:
COLD PLANE AC Pvmt AND OVERLAY HMA-A
OVERLAY HMA-A
CONFORM
Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS
01 | Men | 128 | 0.0/50.5
REGISTERED CIVIL ENGINEER DATE
PLANS APPROVAL DATE
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.
REMOVE CULVERT (SEE DRAINAGE SHEETS FOR DETAILS)
REMOVE TREES
"A" 15+09.00
BD
END AB (CI-2)
END HMA-A
TL-3 CRASH CUSHION X4
12.60 Lt "A" 13+54.00
Beg WIDENING SHOULDER (0.6' TO 4')
16.00 Lt "A" 14+65.20
Beg 4' SHOULDER
"A" 15+43.00
EB
Beg AB (CI-2)
Beg HMA-A
16.00 Lt "A" 15+91.80
END 4' SHOULDER
12.70 Rt "A" 16+01.30
END WIDENING SHOULDER
PROTECT TREES IN PLACE
"A" 16+10.59
END AB (CI-2)
Beg OVERLAY
"A" 18+28.57
END OVERLAY
Beg CONFORM
Beg COLD PLANE AC Pvmt
ROUTE 128
12.60 Rt "A" 13+54.00
Beg WIDENING SHOULDER (0.6' TO 4')
"A" 14+35.71
END COLD PLANE AC Pvmt
Beg AB (CI-2)
16.00 Rt "A" 14+81.00
Beg 4' SHOULDER
"A" 10+88.56
END CONFORM
"A" 10+00.00
Beg CONSTRUCTION
Beg CONFORM
Beg COLD PLANE AC Pvmt
Beg HMA-A
REMOVE TREES
12.00 Rt "A" 16+80.20
END WIDENING SHOULDER
16.00 Rt "A" 15+95.30
END 4' SHOULDER
"A" 20+27.00
END COLD PLANE AC Pvmt
END CONFORM
END HMA-A
END CONSTRUCTION
CURVE DATA
Curve # | R | Δ | T | L
C1 | 580.00' | 039° 42' 54" | 209.47' | 402.03'
LAYOUT
SCALE: 1"=50'
L-1
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/DESIGNED BY
CHECKED BY
REVISED BY
DATE REVISED
MAJID BAHRAMIAN
MAJID BAHRAMIAN
BORDER LAST REVISED 1/4/2023
USERNAME => s152170
DGN FILE => 01200001340001.dgn
RELATIVE BORDER SCALE IS IN INCHES
UNIT 0332
PROJECT NUMBER & PHASE 01200001341
DATE PLOTTED => 29 MAY 2025
TIME PLOTTED => 12:22

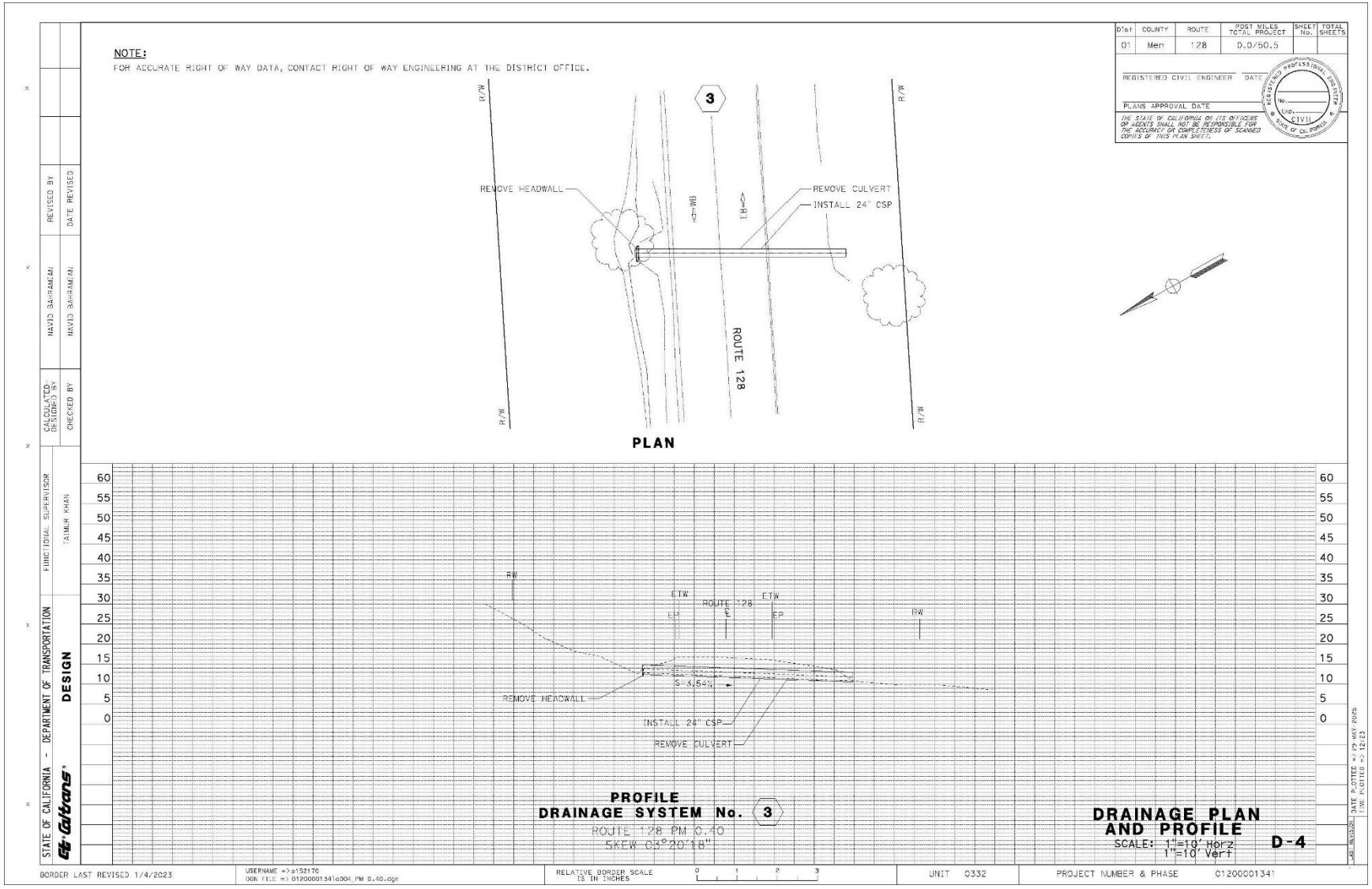

Dist 01
COUNTY Men
ROUTE 128
POST MILES TOTAL PROJECT 0.0/50.5
SHEET No.
TOTAL SHEETS
REGISTERED CIVIL ENGINEER DATE
PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.
REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA
7.00% Lt OUTSIDE SHOULDER & LANE
MATCH EXIST
AXIS OF ROTATION
"A" LINE
MATCH LINE
2.00% Rt & Lt OUTSIDE LANE
-2.00% Rt OUTSIDE LANE
-5.00% Rt OUTSIDE SHOULDER
-7.00% Rt OUTSIDE SHOULDER & LANE
+39.98
+17.12
+68.56
5%
0%
-5%
10+00
11
12
13
14
15+00
SUPERELEVATION DIAGRAM
+00.00 POT
Elev 51.04
+83.98 BVC
Elev 52.20
FG
OG
0.3%
60
55
50
45
PROFILE
ROUTE 128
"A" LINE
PROFILE AND SUPERELEVATION DIAGRAM
SCALE: Horiz 1"=50'
Vert 1"=5'
PS- 1
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR TAIMUR KHAN
CALCULATED-DESIGNED BY
CHECKED BY
DAVID BAHRAMIAN
DAVID BAHRAMIAN
REVISED BY
DATE REVISED
STATION
CY Exc 18
Emb 45
TOTAL
LAST REVISION
DATE PLOTTED => 29-MAY-2025
TIME PLOTTED => 12:22
BORDER LAST REVISED 1/4/2023
USERNAME => s152170
DGN FILE => 0120000134fb001.dgn
RELATIVE BORDER SCALE IS IN INCHES
UNIT 0332
PROJECT NUMBER & PHASE 01200001341

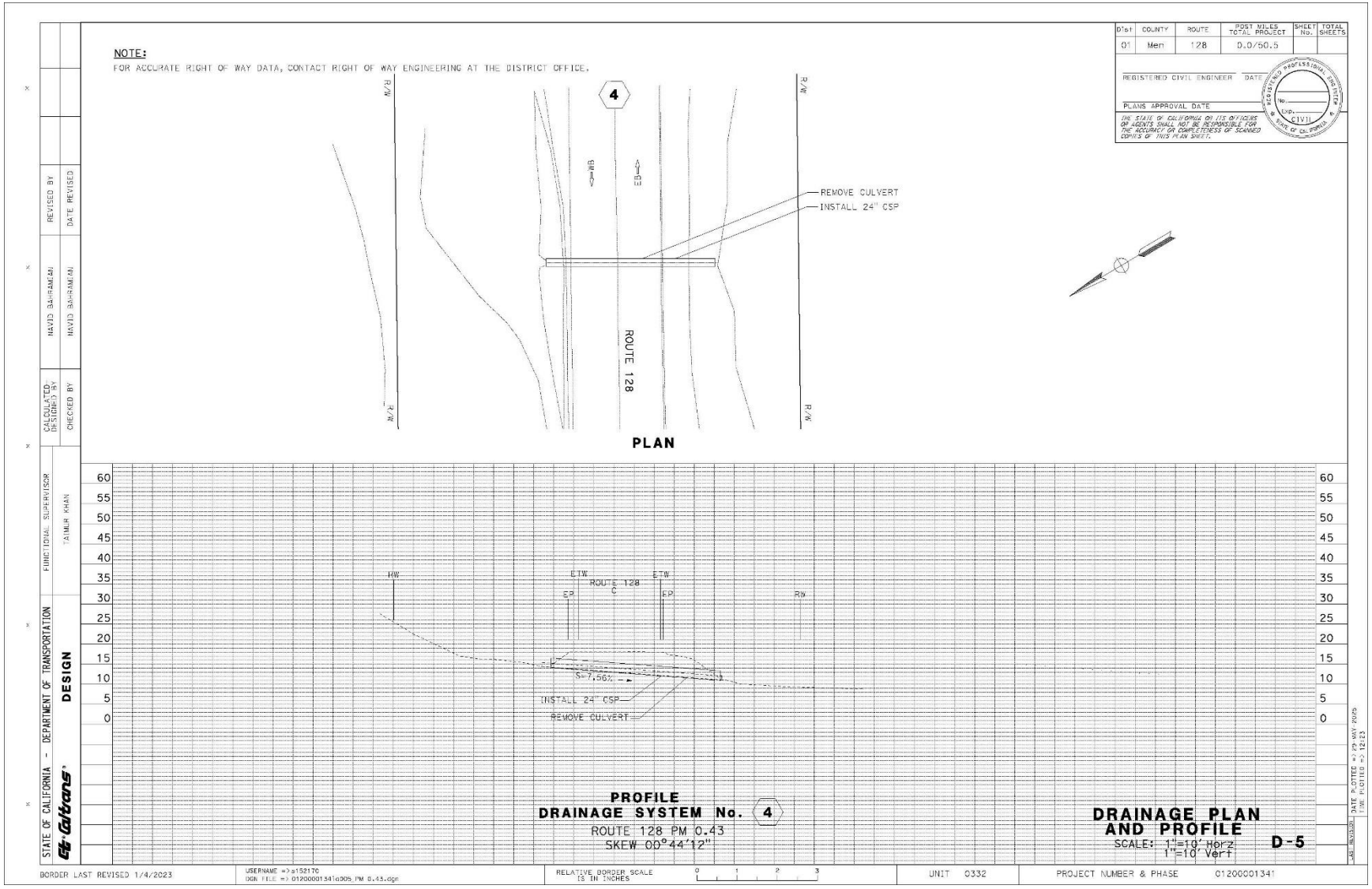

Dist 01 | COUNTY Men | ROUTE 128 | POST MILES TOTAL PROJECT 0.0/50.5 | SHEET No. | TOTAL SHEETS
REGISTERED CIVIL ENGINEER DATE
PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.
REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA
7.00% Lt OUTSIDE SOULDER & LANE
AXIS OF ROTATION
"A" LINE
-2.00% Rt OUTSIDE LANE
-5.00% Rt OUTSIDE SHOULDER
7.00% Rt OUTSIDE SOULDER & LANE
-2.00% Rt & Lt OUTSIDE LANE
-5.00% Rt & Lt OUTSIDE SHOULDER
MATCH LINE
MATCH EXIST
+50.00
+03.00
+82.73
+68.56
5%
0%
-5%
15+00
16
17
18
19
20+00
SUPERELEVATION DIAGRAM
Sta: 15+28.38
Elev: 52.25
Sta: 15+28.38
Elev: 51.66
+33.98 VPI
Elev 52.95
500' VC
FG
OG
+83.98 EVC
Elev 52.20
-0.300%
+27.01 POT
Elev 51.77
BB
EB
ABUTMENT
ABUTMENT
REMOVE BOX CULVERT (4x4)
5
7
34.00
PROPOSED 2' DEEP CREEK BED
60
55
50
45
40
35
30
25
PROFILE
ROUTE 128
"A" LINE
PROFILE AND SUPERELEVATION DIAGRAM
SCALE: Horiz 1"=50'
Vert 1"=5'
PS-2
STATION
CY Exc 530
Emb 111
TOTAL
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR TAIMUR KHAN
CALCULATED-DESIGNED BY NAVID BAHRAMIAN
CHECKED BY NAVID BAHRAMIAN
REVISED BY
DATE REVISED
LAST REVISION
DATE PLOTTED => 29-MAY-2025
TIME PLOTTED => 12:22
BORDER LAST REVISED 1/4/2023
USERNAME => s152170
DGN FILE => 0120000134fb002.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 0332
PROJECT NUMBER & PHASE 01200001341

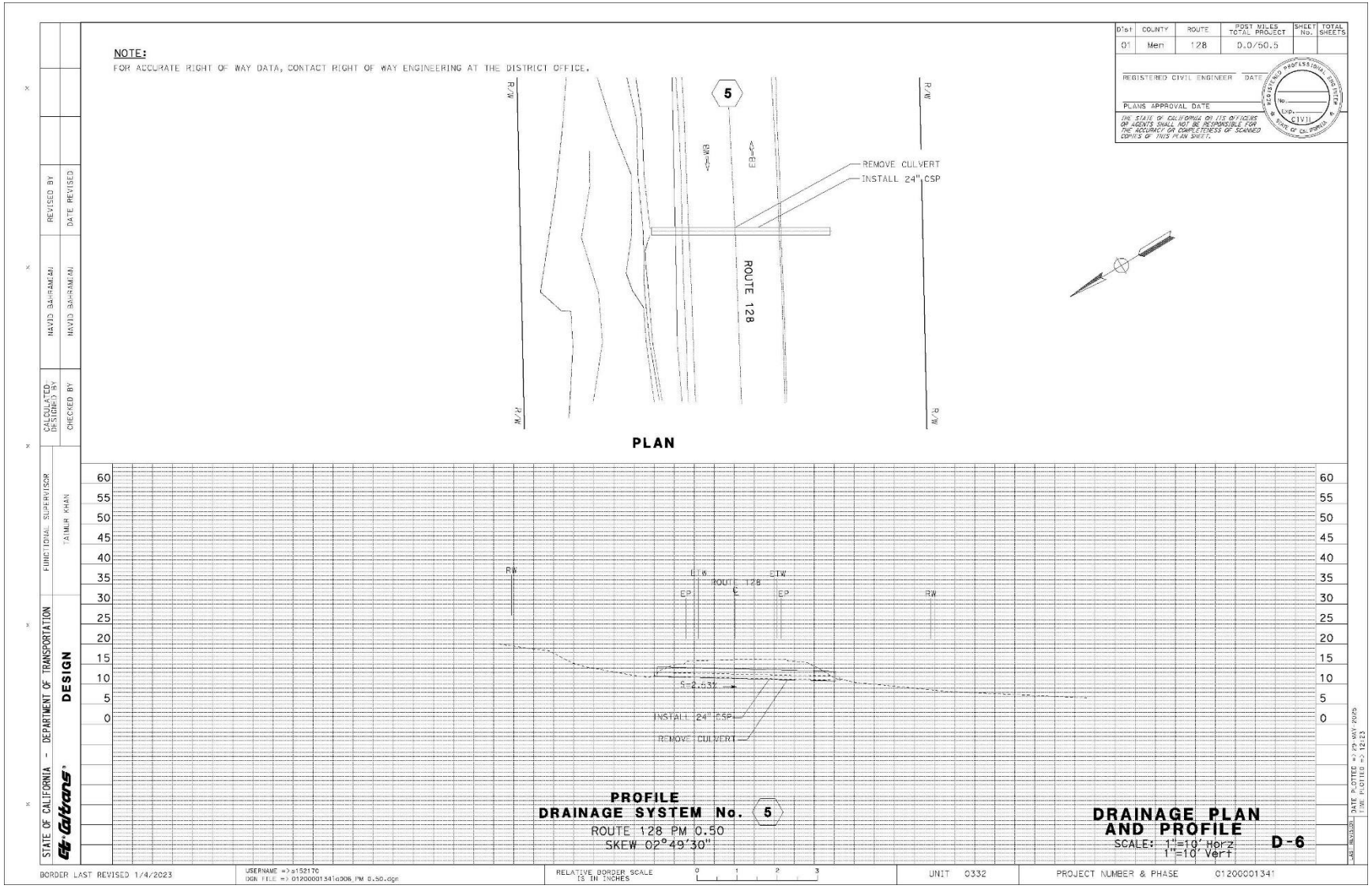

NOTES:
1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. FOR UTILITIES, SEE UTILITY PLAN SHEETS.
3. APPROXIMATE LOCATIONS OF UTILITIES ARE SHOWN.
1
R/W
REMOVE INLET
REMOVE CULVERT
ROUTE 128
PLAN
PROFILE
DRAINAGE SYSTEM No. 1
ROUTE 128 PM 0.03
SKEW 05°56'58"
DRAINAGE PLAN
AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-1
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/DESIGNED BY
DAVID BAHRAMIAN
CHECKED BY
DAVID BAHRAMIAN
REVISED BY
DATE REVISED
BORDER LAST REVISED 1/4/2023
UNIT 0332
PROJECT NUMBER & PHASE 01200001341

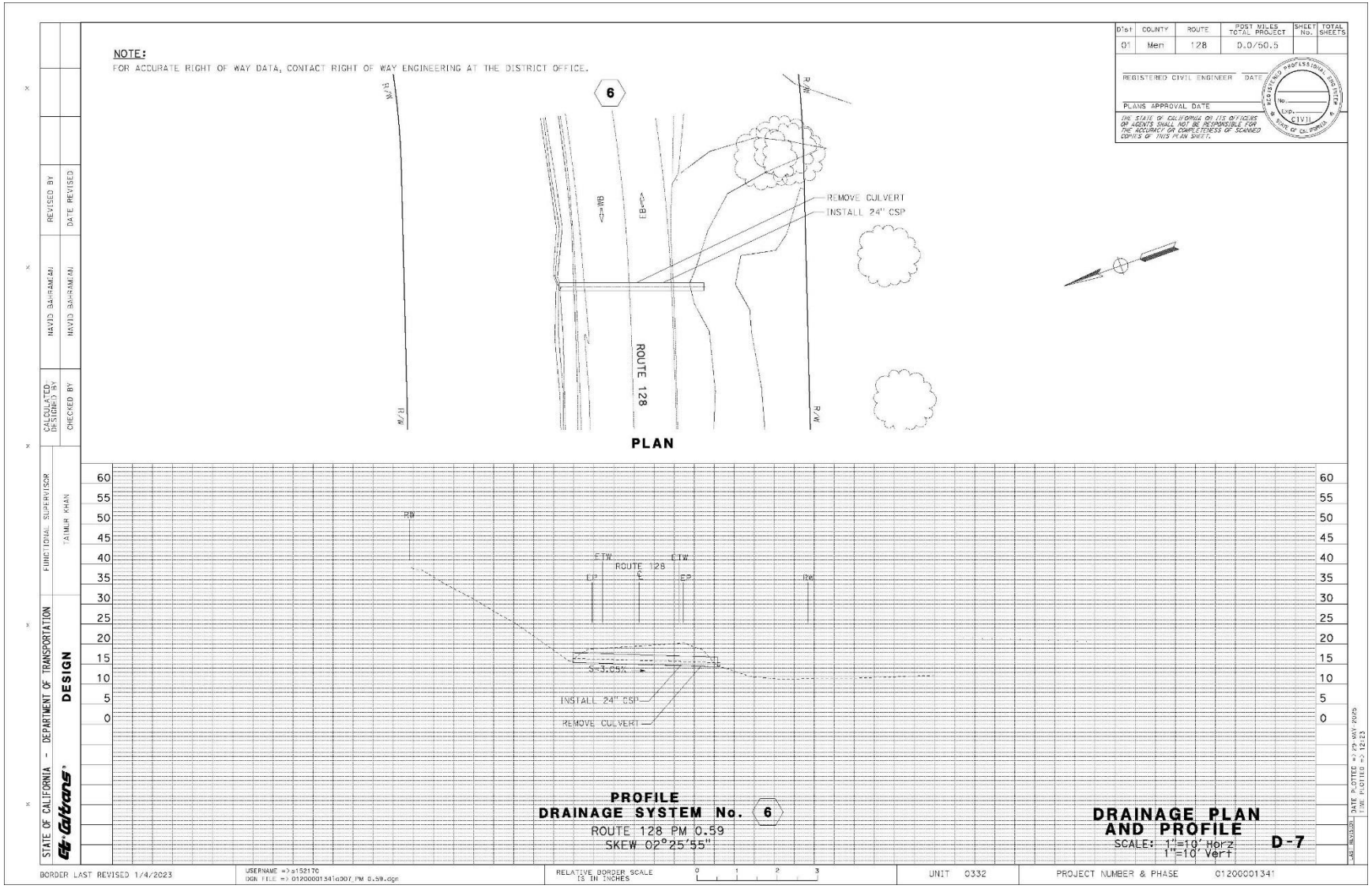

NOTES:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
1
R/W
INSTALL DI
WB
EB
INSTALL 24" CSP
FES 24"
RSP
ROUTE 128
PLAN
PROFILE
DRAINAGE SYSTEM No. 1
ROUTE 128 PM 0.04
SKEW 05°56'58"
DRAINAGE PLAN
AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-2
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/DESIGNED BY
CHECKED BY
NAVID BAHRAMIAN
REVISED BY
DATE REVISED
REGISTERED CIVIL ENGINEER
PLANS APPROVAL DATE
BORDER LAST REVISED 1/4/2023
PROJECT NUMBER & PHASE 01200001341

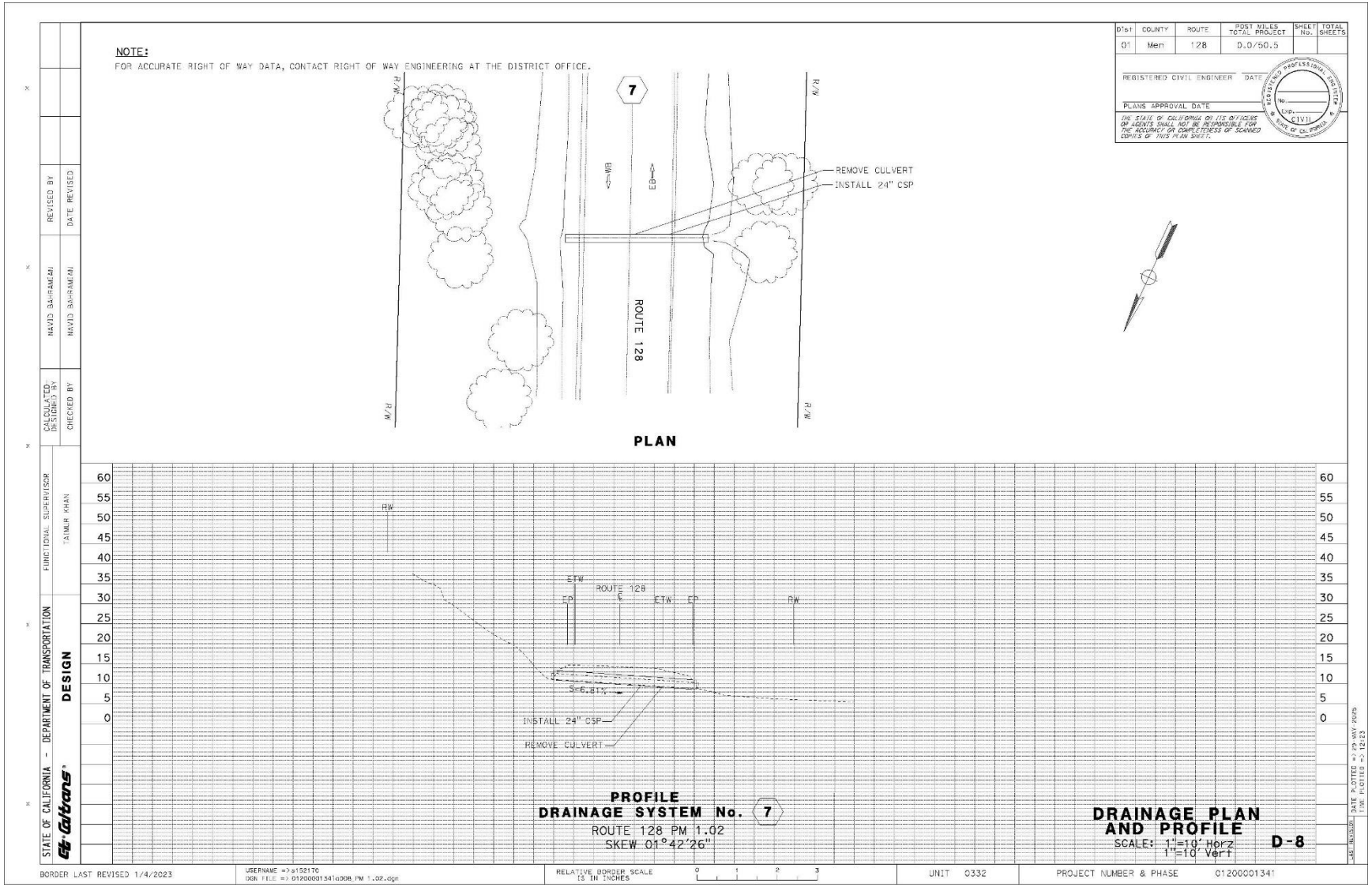

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS
01 | Men | 128 | 0.0/50.5
REGISTERED CIVIL ENGINEER DATE
PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.
REGISTERED PROFESSIONAL ENGINEER
No.
EXP.
CIVIL
STATE OF CALIFORNIA
R/W
2
WB
EB
ROUTE 128
REMOVE CULVERT
INSTALL 24" CSP
PLAN
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/DESIGNED BY
CHECKED BY
DAVID BAHRAMIAN
REVISED BY
DATE REVISED
55 50 45 40 35 30 25 20 15 10 5 0
RW
ETW
EP
ROUTE 128
S=4.68%
INSTALL 24" CSP
REMOVE CULVERT
PROFILE
DRAINAGE SYSTEM No. 2
ROUTE 128 PM 0.18
SKEW 01°01'33"
DRAINAGE PLAN AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-3
BORDER LAST REVISED 1/4/2023
USERNAME =>s153170
DGN FILE => 01200001341d003_PM 0.18.dgn
RELATIVE BORDER SCALE IS IN INCHES
0 1 2 3
UNIT 0332
PROJECT NUMBER & PHASE 01200001341
DATE PLOTTED => 29 MAY 2025
TIME PLOTTED => 12:23

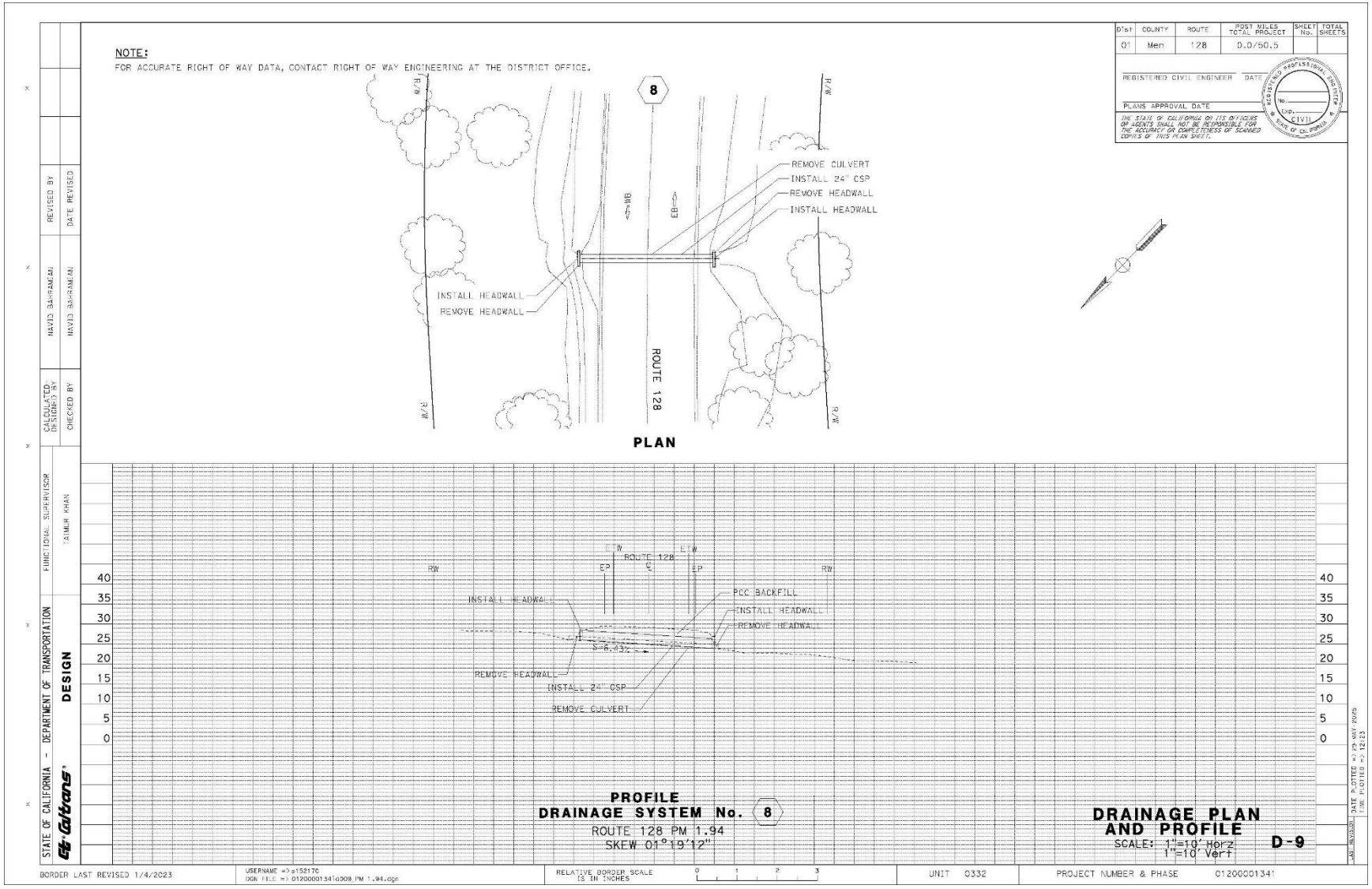

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS
01 | Men | 128 | 0.0/50.5
REGISTERED CIVIL ENGINEER DATE
PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.
REGISTERED PROFESSIONAL ENGINEER
No.
EXP.
CIVIL
STATE OF CALIFORNIA
3
R/W
REMOVE HEADWALL
REMOVE CULVERT
INSTALL 24" CSP
ROUTE 128
PLAN
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/DESIGNED BY
DAVID BAHRAMIAN
CHECKED BY
DAVID BAHRAMIAN
REVISED BY
DATE REVISED
ETW
EP
ROUTE 128
EP
ETW
RW
S=3.54%
REMOVE HEADWALL
INSTALL 24" CSP
REMOVE CULVERT
PROFILE
DRAINAGE SYSTEM No. 3
ROUTE 128 PM 0.40
SKEW 03°20'18"
DRAINAGE PLAN AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-4
BORDER LAST REVISED 1/4/2023
USERNAME =>s153170
DGN FILE =>
RELATIVE BORDER SCALE IS IN INCHES
UNIT 0332
PROJECT NUMBER & PHASE 01200001341
DATE PLOTTED =>
TIME PLOTTED =>

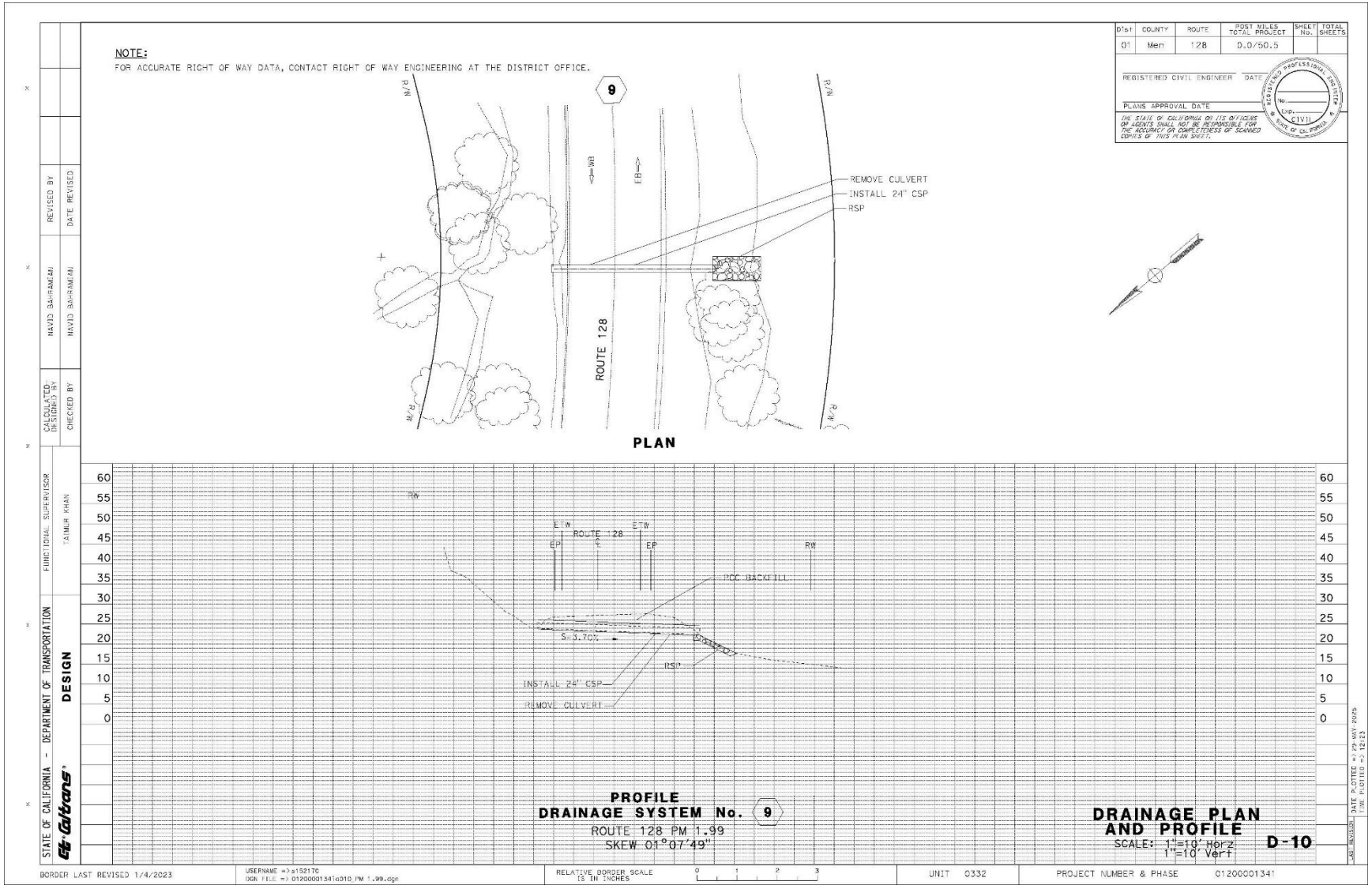

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
4
R/W
REMOVE CULVERT
INSTALL 24" CSP
ROUTE 128
PLAN
Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS
01 | Men | 128 | 0.0/50.5
REGISTERED CIVIL ENGINEER DATE
PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.
REGISTERED PROFESSIONAL ENGINEER
No.
EXP.
CIVIL
STATE OF CALIFORNIA
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/ DESIGNED BY
CHECKED BY
DAVID BAHRAMIAN
REVISED BY
DATE REVISED
60 55 50 45 40 35 30 25 20 15 10 5 0
E.T.W.
ROUTE 128
C
E.P.
RW
S=7.56%
INSTALL 24" CSP
REMOVE CULVERT
PROFILE
DRAINAGE SYSTEM No. 4
ROUTE 128 PM 0.43
SKEW 00°44'12"
DRAINAGE PLAN AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-5
BORDER LAST REVISED 1/4/2023
USERNAME =>s153170
DGN FILE =>01200001341gdos_PM 0.43.dgn
RELATIVE BORDER SCALE IS IN INCHES
0 1 2 3
UNIT 0332
PROJECT NUMBER & PHASE 01200001341
DATE PLOTTED =>29 MAY 2025
TIME PLOTTED =>12:23

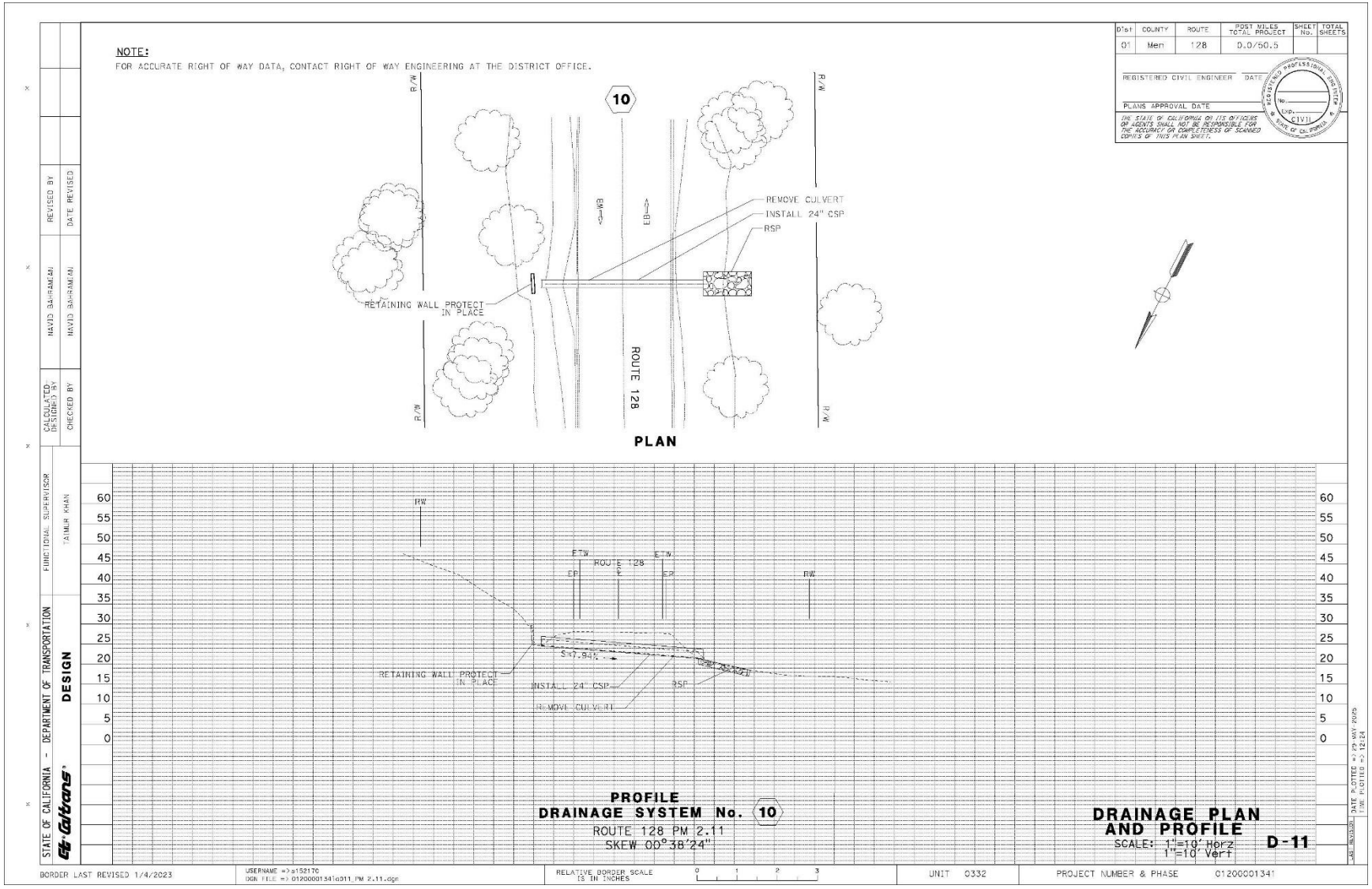

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS
01 | Men | 128 | 0.0/50.5
REGISTERED CIVIL ENGINEER DATE
PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.
REGISTERED PROFESSIONAL ENGINEER
No.
EXP.
CIVIL
STATE OF CALIFORNIA
5
R/W
EB
WB
REMOVE CULVERT
INSTALL 24" CSP
ROUTE 128
PLAN
RW
L W
ROUTE 128
℄
EP
EP
RW
R=2.5%
INSTALL 24" CSP
REMOVE CULVERT
PROFILE
DRAINAGE SYSTEM No. 5
ROUTE 128 PM 0.50
SKEW 02°49'30"
DRAINAGE PLAN AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-6
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/DESIGNED BY
DAVID BAHRAMIAN
CHECKED BY
DAVID BAHRAMIAN
REVISED BY
DATE REVISED
BORDER LAST REVISED 1/4/2023
USERNAME =>s153170
DGN FILE => 01200001341d006_PM 0.50.dgn
RELATIVE BORDER SCALE IS IN INCHES
0 1 2 3
UNIT 0332
PROJECT NUMBER & PHASE 01200001341
DATE PLOTTED => 29 MAY 2025
TIME PLOTTED => 12:23

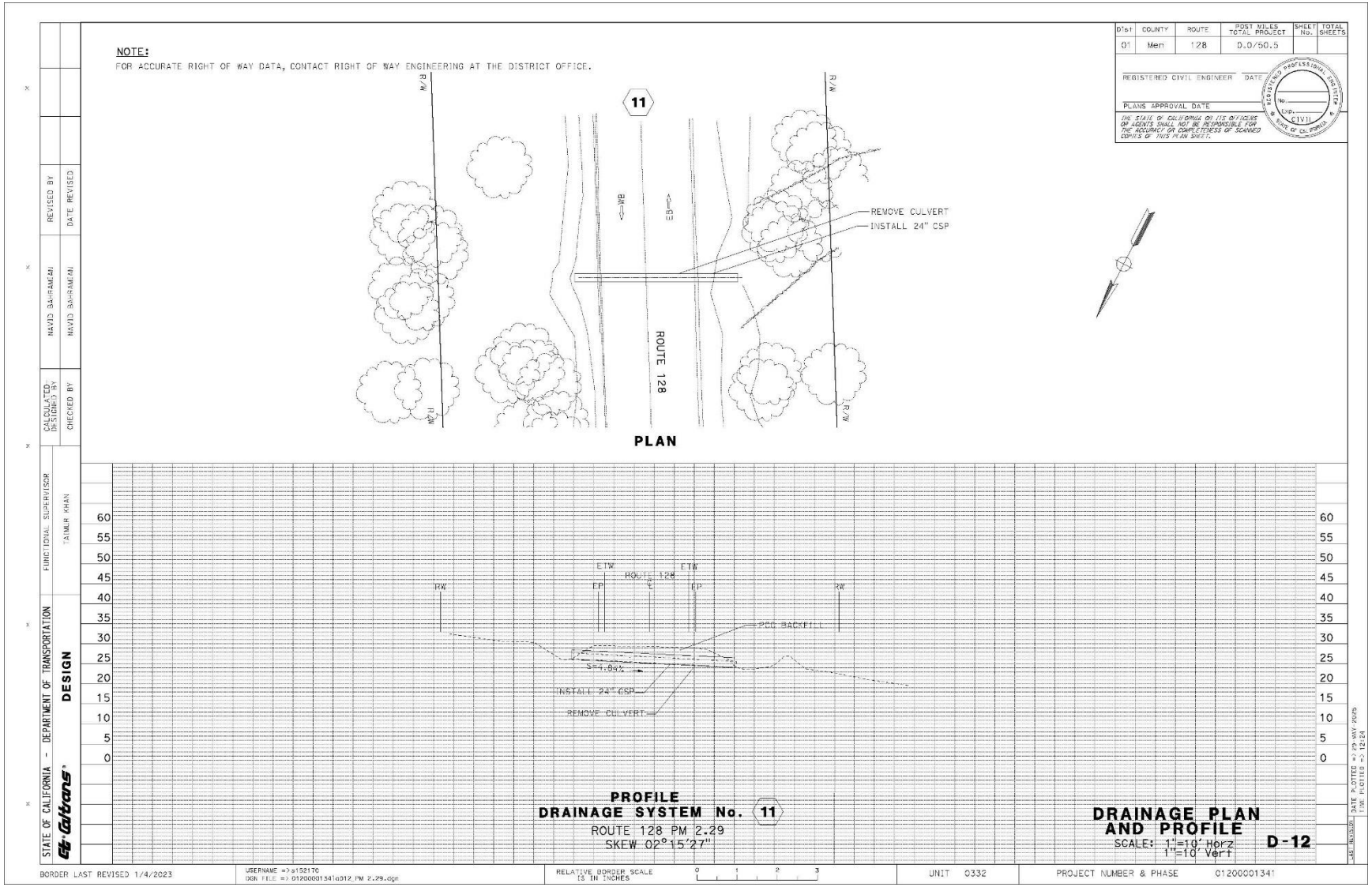

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
6
REMOVE CULVERT
INSTALL 24" CSP
ROUTE 128
PLAN
PROFILE
DRAINAGE SYSTEM No. 6
ROUTE 128 PM 0.59
SKEW 02°25'55"
DRAINAGE PLAN AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-7
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/DESIGNED BY
DAVID BAHRAMIAN
CHECKED BY
DAVID BAHRAMIAN
REVISED BY
DATE REVISED
REGISTERED CIVIL ENGINEER
PLANS APPROVAL DATE
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.
DIST 01
COUNTY Men
ROUTE 128
POST MILES TOTAL PROJECT 0.0/50.5
SHEET No.
TOTAL SHEETS
BORDER LAST REVISED 1/4/2023
USERNAME =>s153170
DGN FILE =>
RELATIVE BORDER SCALE IS IN INCHES
UNIT 0332
PROJECT NUMBER & PHASE 01200001341

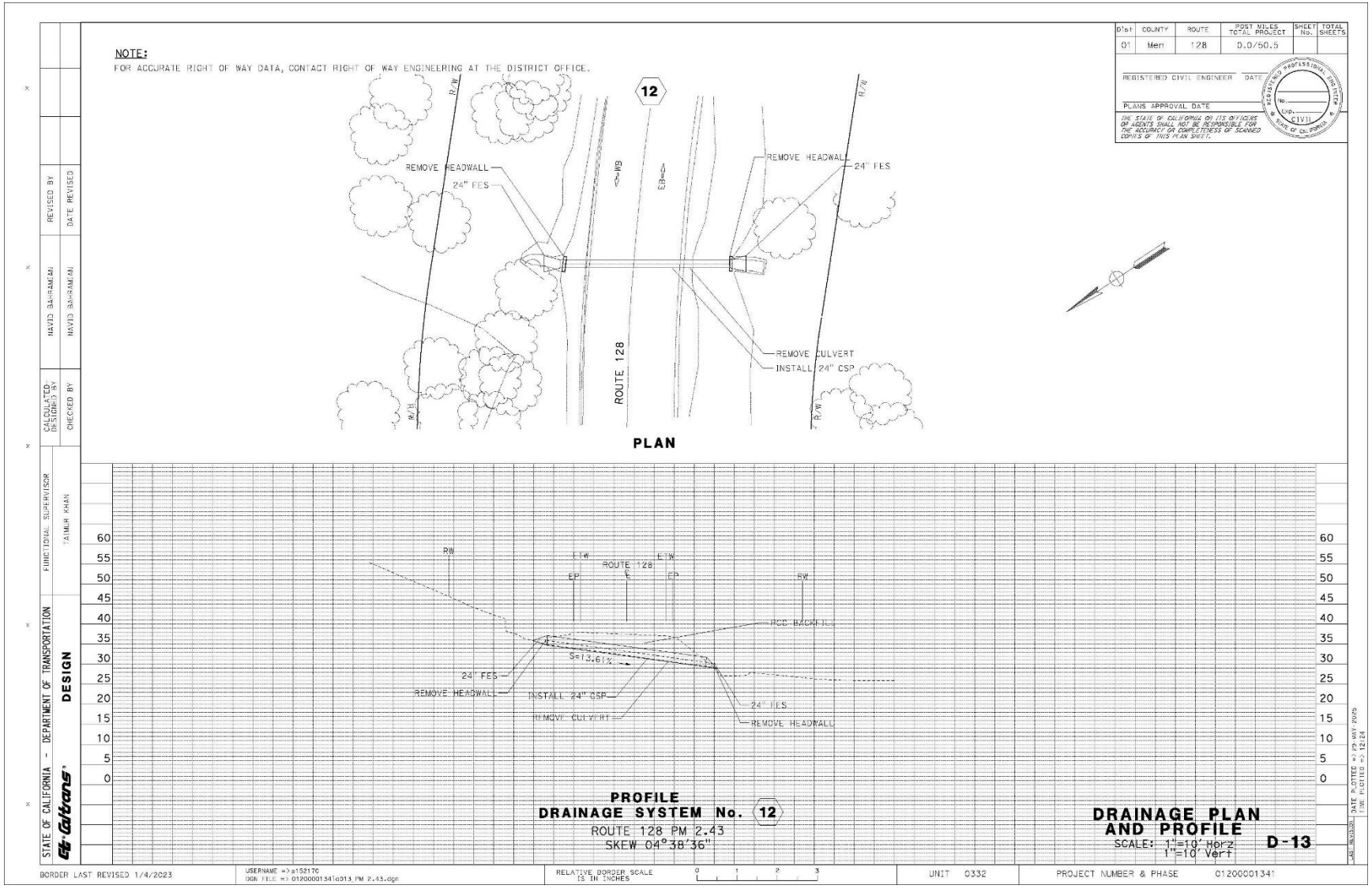

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
7
R/W
EW
EB
REMOVE CULVERT
INSTALL 24" CSP
ROUTE 128
PLAN
Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS
01 | Men | 128 | 0.0/50.5
REGISTERED CIVIL ENGINEER DATE
PLANS APPROVAL DATE
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.
CIVIL
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/DESIGNED BY
DAVID BAHRAMIAN
CHECKED BY
DAVID BAHRAMIAN
REVISED BY
DATE REVISED
60 55 50 45 40 35 30 25 20 15 10 5 0
RW
ETW
EP
ROUTE 128
℄
ETW
EP
RW
S=6.81%
INSTALL 24" CSP
REMOVE CULVERT
PROFILE
DRAINAGE SYSTEM No. 7
ROUTE 128 PM 1.02
SKEW 01°42'26"
DRAINAGE PLAN AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-8
DATE PLOTTED => 29 MAY 2025
TIME PLOTTED => 12:23
BORDER LAST REVISED 1/4/2023
USERNAME => s153170
DGN FILE => 0120000134 1gd08_PM 1.02.dgn
RELATIVE BORDER SCALE IS IN INCHES
0 1 2 3
UNIT 0332
PROJECT NUMBER & PHASE 0120000134

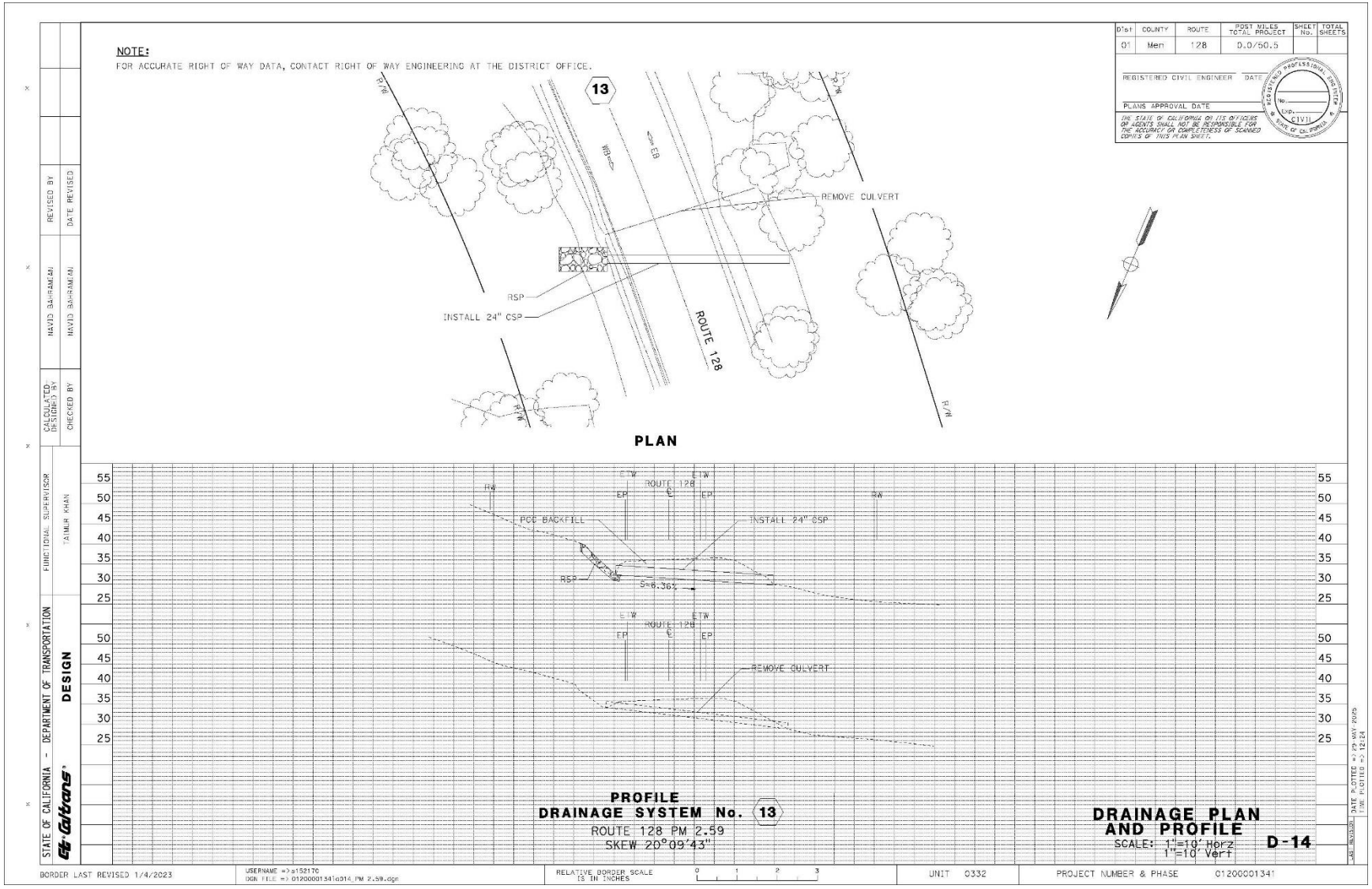

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
8
REMOVE CULVERT
INSTALL 24" CSP
REMOVE HEADWALL
INSTALL HEADWALL
INSTALL HEADWALL
REMOVE HEADWALL
ROUTE 128
PLAN
PCC BACKFILL
INSTALL HEADWALL
REMOVE HEADWALL
INSTALL HEADWALL
REMOVE HEADWALL
INSTALL 24" CSP
REMOVE CULVERT
PROFILE
DRAINAGE SYSTEM No. 8
ROUTE 128 PM 1.94
SKEW 01°19'12"
DRAINAGE PLAN AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-9
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/DESIGNED BY
DAVID BAHRAMIAN
CHECKED BY
DAVID BAHRAMIAN
REVISED BY
DATE REVISED
BORDER LAST REVISED 1/4/2023
UNIT 0332
PROJECT NUMBER & PHASE 01200001341

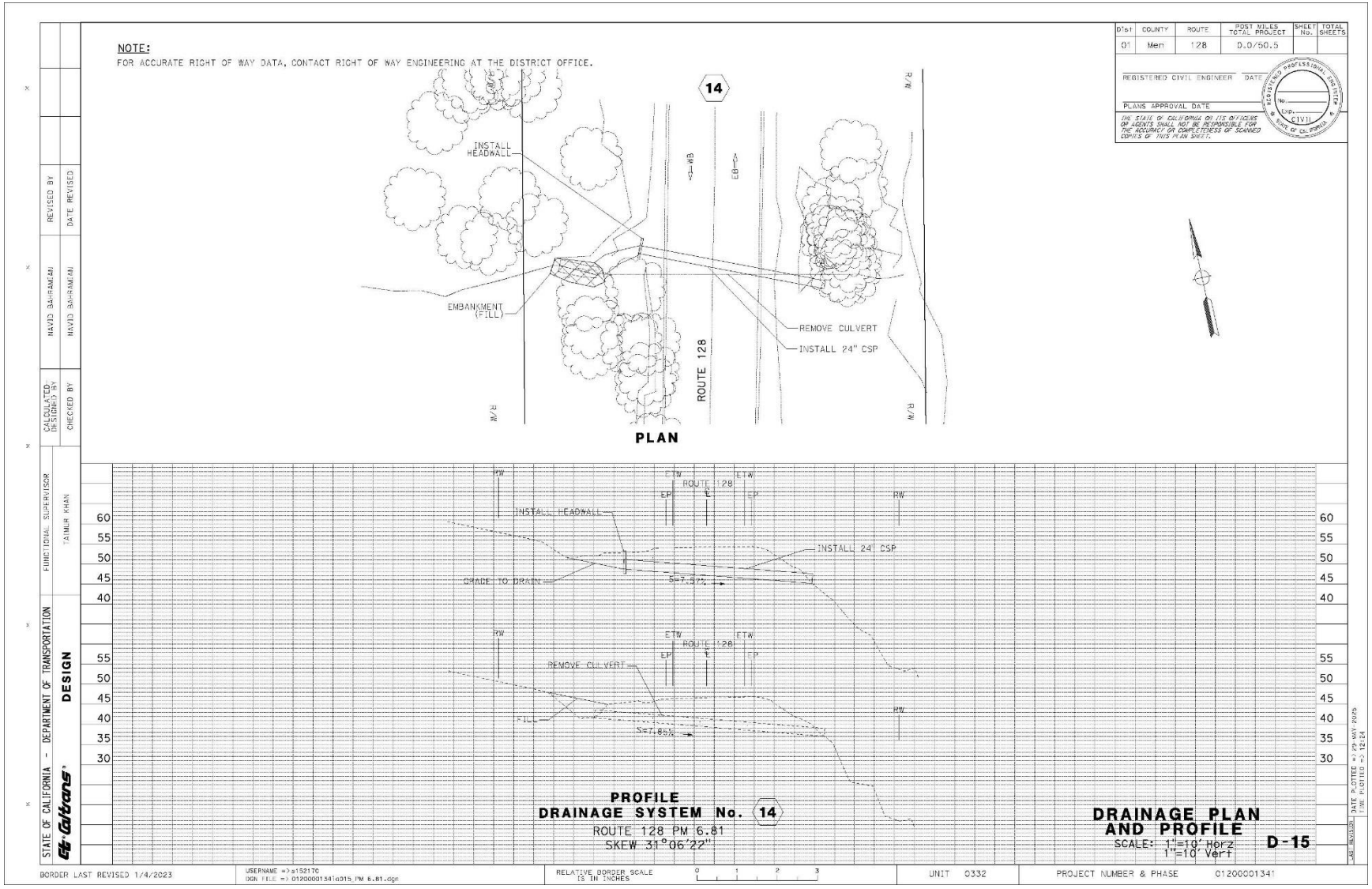

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
9
REMOVE CULVERT
INSTALL 24" CSP
RSP
ROUTE 128
PLAN
PROFILE
DRAINAGE SYSTEM No. 9
ROUTE 128 PM 1.99
SKEW 01°07'49"
DRAINAGE PLAN AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-10
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/DESIGNED BY
CHECKED BY
DAVID BAHRAMIAN
REVISED BY
DATE REVISED
BORDER LAST REVISED 1/4/2023
USERNAME =>s153170
DGN FILE => 01200001341dd10_PM 1.99.dgn
RELATIVE BORDER SCALE IS IN INCHES
UNIT 0332
PROJECT NUMBER & PHASE 01200001341
DATE PLOTTED => 29 MAY 2025
TIME PLOTTED => 12:23

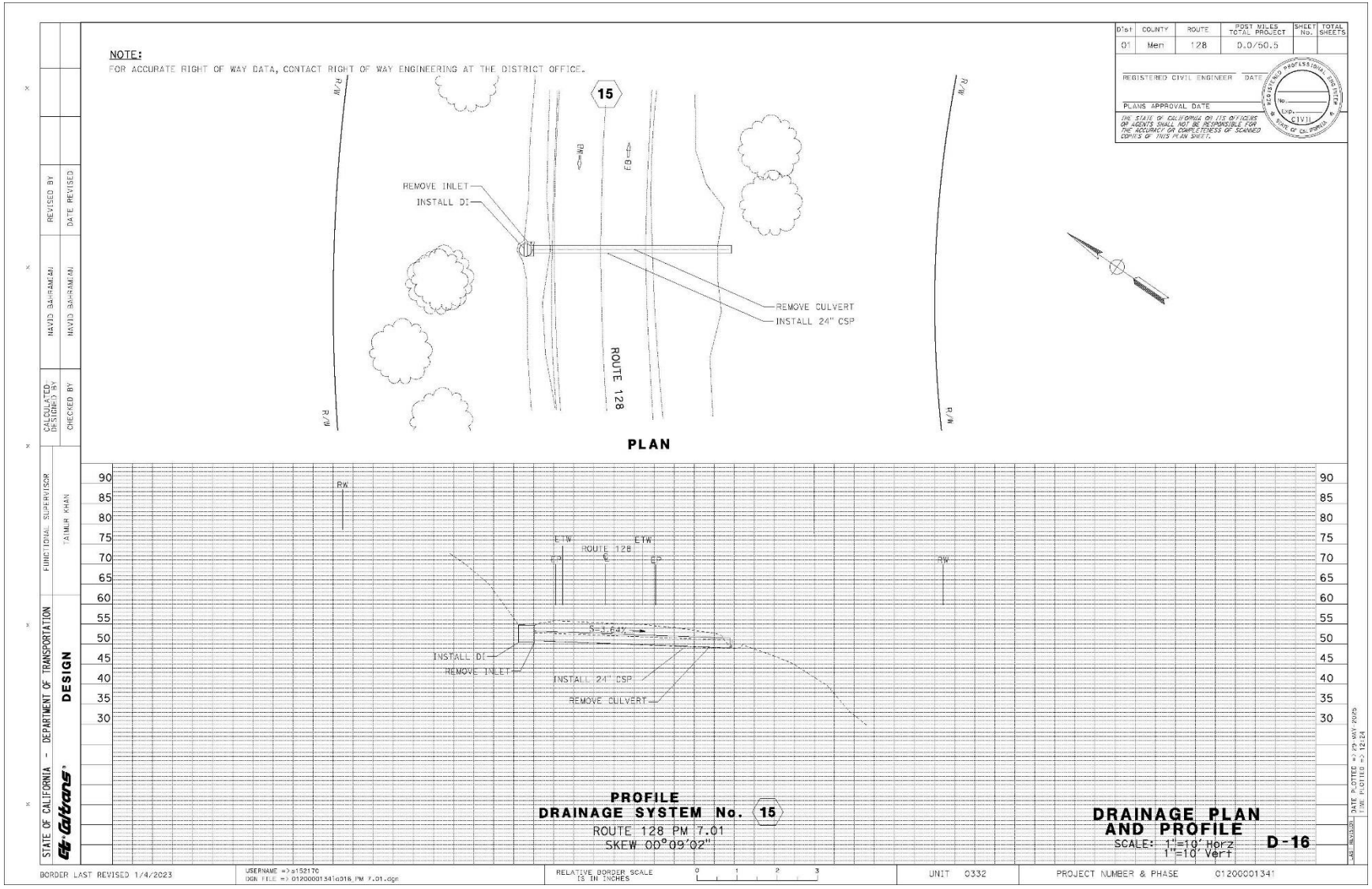

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS
01 | Men | 128 | 0.0/50.5
REGISTERED CIVIL ENGINEER DATE
PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.
REGISTERED PROFESSIONAL ENGINEER
No.
EXP.
CIVIL
STATE OF CALIFORNIA
10
R/W
EBL
WBL
REMOVE CULVERT
INSTALL 24" CSP
RSP
RETAINING WALL PROTECT IN PLACE
ROUTE 128
PLAN
RW
ETW
EP
ROUTE 128
S=7.94%
RETAINING WALL PROTECT IN PLACE
INSTALL 24" CSP
RSP
REMOVE CULVERT
PROFILE
DRAINAGE SYSTEM No. 10
ROUTE 128 PM 2.11
SKEW 00°38'24"
DRAINAGE PLAN AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-11
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/DESIGNED BY
DAVID BAHRAMIAN
CHECKED BY
DAVID BAHRAMIAN
REVISED BY
DATE REVISED
BORDER LAST REVISED 1/4/2023
USERNAME => s153170
DGN FILE => 0120000134 1d011_PM 2.11.dgn
RELATIVE BORDER SCALE IS IN INCHES
0 1 2 3
UNIT 0332
PROJECT NUMBER & PHASE 0120000134
DATE PLOTTED => 29 MAY 2025
TIME PLOTTED => 12:24

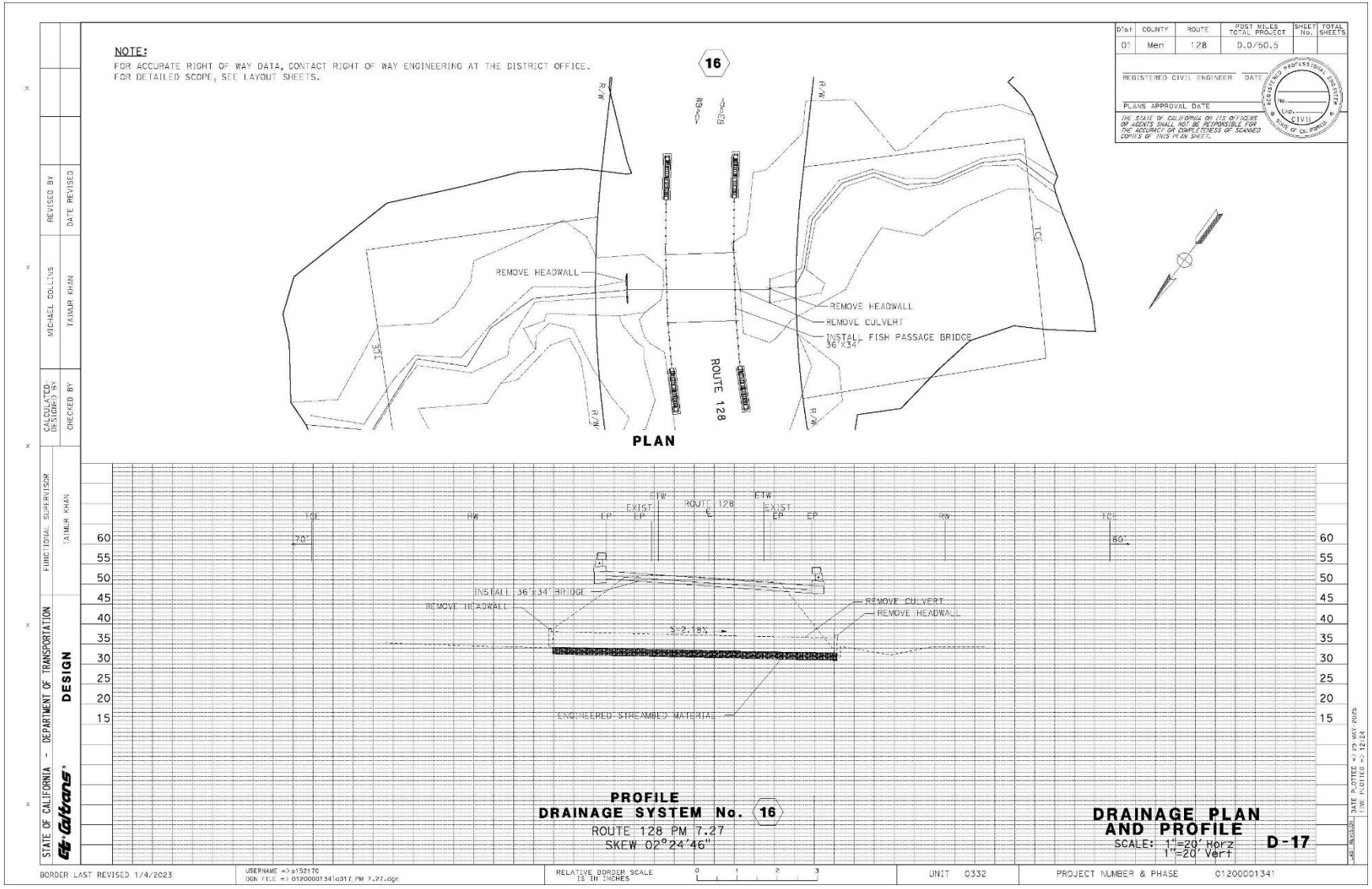

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
11
R/W
<--WB
EB-->
REMOVE CULVERT
INSTALL 24" CSP
ROUTE 128
PLAN
Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS
01 | Men | 128 | 0.0/50.5
REGISTERED CIVIL ENGINEER DATE
PLANS APPROVAL DATE
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.
REGISTERED PROFESSIONAL ENGINEER
No.
EXP.
CIVIL
STATE OF CALIFORNIA
REVISED BY
DATE REVISED
DAVID BAHRAMIAN
DAVID BAHRAMIAN
CALCULATED/ DESIGNED BY
CHECKED BY
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DESIGN
ETW
EP
ROUTE 128
℄
EP
ETW
RW
RW
PCC BACKFILL
S=1.04%
INSTALL 24" CSP
REMOVE CULVERT
60
55
50
45
40
35
30
25
20
15
10
5
0
PROFILE
DRAINAGE SYSTEM No. 11
ROUTE 128 PM 2.29
SKEW 02°15'27"
DRAINAGE PLAN AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-12
BORDER LAST REVISED 1/4/2023
USERNAME =>s153170
DGN FILE => 01200001341qd12_PM 2.29.dgn
RELATIVE BORDER SCALE IS IN INCHES
0 1 2 3
UNIT 0332
PROJECT NUMBER & PHASE 01200001341
DATE PLOTTED => 29 MAY 2025
TIME PLOTTED => 12:24

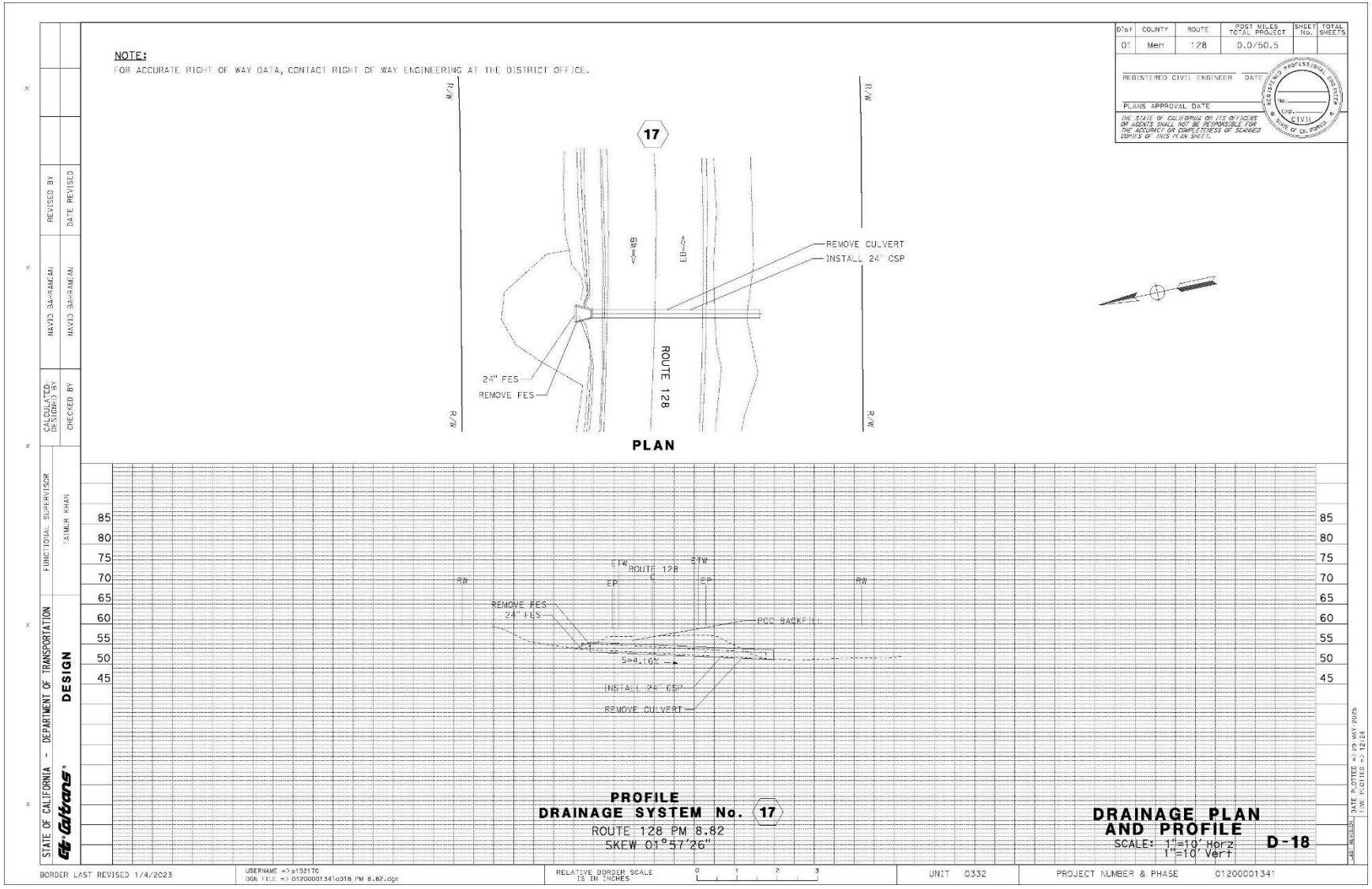

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
12
REMOVE HEADWALL
24" FES
REMOVE HEADWALL
24" FES
REMOVE CULVERT
INSTALL 24" CSP
ROUTE 128
R/W
PLAN
RW
ETW
ROUTE 128
EP
RW
RCC BACKFILL
S=13.61%
24" FES
REMOVE HEADWALL
INSTALL 24" CSP
REMOVE CULVERT
24" FES
REMOVE HEADWALL
PROFILE
DRAINAGE SYSTEM No. 12
ROUTE 128 PM 2.43
SKEW 04°38'36"
DRAINAGE PLAN AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-13
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/DESIGNED BY
DAVID BAHRAMIAN
CHECKED BY
DAVID BAHRAMIAN
REVISED BY
DATE REVISED
DIST 01
COUNTY Men
ROUTE 128
POST MILES TOTAL PROJECT 0.0/50.5
SHEET No.
TOTAL SHEETS
REGISTERED CIVIL ENGINEER
DATE
PLANS APPROVAL DATE
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.
REGISTERED PROFESSIONAL ENGINEER
No.
EXP.
CIVIL
STATE OF CALIFORNIA
BORDER LAST REVISED 1/4/2023
USERNAME =>s153170
DGN FILE => 01200001341dd13_PM 2.43.dgn
RELATIVE BORDER SCALE IS IN INCHES
0 1 2 3
UNIT 0332
PROJECT NUMBER & PHASE 01200001341
DATE PLOTTED => 29 MAY 2025
TIME PLOTTED => 12:24

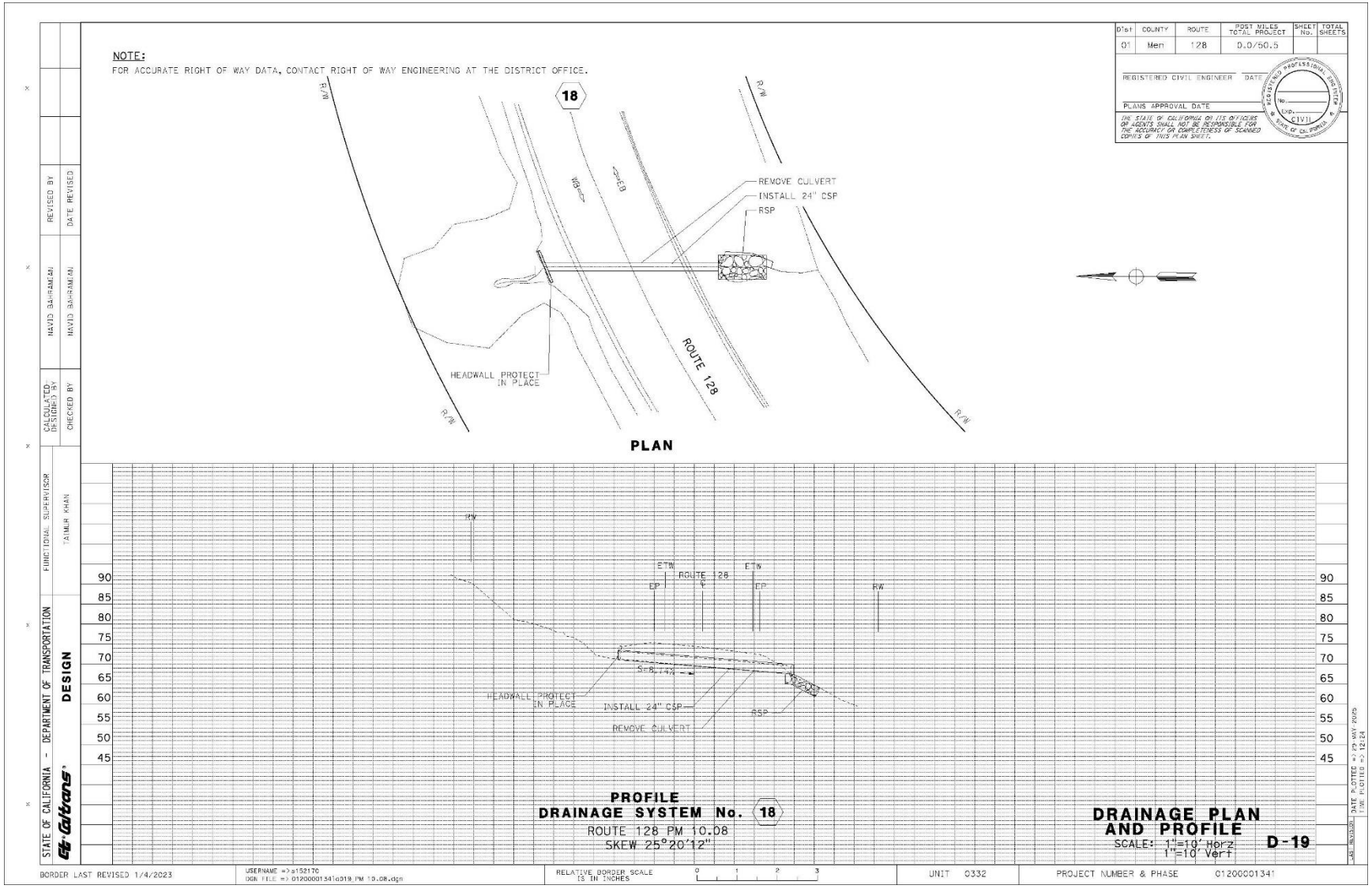

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
13
WB
EB
REMOVE CULVERT
RSP
INSTALL 24" CSP
ROUTE 128
PLAN
PCC BACKFILL
INSTALL 24" CSP
S=6.36%
REMOVE CULVERT
PROFILE
DRAINAGE SYSTEM No. 13
ROUTE 128 PM 2.59
SKEW 20°09'43"
DRAINAGE PLAN AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-14
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/DESIGNED BY
CHECKED BY
DRAWN BY
REVISED BY
DATE REVISED
BORDER LAST REVISED 1/4/2023
USERNAME =>s153170
DGN FILE => 01200001341sd14_PM 2.59.dgn
RELATIVE BORDER SCALE IS IN INCHES
UNIT 0332
PROJECT NUMBER & PHASE 01200001341
DATE PLOTTED => 29 MAY 2025
TIME PLOTTED => 12:24

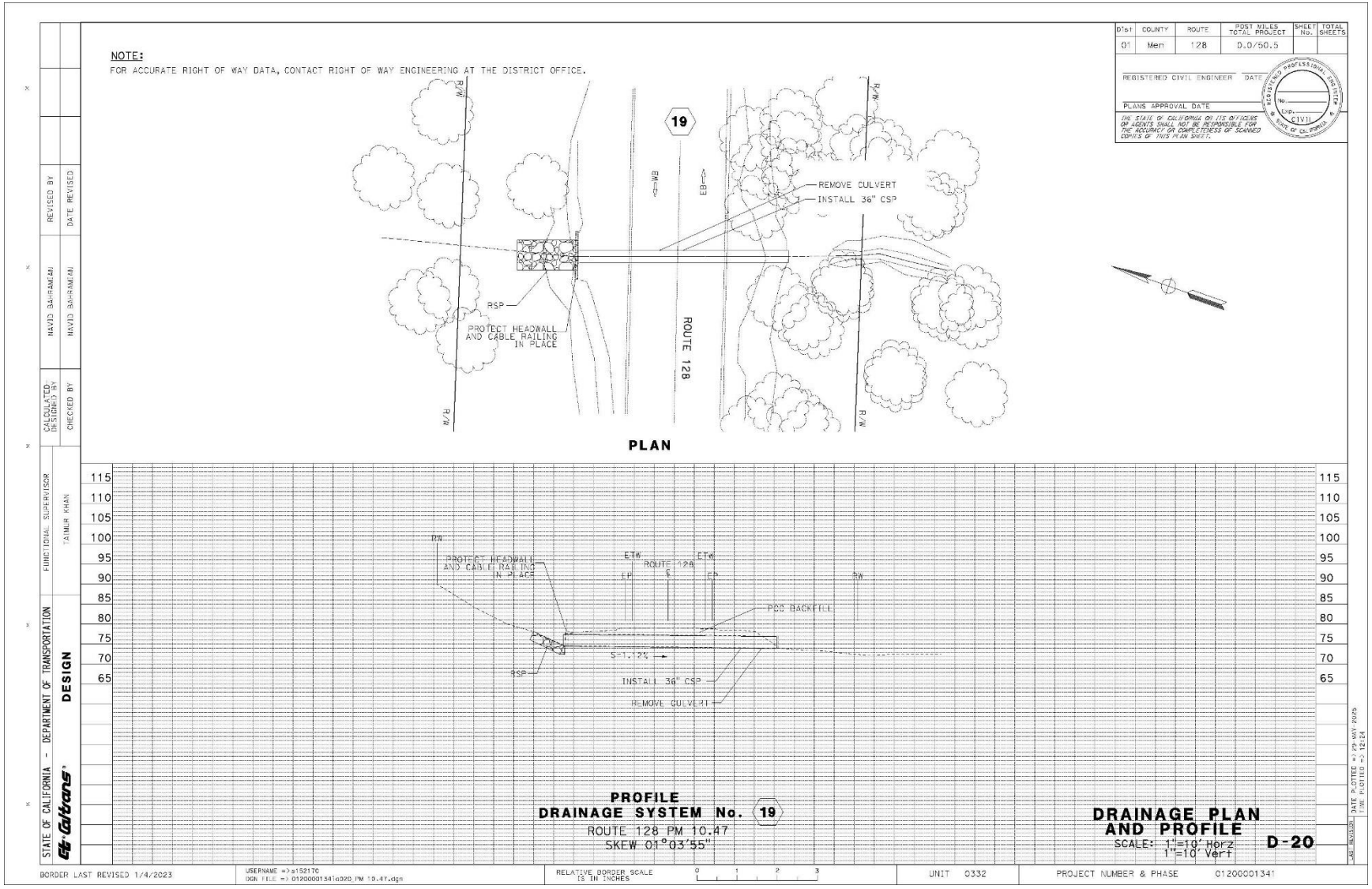

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
14
INSTALL HEADWALL
EMBANKMENT (FILL)
WB
EB
ROUTE 128
REMOVE CULVERT
INSTALL 24" CSP
R/W
PLAN
PROFILE
DRAINAGE SYSTEM No. 14
ROUTE 128 PM 6.81
SKEW 31°06'22"
GRADE TO DRAIN
S=7.85%
FILL
DRAINAGE PLAN AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-15
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/DESIGNED BY
DRAWN BY
CHECKED BY
REVISED BY
DATE REVISED
DIST
COUNTY
ROUTE
POST MILES TOTAL PROJECT
SHEET No.
TOTAL SHEETS
01
Men
128
0.0/50.5
REGISTERED CIVIL ENGINEER
DATE
PLANS APPROVAL DATE
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.
BORDER LAST REVISED 1/4/2023
USERNAME =>s153170
DGN FILE =>
RELATIVE BORDER SCALE IS IN INCHES
UNIT 0332
PROJECT NUMBER & PHASE 01200001341

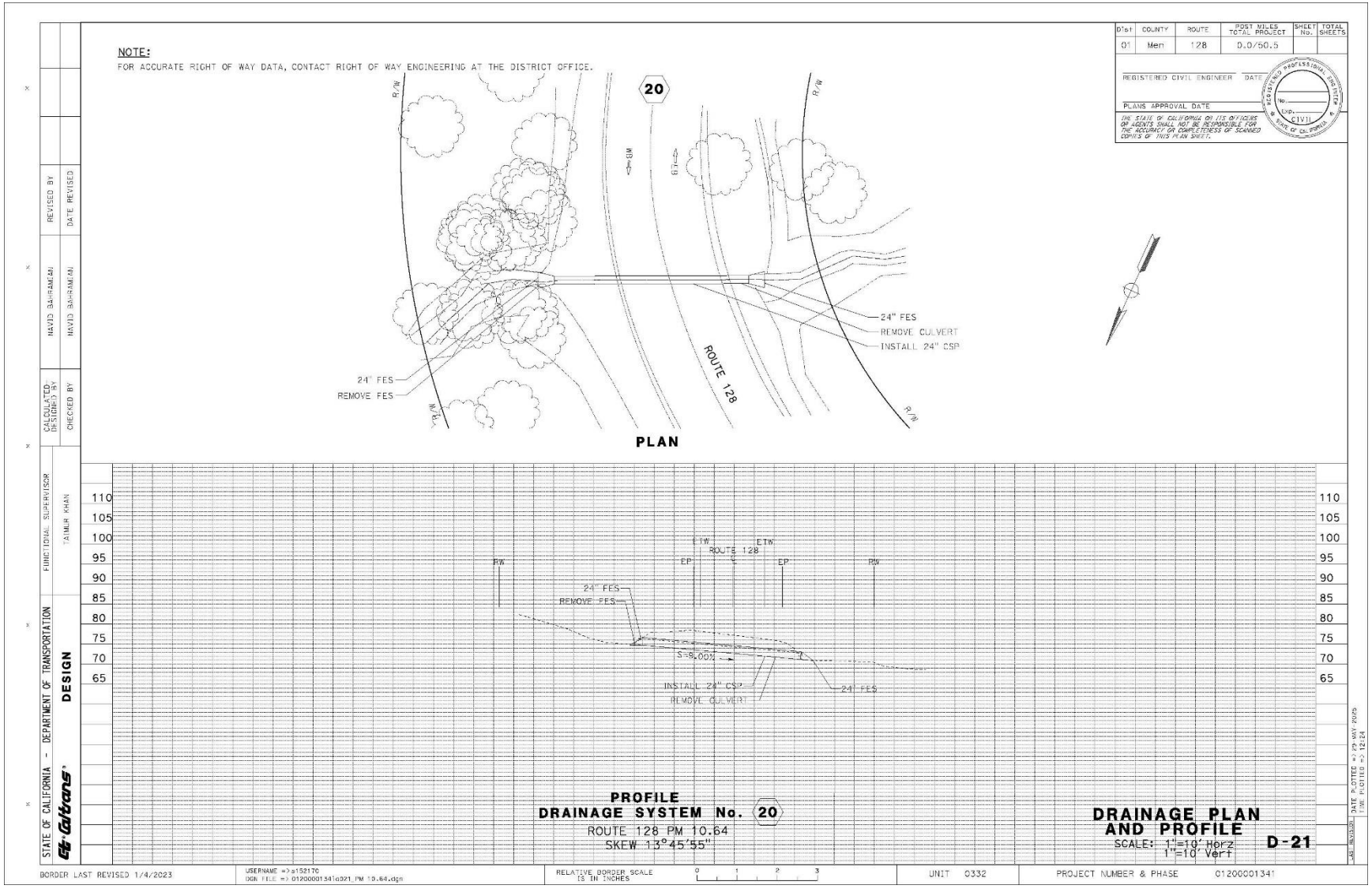

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS
01 | Men | 128 | 0.0/50.5
REGISTERED CIVIL ENGINEER DATE
PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.
15
REMOVE INLET
INSTALL DI
REMOVE CULVERT
INSTALL 24" CSP
ROUTE 128
R/W
PLAN
ETW
ROUTE 128
S=4.64%
INSTALL DI
REMOVE INLET
INSTALL 24" CSP
REMOVE CULVERT
PROFILE
DRAINAGE SYSTEM No. 15
ROUTE 128 PM 7.01
SKEW 00°09'02"
DRAINAGE PLAN AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-16
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/DESIGNED BY
DAVID BAHRAMIAN
CHECKED BY
DAVID BAHRAMIAN
REVISED BY
DATE REVISED
BORDER LAST REVISED 1/4/2023
USERNAME => s153170
DGN FILE => 01200001341a016_PM 7.01.dgn
RELATIVE BORDER SCALE IS IN INCHES
UNIT 0332
PROJECT NUMBER & PHASE 01200001341

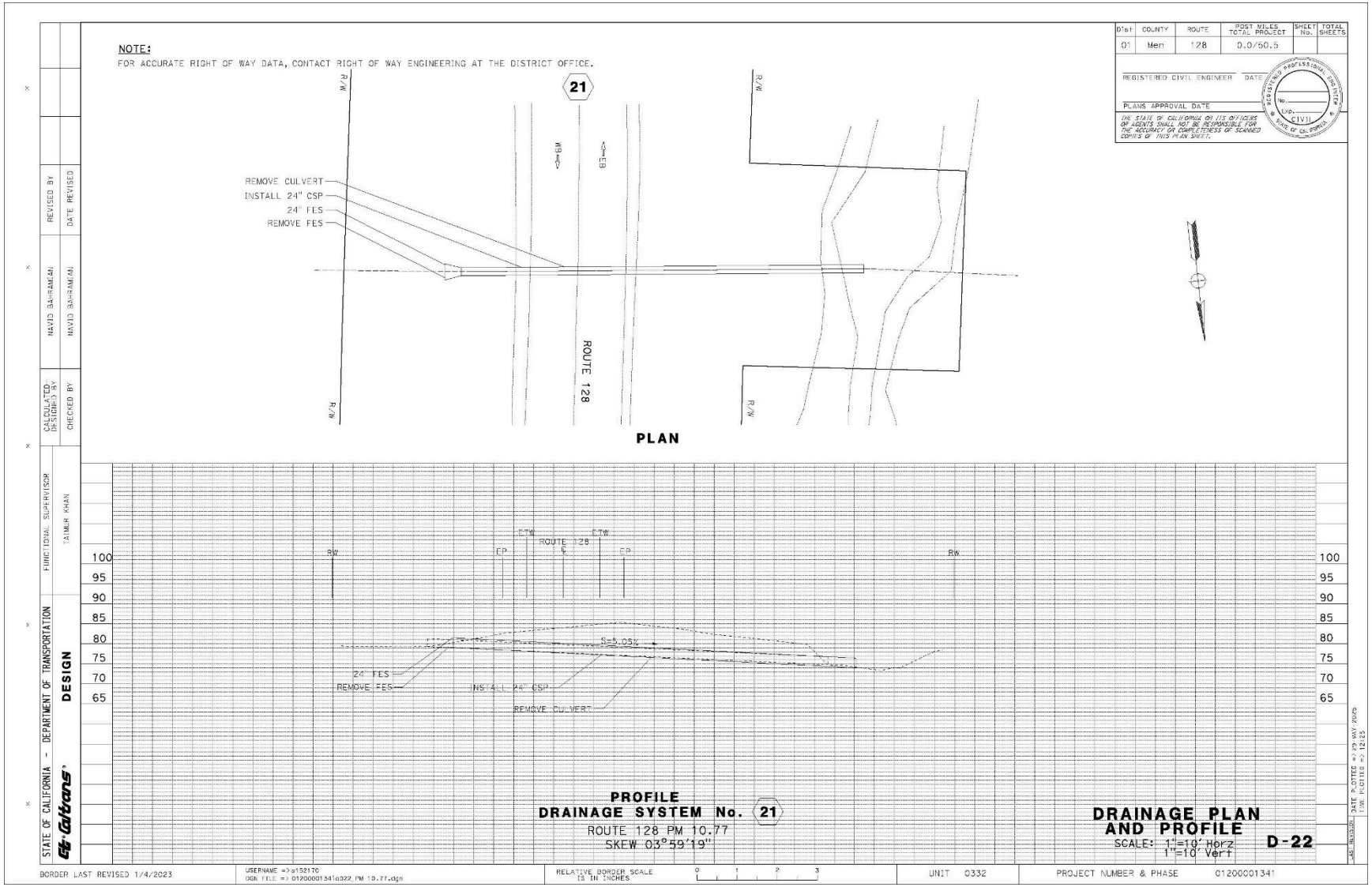

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
FOR DETAILED SCOPE, SEE LAYOUT SHEETS.
16
Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS
01 | Men | 128 | 0.0/50.5
REGISTERED CIVIL ENGINEER DATE
PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.
REMOVE HEADWALL
REMOVE HEADWALL
REMOVE CULVERT
INSTALL FISH PASSAGE BRIDGE 36'X34'
ROUTE 128
PLAN
INSTALL 36'x34' BRIDGE
REMOVE HEADWALL
REMOVE CULVERT
REMOVE HEADWALL
S=2.18%
ENGINEERED STREAMBED MATERIAL
EXIST EP
EXIST EP
ROUTE 128
70'
80'
PROFILE
DRAINAGE SYSTEM No. 16
ROUTE 128 PM 7.27
SKEW 02°24'46"
DRAINAGE PLAN AND PROFILE
SCALE: 1"=20' Horz
1"=20' Vert
D-17
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR TAIMUR KHAN
CALCULATED/DESIGNED BY MICHAEL COLLINS
CHECKED BY TAIMUR KHAN
REVISED BY
DATE REVISED
BORDER LAST REVISED 1/4/2023
USERNAME => s153170
DGN FILE => 0120000134\da017_PM 7.27.dgn
RELATIVE BORDER SCALE IS IN INCHES
UNIT 0332
PROJECT NUMBER & PHASE 0120000134

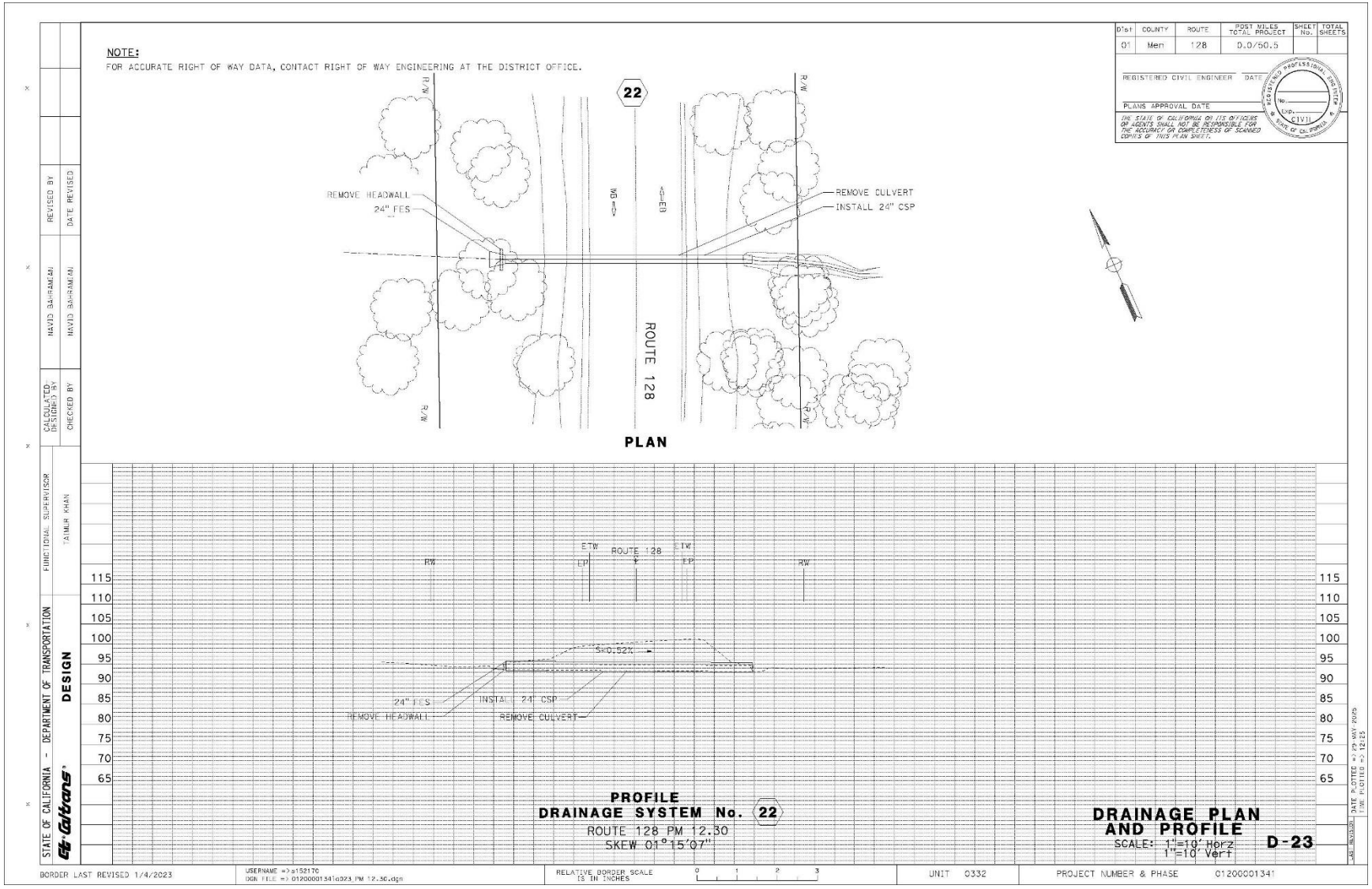

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS
01 | Men | 128 | 0.0/50.5
REGISTERED CIVIL ENGINEER
DATE
PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.
17
R/W
EB
REMOVE CULVERT
INSTALL 24" CSP
24" FES
REMOVE FES
ROUTE 128
PLAN
ETW
ROUTE 128
EP
CP
REMOVE FES
24" FES
PCC BACKFILL
S=4.16%
INSTALL 24" CSP
REMOVE CULVERT
PROFILE
DRAINAGE SYSTEM No. 17
ROUTE 128 PM 8.82
SKEW 01°57'26"
DRAINAGE PLAN AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-18
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/DESIGNED BY
DAVID BAHRAMIAN
CHECKED BY
DAVID BAHRAMIAN
REVISED BY
DATE REVISED
BORDER LAST REVISED 1/4/2023
USERNAME =>s153170
DGN FILE => 01200001341d018_PM 8.82.dgn
RELATIVE BORDER SCALE IS IN INCHES
UNIT 0332
PROJECT NUMBER & PHASE 01200001341
DATE PLOTTED => 29 MAY 2025
TIME PLOTTED => 12:24

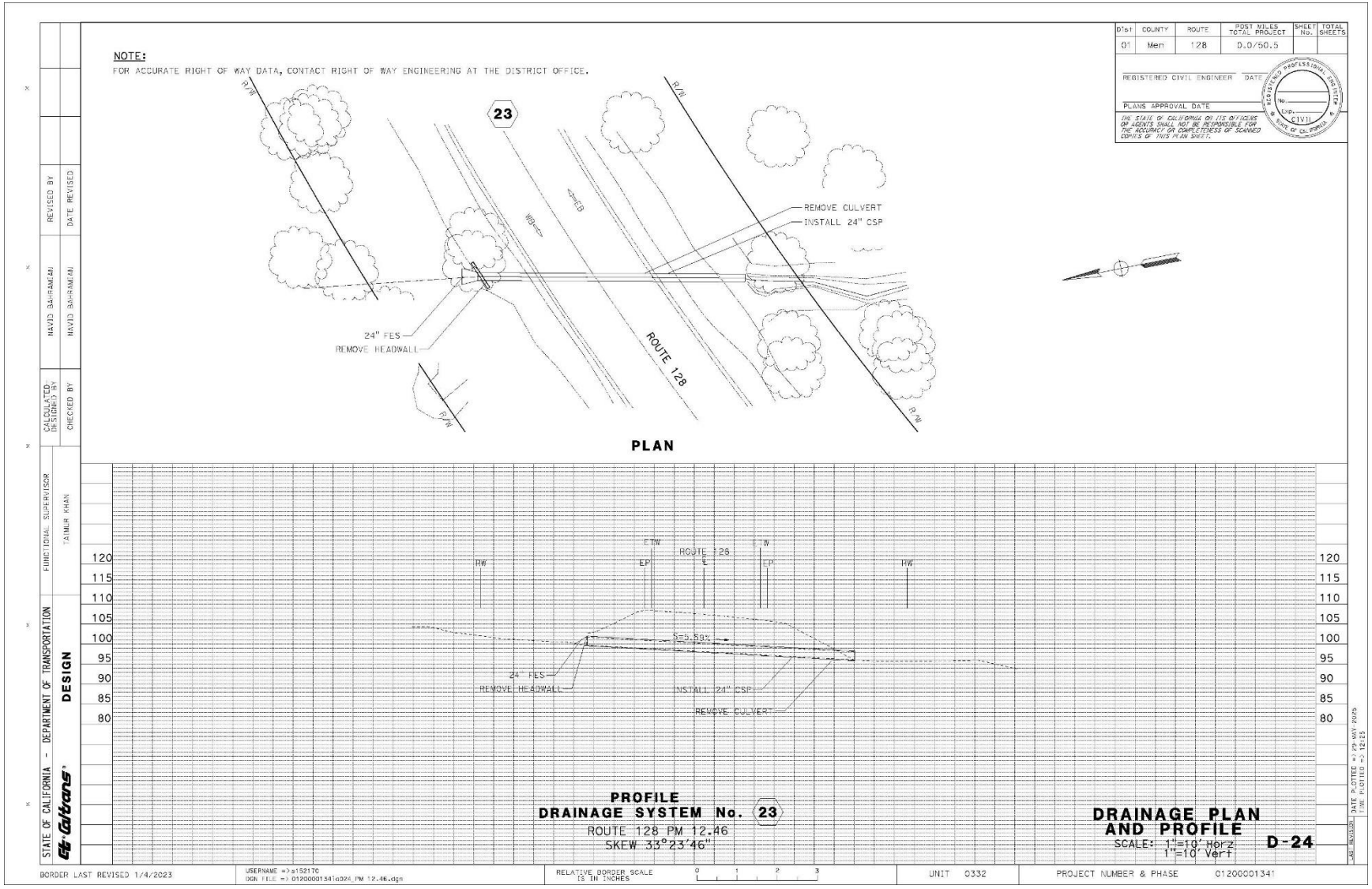

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
18
R/W
WB
EB
REMOVE CULVERT
INSTALL 24" CSP
RSP
HEADWALL PROTECT IN PLACE
ROUTE 128
PLAN
ETW
EP
ROUTE 128
SEAL
INSTALL 24" CSP
REMOVE CULVERT
PROFILE
DRAINAGE SYSTEM No. 18
ROUTE 128 PM 10.08
SKEW 25°20'12"
DRAINAGE PLAN AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-19
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/DESIGNED BY
DAVID BAHRAMIAN
CHECKED BY
DAVID BAHRAMIAN
REVISED BY
DATE REVISED
Dist
COUNTY
ROUTE
POST MILES TOTAL PROJECT
SHEET No.
TOTAL SHEETS
01
Men
128
0.0/50.5
REGISTERED CIVIL ENGINEER
DATE
PLANS APPROVAL DATE
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.
BORDER LAST REVISED 1/4/2023
USERNAME =>s153170
DGN FILE => 01200001341dd19_PM 10.08.dgn
RELATIVE BORDER SCALE IS IN INCHES
UNIT 0332
PROJECT NUMBER & PHASE 01200001341

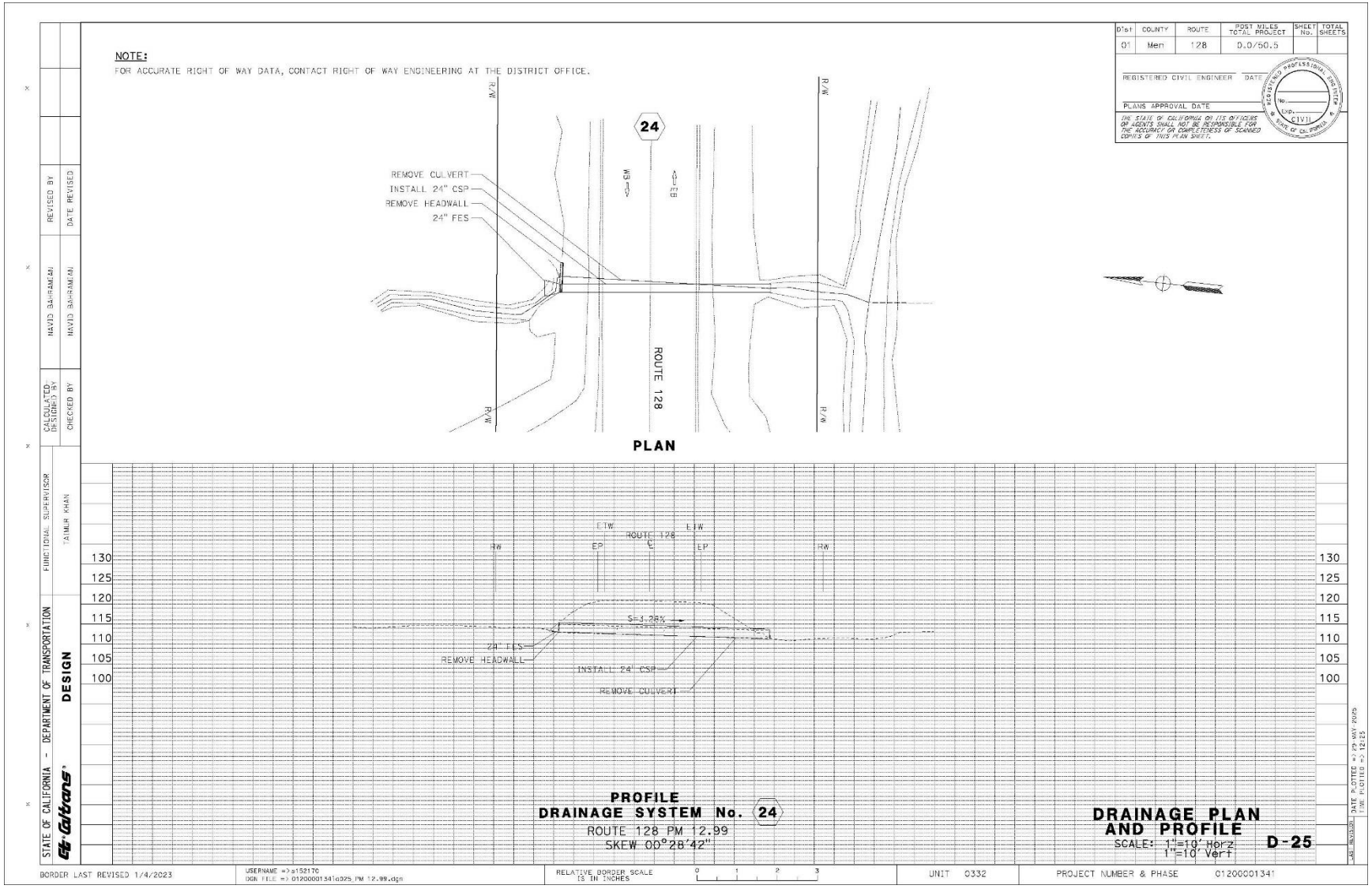

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS
01 | Men | 128 | 0.0/50.5
REGISTERED CIVIL ENGINEER DATE
PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.
19
REMOVE CULVERT
INSTALL 36" CSP
RSP
PROTECT HEADWALL AND CABLE RAILING IN PLACE
ROUTE 128
PLAN
PROTECT HEADWALL AND CABLE RAILING IN PLACE
ETW
ROUTE 128
FP
PCC BACKFILL
S=1.2%
INSTALL 36" CSP
REMOVE CULVERT
PROFILE
DRAINAGE SYSTEM No. 19
ROUTE 128 PM 10.47
SKEW 01°03'55"
DRAINAGE PLAN AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-20
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/DESIGNED BY
CHECKED BY
DAVID BAHRAMIAN
REVISED BY
DATE REVISED
BORDER LAST REVISED 1/4/2023
USERNAME =>s153170
DGN FILE =>
RELATIVE BORDER SCALE IS IN INCHES
UNIT 0332
PROJECT NUMBER & PHASE 01200001341


NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
20
R/W
CRM
617
24" FES
REMOVE CULVERT
INSTALL 24" CSP
24" FES
REMOVE FES
ROUTE 128
PLAN
Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS
01 | Men | 128 | 0.0/50.5
REGISTERED CIVIL ENGINEER
DATE
PLANS APPROVAL DATE
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.
REGISTERED PROFESSIONAL ENGINEER
No.
EXP.
CIVIL
STATE OF CALIFORNIA
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/DESIGNED BY
CHECKED BY
REVISED BY
DATE REVISED
NAVID BAHRAMIAN
NAVID BAHRAMIAN
110
105
100
95
90
85
80
75
70
65
ETW
ROUTE 128
EP
EP
PM
PM
24" FES
REMOVE FES
S=8.00%
INSTALL 24" CSP
REMOVE CULVERT
24" FES
PROFILE
DRAINAGE SYSTEM No. 20
ROUTE 128 PM 10.64
SKEW 13°45'55"
DRAINAGE PLAN AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-21
BORDER LAST REVISED 1/4/2023
USERNAME =>s153170
DGN FILE =>
RELATIVE BORDER SCALE IS IN INCHES
0 1 2 3
UNIT 0332
PROJECT NUMBER & PHASE 01200001341
DATE PLOTTED =>
TIME PLOTTED =>

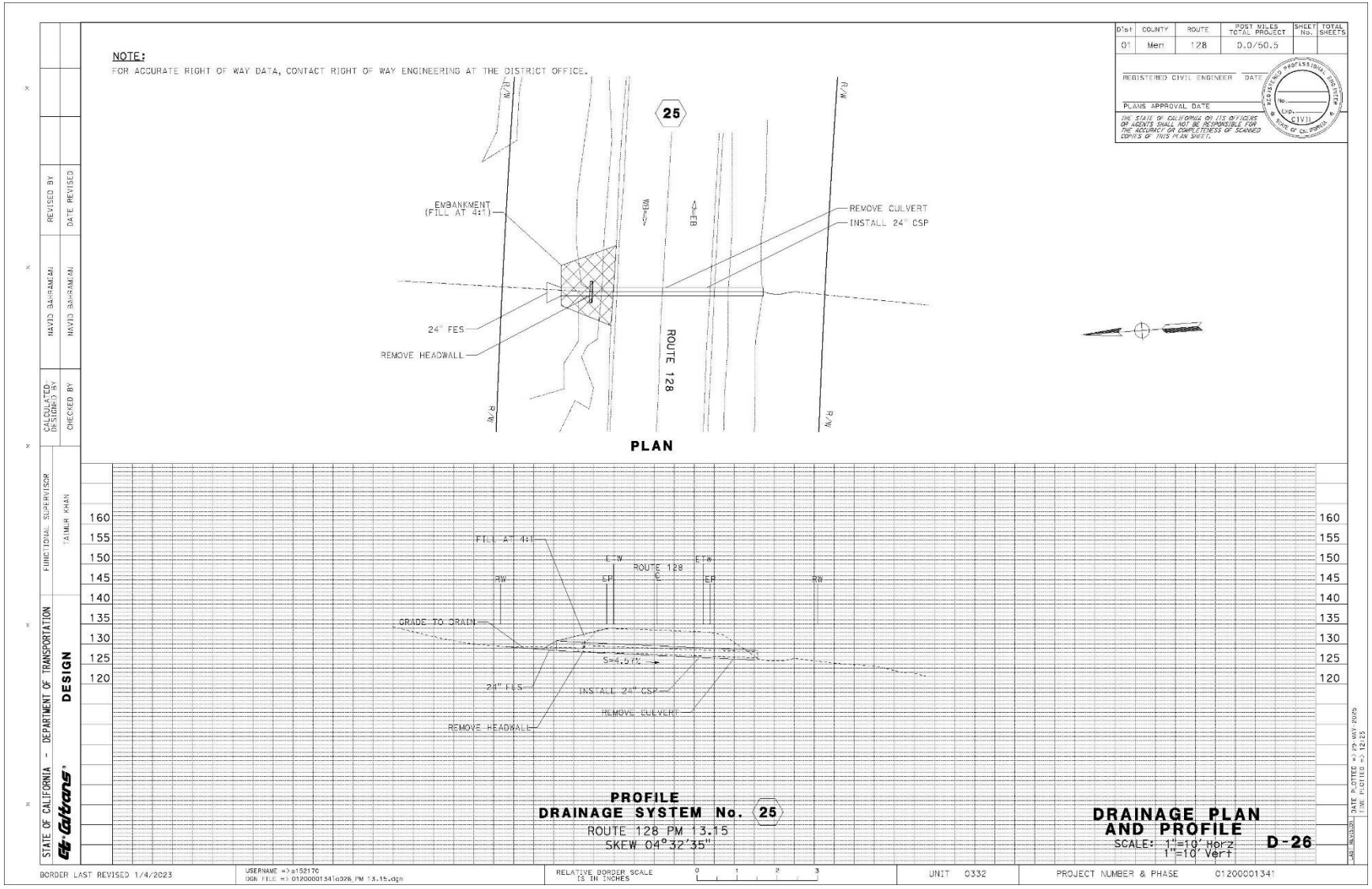

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
21
REMOVE CULVERT
INSTALL 24" CSP
24" FES
REMOVE FES
R/W
ROUTE 128
PLAN
S=5.05%
24" FES
REMOVE FES
INSTALL 24" CSP
REMOVE CULVERT
PROFILE
DRAINAGE SYSTEM No. 21
ROUTE 128 PM 10.77
SKEW 03°59'19"
DRAINAGE PLAN AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-22
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/DESIGNED BY
MAVID BAHRAMIAN
CHECKED BY
MAVID BAHRAMIAN
REVISED BY
DATE REVISED
REGISTERED CIVIL ENGINEER
DATE
PLANS APPROVAL DATE
CIVIL
BORDER LAST REVISED 1/4/2023
UNIT 0332
PROJECT NUMBER & PHASE 01200001341

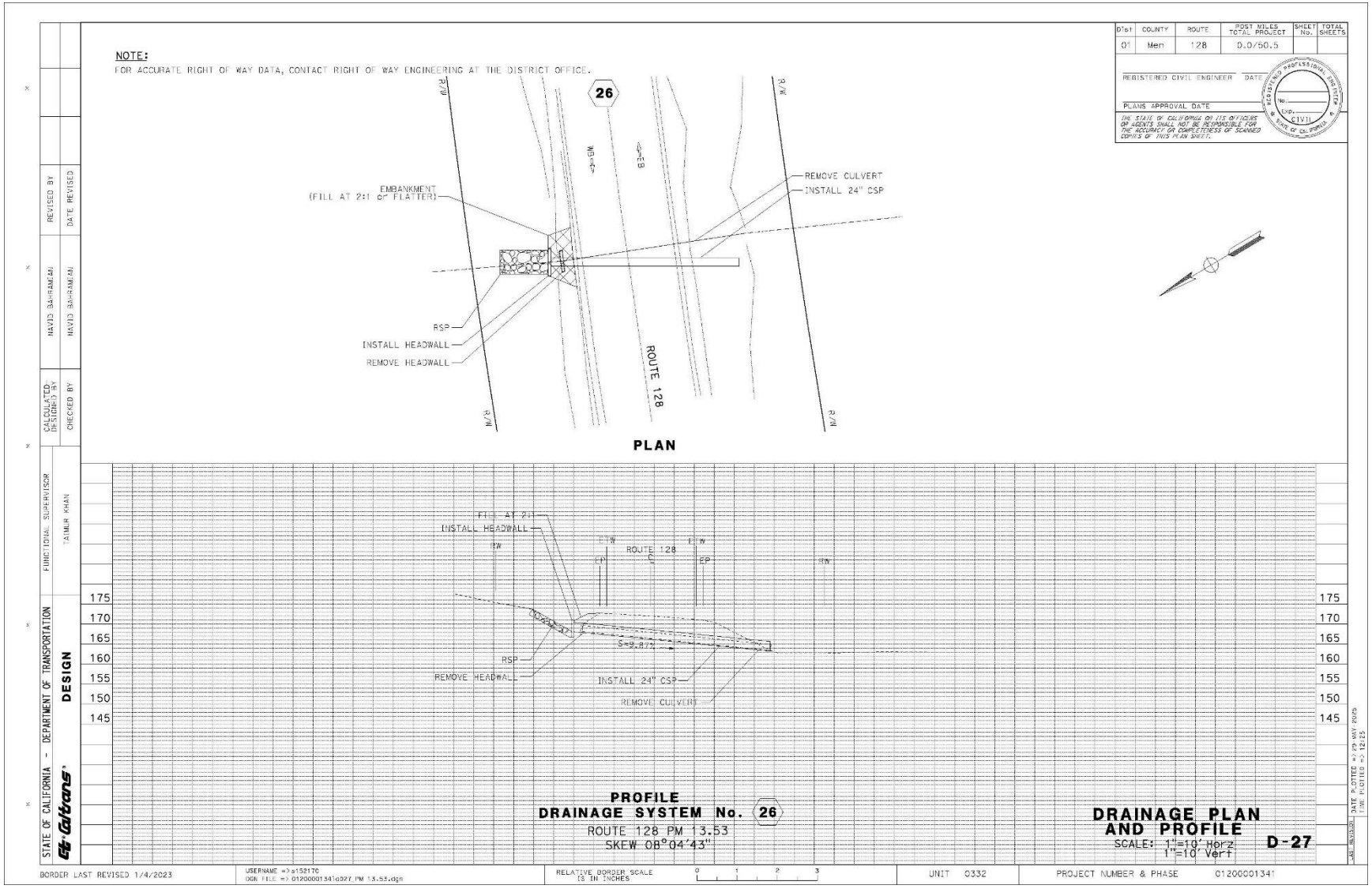

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
22
REMOVE HEADWALL
24" FES
REMOVE CULVERT
INSTALL 24" CSP
ROUTE 128
PLAN
PROFILE
DRAINAGE SYSTEM No. 22
ROUTE 128 PM 12.30
SKEW 01°15'07"
DRAINAGE PLAN
AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-23
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/DESIGNED BY
DAVID BAHRAMIAN
CHECKED BY
DAVID BAHRAMIAN
REVISED BY
DATE REVISED
BORDER LAST REVISED 1/4/2023
UNIT 0332
PROJECT NUMBER & PHASE 01200001341

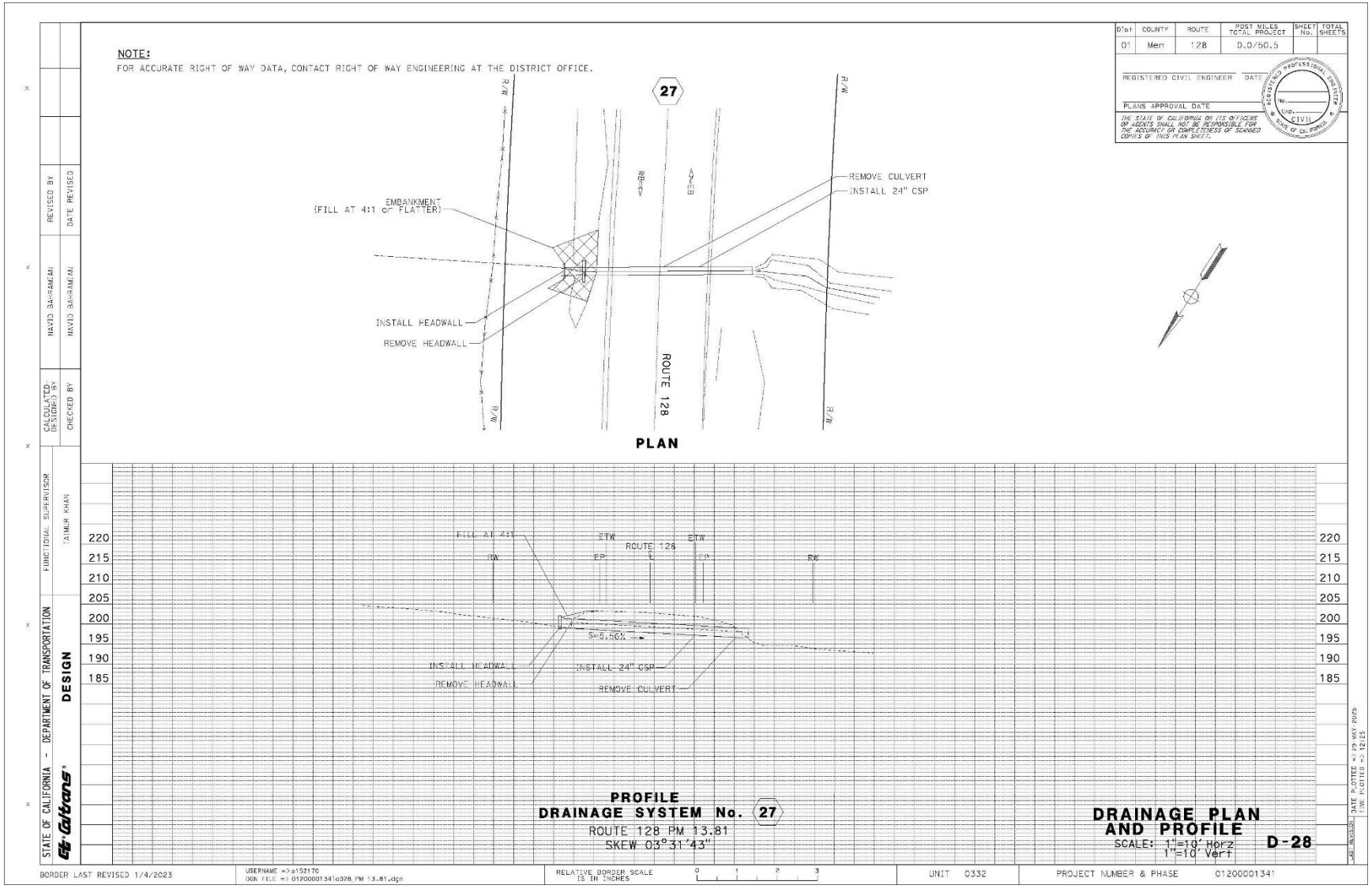

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
23
R/W
REMOVE CULVERT
INSTALL 24" CSP
24" FES
REMOVE HEADWALL
ROUTE 128
PLAN
ETW
EP
ROUTE 128
℄
TW
RW
S=5.59%
INSTALL 21" CSP
REMOVE CULVERT
PROFILE
DRAINAGE SYSTEM No. 23
ROUTE 128 PM 12.46
SKEW 33°23'46"
DRAINAGE PLAN AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-24
Dist 01
COUNTY Men
ROUTE 128
POST MILES TOTAL PROJECT 0.0/50.5
SHEET No.
TOTAL SHEETS
REGISTERED CIVIL ENGINEER
DATE
PLANS APPROVAL DATE
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.
REGISTERED PROFESSIONAL ENGINEER
No.
EXP.
CIVIL
STATE OF CALIFORNIA
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/DESIGNED BY
CHECKED BY
DAVID BAHRAMIAN
REVISED BY
DATE REVISED
BORDER LAST REVISED 1/4/2023
USERNAME =>s153170
DGN FILE =>
RELATIVE BORDER SCALE IS IN INCHES
UNIT 0332
PROJECT NUMBER & PHASE 01200001341
DATE PLOTTED =>
TIME PLOTTED =>



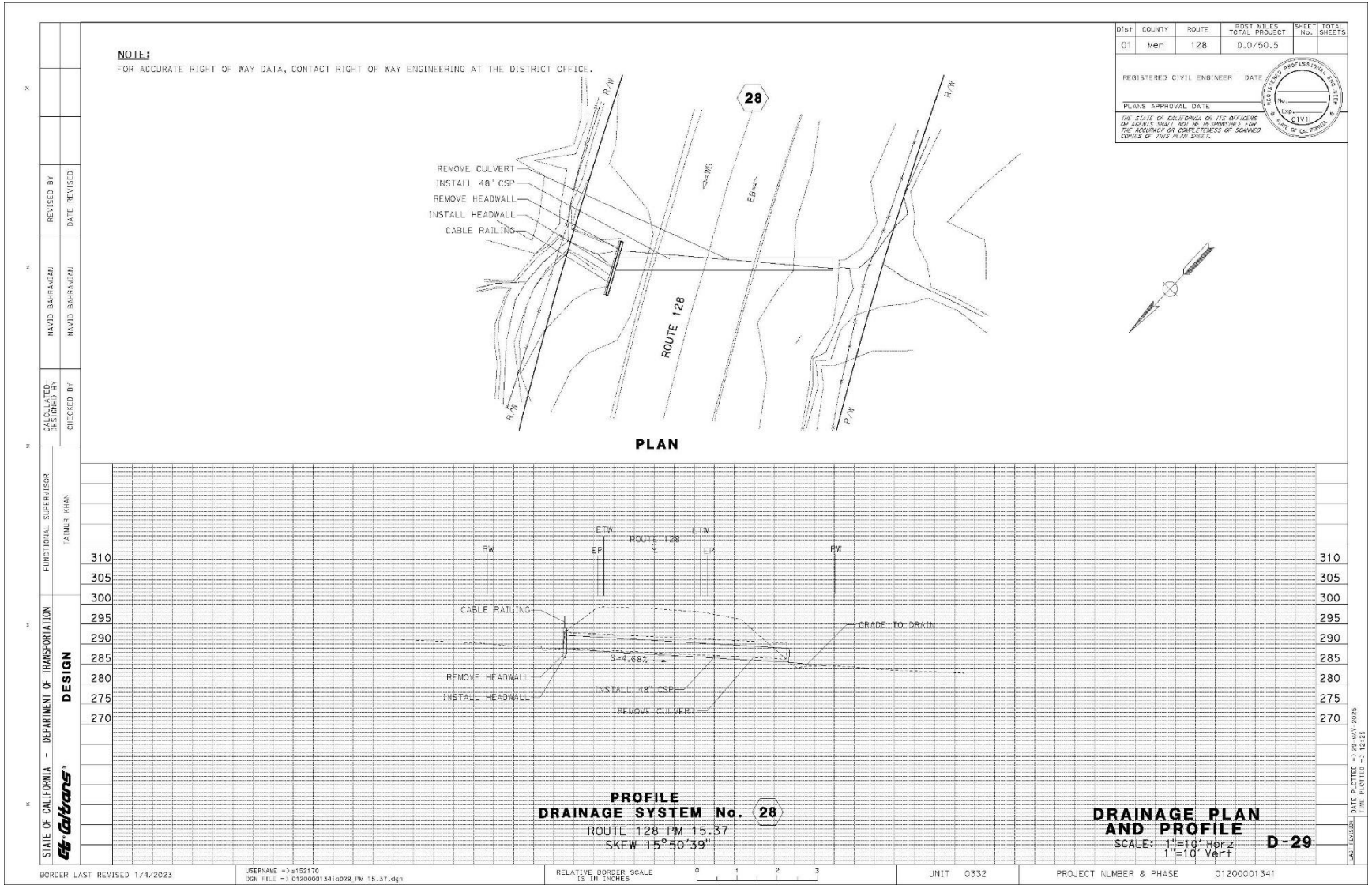
Drainage Plan and Profile

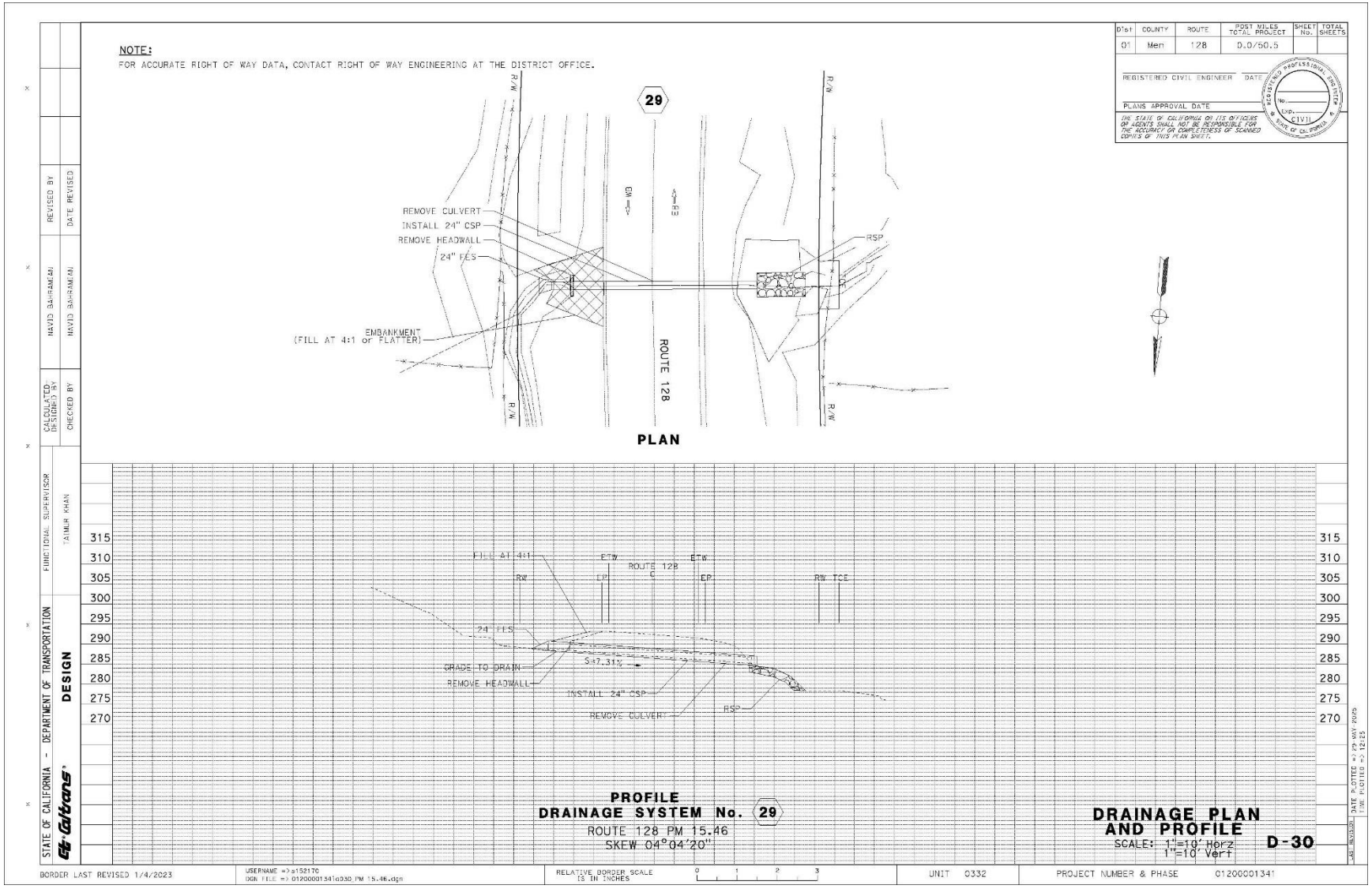

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS
01 | Men | 128 | 0.0/50.5
REGISTERED CIVIL ENGINEER DATE
PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.
25
EMBANKMENT (FILL AT 4:1)
REMOVE CULVERT
INSTALL 24" CSP
24" FES
REMOVE HEADWALL
ROUTE 128
PLAN
FILL AT 4:1
ROUTE 128
GRADE TO DRAIN
S=4.5%
24" FES
INSTALL 24" CSP
REMOVE CULVERT
REMOVE HEADWALL
PROFILE
DRAINAGE SYSTEM No. 25
ROUTE 128 PM 13.15
SKEW 04°32'35"
DRAINAGE PLAN AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-26
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/DESIGNED BY
CHECKED BY
DAVID BAHRAMIAN
DAVID BAHRAMIAN
REVISED BY
DATE REVISED
BORDER LAST REVISED 1/4/2023
USERNAME =>s153170
DGN FILE =>
RELATIVE BORDER SCALE IS IN INCHES
UNIT 0332
PROJECT NUMBER & PHASE 01200001341


NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS
01 | Men | 128 | 0.0/50.5
REGISTERED CIVIL ENGINEER DATE
PLANS APPROVAL DATE
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.
26
R/W
EMBANKMENT (FILL AT 2:1 or FLATTER)
REMOVE CULVERT
INSTALL 24" CSP
RSP
INSTALL HEADWALL
REMOVE HEADWALL
ROUTE 128
PLAN
FILL AT 2:1
INSTALL HEADWALL
FW
EP
ROUTE 128
RSP
REMOVE HEADWALL
INSTALL 24" CSP
REMOVE CULVERT
175
170
165
160
155
150
145
PROFILE
DRAINAGE SYSTEM No. 26
ROUTE 128 PM 13.53
SKEW 08°04'43"
DRAINAGE PLAN AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-27
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/DESIGNED BY
DAVID BAHRAMIAN
CHECKED BY
DAVID BAHRAMIAN
REVISED BY
DATE REVISED
BORDER LAST REVISED 1/4/2023
USERNAME => s153170
DGN FILE => 0120000134 1d027_PM 13.53.dgn
RELATIVE BORDER SCALE IS IN INCHES
0 1 2 3
UNIT 0332
PROJECT NUMBER & PHASE 0120000134
DATE PLOTTED => 29 MAY 2025
TIME PLOTTED => 12:25

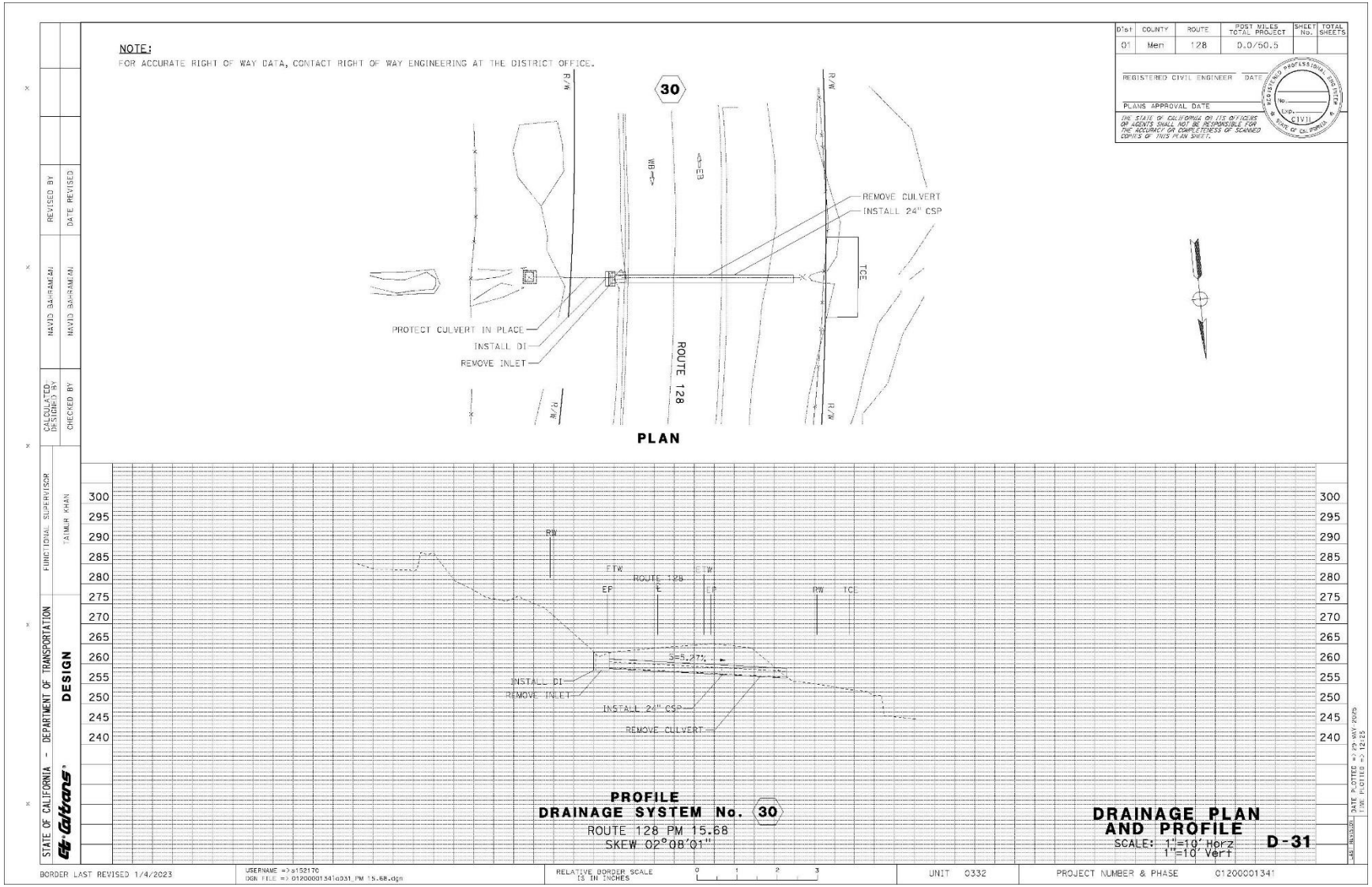


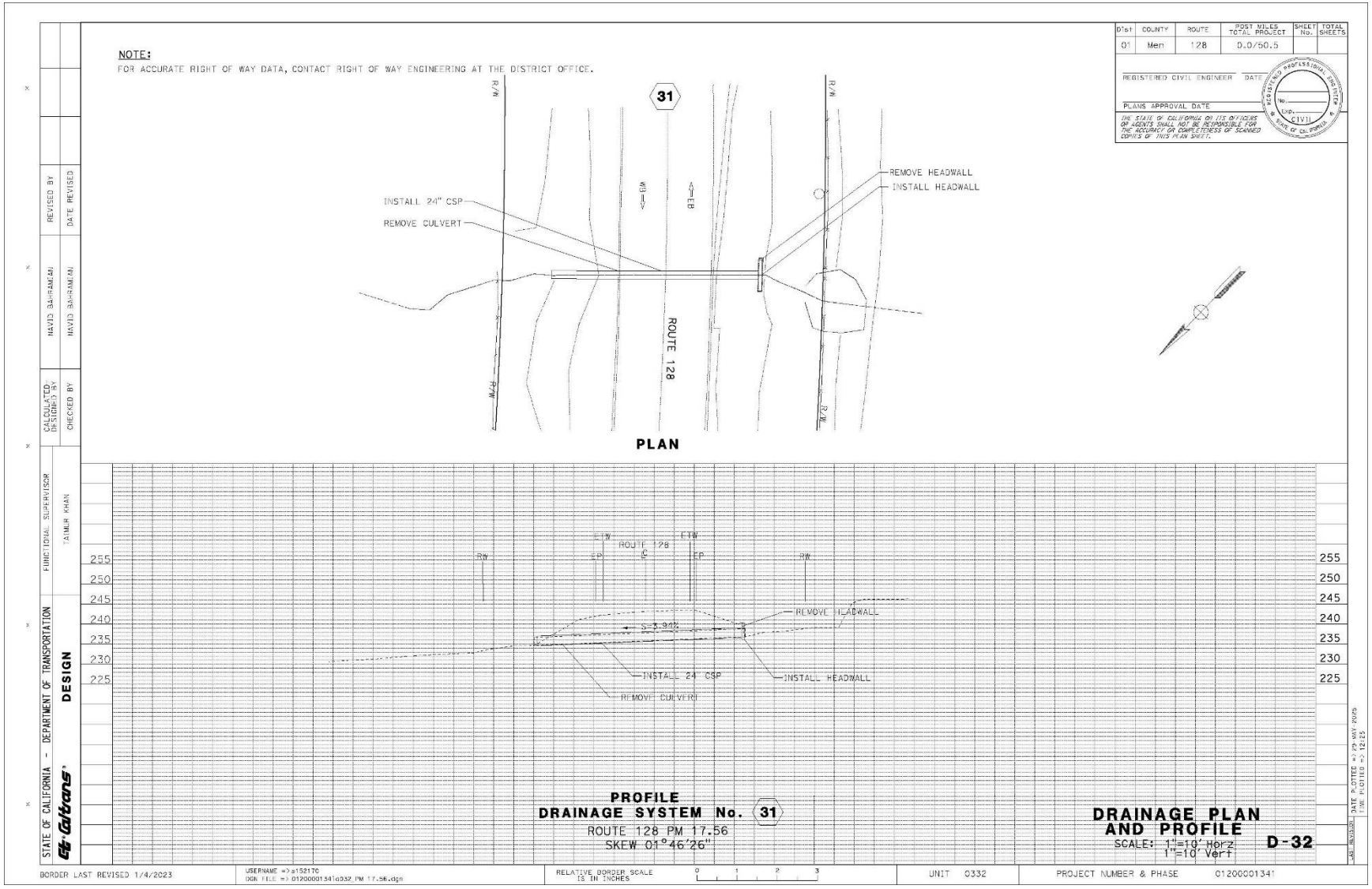
Initial Study / Negative Declaration and Final Section 4(f) Determination
EA 01-0K680 Culvert Rehabilitation and Fish Passage Project *June 2025*

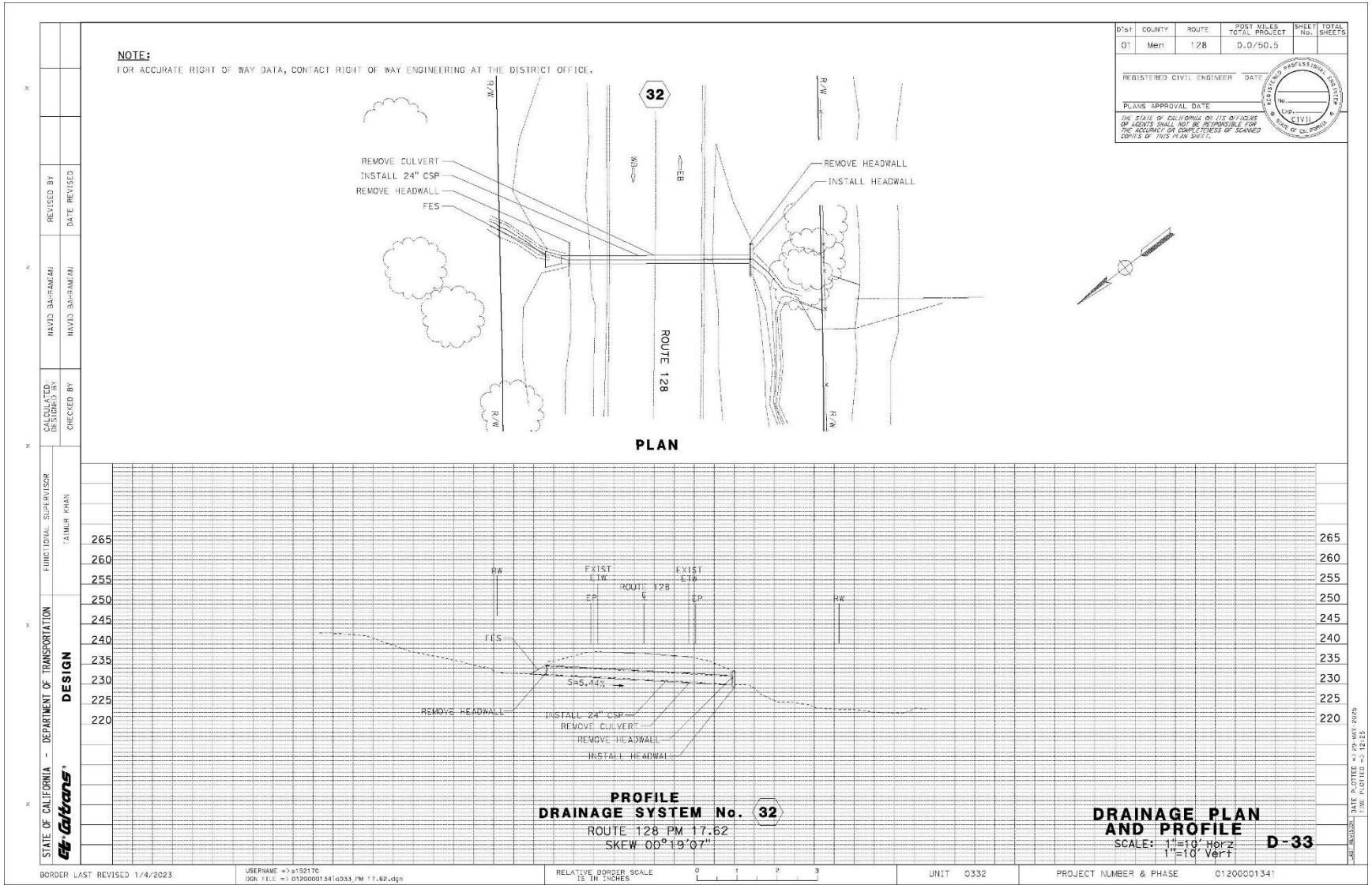

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS
01 | Men | 128 | 0.0/50.5
REGISTERED CIVIL ENGINEER
DATE
PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.
REGISTERED PROFESSIONAL ENGINEER
No.
EXP.
CIVIL
STATE OF CALIFORNIA
REMOVE CULVERT
INSTALL 48" CSP
REMOVE HEADWALL
INSTALL HEADWALL
CABLE RAILING
28
R/W
ROUTE 128
E.B.
PLAN
ETW
ROUTE 128
EP
℄
EP
RW
CABLE RAILING
GRADE TO DRAIN
S=4.68%
REMOVE HEADWALL
INSTALL HEADWALL
INSTALL 48" CSP
REMOVE CULVERT
310
305
300
295
290
285
280
275
270
PROFILE
DRAINAGE SYSTEM No. 28
ROUTE 128 PM 15.37
SKEW 15°50'39"
DRAINAGE PLAN AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-29
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/DESIGNED BY
DAVID BAHRAMIAN
CHECKED BY
DAVID BAHRAMIAN
REVISED BY
DATE REVISED
BORDER LAST REVISED 1/4/2023
USERNAME => s153170
DGN FILE => 01200001341d029_PM 15.37.dgn
RELATIVE BORDER SCALE IS IN INCHES
0 1 2 3
UNIT 0332
PROJECT NUMBER & PHASE 01200001341
DATE PLOTTED => 29 MAY 2025
TIME PLOTTED => 12:25

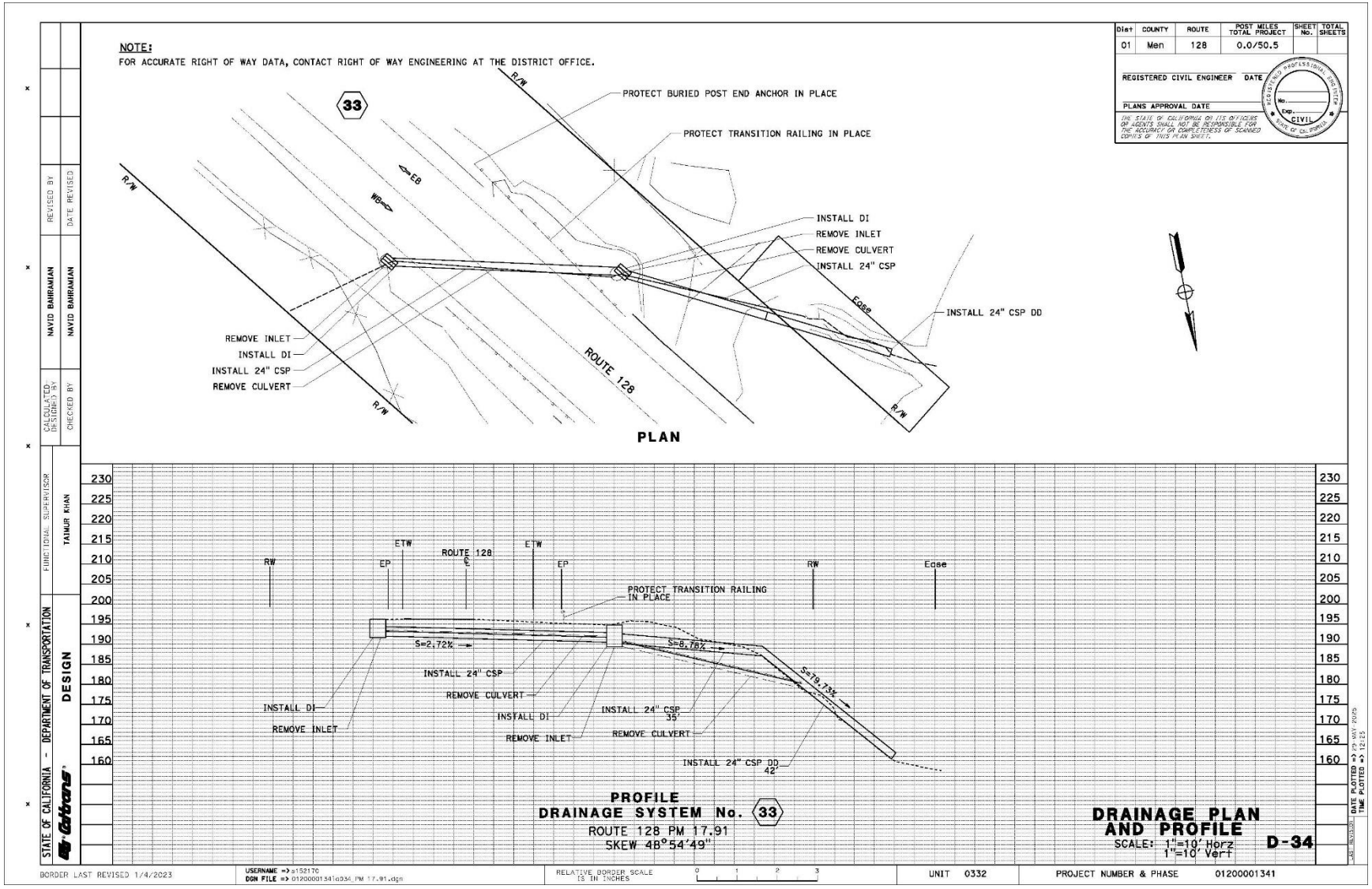


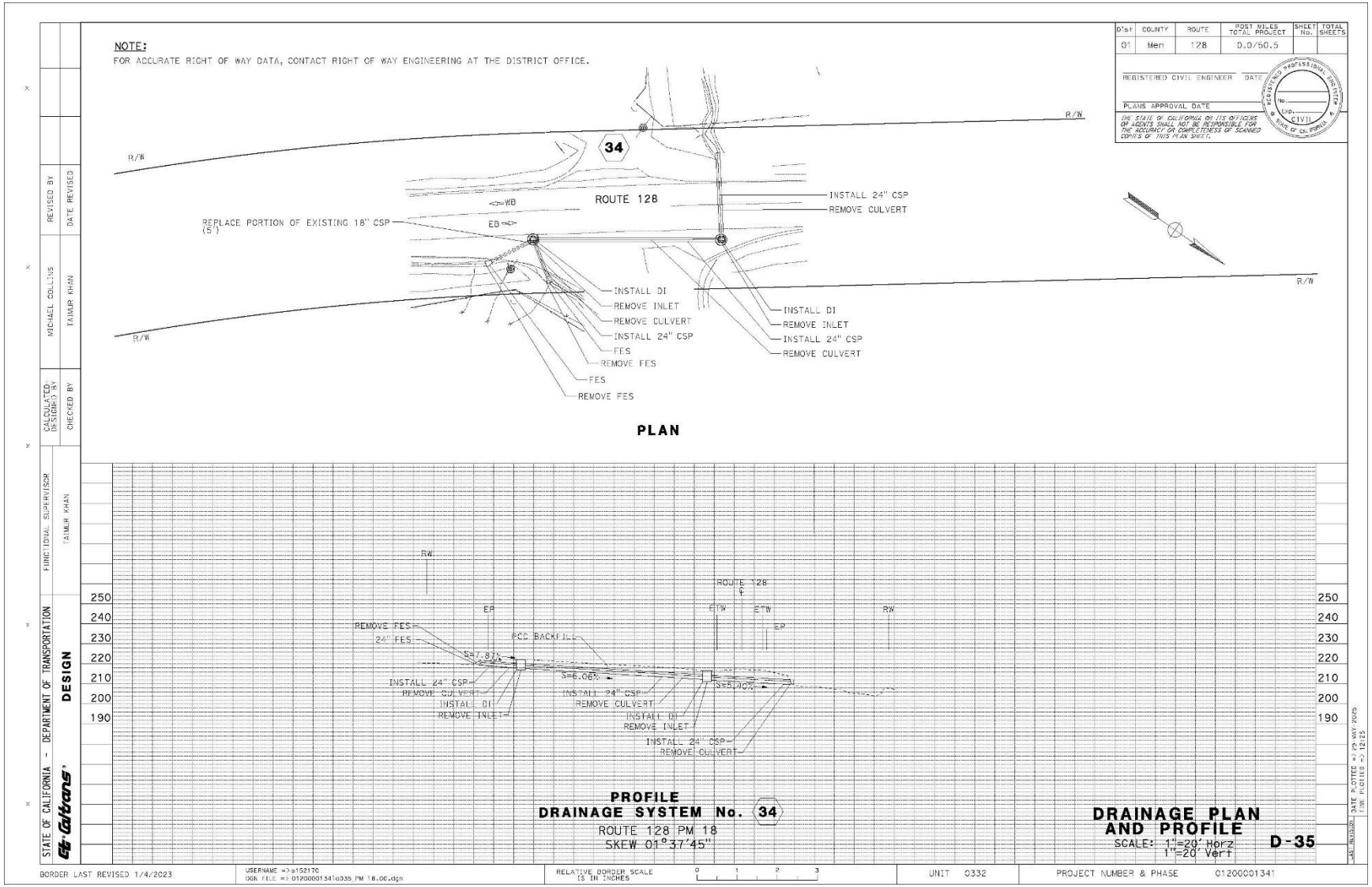
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	128	0.0/50.5		

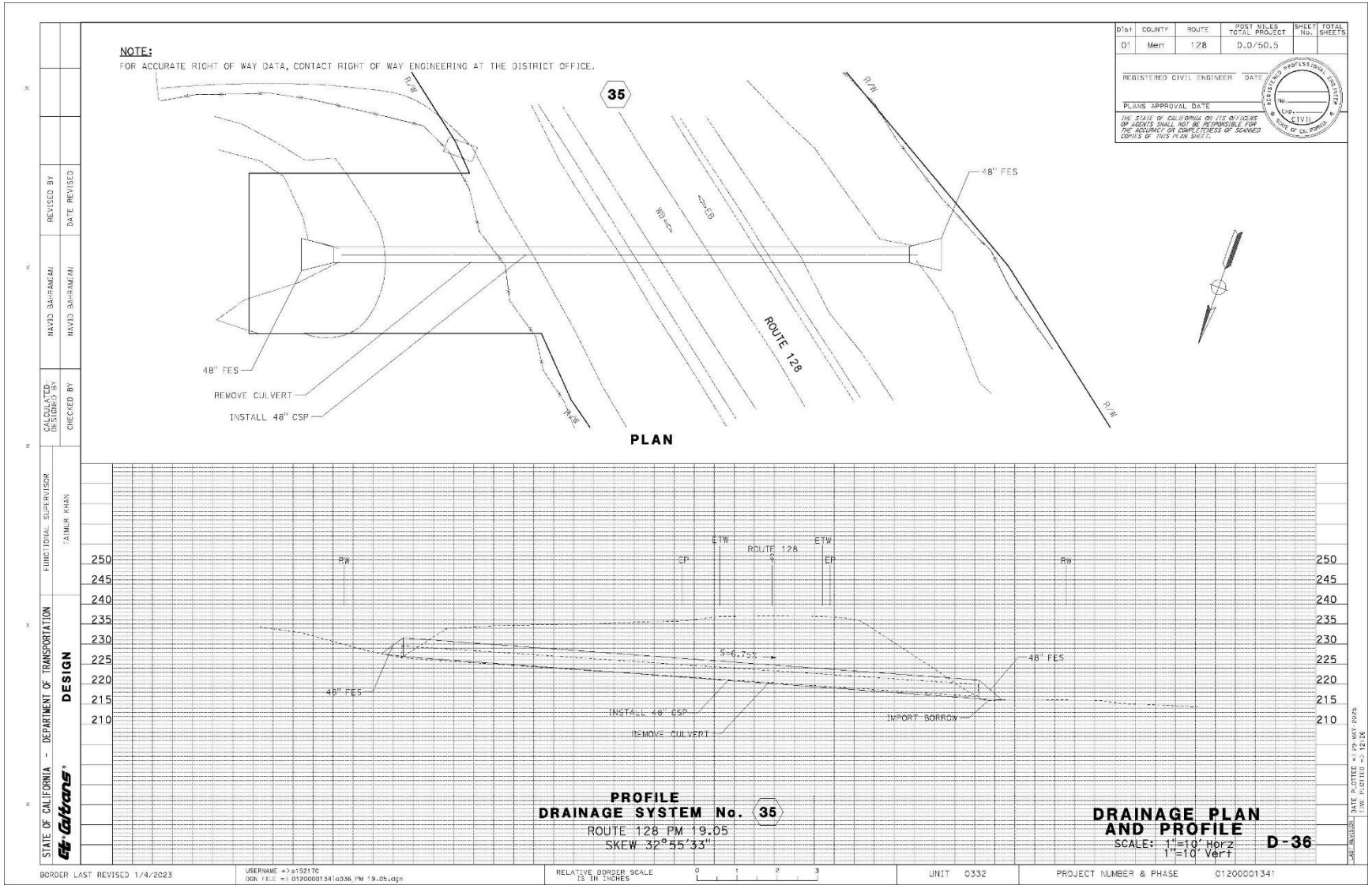

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS
01 | Men | 128 | 0.0/50.5
REGISTERED CIVIL ENGINEER
DATE
PLANS APPROVAL DATE
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REGISTERED PROFESSIONAL ENGINEER
No.
EXP.
CIVIL
STATE OF CALIFORNIA
30
R/W
BB
EB
REMOVE CULVERT
INSTALL 24" CSP
TCE
PROTECT CULVERT IN PLACE
INSTALL DI
REMOVE INLET
ROUTE 128
PLAN
REVISED BY
DATE REVISED
DAVID BAHRAMIAN
DAVID BAHRAMIAN
CALCULATED/DESIGNED BY
CHECKED BY
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
300 295 290 285 280 275 270 265 260 255 250 245 240
PW
FTW
EP
ROUTE 128
℄
ETW
EP
PW
TCE
S=8.27%
INSTALL DI
REMOVE INLET
INSTALL 24" CSP
REMOVE CULVERT
PROFILE
DRAINAGE SYSTEM No. 30
ROUTE 128 PM 15.68
SKEW 02°08'01"
DRAINAGE PLAN AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-31
DATE PLOTTED => 29 MAY 2025
TIME PLOTTED => 12:25
BORDER LAST REVISED 1/4/2023
USERNAME =>s153170
DGN FILE => 0120000134 1d031_PM 15.68.dgn
RELATIVE BORDER SCALE IS IN INCHES
0 1 2 3
UNIT 0332
PROJECT NUMBER & PHASE 01200001341

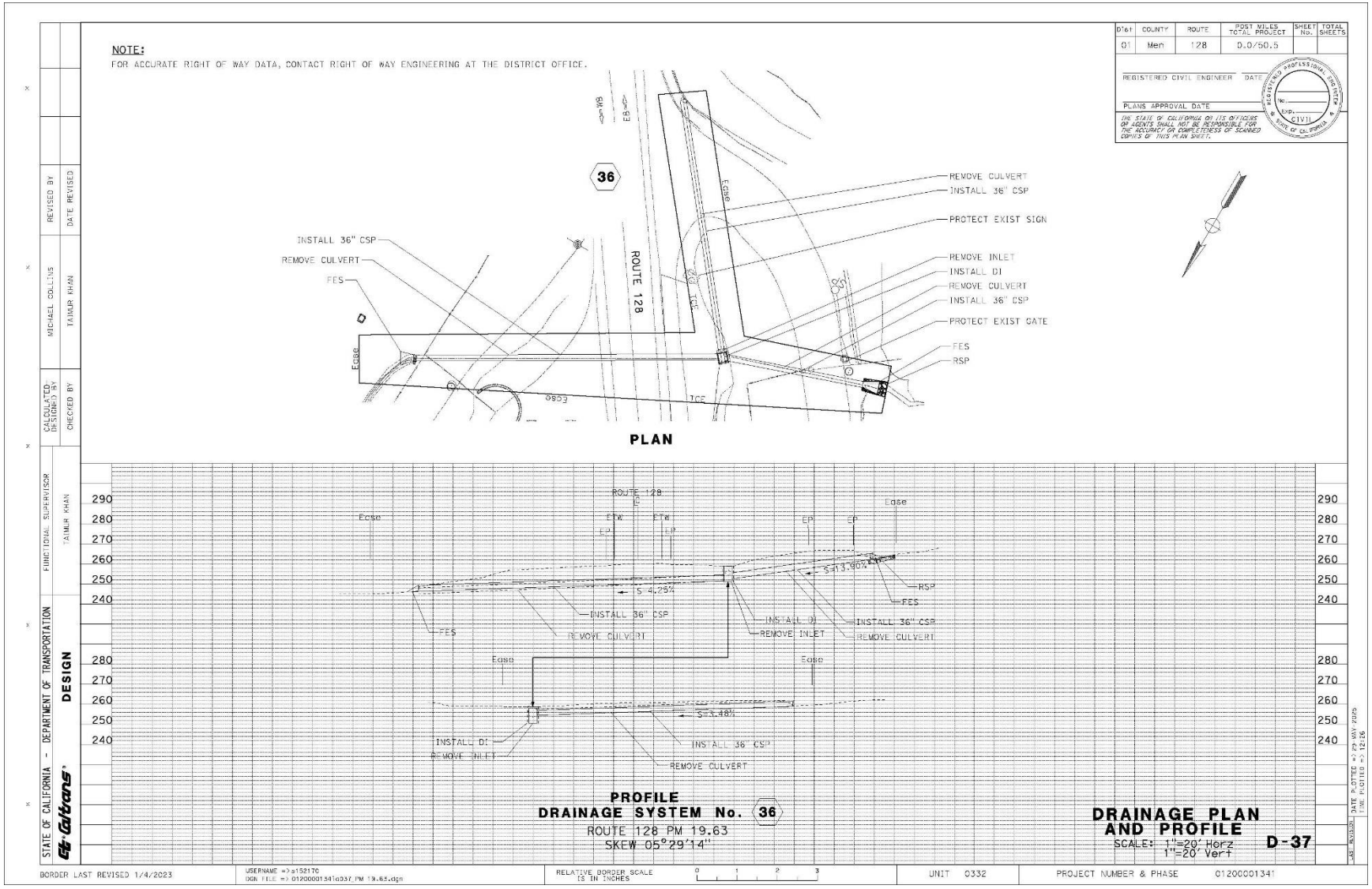

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
31
INSTALL 24" CSP
REMOVE CULVERT
REMOVE HEADWALL
INSTALL HEADWALL
ROUTE 128
PLAN
PROFILE
DRAINAGE SYSTEM No. 31
ROUTE 128 PM 17.56
SKEW 01°46'26"
DRAINAGE PLAN AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-32
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
BORDER LAST REVISED 1/4/2023

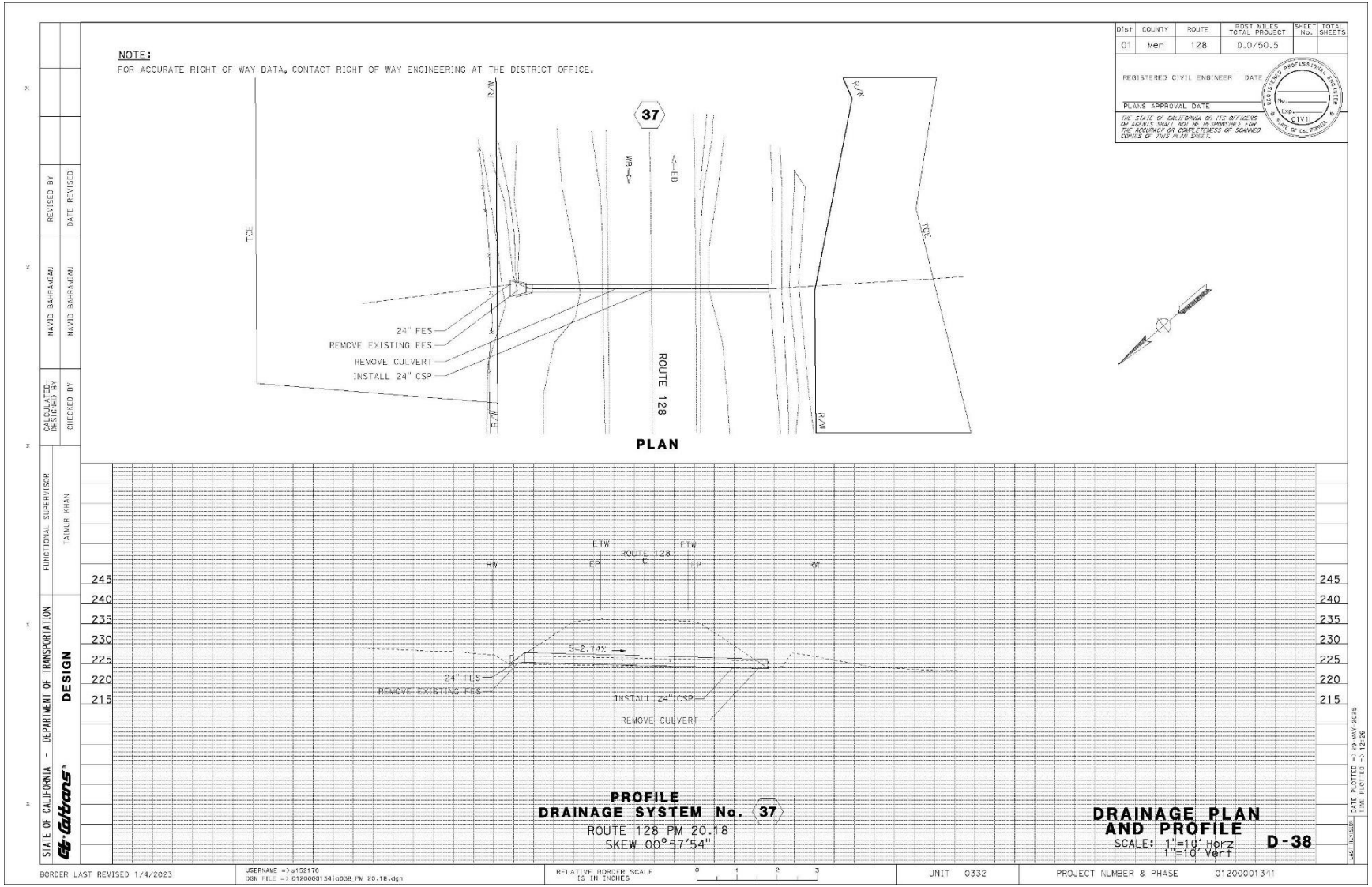

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS
01 | Men | 128 | 0.0/50.5
REGISTERED CIVIL ENGINEER DATE
PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.
REGISTERED PROFESSIONAL ENGINEER
No.
EXP.
CIVIL
STATE OF CALIFORNIA
32
REMOVE CULVERT
INSTALL 24" CSP
REMOVE HEADWALL
FES
REMOVE HEADWALL
INSTALL HEADWALL
ROUTE 128
PLAN
EXIST CLVT
EXIST CLVT
ROUTE 128
EP
EP
RW
RW
FES
SAS 4%
REMOVE HEADWALL
INSTALL 24" CSP
REMOVE CULVERT
REMOVE HEADWALL
INSTALL HEADWAL
265
260
255
250
245
240
235
230
225
220
PROFILE
DRAINAGE SYSTEM No. 32
ROUTE 128 PM 17.62
SKEW 00°19'07"
DRAINAGE PLAN AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-33
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/ DESIGNED BY
DAVID BAHRAMIAN
CHECKED BY
DAVID BAHRAMIAN
REVISED BY
DATE REVISED
DATE PLOTTED => 29 MAY 2025
TIME PLOTTED => 12:25
BORDER LAST REVISED 1/4/2023
USERNAME => s153170
DGN FILE => 0120000134 1a033_PM 17.62.dgn
RELATIVE BORDER SCALE IS IN INCHES
0 1 2 3
UNIT 0332
PROJECT NUMBER & PHASE 0120000134 1

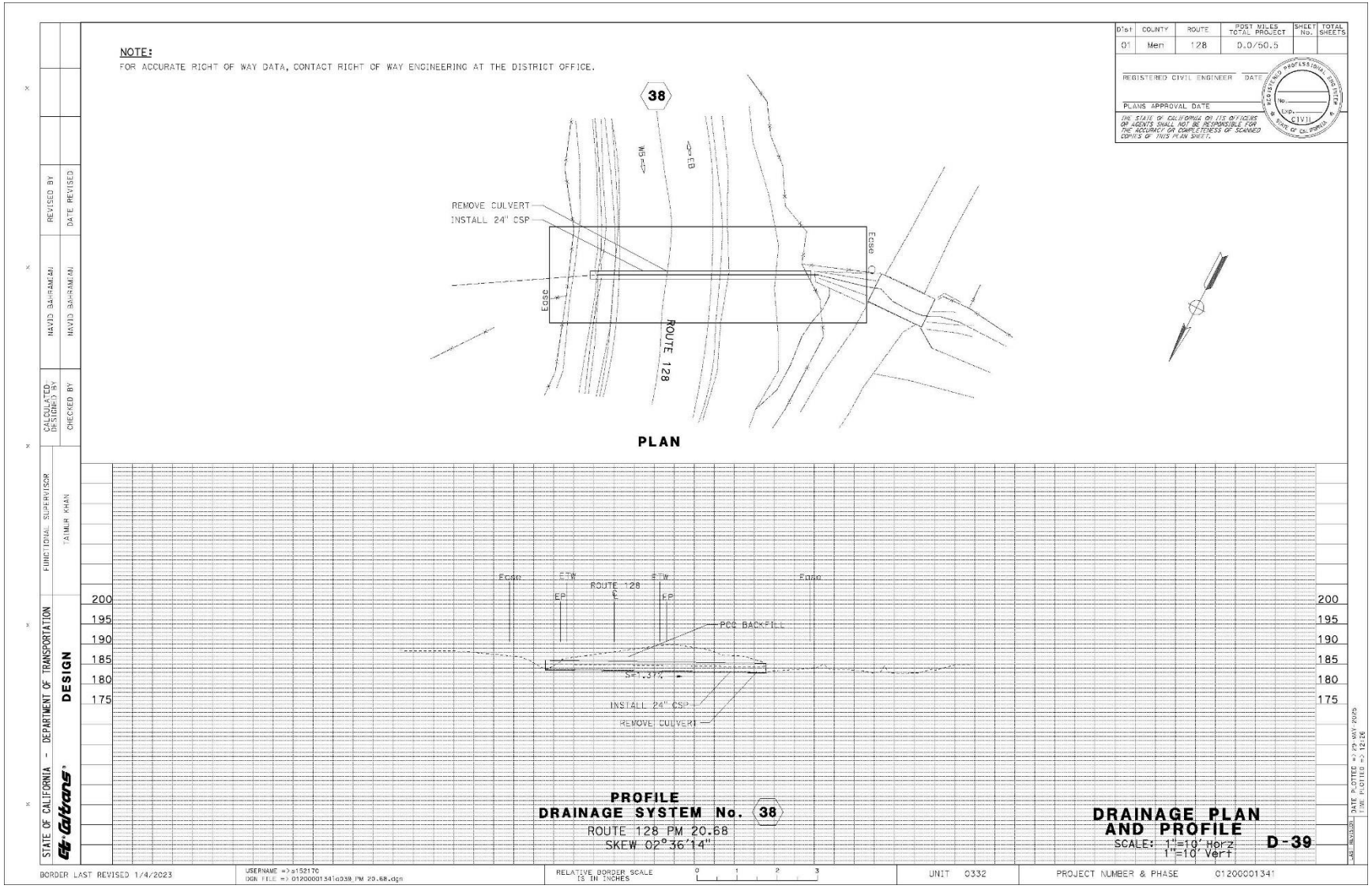

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS
01 | Men | 128 | 0.0/50.5
REGISTERED CIVIL ENGINEER DATE
PLANS APPROVAL DATE
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33
R/W
EB
WB
PROTECT BURIED POST END ANCHOR IN PLACE
PROTECT TRANSITION RAILING IN PLACE
INSTALL DI
REMOVE INLET
REMOVE CULVERT
INSTALL 24" CSP
Ease
INSTALL 24" CSP DD
REMOVE INLET
INSTALL DI
INSTALL 24" CSP
REMOVE CULVERT
ROUTE 128
PLAN
ETW
EP
ROUTE 128 ℄
RW
PROTECT TRANSITION RAILING IN PLACE
S=2.72%
S=8.78%
S=19.73%
INSTALL 24" CSP
REMOVE CULVERT
INSTALL DI
REMOVE INLET
INSTALL 24" CSP 35'
REMOVE CULVERT
INSTALL 24" CSP DD 42'
PROFILE
DRAINAGE SYSTEM No. 33
ROUTE 128 PM 17.91
SKEW 48°54'49"
DRAINAGE PLAN AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-34
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/DESIGNED BY
NAVID BAHRAMIAN
CHECKED BY
NAVID BAHRAMIAN
REVISED BY
DATE REVISED
BORDER LAST REVISED 1/4/2023
USERNAME => e153170
DGN FILE => 01200001341d034_PM 17.91.dgn
RELATIVE BORDER SCALE IS IN INCHES
UNIT 0332
PROJECT NUMBER & PHASE 01200001341
DATE PLOTTED => 20 MAY 2025
TIME PLOTTED => 12:25

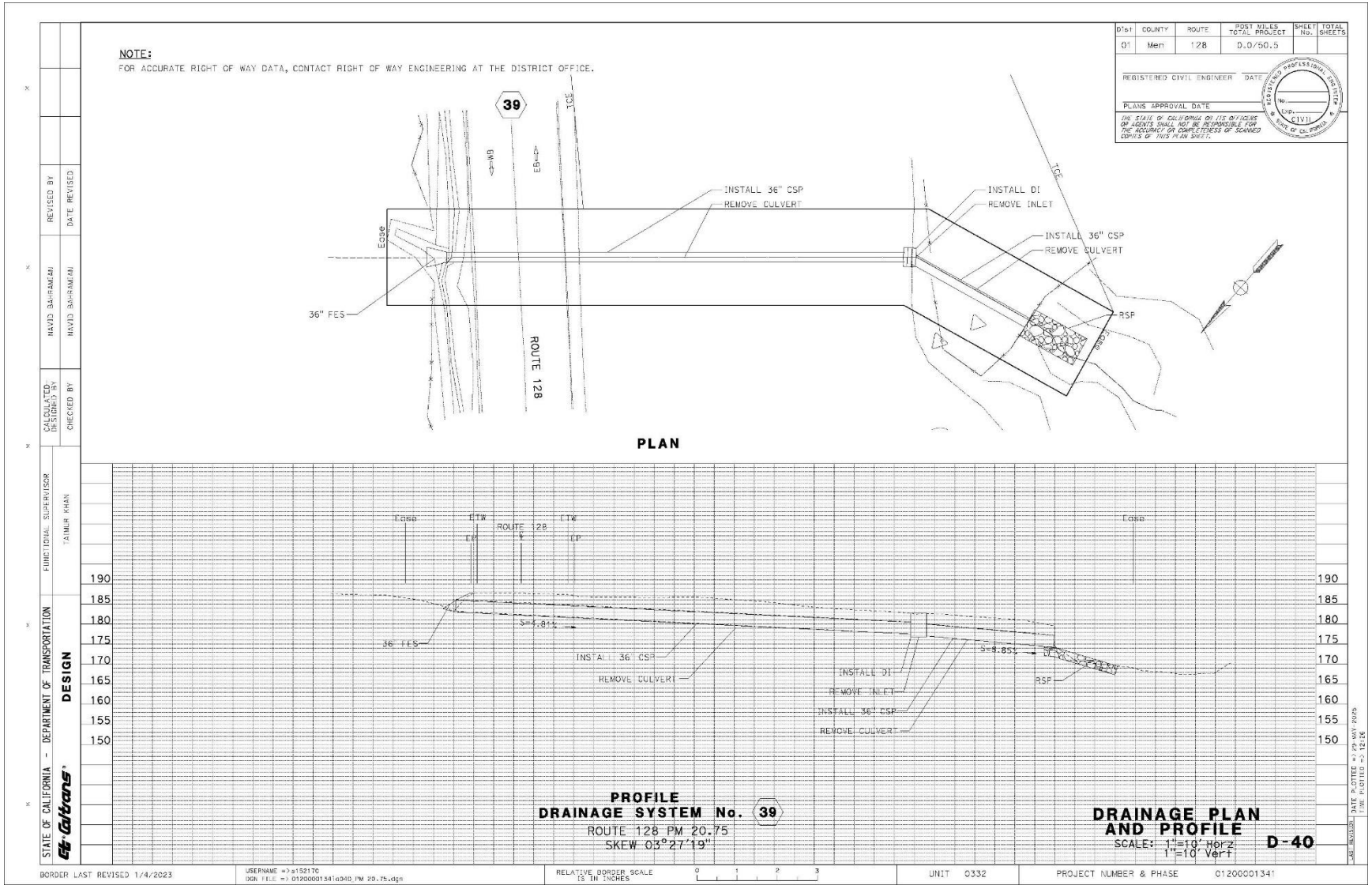

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Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS
01 | Men | 128 | 0.0/50.5
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34
ROUTE 128
WB
EB
R/W
REPLACE PORTION OF EXISTING 18" CSP (5')
INSTALL 24" CSP
REMOVE CULVERT
INSTALL DI
REMOVE INLET
REMOVE CULVERT
INSTALL 24" CSP
FES
REMOVE FES
PLAN
REMOVE FES
24" FES
PCC BACKFILL
S=7.87%
S=6.06%
S=5.10%
INSTALL 24" CSP
REMOVE CULVERT
INSTALL DI
REMOVE INLET
PROFILE
DRAINAGE SYSTEM No. 34
ROUTE 128 PM 18
SKEW 01°37'45"
DRAINAGE PLAN AND PROFILE
SCALE: 1"=20' Horz
1"=20' Vert
D-35
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR TAIMUR KHAN
CALCULATED/DESIGNED BY MICHAEL COLLINS
CHECKED BY TAIMUR KHAN
REVISED BY
DATE REVISED
BORDER LAST REVISED 1/4/2023
USERNAME => s153170
DGN FILE => 01200001341d035_PM 18.00.dgn
RELATIVE BORDER SCALE IS IN INCHES
UNIT 0332
PROJECT NUMBER & PHASE 01200001341

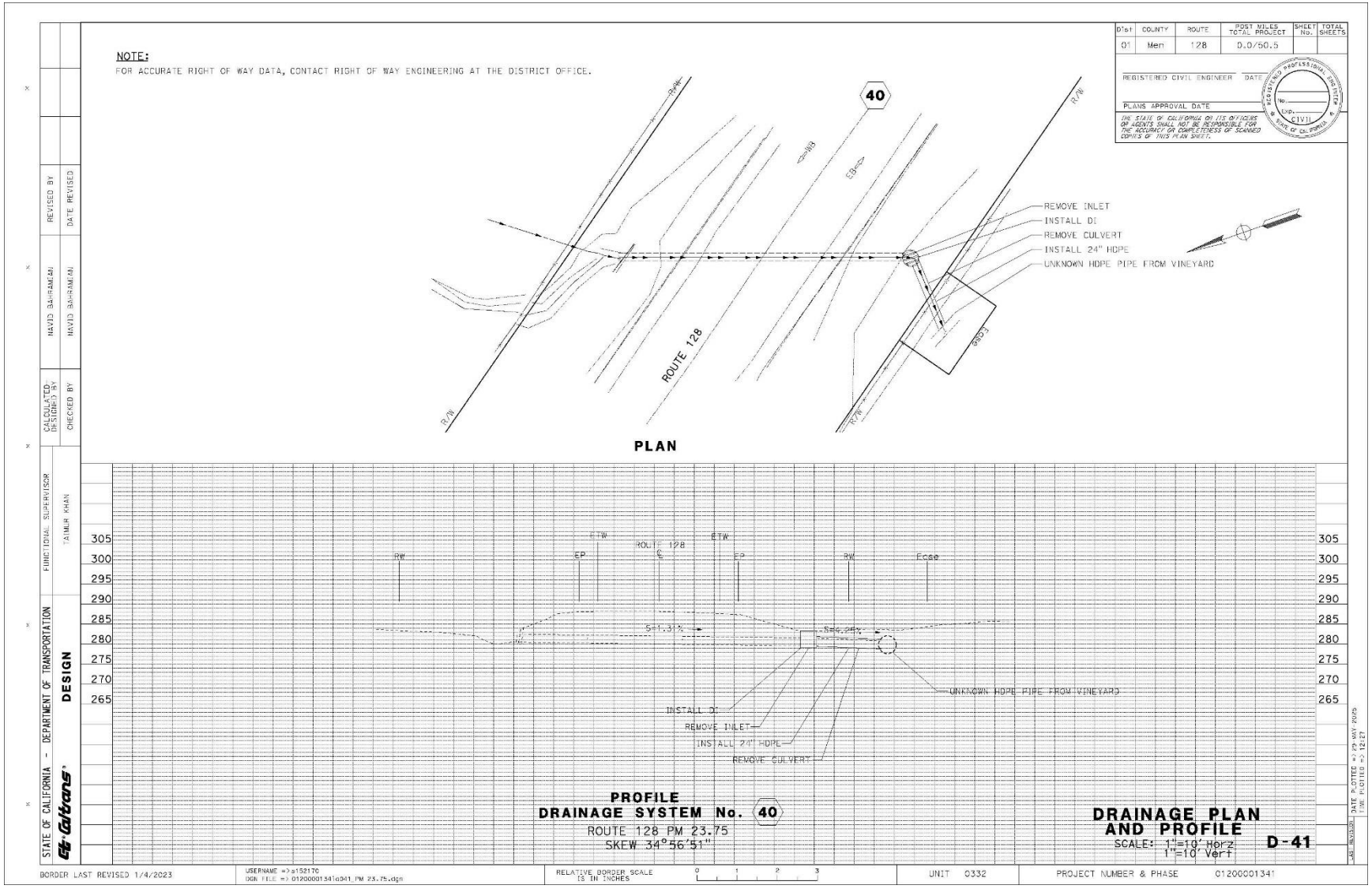

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
35
R/W
48" FES
REMOVE CULVERT
INSTALL 48" CSP
WB
EB
ROUTE 128
PLAN
ETW
CP
EP
S=6.75%
IMPORT BORROW
PROFILE
DRAINAGE SYSTEM No. 35
ROUTE 128 PM 19.05
SKEW 32°55'33"
DRAINAGE PLAN AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-36
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/DESIGNED BY
DAVID BAHRAMIAN
CHECKED BY
DAVID BAHRAMIAN
REVISED BY
DATE REVISED
DIST 01 | COUNTY Men | ROUTE 128 | POST MILES TOTAL PROJECT 0.0/50.5 | SHEET No. | TOTAL SHEETS
REGISTERED CIVIL ENGINEER DATE
PLANS APPROVAL DATE
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.
BORDER LAST REVISED 1/4/2023
USERNAME =>s153170
DGN FILE => 01200001341d036_PM 19.05.dgn
RELATIVE BORDER SCALE IS IN INCHES
UNIT 0332
PROJECT NUMBER & PHASE 01200001341

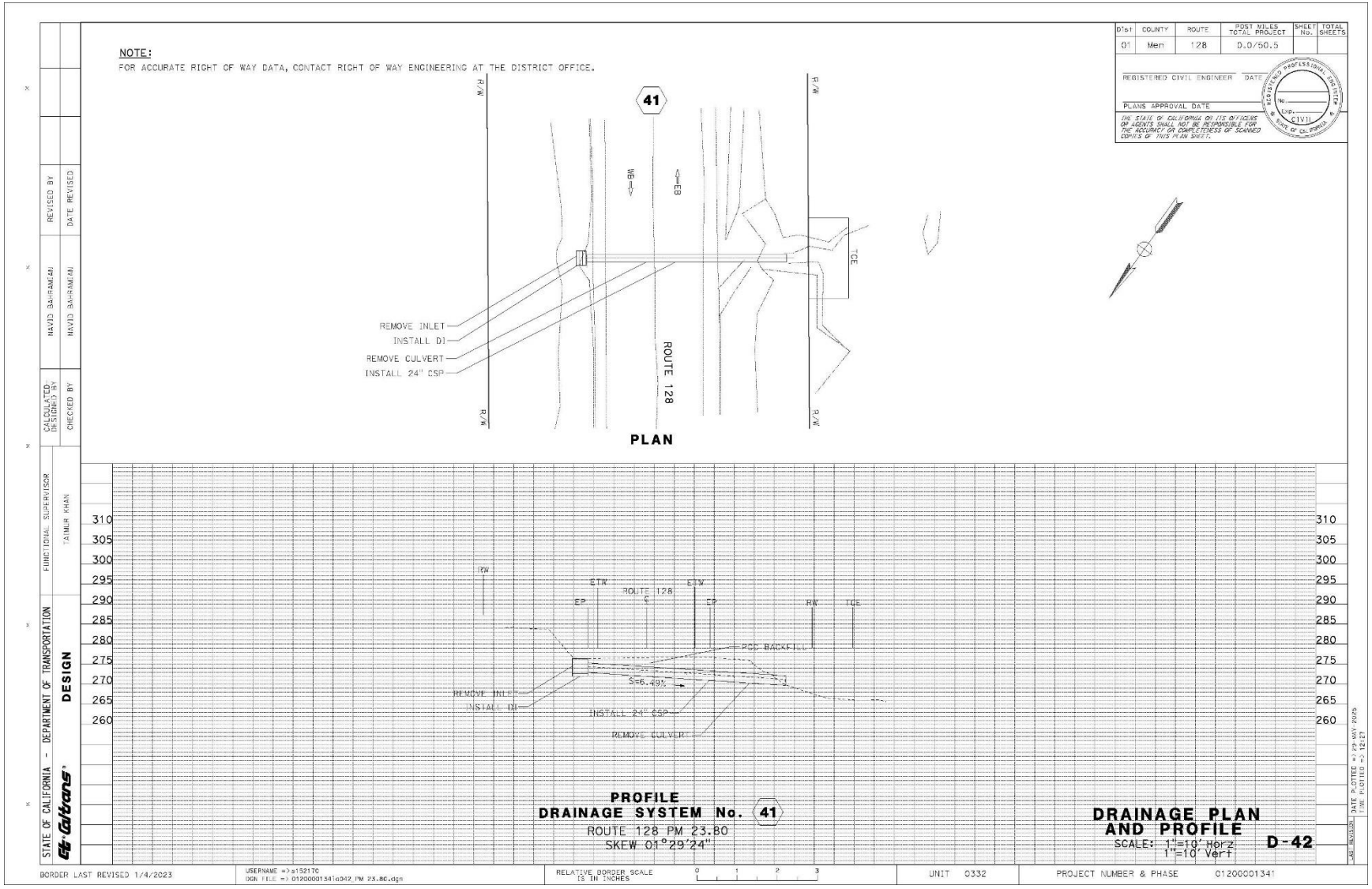

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS
01 | Men | 128 | 0.0/50.5
REGISTERED CIVIL ENGINEER DATE
PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.
REGISTERED PROFESSIONAL ENGINEER
CIVIL
STATE OF CALIFORNIA
36
ROUTE 128
REMOVE CULVERT
INSTALL 36" CSP
PROTECT EXIST SIGN
REMOVE INLET
INSTALL DI
REMOVE CULVERT
INSTALL 36" CSP
PROTECT EXIST GATE
FES
RSP
INSTALL 36" CSP
REMOVE CULVERT
FES
Ease
ECRB
TCE
PLAN
ROUTE 128
ETW
EP
S=3.90%
S=4.25%
S=3.48%
INSTALL 36" CSP
REMOVE CULVERT
INSTALL DI
REMOVE INLET
RSP
FES
290
280
270
260
250
240
PROFILE
DRAINAGE SYSTEM No. 36
ROUTE 128 PM 19.63
SKEW 05°29'14"
DRAINAGE PLAN AND PROFILE
SCALE: 1"=20' Horz
1"=20' Vert
D-37
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR TAIMUR KHAN
CALCULATED/DESIGNED BY MICHAEL COLLINS
CHECKED BY TAIMUR KHAN
REVISED BY
DATE REVISED
BORDER LAST REVISED 1/4/2023
USERNAME =>s152170
DGN FILE => 01200001341d037_PM 19.63.dgn
RELATIVE BORDER SCALE IS IN INCHES
0 1 2 3
UNIT 0332
PROJECT NUMBER & PHASE 01200001341

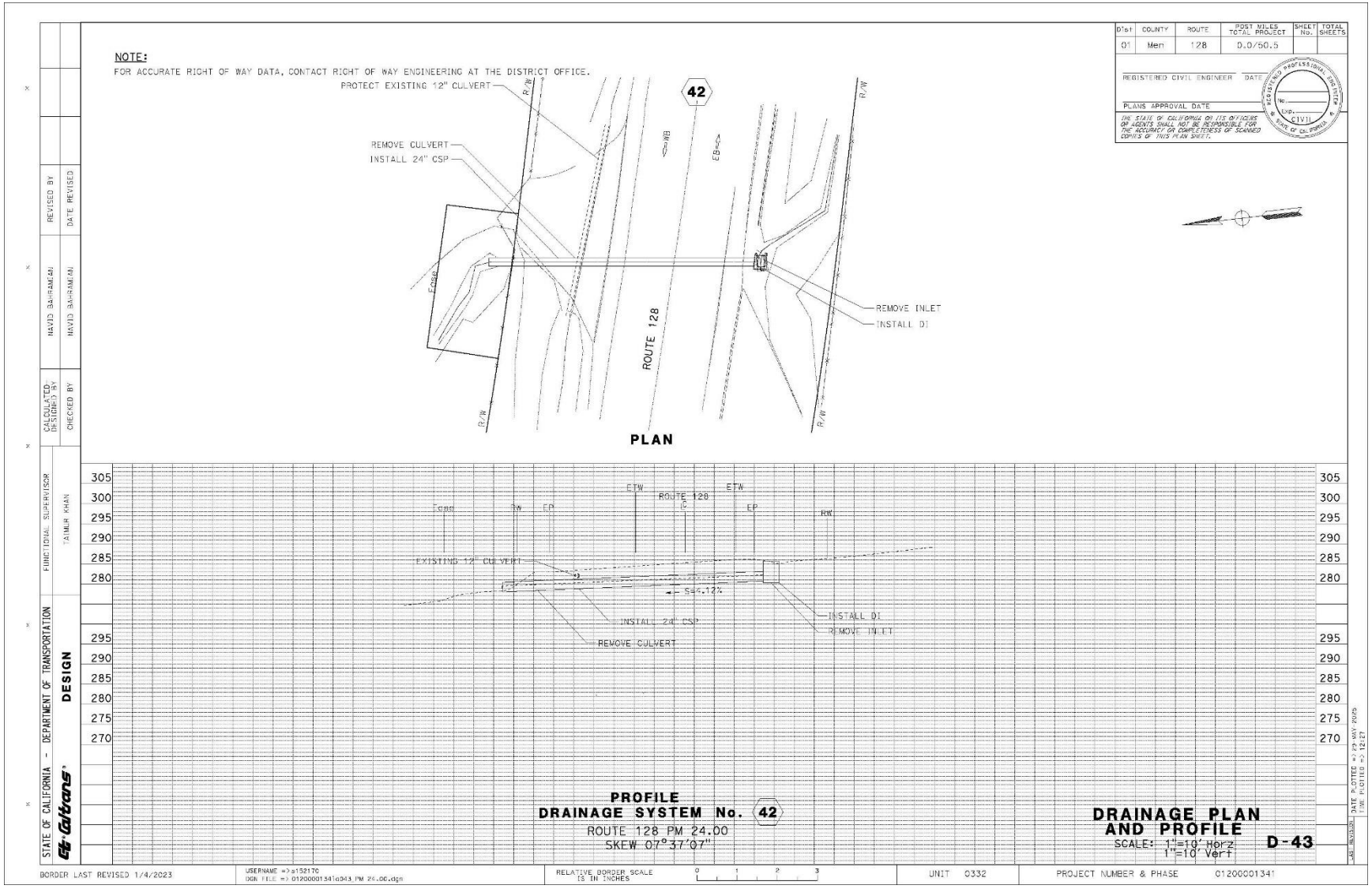

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS
01 | Men | 128 | 0.0/50.5
REGISTERED CIVIL ENGINEER DATE
PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.
37
R/W
TCE
8M
EB
24" FES
REMOVE EXISTING FES
REMOVE CULVERT
INSTALL 24" CSP
ROUTE 128
PLAN
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/DESIGNED BY
CHECKED BY
DRAWN BY
REVISED BY
DATE REVISED
245
240
235
230
225
220
215
LTW
ROUTE 128
ETW
EP
S=2.71%
24" FES
REMOVE EXISTING FES
INSTALL 24" CSP
REMOVE CULVERT
PROFILE
DRAINAGE SYSTEM No. 37
ROUTE 128 PM 20.18
SKEW 00°57'54"
DRAINAGE PLAN AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-38
BORDER LAST REVISED 1/4/2023
USERNAME =>s153170
DGN FILE => 01200001341d038_PM 20.18.dgn
RELATIVE BORDER SCALE IS IN INCHES
0 1 2 3
UNIT 0332
PROJECT NUMBER & PHASE 01200001341

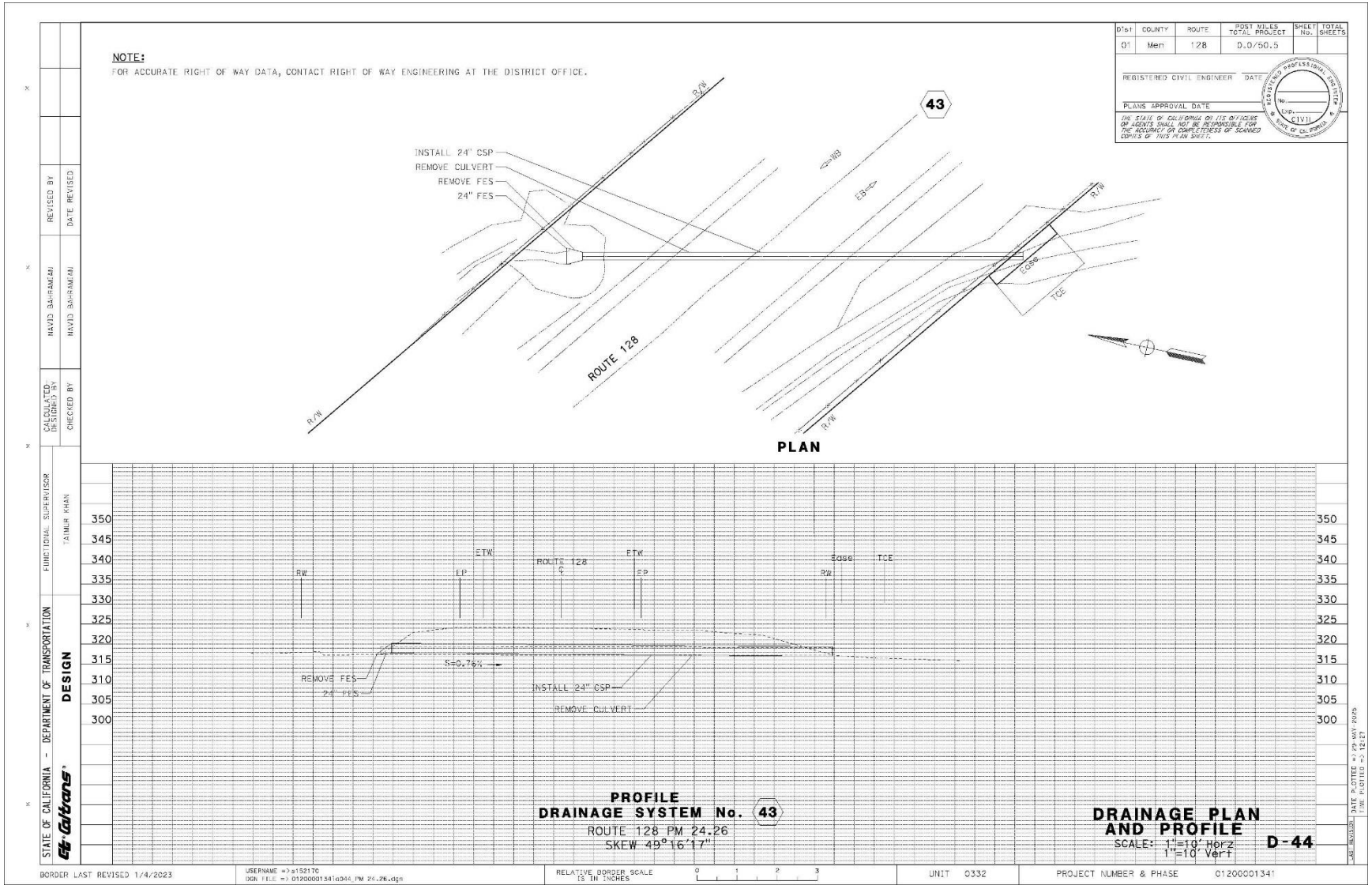

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
38
REMOVE CULVERT
INSTALL 24" CSP
Edge
Edge
ROUTE 128
EB
PLAN
PROFILE
DRAINAGE SYSTEM No. 38
ROUTE 128 PM 20.68
SKEW 02°36'14"
DRAINAGE PLAN AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-39
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/DESIGNED BY
CHECKED BY
DRAWN BY
DATE REVISED
REVISED BY
BORDER LAST REVISED 1/4/2023

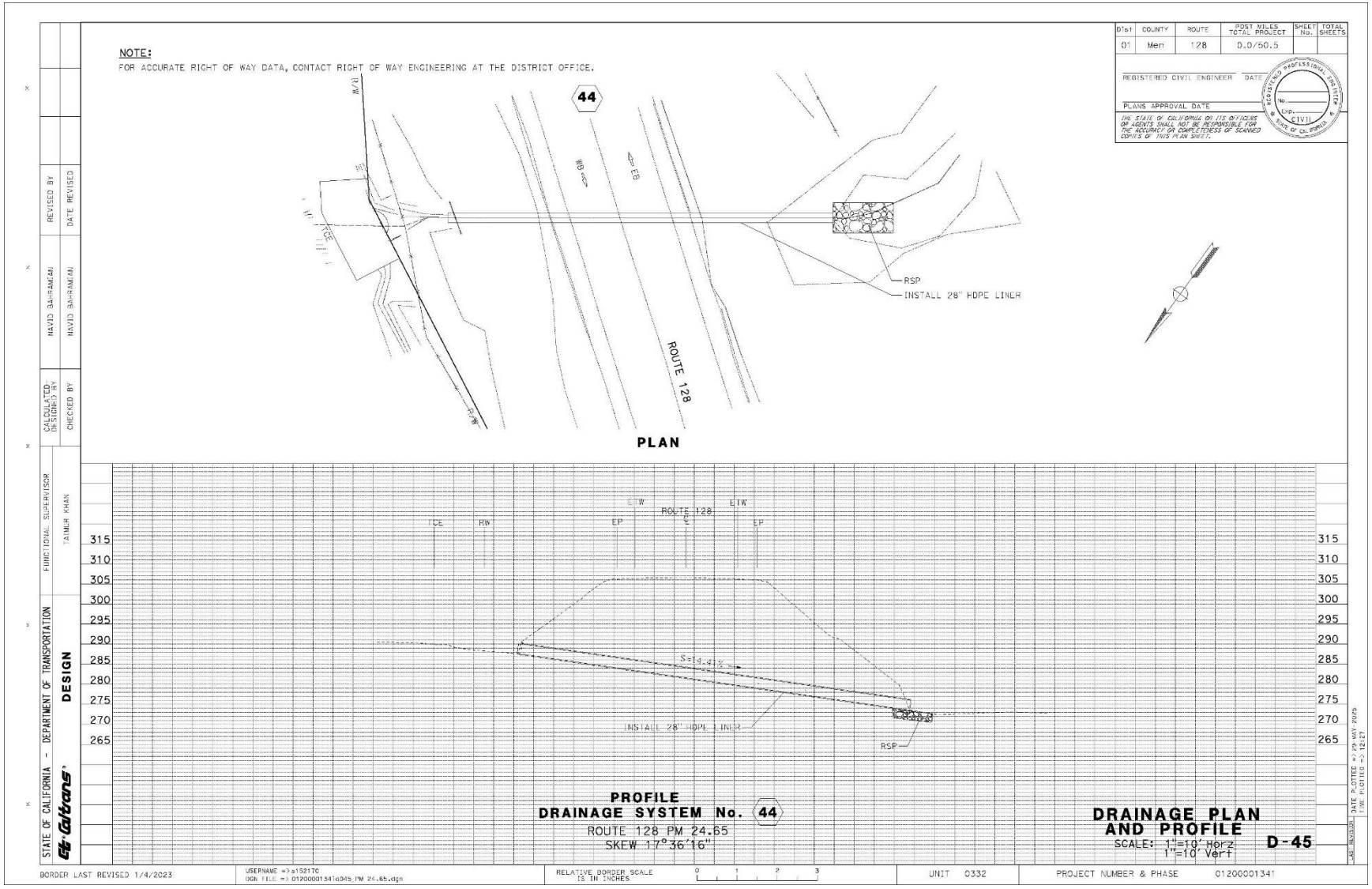

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
39
INSTALL 36" CSP
REMOVE CULVERT
INSTALL DI
REMOVE INLET
INSTALL 36" CSP
REMOVE CULVERT
36" FES
RSF
ROUTE 128
PLAN
PROFILE
DRAINAGE SYSTEM No. 39
ROUTE 128 PM 20.75
SKEW 03°27'19"
DRAINAGE PLAN AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-40
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/DESIGNED BY
CHECKED BY
NAVID BAHRAMIAN
REVISED BY
DATE REVISED
BORDER LAST REVISED 1/4/2023
USERNAME =>s153170
DGN FILE => 01200001341dg40_PM 20.75.dgn
RELATIVE BORDER SCALE IS IN INCHES
UNIT 0332
PROJECT NUMBER & PHASE 01200001341

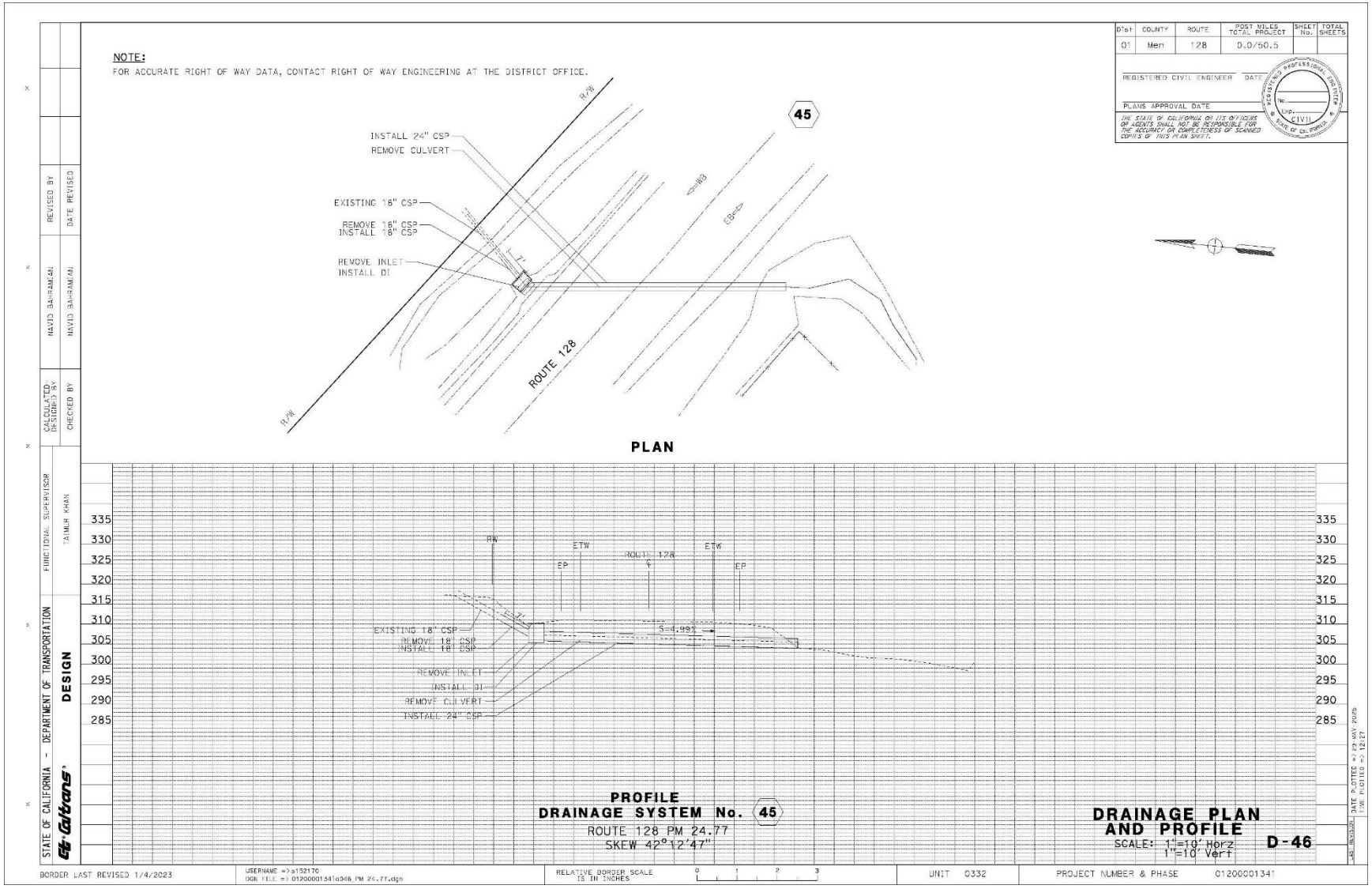

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS
01 | Men | 128 | 0.0/50.5
REGISTERED CIVIL ENGINEER DATE
PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.
40
ROUTE 128
R/W
EP
EDGE
REMOVE INLET
INSTALL DI
REMOVE CULVERT
INSTALL 24" HDPE
UNKNOWN HDPE PIPE FROM VINEYARD
PLAN
ETW
RW
Edge
S=1.3%
S=4.24%
305
300
295
290
285
280
275
270
265
INSTALL DI
REMOVE INLET
INSTALL 24" HDPE
REMOVE CULVERT
PROFILE
DRAINAGE SYSTEM No. 40
ROUTE 128 PM 23.75
SKEW 34°56'51"
DRAINAGE PLAN AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-41
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/DESIGNED BY
DAVID BAHRAMIAN
CHECKED BY
DAVID BAHRAMIAN
REVISED BY
DATE REVISED
BORDER LAST REVISED 1/4/2023
USERNAME =>s153170
DGN FILE => 01200001341d041_PM 23.75.dgn
RELATIVE BORDER SCALE IS IN INCHES
UNIT 0332
PROJECT NUMBER & PHASE 01200001341

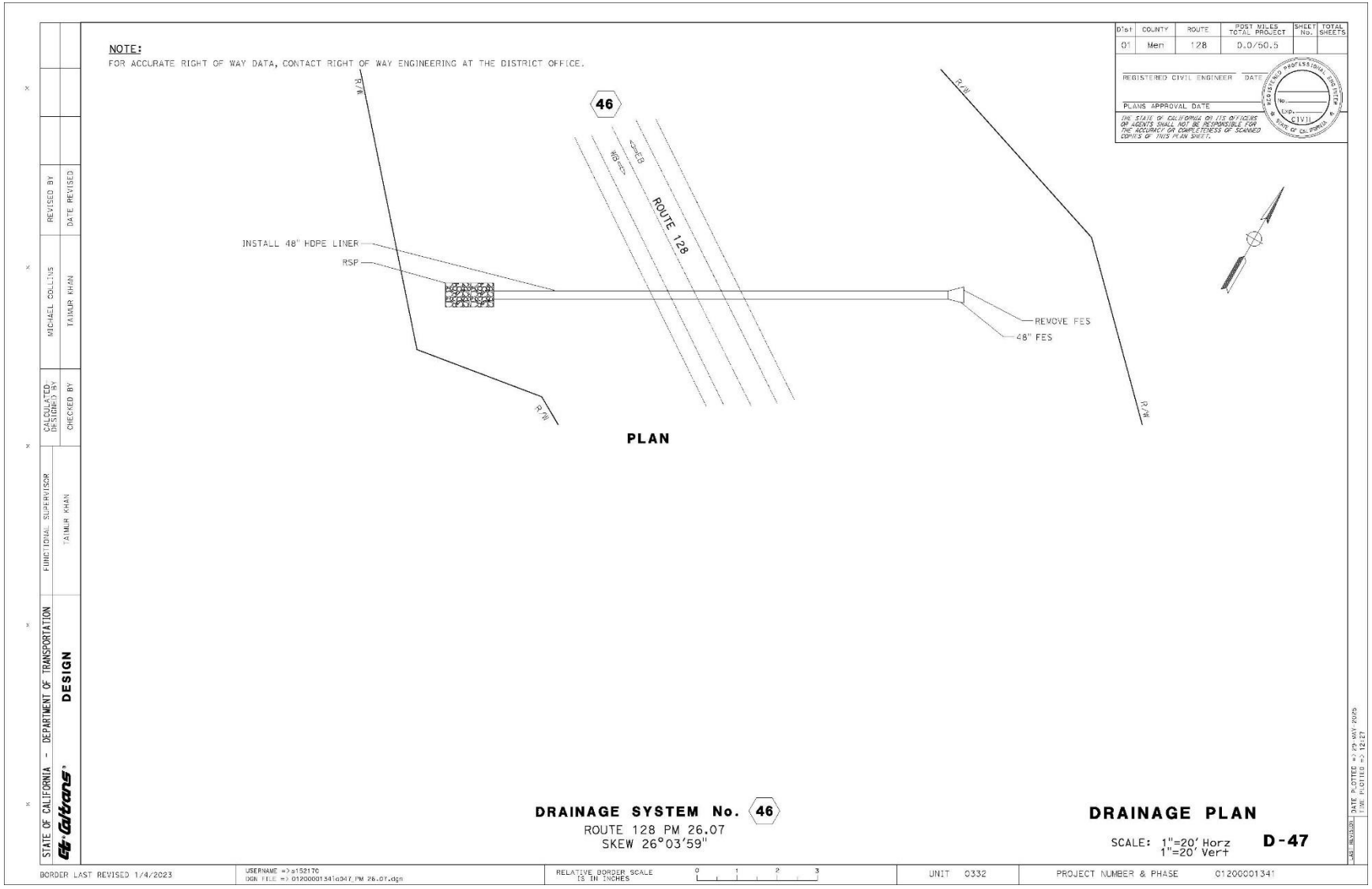

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
41
REMOVE INLET
INSTALL DI
REMOVE CULVERT
INSTALL 24" CSP
ROUTE 128
R/W
WB
EB
TOE
PLAN
PROFILE
DRAINAGE SYSTEM No. 41
ROUTE 128 PM 23.80
SKEW 01°29'24"
S=6.49%
POST BACKFILL
DRAINAGE PLAN
AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-42
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/DESIGNED BY
DAVID BAHRAMIAN
CHECKED BY
DAVID BAHRAMIAN
REVISED BY
DATE REVISED
BORDER LAST REVISED 1/4/2023
USERNAME =>s152170
DGN FILE => 01200001341d042_PM 23.80.dgn
UNIT 0332
PROJECT NUMBER & PHASE 01200001341

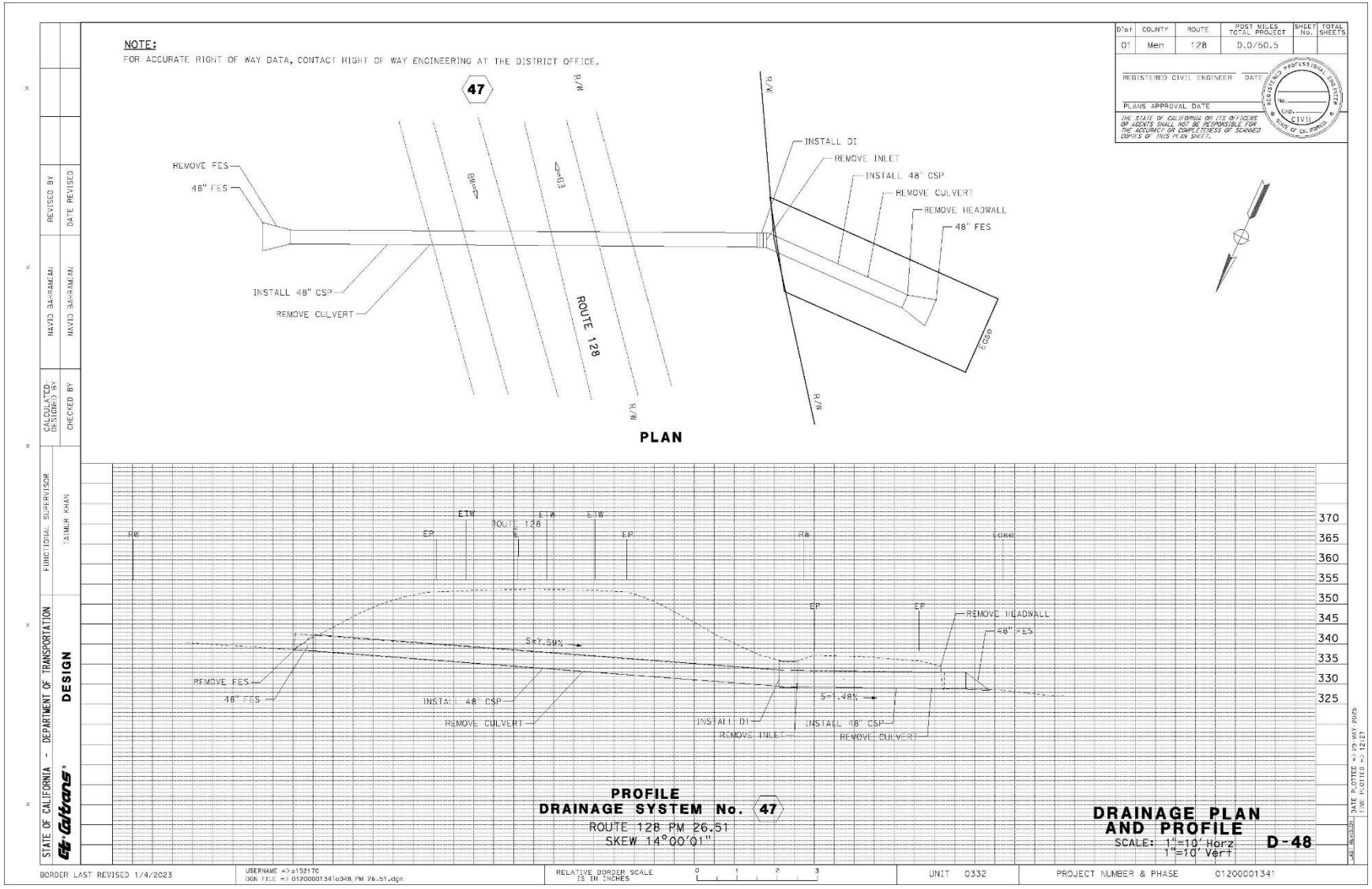

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
PROTECT EXISTING 12" CULVERT
REMOVE CULVERT
INSTALL 24" CSP
42
NB
EB
ROUTE 128
REMOVE INLET
INSTALL DI
R/W
EXIST
PLAN
Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS
01 | Men | 128 | 0.0/50.5
REGISTERED CIVIL ENGINEER DATE
PLANS APPROVAL DATE
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.
REGISTERED PROFESSIONAL ENGINEER
No.
EXP.
CIVIL
STATE OF CALIFORNIA
305
300
295
290
285
280
275
270
ETW
ROUTE 128
EP
RW
EXISTING 12" CULVERT
S=6.12%
INSTALL 24" CSP
REMOVE CULVERT
INSTALL DI
REMOVE INLET
PROFILE
DRAINAGE SYSTEM No. 42
ROUTE 128 PM 24.00
SKEW 07°37'07"
DRAINAGE PLAN AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-43
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/DESIGNED BY
DAVID BAHRAMIAN
CHECKED BY
DAVID BAHRAMIAN
REVISED BY
DATE REVISED
BORDER LAST REVISED 1/4/2023
USERNAME => s152170
DGN FILE => 0120000134 1d043_PM 24.00.dgn
RELATIVE BORDER SCALE IS IN INCHES
0 1 2 3
UNIT 0332
PROJECT NUMBER & PHASE 0120000134
DATE PLOTTED => 29 MAY 2025
TIME PLOTTED => 12:27

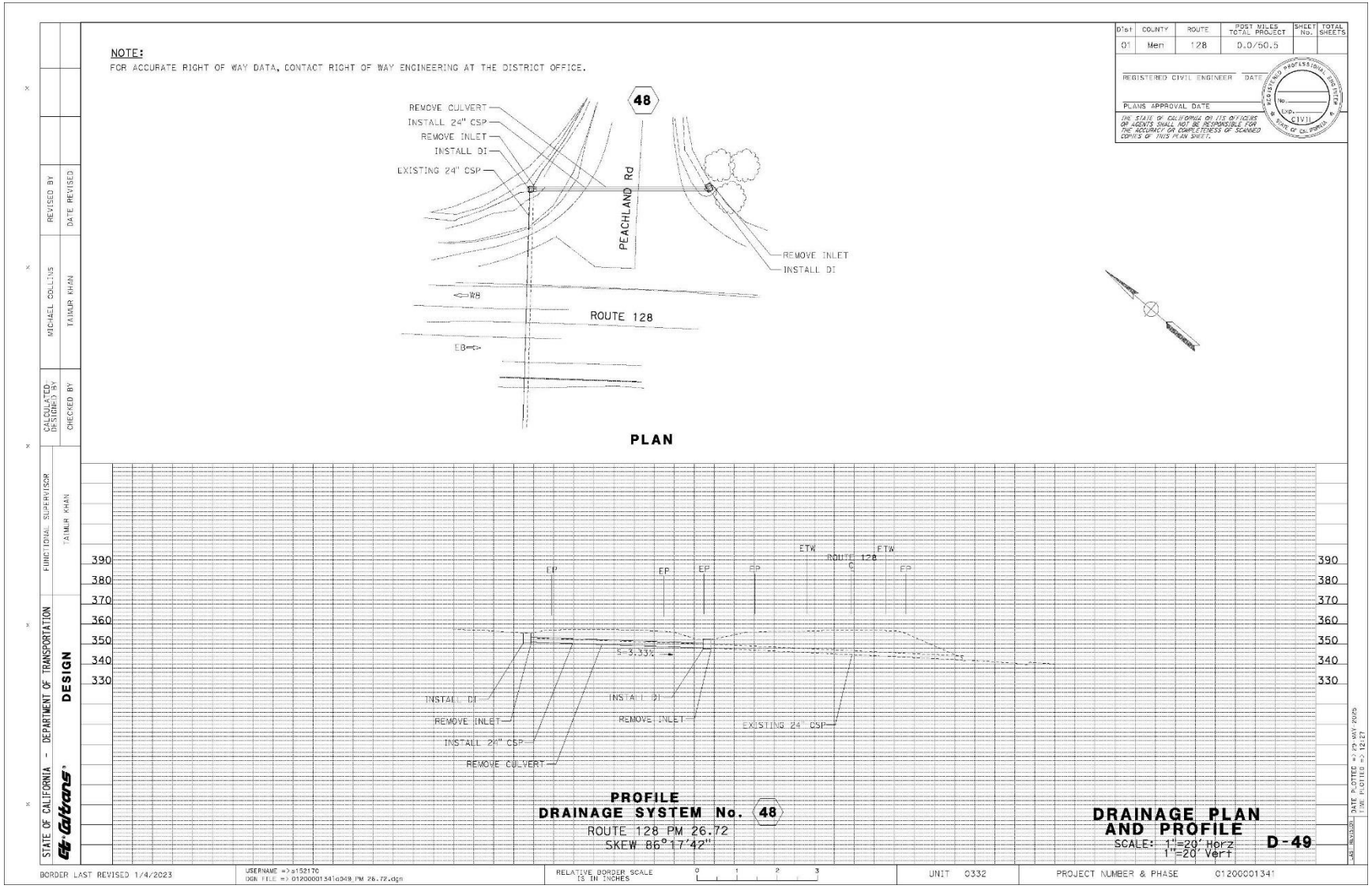

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS
01 | Men | 128 | 0.0/50.5
REGISTERED CIVIL ENGINEER DATE
PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.
43
INSTALL 24" CSP
REMOVE CULVERT
REMOVE FES
24" FES
R/W
EB
ROUTE 128
Edge
TOE
PLAN
350
345
340
335
330
325
320
315
310
305
300
RW
LP
ETW
ROUTE 128
ETW
EP
Edge
TOE
S=0.76%
REMOVE FES
24" FES
INSTALL 24" CSP
REMOVE CULVERT
PROFILE
DRAINAGE SYSTEM No. 43
ROUTE 128 PM 24.26
SKEW 49°16'17"
DRAINAGE PLAN AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-44
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/DESIGNED BY
CHECKED BY
NAVID BAHRAMIAN
REVISED BY
DATE REVISED
BORDER LAST REVISED 1/4/2023
USERNAME =>s153170
DGN FILE => 01200001341dg44_PM 24.26.dgn
RELATIVE BORDER SCALE IS IN INCHES
0 1 2 3
UNIT 0332
PROJECT NUMBER & PHASE 01200001341
DATE PLOTTED => 29 MAY 2025
TIME PLOTTED => 12:27

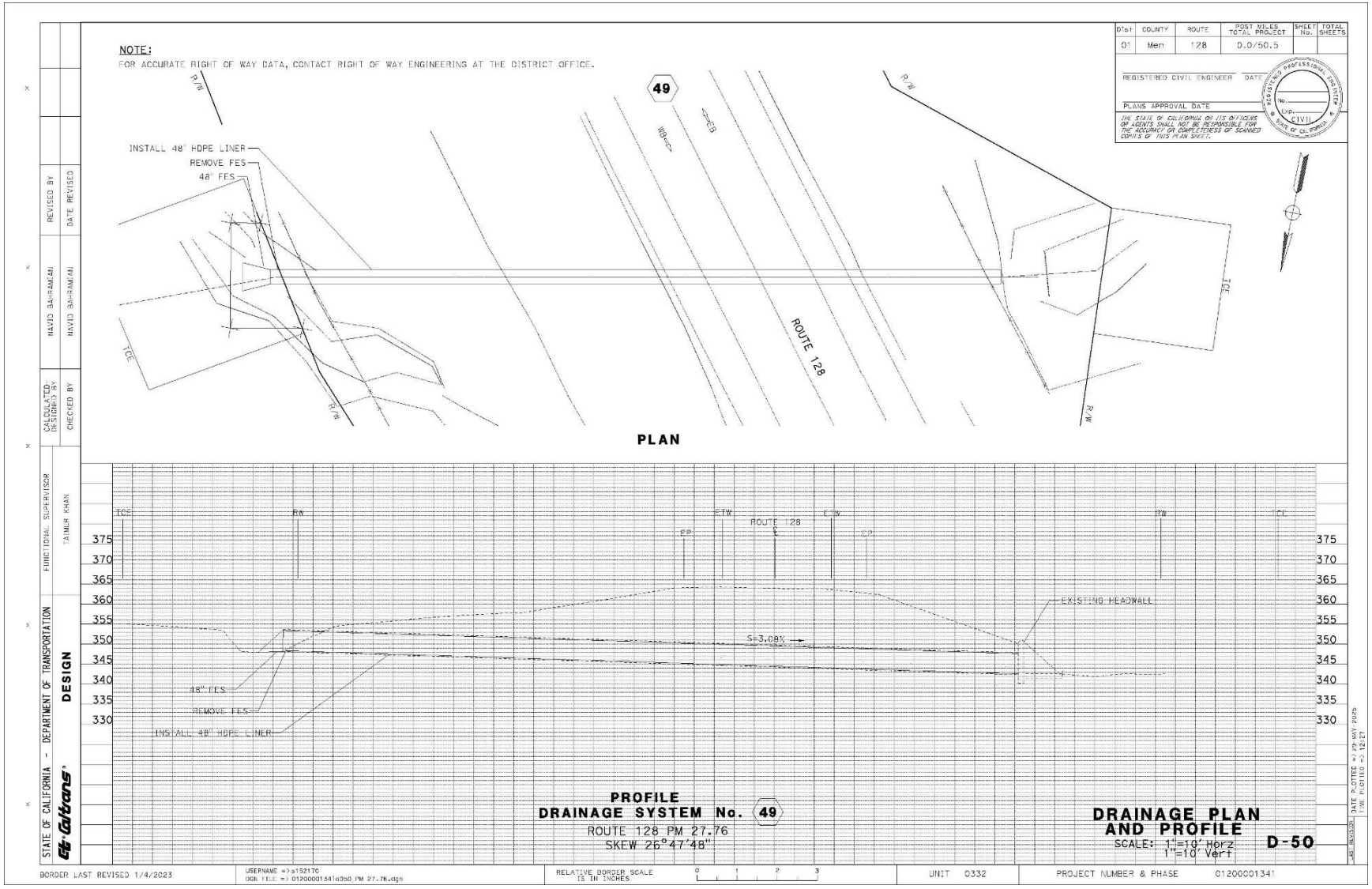

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
44
WB
EB
RSP
INSTALL 28" HDPE LINER
ROUTE 128
PLAN
ROUTE 128
EIW
EP
TCE
RW
S=14.41%
INSTALL 28" HDPE LINER
RSP
315
310
305
300
295
290
285
280
275
270
265
PROFILE
DRAINAGE SYSTEM No. 44
ROUTE 128 PM 24.65
SKEW 17°36'16"
DRAINAGE PLAN
AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-45
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/DESIGNED BY
MAJID SAHRAMIAN
CHECKED BY
MAJID SAHRAMIAN
REVISED BY
DATE REVISED
DIST
01
COUNTY
Men
ROUTE
128
POST MILES TOTAL PROJECT
0.0/50.5
SHEET No.
TOTAL SHEETS
REGISTERED CIVIL ENGINEER
DATE
PLANS APPROVAL DATE
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.
REGISTERED PROFESSIONAL ENGINEER
No.
EXP.
CIVIL
STATE OF CALIFORNIA
BORDER LAST REVISED 1/4/2023
USERNAME =>s153170
DGN FILE =>
RELATIVE BORDER SCALE IS IN INCHES
0 1 2 3
UNIT 0332
PROJECT NUMBER & PHASE 01200001341
DATE PLOTTED =>
TIME PLOTTED =>

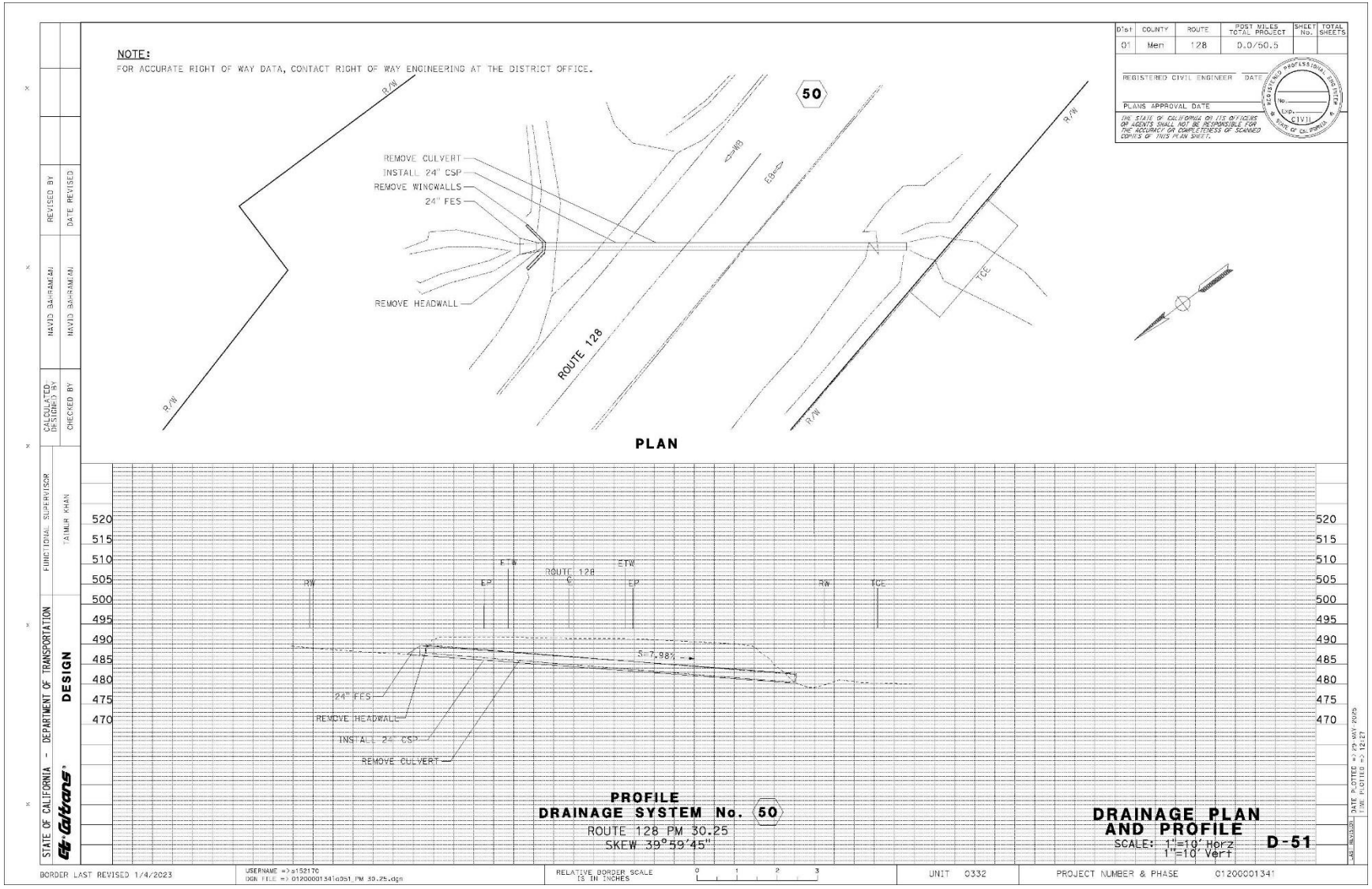

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
45
INSTALL 24" CSP
REMOVE CULVERT
EXISTING 18" CSP
REMOVE 18" CSP
INSTALL 18" CSP
REMOVE INLET
INSTALL DI
ROUTE 128
R/W
PLAN
EXISTING 18" CSP
REMOVE 18" CSP
INSTALL 18" CSP
REMOVE INLET
INSTALL DI
REMOVE CULVERT
INSTALL 24" CSP
RW
ETW
EP
ROUTE 128
S=4.99%
PROFILE
DRAINAGE SYSTEM No. 45
ROUTE 128 PM 24.77
SKEW 42°12'47"
DRAINAGE PLAN AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-46
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/DESIGNED BY
DAVID BAHRAMIAN
CHECKED BY
DAVID BAHRAMIAN
REVISED BY
DATE REVISED
REGISTERED CIVIL ENGINEER
DATE
PLANS APPROVAL DATE
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.
Dist 01 | COUNTY Men | ROUTE 128 | POST MILES TOTAL PROJECT 0.0/50.5 | SHEET No. | TOTAL SHEETS
BORDER LAST REVISED 1/4/2023
USERNAME =>s152170
DGN FILE =>
RELATIVE BORDER SCALE IS IN INCHES
UNIT 0332
PROJECT NUMBER & PHASE 01200001341

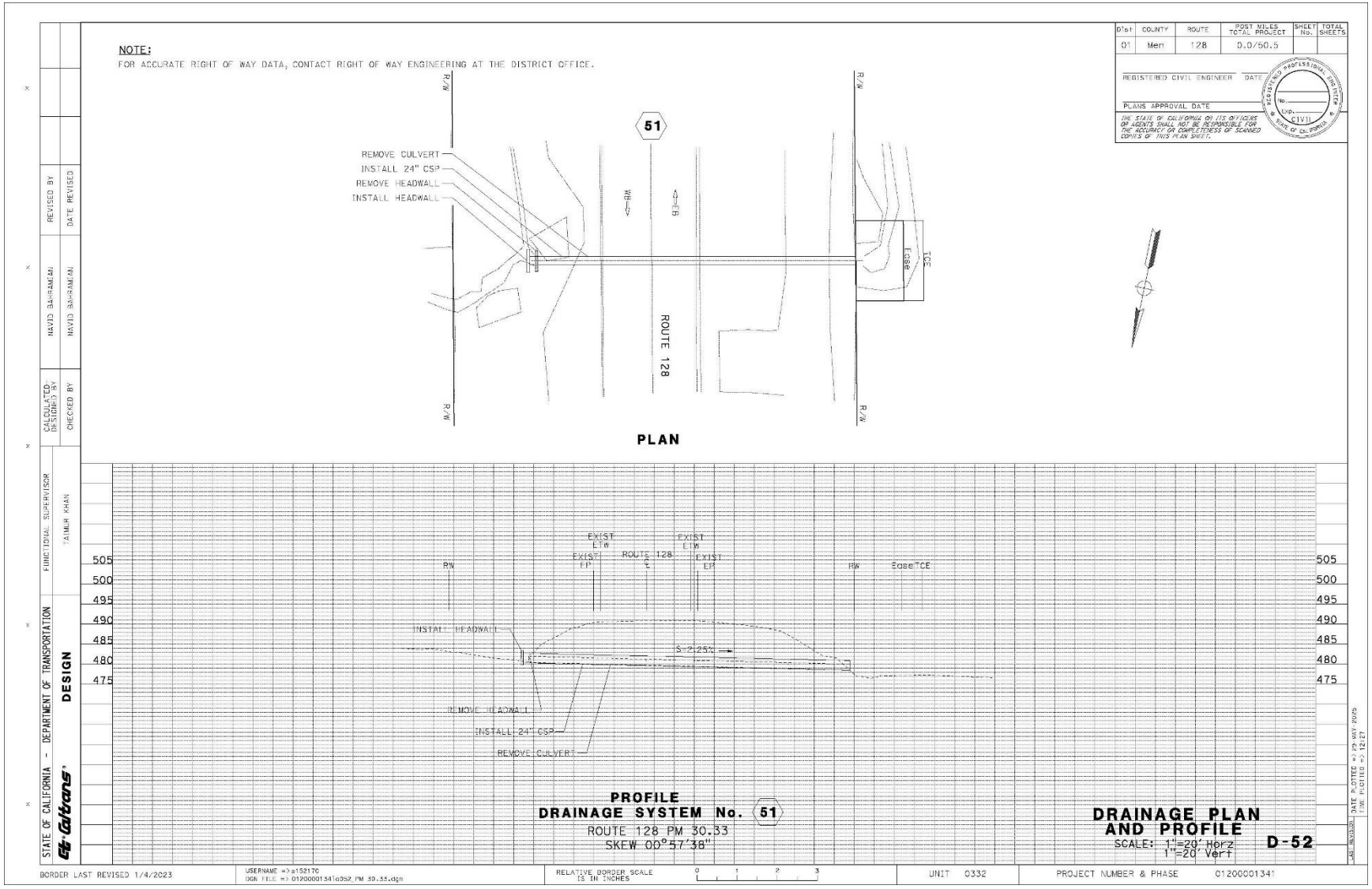

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
46
ROUTE 128
INSTALL 48" HDPE LINER
RSP
REMOVE FES
48" FES
R/W
PLAN
DRAINAGE SYSTEM No. 46
ROUTE 128 PM 26.07
SKEW 26°03'59"
DRAINAGE PLAN
SCALE: 1"=20' Horz
1"=20' Vert
D-47
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/DESIGNED BY
MICHAEL COLLINS
CHECKED BY
TAIMUR KHAN
REVISED BY
DATE REVISED
Dist
COUNTY
ROUTE
POST MILES TOTAL PROJECT
SHEET No.
TOTAL SHEETS
01
Men
128
0.0/50.5
REGISTERED CIVIL ENGINEER
DATE
PLANS APPROVAL DATE
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.
CIVIL
BORDER LAST REVISED 1/4/2023
USERNAME =>s152170
DGN FILE => 01200001341d047_PM 26.07.dgn
RELATIVE BORDER SCALE IS IN INCHES
0 1 2 3
UNIT 0332
PROJECT NUMBER & PHASE 01200001341
DATE PLOTTED => 29 MAY 2025
TIME PLOTTED => 12:27

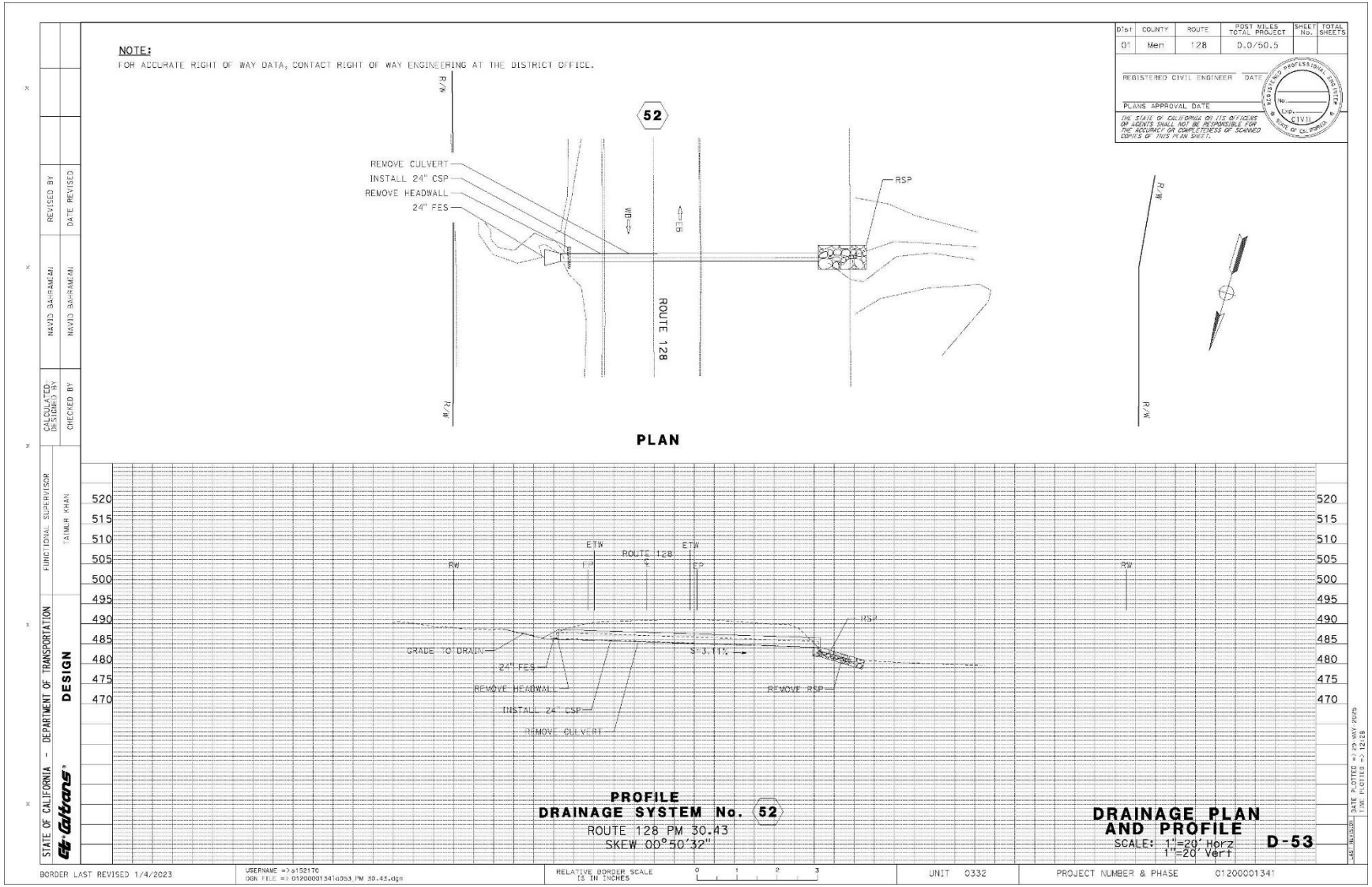

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
47
R/W
REMOVE FES
48" FES
INSTALL 48" CSP
REMOVE CULVERT
ROUTE 128
EDGE
INSTALL DI
REMOVE INLET
INSTALL 48" CSP
REMOVE CULVERT
REMOVE HEADWALL
48" FES
PLAN
ETW
EP
S=7.59%
S=1.48%
370
365
360
355
350
345
340
335
330
325
PROFILE
DRAINAGE SYSTEM No. 47
ROUTE 128 PM 26.51
SKEW 14°00'01"
DRAINAGE PLAN
AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-48
Dist
COUNTY
ROUTE
POST MILES TOTAL PROJECT
SHEET No.
TOTAL SHEETS
01
Men
128
0.0/50.5
REGISTERED CIVIL ENGINEER
DATE
PLANS APPROVAL DATE
CIVIL
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.
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/DESIGNED BY
DAVID BAHRAMIAN
CHECKED BY
DAVID BAHRAMIAN
REVISED BY
DATE REVISED
BORDER LAST REVISED 1/4/2023
USERNAME =>s153170
DGN FILE => 01200001341d048_PM 26.51.dgn
RELATIVE BORDER SCALE IS IN INCHES
0 1 2 3
UNIT 0332
PROJECT NUMBER & PHASE 01200001341
DATE PLOTTED => 29 MAY 2025
TIME PLOTTED => 12:27

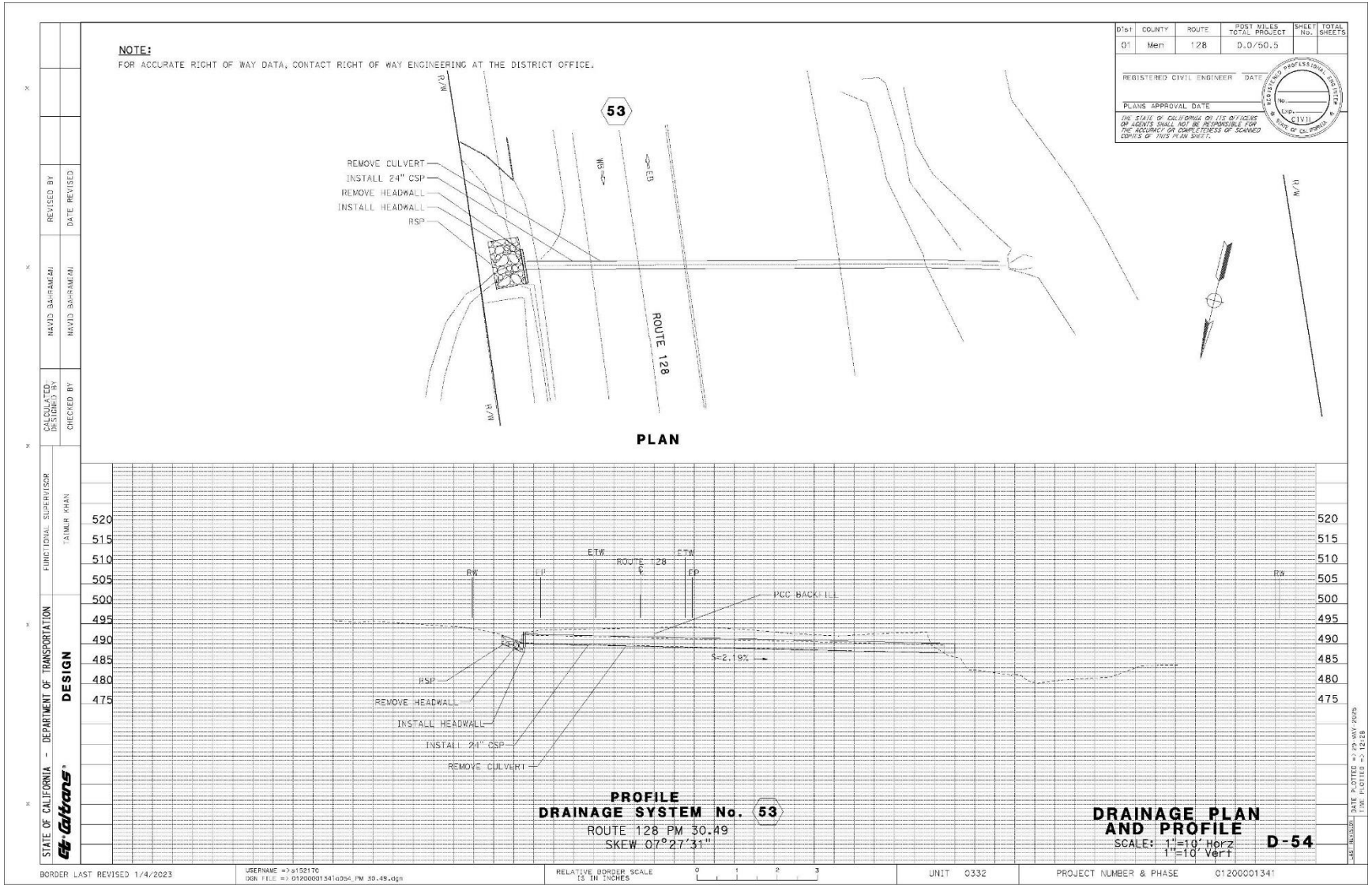

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
REMOVE CULVERT
INSTALL 24" CSP
REMOVE INLET
INSTALL DI
EXISTING 24" CSP
48
PEACHLAND Rd
REMOVE INLET
INSTALL DI
WB
ROUTE 128
EB
PLAN
ETW
ROUTE 128
ETW
EP
EP
EP
EP
EP
S=3.33%
INSTALL DI
REMOVE INLET
INSTALL 24" CSP
REMOVE CULVERT
INSTALL DI
REMOVE INLET
EXISTING 24" CSP
390
380
370
360
350
340
330
PROFILE
DRAINAGE SYSTEM No. 48
ROUTE 128 PM 26.72
SKEW 86°17'42"
DRAINAGE PLAN
AND PROFILE
SCALE: 1"=20' Horz
1"=20' Vert
D-49
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/DESIGNED BY
MICHAEL COLLINS
CHECKED BY
TAIMUR KHAN
REVISED BY
DATE REVISED
Dist
COUNTY
ROUTE
POST MILES TOTAL PROJECT
SHEET No.
TOTAL SHEETS
01
Men
128
0.0/50.5
REGISTERED CIVIL ENGINEER
DATE
PLANS APPROVAL DATE
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.
REGISTERED PROFESSIONAL ENGINEER
No.
EXP.
CIVIL
STATE OF CALIFORNIA
BORDER LAST REVISED 1/4/2023
USERNAME =>s153170
DGN FILE =>
RELATIVE BORDER SCALE IS IN INCHES
0 1 2 3
UNIT 0332
PROJECT NUMBER & PHASE 01200001341

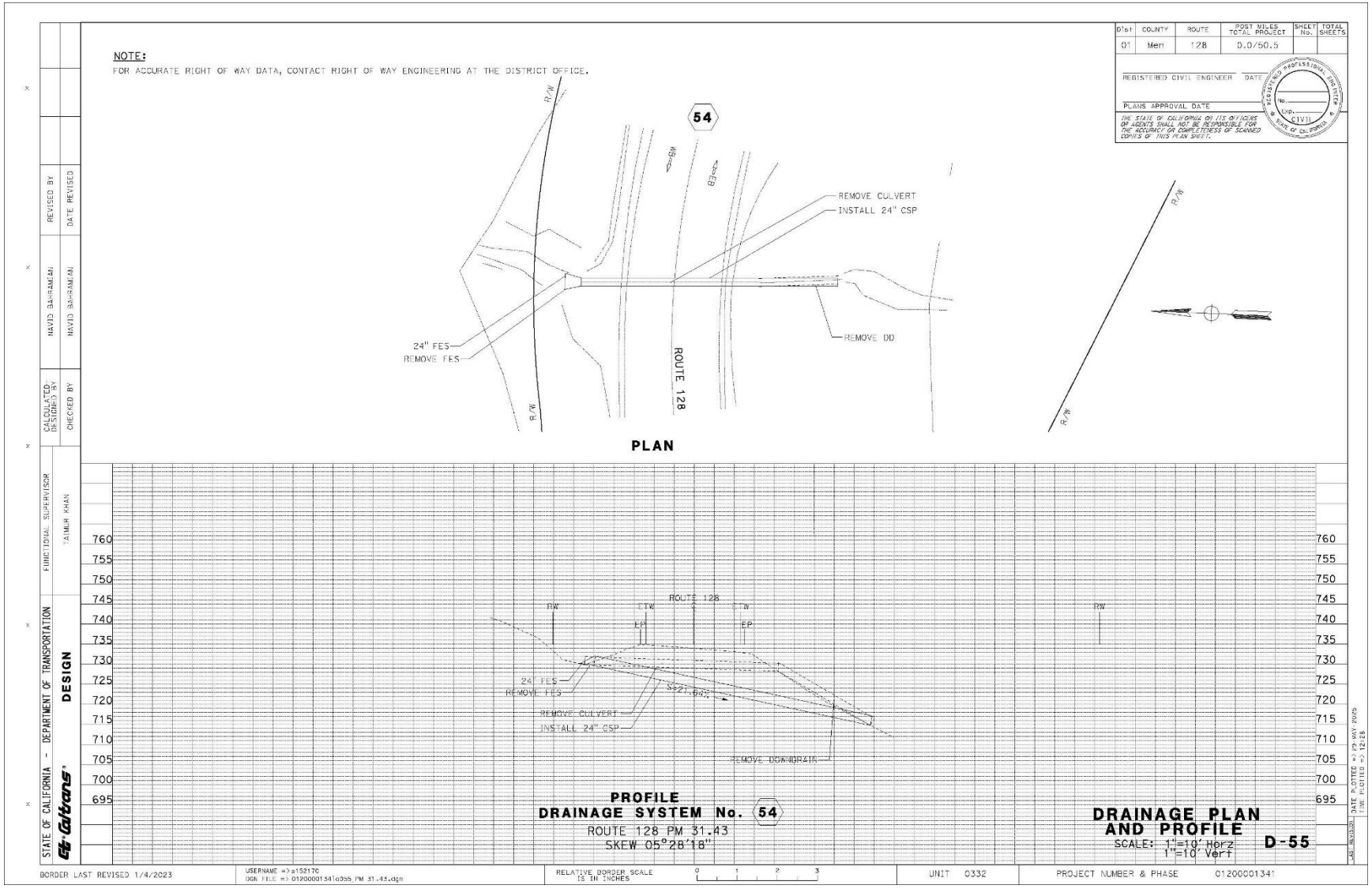

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS
01 | Men | 128 | 0.0/50.5
REGISTERED CIVIL ENGINEER DATE
PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.
49
R/W
INSTALL 48" HDPE LINER
REMOVE FES
48" FES
NBED
SBED
ROUTE 128
TCE
PLAN
TCE
RW
FTW
ROUTE 128
FP
EP
EXISTING HEADWALL
S=3.08%
48" FES
REMOVE FES
INSTALL 48" HDPE LINER
375
370
365
360
355
350
345
340
335
330
PROFILE
DRAINAGE SYSTEM No. 49
ROUTE 128 PM 27.76
SKEW 26°47'48"
DRAINAGE PLAN AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-50
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/DESIGNED BY
CHECKED BY
DAVID BAHRAMIAN
DAVID BAHRAMIAN
REVISED BY
DATE REVISED
BORDER LAST REVISED 1/4/2023
USERNAME =>s153170
DGN FILE => 01200001341dd50_PM 27.76.dgn
RELATIVE BORDER SCALE IS IN INCHES
0 1 2 3
UNIT 0332
PROJECT NUMBER & PHASE 01200001341

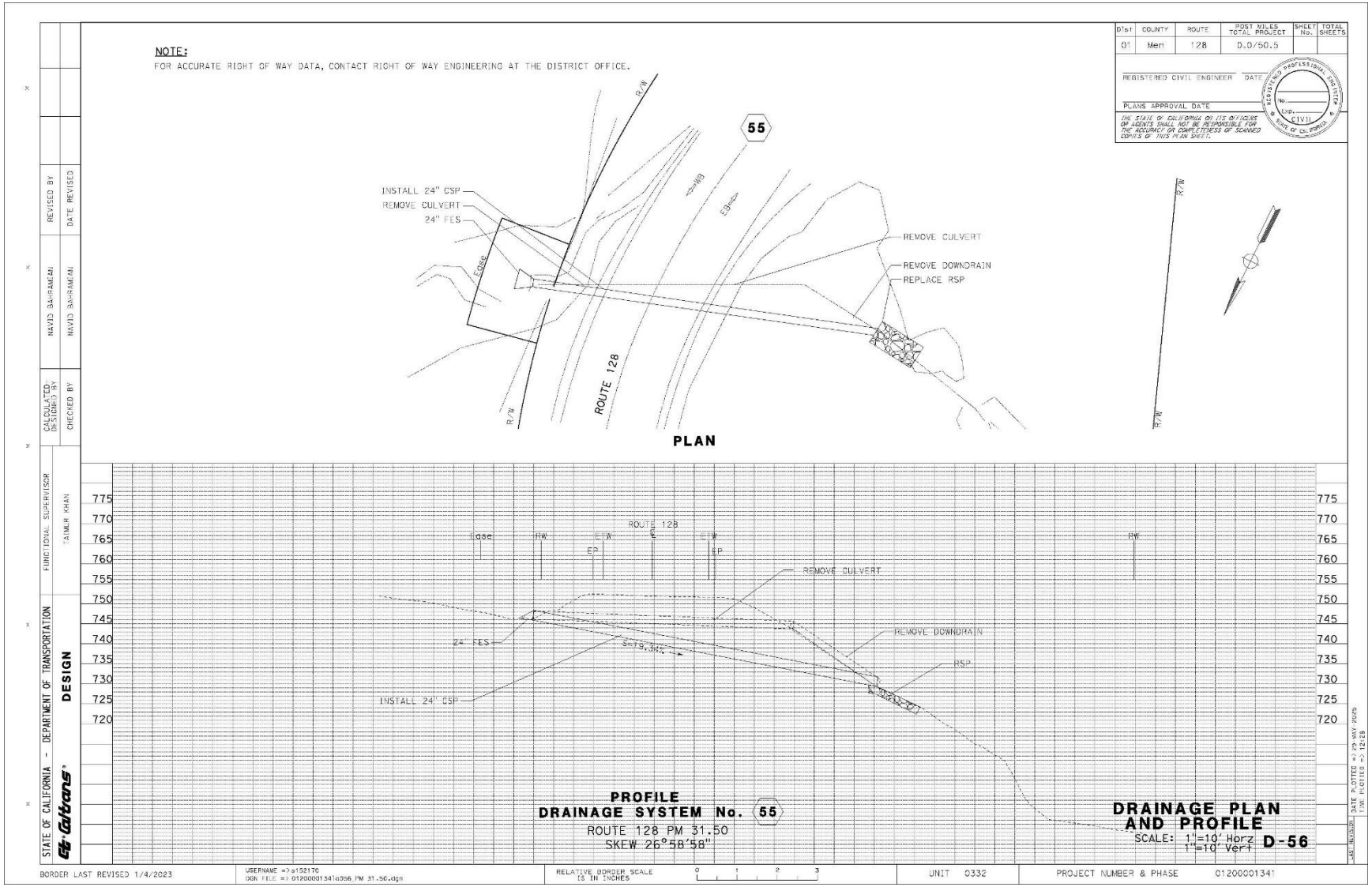

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS
01 | Men | 128 | 0.0/50.5
REGISTERED CIVIL ENGINEER DATE
PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.
50
REMOVE CULVERT
INSTALL 24" CSP
REMOVE WINGWALLS
24" FES
REMOVE HEADWALL
ROUTE 128
R/W
EP
TCE
PLAN
520
515
510
505
500
495
490
485
480
475
470
FTW
ETW
S=7.98%
24" FES
REMOVE HEADWALL
INSTALL 24" CSP
REMOVE CULVERT
PROFILE
DRAINAGE SYSTEM No. 50
ROUTE 128 PM 30.25
SKEW 39°59'45"
DRAINAGE PLAN AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-51
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/DESIGNED BY
CHECKED BY
DRAWN BY
CHECKED BY
REVISED BY
DATE REVISED
BORDER LAST REVISED 1/4/2023
USERNAME =>s153170
DGN FILE => 01200001341qd51_PM 30.25.dgn
RELATIVE BORDER SCALE IS IN INCHES
0 1 2 3
UNIT 0332
PROJECT NUMBER & PHASE 01200001341
DATE PLOTTED => 29 MAY 2025
TIME PLOTTED => 12:27

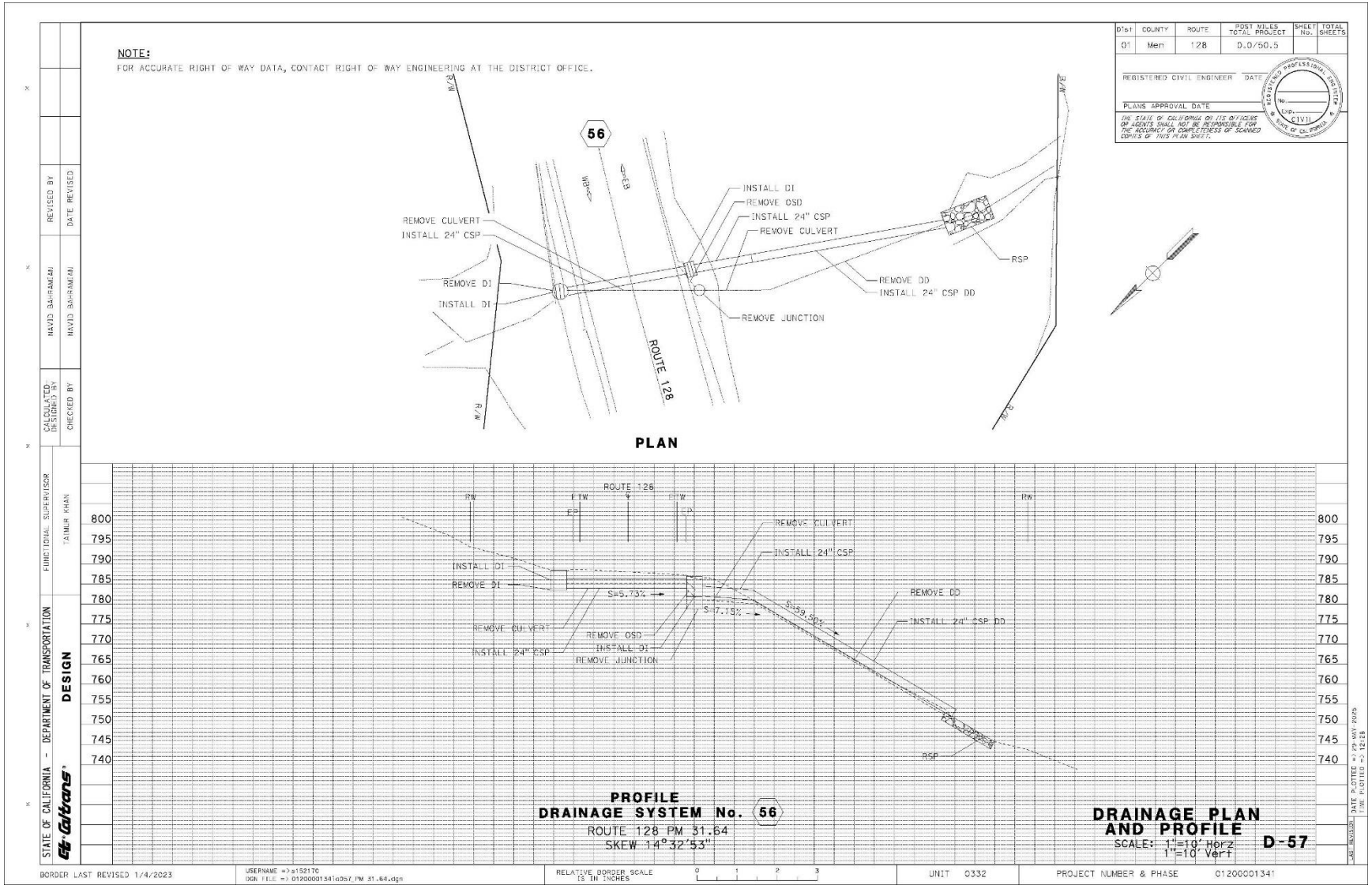

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS
01 | Men | 128 | 0.0/50.5
REGISTERED CIVIL ENGINEER
DATE
PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.
51
REMOVE CULVERT
INSTALL 24" CSP
REMOVE HEADWALL
INSTALL HEADWALL
R/W
ROUTE 128
PLAN
EXIST EP
EXIST CTR
ROUTE 128 ℄
EXIST EP
EXIST CTR
R/W
EaseTCE
INSTALL HEADWALL
S=2.25%
REMOVE HEADWALL
INSTALL 24" CSP
REMOVE CULVERT
505
500
495
490
485
480
475
PROFILE
DRAINAGE SYSTEM No. 51
ROUTE 128 PM 30.33
SKEW 00°57'38"
DRAINAGE PLAN AND PROFILE
SCALE: 1"=20' Horz
1"=20' Vert
D-52
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/DESIGNED BY
DAVID BAHRAMIAN
CHECKED BY
DAVID BAHRAMIAN
REVISED BY
DATE REVISED
BORDER LAST REVISED 1/4/2023
USERNAME => s153170
DGN FILE => 0120000134 1d052_PM 30.33.dgn
RELATIVE BORDER SCALE IS IN INCHES
0 1 2 3
UNIT 0332
PROJECT NUMBER & PHASE 0120000134
DATE PLOTTED => 29 MAY 2025
TIME PLOTTED => 12:27

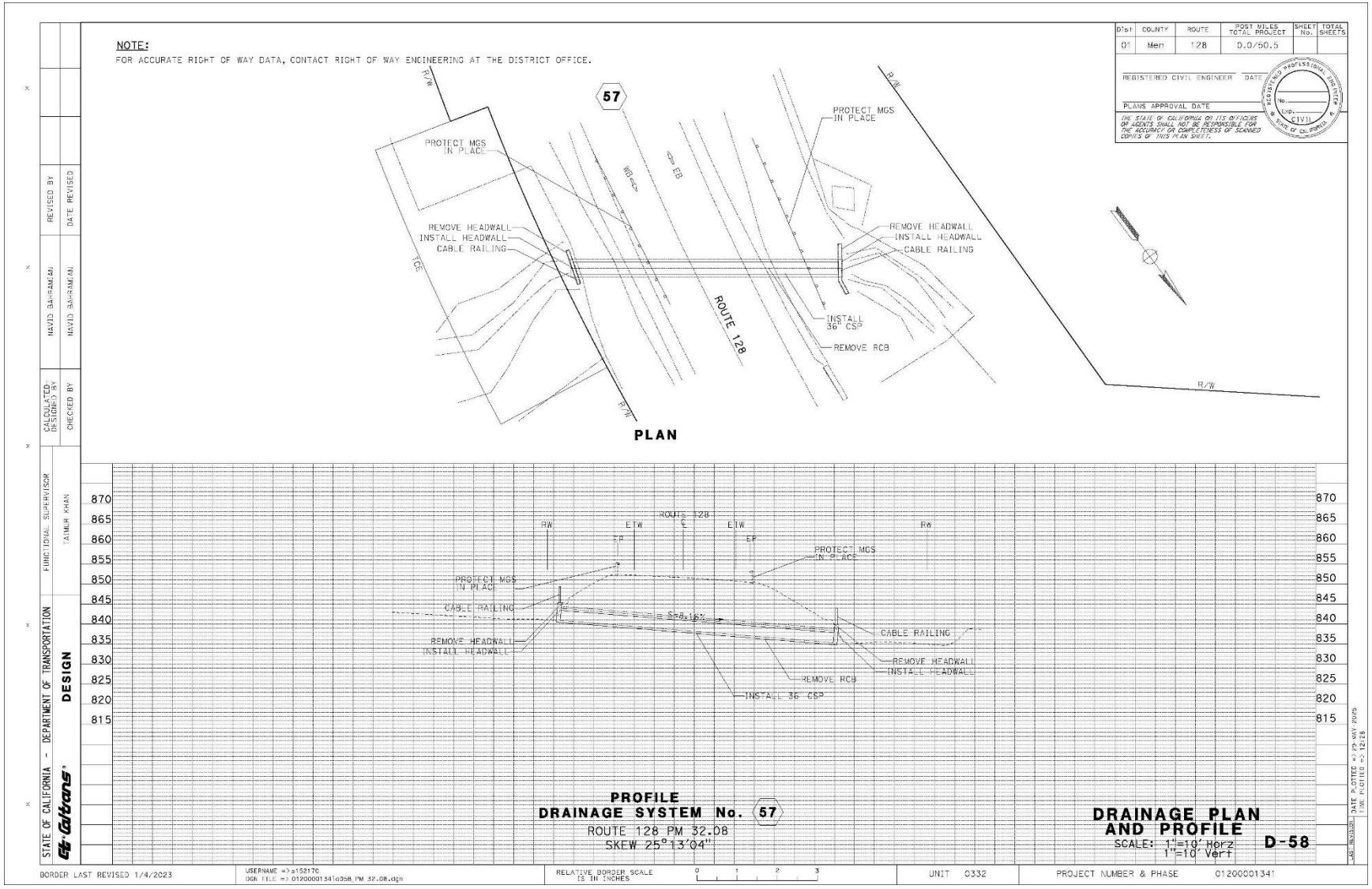

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS
01 | Men | 128 | 0.0/50.5
REGISTERED CIVIL ENGINEER DATE
PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.
52
R/W
REMOVE CULVERT
INSTALL 24" CSP
REMOVE HEADWALL
24" FES
RSP
WB
EB
ROUTE 128
PLAN
ETW
EP
GRADE TO DRAIN
S=3.11%
REMOVE RSP
PROFILE
DRAINAGE SYSTEM No. 52
ROUTE 128 PM 30.43
SKEW 00°50'32"
DRAINAGE PLAN AND PROFILE
SCALE: 1"=20' Horz
1"=20' Vert
D-53
520
515
510
505
500
495
490
485
480
475
470
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/DESIGNED BY
CHECKED BY
DAVID BAHRAMIAN
DAVID BAHRAMIAN
REVISED BY
DATE REVISED
BORDER LAST REVISED 1/4/2023
USERNAME => s153170
DGN FILE => 0120000134 1d053_PM 30.43.dgn
RELATIVE BORDER SCALE IS IN INCHES
UNIT 0332
PROJECT NUMBER & PHASE 0120000134

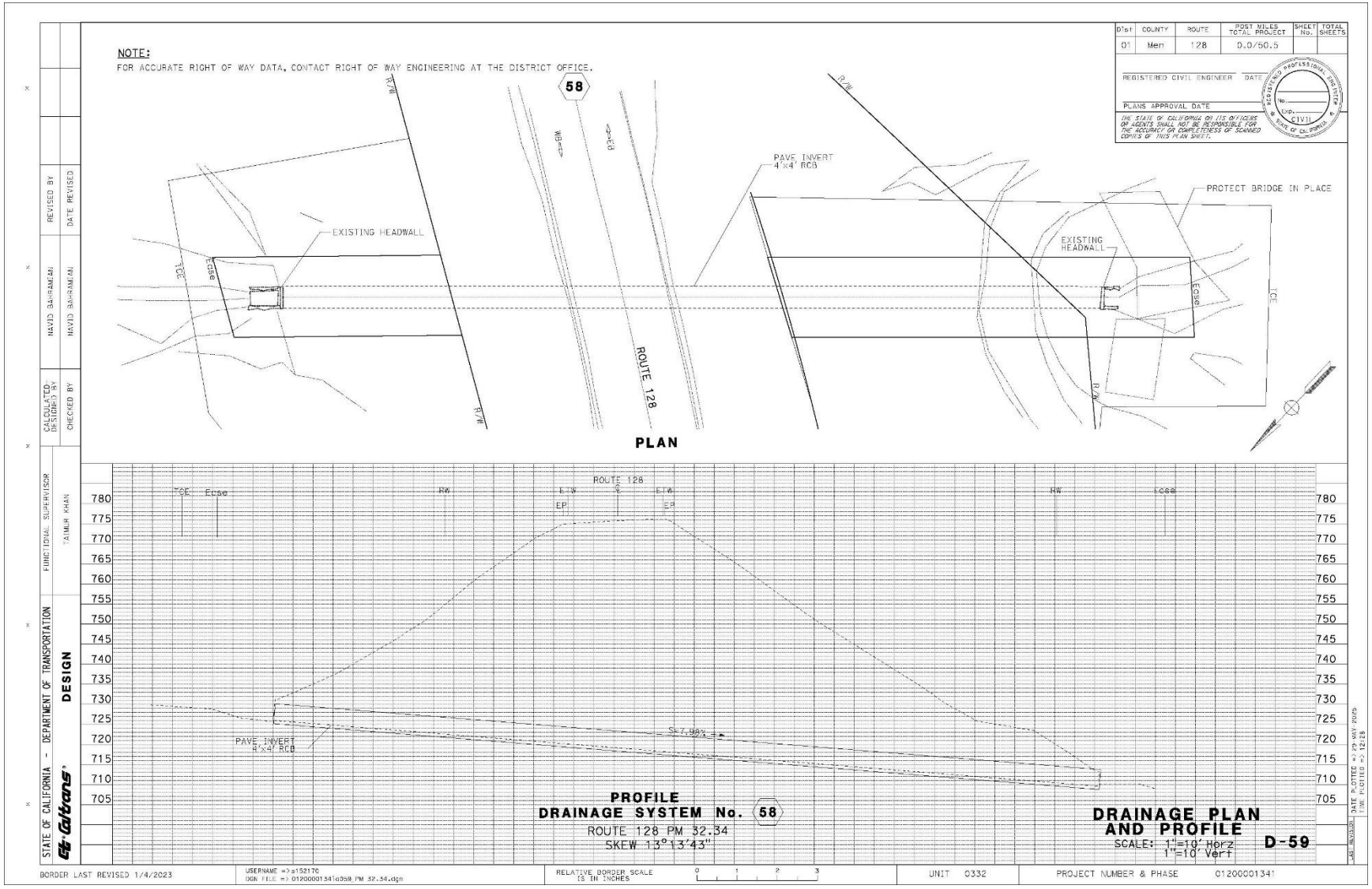

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS
01 | Men | 128 | 0.0/50.5
REGISTERED CIVIL ENGINEER DATE
PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.
53
REMOVE CULVERT
INSTALL 24" CSP
REMOVE HEADWALL
INSTALL HEADWALL
RSP
ROUTE 128
PLAN
ETW
ROUTE 128
RW
EP
PCC BACKFILL
S=2.9%
RSP
REMOVE HEADWALL
INSTALL HEADWALL
INSTALL 24" CSP
REMOVE CULVERT
520
515
510
505
500
495
490
485
480
475
PROFILE
DRAINAGE SYSTEM No. 53
ROUTE 128 PM 30.49
SKEW 07°27'31"
DRAINAGE PLAN AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-54
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/DESIGNED BY
DAVID BAHRAMIAN
CHECKED BY
DAVID BAHRAMIAN
REVISED BY
DATE REVISED
BORDER LAST REVISED 1/4/2023
USERNAME => s153170
DGN FILE => 01200001341dd54_PM 30.49.dgn
RELATIVE BORDER SCALE IS IN INCHES
0 1 2 3
UNIT 0332
PROJECT NUMBER & PHASE 01200001341

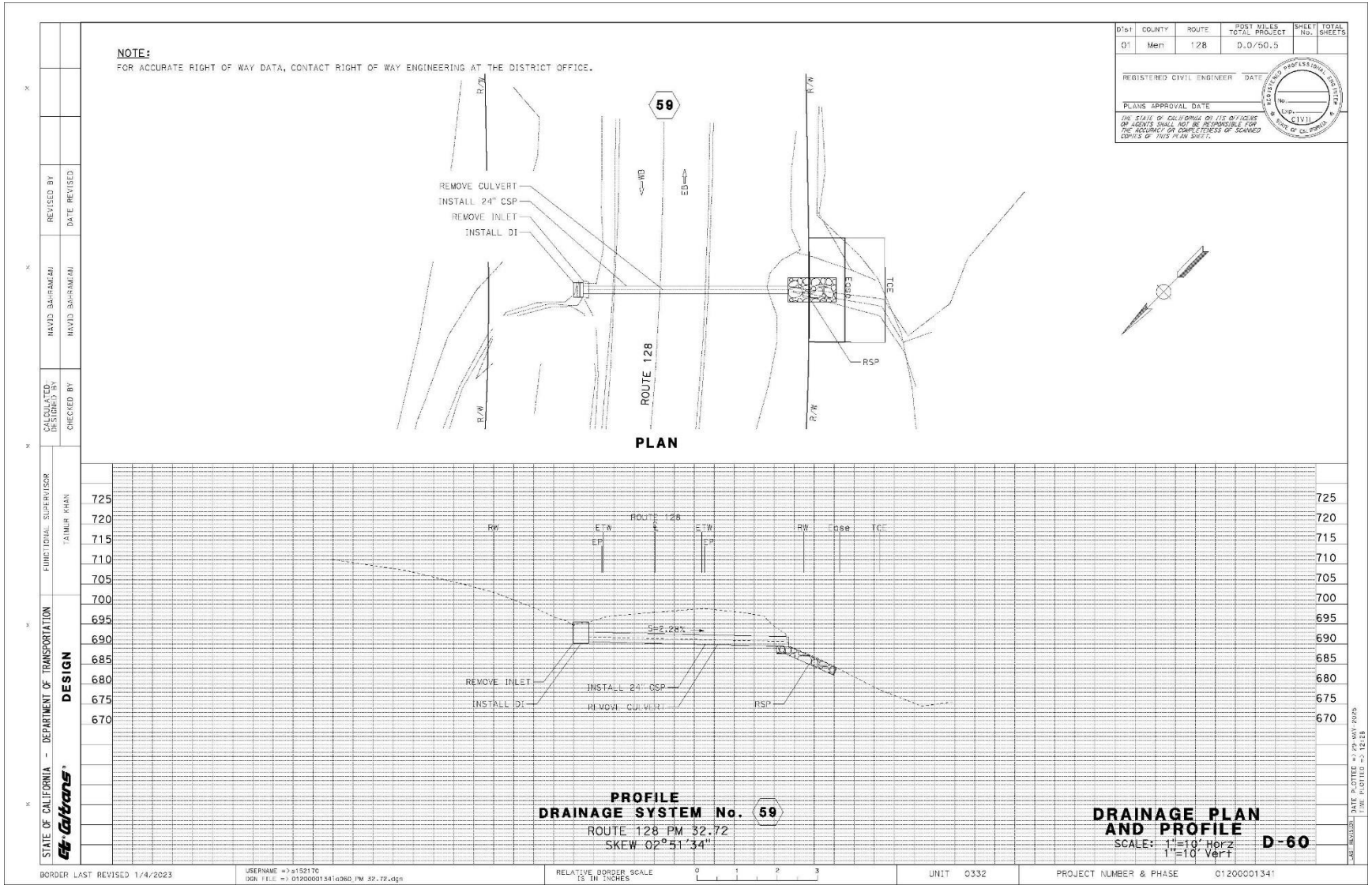

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS
01 | Men | 128 | 0.0/50.5
REGISTERED CIVIL ENGINEER DATE
PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.
54
REMOVE CULVERT
INSTALL 24" CSP
24" FES
REMOVE FES
REMOVE DD
ROUTE 128
R/W
PLAN
PROFILE
DRAINAGE SYSTEM No. 54
ROUTE 128 PM 31.43
SKEW 05°28'18"
REMOVE DOWNDRAIN
DRAINAGE PLAN AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-55
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/DESIGNED BY
CHECKED BY
DAVID BAHRAMIAN
REVISED BY
DATE REVISED
BORDER LAST REVISED 1/4/2023
USERNAME => s153170
DGN FILE => 01200001341dgnss_PM 31.43.dgn
RELATIVE BORDER SCALE IS IN INCHES
UNIT 0332
PROJECT NUMBER & PHASE 01200001341

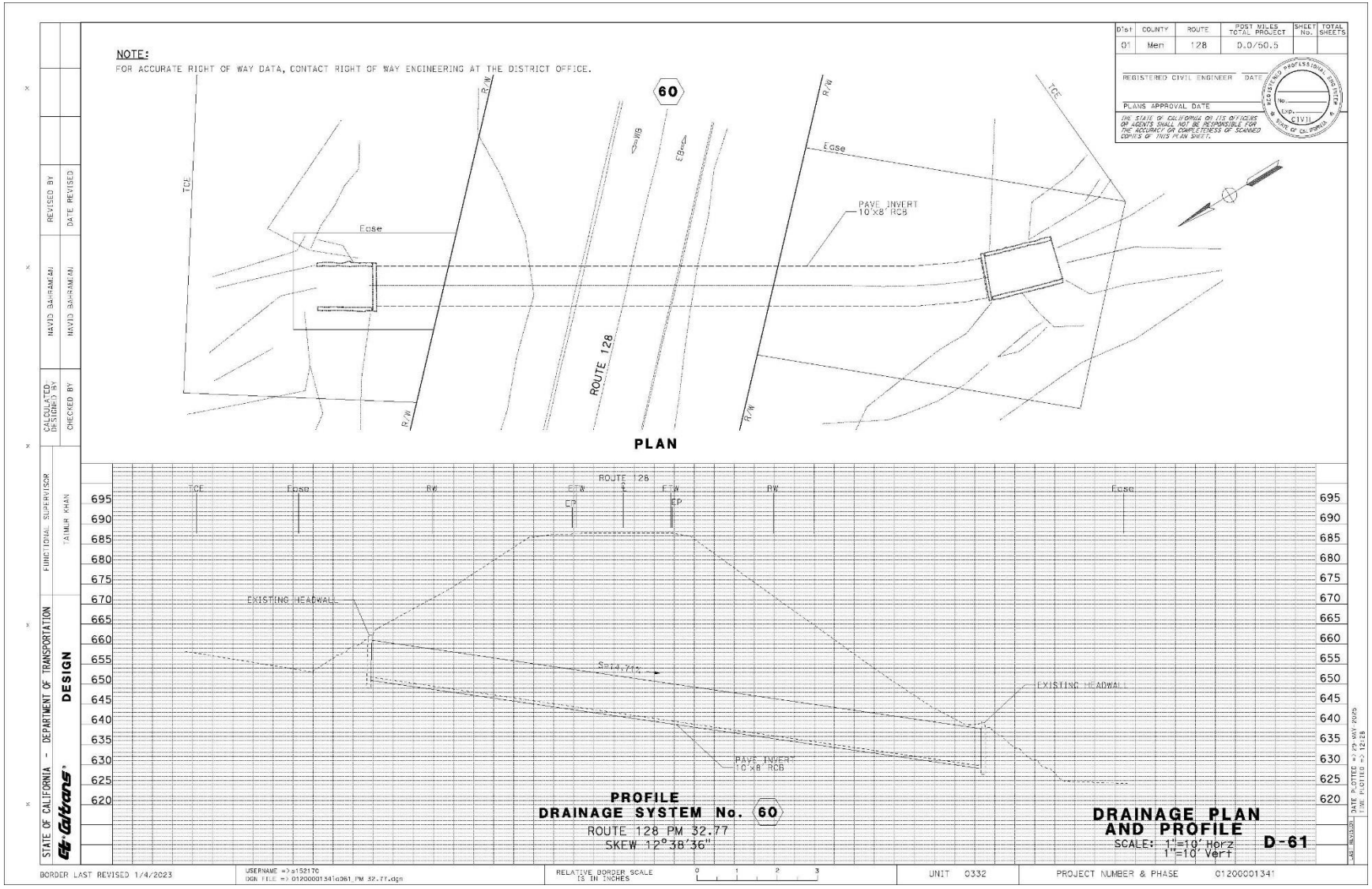

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS
01 | Men | 128 | 0.0/50.5
REGISTERED CIVIL ENGINEER DATE
PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.
55
INSTALL 24" CSP
REMOVE CULVERT
24" FES
REMOVE CULVERT
REMOVE DOWNDRAIN
REPLACE RSP
R/W
ROUTE 128
PLAN
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/DESIGNED BY
CHECKED BY
DAVID BAHRAMIAN
REVISED BY
DATE REVISED
Base
HW
ROUTE 128
REMOVE CULVERT
REMOVE DOWNDRAIN
RSP
24" FES
INSTALL 24" CSP
775
770
765
760
755
750
745
740
735
730
725
720
PROFILE
DRAINAGE SYSTEM No. 55
ROUTE 128 PM 31.50
SKEW 26°58'58"
DRAINAGE PLAN AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-56
BORDER LAST REVISED 1/4/2023
USERNAME =>s153170
DGN FILE => 01200001341d056_PM 31.50.dgn
RELATIVE BORDER SCALE IS IN INCHES
0 1 2 3
UNIT 0332
PROJECT NUMBER & PHASE 01200001341

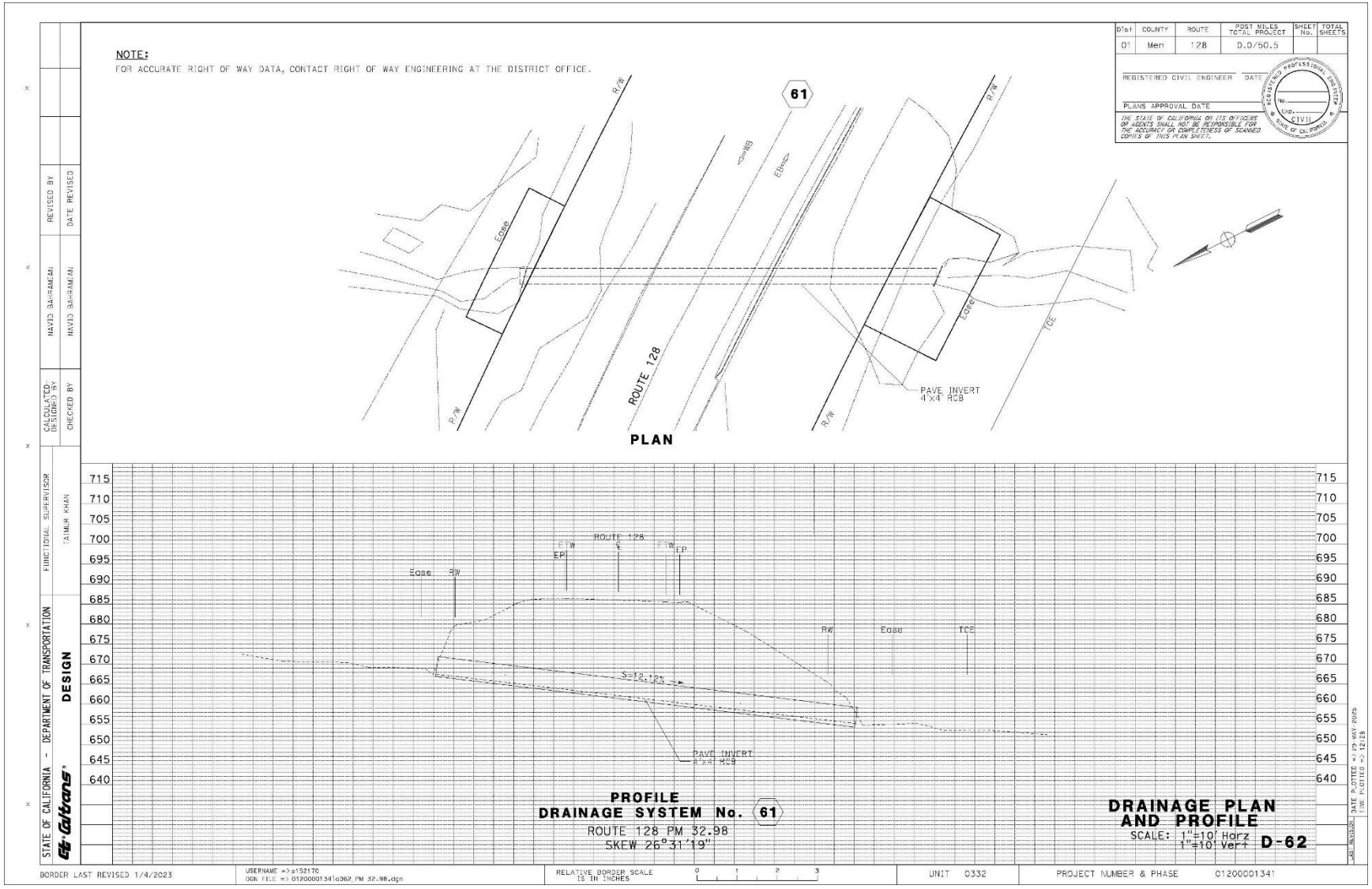

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS
01 | Men | 128 | 0.0/50.5
REGISTERED CIVIL ENGINEER
DATE
PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.
56
REMOVE CULVERT
INSTALL 24" CSP
REMOVE DI
INSTALL DI
INSTALL DI
REMOVE OSD
INSTALL 24" CSP
REMOVE CULVERT
RSP
REMOVE DD
INSTALL 24" CSP DD
REMOVE JUNCTION
ROUTE 128
PLAN
ROUTE 128
RW
FTW
EP
REMOVE CULVERT
INSTALL 24" CSP
INSTALL DI
REMOVE DI
S=5.73%
S=7.15%
S=59.20%
REMOVE DD
INSTALL 24" CSP DD
REMOVE CULVERT
INSTALL 24" CSP
REMOVE OSD
INSTALL DI
REMOVE JUNCTION
RSP
800
795
790
785
780
775
770
765
760
755
750
745
740
PROFILE
DRAINAGE SYSTEM No. 56
ROUTE 128 PM 31.64
SKEW 14°32'53"
DRAINAGE PLAN AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-57
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/DESIGNED BY
CHECKED BY
DAVID BAHRAMIAN
DAVID BAHRAMIAN
REVISED BY
DATE REVISED
BORDER LAST REVISED 1/4/2023
USERNAME =>s153170
DGN FILE => 01200001341dd57_PM 31.64.dgn
RELATIVE BORDER SCALE IS IN INCHES
0 1 2 3
UNIT 0332
PROJECT NUMBER & PHASE 01200001341
DATE PLOTTED => 29 MAY 2025
TIME PLOTTED => 12:28

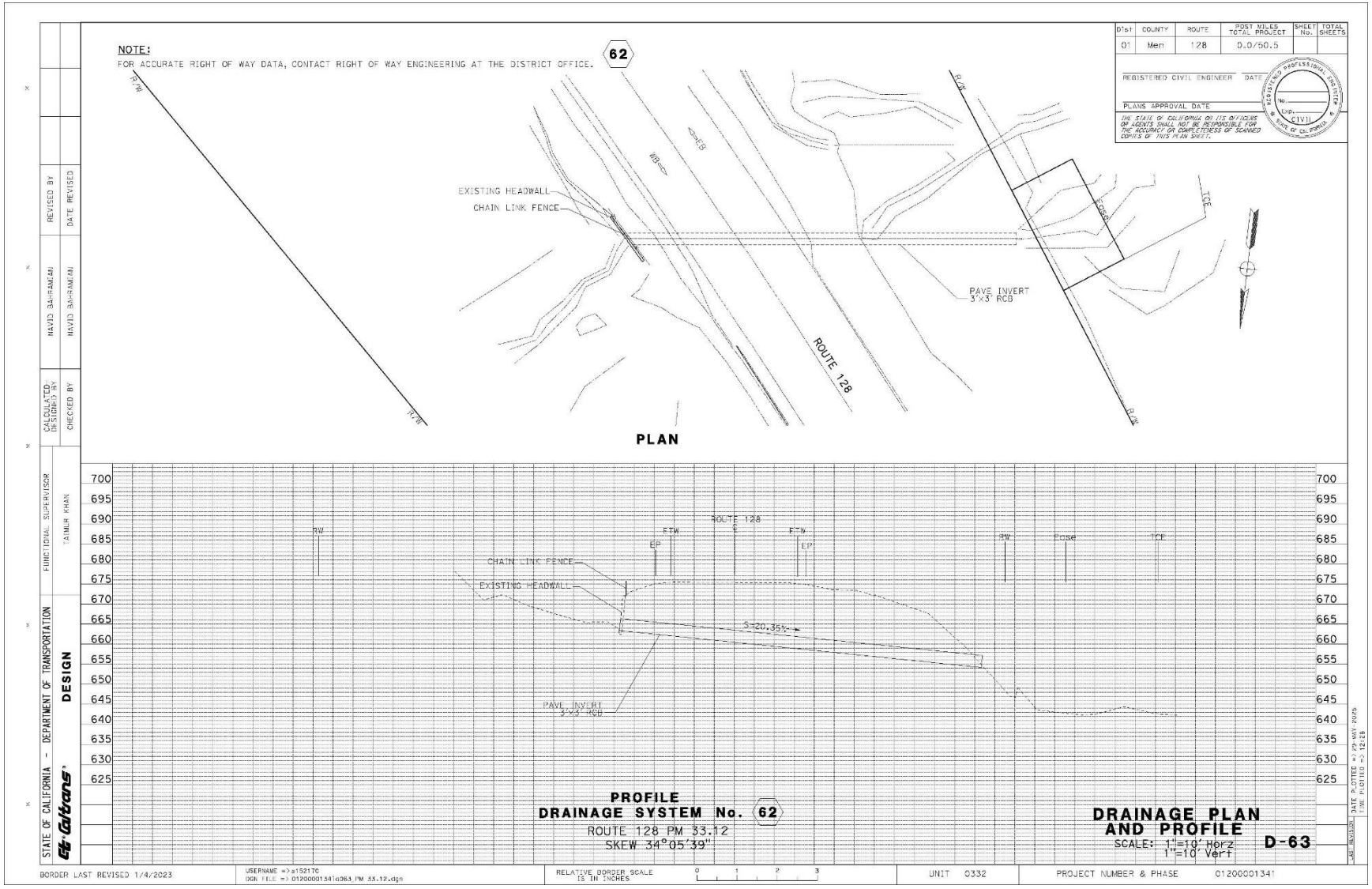

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS
01 | Men | 128 | 0.0/50.5
REGISTERED CIVIL ENGINEER DATE
PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.
REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA
57
PROTECT MGS IN PLACE
REMOVE HEADWALL
INSTALL HEADWALL
CABLE RAILING
WB-ACC
EB
ROUTE 128
INSTALL 36" CSP
REMOVE RCB
R/W
TCS
PLAN
ROUTE 128
RW
ETW
EP
PROTECT MGS IN PLACE
CABLE RAILING
REMOVE HEADWALL
INSTALL HEADWALL
S=8.6%
REMOVE RCB
INSTALL 36" CSP
870
865
860
855
850
845
840
835
830
825
820
815
PROFILE
DRAINAGE SYSTEM No. 57
ROUTE 128 PM 32.08
SKEW 25°13'04"
DRAINAGE PLAN AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-58
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/DESIGNED BY
HAVID BAHRAMIAN
CHECKED BY
HAVID BAHRAMIAN
REVISED BY
DATE REVISED
BORDER LAST REVISED 1/4/2023
USERNAME =>s153170
DGN FILE => 01200001341d058_PM 32.08.dgn
RELATIVE BORDER SCALE IS IN INCHES
0 1 2 3
UNIT 0332
PROJECT NUMBER & PHASE 01200001341
DATE PLOTTED => 29 MAY 2025
TIME PLOTTED => 12:28

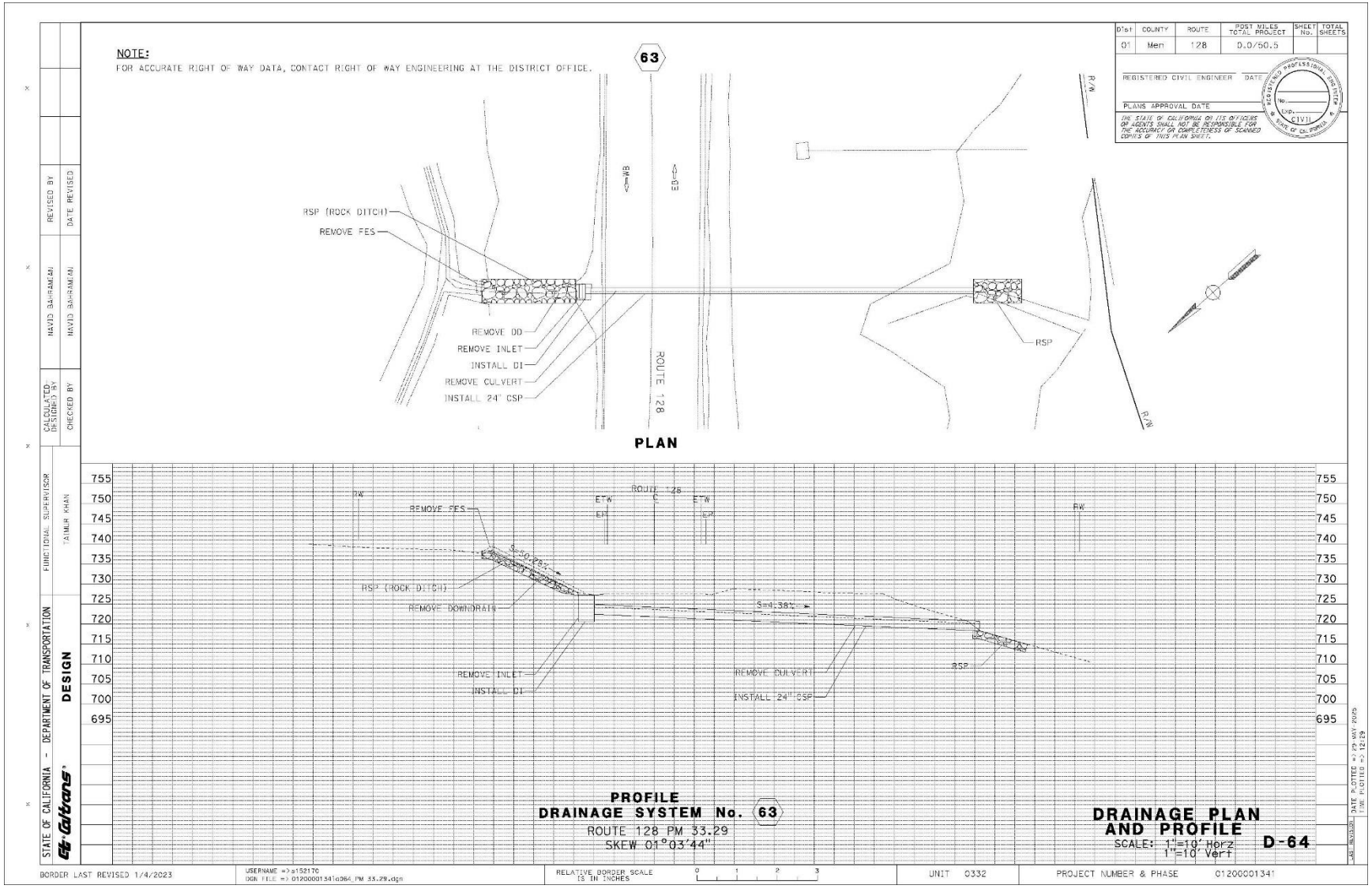

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
58
R/W
EXISTING HEADWALL
TOE
Ecse
ROUTE 128
PAVE INVERT 4'x4' RCB
PROTECT BRIDGE IN PLACE
EXISTING HEADWALL
PLAN
ROUTE 128
TOE Ecse
RW
E.I.W.
EP
S=7.98%
PAVE INVERT 4'x4' RCB
780
775
770
765
760
755
750
745
740
735
730
725
720
715
710
705
PROFILE
DRAINAGE SYSTEM No. 58
ROUTE 128 PM 32.34
SKEW 13°13'43"
DRAINAGE PLAN AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-59
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/DESIGNED BY
HAVID BAHRAMIAN
CHECKED BY
HAVID BAHRAMIAN
REVISED BY
DATE REVISED
Dist
COUNTY
ROUTE
POST MILES TOTAL PROJECT
SHEET No.
TOTAL SHEETS
01
Men
128
0.0/50.5
REGISTERED CIVIL ENGINEER
DATE
PLANS APPROVAL DATE
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.
BORDER LAST REVISED 1/4/2023
USERNAME =>s153170
DGN FILE => 01200001341d058_PM 32.34.dgn
RELATIVE BORDER SCALE IS IN INCHES
0 1 2 3
UNIT 0332
PROJECT NUMBER & PHASE 01200001341

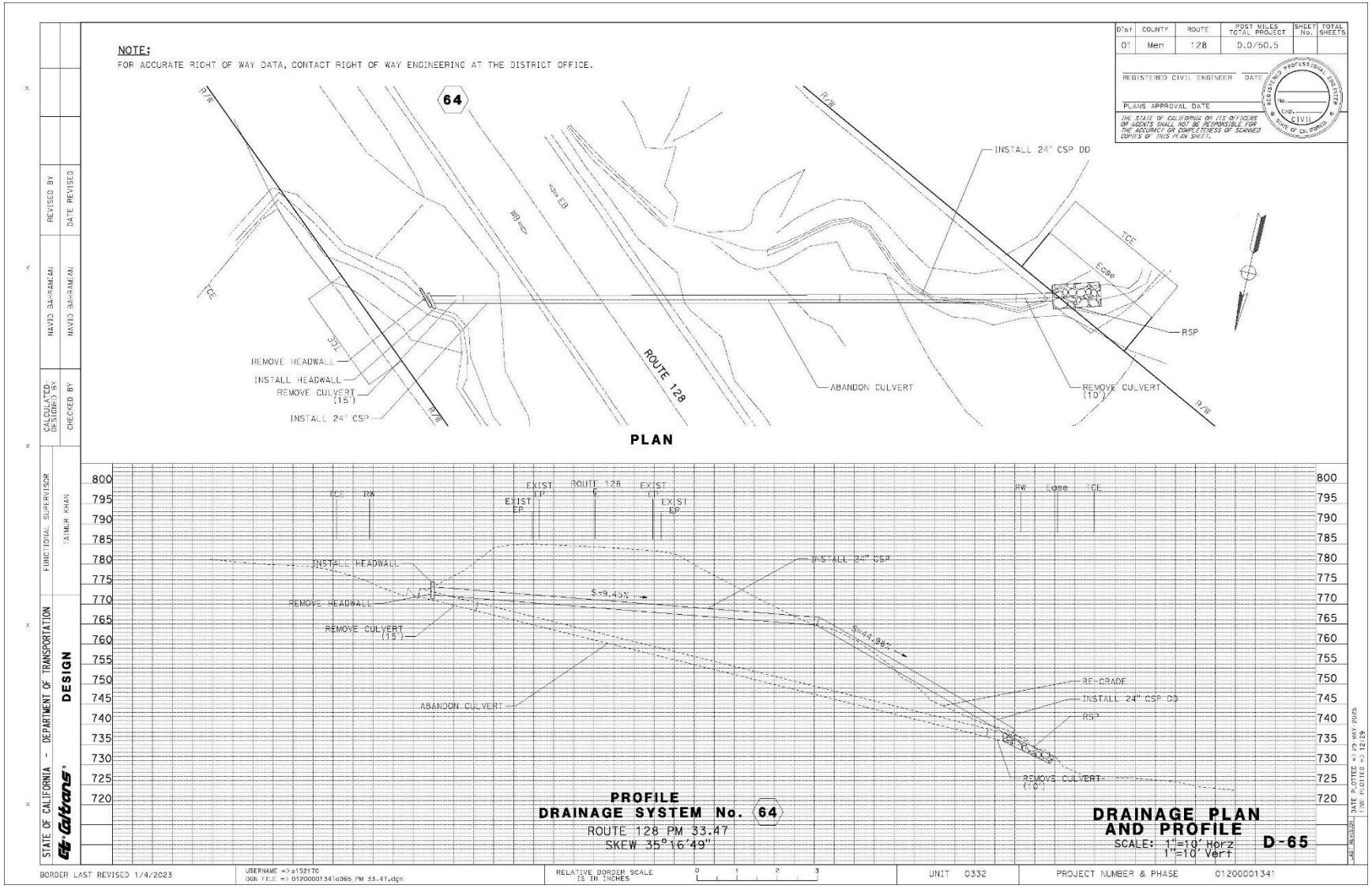

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS
01 | Men | 128 | 0.0/50.5
REGISTERED CIVIL ENGINEER DATE
PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.
59
R/W
REMOVE CULVERT
INSTALL 24" CSP
REMOVE INLET
INSTALL DI
WB
EB
ROUTE 128
EOSP
TOE
RSP
PLAN
ROUTE 128
RW
E.W.
EP
RW
Base
TC
S=2.28%
REMOVE INLET
INSTALL DI
INSTALL 24" CSP
REMOVE CULVERT
RSP
725
720
715
710
705
700
695
690
685
680
675
670
PROFILE
DRAINAGE SYSTEM No. 59
ROUTE 128 PM 32.72
SKEW 02°51'34"
DRAINAGE PLAN AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-60
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/DESIGNED BY
HAVID BAHRAMIAN
CHECKED BY
HAVID BAHRAMIAN
REVISED BY
DATE REVISED
BORDER LAST REVISED 1/4/2023
USERNAME =>s153170
DGN FILE => 01200001341d060_PM 32.72.dgn
RELATIVE BORDER SCALE IS IN INCHES
0 1 2 3
UNIT 0332
PROJECT NUMBER & PHASE 01200001341
DATE PLOTTED => 29 MAY 2025
TIME PLOTTED => 12:28

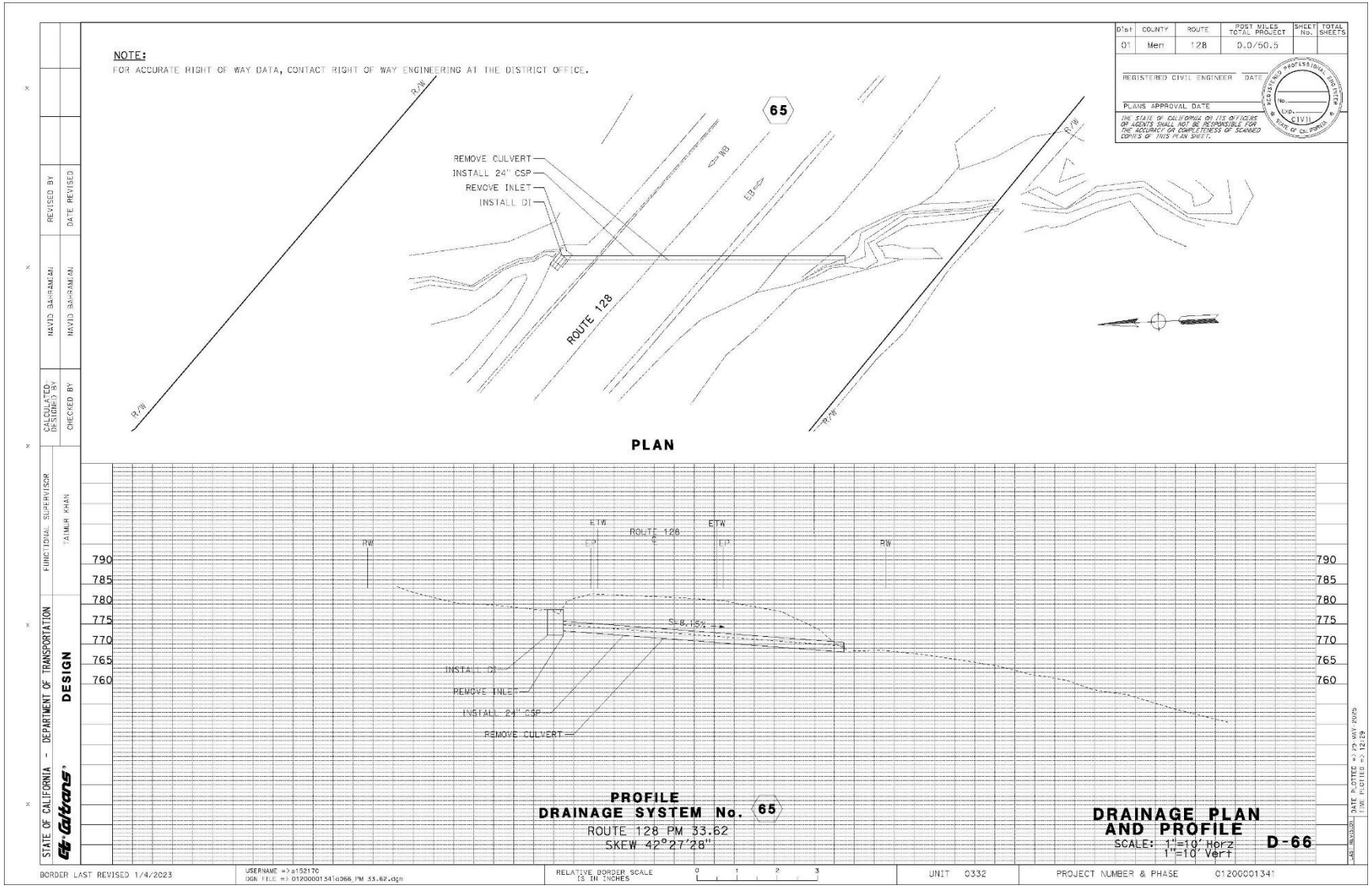

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS
01 | Men | 128 | 0.0/50.5
REGISTERED CIVIL ENGINEER DATE
PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.
60
TCE
R/W
Ease
WB
EB
ROUTE 128
PAVE INVERT 10'x8' RCB
PLAN
ROUTE 128
EXISTING HEADWALL
PAVE INVERT 10'x8' RCB
PROFILE
DRAINAGE SYSTEM No. 60
ROUTE 128 PM 32.77
SKEW 12°38'36"
DRAINAGE PLAN AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-61
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/DESIGNED BY
CHECKED BY
DRAWN BY
REVISED BY
DATE REVISED
695 690 685 680 675 670 665 660 655 650 645 640 635 630 625 620
BORDER LAST REVISED 1/4/2023
USERNAME =>s153170
DGN FILE => 01200001341d061_PM 32.77.dgn
RELATIVE BORDER SCALE IS IN INCHES
UNIT 0332
PROJECT NUMBER & PHASE 01200001341

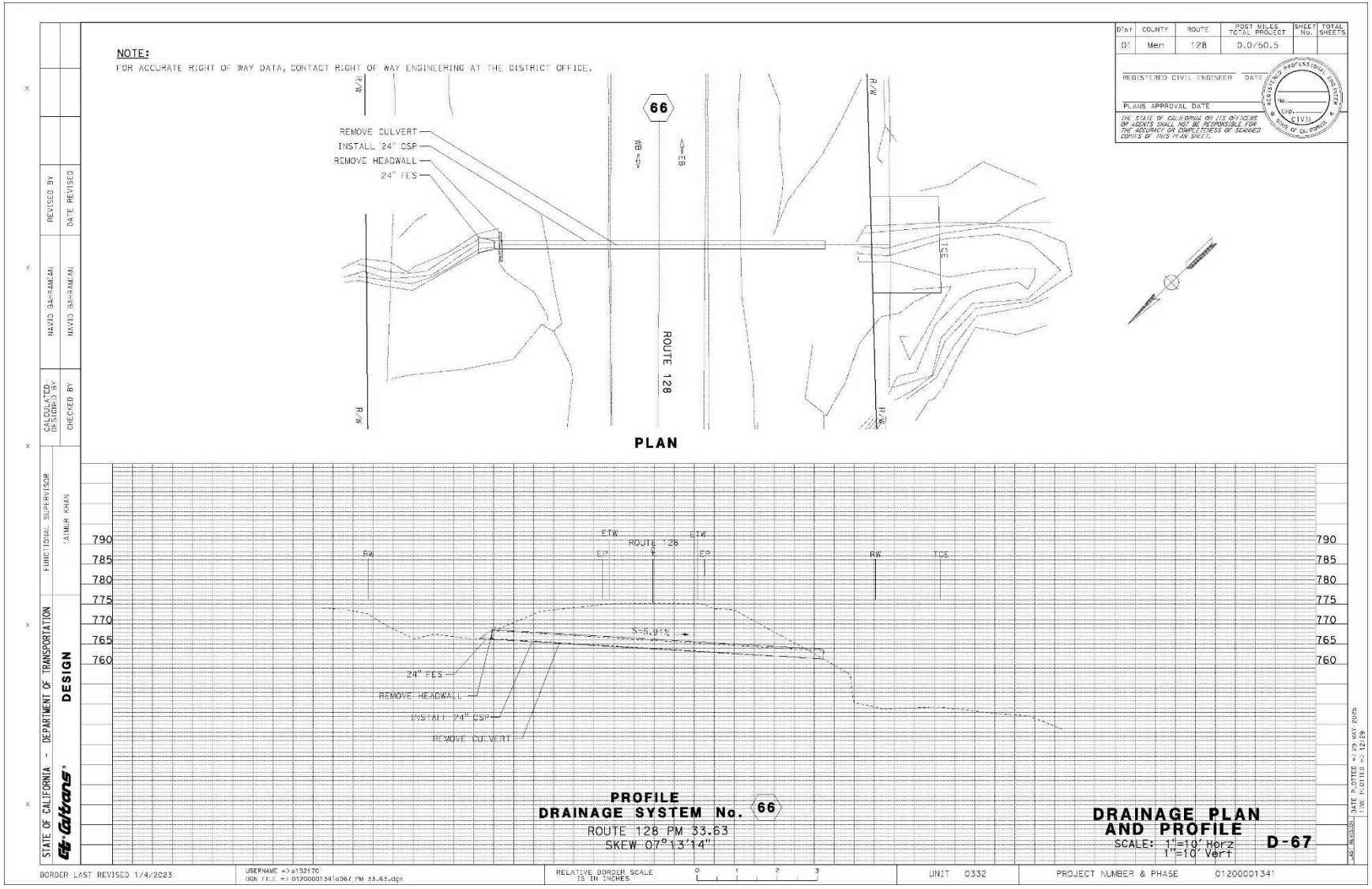

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS
01 | Men | 128 | 0.0/50.5
REGISTERED CIVIL ENGINEER DATE
PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.
61
R/W
Ease
ROUTE 128
EOP
PAVE INVERT 4'x4' RCB
TOE
PLAN
PROFILE
DRAINAGE SYSTEM No. 61
ROUTE 128 PM 32.98
SKEW 26°31'19"
S=12.12%
DRAINAGE PLAN AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-62
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/DESIGNED BY
CHECKED BY
DAVID BAHRAMIAN
REVISED BY
DATE REVISED
BORDER LAST REVISED 1/4/2023
USERNAME =>s153170
DGN FILE => 01200001341d062_PM 32.98.dgn
RELATIVE BORDER SCALE IS IN INCHES
UNIT 0332
PROJECT NUMBER & PHASE 01200001341

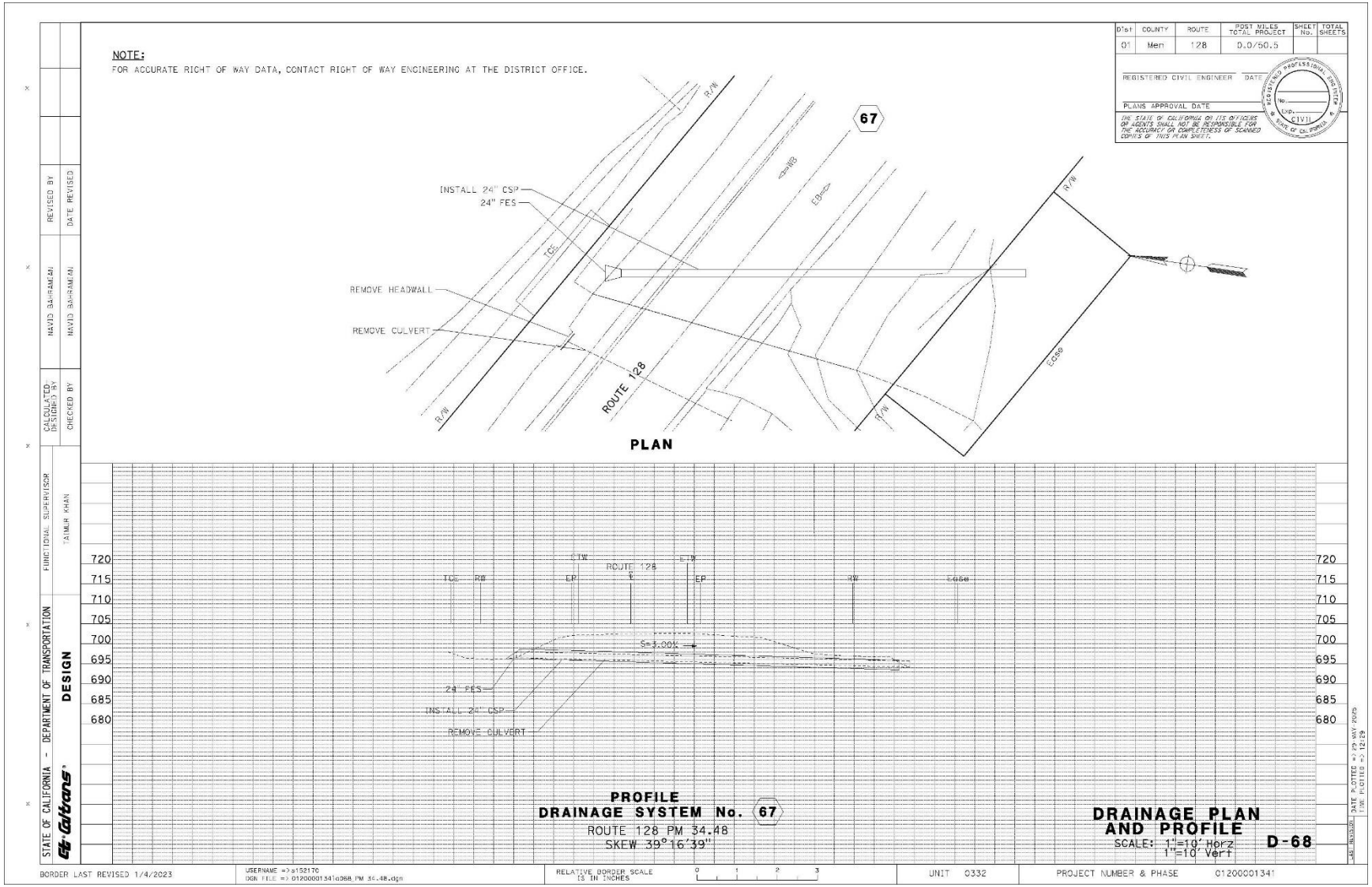

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
62
Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS
01 | Men | 128 | 0.0/50.5
REGISTERED CIVIL ENGINEER DATE
PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.
R/W
EXISTING HEADWALL
CHAIN LINK FENCE
WB
ROUTE 128
PAVE INVERT
3'X3' RCB
FENCE
TOE
PLAN
700
695
690
685
680
675
670
665
660
655
650
645
640
635
630
625
FTW
EP
ROUTE 128
S=20.35%
Fence
PROFILE
DRAINAGE SYSTEM No. 62
ROUTE 128 PM 33.12
SKEW 34°05'39"
DRAINAGE PLAN AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-63
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/DESIGNED BY
DAVID BAHRAMIAN
CHECKED BY
DAVID BAHRAMIAN
REVISED BY
DATE REVISED
BORDER LAST REVISED 1/4/2023
USERNAME => s153170
DGN FILE => 0120000134 1d063_PM 33.12.dgn
RELATIVE BORDER SCALE IS IN INCHES
0 1 2 3
UNIT 0332
PROJECT NUMBER & PHASE 0120000134
DATE PLOTTED => 29 MAY 2025
TIME PLOTTED => 12:28

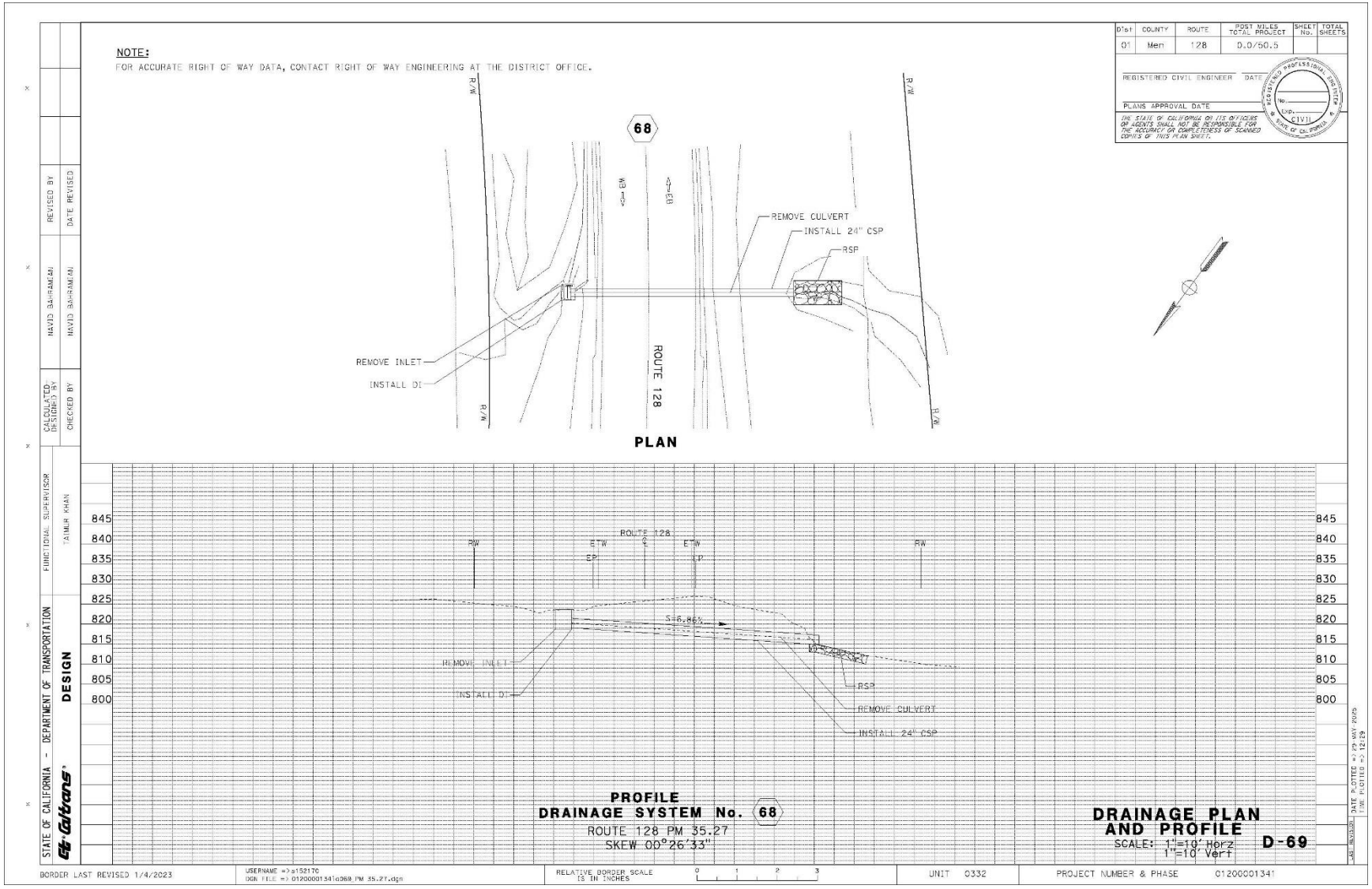

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
63
Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS
01 | Men | 128 | 0.0/50.5
REGISTERED CIVIL ENGINEER DATE
PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.
REGISTERED PROFESSIONAL ENGINEER
No.
EXP. 6/30/25
CIVIL
STATE OF CALIFORNIA
RSP (ROCK DITCH)
REMOVE FES
REMOVE DD
REMOVE INLET
INSTALL DI
REMOVE CULVERT
INSTALL 24" CSP
WB
EB
ROUTE 128
RSP
R/W
PLAN
REMOVE FES
RSP (ROCK DITCH)
REMOVE DOWNDRAIN
REMOVE INLET
INSTALL DI
REMOVE CULVERT
INSTALL 24" CSP
RSP
ROUTE 128
EW
ETW
EP
RW
S=-0.48%
S=-1.38%
755
750
745
740
735
730
725
720
715
710
705
700
695
PROFILE
DRAINAGE SYSTEM No. 63
ROUTE 128 PM 33.29
SKEW 01°03'44"
DRAINAGE PLAN
AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-64
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/DESIGNED BY
CHECKED BY
DAVID BAHRAMIAN
DAVID BAHRAMIAN
REVISED BY
DATE REVISED
BORDER LAST REVISED 1/4/2023
USERNAME =>s153170
DGN FILE => 01200001341d064_PM 33.29.dgn
RELATIVE BORDER SCALE IS IN INCHES
0 1 2 3
UNIT 0332
PROJECT NUMBER & PHASE 01200001341
DATE PLOTTED => 29 MAY 2025
TIME PLOTTED => 12:29

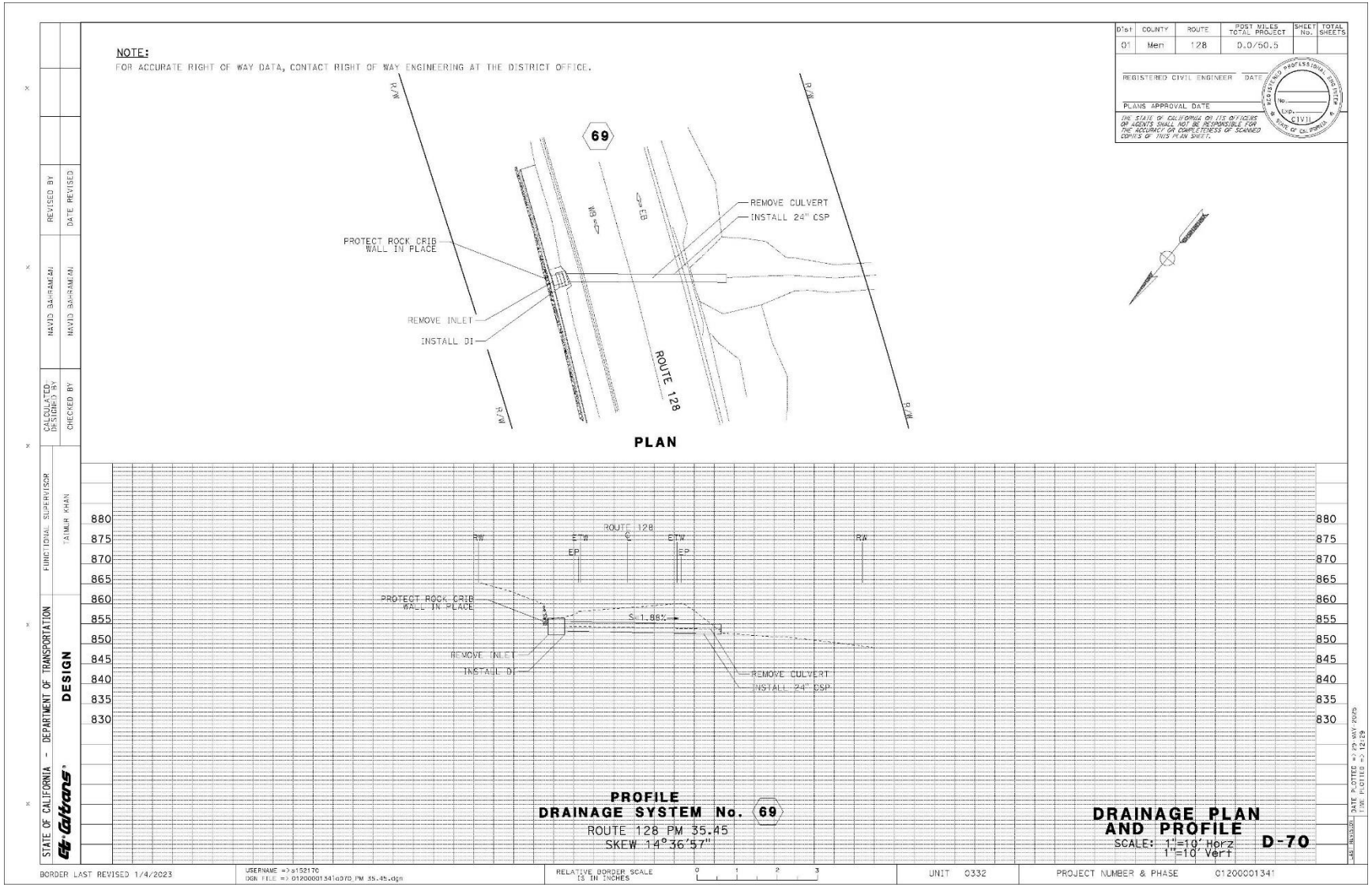

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS
01 | Men | 128 | 0.0/50.5
REGISTERED CIVIL ENGINEER DATE
PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.
64
INSTALL 24" CSP DD
TCE
EASE
RSP
REMOVE HEADWALL
INSTALL HEADWALL
REMOVE CULVERT (15')
INSTALL 24" CSP
ROUTE 128
ABANDON CULVERT
REMOVE CULVERT (10')
R/W
PLAN
EXIST EP
EXIST CL
INSTALL HEADWALL
REMOVE HEADWALL
REMOVE CULVERT (15')
S=9.45%
S=4.98%
ABANDON CULVERT
INSTALL 24" CSP
RE-GRADE
INSTALL 24" CSP DD
RSP
REMOVE CULVERT (10')
PROFILE
DRAINAGE SYSTEM No. 64
ROUTE 128 PM 33.47
SKEW 35°16'49"
DRAINAGE PLAN AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-65
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/DESIGNED BY
DAVID BAHRAMIAN
CHECKED BY
DAVID BAHRAMIAN
REVISED BY
DATE REVISED
BORDER LAST REVISED 1/4/2023
USERNAME => s153170
DGN FILE => 0120000134 1d065_PM 33.47.dgn
RELATIVE BORDER SCALE IS IN INCHES
UNIT 0332
PROJECT NUMBER & PHASE 0120000134

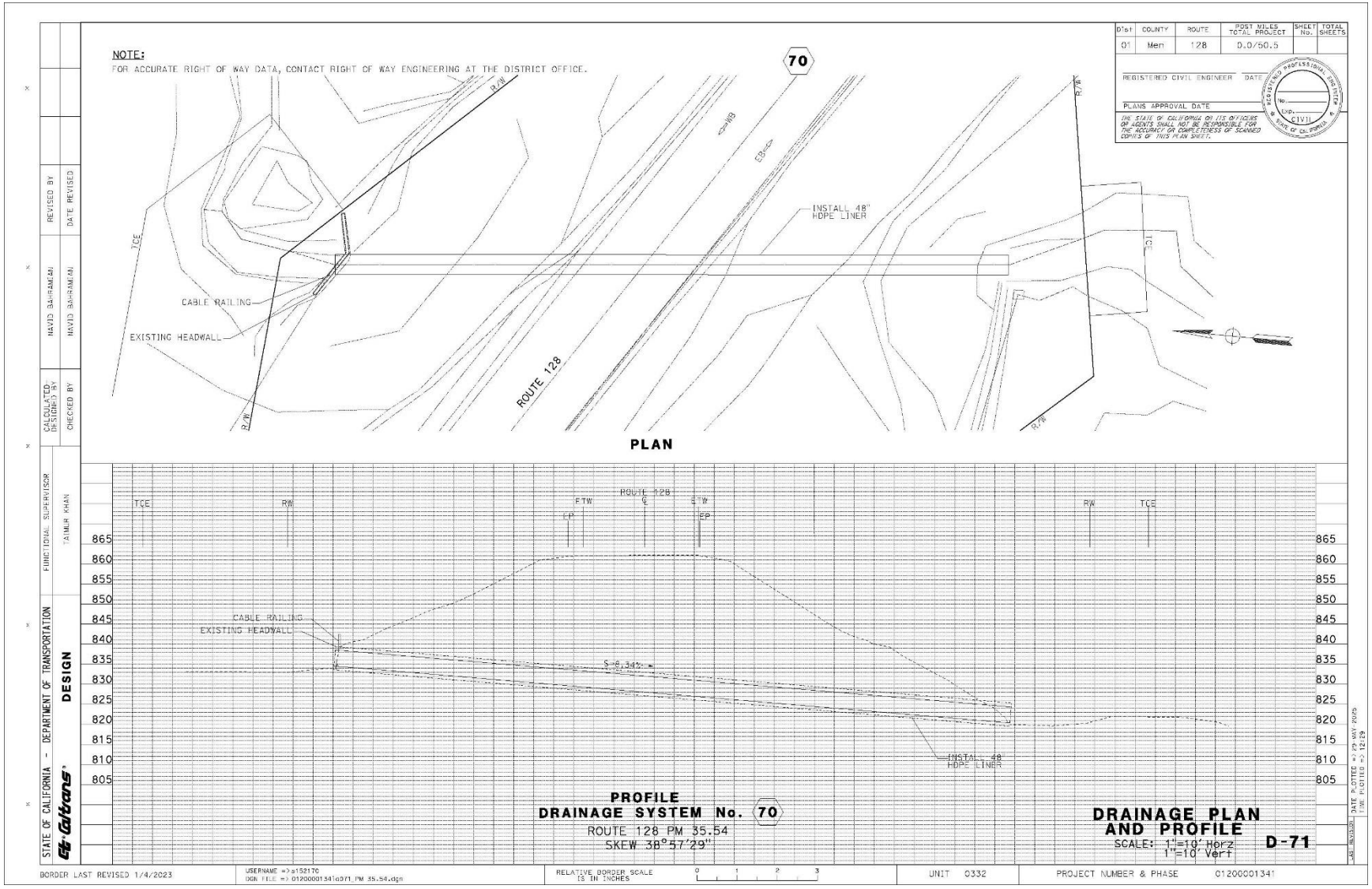

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS
01 | Men | 128 | 0.0/50.5
REGISTERED CIVIL ENGINEER DATE
PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.
REGISTERED PROFESSIONAL ENGINEER
No.
EXP. CIVIL
STATE OF CALIFORNIA
65
REMOVE CULVERT
INSTALL 24" CSP
REMOVE INLET
INSTALL DI
ROUTE 128
R/W
PLAN
ETW
ROUTE 128
RW
S=8.15%
INSTALL DI
REMOVE INLET
INSTALL 24" CSP
REMOVE CULVERT
790
785
780
775
770
765
760
PROFILE
DRAINAGE SYSTEM No. 65
ROUTE 128 PM 33.62
SKEW 42°27'28"
DRAINAGE PLAN AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-66
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/DESIGNED BY
CHECKED BY
DAVID BAHRAMIAN
REVISED BY
DATE REVISED
BORDER LAST REVISED 1/4/2023
USERNAME =>s153170
DGN FILE => 01200001341a066_PM 33.62.dgn
RELATIVE BORDER SCALE IS IN INCHES
0 1 2 3
UNIT 0332
PROJECT NUMBER & PHASE 01200001341
DATE PLOTTED => 29 MAY 2025
TIME PLOTTED => 12:29

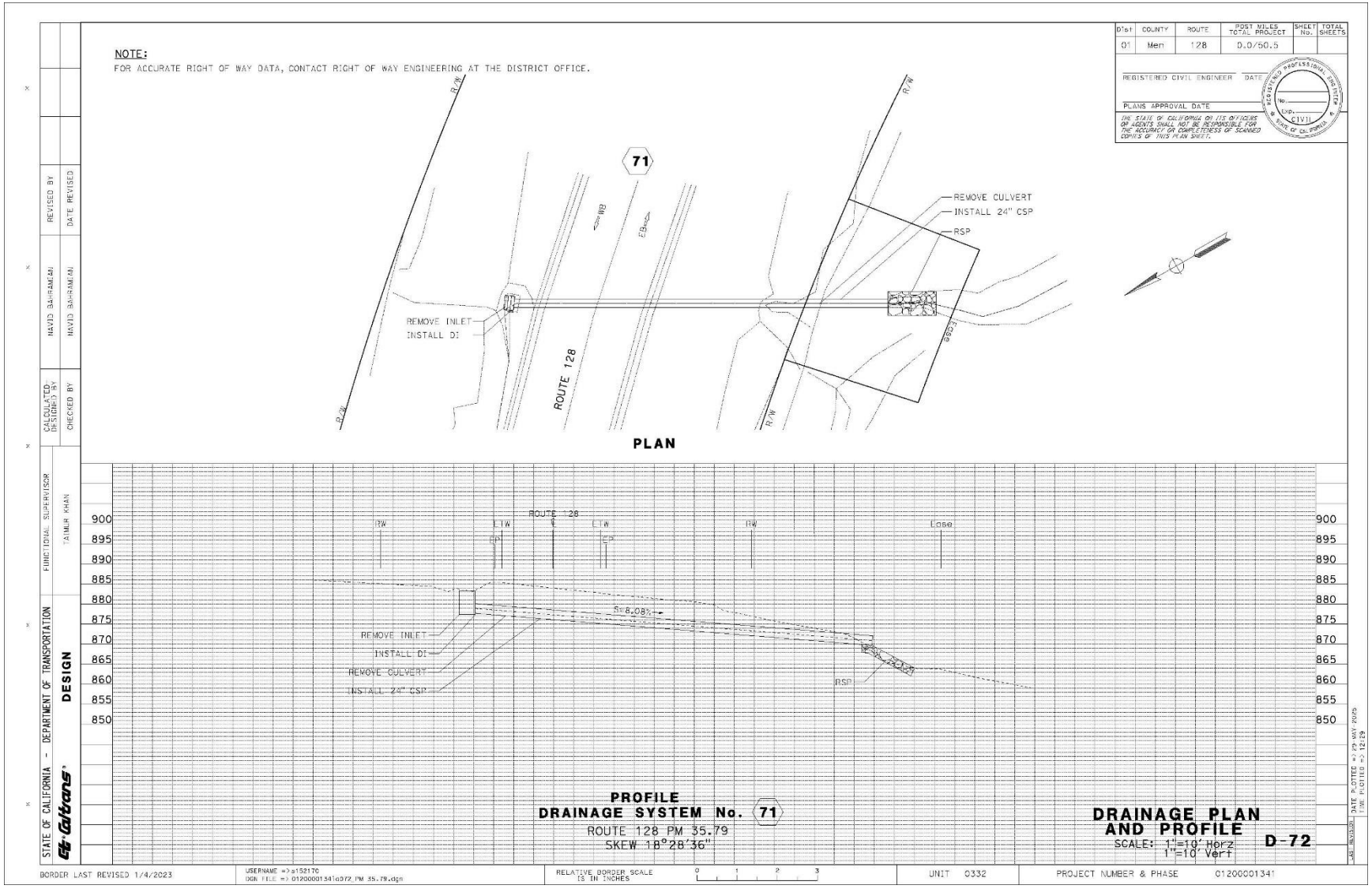

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS
01 | Men | 128 | 0.0/50.5
REGISTERED CIVIL ENGINEER DATE
PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.
REMOVE CULVERT
INSTALL 24" CSP
REMOVE HEADWALL
24" FES
66
EB
ROUTE 128
TCE
PLAN
ETW
EP
RW
S=5.91%
24" FES
REMOVE HEADWALL
INSTALL 24" CSP
REMOVE CULVERT
790
785
780
775
770
765
760
PROFILE
DRAINAGE SYSTEM No. 66
ROUTE 128 PM 33.63
SKEW 07°13'14"
DRAINAGE PLAN AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-67
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/DESIGNED BY
CHECKED BY
DAVID BAHRAMIAN
DAVID BAHRAMIAN
REVISED BY
DATE REVISED
BORDER LAST REVISED 1/4/2023
USERNAME => s153170
DGN FILE => 0120000134 1d067_PM 33.63.dgn
RELATIVE BORDER SCALE IS IN INCHES
0 1 2 3
UNIT 0332
PROJECT NUMBER & PHASE 0120000134

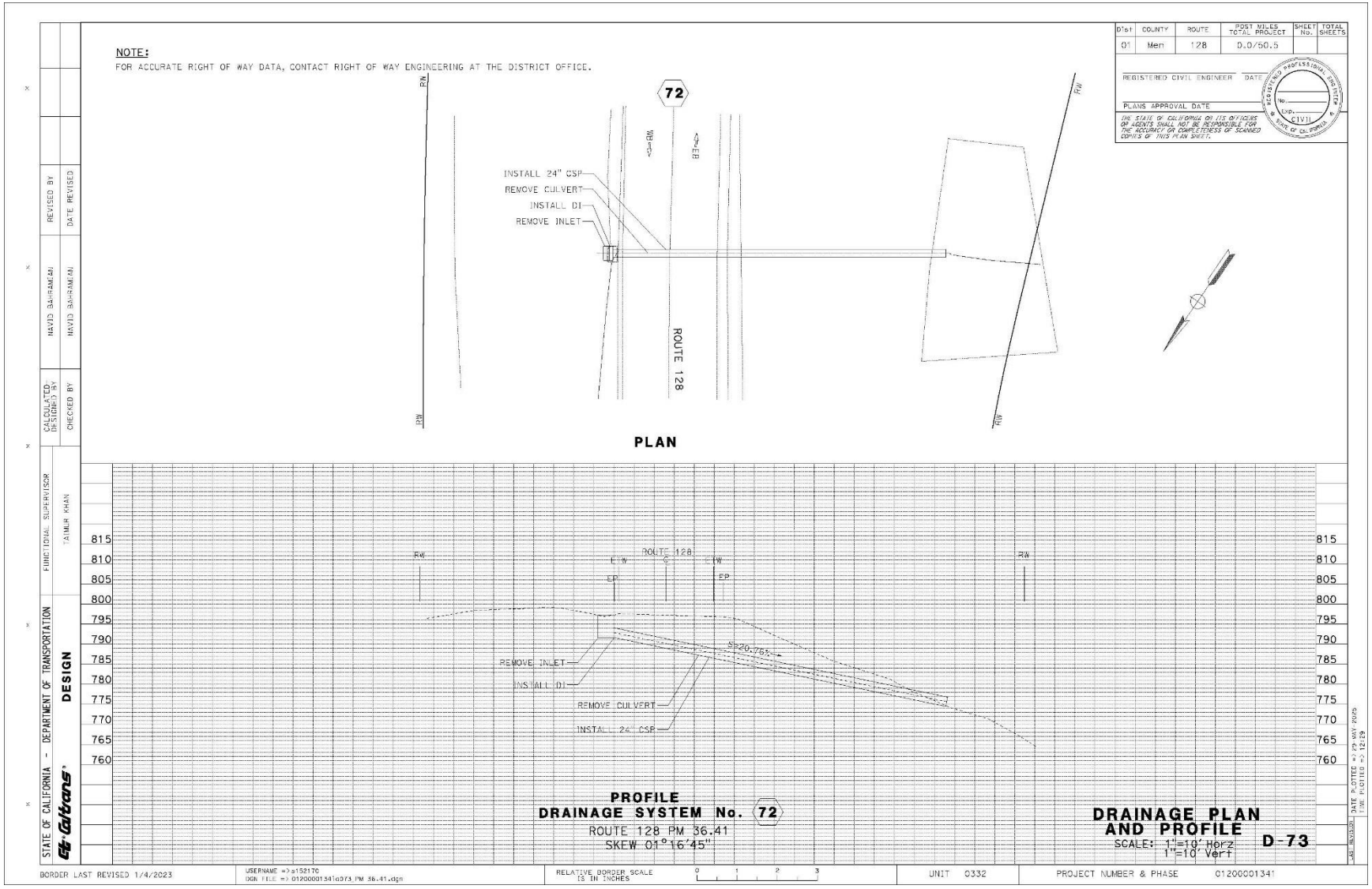

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS
01 | Men | 128 | 0.0/50.5
REGISTERED CIVIL ENGINEER DATE
PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.
67
INSTALL 24" CSP
24" FES
REMOVE HEADWALL
REMOVE CULVERT
ROUTE 128
R/W
EOAS
PLAN
720
715
710
705
700
695
690
685
680
TOE
RW
EP
ROUTE 128
EOAS
Sp=3.00%
24" FES
INSTALL 24" CSP
REMOVE CULVERT
PROFILE
DRAINAGE SYSTEM No. 67
ROUTE 128 PM 34.48
SKEW 39°16'39"
DRAINAGE PLAN AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-68
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/DESIGNED BY
CHECKED BY
DAVID BAHRAMIAN
REVISED BY
DATE REVISED
BORDER LAST REVISED 1/4/2023
USERNAME =>s153170
DGN FILE => 01200001341d068_PM 34.48.dgn
RELATIVE BORDER SCALE IS IN INCHES
0 1 2 3
UNIT 0332
PROJECT NUMBER & PHASE 01200001341

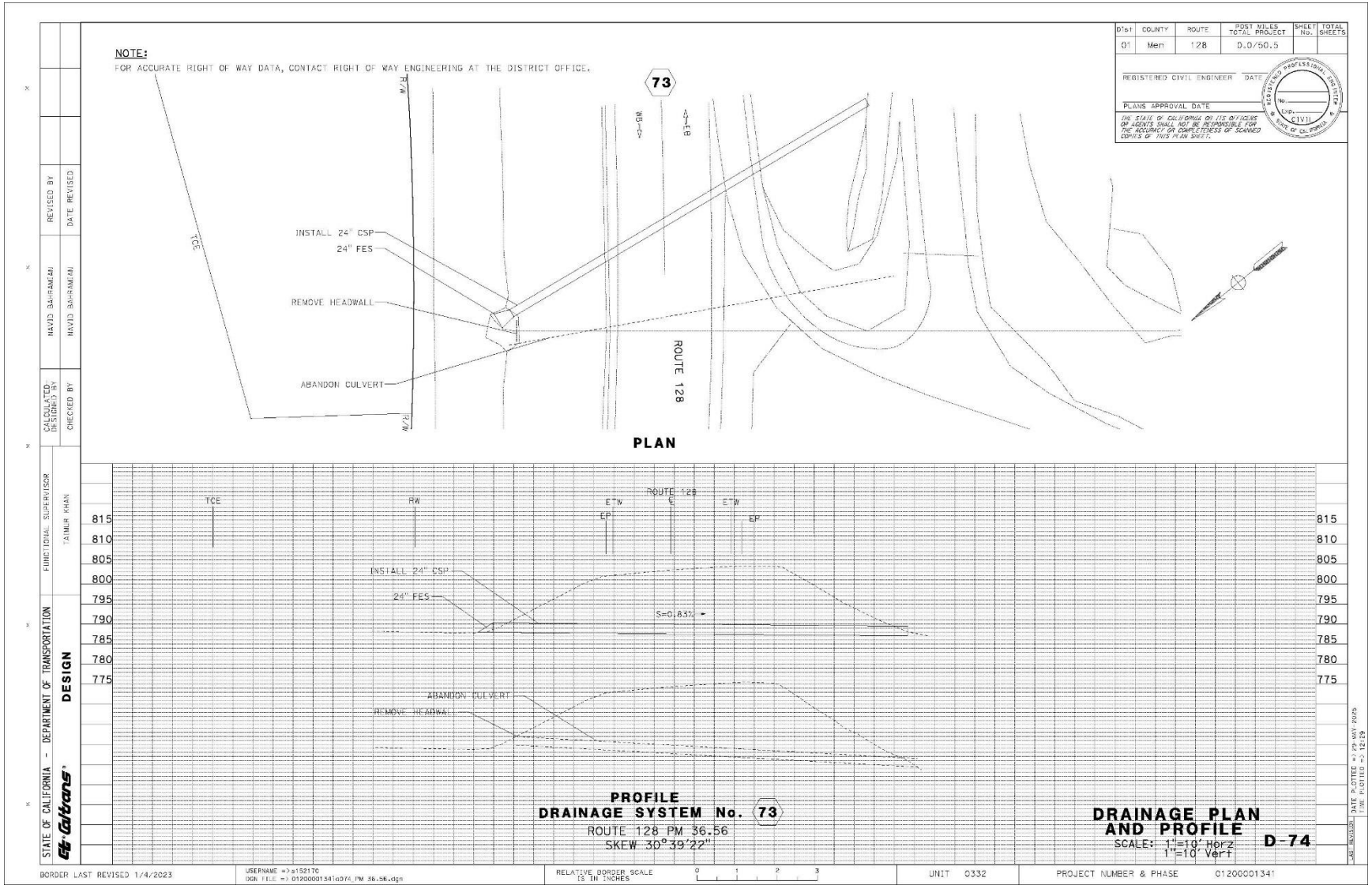

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS
01 | Men | 128 | 0.0/50.5
REGISTERED CIVIL ENGINEER DATE
PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.
68
R/W
REMOVE CULVERT
INSTALL 24" CSP
RSP
REMOVE INLET
INSTALL DI
ROUTE 128
PLAN
845
840
835
830
825
820
815
810
805
800
ROUTE 128
ETW
EP
S=6.86%
REMOVE INLET
INSTALL DI
RSP
REMOVE CULVERT
INSTALL 24" CSP
PROFILE
DRAINAGE SYSTEM No. 68
ROUTE 128 PM 35.27
SKEW 00°26'33"
DRAINAGE PLAN AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-69
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/ DESIGNED BY
DAVID BAHRAMIAN
CHECKED BY
DAVID BAHRAMIAN
REVISED BY
DATE REVISED
BORDER LAST REVISED 1/4/2023
USERNAME =>s153170
DGN FILE => 0120000134 1d069_PM 35.27.dgn
RELATIVE BORDER SCALE IS IN INCHES
0 1 2 3
UNIT 0332
PROJECT NUMBER & PHASE 0120000134 1
DATE PLOTTED => 29 MAY 2025
TIME PLOTTED => 12:29

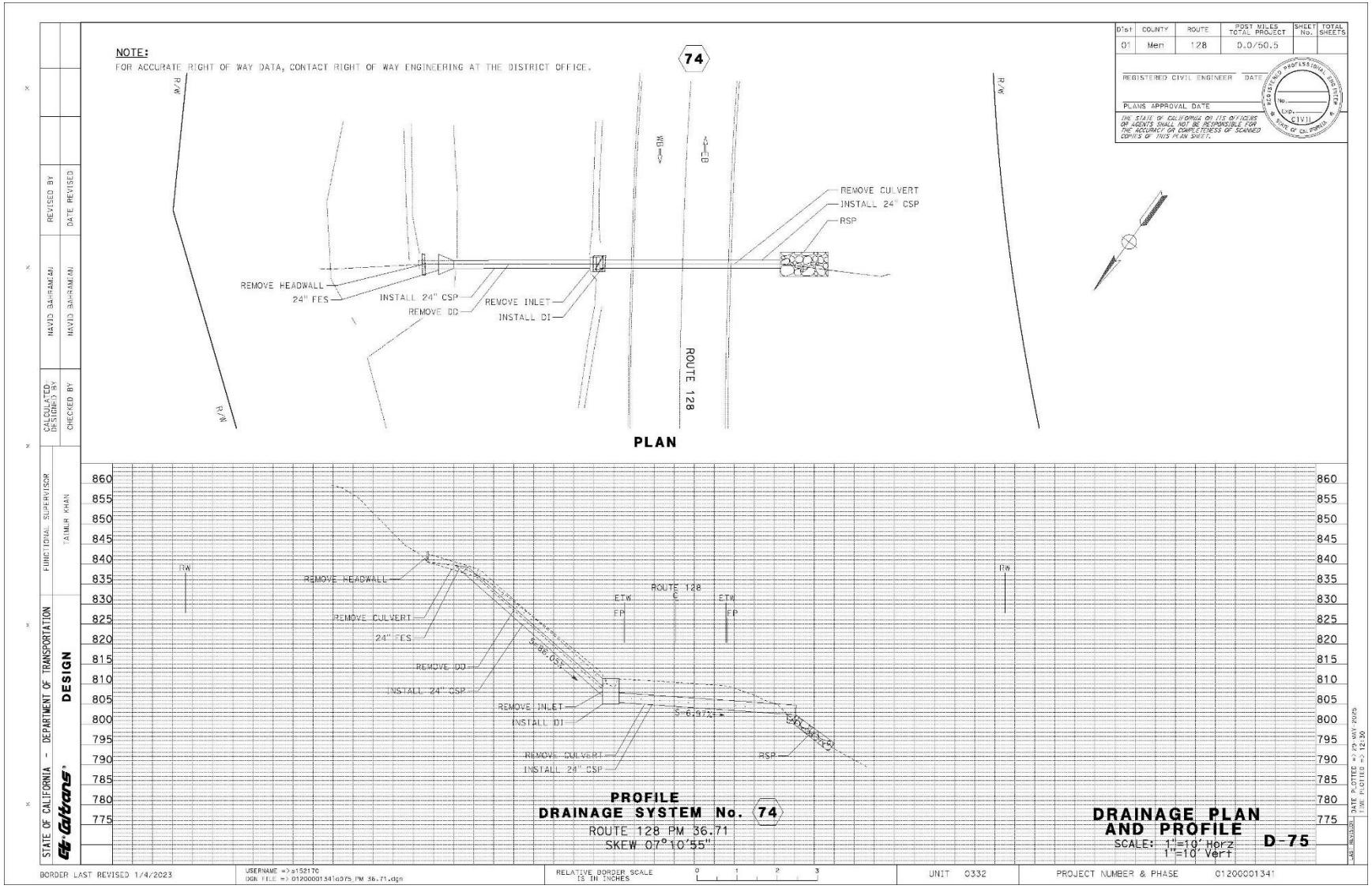

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS
01 | Men | 128 | 0.0/50.5
REGISTERED CIVIL ENGINEER DATE
PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.
69
PROTECT ROCK CRIB WALL IN PLACE
REMOVE INLET
INSTALL DI
REMOVE CULVERT
INSTALL 24" CSP
ROUTE 128
PLAN
PROTECT ROCK CRIB WALL IN PLACE
REMOVE INLET
INSTALL DI
S=1.88%
REMOVE CULVERT
INSTALL 24" CSP
PROFILE
DRAINAGE SYSTEM No. 69
ROUTE 128 PM 35.45
SKEW 14°36'57"
DRAINAGE PLAN AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-70
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/DESIGNED BY
CHECKED BY
DAVID BAHRAMIAN
REVISED BY
DATE REVISED
BORDER LAST REVISED 1/4/2023
USERNAME => s153170
DGN FILE => 01200001341dp70_PM 35.45.dgn
RELATIVE BORDER SCALE IS IN INCHES
UNIT 0332
PROJECT NUMBER & PHASE 01200001341

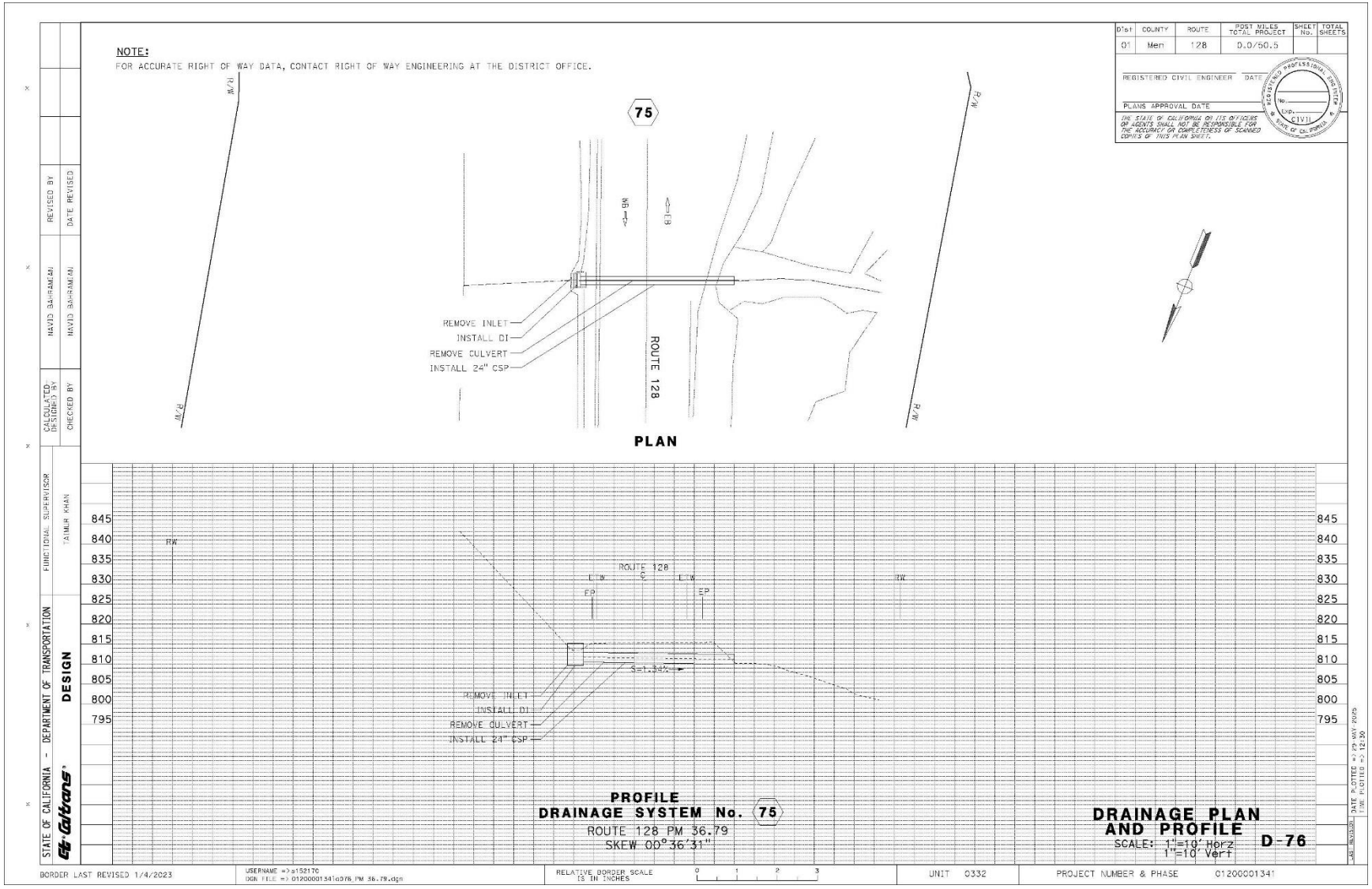

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
70
R/W
CB
INSTALL 48" HDPE LINER
TOE
CABLE RAILING
EXISTING HEADWALL
ROUTE 128
PLAN
TOE
RW
FTW
EP
ROUTE 128
℄
STW
EP
RW
TOE
865
860
855
850
845
840
835
830
825
820
815
810
805
CABLE RAILING
EXISTING HEADWALL
S=6.34%
INSTALL 48" HDPE LINER
PROFILE
DRAINAGE SYSTEM No. 70
ROUTE 128 PM 35.54
SKEW 38°57'29"
DRAINAGE PLAN AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-71
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/DESIGNED BY
HAVID BAHRAMIAN
CHECKED BY
HAVID BAHRAMIAN
REVISED BY
DATE REVISED
Dist
COUNTY
ROUTE
POST MILES TOTAL PROJECT
SHEET No.
TOTAL SHEETS
01
Men
128
0.0/50.5
REGISTERED CIVIL ENGINEER
DATE
PLANS APPROVAL DATE
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.
REGISTERED PROFESSIONAL ENGINEER
No.
EXP.
CIVIL
STATE OF CALIFORNIA
BORDER LAST REVISED 1/4/2023
USERNAME =>s153170
DGN FILE => 01200001341gd71_PM 35.54.dgn
RELATIVE BORDER SCALE IS IN INCHES
0 1 2 3
UNIT 0332
PROJECT NUMBER & PHASE 01200001341
DATE PLOTTED => 29 MAY 2025
TIME PLOTTED => 12:29

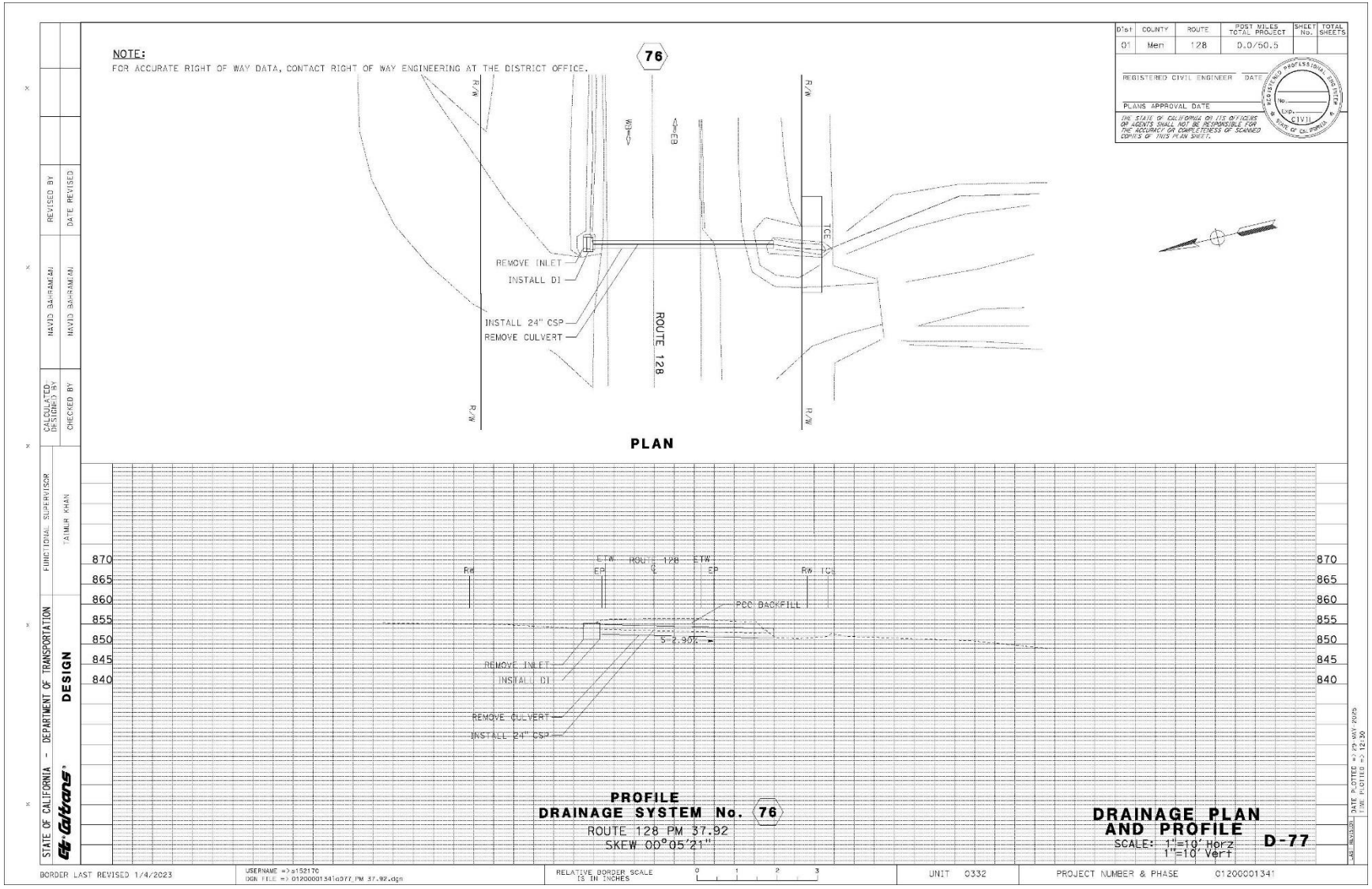

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS
01 | Men | 128 | 0.0/50.5
REGISTERED CIVIL ENGINEER
DATE
PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.
REGISTERED PROFESSIONAL ENGINEER
No.
EXP.
CIVIL
STATE OF CALIFORNIA
71
R/W
BEG
END
REMOVE CULVERT
INSTALL 24" CSP
RSP
REMOVE INLET
INSTALL DI
ROUTE 128
PLAN
900
895
890
885
880
875
870
865
860
855
850
RW
LTW
EP
ROUTE 128
CL
RTW
RW
Case
S=8.08%
REMOVE INLET
INSTALL DI
REMOVE CULVERT
INSTALL 24" CSP
RSP
PROFILE
DRAINAGE SYSTEM No. 71
ROUTE 128 PM 35.79
SKEW 18°28'36"
DRAINAGE PLAN AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-72
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/DESIGNED BY
HAVID BAHRAMIAN
CHECKED BY
HAVID BAHRAMIAN
REVISED BY
DATE REVISED
BORDER LAST REVISED 1/4/2023
USERNAME => s153170
DGN FILE => 01200001341dd72_PM 35.79.dgn
RELATIVE BORDER SCALE IS IN INCHES
0 1 2 3
UNIT 0332
PROJECT NUMBER & PHASE 01200001341
DATE PLOTTED => 29 MAY 2025
TIME PLOTTED => 12:29

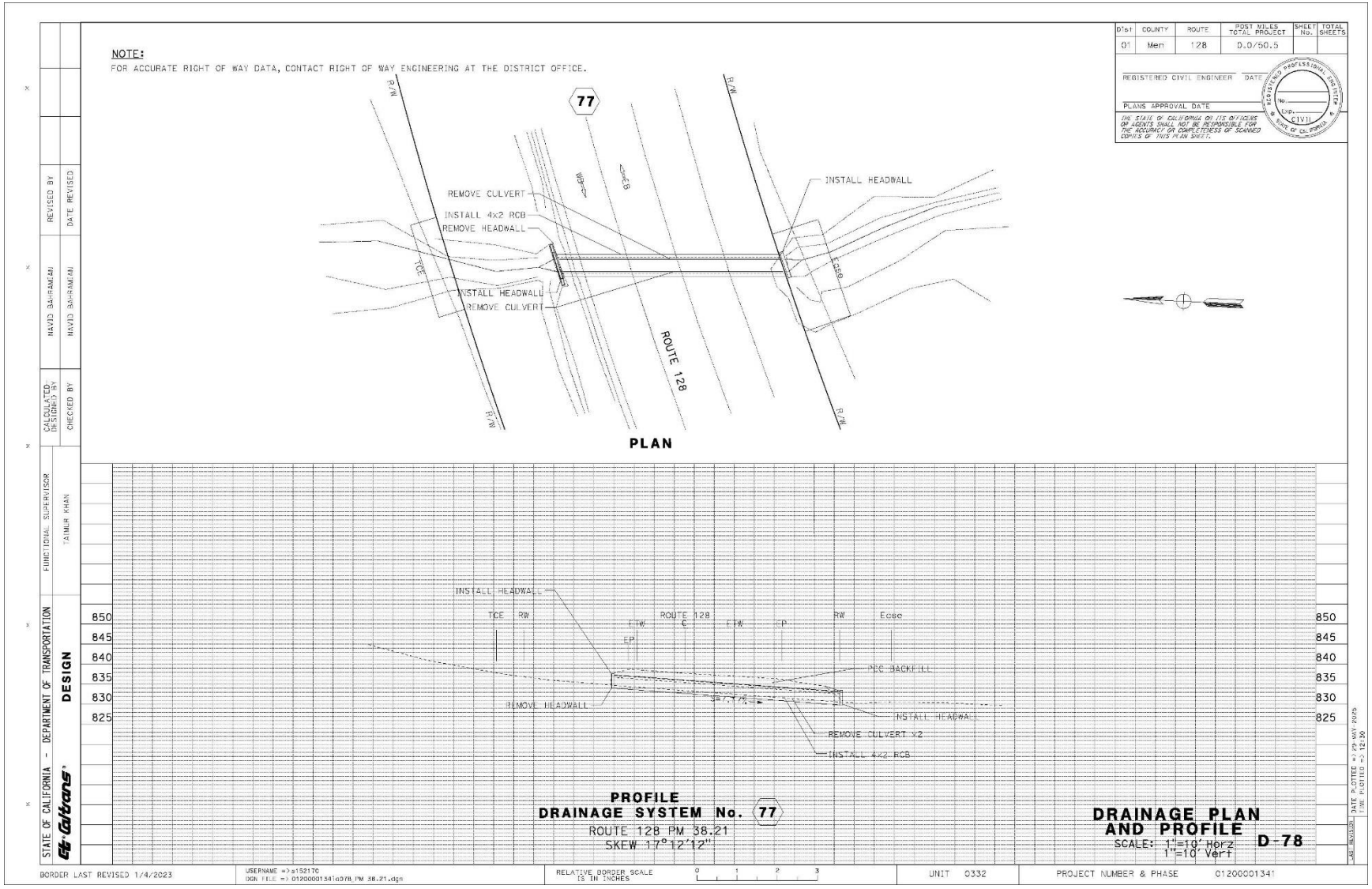

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS
01 | Men | 128 | 0.0/50.5
REGISTERED CIVIL ENGINEER DATE
PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.
72
RW
EB
INSTALL 24" CSP
REMOVE CULVERT
INSTALL DI
REMOVE INLET
ROUTE 128
PLAN
REMOVE INLET
INSTALL DI
REMOVE CULVERT
INSTALL 24" CSP
S=20.76%
PROFILE
DRAINAGE SYSTEM No. 72
ROUTE 128 PM 36.41
SKEW 01°16'45"
DRAINAGE PLAN AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-73
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/DESIGNED BY
CHECKED BY
DAVID BAHRAMIAN
DAVID BAHRAMIAN
REVISED BY
DATE REVISED
BORDER LAST REVISED 1/4/2023
USERNAME => s153170
DGN FILE => 0120000134 1\d073_PM 36.41.dgn
RELATIVE BORDER SCALE IS IN INCHES
UNIT 0332
PROJECT NUMBER & PHASE 0120000134

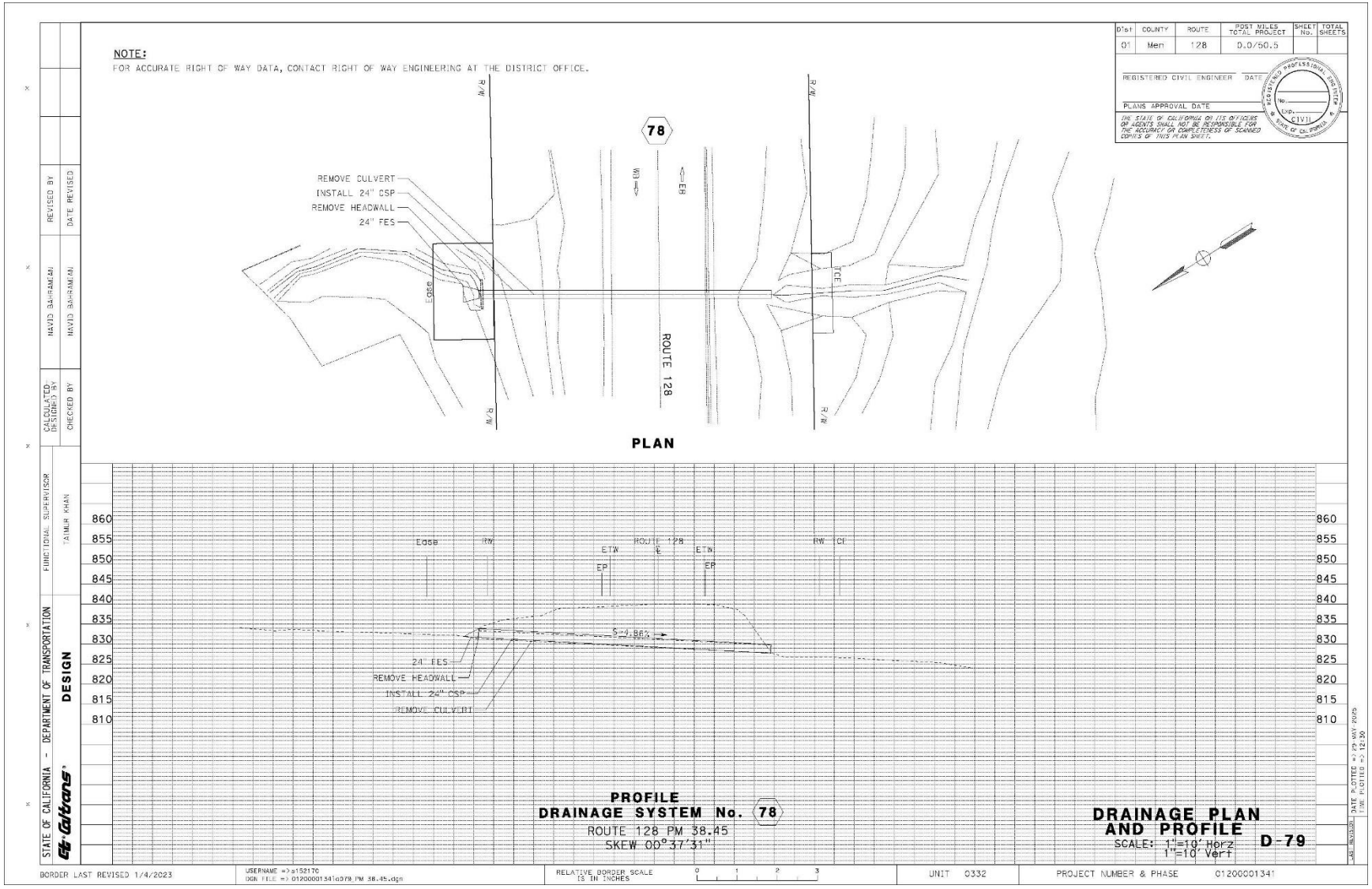

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
73
INSTALL 24" CSP
24" FES
REMOVE HEADWALL
ABANDON CULVERT
ROUTE 128
PLAN
TCE
RW
ROUTE 128
EP
INSTALL 24" CSP
24" FES
S=0.83%
ABANDON CULVERT
REMOVE HEADWALL
815
810
805
800
795
790
785
780
775
PROFILE
DRAINAGE SYSTEM No. 73
ROUTE 128 PM 36.56
SKEW 30°39'22"
DRAINAGE PLAN AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-74
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/DESIGNED BY
CHECKED BY
NAVID BAHRAMIAN
REVISED BY
DATE REVISED
Dist 01 | COUNTY Men | ROUTE 128 | POST MILES TOTAL PROJECT 0.0/50.5 | SHEET No. | TOTAL SHEETS
REGISTERED CIVIL ENGINEER DATE
PLANS APPROVAL DATE
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.
REGISTERED PROFESSIONAL ENGINEER
No.
EXP.
CIVIL
STATE OF CALIFORNIA
BORDER LAST REVISED 1/4/2023
USERNAME =>s153170
DGN FILE =>
RELATIVE BORDER SCALE IS IN INCHES
0 1 2 3
UNIT 0332
PROJECT NUMBER & PHASE 01200001341
DATE PLOTTED =>
TIME PLOTTED =>

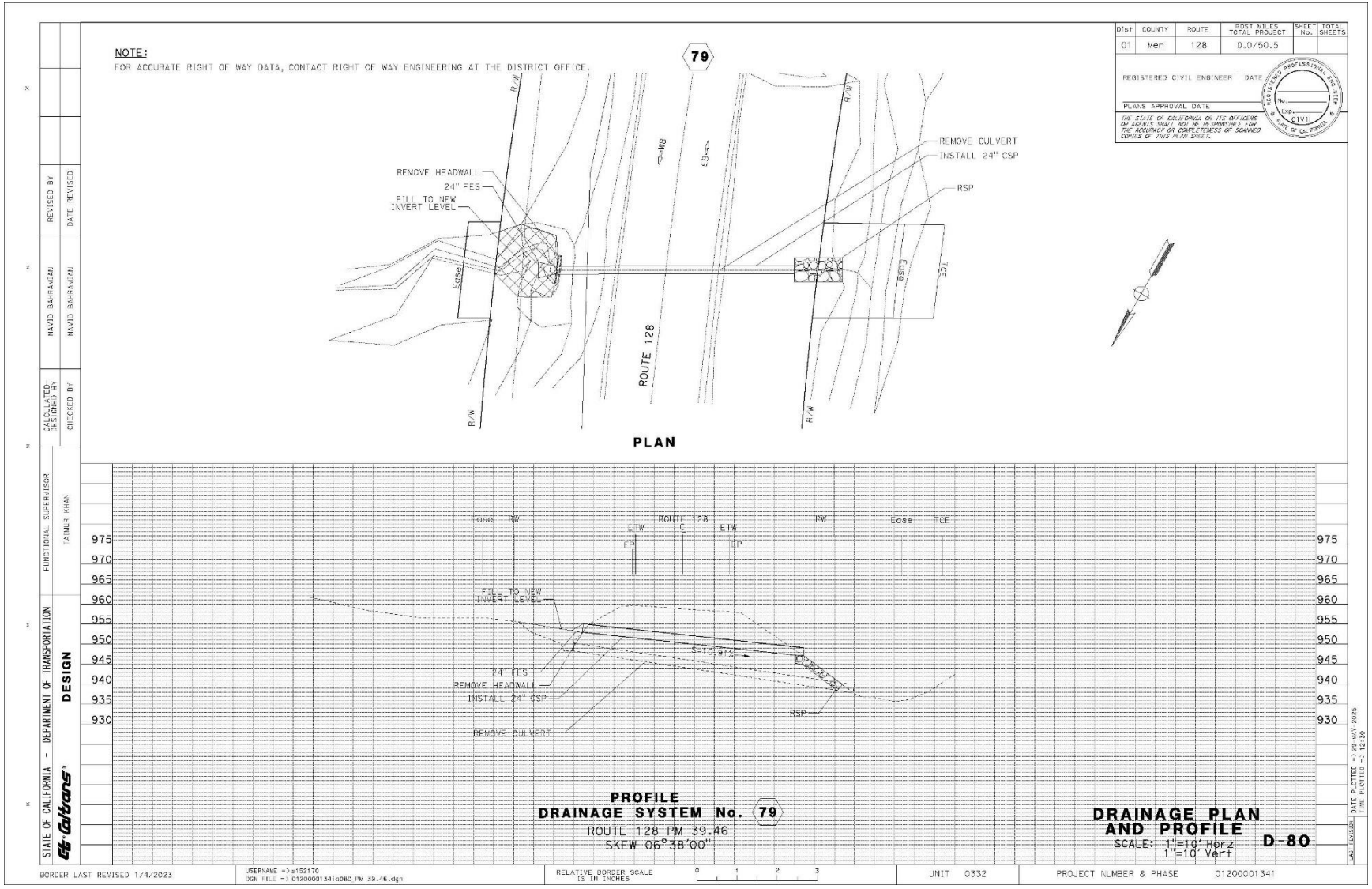

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
74
R/W
REMOVE CULVERT
INSTALL 24" CSP
RSP
REMOVE HEADWALL
24" FES
INSTALL 24" CSP
REMOVE DD
REMOVE INLET
INSTALL DI
ROUTE 128
PLAN
REMOVE HEADWALL
REMOVE CULVERT
24" FES
REMOVE DD
INSTALL 24" CSP
REMOVE INLET
INSTALL DI
REMOVE CULVERT
INSTALL 24" CSP
RSP
ROUTE 128
ETW
EP
PROFILE
DRAINAGE SYSTEM No. 74
ROUTE 128 PM 36.71
SKEW 07°10'55"
DRAINAGE PLAN
AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-75
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/DESIGNED BY
CHECKED BY
DAVID BAHRAMIAN
REVISED BY
DATE REVISED
DIST
COUNTY
ROUTE
POST MILES TOTAL PROJECT
SHEET No.
TOTAL SHEETS
01
Men
128
0.0/50.5
REGISTERED CIVIL ENGINEER
DATE
PLANS APPROVAL DATE
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.
BORDER LAST REVISED 1/4/2023
USERNAME =>s153170
DGN FILE =>
RELATIVE BORDER SCALE IS IN INCHES
UNIT 0332
PROJECT NUMBER & PHASE 01200001341

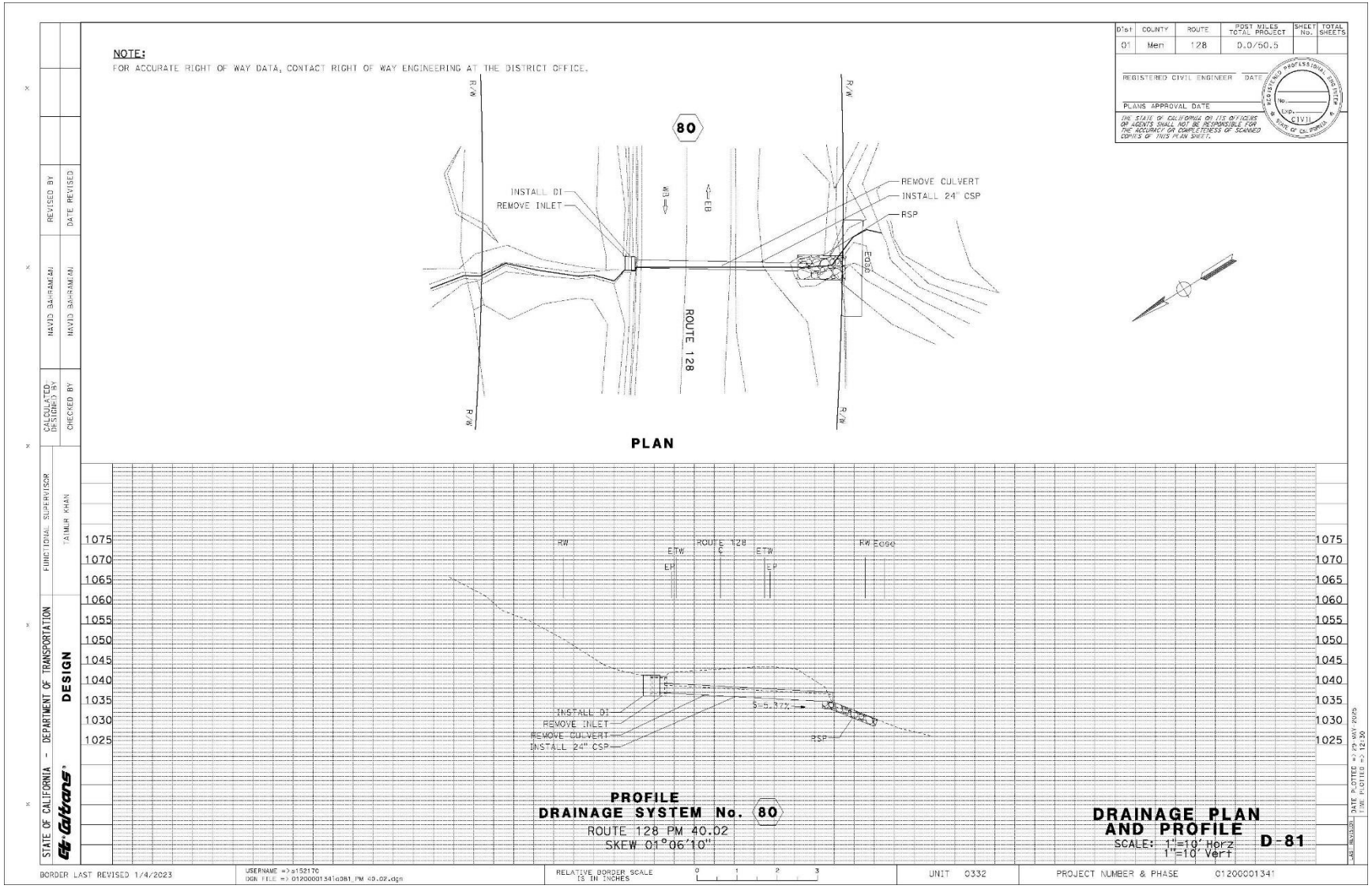

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS
01 | Men | 128 | 0.0/50.5
REGISTERED CIVIL ENGINEER DATE
PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.
75
REMOVE INLET
INSTALL DI
REMOVE CULVERT
INSTALL 24" CSP
ROUTE 128
PLAN
ROUTE 128
REMOVE INLET
INSTALL DI
REMOVE CULVERT
INSTALL 24" CSP
PROFILE
DRAINAGE SYSTEM No. 75
ROUTE 128 PM 36.79
SKEW 00°36'31"
DRAINAGE PLAN AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-76
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/DESIGNED BY
DAVID BAHRAMIAN
CHECKED BY
DAVID BAHRAMIAN
REVISED BY
DATE REVISED
BORDER LAST REVISED 1/4/2023
USERNAME =>s153170
DGN FILE => 01200001341dd76_PM 36.79.dgn
RELATIVE BORDER SCALE IS IN INCHES
UNIT 0332
PROJECT NUMBER & PHASE 01200001341

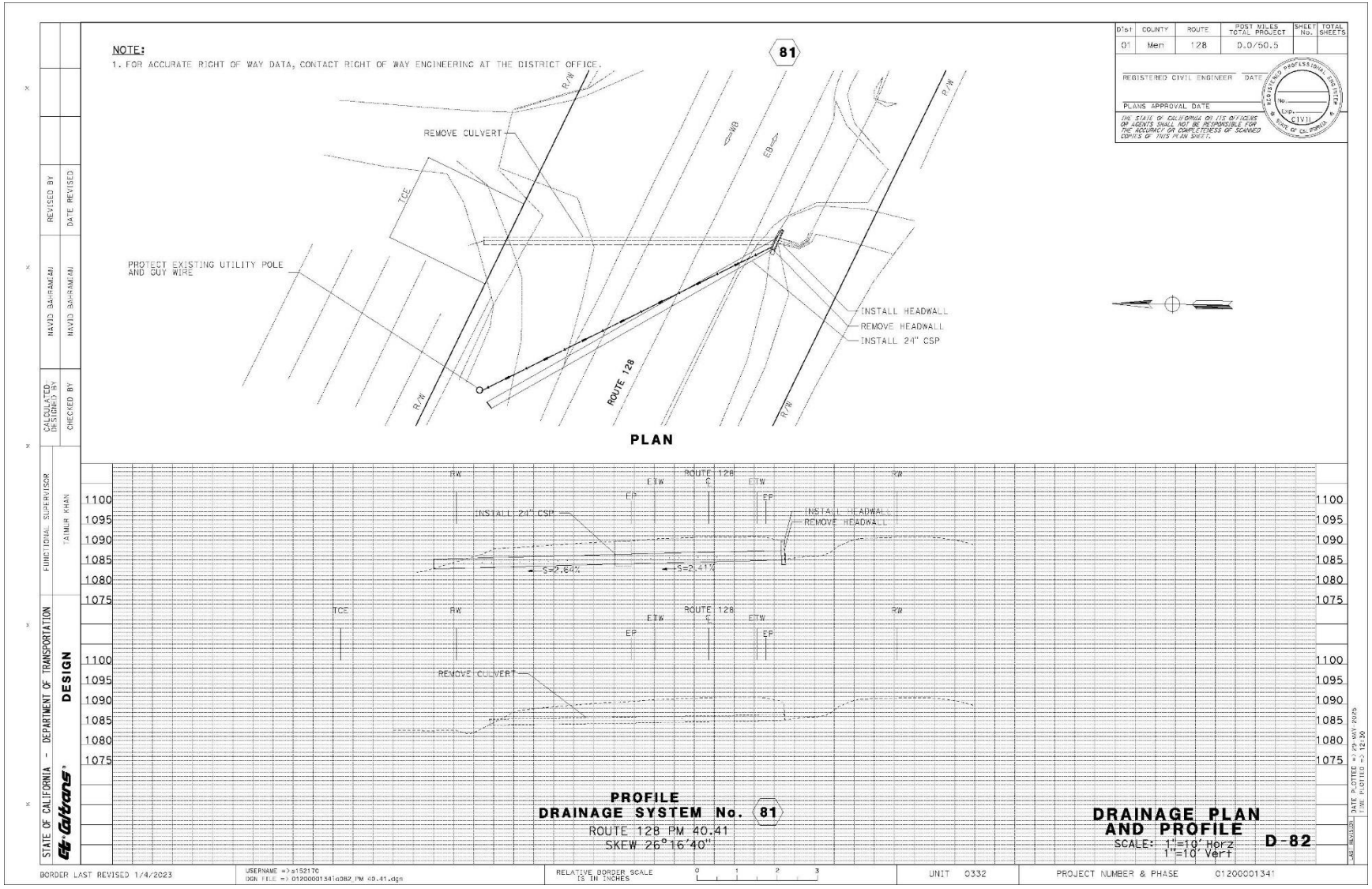

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
76
Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS
01 | Men | 128 | 0.0/50.5
REGISTERED CIVIL ENGINEER DATE
PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.
REGISTERED PROFESSIONAL ENGINEER
No.
EXP.
CIVIL
STATE OF CALIFORNIA
R/W
CL
EP
REMOVE INLET
INSTALL DI
INSTALL 24" CSP
REMOVE CULVERT
ROUTE 128
TCE
PLAN
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/DESIGNED BY
CHECKED BY
DAVID BAHRAMIAN
REVISED BY
DATE REVISED
ETW
ROUTE 128
RW
PCC BACKFILL
S=2.90%
870
865
860
855
850
845
840
PROFILE
DRAINAGE SYSTEM No. 76
ROUTE 128 PM 37.92
SKEW 00°05'21"
DRAINAGE PLAN AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-77
BORDER LAST REVISED 1/4/2023
USERNAME =>s153170
DGN FILE =>
RELATIVE BORDER SCALE IS IN INCHES
0 1 2 3
UNIT 0332
PROJECT NUMBER & PHASE 01200001341
DATE PLOTTED =>
TIME PLOTTED =>

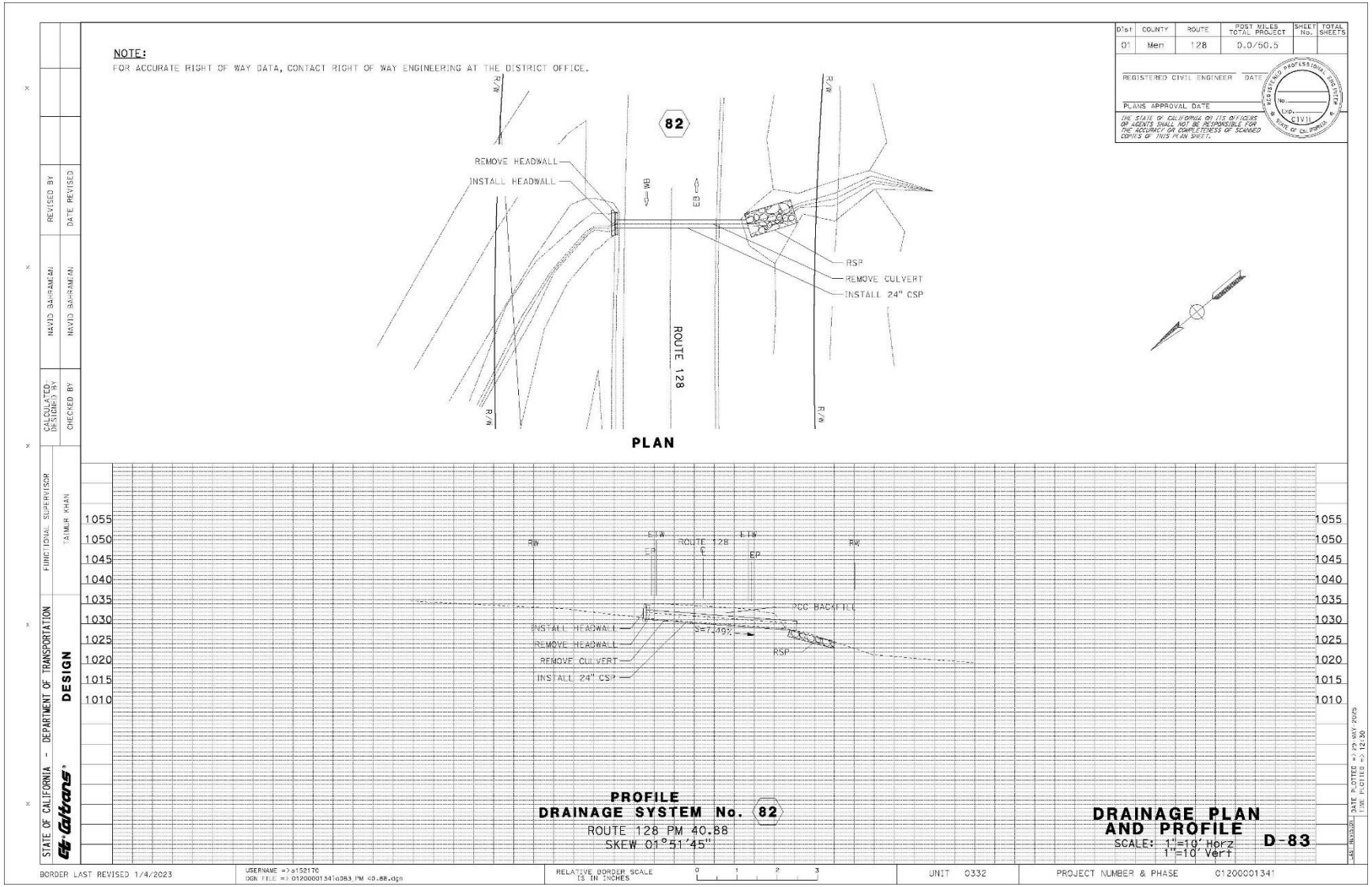

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
77
R/W
REMOVE CULVERT
INSTALL 4x2 RCB
REMOVE HEADWALL
INSTALL HEADWALL
TOE
INSTALL HEADWALL
REMOVE CULVERT
ROUTE 128
PLAN
INSTALL HEADWALL
TOE RW
ROUTE 128
EP
RW
Ease
REMOVE HEADWALL
INSTALL HEADWALL
REMOVE CULVERT X2
INSTALL 4X2 RCB
PROFILE
DRAINAGE SYSTEM No. 77
ROUTE 128 PM 38.21
SKEW 17°12'12"
DRAINAGE PLAN
AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-78
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/DESIGNED BY
HAYID BAHRAMIAN
CHECKED BY
HAYID BAHRAMIAN
REVISED BY
DATE REVISED
Dist
COUNTY
ROUTE
POST MILES TOTAL PROJECT
SHEET No.
TOTAL SHEETS
01
Men
128
0.0/50.5
REGISTERED CIVIL ENGINEER
DATE
PLANS APPROVAL DATE
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.
REGISTERED PROFESSIONAL ENGINEER
No.
EXP.
CIVIL
STATE OF CALIFORNIA
BORDER LAST REVISED 1/4/2023
USERNAME =>s153170
DGN FILE =>
RELATIVE BORDER SCALE IS IN INCHES
UNIT 0332
PROJECT NUMBER & PHASE 01200001341

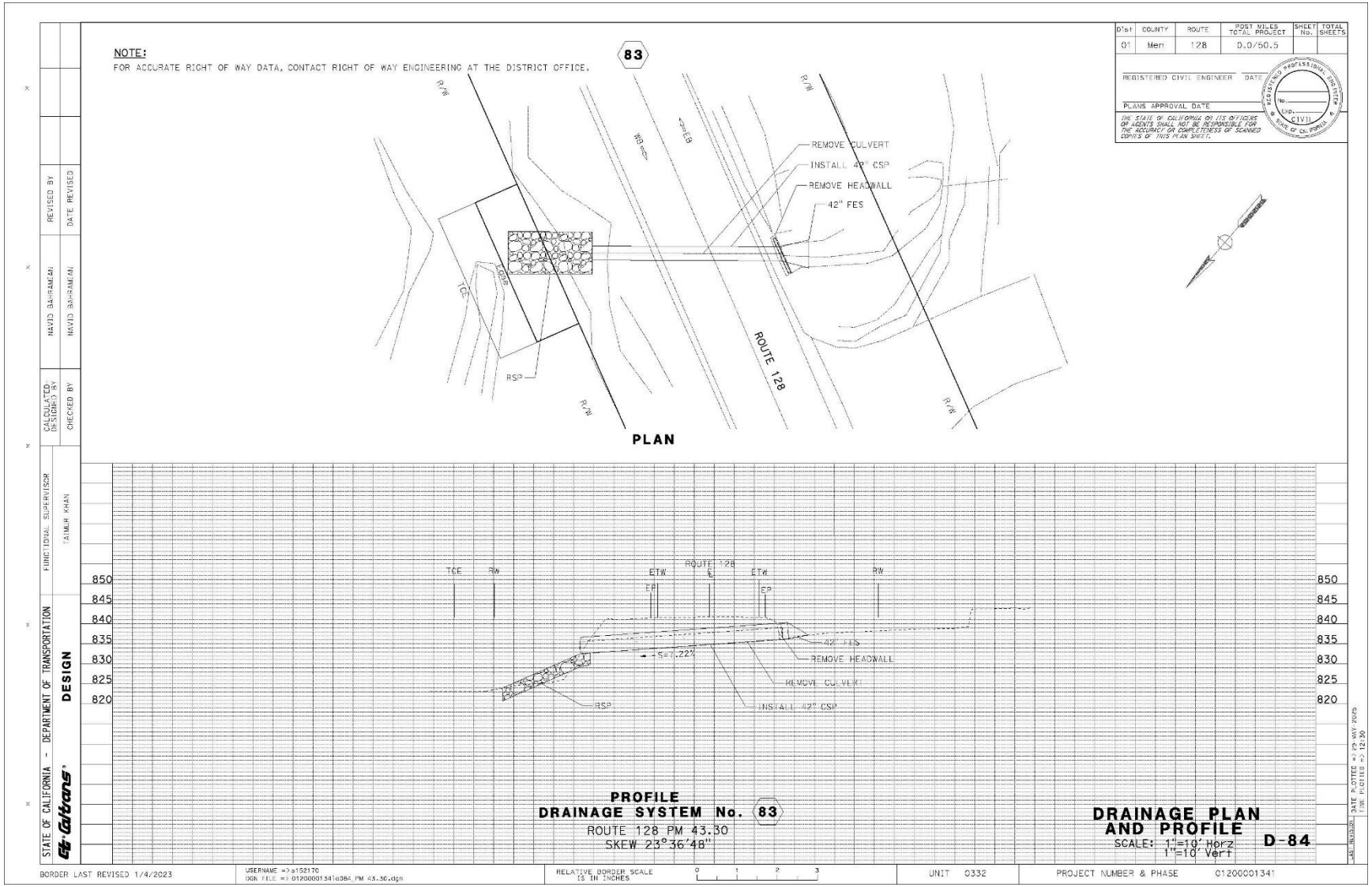

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS
01 | Men | 128 | 0.0/50.5
REGISTERED CIVIL ENGINEER DATE
PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.
78
REMOVE CULVERT
INSTALL 24" CSP
REMOVE HEADWALL
24" FES
ROUTE 128
PLAN
Ease
RW
ETW
EP
ROUTE 128
℄
CL
5=7.86%
24" FES
REMOVE HEADWALL
INSTALL 24" CSP
REMOVE CULVERT
860
855
850
845
840
835
830
825
820
815
810
PROFILE
DRAINAGE SYSTEM No. 78
ROUTE 128 PM 38.45
SKEW 00°37'31"
DRAINAGE PLAN AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-79
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/DESIGNED BY
DAVID BAHRAMIAN
CHECKED BY
DAVID BAHRAMIAN
REVISED BY
DATE REVISED
BORDER LAST REVISED 1/4/2023
USERNAME => s153170
DGN FILE => 01200001341dd79_PM 38.45.dgn
RELATIVE BORDER SCALE IS IN INCHES
0 1 2 3
UNIT 0332
PROJECT NUMBER & PHASE 01200001341
DATE PLOTTED => 29 MAY 2025
TIME PLOTTED => 12:30

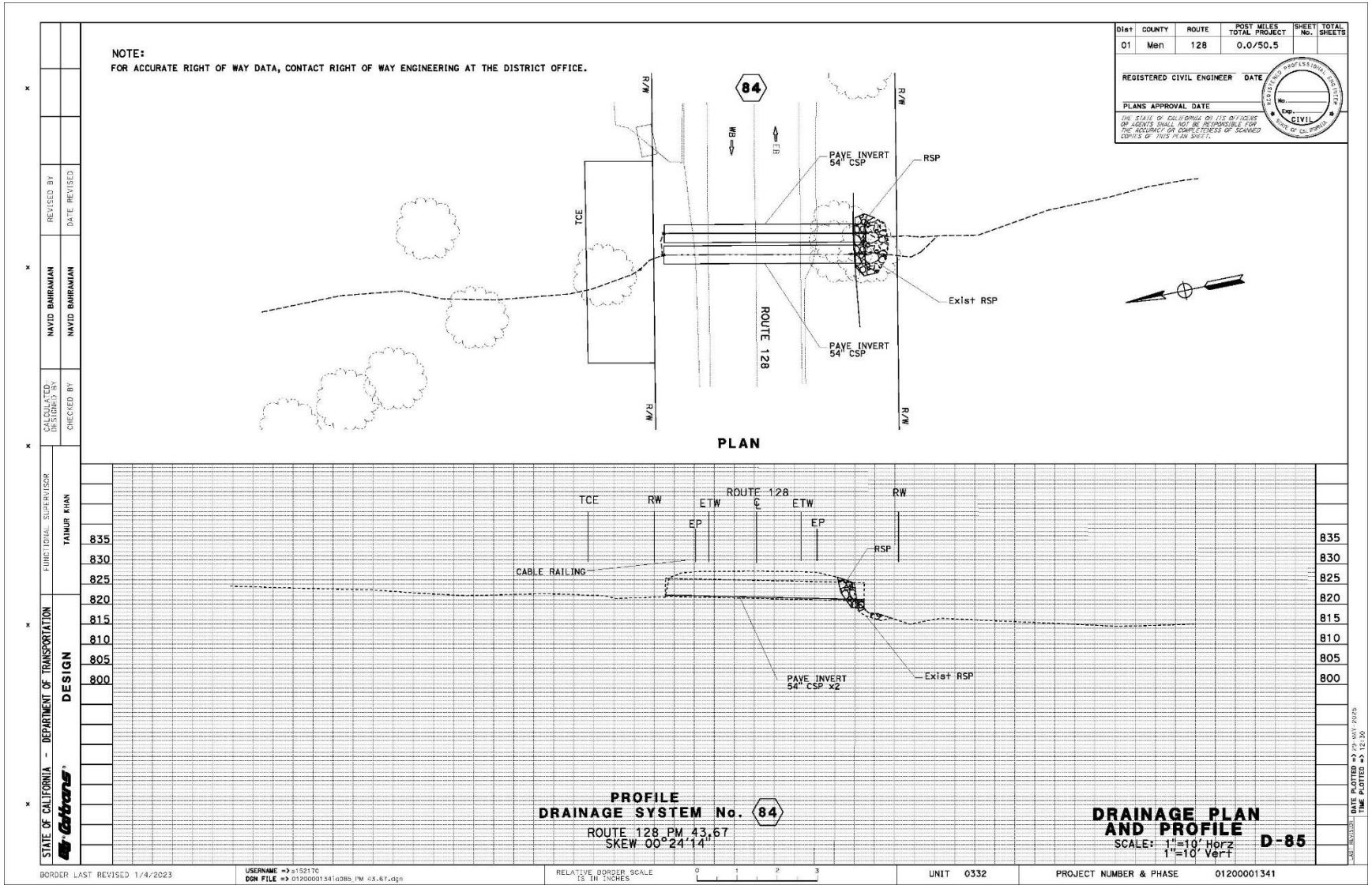

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
79
REMOVE HEADWALL
24" FES
FILL TO NEW INVERT LEVEL
REMOVE CULVERT
INSTALL 24" CSP
RSP
ROUTE 128
R/W
PLAN
PROFILE
DRAINAGE SYSTEM No. 79
ROUTE 128 PM 39.46
SKEW 06°38'00"
DRAINAGE PLAN AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-80
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/DESIGNED BY
DAVID BAHRAMIAN
CHECKED BY
DAVID BAHRAMIAN
REVISED BY
DATE REVISED
BORDER LAST REVISED 1/4/2023
USERNAME => s153170
DGN FILE => 01200001341d080_PM 39.46.dgn
RELATIVE BORDER SCALE IS IN INCHES
UNIT 0332
PROJECT NUMBER & PHASE 01200001341
DIST 01
COUNTY Men
ROUTE 128
POST MILES TOTAL PROJECT 0.0/50.5
SHEET No.
TOTAL SHEETS
REGISTERED CIVIL ENGINEER
DATE
PLANS APPROVAL DATE
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.
REGISTERED PROFESSIONAL ENGINEER
No.
EXP.
CIVIL
STATE OF CALIFORNIA

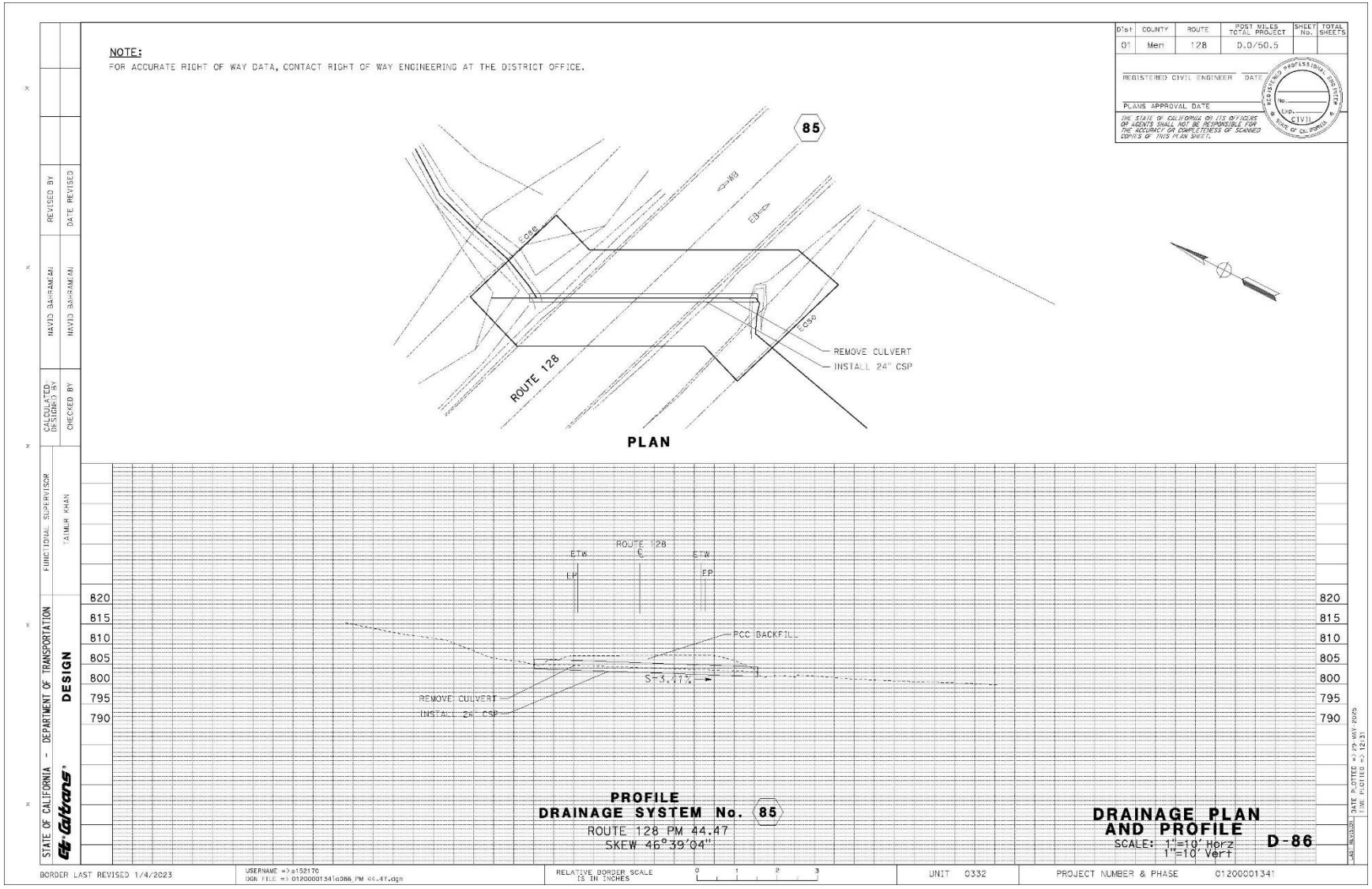

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS
01 | Men | 128 | 0.0/50.5
REGISTERED CIVIL ENGINEER DATE
PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.
80
R/W
INSTALL DI
REMOVE INLET
WB
EB
REMOVE CULVERT
INSTALL 24" CSP
RSP
Edge
ROUTE 128
PLAN
RW
ETW
EP
ROUTE 128
℄
FW Edge
INSTALL DI
REMOVE INLET
REMOVE CULVERT
INSTALL 24" CSP
5=5.37%
RSP
1075
1070
1065
1060
1055
1050
1045
1040
1035
1030
1025
PROFILE
DRAINAGE SYSTEM No. 80
ROUTE 128 PM 40.02
SKEW 01°06'10"
DRAINAGE PLAN AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-81
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/ DESIGNED BY
HAYID BAHRAMIAN
CHECKED BY
HAYID BAHRAMIAN
REVISED BY
DATE REVISED
BORDER LAST REVISED 1/4/2023
USERNAME =>s153170
DGN FILE =>
RELATIVE BORDER SCALE IS IN INCHES
0 1 2 3
UNIT 0332
PROJECT NUMBER & PHASE 01200001341

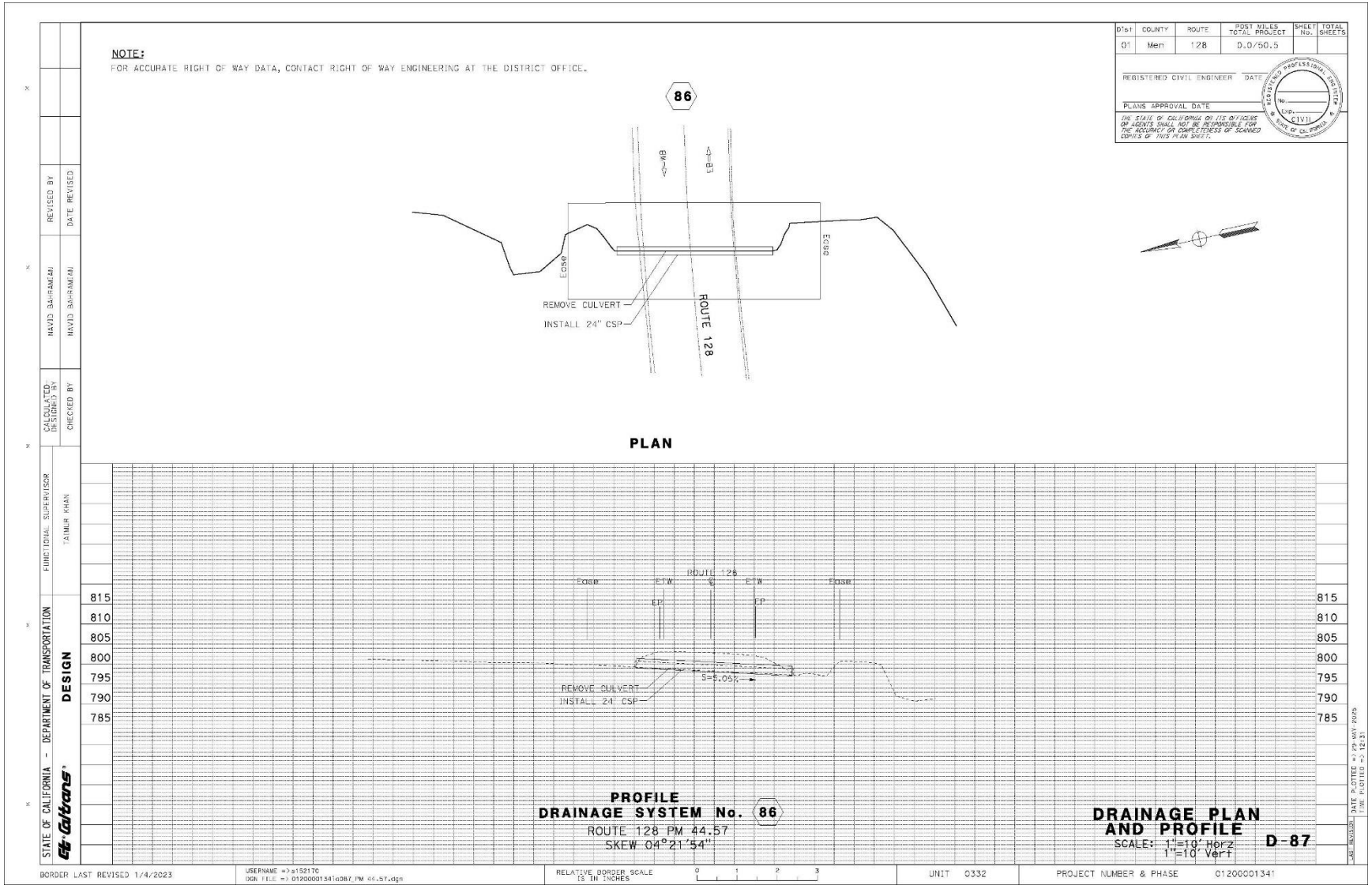

NOTE:
1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
81
REMOVE CULVERT
TCE
PROTECT EXISTING UTILITY POLE AND GUY WIRE
R/W
WB
EB
ROUTE 128
INSTALL HEADWALL
REMOVE HEADWALL
INSTALL 24" CSP
PLAN
RW
ETW
EP
INSTALL 24" CSP
INSTALL HEADWALL
REMOVE HEADWALL
S=2.64%
S=2.41%
1100
1095
1090
1085
1080
1075
PROFILE
DRAINAGE SYSTEM No. 81
ROUTE 128 PM 40.41
SKEW 26°16'40"
DRAINAGE PLAN AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-82
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/DESIGNED BY
DAVID BAHRAMIAN
CHECKED BY
DAVID BAHRAMIAN
REVISED BY
DATE REVISED
REGISTERED CIVIL ENGINEER
DATE
PLANS APPROVAL DATE
CIVIL
DIST
01
COUNTY
Men
ROUTE
128
POST MILES TOTAL PROJECT
0.0/50.5
SHEET No.
TOTAL SHEETS
BORDER LAST REVISED 1/4/2023
USERNAME =>s153170
DGN FILE =>
RELATIVE BORDER SCALE IS IN INCHES
UNIT 0332
PROJECT NUMBER & PHASE 01200001341


NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
82
REMOVE HEADWALL
INSTALL HEADWALL
WB
EB
RSP
REMOVE CULVERT
INSTALL 24" CSP
ROUTE 128
R/W
PLAN
Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS
01 | Men | 128 | 0.0/50.5
REGISTERED CIVIL ENGINEER
DATE
PLANS APPROVAL DATE
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.
REGISTERED PROFESSIONAL ENGINEER
No.
EXP.
CIVIL
STATE OF CALIFORNIA
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/DESIGNED BY
CHECKED BY
DAVID BAHRAMIAN
DAVID BAHRAMIAN
REVISED BY
DATE REVISED
1055
1050
1045
1040
1035
1030
1025
1020
1015
1010
RW
EIW
ROUTE 128
℄
EP
PCC BACKFILL
S=7.49%
INSTALL HEADWALL
REMOVE HEADWALL
REMOVE CULVERT
INSTALL 24" CSP
RSP
PROFILE
DRAINAGE SYSTEM No. 82
ROUTE 128 PM 40.88
SKEW 01°51'45"
DRAINAGE PLAN AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-83
BORDER LAST REVISED 1/4/2023
USERNAME =>s153170
DGN FILE => 01200001341dd83_PM 40.88.dgn
RELATIVE BORDER SCALE IS IN INCHES
0 1 2 3
UNIT 0332
PROJECT NUMBER & PHASE 01200001341
DATE PLOTTED => 29 MAY 2025
TIME PLOTTED => 12:30

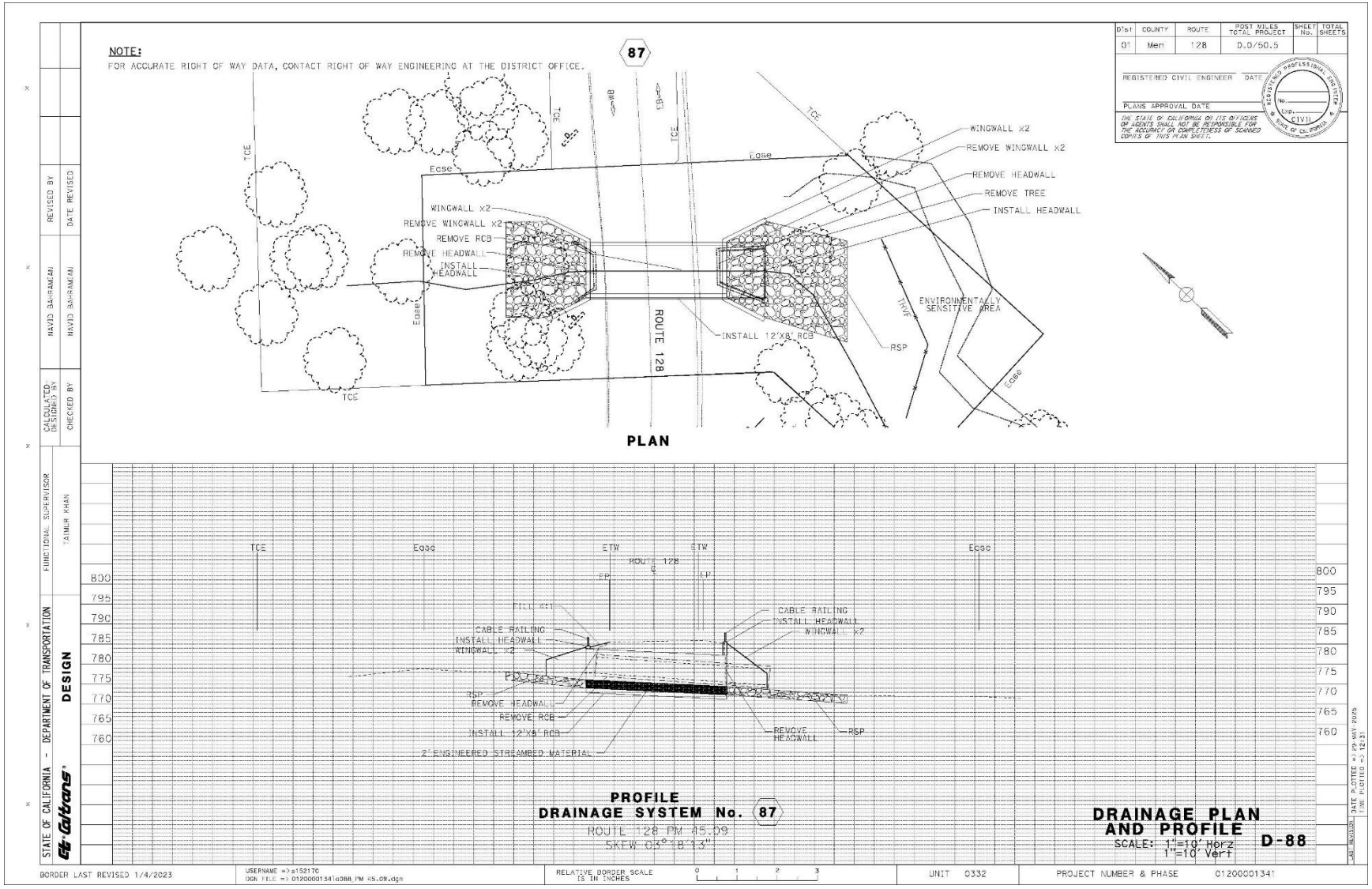

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
83
REMOVE CULVERT
INSTALL 42" CSP
REMOVE HEADWALL
42" FES
ROUTE 128
R/W
WB
EB
TCE
EDGE
RSP
PLAN
PROFILE
DRAINAGE SYSTEM No. 83
ROUTE 128 PM 43.30
SKEW 23°36'48"
TCE
RW
ETW
ROUTE 128
℄
EP
S=-.22'
42" FES
REMOVE HEADWALL
REMOVE CULVERT
INSTALL 42" CSP
RSP
850
845
840
835
830
825
820
DRAINAGE PLAN
AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-84
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/DESIGNED BY
DAVID BAHRAMIAN
CHECKED BY
DAVID BAHRAMIAN
REVISED BY
DATE REVISED
Dist
COUNTY
ROUTE
POST MILES TOTAL PROJECT
SHEET No.
TOTAL SHEETS
01
Men
128
0.0/50.5
REGISTERED CIVIL ENGINEER
DATE
PLANS APPROVAL DATE
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.
REGISTERED PROFESSIONAL ENGINEER
No.
EXP.
CIVIL
STATE OF CALIFORNIA
BORDER LAST REVISED 1/4/2023
USERNAME =>a158170
DGN FILE =>
RELATIVE BORDER SCALE IS IN INCHES
0 1 2 3
UNIT 0332
PROJECT NUMBER & PHASE 01200001341
DATE PLOTTED =>
TIME PLOTTED =>

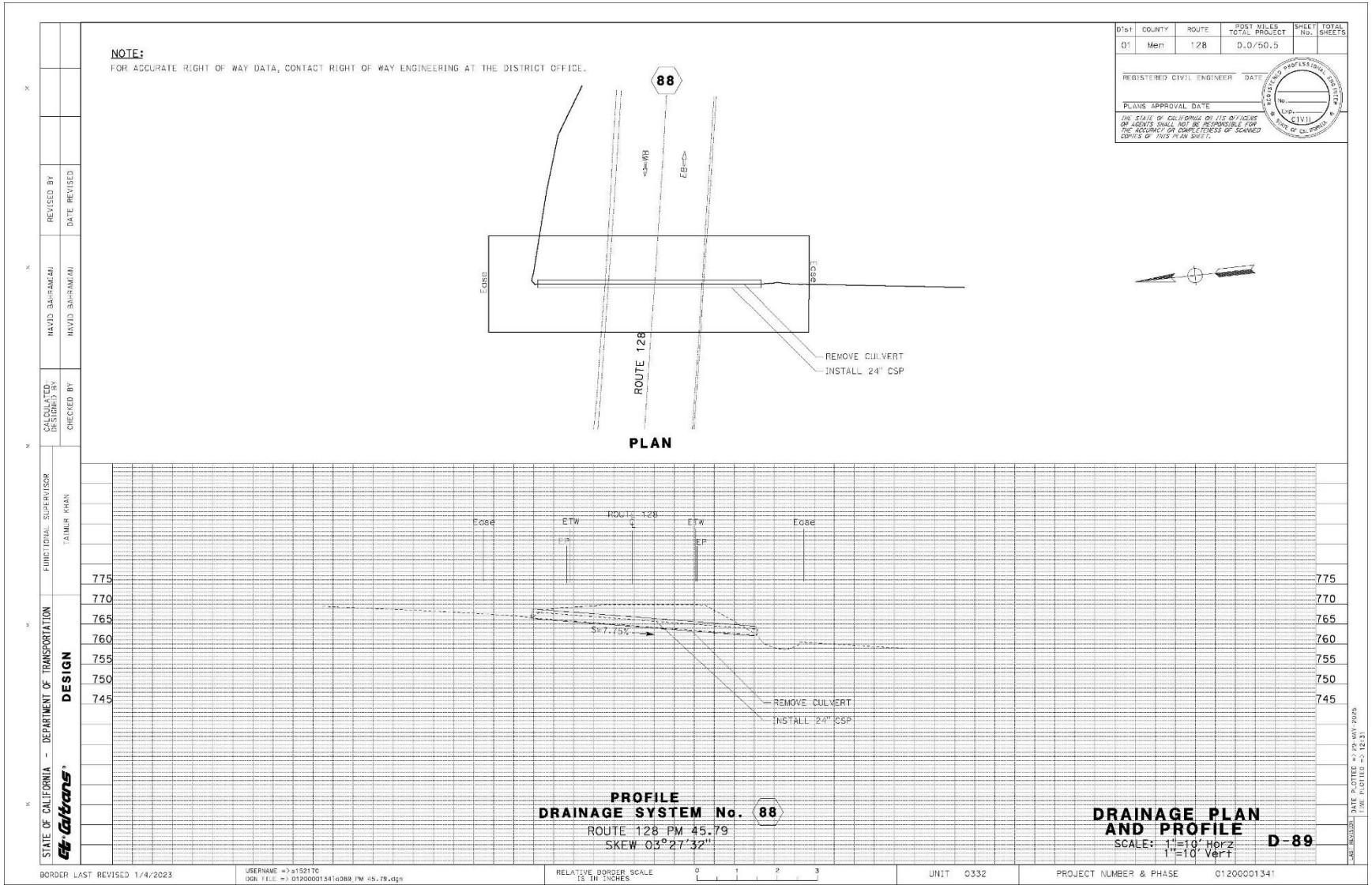

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS
01 | Men | 128 | 0.0/50.5
REGISTERED CIVIL ENGINEER DATE
PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.
84
R/W
WB
EB
PAVE INVERT 54" CSP
RSP
TCE
Exist RSP
ROUTE 128
PAVE INVERT 54" CSP
PLAN
TCE
RW
ETW
℄
EP
ROUTE 128
CABLE RAILING
PAVE INVERT 54" CSP x2
835
830
825
820
815
810
805
800
PROFILE
DRAINAGE SYSTEM No. 84
ROUTE 128 PM 43.67
SKEW 00°24'14"
DRAINAGE PLAN AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-85
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/DESIGNED BY
NAVID BAHRAMIAN
CHECKED BY
NAVID BAHRAMIAN
REVISED BY
DATE REVISED
BORDER LAST REVISED 1/4/2023
USERNAME => s153170
DGN FILE => 01200001341gd85_PM 43.67.dgn
RELATIVE BORDER SCALE IS IN INCHES
0 1 2 3
UNIT 0332
PROJECT NUMBER & PHASE 01200001341
DATE PLOTTED => 29 MAY 2025
TIME PLOTTED => 12:30

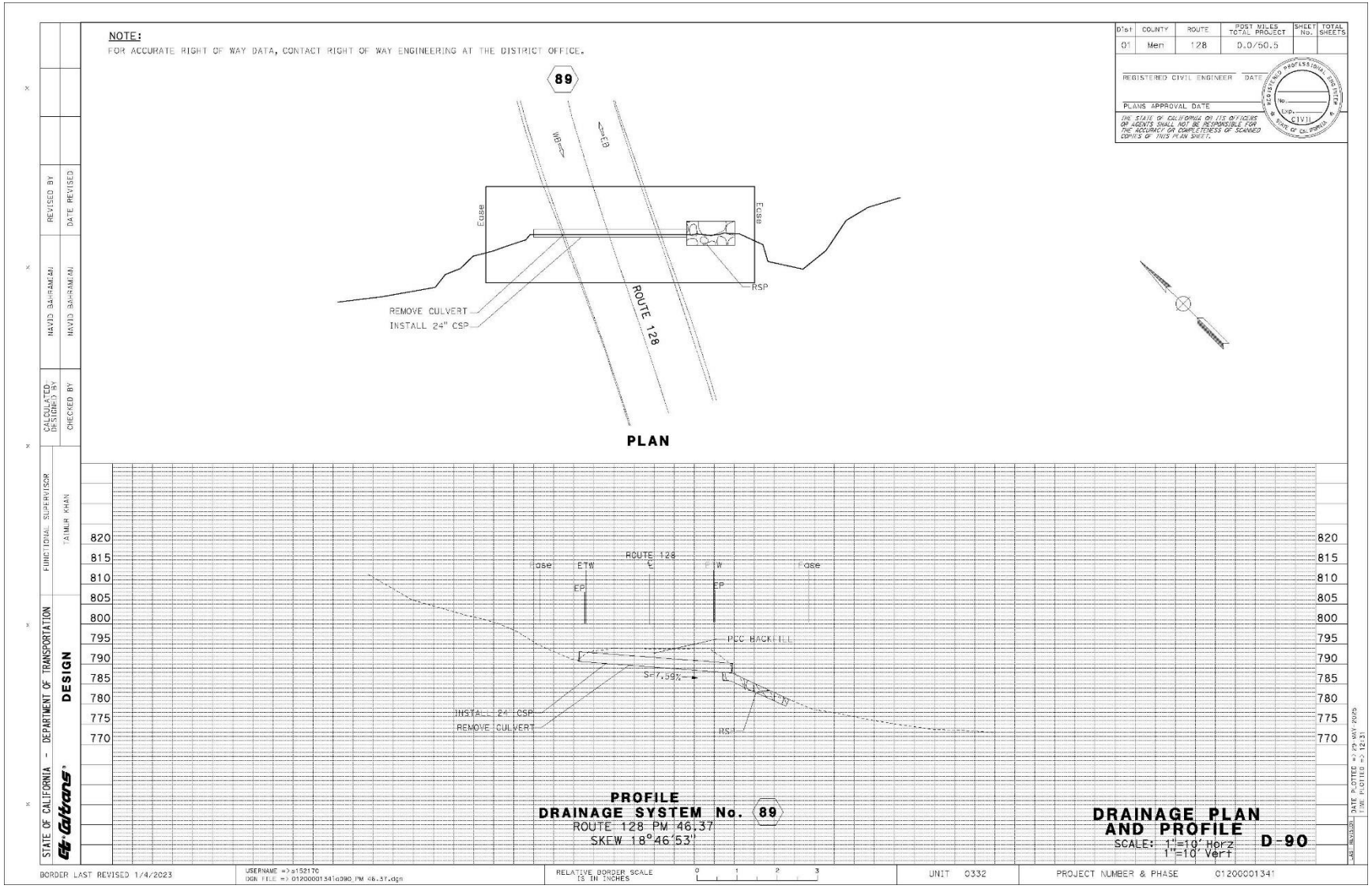

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS
01 | Men | 128 | 0.0/50.5
REGISTERED CIVIL ENGINEER DATE
PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.
85
WB
EB
ECSE
ECSE
REMOVE CULVERT
INSTALL 24" CSP
ROUTE 128
PLAN
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/DESIGNED BY
CHECKED BY
DAVID BAHRAMIAN
DAVID BAHRAMIAN
REVISED BY
DATE REVISED
ETW
ROUTE 128
℄
ETW
EP
EP
FCC BACKFILL
S=3.77%
REMOVE CULVERT
INSTALL 24" CSP
820
815
810
805
800
795
790
PROFILE
DRAINAGE SYSTEM No. 85
ROUTE 128 PM 44.47
SKEW 46°39'04"
DRAINAGE PLAN AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-86
BORDER LAST REVISED 1/4/2023
USERNAME =>s153170
DGN FILE => 01200001341d086_PM 44.47.dgn
RELATIVE BORDER SCALE IS IN INCHES
0 1 2 3
UNIT 0332
PROJECT NUMBER & PHASE 01200001341
DATE PLOTTED => 29 MAY 2025
TIME PLOTTED => 12:31


NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
86
Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS
01 | Men | 128 | 0.0/50.5
REGISTERED CIVIL ENGINEER DATE
PLANS APPROVAL DATE
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.
REGISTERED PROFESSIONAL ENGINEER
No.
EXP.
CIVIL
STATE OF CALIFORNIA
REVISED BY
DATE REVISED
CALCULATED/ DESIGNED BY
MAJID SAHRAMIAN
CHECKED BY
MAJID SAHRAMIAN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DESIGN
Ease
ETW
ROUTE 128
ETW
Ease
EP
EP
S=5.05%
REMOVE CULVERT
INSTALL 24" CSP
815
810
805
800
795
790
785
PROFILE
DRAINAGE SYSTEM No. 86
ROUTE 128 PM 44.57
SKEW 04°21'54"
DRAINAGE PLAN AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-87
BORDER LAST REVISED 1/4/2023
USERNAME =>s153170
DGN FILE => 01200001341gD87_PM 44.57.dgn
RELATIVE BORDER SCALE IS IN INCHES
0 1 2 3
UNIT 0332
PROJECT NUMBER & PHASE 01200001341
DATE PLOTTED => 29 MAY 2025
TIME PLOTTED => 12:31

PLAN


NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
87
WINGWALL x2
REMOVE WINGWALL x2
REMOVE HEADWALL
REMOVE TREE
INSTALL HEADWALL
REMOVE RCB
INSTALL 12'X8' RCB
ENVIRONMENTALLY SENSITIVE AREA
RSP
ROUTE 128
TCE
Edge
PLAN
CABLE RAILING
2' ENGINEERED STREAMBED MATERIAL
PROFILE
DRAINAGE SYSTEM No. 87
ROUTE 128 PM 45.09
SKEW 03°18'13"
DRAINAGE PLAN AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-88
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/DESIGNED BY
CHECKED BY
DAVID BAHRAMIAN
REVISED BY
DATE REVISED
BORDER LAST REVISED 1/4/2023
USERNAME =>s153170
DGN FILE => 01200001341d088_PM 45.09.dgn
RELATIVE BORDER SCALE IS IN INCHES
UNIT 0332
PROJECT NUMBER & PHASE 01200001341


NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
88
WB
EB
Ease
ROUTE 128
REMOVE CULVERT
INSTALL 24" CSP
PLAN
ETW
EP
S=7.75%
PROFILE
DRAINAGE SYSTEM No. 88
ROUTE 128 PM 45.79
SKEW 03°27'32"
DRAINAGE PLAN AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-89
775
770
765
760
755
750
745
Dist
COUNTY
ROUTE
POST MILES TOTAL PROJECT
SHEET No.
TOTAL SHEETS
01
Men
128
0.0/50.5
REGISTERED CIVIL ENGINEER
DATE
PLANS APPROVAL DATE
CIVIL
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.
REVISED BY
DATE REVISED
DAVID BAHRAMIAN
DAVID BAHRAMIAN
CALCULATED/DESIGNED BY
CHECKED BY
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
BORDER LAST REVISED 1/4/2023
USERNAME =>s153170
DGN FILE =>
RELATIVE BORDER SCALE IS IN INCHES
UNIT 0332
PROJECT NUMBER & PHASE 01200001341
DATE PLOTTED =>
TIME PLOTTED =>


NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
89
WB
EB
Ease
Ease
RSP
REMOVE CULVERT
INSTALL 24" CSP
ROUTE 128
PLAN
Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS
01 | Men | 128 | 0.0/50.5
REGISTERED CIVIL ENGINEER DATE
PLANS APPROVAL DATE
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.
REGISTERED PROFESSIONAL ENGINEER
No.
EXP.
CIVIL
STATE OF CALIFORNIA
REVISED BY
DATE REVISED
CALCULATED/DESIGNED BY
MAVID BAHRAMIAN
CHECKED BY
MAVID BAHRAMIAN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
Caltrans
820
815
810
805
800
795
790
785
780
775
770
Ease
ETW
EP
ROUTE 128
ETW
EP
Ease
PCC BACKFILL
S=7.99%
INSTALL 24" CSP
REMOVE CULVERT
RSP
PROFILE
DRAINAGE SYSTEM No. 89
ROUTE 128 PM 46.37
SKEW 18°46'53"
DRAINAGE PLAN AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-90
DATE PLOTTED => 29 MAY 2025
TIME PLOTTED => 12:31
BORDER LAST REVISED 1/4/2023
USERNAME =>a152170
DGN FILE => 01200001341d080_PM 46.37.dgn
RELATIVE BORDER SCALE IS IN INCHES
0 1 2 3
UNIT 0332
PROJECT NUMBER & PHASE 01200001341

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

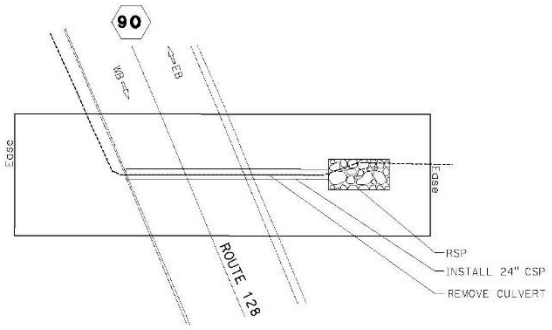
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	128	0.0/50.5		

REGISTERED CIVIL ENGINEER DATE

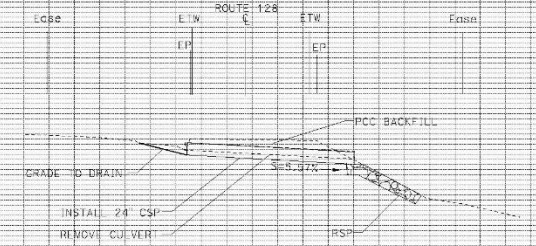
PLANS APPROVAL DATE

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.

REGISTERED PROFESSIONAL ENGINEER No. EXP. CIVIL STATE OF CALIFORNIA



PLAN



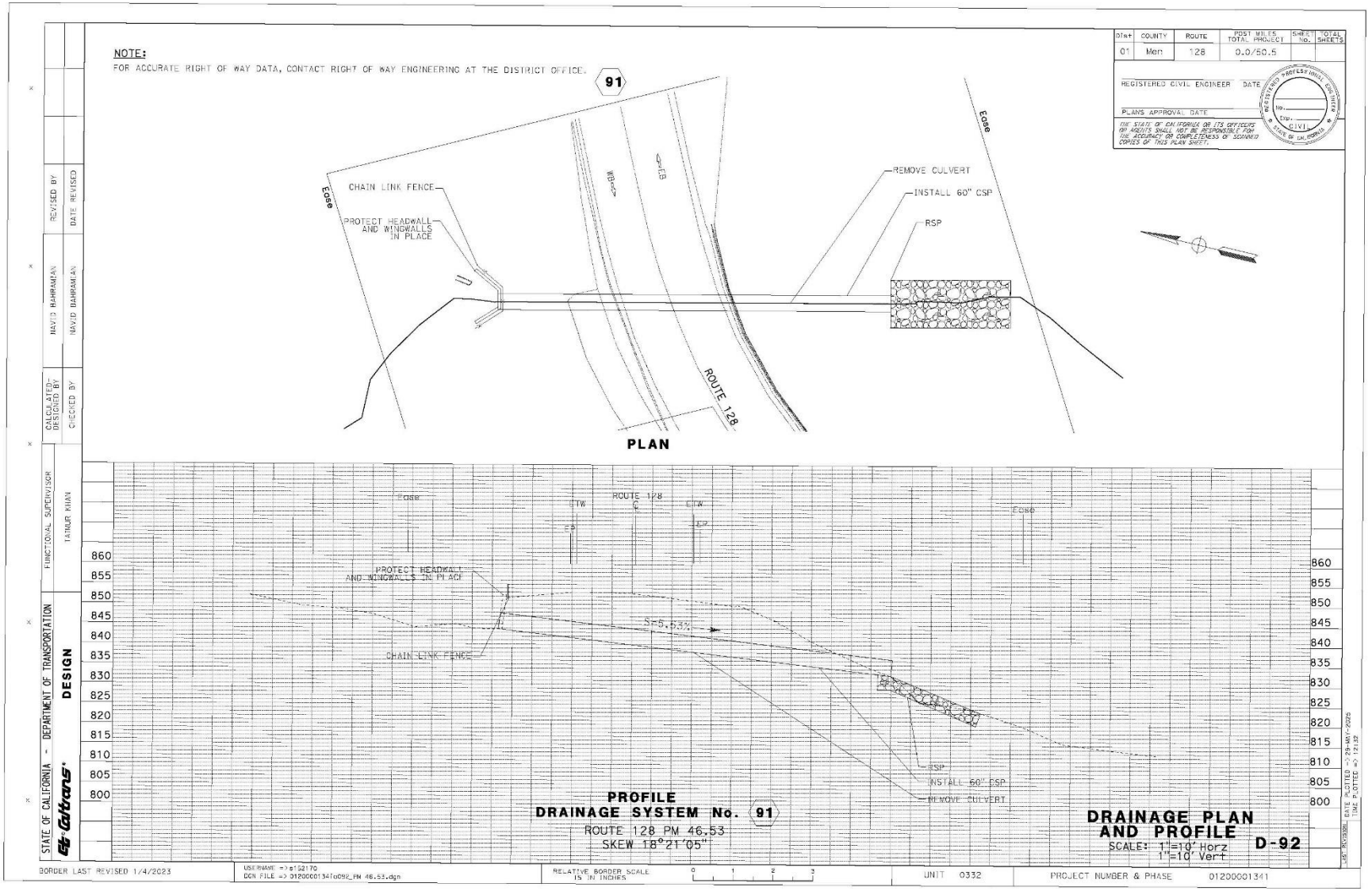
PROFILE
DRAINAGE SYSTEM No. 90
ROUTE 128 PM 46.43
SKEW 22°42'10"

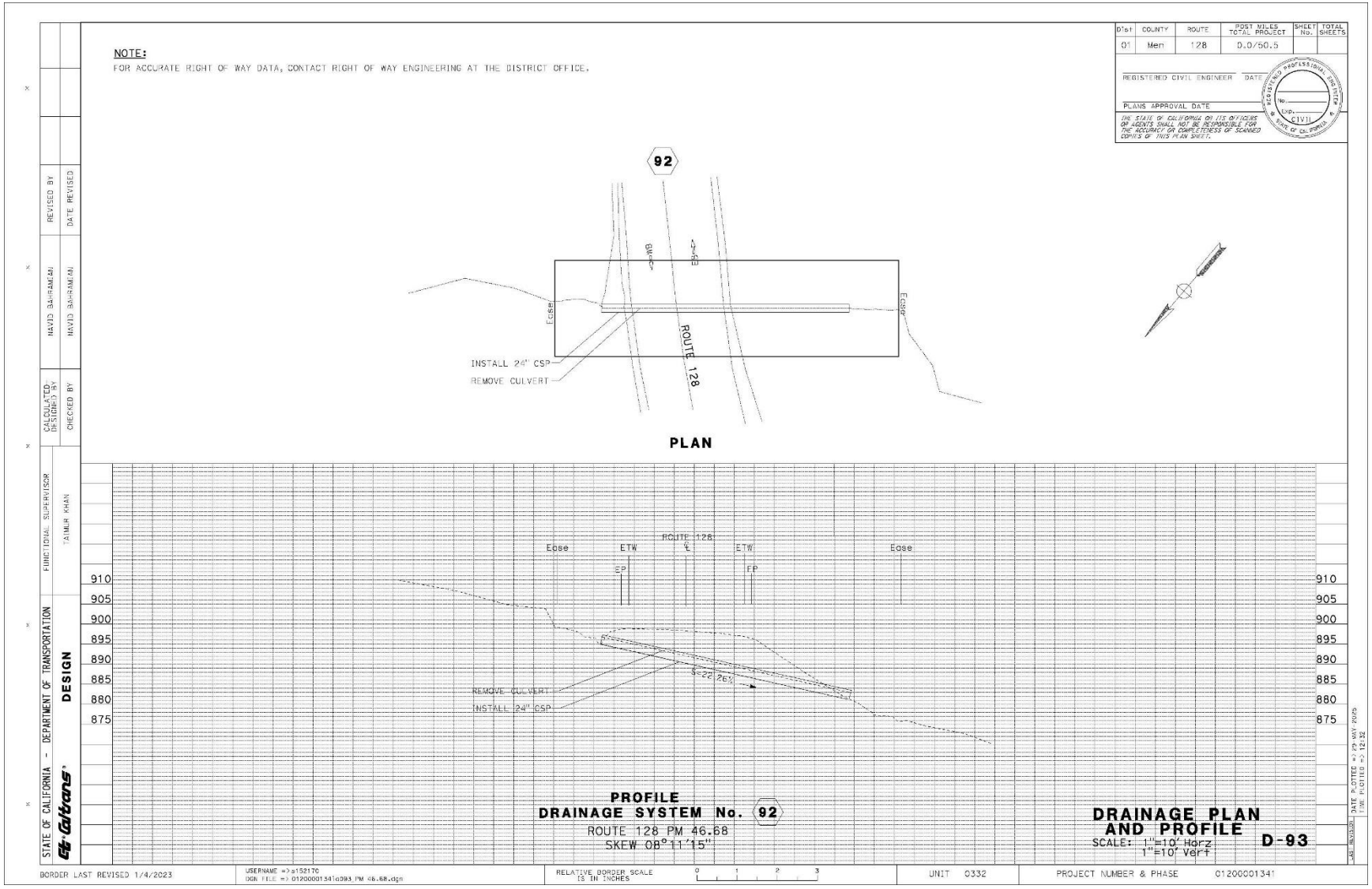
DRAINAGE PLAN AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-91

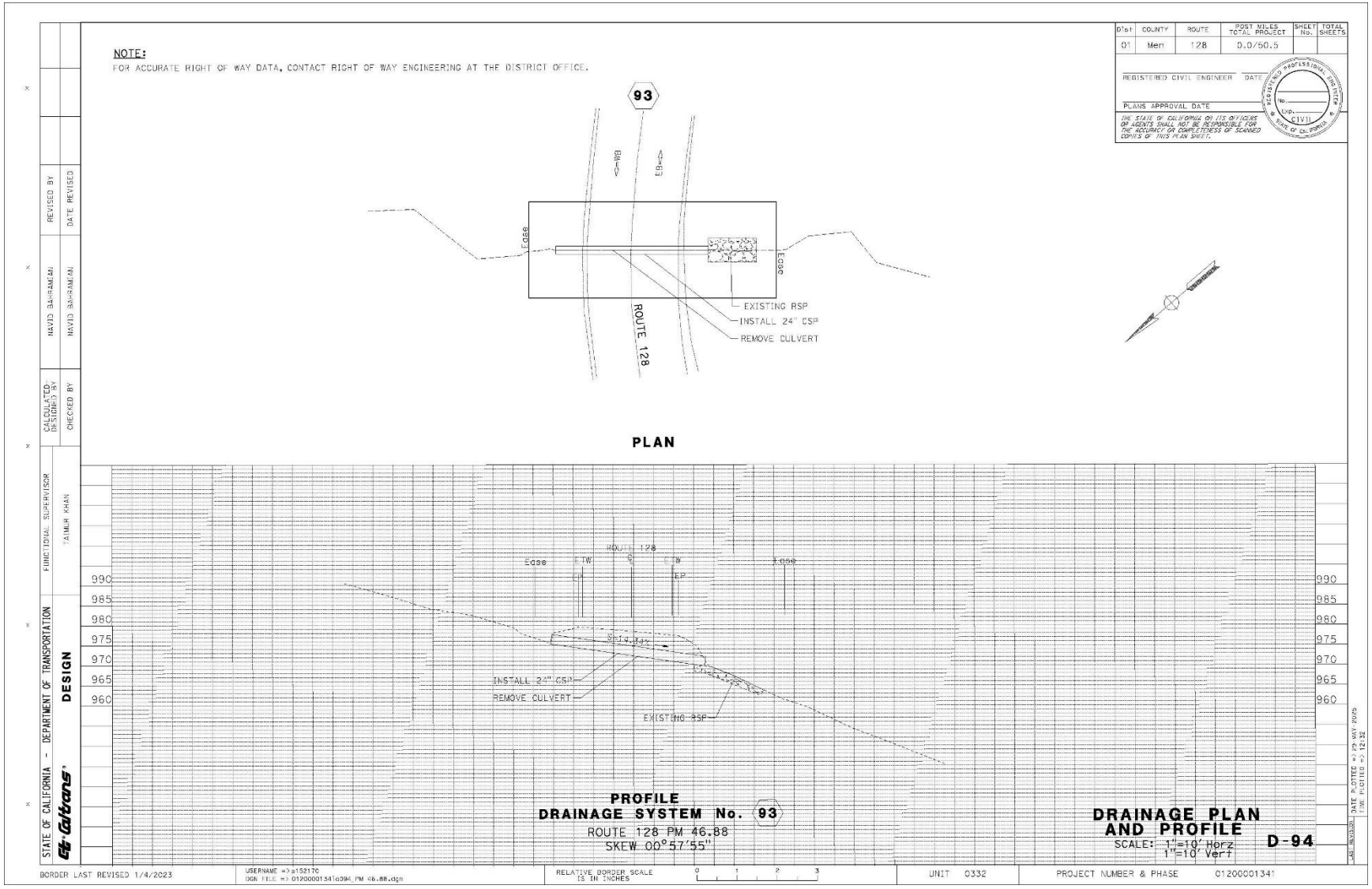
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR: TAIMUR KHAN
CALCULATED/DESIGNED BY
CHECKED BY: NAVID BAHRAMIAN
REVISED BY
DATE REVISED: NAVID BAHRAMIAN

DATE PLOTTED => 29 MAY 2025
TIME PLOTTED => 12:32

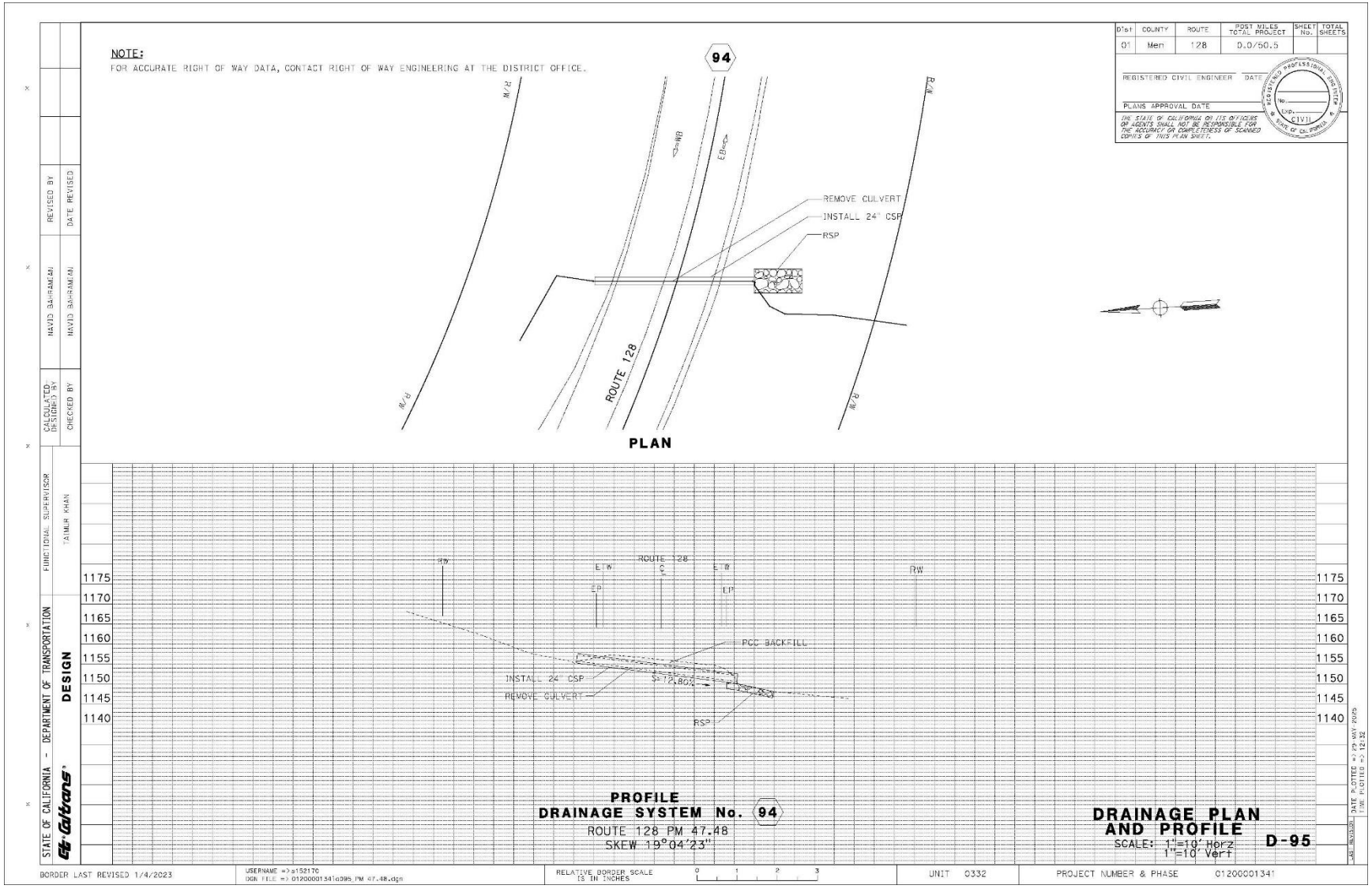
BORDER LAST REVISED 1/4/2023
USERNAME => s153170
DGN FILE => 0120000134 1d091_PM 46.43.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 0332
PROJECT NUMBER & PHASE 01200001341

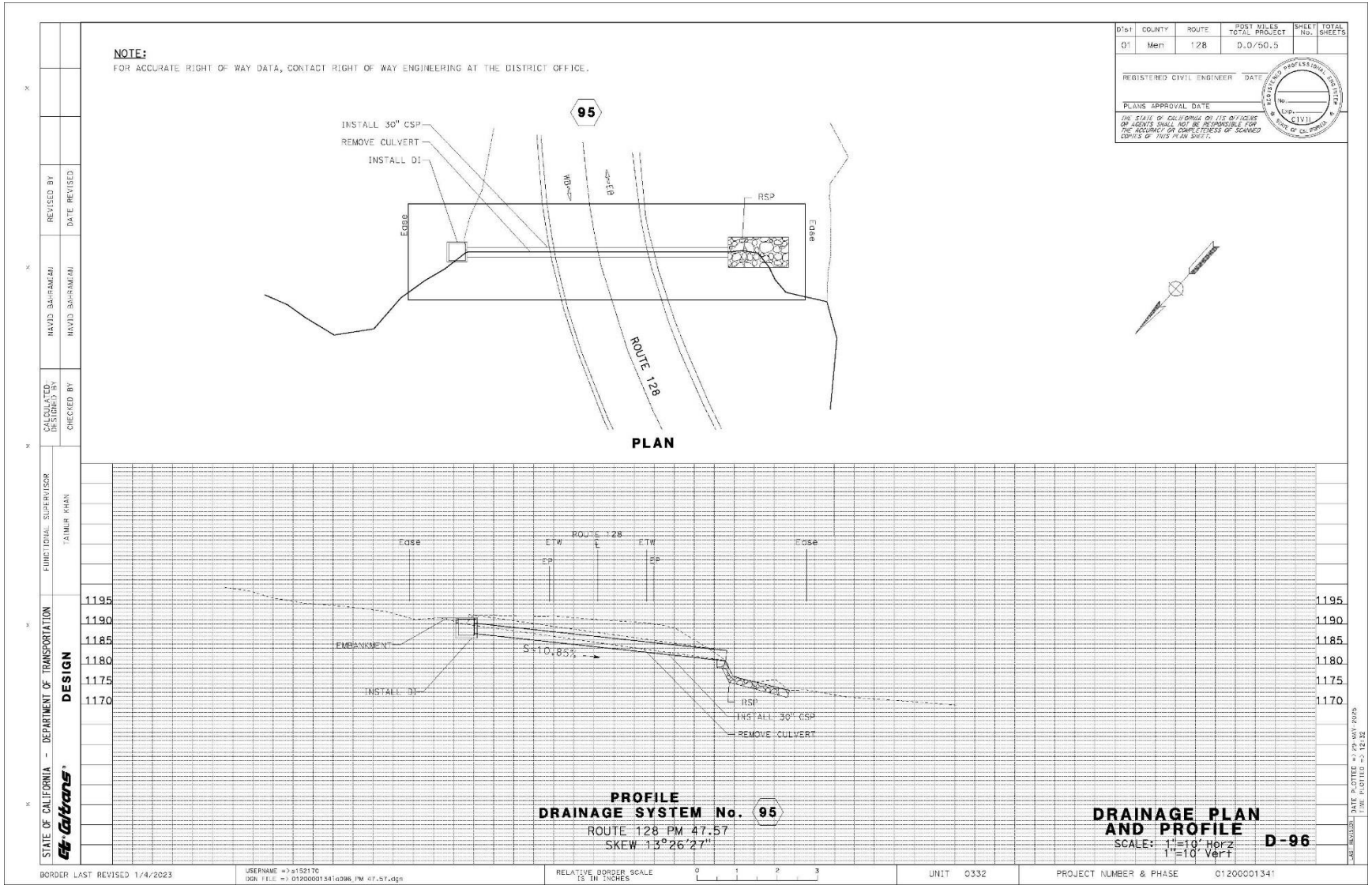

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
91
Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET NO. | TOTAL SHEETS
01 | Men | 128 | 0.0/50.5
REGISTERED CIVIL ENGINEER DATE
PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.
CHAIN LINK FENCE
PROTECT HEADWALL AND WINGWALLS IN PLACE
Edge
EOP
REMOVE CULVERT
INSTALL 60" CSP
RSP
ROUTE 128
PLAN
PROTECT HEADWALL AND WINGWALLS IN PLACE
S=5.53%
CHAIN LINK FENCE
RSP
INSTALL 60" CSP
REMOVE CULVERT
PROFILE
DRAINAGE SYSTEM No. 91
ROUTE 128 PM 46.53
SKEW 18°21'05"
DRAINAGE PLAN AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-92
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/DESIGNED BY
CHECKED BY
NAVID RAHRAMIAN
REVISED BY
DATE REVISED
BORDER LAST REVISED 1/4/2023
USERNAME => e152170
DGN FILE => 01200001341o092_PM 46.53.dgn
RELATIVE BORDER SCALE IS IN INCHES
UNIT 0332
PROJECT NUMBER & PHASE 01200001341

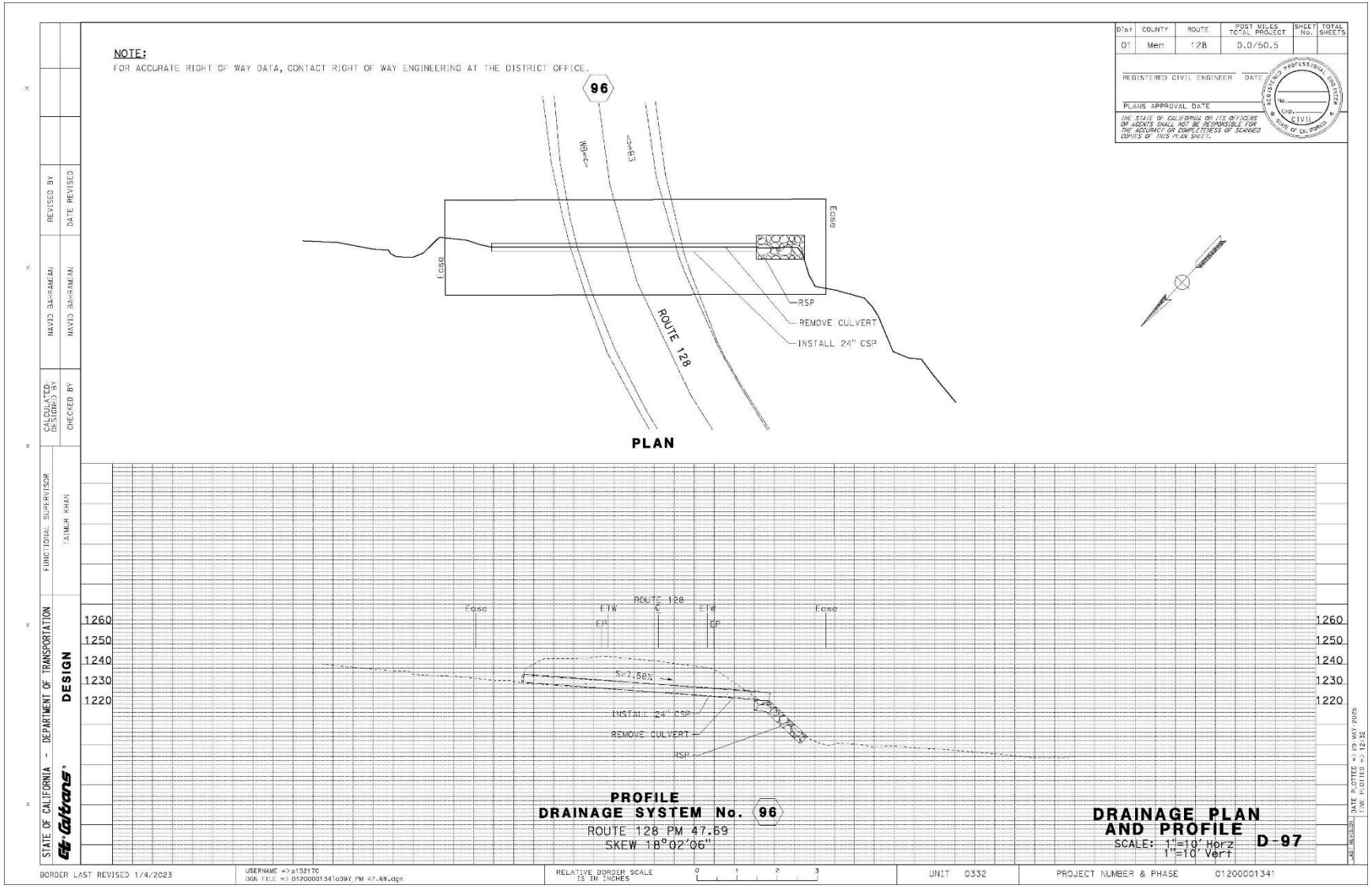

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS
01 | Men | 128 | 0.0/50.5
REGISTERED CIVIL ENGINEER DATE
PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.
92
BMP
EBP
Ease
Ease
ROUTE 128
INSTALL 24" CSP
REMOVE CULVERT
PLAN
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/DESIGNED BY
CHECKED BY
DAVID BAHRAMIAN
DAVID BAHRAMIAN
REVISED BY
DATE REVISED
Ease
ETW
ROUTE 128 ℄
ETW
Ease
EP
EP
910
905
900
895
890
885
880
875
S=02.76%
REMOVE CULVERT
INSTALL 24" CSP
PROFILE
DRAINAGE SYSTEM No. 92
ROUTE 128 PM 46.68
SKEW 08°11'15"
DRAINAGE PLAN AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-93
BORDER LAST REVISED 1/4/2023
USERNAME =>s153170
DGN FILE => 01200001341dd93_PM 46.68.dgn
RELATIVE BORDER SCALE IS IN INCHES
0 1 2 3
UNIT 0332
PROJECT NUMBER & PHASE 01200001341
DATE PLOTTED => 29 MAY 2025
TIME PLOTTED => 12:32

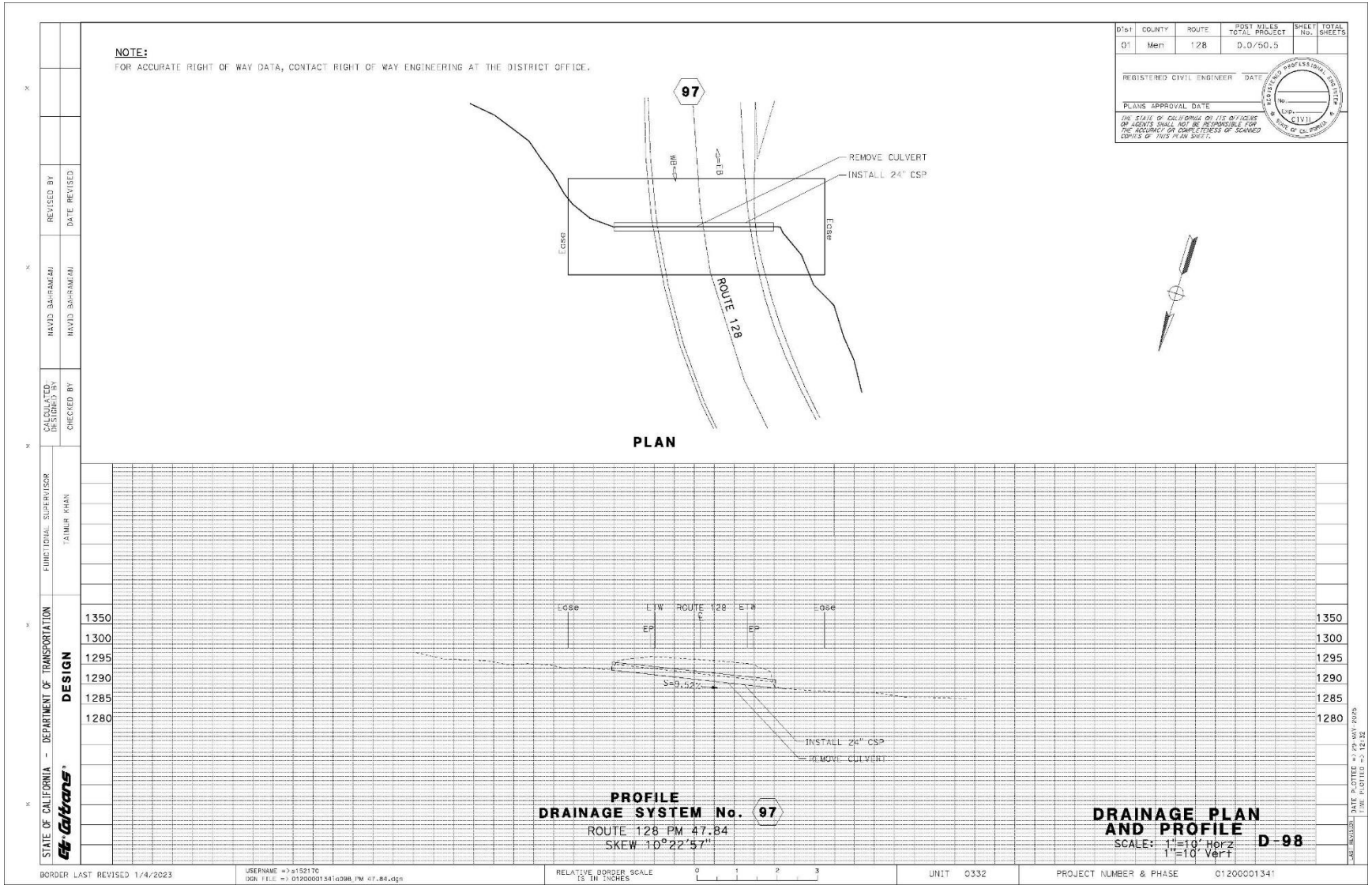


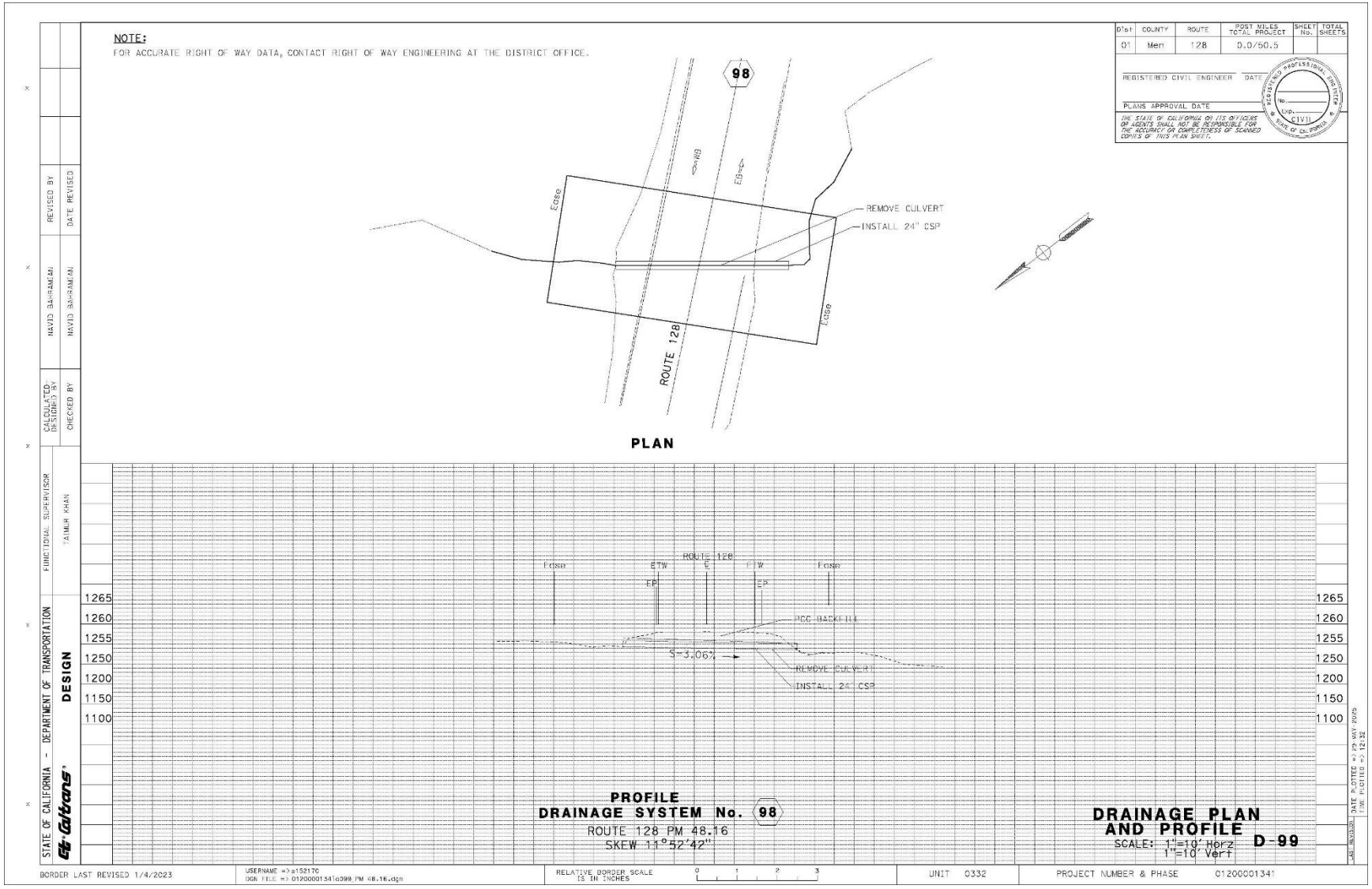
Initial Study / Negative Declaration and Final Section 4(f) Determination
EA 01-0K680 Culvert Rehabilitation and Fish Passage Project *June 2025*

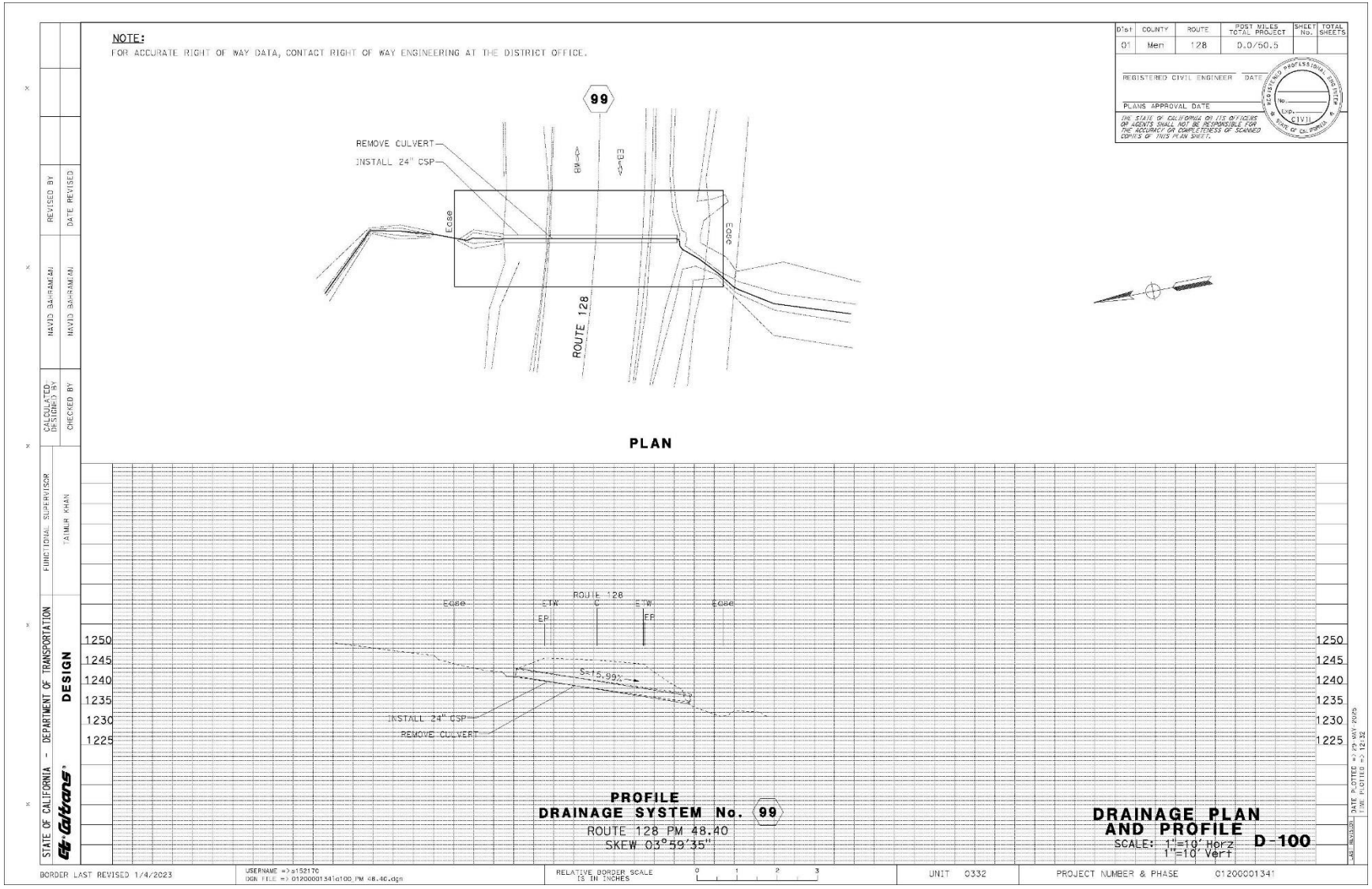

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
94
R/W
WB
EB
REMOVE CULVERT
INSTALL 24" CSP
RSP
ROUTE 128
PLAN
Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS
01 | Men | 128 | 0.0/50.5
REGISTERED CIVIL ENGINEER DATE
PLANS APPROVAL DATE
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.
REGISTERED PROFESSIONAL ENGINEER
No.
EXP.
CIVIL
STATE OF CALIFORNIA
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/DESIGNED BY
MAYID BAHRAMIAN
CHECKED BY
MAYID BAHRAMIAN
REVISED BY
DATE REVISED
1175
1170
1165
1160
1155
1150
1145
1140
ROUTE 128
E.T.W.
E.P.
L.P.
PCC BACKFILL
INSTALL 24" CSP
REMOVE CULVERT
S=2.80%
RSP
PROFILE
DRAINAGE SYSTEM No. 94
ROUTE 128 PM 47.48
SKEW 19°04'23"
DRAINAGE PLAN AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-95
AS BUILT
DATE PLOTTED => 29 MAY 2025
TIME PLOTTED => 12:32
BORDER LAST REVISED 1/4/2023
USERNAME => s153170
DGN FILE => 0120000134\dgn\95_PM 47.48.dgn
RELATIVE BORDER SCALE IS IN INCHES
0 1 2 3
UNIT 0332
PROJECT NUMBER & PHASE 0120000134

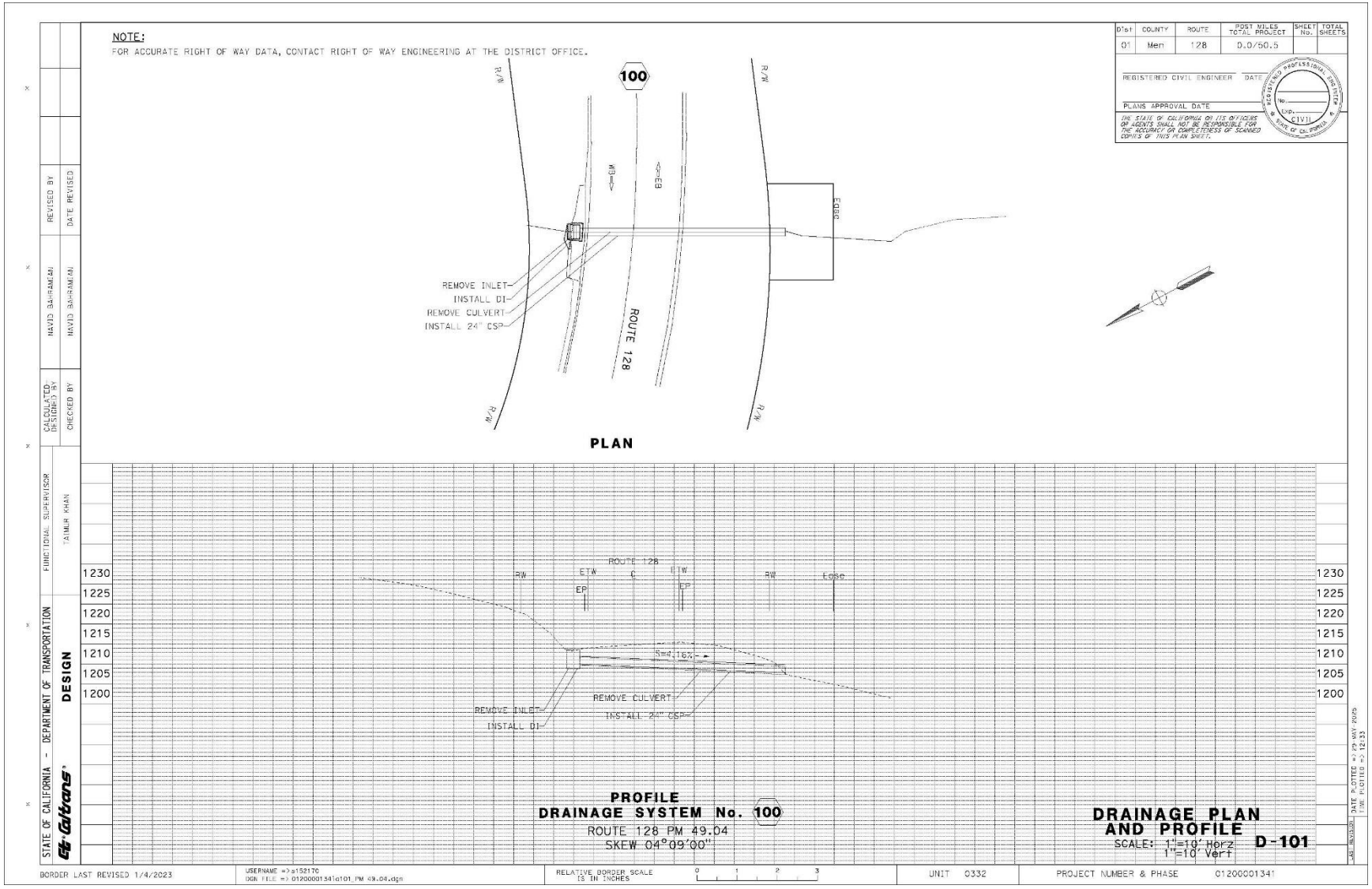

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS
01 | Men | 128 | 0.0/50.5
REGISTERED CIVIL ENGINEER DATE
PLANS APPROVAL DATE
95
INSTALL 30" CSP
REMOVE CULVERT
INSTALL DI
RSP
Edge
ROUTE 128
PLAN
Edge
ETW
ROUTE 128
ETW
Edge
EMBANKMENT
S=10.85%
INSTALL DI
RSP
INSTALL 30" CSP
REMOVE CULVERT
1195
1190
1185
1180
1175
1170
PROFILE
DRAINAGE SYSTEM No. 95
ROUTE 128 PM 47.57
SKEW 13°26'27"
DRAINAGE PLAN AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-96
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/DESIGNED BY
CHECKED BY
DAVID BAHRAMIAN
DAVID BAHRAMIAN
REVISED BY
DATE REVISED
BORDER LAST REVISED 1/4/2023
USERNAME => s153170
DGN FILE => 01200001341d096_PM 47.57.dgn
RELATIVE BORDER SCALE IS IN INCHES
UNIT 0332
PROJECT NUMBER & PHASE 01200001341

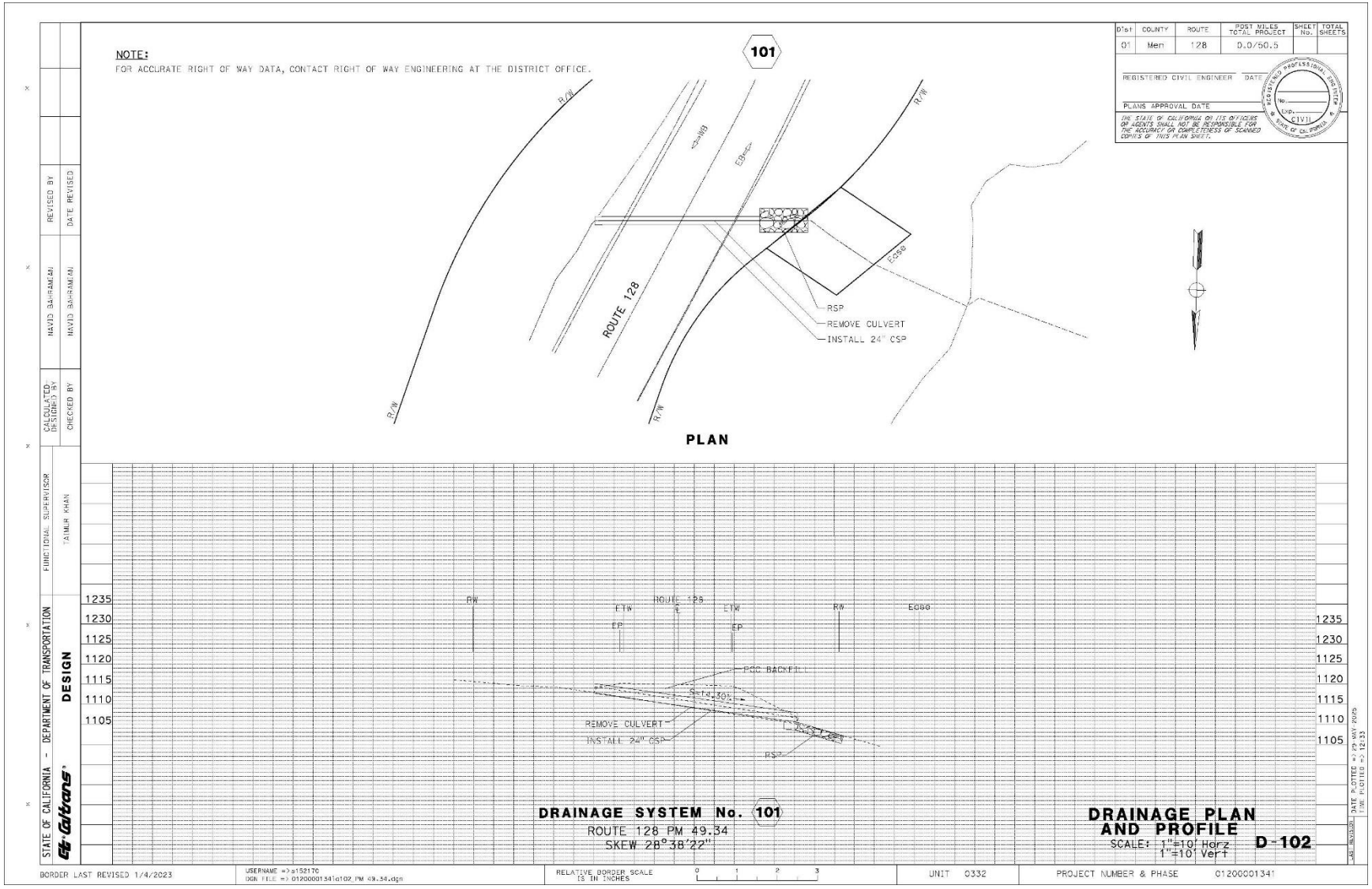

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
96
Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS
01 | Men | 128 | 0.0/50.5
REGISTERED CIVIL ENGINEER
DATE
PLANS APPROVAL DATE
CIVIL
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.
ROUTE 128
RSP
REMOVE CULVERT
INSTALL 24" CSP
Ease
PLAN
ROUTE 128
ETW
℄
EP
Ease
S=7.50%
INSTALL 24" CSP
REMOVE CULVERT
RSP
1260
1250
1240
1230
1220
PROFILE
DRAINAGE SYSTEM No. 96
ROUTE 128 PM 47.69
SKEW 18°02'06"
DRAINAGE PLAN AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-97
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/DESIGNED BY
HAYID BAHRAMIAN
CHECKED BY
HAYID BAHRAMIAN
REVISED BY
DATE REVISED
BORDER LAST REVISED 1/4/2023
USERNAME =>s153170
DGN FILE => 01200001341d097_PM 47.69.dgn
RELATIVE BORDER SCALE IS IN INCHES
0 1 2 3
UNIT 0332
PROJECT NUMBER & PHASE 01200001341
DATE PLOTTED => 29 MAY 2025
TIME PLOTTED => 12:32

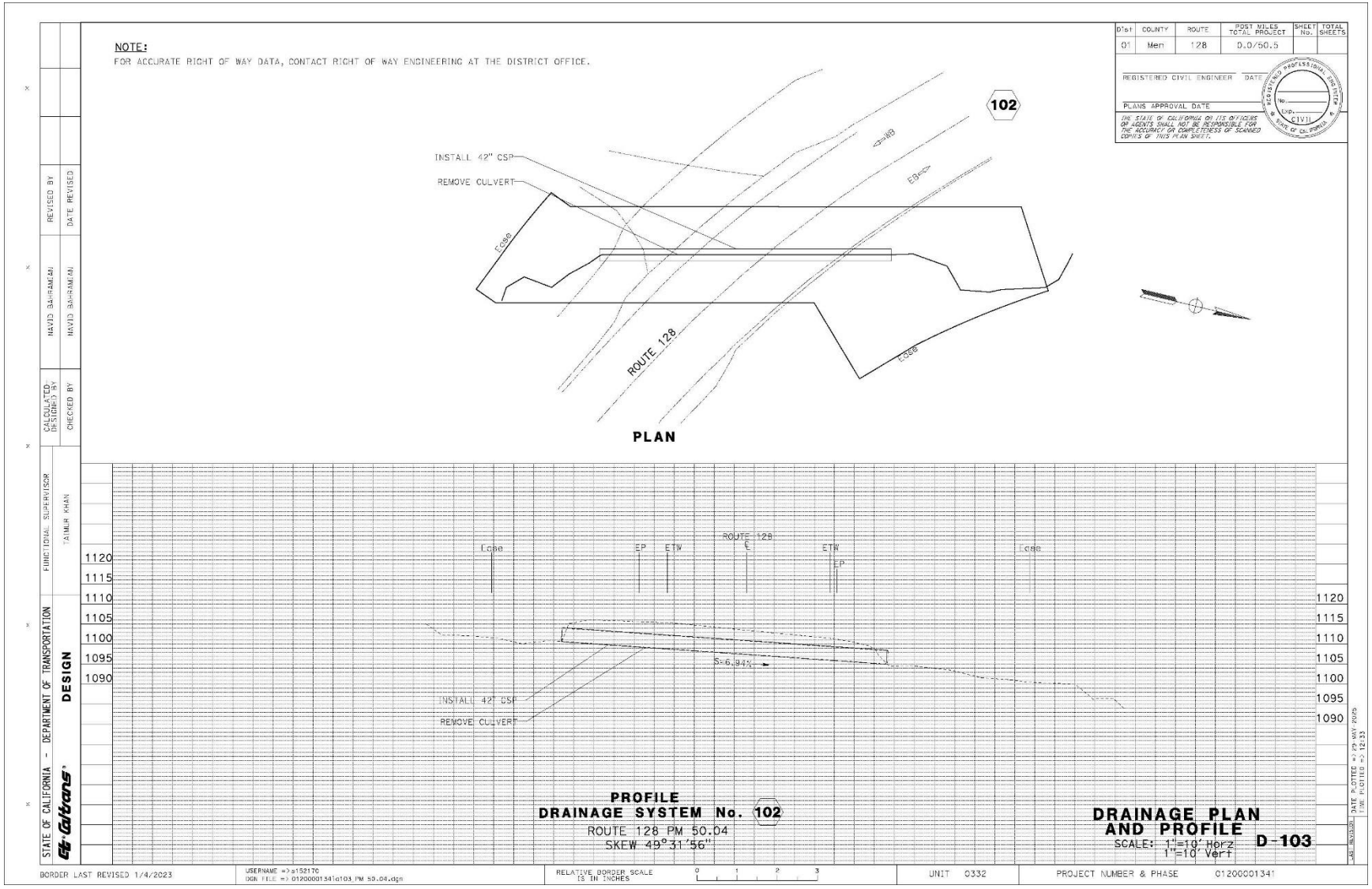

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
97
BW
FB
REMOVE CULVERT
INSTALL 24" CSP
Edge
Edge
ROUTE 128
PLAN
Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS
01 | Men | 128 | 0.0/50.5
REGISTERED CIVIL ENGINEER DATE
PLANS APPROVAL DATE
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.
REGISTERED PROFESSIONAL ENGINEER
No.
EXP.
CIVIL
STATE OF CALIFORNIA
REVISED BY
DATE REVISED
CALCULATED/DESIGNED BY
CHECKED BY
DAVID BAHRAMIAN
DAVID BAHRAMIAN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DESIGN
1350
1300
1295
1290
1285
1280
Edge
LTW
ROUTE 128
ETW
Edge
EP
EP
S=9.42%
INSTALL 24" CSP
REMOVE CULVERT
PROFILE
DRAINAGE SYSTEM No. 97
ROUTE 128 PM 47.84
SKEW 10°22'57"
DRAINAGE PLAN AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-98
ASL REVISIONS
DATE PLOTTED => 29 MAY 2025
TIME PLOTTED => 12:32
BORDER LAST REVISED 1/4/2023
USERNAME =>s153170
DGN FILE => 0120000134\dgn\98_PM 47.84.dgn
RELATIVE BORDER SCALE IS IN INCHES
0 1 2 3
UNIT 0332
PROJECT NUMBER & PHASE 0120000134

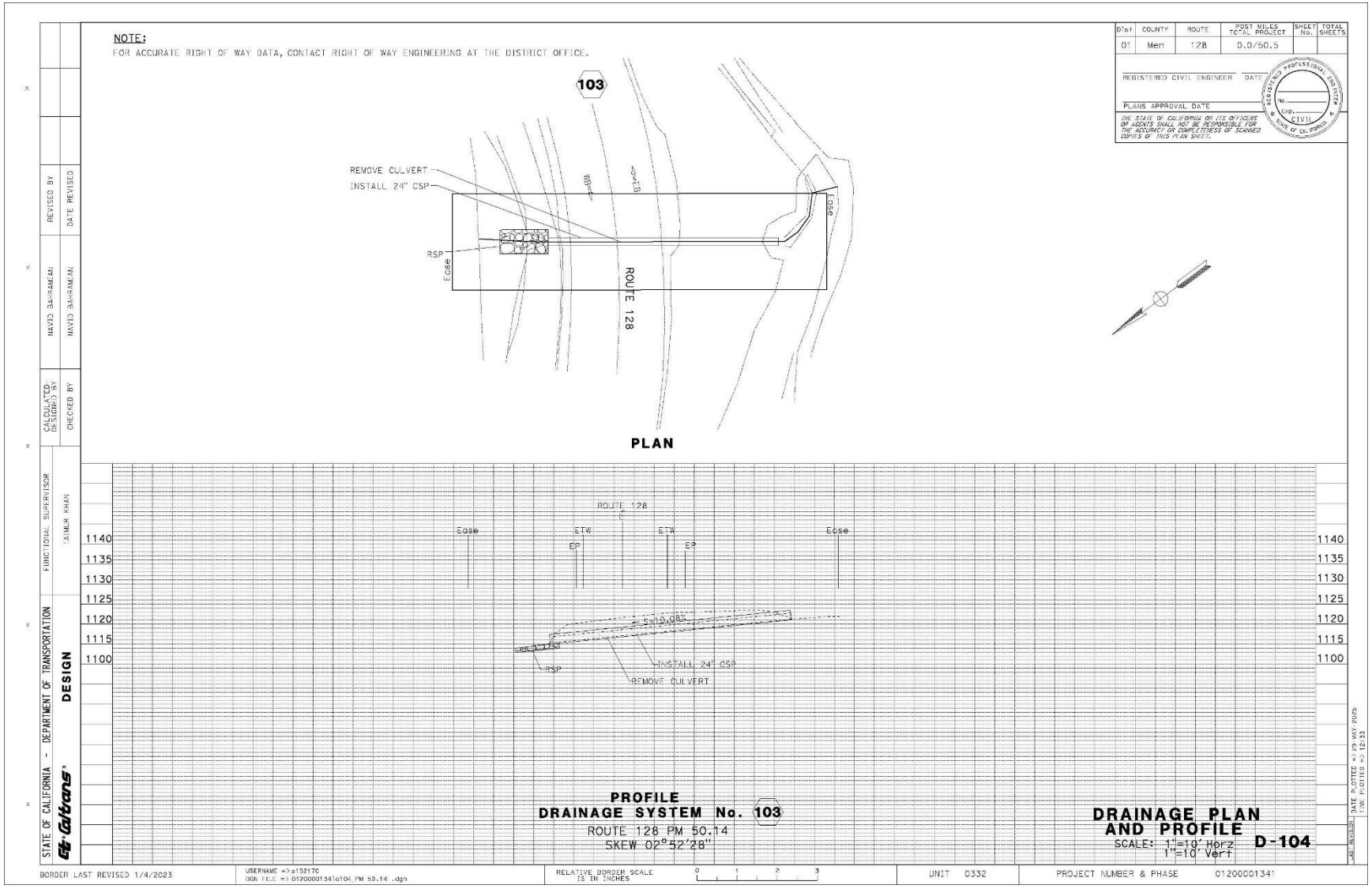

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
98
REMOVE CULVERT
INSTALL 24" CSP
Ease
Ease
ROUTE 128
PLAN
ROUTE 128
Ease
ETW
℄
ETW
Ease
EP
EP
PCC BACKFILL
S=3.06%
REMOVE CULVERT
INSTALL 24" CSP
1265
1260
1255
1250
1200
1150
1100
PROFILE
DRAINAGE SYSTEM No. 98
ROUTE 128 PM 48.16
SKEW 11°52'42"
DRAINAGE PLAN
AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-99
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/DESIGNED BY
DAVID BAHRAMIAN
CHECKED BY
DAVID BAHRAMIAN
REVISED BY
DATE REVISED
Dist
01
COUNTY
Men
ROUTE
128
POST MILES TOTAL PROJECT
0.0/50.5
SHEET No.
TOTAL SHEETS
REGISTERED CIVIL ENGINEER
DATE
PLANS APPROVAL DATE
CIVIL
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.
BORDER LAST REVISED 1/4/2023
USERNAME =>s153170
DGN FILE => 01200001341d099_PM 48.16.dgn
RELATIVE BORDER SCALE IS IN INCHES
0 1 2 3
UNIT 0332
PROJECT NUMBER & PHASE 01200001341
DATE PLOTTED => 29 MAY 2025
TIME PLOTTED => 12:32


NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
99
REMOVE CULVERT
INSTALL 24" CSP
Edge
Edge
ROUTE 128
PLAN
ROUTE 128
EP
EP
Edge
Edge
S=15.99%
INSTALL 24" CSP
REMOVE CULVERT
1250
1245
1240
1235
1230
1225
PROFILE
DRAINAGE SYSTEM No. 99
ROUTE 128 PM 48.40
SKEW 03°59'35"
DRAINAGE PLAN
AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-100
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/DESIGNED BY
DAVID BAHRAMIAN
CHECKED BY
DAVID BAHRAMIAN
REVISED BY
DATE REVISED
Dist
COUNTY
ROUTE
POST MILES TOTAL PROJECT
SHEET No.
TOTAL SHEETS
01
Men
128
0.0/50.5
REGISTERED CIVIL ENGINEER
DATE
PLANS APPROVAL DATE
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.
REGISTERED PROFESSIONAL ENGINEER
No.
EXP.
CIVIL
STATE OF CALIFORNIA
BORDER LAST REVISED 1/4/2023
USERNAME =>s153170
DGN FILE => 01200001341d100_PM 48.40.dgn
RELATIVE BORDER SCALE IS IN INCHES
0 1 2 3
UNIT 0332
PROJECT NUMBER & PHASE 01200001341
DATE PLOTTED => 29 MAY 2025
TIME PLOTTED => 12:32


NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
100
R/W
CL
EP
EOSC
REMOVE INLET
INSTALL DI
REMOVE CULVERT
INSTALL 24" CSP
ROUTE 128
PLAN
ROUTE 128
ETW
EP
RW
EOSC
S=4.16%
REMOVE INLET
INSTALL DI
REMOVE CULVERT
INSTALL 24" CSP
1230
1225
1220
1215
1210
1205
1200
PROFILE
DRAINAGE SYSTEM No. 100
ROUTE 128 PM 49.04
SKEW 04°09'00"
DRAINAGE PLAN
AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-101
Dist
COUNTY
ROUTE
POST MILES TOTAL PROJECT
SHEET No.
TOTAL SHEETS
01
Men
128
0.0/50.5
REGISTERED CIVIL ENGINEER
DATE
PLANS APPROVAL DATE
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.
REGISTERED PROFESSIONAL ENGINEER
No.
EXP.
CIVIL
STATE OF CALIFORNIA
REVISED BY
DATE REVISED
CALCULATED/DESIGNED BY
CHECKED BY
NAVID BAHRAMIAN
NAVID BAHRAMIAN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DESIGN
BORDER LAST REVISED 1/4/2023
USERNAME =>s153170
DGN FILE =>
RELATIVE BORDER SCALE IS IN INCHES
0 1 2 3
UNIT 0332
PROJECT NUMBER & PHASE 01200001341
DATE PLOTTED =>
TIME PLOTTED =>


NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
101
R/W
ROUTE 128
RSP
REMOVE CULVERT
INSTALL 24" CSP
EG@6
PLAN
DRAINAGE SYSTEM No. 101
ROUTE 128 PM 49.34
SKEW 28°38'22"
DRAINAGE PLAN AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-102
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/DESIGNED BY
DAVID BAHRAMIAN
CHECKED BY
DAVID BAHRAMIAN
REVISED BY
DATE REVISED
REGISTERED CIVIL ENGINEER
DATE
PLANS APPROVAL DATE
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.
Dist
COUNTY
ROUTE
POST MILES TOTAL PROJECT
SHEET No.
TOTAL SHEETS
01
Men
128
0.0/50.5
BORDER LAST REVISED 1/4/2023
USERNAME =>s153170
DGN FILE => 01200001341d102_PM 49.34.dgn
RELATIVE BORDER SCALE IS IN INCHES
UNIT 0332
PROJECT NUMBER & PHASE 01200001341


NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
102
INSTALL 42" CSP
REMOVE CULVERT
EB
Case
ROUTE 128
PLAN
PROFILE
DRAINAGE SYSTEM No. 102
ROUTE 128 PM 50.04
SKEW 49°31'56"
DRAINAGE PLAN
AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-103
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
BORDER LAST REVISED 1/4/2023


NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
103
REMOVE CULVERT
INSTALL 24" CSP
RSP
Edge
ROUTE 128
PLAN
ROUTE 128
Edge
ETW
EP
Edge
1140
1135
1130
1125
1120
1115
1100
RSP
INSTALL 24" CSP
REMOVE CULVERT
PROFILE
DRAINAGE SYSTEM No. 103
ROUTE 128 PM 50.14
SKEW 02°52'28"
DRAINAGE PLAN
AND PROFILE
SCALE: 1"=10' Horz
1"=10' Vert
D-104
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
TAIMUR KHAN
CALCULATED/DESIGNED BY
CHECKED BY
DAVID BAHRAMIAN
DAVID BAHRAMIAN
REVISED BY
DATE REVISED
Dist
COUNTY
ROUTE
POST MILES TOTAL PROJECT
SHEET No.
TOTAL SHEETS
01
Men
128
0.0/50.5
REGISTERED CIVIL ENGINEER
DATE
PLANS APPROVAL DATE
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.
REGISTERED PROFESSIONAL ENGINEER
No.
EXP.
CIVIL
STATE OF CALIFORNIA
BORDER LAST REVISED 1/4/2023
USERNAME =>s153170
DGN FILE =>
RELATIVE BORDER SCALE IS IN INCHES
0 1 2 3
UNIT 0332
PROJECT NUMBER & PHASE 01200001341



Appendix B. Title VI Policy Statement



CALIFORNIA STATE TRANSPORTATION AGENCY GAVIN NEWSOM, GOVERNOR

California Department of Transportation

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

September 2022

NON-DISCRIMINATION POLICY STATEMENT

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

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

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

For information or guidance on how to file a complaint, or obtain more information regarding Title VI, please contact the Title VI Branch Manager at (916) 639-6392 or visit the following web page: https://dot.ca.gov/programs/civil-rights/title-vi.

To obtain this information in an alternate format such as Braille or in a language other than English, please contact the California Department of Transportation, Office of Civil Rights, at PO Box 942874, MS-79, Sacramento, CA 94274-0001; (916) 879-6768 (TTY 711); or at Title.VI@dot.ca.gov.

TONY TAVARES
Director

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



Appendix C. USFWS, NMFS, CDFW-CNDDB, and CNPS Species Lists



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: 06/19/2025 17:20:18 UTC
Project Code: 2025-0111702
Project Name: 01-0K680 Men 128 Culvert Rehabilitation and Fish Passage 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 IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological

evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see https://www.fws.gov/program/migratory-bird-permit/what-we-do.

It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see https://www.fws.gov/library/collections/threats-birds.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/partner/council-conservation-migratory-birds.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

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

Project Code: 2025-0111702
Project Name: 01-0K680 Men 128 Culvert Rehabilitation and Fish Passage Project
Project Type: Culvert Repair/Replacement/Maintenance
Project Description: The proposed project is located on SR 128 in Mendocino County between Post Miles (PMs) 0.00 and 50.50. The project proposes to replace drainage facilities at 103 locations and includes the replacement of one culvert with a bridge to remediate a fish passage barrier.

Proposed improvements include:
• Cut and cover replacement at 91 locations
• Liner installation of 5 culverts with high-density polyethylene (HDPE)
• Invert pave 4 reinforced box culverts (RCB)
• Cast in place (CIP) replacement of 2 RCB culverts
• Upsizing 30 culverts
• Replace one culvert with a full span bridge at Mustard Gulch, State Route (SR) 128, PM 7.27

Total improvements include 7,903 linear feet (LF) of drainage system rehabilitation. This includes improvements of 5,053 LF of jurisdictional waters and one fish passage location. The culvert at SR 128 PM 7.27, Mustard Gulch, will be replaced with a bridge to allow for fish passage.

There are 400 working days anticipated for the project. Construction would be conducted over two seasons beginning in 2027 and continuing through 2028. The working days are divided among the 102 locations with 5 to 20 working days estimated per location, with the exception of bridge construction at Mustard Gulch. The majority of the project can follow the Programmatic Letter of Concurrence for Northern Spotted Owl (NSO) and marbled murrelet (MAMU). However, at PM 7.27, Mustard Gulch, the construction timing and noise exceedance does not fit into the PLOC.

Bridge Construction at Mustard Gulch PM 7.27 is to occur in the year 2028. The existing 4-foot wide by 4-foot-tall reinforced concrete box culvert at Mustard Gulch, PM 7.27 would be replaced with a 34-foot-long, a cast-in-place reinforced concrete bridge. The proposed bridge would be 36 feet wide consisting of two 12-foot-wide lanes, two 4-foot-wide shoulders, and two concrete barrier railings. Test Level 3 crash cushions would be installed at each corner of the railings. The bridge would be supported by cast-in-place diaphragm abutments, cast-in-place wingwalls and driven steel piles. Construction is proposed to be completed in one season with 258 working days. Construction would be completed via the half-width construction method with one way-

controlled traffic.

Approximately 13 second growth redwood trees would need to be removed to accommodate the proposed structure. These include a clump of 8 trees at the inlet (DBHs: 19", 27", 3-34", 2-42", 53"), a clump of 4 trees at the outlet (DBHs: 11", 31", 42", 67"), and one additional single redwood tree (DBH 45"). It is proposed that these trees will be removed outside of the NSO and MAMU nesting season. There are two construction items that exceed the noise limits for the PLOC and are within the nesting season for NSO and MAMU:

• July 5th (1 to 3 days): Drive five Steel Piles for Abutment 1 (Work exceeds 90 db)
• July 24th (1 to 3 days): Drive five Steel Piles for Abutment 2 (Work exceeds 90 db)

Mustard Gulch, Mendocino County Highway 128, PM 7.27, (39.165837, -123.640970) sits within NSO & MAMU habitat, MAMU is unlikely to be present but cannot be excluded due to a lack of surveys. Caltrans seeks to obtain a Biological Opinion from the USFWS about NSO and MAMU at this location.

Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@39.17922375,-123.68265237935447,14z



Counties: Mendocino County, California

ENDANGERED SPECIES ACT SPECIES

There is a total of 14 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.

BIRDS

NAME	STATUS
Marbled Murrelet *Brachyramphus marmoratus* Population: U.S.A. (CA, OR, WA) There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/4467	Threatened
Northern Spotted Owl *Strix occidentalis caurina* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. 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. Your location does not overlap the critical habitat. 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. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3911	Threatened

REPTILES

NAME	STATUS
Green Sea Turtle *Chelonia mydas* Population: East Pacific DPS No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6199	Threatened
Northwestern Pond Turtle *Actinemys marmorata* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1111	Proposed Threatened

FISHES

NAME	STATUS
Tidewater Goby *Eucyclogobius newberryi* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/57	Endangered

INSECTS

NAME	STATUS
Behren's Silverspot Butterfly *Speyeria zerene behrensii* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/900	Endangered
Lotis Blue Butterfly *Lycaeides argyrognomon lotis*	Endangered

NAME	STATUS
There is **proposed** critical habitat for this species. Species profile: https://ecos.fws.gov/ecp/species/5174	
Monarch Butterfly *Danaus plexippus* There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/9743	Proposed Threatened

FLOWERING PLANTS

NAME	STATUS
Burke's Goldfields *Lasthenia burkei* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4338	Endangered
Contra Costa Goldfields *Lasthenia conjugens* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/7058	Endangered
Monterey Clover *Trifolium trichocalyx* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4282	Endangered
Showy Indian Clover *Trifolium amoenum* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6459	Endangered

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

IPAC USER CONTACT INFORMATION

Agency: California Department of Transportation District 1
Name: Rose Dana
Address: 1656 Union Street
City: Eureka
State: CA
Zip: 95501
Email rose.dana@dot.ca.gov
Phone: 7078154984

Quad Name Elk
Quad Number 39123-B6

ESA Anadromous Fish

SONCC Coho ESU (T) -
CCC Coho ESU (E) - X
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) - X

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat -
CCC Coho Critical Habitat - X
CC Chinook Salmon Critical Habitat - X
CVSR Chinook Salmon Critical Habitat -
SRWR Chinook Salmon Critical Habitat -
NC Steelhead Critical Habitat - X
CCC Steelhead Critical Habitat -
SCCC Steelhead Critical Habitat -
SC Steelhead Critical Habitat -
CCV Steelhead Critical Habitat -
Eulachon Critical Habitat -
sDPS Green Sturgeon Critical Habitat - X

ESA Marine Invertebrates

Range Black Abalone (E) -
Range White Abalone (E) -

ESA Marine Invertebrates Critical Habitat

Black Abalone Critical Habitat -

ESA Sea Turtles

East Pacific Green Sea Turtle (T) - X
Olive Ridley Sea Turtle (T/E) - X
Leatherback Sea Turtle (E) - X
North Pacific Loggerhead Sea Turtle (E) -

ESA Whales

Blue Whale (E) - X
Fin Whale (E) - X
Humpback Whale (E) - X
Southern Resident Killer Whale (E) - X
North Pacific Right Whale (E) - X
Sei Whale (E) - X
Sperm Whale (E) - X

ESA Pinnipeds

Guadalupe Fur Seal (T) - X

Essential Fish Habitat

Coho EFH - X
Chinook Salmon EFH - X
Groundfish EFH - X
Coastal Pelagics EFH - X
Highly Migratory Species EFH -

MMPA Species (See list at left)

ESA and MMPA Cetaceans/Pinnipeds
See list at left and consult Monica DeAngelis
monica.deangelis@noaa.gov
562-980-3232

MMPA Cetaceans - X
MMPA Pinnipeds - X

Quad Name Navarro
Quad Number 39123-B5

ESA Anadromous Fish

SONCC Coho ESU (T) -
CCC Coho ESU (E) - X
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 -
CCC Coho Critical Habitat - X
CC Chinook Salmon Critical Habitat -
CVSR Chinook Salmon Critical Habitat -
SRWR Chinook Salmon Critical Habitat -
NC Steelhead Critical Habitat - X
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) -

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 Monica DeAngelis
monica.deangelis@noaa.gov
562-980-3232

MMPA Cetaceans -
MMPA Pinnipeds -

Quad Name **Cold Spring**
Quad Number **39123-A5**

ESA Anadromous Fish

SONCC Coho ESU (T) -
CCC Coho ESU (E) - X
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 -
CCC Coho Critical Habitat - X
CC Chinook Salmon Critical Habitat -
CVSR Chinook Salmon Critical Habitat -
SRWR Chinook Salmon Critical Habitat -
NC Steelhead Critical Habitat - X
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) -

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 Monica DeAngelis
monica.deangelis@noaa.gov
562-980-3232

MMPA Cetaceans -
MMPA Pinnipeds -

Quad Name **Philo**
Quad Number **39123-A4**

ESA Anadromous Fish

SONCC Coho ESU (T) -
CCC Coho ESU (E) - X
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 -
CCC Coho Critical Habitat - X
CC Chinook Salmon Critical Habitat -
CVSR Chinook Salmon Critical Habitat -
SRWR Chinook Salmon Critical Habitat -
NC Steelhead Critical Habitat - X
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) -

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 Monica DeAngelis
monica.deangelis@noaa.gov
562-980-3232

MMPA Cetaceans -
MMPA Pinnipeds -

Quad Name **Boonville**
Quad Number **39123-A3**

ESA Anadromous Fish

SONCC Coho ESU (T) -
CCC Coho ESU (E) - X
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) - X
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 -
CCC Coho Critical Habitat - X
CC Chinook Salmon Critical Habitat -
CVSR Chinook Salmon Critical Habitat -
SRWR Chinook Salmon Critical Habitat -
NC Steelhead Critical Habitat - X
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) -

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 Monica DeAngelis
monica.deangelis@noaa.gov
562-980-3232

MMPA Cetaceans -
MMPA Pinnipeds -

Quad Name **Ornbaun Valley**
Quad Number **38123-H3**

ESA Anadromous Fish

SONCC Coho ESU (T) -
CCC Coho ESU (E) - X
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) - X
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 -
CCC Coho Critical Habitat - X
CC Chinook Salmon Critical Habitat -
CVSR Chinook Salmon Critical Habitat -
SRWR Chinook Salmon Critical Habitat -
NC Steelhead Critical Habitat - X
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) -

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 Monica DeAngelis
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562-980-3232

MMPA Cetaceans -
MMPA Pinnipeds -

Quad Name Yorkville
Quad Number 38123-H2

ESA Anadromous Fish

SONCC Coho ESU (T) -
CCC Coho ESU (E) - X
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) - X
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 -
CCC Coho Critical Habitat - X
CC Chinook Salmon Critical Habitat - X
CVSR Chinook Salmon Critical Habitat -
SRWR Chinook Salmon Critical Habitat -
NC Steelhead Critical Habitat - X
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) -

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 Monica DeAngelis
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562-980-3232

MMPA Cetaceans -
MMPA Pinnipeds -

Quad Name **Hopland**
Quad Number **38123-H1**

ESA Anadromous Fish

SONCC Coho ESU (T) -
CCC Coho ESU (E) - X
CC Chinook Salmon ESU (T) - X
CVSR Chinook Salmon ESU (T) -
SRWR Chinook Salmon ESU (E) -
NC Steelhead DPS (T) -
CCC Steelhead DPS (T) - X
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 -
CCC Coho Critical Habitat - X
CC Chinook Salmon Critical Habitat - X
CVSR Chinook Salmon Critical Habitat -
SRWR Chinook Salmon Critical Habitat -
NC Steelhead Critical Habitat -
CCC Steelhead Critical Habitat - X
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) -

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 Monica DeAngelis
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562-980-3232

MMPA Cetaceans -
MMPA Pinnipeds -

Quad Name **Cloverdale**
Quad Number **38123-G1**

ESA Anadromous Fish

SONCC Coho ESU (T) -
CCC Coho ESU (E) - X
CC Chinook Salmon ESU (T) - X
CVSR Chinook Salmon ESU (T) -
SRWR Chinook Salmon ESU (E) -
NC Steelhead DPS (T) -
CCC Steelhead DPS (T) - X
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 -
CCC Coho Critical Habitat - X
CC Chinook Salmon Critical Habitat - X
CVSR Chinook Salmon Critical Habitat -
SRWR Chinook Salmon Critical Habitat -
NC Steelhead Critical Habitat -
CCC Steelhead Critical Habitat - X
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) -

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 Monica DeAngelis
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562-980-3232

MMPA Cetaceans -
MMPA Pinnipeds -

Selected Elements by Common Name

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Albion (3912327) OR Elk (3912326) OR Navarro (3912325) OR Bailey Ridge (3912324) OR Cold Spring (3912315) OR Philo (3912314) OR Boonville (3912313) OR Zeni Ridge (3812384) OR Ornbaun Valley (3812383) OR Yorkville (3812382) OR Hopland (3812381) OR Big Foot Mtn. (3812372) OR Cloverdale (3812371))

01-0K680 Culvert Rehabilitation and Fish Passage Project

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
American bumble bee *Bombus pensylvanicus*	IIHYM24260	None	None	G3G4	S2	
American goshawk *Accipiter atricapillus*	ABNKC12061	None	None	G5	S3	SSC
American peregrine falcon *Falco peregrinus anatum*	ABNKD06071	Delisted	Delisted	G4T4	S3S4	
Baker's goldfields *Lasthenia californica ssp. bakeri*	PDAST5L0C4	None	None	G3T1	S1	1B.2
bald eagle *Haliaeetus leucocephalus*	ABNKC10010	Delisted	Endangered	G5	S3	FP
beaked tracyina *Tracyina rostrata*	PDAST9D010	None	None	G2	S2	1B.2
Behren's silverspot butterfly *Speyeria zerene behrensii*	IILEPJ6088	Endangered	None	G5T1	S1	
Blasdale's bent grass *Agrostis blasdalei*	PMPOA04060	None	None	G2G3	S2	1B.2
bluff wallflower *Erysimum concinnum*	PDBRA160E3	None	None	G3	S2	1B.2
Bolander's beach pine *Pinus contorta ssp. bolanderi*	PGPIN04081	None	None	G5T2	S2	1B.2
bristly sedge *Carex comosa*	PMCYP032Y0	None	None	G5	S2	2B.1
California giant salamander *Dicamptodon ensatus*	AAAAH01020	None	None	G2G3	S2S3	SSC
California sedge *Carex californica*	PMCYP032D0	None	None	G5	S2	2B.2
coast fawn lily *Erythronium revolutum*	PMLIL0U0F0	None	None	G4G5	S3	2B.2
coast lily *Lilium maritimum*	PMLIL1A0C0	None	None	G2	S2	1B.1
coastal bluff morning-glory *Calystegia purpurata ssp. saxicola*	PDCON040D2	None	None	G4T2T3	S2S3	1B.2
Cobb Mountain lupine *Lupinus sericatus*	PDFAB2B3J0	None	None	G2?	S2?	1B.2
coho salmon - central California coast ESU *Oncorhynchus kisutch pop. 4*	AFCHA02034	Endangered	Endangered	G5T2Q	S2	

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Colusa layia *Layia septentrionalis*	PDAST5N0F0	None	None	G2	S2	1B.2
congested-headed hayfield tarplant *Hemizonia congesta ssp. congesta*	PDAST4R0W1	None	None	G5T2	S2	1B.2
deceiving sedge *Carex saliniformis*	PMCYP03BY0	None	None	G2	S2	1B.2
foothill yellow-legged frog - north coast DPS *Rana boylii pop. 1*	AAABH01051	None	None	G3T4	S4	SSC
Franciscan onion *Allium peninsulare var. franciscanum*	PMLIL021R1	None	None	G4G5T2	S2	1B.2
Grand Fir Forest *Grand Fir Forest*	CTT82120CA	None	None	G1	S1.1	
grasshopper sparrow *Ammodramus savannarum*	ABPBXA0020	None	None	G5	S3	SSC
great burnet *Sanguisorba officinalis*	PDROS1L060	None	None	G5?	S2	2B.2
Guggolz's harmonia *Harmonia guggolziorum*	PDAST650M0	None	None	G1	S1	1B.1
hoary bat *Lasiurus cinereus*	AMACC05032	None	None	G3G4	S4	
Hoffman's bristly jewelflower *Streptanthus glandulosus ssp. hoffmanii*	PDBRA2G0J4	None	None	G4T2	S2	1B.3
Humboldt County milk-vetch *Astragalus agnicidus*	PDFAB0F080	None	Endangered	G2	S2	1B.1
Koch's cord moss *Entosthodon kochii*	NBMUS2P050	None	None	G1	S1	1B.3
Konocti manzanita *Arctostaphylos manzanita ssp. elegans*	PDERI04271	None	None	G5T3	S3	1B.3
leafy-stemmed mitrewort *Mitellastra caulescens*	PDSAX0N020	None	None	G5	S4	4.2
maple-leaved checkerbloom *Sidalcea malachroides*	PDMAL110E0	None	None	G3	S3	4.2
Mendocino Coast paintbrush *Castilleja mendocinensis*	PDSCR0D3N0	None	None	G2	S2	1B.2
Mendocino leptonetid spider *Calileptoneta wapiti*	ILARAU6040	None	None	G1	S1	
Mendocino Pygmy Cypress Forest *Mendocino Pygmy Cypress Forest*	CTT83161CA	None	None	G2	S2.1	
Methuselah's beard lichen *Usnea longissima*	NLLEC5P420	None	None	G5	S4	4.2
minute pocket moss *Fissidens pauperculus*	NBMUS2W0U0	None	None	G3?	S2	1B.2

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
North American porcupine *Erethizon dorsatum*	AMAFJ01010	None	None	G5	S3	
North Coast semaphore grass *Pleuropogon hooverianus*	PMPOA4Y070	None	Threatened	G2	S2	1B.1
northern coastal roach *Hesperoleucus venustus navarroensis*	AFCJB19031	None	None	GNRT3	S3	SSC
Northern Coastal Salt Marsh *Northern Coastal Salt Marsh*	CTT52110CA	None	None	G3	S3.2	
northern red-legged frog *Rana aurora*	AAABH01021	None	None	G4	S3	SSC
northwestern pond turtle *Actinemys marmorata*	ARAAD02031	Proposed Threatened	None	G2	SNR	SSC
obscure bumble bee *Bombus caliginosus*	IIHYM24380	None	None	G2G3	S1S2	
Oregon coast paintbrush *Castilleja litoralis*	PDSCR0D012	None	None	G3	S3	2B.2
Oregon goldthread *Coptis laciniata*	PDRAN0A020	None	None	G4?	S3?	4.2
osprey *Pandion haliaetus*	ABNKC01010	None	None	G5	S4	WL
oval-leaved viburnum *Viburnum ellipticum*	PDCPR07080	None	None	G4G5	S3	2B.3
Pacific gilia *Gilia capitata ssp. pacifica*	PDPLM040B6	None	None	G5T3	S3	1B.2
Pacific tailed frog *Ascaphus truei*	AAABA01010	None	None	G4	S3S4	SSC
pallid bat *Antrozous pallidus*	AMACC10010	None	None	G4	S3	SSC
perennial goldfields *Lasthenia californica ssp. macrantha*	PDAST5L0C5	None	None	G3T2	S2	1B.2
Point Arena mountain beaver *Aplodontia rufa nigra*	AMAFA01011	Endangered	None	G5T1	S1	SSC
Point Reyes checkerbloom *Sidalcea calycosa ssp. rhizomata*	PDMAL11012	None	None	G5T2	S2	1B.2
Pomo bronze shoulderband *Helminthoglypta arrosa pomoensis*	IMGASC2033	None	None	G2G3T1	S1	
pygmy cypress *Hesperocyparis pygmaea*	PGCUP04032	None	None	G1	S1	1B.2
Raiche's manzanita *Arctostaphylos stanfordiana ssp. raichei*	PDERI041G2	None	None	G3T2	S2	1B.1
red-bellied newt *Taricha rivularis*	AAAAF02020	None	None	G2	S2	SSC

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Rincon Ridge ceanothus *Ceanothus confusus*	PDRHA04220	None	None	G1	S1	1B.1
Roderick's fritillary *Fritillaria roderickii*	PMLIL0V0M0	None	Endangered	G1Q	S1	1B.1
Santa Cruz clover *Trifolium buckwestiorum*	PDFAB402W0	None	None	G2	S2	1B.1
serpentine cryptantha *Cryptantha dissita*	PDBOR0A0H2	None	None	G3	S3	1B.2
short-leaved evax *Hesperevax sparsiflora var. brevifolia*	PDASTE5011	None	None	G4T3	S3	1B.2
Siskiyou checkerbloom *Sidalcea malviflora ssp. patula*	PDMAL110F9	None	None	G4G5T2	S2	1B.2
small groundcone *Kopsiopsis hookeri*	PDORO01010	None	None	G4?	S1S2	2B.3
Sonoma tree vole *Arborimus pomo*	AMAFF23030	None	None	G3	S3	SSC
southern torrent salamander *Rhyacotriton variegatus*	AAAAJ01020	None	None	G3?	S2S3	SSC
Sphagnum Bog *Sphagnum Bog*	CTT51110CA	None	None	G3	S1.2	
steelhead - northern California DPS winter-run *Oncorhynchus mykiss irideus pop. 49*	AFCHA0213Q	Threatened	None	G5T3Q	S3	SSC
swamp harebell *Eastwoodiella californica*	PDCAM02060	None	None	G3	S3	1B.2
Townsend's big-eared bat *Corynorhinus townsendii*	AMACC08010	None	None	G4	S2	SSC
tricolored blackbird *Agelaius tricolor*	ABPBXB0020	None	Threatened	G1G2	S2	SSC
western bumble bee *Bombus occidentalis*	IIHYM24252	None	Candidate Endangered	G3	S1	
white-flowered rein orchid *Piperia candida*	PMORC1X050	None	None	G3?	S3	1B.2
white-tailed kite *Elanus leucurus*	ABNKC06010	None	None	G5	S3S4	FP

Record Count: 77

California Native Plant Society Inventory of Rare and Endangered Species Results

Common Name	Scientific Name	CRPR	CESA	FESA	Blooming Period	Habitat
angel's hair lichen	*Ramalina thrausta*	2B.1	None	None		North Coast coniferous forest
Baker's goldfields	*Lasthenia californica ssp. bakeri*	1B.2	None	None	Apr-Oct	Closed-cone coniferous forest (openings), Coastal scrub, Marshes and swamps, Meadows and seeps
bare monkeyflower	*Erythranthe nudata*	4.3	None	None	May-Jun	Chaparral, Cismontane woodland
beaked tracyina	*Tracyina rostrata*	1B.2	None	None	May-Jun	Chaparral, Cismontane woodland, Valley and foothill grassland
bearded jewelflower	*Streptanthus barbiger*	4.2	None	None	May-Jul	Chaparral (serpentinite)
Blasdale's bent grass	*Agrostis blasdalei*	1B.2	None	None	May-Jul	Coastal bluff scrub, Coastal dunes, Coastal prairie
bluff wallflower	*Erysimum concinnum*	1B.2	None	None	Feb-Jul	Coastal bluff scrub, Coastal dunes, Coastal prairie
Bolander's beach pine	*Pinus contorta ssp. bolanderi*	1B.2	None	None		Closed-cone coniferous forest (podzol-like soil)
Bolander's reed grass	*Calamagrostis bolanderi*	4.2	None	None	May-Aug	Bogs and fens, Broadleafed upland forest, Closed-cone coniferous forest, Coastal scrub, Marshes and swamps (freshwater), Meadows and seeps (mesic), North Coast coniferous forest
brassy bryum	*Bryum chryseum*	4.3	None	None		Chaparral (openings), Cismontane woodland, Valley and foothill grassland
Brewer's milk-vetch	*Astragalus breweri*	4.2	None	None	Apr-Jun	Chaparral, Cismontane woodland, Meadows and seeps, Valley and foothill grassland (openings, often gravelly)
bristly leptosiphon	*Leptosiphon aureus*	4.2	None	None	Apr-Jul	Chaparral, Cismontane woodland, Coastal prairie, Valley and foothill grassland
bristly sedge	*Carex comosa*	2B.1	None	None	May-Sep	Coastal prairie, Marshes and swamps (lake margins), Valley and foothill grassland
broad-lobed leptosiphon	*Leptosiphon latisectus*	4.3	None	None	Apr-Jun	Broadleafed upland forest, Cismontane woodland
California pinefoot	*Pityopus californicus*	4.2	None	None	(Mar-Apr)May-Aug	Broadleafed upland forest, Lower montane coniferous forest, North Coast coniferous forest, Upper montane coniferous forest
California sedge	*Carex californica*	2B.2	None	None	May-Aug	Bogs and fens, Closed-cone coniferous forest, Coastal prairie, Marshes and swamps (margins), Meadows and seeps
coast fawn lily	*Erythronium revolutum*	2B.2	None	None	Mar-Jul(Aug)	Bogs and fens, Broadleafed upland forest, North Coast coniferous forest
coast iris	*Iris longipetala*	4.2	None	None	Mar-May(Jun)	Coastal prairie, Lower montane coniferous forest, Meadows and seeps

California Native Plant Society Inventory of Rare and Endangered Species Results

Common Name	Scientific Name	CRPR	CESA	FESA	Blooming Period	Habitat
coast lily	*Lilium maritimum*	1B.1	None	None	May-Aug	Broadleafed upland forest, Closed-cone coniferous forest, Coastal prairie, Coastal scrub, Marshes and swamps (freshwater), North Coast coniferous forest
coastal bluff morning-glory	*Calystegia purpurata ssp. saxicola*	1B.2	None	None	(Mar)Apr-Sep	Coastal bluff scrub, Coastal dunes, Coastal scrub, North Coast coniferous forest
Cobb Mountain lupine	*Lupinus sericatus*	1B.2	None	None	Mar-Jun	Broadleafed upland forest, Chaparral, Cismontane woodland, Lower montane coniferous forest
Colusa layia	*Layia septentrionalis*	1B.2	None	None	Apr-May	Chaparral, Cismontane woodland, Valley and foothill grassland
congested-headed hayfield tarplant	*Hemizonia congesta ssp. congesta*	1B.2	None	None	Apr-Nov	Valley and foothill grassland
deceiving sedge	*Carex saliniformis*	1B.2	None	None	(May)Jun(Jul)	Coastal prairie, Coastal scrub, Marshes and swamps (coastal salt), Meadows and seeps
Franciscan onion	*Allium peninsulare var. franciscanum*	1B.2	None	None	(Apr)May-Jun	Cismontane woodland, Valley and foothill grassland
fringed false-hellebore	*Veratrum fimbriatum*	4.3	None	None	Jul-Sep	Bogs and fens, Coastal scrub, Meadows and seeps, North Coast coniferous forest
glory brush	*Ceanothus gloriosus var. exaltatus*	4.3	None	None	Mar-Jun(Aug)	Chaparral
great burnet	*Sanguisorba officinalis*	2B.2	None	None	Jul-Oct	Bogs and fens, Broadleafed upland forest, Marshes and swamps, Meadows and seeps, North Coast coniferous forest, Riparian forest
green shield-moss	*Buxbaumia viridis*	2B.2	None	None		Lower montane coniferous forest, Subalpine coniferous forest, Upper montane coniferous forest
Guggolz's harmonia	*Harmonia guggolziorum*	1B.1	None	None	Apr-May	Chaparral (openings, serpentinite)
harlequin lotus	*Hosackia gracilis*	4.2	None	None	Mar-Jul	Broadleafed upland forest, Cismontane woodland, Closed-cone coniferous forest, Coastal bluff scrub, Coastal prairie, Coastal scrub, Marshes and swamps, Meadows and seeps, North Coast coniferous forest, Valley and foothill grassland
Hoffman's bristly jewelflower	*Streptanthus glandulosus ssp. hoffmanii*	1B.3	None	None	Mar-Jul	Chaparral, Cismontane woodland, Valley and foothill grassland (often serpentinite)
Howell's manzanita	*Arctostaphylos hispidula*	4.2	None	None	Mar-Apr	Chaparral (sandstone, serpentinite)
Humboldt County fuchsia	*Epilobium septentrionale*	4.3	None	None	Jul-Sep	Broadleafed upland forest, North Coast coniferous forest

California Native Plant Society Inventory of Rare and Endangered Species Results

Common Name	Scientific Name	CRPR	CESA	FESA	Blooming Period	Habitat
Humboldt County milk-vetch	*Astragalus agnicidus*	1B.1	CE	None	(Mar)Apr-Sep	Broadleafed upland forest, North Coast coniferous forest
Koch's cord moss	*Entosthodon kochii*	1B.3	None	None		Cismontane woodland (soil)
Konocti manzanita	*Arctostaphylos manzanita ssp. elegans*	1B.3	None	None	(Jan)Mar-May(Jul)	Chaparral, Cismontane woodland, Lower montane coniferous forest
leafy-stemmed mitrewort	*Mitellastra caulescens*	4.2	None	None	(Mar)Apr-Oct	Broadleafed upland forest, Lower montane coniferous forest, Meadows and seeps, North Coast coniferous forest
maple-leaved checkerbloom	*Sidalcea malachroides*	4.2	None	None	(Mar)Apr-Aug	Broadleafed upland forest, Coastal prairie, Coastal scrub, North Coast coniferous forest, Riparian woodland
Mendocino Coast paintbrush	*Castilleja mendocinensis*	1B.2	None	None	Apr-Aug	Closed-cone coniferous forest, Coastal bluff scrub, Coastal dunes, Coastal prairie, Coastal scrub
Methuselah's beard lichen	*Usnea longissima*	4.2	None	None		Broadleafed upland forest, North Coast coniferous forest
minute pocket moss	*Fissidens pauperculus*	1B.2	None	None		North Coast coniferous forest (damp coastal soil)
mountain lady's-slipper	*Cypripedium montanum*	4.2	None	None	Mar-Aug	Broadleafed upland forest, Cismontane woodland, Lower montane coniferous forest, North Coast coniferous forest
Mt. Saint Helena morning-glory	*Calystegia collina ssp. oxyphylla*	4.2	None	None	Apr-Jun	Chaparral, Lower montane coniferous forest, Valley and foothill grassland
North Coast semaphore grass	*Pleuropogon hooverianus*	1B.1	CT	None	Apr-Jun	Broadleafed upland forest, Meadows and seeps, North Coast coniferous forest
Oregon coast paintbrush	*Castilleja litoralis*	2B.2	None	None	Jun	Coastal bluff scrub, Coastal dunes, Coastal scrub
Oregon goldthread	*Coptis laciniata*	4.2	None	None	(Feb)Mar-May(Sep-Nov)	Meadows and seeps, North Coast coniferous forest (streambanks)
oval-leaved viburnum	*Viburnum ellipticum*	2B.3	None	None	May-Jun	Chaparral, Cismontane woodland, Lower montane coniferous forest
Pacific gilia	*Gilia capitata ssp. pacifica*	1B.2	None	None	Apr-Aug	Chaparral (openings), Coastal bluff scrub, Coastal prairie, Valley and foothill grassland
Pacific golden saxifrage	*Chrysosplenium glechomifolium*	4.3	None	None	Feb-Jun	North Coast coniferous forest, Riparian forest
perennial goldfields	*Lasthenia californica ssp. macrantha*	1B.2	None	None	Jan-Nov	Coastal bluff scrub, Coastal dunes, Coastal scrub
Point Reyes ceanothus	*Ceanothus gloriosus var. gloriosus*	4.3	None	None	Mar-May	Closed-cone coniferous forest, Coastal bluff scrub, Coastal dunes, Coastal scrub
Point Reyes checkerbloom	*Sidalcea calycosa ssp. rhizomata*	1B.2	None	None	Apr-Sep	Marshes and swamps (freshwater, near coast)

California Native Plant Society Inventory of Rare and Endangered Species Results

Common Name	Scientific Name	CRPR	CESA	FESA	Blooming Period	Habitat
Humboldt County milk-vetch	*Astragalus agnicidus*	1B.1	CE	None	(Mar)Apr-Sep	Broadleafed upland forest, North Coast coniferous forest
Koch's cord moss	*Entosthodon kochii*	1B.3	None	None		Cismontane woodland (soil)
Konocti manzanita	*Arctostaphylos manzanita ssp. elegans*	1B.3	None	None	(Jan)Mar-May(Jul)	Chaparral, Cismontane woodland, Lower montane coniferous forest
leafy-stemmed mitrewort	*Mitellastra caulescens*	4.2	None	None	(Mar)Apr-Oct	Broadleafed upland forest, Lower montane coniferous forest, Meadows and seeps, North Coast coniferous forest
maple-leaved checkerbloom	*Sidalcea malachroides*	4.2	None	None	(Mar)Apr-Aug	Broadleafed upland forest, Coastal prairie, Coastal scrub, North Coast coniferous forest, Riparian woodland
Mendocino Coast paintbrush	*Castilleja mendocinensis*	1B.2	None	None	Apr-Aug	Closed-cone coniferous forest, Coastal bluff scrub, Coastal dunes, Coastal prairie, Coastal scrub
Methuselah's beard lichen	*Usnea longissima*	4.2	None	None		Broadleafed upland forest, North Coast coniferous forest
minute pocket moss	*Fissidens pauperculus*	1B.2	None	None		North Coast coniferous forest (damp coastal soil)
mountain lady's-slipper	*Cypripedium montanum*	4.2	None	None	Mar-Aug	Broadleafed upland forest, Cismontane woodland, Lower montane coniferous forest, North Coast coniferous forest
Mt. Saint Helena morning-glory	*Calystegia collina ssp. oxyphylla*	4.2	None	None	Apr-Jun	Chaparral, Lower montane coniferous forest, Valley and foothill grassland
North Coast semaphore grass	*Pleuropogon hooverianus*	1B.1	CT	None	Apr-Jun	Broadleafed upland forest, Meadows and seeps, North Coast coniferous forest
Oregon coast paintbrush	*Castilleja litoralis*	2B.2	None	None	Jun	Coastal bluff scrub, Coastal dunes, Coastal scrub
Oregon goldthread	*Coptis laciniata*	4.2	None	None	(Feb)Mar-May(Sep-Nov)	Meadows and seeps, North Coast coniferous forest (streambanks)
oval-leaved viburnum	*Viburnum ellipticum*	2B.3	None	None	May-Jun	Chaparral, Cismontane woodland, Lower montane coniferous forest
Pacific gilia	*Gilia capitata ssp. pacifica*	1B.2	None	None	Apr-Aug	Chaparral (openings), Coastal bluff scrub, Coastal prairie, Valley and foothill grassland
Pacific golden saxifrage	*Chrysosplenium glechomifolium*	4.3	None	None	Feb-Jun	North Coast coniferous forest, Riparian forest
perennial goldfields	*Lasthenia californica ssp. macrantha*	1B.2	None	None	Jan-Nov	Coastal bluff scrub, Coastal dunes, Coastal scrub
Point Reyes ceanothus	*Ceanothus gloriosus var. gloriosus*	4.3	None	None	Mar-May	Closed-cone coniferous forest, Coastal bluff scrub, Coastal dunes, Coastal scrub
Point Reyes checkerbloom	*Sidalcea calycosa ssp. rhizomata*	1B.2	None	None	Apr-Sep	Marshes and swamps (freshwater, near coast)

California Native Plant Society Inventory of Rare and Endangered Species Results

Common Name	Scientific Name	CRPR	CESA	FESA	Blooming Period	Habitat
purple-stemmed checkerbloom	*Sidalcea malviflora ssp. purpurea*	1B.2	None	None	May-Jun	Broadleafed upland forest, Coastal prairie
pygmy cypress	*Hesperocyparis pygmaea*	1B.2	None	None		Closed-cone coniferous forest (usually podzol-like soil)
pygmy manzanita	*Arctostaphylos nummularia ssp. mendocinoensis*	1B.2	None	None	Jan	Closed-cone coniferous forest (acidic sandy clay)
Raiche's manzanita	*Arctostaphylos stanfordiana ssp. raichei*	1B.1	None	None	Feb-Apr	Chaparral, Lower montane coniferous forest (openings)
Rattan's leptosiphon	*Leptosiphon rattanii*	4.3	None	None	May-Jul	Cismontane woodland, Lower montane coniferous forest
redwood lily	*Lilium rubescens*	4.2	None	None	(Mar)Apr-Aug(Sep)	Broadleafed upland forest, Chaparral, Lower montane coniferous forest, North Coast coniferous forest, Upper montane coniferous forest
Rincon Ridge ceanothus	*Ceanothus confusus*	1B.1	None	None	Feb-Jun	Chaparral, Cismontane woodland, Closed-cone coniferous forest
Roderick's fritillary	*Fritillaria roderickii*	1B.1	CE	None	Mar-May	Coastal bluff scrub, Coastal prairie, Valley and foothill grassland
running-pine	*Lycopodium clavatum*	4.1	None	None	Jun-Aug(Sep)	Lower montane coniferous forest (mesic), Marshes and swamps, North Coast coniferous forest (mesic)
Santa Cruz clover	*Trifolium buckwestiorum*	1B.1	None	None	Apr-Oct	Broadleafed upland forest, Cismontane woodland, Coastal prairie
sea-watch	*Angelica lucida*	4.2	None	None	Apr-Sep	Coastal bluff scrub, Coastal dunes, Coastal scrub, Marshes and swamps (coastal salt)
serpentine bird's-beak	*Cordylanthus tenuis ssp. brunneus*	4.3	None	None	Jul-Aug	Chaparral, Cismontane woodland, Closed-cone coniferous forest
serpentine collomia	*Collomia diversifolia*	4.3	None	None	May-Jun	Chaparral, Cismontane woodland
serpentine cryptantha	*Cryptantha dissita*	1B.2	None	None	Apr-Jun	Chaparral (serpentinite)
serpentine reed grass	*Calamagrostis ophitidis*	4.3	None	None	Apr-Jul	Chaparral (openings, often north-facing slopes), Lower montane coniferous forest, Meadows and seeps, Valley and foothill grassland
short-leaved evax	*Hesperevax sparsiflora var. brevifolia*	1B.2	None	None	Mar-Jun	Coastal bluff scrub (sandy), Coastal dunes, Coastal prairie
Siskiyou checkerbloom	*Sidalcea malviflora ssp. patula*	1B.2	None	None	(Mar-Apr)May-Aug	Coastal bluff scrub, Coastal prairie, North Coast coniferous forest
small groundcone	*Kopsiopsis hookeri*	2B.3	None	None	Apr-Aug	Lower montane coniferous forest, North Coast coniferous forest, Upper montane coniferous forest

Appendix D. Section 4(f)



Section 4(f) of the Department of Transportation Act of 1966, codified in federal law at 49 United States Code (USC) 303, declares that “it is the policy of the United States Government that special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites.”

Section 4(f) specifies that the Secretary of Transportation may approve a transportation program or project . . . “requiring the use of publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, state, or local significance, or land of an historic site of national, state, or local significance (as determined by the federal, state, or local officials having jurisdiction over the park, area, refuge, or site) only if:

- There is no prudent and feasible alternative to using that land; and
- The program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from the use.”

Section 4(f) further requires coordination with the Department of the Interior and, as appropriate, the involved offices of the Department of Agriculture and the Department of Housing and Urban Development in developing transportation projects and programs that use lands protected by Section 4(f). If historic sites are involved, then coordination with the State Historic Preservation Officer (SHPO) is also needed.

Responsibility for compliance with Section 4(f) has been assigned to Caltrans pursuant to 23 USC 326 and 327, including determinations and approval of Section 4(f) evaluations, as well as coordination with those agencies that have jurisdiction over a Section 4(f) resource that may be affected by a project action.

The activities associated with the project would occur within California State Parks-Navarro River Redwoods State Park. Consultation with California State Parks is ongoing; the draft Section 4(f) analyses are on the following pages.



Appendix D. Section 4(f)

STATE OF CALIFORNIA CALIFORNIA STATE TRANSPORTATION AGENCY GAVIN NEWSOM, Governor

DEPARTMENT OF TRANSPORTATION
NORTH REGION ENVIRONMENTAL
1656 Union Street
Eureka, CA 95501
(707) 492-4064
www.dot.ca.gov
TTY 711

Making Conservation a California Way of Life.

November 8, 2024

Bill Maslach, District Superintendent
Sonoma-Mendocino District California State Parks
12301 North Highway 1
Mendocino, CA 95460

Dear Mr. Maslach:

The California Department of Transportation (Caltrans) is proposing the Culvert Rehabilitation and Fish Passage Project on State Route (SR) 128, between Post Mile (PM) 0.0, at the intersection with SR 1, and PM 50.5, at the Sonoma County boundary. A portion of the project is located within the Navarro River Redwoods State Park, within the Sonoma-Mendocino Coast District of California State Parks.

Section 4(f) of the Department of Transportation Act of 1966 was designed to preserve publicly owned parklands, recreation areas, waterfowl and wildlife refuges, and historic significant historic sites, and is applicable whenever a U.S. Department of Transportation (USDOT) action involves the "use" of these sites. Because the proposed project is federally funded and proposes the "use" of a State-owned Section 4(f) resource, concurrence from California State Parks–Sonoma-Mendocino Coast District on the Section 4(f) determination is needed.

There is "use" of a Section 4(f) resource when a resource is Permanently Incorporated into a transportation facility, when there is Temporary Occupancy of the resource that does not meet the five criteria of temporary use (temporary duration, minor scope, no adverse physical impact or interference with activities or purposes of the resource, land is fully restored, and documented agreement with appropriate officials), or when there is Constructive Use of the resource (i.e.,

when the project's proximity impacts are so severe that the protected activities, features or attributes that qualify the resource for protection are substantially impaired).

Under 49 USC 303(d)1, based on the "use" of the 4(f) resource, Caltrans has determined the proposed Culvert Rehabilitation and Fish Passage Project would not result in a permanent, adverse effect on the activities, features, or attributes of the park that make it eligible under Section 4(f) and, therefore, would result in a *de minimis* impact to Navarro River Redwoods State Park. A *de minimis* impact determination is not an exemption from Section 4(f); it is an authorization for a minor use of a Section 4(f) property, without having to make a finding that there are no feasible and prudent avoidance alternatives.

As part of the Section 4(f) process, the public must be afforded the opportunity to review and comment on the 4(f) evaluation. As such, this evaluation is included as an attachment to the CEQA Initial Study / Proposed Negative Declaration. The following sections provide project information and supporting documentation for the *de minimis* determination.

DESCRIPTION OF 4(F) RESOURCES

Navarro River Redwoods State Park, described as a redwood tunnel to the sea, is located along an approximately 11-mile stretch of the Navarro River in Northern California that begins at the Pacific Ocean and offers 600 acres of second growth redwoods, riparian, and coastal environments. Major activities in Navarro River Redwoods State Park include fishing, kayaking, canoeing, swimming, nature and wildlife viewing, camping, picnicking, geocaching, and hiking. Important attributes include the Navarro Beach Campground located at the mouth of the Navarro River on the Pacific Ocean and the Paul M. Dimmick Campground and Picnic Area which is 6 miles east of the junction of SR 128 and SR 1.

PROJECT DESCRIPTION

The purpose of the project is to rehabilitate existing drainage systems to good condition and eliminate a fish passage barrier (Mustard Gulch). This project is needed to repair deteriorating drainage systems in order to prevent erosion and potential roadway embankment failure and restore fish access to habitat at Mustard Gulch that is necessary for survival and spawning during various life stages.

The project as a whole proposes to rehabilitate and/or replace 103 culverts in total from PMs 0.0 to 50.5 on SR 128. There are 16 existing drainage facilities located within the Navarro River Redwoods State Park (between PM 1.94 and PM 12.46) which Caltrans proposes to improve as a part of this project.

Proposed activities at Mustard Gulch (PM 7.27) include removing the existing reinforced concrete box culvert (4-foot wide by 4-foot high by 67-foot long), restoring the channel, and constructing a bridge. Work would remove a fish barrier and reopen approximately 1.55 miles of potential fish habitat. The proposed bridge would be a 34-foot-long, cast-in-place (CIP) reinforced concrete bridge. The proposed bridge would be 36 feet wide consisting of two 12-foot-wide lanes, two 4-foot-wide shoulders, and two Type 85 concrete barrier railings. Test Level 3 crash cushions would be installed at each corner of the railings. The bridge would be supported by CIP diaphragm abutments, CIP wingwalls and driven HP piles (Figure 1). Construction is anticipated to be completed in one season and would be completed via the half-width construction method with one way-controlled traffic.

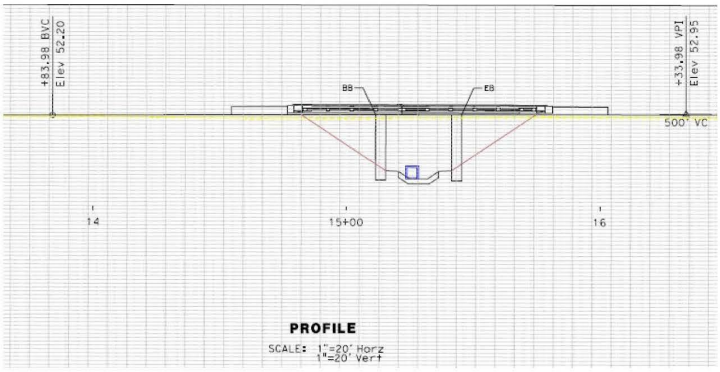


Figure 1. Profile of proposed bridge design at Mustard Gulch

Proposed activities at the 15 drainage locations include replacing existing culverts utilizing the cut and cover method. The culverts proposed to be replaced are at Post Miles 1.94, 1.99, 2.11, 2.29, 2.43, 2.59, 6.81, 7.01, 8.82, 10.08, 10.47, 10.64, 10.77, 12.30, and 12.46. The cut and cover replacement method would dig a trench to remove the existing culvert, place the new culvert, then cover the impacted area to restore the roadway. Work would occur from the roadway and minimal vegetation would be removed. The culverts would be limited to areas within the existing Caltrans right of way (ROW). If water is present at the time of construction, then a clear water diversion would occur ensuring water remains outside of the work area during culvert replacement. Work using this method would be completed from the roadway utilizing a one-way reversible traffic lane closure. The anticipated duration of work at each location is estimated to be 5 to 20 days.

Within the boundaries of the State Park, it is anticipated that equipment staging would take place in established non-vegetated turnouts within the existing Caltrans right of way and within closed lanes of the roadway. Vegetation removal would be minimized where possible; however, some vegetation, including tree removal, would occur near the placement of culverts or structures. Standard erosion control measures would be in place. A Revegetation Plan would be prepared for this project. Following construction, vegetation would be returned to natural conditions consistent with the Genetic Integrity Policy of California State Parks.

SECTION 4(F) PROPERTY "USE"

At Mustard Gulch, it is anticipated a Right of Entry (ROE) permit from California State Parks would be needed to utilize approximately 12,000 square feet upstream and 13,000 square feet downstream for bridge construction. Approximately 13 second growth redwood trees would need to be removed to accommodate the proposed structure (Figures 2 and 3). These include a clump of 8 trees at the inlet, a clump of 4 trees at the outlet, and one additional single redwood. These trees are located within the existing Caltrans right of way.



Figure 2. Two clumps of redwood trees proposed to be removed at Mustard Gulch



Figure 3. Single redwood tree proposed to be removed at Mustard Gulch

There are no established hiking trails in the project vicinity and the Paul Dimmick Campground (nearest camping facility) is located approximately 0.8 miles west of Mustard Gulch (Figure 4). There is an unofficial gated river access road that is located directly adjacent to Mustard Gulch. Access to the river at this location would be closed to park visitors during construction. However, there would be no construction at this location, and it would be reopened to the public following construction.



Figure 2. Mustard Gulch project location in relation to Paul Dimmick Campground

Because work at the 15 other locations would not require a Right of Entry or permanent Right of Way acquisition, and because the proposed work at these locations meets the five criteria for Temporary Occupancy of the resource (temporary duration, minor scope, no adverse physical impact or interference with activities or purposes of the resource, land is fully restored, and documented agreement with appropriate officials), the 15 culvert replacements occurring within the Navarro River Redwoods State Park boundary would not constitute a "use" under 4(f).

DE MINIMIS DETERMINATION

After considering potential "use" of park resources and measures to avoid impacts, Caltrans has determined the proposed project would result in a *de minimis* impact to park resources at Mustard Gulch.

Caltrans is proposing to acquire a Right of Entry permit in the State Park to account for the channel work and restoration; however, the area would remain in State Park control and would be restored after construction.

Although the project would temporarily close several small parking areas and access to a gated road that provides access to the park and its resources, visitors to the park would still have access to the rest of the Navarro River Redwoods State Park. Though the pullout, parking area, and unofficial trail segments would be temporarily closed for the duration of the project, there would be no change to these features, and they would be re-opened after construction. Visitors accessing the State Park would experience traffic delays as well as increased noise in the immediate vicinity for the duration of the drainage improvement work. However, the new bridge at Mustard Gulch would add to the features by providing a location for the public to view fish returning to the creek. As a result, recreational resources within the Navarro River Redwoods State Park would be minimally impacted.

Areas disturbed by vegetation and tree removal would be restored after construction. Caltrans' Standard Measures and Best Management Practices would be implemented to reduce impacts to tree roots. All feasible measures would be taken to preserve the trees growing adjacent to the creek.

Based on the activities associated with the project, Caltrans determined the type of "use" of State Park resources would be *de minimis* because the project would not adversely affect the activities, features, or attributes of the park that make it eligible under Section 4(f). Therefore, Caltrans considers the requirements of Section 4(f) *de minimis* to be satisfied.

Please sign below to indicate California State Parks concurrence with Caltrans' *de minimis* determination for the activities located on State Park land associated with the Culvert Rehabilitation and Fish Passage Project on SR 128.

William Maslach May 21, 2025

Bill Maslach, District Superintendent Date
California State Parks, Sonoma-Mendocino District

If you have questions or need additional information, please contact Laurel Osborn at Laurel.Osborn@dot.ca.gov or (707) 492-4064 or Dominic.Vitali@dot.ca.gov or (707) 572-0948.

Sincerely,

Dominic Vitali
Senior Environmental Scientist

Appendix E. Response to Comments



MEN 128 Culvert Rehabilitation and Fish Passage Project

Response to Comments

Agency	Comment	Response
CDFW	The IS/ND states all but one of the drainage work locations in the Project are on a steep grade or have natural downstream barriers that are not accessible to salmonids and that Mustard Gulch (PM 7.27) is the only location currently accessible to salmonids. The IS/ND states nine additional Project locations were investigated for fish passage (PMs 15.37, 27.76, 32.08, 32.34, 32.98, 35.54, 43.30, 43.67, 45.09) and were found to not be barriers to anadromy. The IS/ND does not include these assessments, or a description of the methodology used. These nine additional locations are designated as full or partial barriers on the California Fish Passage Assessment Database (PAD; Elston, 2024). Changes to these or any other PAD location designation from barrier to non-barrier status is important because Fish & G. Code section 5901 makes it is unlawful to construct or maintain any device or contrivance that prevents, impedes, or tends to prevent or impede, the passing of fish up and down stream. Additionally, Senate Bill 857 (Streets and Highways Code section 156.3) requires projects using state or federal transportation funds (if the project affects a stream crossing on a stream where salmon or steelhead are, or historically were) to remediate any fish passage barrier. Fish passage assessments should also be included for Project locations at PMs 26.07, 26.51, and 32.77. Therefore,	The appropriate assessments (1st pass, habitat, and/or 2nd pass) for these locations have been or will be completed and submitted to Caltrans HQ and the CDFW Passage Assessment Database (PAD) administrator for the quality assurance/quality control (QA/QC) process. Once the fish passage assessment QA/QC process is complete, the PAD will be updated to reflect the non-barrier or no habitat upstream status for these locations. Information in the assessments, once QA/QC'd, will be included on the PAD. However, the assessments themselves are never included in our environmental documents. Standard protocol methodology was used for these assessments and are based on the First Pass Fish Passage Data sheet developed by the California Fish Passage Forum with input from the CDFW Restoration manual (Part IX). The set of data fields included in the PAD were chosen to meet the needs of the California Fish Passage Forum, an

	CDFW recommends the IS/ND be revised to include these fish passage assessments, including a description of the methodology used (Recommendation 1). Pursuant to Fish & G. Code section 5901, these assessments should also include potential habitat for resident trout, including those with potential steelhead (O. mykiss irideus) genetics above Lake Sonoma (Deiner et al. 2007).	association of public, private and governmental organizations, with the mission to protect and revitalize anadromous fish populations in California. The locations that are above Lake Sonoma (PM 43.30, 43.67, 45.09) are outside of the limits of anadromy, and are not the primary focus of fish passage regulation nor included on fish passage assessments. Native resident non-anadromous / diadromous species are not prioritized under fish passage regulation, but will be reviewed per location basis.
CDFW	Based on information provided in the IS/ND, it is unclear if the Environmental Study Limits (ESL), Right of Way (ROW), and Temporary Construction Easements (TCE) are large enough to encompass areas needed at Project locations where fish passage design and/or stream bed vertical adjustment is needed. More specifically, the IS/ND does not contain related information regarding the development of geomorphic site assessments, longitudinal profile elevation surveys that fully capture the site geomorphic context to guide stream restoration, channel cross sections with existing and proposed Project elements, and hydraulic modeling studies. Without this information CDFW is not able to evaluate the appropriateness of proposed engineered road-stream crossing lengths/widths, the full effects of the existing and proposed road-stream crossings have had on the stream system, effects of streamflow modifications, and distance/locations of streamflow bypass around construction areas. As a result, CDFW	The design grade longitudinal profile elevation surveys, channel cross sections, and existing hydraulic modeling is currently being conducted and will be provided to CDFW as soon as possible. If necessary, the ESL, ROW and TCE will be adjusted as appropriate. CDFW is required to approve the stream crossing design for fish passage locations. Caltrans will continue to work with CDFW hydraulics staff to ensure an appropriate design in the next phase of the project.

	cannot evaluate the adequacy of the ESL, ROW, and TCE. These parameters are needed to identify the entire Project area and the "whole of the action," which will inform appropriate ESL, ROW, and TCE (CEQA Guidelines sections 15003 (h), and 15063(a)(1)). Additionally, insufficient ROW or TCE areas could result in Project delays or unforeseen additional costs to Caltrans. Therefore, CDFW recommends the IS/ND be revised to include (for complex fish passage remediation locations and/or locations where stream bed vertical adjustment is needed) a minimum of 30 percent design plans (including stream grading and engineered streambed material) that utilize the geomorphic site assessments, longitudinal profile elevation surveys, channel cross sections, and existing hydraulic modeling to determine the project footprint, stream reach length, and ROW/TCE required to restore geomorphic function to these Project locations (Recommendation 2). Conducting this work prior to preparing a CEQA document will increase the likelihood that the ESL, ROW, and TCE are sufficient for biological effects analyses, and the appropriate Project design footprint as well as site access for construction activities.	
CDFW	The IS/ND cites Caltrans' Climate Change Vulnerability Assessment for District 1 (Caltrans 2019) and discusses a potential 9.9 percent increase in the 100-year storm precipitation event in the Project area. The IS/ND also states the 100-year storm event is a metric commonly used in the design of stream crossing culverts and the Project would replace existing deteriorated culverts with larger pipe sizes, where needed. The IS/ND states that increasing the diameter of culverts is anticipated to	Caltrans designs culverts and drainage systems per the Highway Design Manual which establishes policies and procedures to carry out the State highway design functions of the Department. Providing justification to CDFW for a design that follows these design standards is impracticable. The continuous inspection and maintenance

	reduce the occurrence of flooding upstream of culverts and decrease water velocities at the outlet of culverts, but no information is provided to assess whether the proposed culvert sizes will pass 100-year storm event flows (e.g. watershed area, 100-year stormflow, etc.). CDFW typically recommends stream crossings be designed to accommodate the estimated 100-year flow (1% annual exceedance probability [AEP]), including debris and sediment loads. Designing for larger storm events will become increasingly important in the context of a changing climate (Michaelis et al. 2022; Kunkel et al 2013), and can also provide terrestrial wildlife connectivity benefits. The Project's pending LSA notification should include an assessment of each culvert's watershed area, the 1% AEP flow, and the design discharge (e.g., Q100) (Recommendation 3). If Caltrans proposes culverts at stream crossings with hydraulic capacity less than the estimated 100-year flow (including sediment and debris), Caltrans should provide site-specific justifications and risk assessments.	of these drainage systems by Caltrans within the State Highway System ensures the functionality of these systems.
CDFW	Herpetofauna are a group of organisms that includes both amphibians and reptiles. Steep or vertical culverts and drainage inlets (DI) types are known to be barriers to herpetofauna passage, and these can entrap species such as foothill yellow-legged frog (Rana boylii), a species of special concern in the Project area and listed as threatened/endangered in other parts of California. In other prior Caltrans project locations, "amphibian ladders" have been incorporated into project designs to allow passage of herpetofauna. The Project's pending LSA notification should include an assessment of herpetofauna passage and propose passage designs, where appropriate (Recommendation #4).	Prior to submittal of the LSA notification, Caltrans will review locations and, where necessary, complete assessments of herpetofauna passage. Passage designs would be proposed and incorporated into the project if deemed appropriate.

NCRWQCB	RWB Comment 1): Permanent impacts to aquatic resources of the State require compensatory mitigation. Please explain how wetland impacts will be avoided and minimized. Describe a plan for restoring temporary wetland impacts and for mitigating permanent wetland impacts.	Caltrans will address this comment during the 401-application process. The 401-application will include avoidance and minimization measures and will outline the plans for restoring temporary wetland impacts.
NCRWQCB	RWB Comment 2): Permanent impacts to aquatic resources of the State require compensatory mitigation. Increasing the diameter of a culvert (upsizing) may be used only as an offset for an equal amount of compensatory mitigation required due to permanent impacts to streams.	Caltrans will address this comment during the 401-application process.
NCRWQCB	RWB Comment 3): The calculation for credit is equal to half of the culvert length (linear feet) multiplied by the increase in diameter (sq. ft.) and this is converted to acres for area. Upsizing is considered as Enhancement and may be used only to offset to compensatory mitigation.	Caltrans will address this comment during the 401-application process.
NCRWQCB	RWB Comment 4): Calculations for upsizing are not to be subtracted from the permanent impacts or total impacts for a project. The total impacts must be entered in the 401 Fee Calculator to determine the fees.	The total impacts will be entered in the 401 Fee Calculator to determine the correct fees.
NCRWQCB	RWB Comment 5): – The information provided for these calculations is not adequate for verification. When submitting the Application for 401 Certification to the Regional Water Board please include a spreadsheet with calculations, layouts, and drainage profiles. The spreadsheet and plans should include the dimensions of the existing and new facilities for each drainage system.	The required information (including a spreadsheet with calculations, layouts, and drainage profiles and plans that will include the dimensions of the existing and new facilities for each drainage system) will be included in the Application for 401 Certification.
NCRWQCB	RWB Comment 6): When a wetland, watercourse (ephemeral, intermittent and/or perennial), or vegetation within the riparian area will be permanently impacted by	If necessary, a draft Compensatory Mitigation Plan will be submitted with a 401 application to address permanent

	the proposed project, mitigation will be necessary to preserve the function and beneficial uses of the site. A draft Compensatory Mitigation Plan must be submitted with a 401 application to address permanent impacts. Temporal loss of functions may also require mitigation. Temporary impacts will require submittal of a Temporary Impact Draft Restoration Plan with the 401 application. The Application for 401 Certification includes the following language: • Temporary impacts – Project impacts to aquatic resources and functions that will be restored through active and/or passive restoration methods. Temporal loss of functions may require mitigation. Temporary impacts require a Temporary Impact draft Restoration Plan (see below). • Permanent impacts – Impacts to aquatic resources and functions that result in loss of area (filled) and/or long-term ecological function degradation within the aquatic resource. Mitigation is required to offset these impacts and must meet no net loss policy (W-59-93). Permanent impacts require a draft Compensatory Mitigation Plan.	impacts and/or a Temporary Impact Draft Restoration Plan to address temporary impacts.
NCRWQCB	RWB Comment 7): Page 162 of the Draft IS/ND discusses the potential for violating water quality standards due to turbidity impacts from construction-related activities. Turbidity due to construction should be minimized by use of best management practices (BMPs), which may include a temporary water diversion system or dewatering system for any work within an active stream channel, and a water quality monitoring plan to avoid exceedances by slowing or stopping construction activities that may result in a violation of water quality standards.	The appropriate BMPs will be included to minimize potential turbidity and impacts to water quality standards. If a temporary creek diversion system is required, a water quality monitoring plan will be included with the 401-application to protect water quality standards.

Vicki Abrahamsohn (Property Owner)	We received your letter re: possible replacement of the culvert at our property by the highway at 43.67 hwy 128 Yorkville. It is our understanding that you are considering putting in a much larger culvert than what currently exists . We believe that your team thought fish pass through here. But in fact fish don't, as determined by a later investigation. The water just comes from the high mountain run off. Secondly, we heard you have a wildlife concern, thinking deer could pass underneath the highway through culvert. Honestly, deer don't go down in that area, because there are two dogs at the house right at the hwy/culvert area, and the deer just stay up high!! They don't want to be by dogs!! Also, if there ever were deer down there, I'm not sure they are smart enough to see or pass through a culvert instead of crossing the road! Thirdly, we do not get a high flow of water going through this culvert. There has never been flooding, or erosion, as it is placed nicely below in a small embankment, a bit away from our dirt road. Lots of natural rock keep this quite nicely secure. And, it does not flow during the summer. It dries up. So it's not year-long flow. If there is a crack in the existing culvert(s), we understand it may need to be repaired or replaced. But to do it routinely, or because other culverts in the area are being replaced, or because of the concerns stated above, we do not feel the project needs to take place here. Existing culvert has always been more than adequate.	Caltrans has had numerous conversations with the property owner regarding the proposed culvert design at this location and their concerns. Caltrans will consider the concerns of the property owner as we move into the design phase.

	If a new culvert is needed because the old one is faulty, then we would like the smallest possible one, the size of what exists now.	

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State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
Northern Region
601 Locust Street
Redding, CA 96001
www.wildlife.ca.gov

GAVIN NEWSOM, Governor
CHARLTON H. BONHAM, Director

December 19, 2024

Laurel Osborn
Environmental Scientist
California Department of Transportation
1656 Union Street
Eureka, CA 95501
Laurel.Osborn@dot.ca.gov

SUBJECT: MEN 128 CULVERT REHABILITATION AND FISH PASSAGE PROJECT, STATE CLEARINGHOUSE NUMBER: 2024110567

Dear Laurel Osborn:

On November 18, 2024, the California Department of Fish and Wildlife (CDFW) received an Initial Study and Proposed Negative Declaration (IS/ND) from the California Department of Transportation (Caltrans; Lead Agency) for the MEN 128 Culvert Rehabilitation and Fish Passage Project (Project), Mendocino County, California. CDFW understands that the Lead Agency will accept comments on the Project through December 20, 2024.

As a Trustee Agency for the State's fish and wildlife resources, CDFW has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and the habitat necessary to sustain their populations. As a Responsible Agency, CDFW administers the California Endangered Species Act (CESA) and other provisions of the Fish and Game Code (Fish & G. Code) that conserve the State's fish and wildlife public trust resources. CDFW offers the following comments and recommendations in our role as Trustee and Responsible Agency pursuant to the California Environmental Quality Act (CEQA; California Public Resource Code, § 21000 *et seq.*). CDFW participates in the regulatory process in its roles as Trustee and Responsible Agency to minimize Project impacts and avoid potentially significant environmental impacts by recommending avoidance and minimization measures. These comments are intended to reduce the Project impacts on public trust resources.

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Project Description
As stated in the IS/ND, the Project is located on a section of State Route (SR) 128 in Mendocino County, California. SR 128 is an east-west route that operates as a rural two-lane highway. The Project area begins at Post Mile (PM) 0.0 and ends at PM 50.5 and proposes to rehabilitate 116 deteriorating drainage facilities at 103 locations and includes one fish passage location. Proposed improvements include "cut and cover" culvert replacements at 91 locations, high-density polyethylene liner installation of five culverts, invert paving of four reinforced box culverts (RCB), cast-in-place replacement of two RCB culverts, and replacement of one culvert with a full span bridge facilitating fish passage at Mustard Gulch.

As summarized in the IS/ND, the Project includes many Standard Measures and Best Management Practices to avoid or minimize impacts to biological and other resources. The IS/ND states that Caltrans has prepared this Initial Study and, pending public review, expects to determine that the proposed Project would not have a significant impact on the environment and no mitigation is required.

Environmental Setting and Special Status Species
The Project is located east of the Pacific Ocean and occurs within a 50 mile stretch of SR 128, within the Navarro River and Russian River watersheds. The IS/ND states the Project's biological study area contains potential habitat for at least 58 special status species, seven amphibians and reptiles, five birds, four fishes, three mammals, and two invertebrates. Additionally, the IS/ND states the study area contains two Sensitive Natural Communities, 0.675 acres of wetlands and other Waters of the State[1], and 1.62 acres of riparian habitat.

CDFW Consultation History
CDFW consultation for this Project began in 2020, with CDFW staff attending preliminary site visits for potential fish passage locations. On July 18, 2023, CDFW attended a site visit at the Mustard Gulch Project location. While some preliminary discussion has occurred regarding which locations require fish passage designs, the IS/ND should include analyses to support Caltrans'

[1] "Waters of the state" means any surface water or groundwater, including saline waters, within the boundaries of the state (Cal. Wat. Code, § 13050).

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determinations. CDFW looks forward to further coordination by the Lead Agency regarding specific Project components, impacts, and proposed Project designs.

CDFW Permitting
Based on information provided in the IS/ND, the proposed Project will have substantial impacts to the bed, bank or channel of tributaries to the Navarro River and Russian River. Caltrans should notify CDFW for a Lake or Streambed Alteration (LSA) Agreement.

Based on information provided in the IS/ND, CDFW agrees with the Lead Agency there is potential for coho salmon[2] (*Oncorhynchus kisutch*) to be present within the Project work area. If the Project has the potential to result in take[3] of species listed as threatened or endangered pursuant to Fish and Game Code, the Project should coordinate further with CDFW and obtain take authorization. CDFW looks forward to continuing coordination with Caltrans to ensure that mitigation approaches will be compatible with state permitting requirements, including further coordination on mitigation approaches for impacts to onsite habitat.

CDFW Comments on the IS/ND:

1. **Fish Passage Assessments**
   The IS/ND states all but one of the drainage work locations in the Project are on a steep grade or have natural downstream barriers that are not accessible to salmonids and that Mustard Gulch (PM 7.27) is the only location currently accessible to salmonids. The IS/ND states nine additional Project locations were investigated for fish passage (PMs 15.37, 27.76, 32.08, 32.34, 32.98, 35.54, 43.30, 43.67, 45.09) and were found to not be barriers to anadromy. The IS/ND does not include these assessments, or a description of the methodology used.

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[2] Central California Coast Evolutionarily Significant Unit of coho salmon is listed as Endangered pursuant to the California Endangered Species Act.
[3] Take means hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill (Fish & G. Code, § 86).

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These nine additional locations are designated as full or partial barriers on the California Fish Passage Assessment Database (PAD; Elston, 2024). Changes to these or any other PAD location designation from barrier to non-barrier status is important because Fish & G. Code section 5901 makes it is unlawful to construct or maintain any device or contrivance that prevents, impedes, or tends to prevent or impede, the passing of fish up and down stream. Additionally, Senate Bill 857 (Streets and Highways Code section 156.3) requires projects using state or federal transportation funds (if the project affects a stream crossing on a stream where salmon or steelhead are, or historically were) to remediate any fish passage barrier. Fish passage assessments should also be included for Project locations at PMs 26.07, 26.51, and 32.77.

Therefore, CDFW recommends the IS/ND be revised to include these fish passage assessments, including a description of the methodology used **(Recommendation 1)**. Pursuant to Fish & G. Code section 5901, these assessments should also include potential habitat for resident trout, including those with potential steelhead (*O. mykiss irideus*) genetics above Lake Sonoma (Deiner et al. 2007).

2. **Fish Passage Design**
Based on information provided in the IS/ND, it is unclear if the Environmental Study Limits (ESL), Right of Way (ROW), and Temporary Construction Easements (TCE) are large enough to encompass areas needed at Project locations where fish passage design and/or stream bed vertical adjustment is needed. More specifically, the IS/ND does not contain related information regarding the development of geomorphic site assessments, longitudinal profile elevation surveys that fully capture the site geomorphic context to guide stream restoration, channel cross sections with existing and proposed Project elements, and hydraulic modeling studies. Without this information CDFW is not able to evaluate the appropriateness of proposed engineered road-stream crossing lengths/widths, the full effects of the existing and proposed road-stream crossings have had on the stream system, effects of streamflow modifications, and distance/locations of streamflow bypass around construction areas. As a result, CDFW cannot evaluate the adequacy of the ESL, ROW, and TCE. These parameters are needed to identify the entire Project area and the "whole of the action," which will inform

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appropriate ESL, ROW, and TCE (CEQA Guidelines sections 15003 (h), and 15063(a)(1)). Additionally, insufficient ROW or TCE areas could result in Project delays or unforeseen additional costs to Caltrans.

Therefore, CDFW recommends the IS/ND be revised to include (for complex fish passage remediation locations and/or locations where stream bed vertical adjustment is needed) a minimum of 30 percent design plans (including stream grading and engineered streambed material) that utilize the geomorphic site assessments, longitudinal profile elevation surveys, channel cross sections, and existing hydraulic modeling to determine the project footprint, stream reach length, and ROW/TCE required to restore geomorphic function to these Project locations **(Recommendation 2)**. Conducting this work prior to preparing a CEQA document will increase the likelihood that the ESL, ROW, and TCE are sufficient for biological effects analyses, and the appropriate Project design footprint as well as site access for construction activities.

3. **Culvert Sizing for 100-Year Storm Events**
The IS/ND cites Caltrans' Climate Change Vulnerability Assessment for District 1 (Caltrans 2019) and discusses a potential 9.9 percent increase in the 100-year storm precipitation event in the Project area. The IS/ND also states the 100-year storm event is a metric commonly used in the design of stream crossing culverts and the Project would replace existing deteriorated culverts with larger pipe sizes, where needed. The IS/ND states that increasing the diameter of culverts is anticipated to reduce the occurrence of flooding upstream of culverts and decrease water velocities at the outlet of culverts, but no information is provided to assess whether the proposed culvert sizes will pass 100-year storm event flows (e.g. watershed area, 100-year stormflow, etc.).

CDFW typically recommends stream crossings be designed to accommodate the estimated 100-year flow (1% annual exceedance probability [AEP]), including debris and sediment loads. Designing for larger storm events will become increasingly important in the context of a changing climate (Michaelis et al. 2022; Kunkel et al 2013), and can also provide terrestrial wildlife connectivity benefits. The Project's pending LSA notification should include an assessment of each culvert's watershed area, the 1% AEP flow, and the design discharge (e.g., Q_{100})

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(Recommendation 3). If Caltrans proposes culverts at stream crossings with hydraulic capacity less than the estimated 100-year flow (including sediment and debris), Caltrans should provide site-specific justifications and risk assessments.

4. **Herpetofauna Passage**
   Herpetofauna are a group of organisms that includes both amphibians and reptiles. Steep or vertical culverts and drainage inlets (DI) types are known to be barriers to herpetofauna passage, and these can entrap species such as foothill yellow-legged frog (*Rana boylii*), a species of special concern in the Project area and listed as threatened/endangered in other parts of California. In other prior Caltrans project locations, "amphibian ladders" have been incorporated into project designs to allow passage of herpetofauna. The Project's pending LSA notification should include an assessment of herpetofauna passage and propose passage designs, where appropriate **(Recommendation #4)**.

Summary of Recommendations

1. CDFW recommends the IS/ND be revised to include fish passage assessments, including a description of the methodology used. Pursuant to Fish & G. Code section 5901, these assessments should also include potential habitat for resident trout, including those with potential steelhead genetics above Lake Sonoma.

2. CDFW recommends the IS/ND be revised to include (for complex fish passage remediation locations and/or locations where stream bed vertical adjustment is needed) a minimum of 30 percent design plans (including stream grading and engineered streambed material) that utilize the geomorphic site assessments, longitudinal profile elevation surveys, channel cross sections, and existing hydraulic modeling to determine the project footprint, stream reach length, and ROW/TCE required to restore geomorphic function to these Project locations.

3. CDFW recommends the Project's pending LSA notification include an assessment of each culvert's watershed area, the 1% AEP flow rate, and the design flow (e.g., Q100). If Caltrans proposes culverts with a design

M e m o r a n d u m

Date: December 19, 2024
To: Laurel Osborn
North Region Environmental–District 1
1656 Union Street
Eureka, CA 95501
Laurel.Osborn@dot.ca.gov

From: Susan Stewart, Environmental Scientist / Caltrans Liaison
Subject: Culvert Rehabilitation and Fish Passage Project (SCH# 2024110567)

Dear Laurel Osborn,

On November 20, 2024, the North Coast Regional Water Quality Control Board (Regional Water Board) received a Draft Initial Study/Negative Declaration (Draft IS/ND) from the California Department of Transportation (Caltrans) for the Culvert Rehabilitation and Fish Passage Project (Project), located on State Route 128 from post mile (PM) 0.0 to 50.5 in Mendocino County, California. This project proposes to rehabilitate 116 drainage facilities at 103 locations and includes the replacement of one culvert with a bridge to remediate a fish passage barrier. The Draft IS/ND notes that comments must be submitted no later than December 20, 2024. The Regional Water Board hereby submits the following comments.

Regional Water Board Permitting
The proposed Project will require a Water Quality Certification under section 401 of the Clean Water Act (33 U.S.C. § 1341) for activities related to Project construction within or affecting waters of the U.S. and waters of the State.

Regional Water Board Comments

Wetlands and Other Waters Page 115 – "Total wetland impacts (Table 10) include temporary impacts of 0.046 acre and permanent impacts of 0.015 acre."

RWB Comment 1): Permanent impacts to aquatic resources of the State require compensatory mitigation. Please explain how wetland impacts will be avoided and minimized. Describe a plan for restoring temporary wetland impacts and for mitigating permanent wetland impacts.

Wetlands and Other Waters Page 116 – "*Total waters impacts (Table 11 below) include temporary impacts to jurisdictional waters of 7,629 linear feet or 0.506 acre and permanent impacts of 2,387 linear feet, or 0.055 acre. However, total water credits to jurisdictional waters (Table 12 below) include 1,108 linear feet, or 0.130 acre. The water credits are calculated when culverts that convey jurisdictional waters are upsized or daylighted. Water credits are used to offset potential permanent impacts to waters. There are currently 27 jurisdictional locations proposed to be upsized via the cut and*

cover method. One double barrel CSP and one RCB will be replaced with larger RCBs. Additionally, the existing culvert at PM 7.27 will be removed and replaced with a bridge."

RWB Comment 2): Permanent impacts to aquatic resources of the State require compensatory mitigation. Increasing the diameter of a culvert (upsizing) may be used only as an offset for an equal amount of compensatory mitigation required due to permanent impacts to streams.

RWB Comment 3): The calculation for credit is equal to half of the culvert length (linear feet) multiplied by the increase in diameter (sq. ft.) and this is converted to acres for area. Upsizing is considered as Enhancement and may be used only to offset to compensatory mitigation.

RWB Comment 4): Calculations for upsizing are not to be subtracted from the permanent impacts or total impacts for a project. The total impacts must be entered in the 401 Fee Calculator to determine the fees.

Wetlands and Other Waters, Table 12., Page 120

RWB Comment 5): – The information provided for these calculations is not adequate for verification. When submitting the Application for 401 Certification to the Regional Water Board please include a spreadsheet with calculations, layouts, and drainage profiles. The spreadsheet and plans should include the dimensions of the existing and new facilities for each drainage system.

Wetlands and Other Waters, Page 121 - Page 121 states that, "*Given the above, it was determined the project would have a "Less Than Significant Impact" in response to CEQA Environmental Checklist Question 2.4 c). Based on the determinations made in the CEQA Environmental Checklist, no mitigation measures are proposed.*"

RWB Comment 6): When a wetland, watercourse (ephemeral, intermittent and/or perennial), or vegetation within the riparian area will be permanently impacted by the proposed project, mitigation will be necessary to preserve the function and beneficial uses of the site. A draft Compensatory Mitigation Plan must be submitted with a 401 application to address permanent impacts. Temporal loss of functions may also require mitigation. Temporary impacts will require submittal of a Temporary Impact Draft Restoration Plan with the 401 application. The Application for 401 Certification includes the following language:

- Temporary impacts – Project impacts to aquatic resources and functions that will be restored through active and/or passive restoration methods. Temporal loss of functions may require mitigation. Temporary impacts require a Temporary Impact draft Restoration Plan (see below).
- Permanent impacts – Impacts to aquatic resources and functions that result in loss of area (filled) and/or long-term ecological function degradation within the aquatic resource. Mitigation is required to offset these impacts and must meet no

net loss policy (W-59-93). Permanent impacts require a draft Compensatory Mitigation Plan.

RWB Comment 7): Page 162 of the Draft IS/ND discusses the potential for violating water quality standards due to turbidity impacts from construction-related activities. Turbidity due to construction should be minimized by use of best management practices (BMPs), which may include a temporary water diversion system or dewatering system for any work within an active stream channel, and a water quality monitoring plan to avoid exceedances by slowing or stopping construction activities that may result in a violation of water quality standards.

Thank you for providing the Regional Water Board an opportunity to comment on this draft IS/MND. If you have any questions or comments or would like to discuss these recommendations, please contact Environmental Scientist, Susan Stewart at (707) 576-2657 or by email at Susan.Stewart@waterboards.ca.gov.

Best regards,

Susan Stewart

Ec:
State Clearinghouse, Office of Planning and Research
State.Clearinghouse@opr.ca.gov