

ROAD REPAIR AND ACCOUNTABILITY ACT OF 2017
PROJECT BASELINE AGREEMENT

Flume Creek CAPM

Resolution **SHOPP-P-2425-07B**

(to be completed by CTC)

1. FUNDING PROGRAM

- ☐ Active Transportation Program
- ☐ Local Partnership Program (Competitive)
- ☐ Solutions for Congested Corridors Program
- ☒ State Highway Operation and Protection Program
- ☐ Trade Corridor Enhancement Program

2. PARTIES AND DATE

- 2.1 This Project Baseline Agreement (Agreement) effective on **June 26, 2025** (will be completed by CTC), is made by and between the California Transportation Commission (Commission), the California Department of Transportation (Caltrans), the Project Applicant, **Caltrans**, and the Implementing Agency, **Caltrans**, sometimes collectively referred to as the "Parties".

3. RECITAL

- 3.1 Whereas at its **3/22/2024** meeting the Commission approved the **State Highway Operation and Protection Program** and included in this program of projects the **Flume Creek CAPM**, the parties are entering into this Project Baseline Agreement to document the project cost, schedule, scope and benefits, as detailed on the Project Programming Request Form attached hereto as **Exhibit A**, the Project Report attached hereto as **Exhibit B**, the Performance Metrics Form, if applicable, attached hereto as **Exhibit C**, as the baseline for project monitoring by the Commission.
- 3.2 The undersigned Project Applicant certifies that the funding sources cited are committed and expected to be available; the estimated costs represent full project funding; and the scope and description of benefits is the best estimate possible.

4. GENERAL PROVISIONS

The Project Applicant, Implementing Agency, and Caltrans agree to abide by the following provisions:

- 4.1 To meet the requirements of the Road Repair and Accountability Act of 2017 (Senate Bill [SB] 1, Chapter 5, Statutes of 2017) which provides the first significant, stable, and on-going increase in state transportation funding in more than two decades.
- 4.2 To adhere, as applicable, to the provisions of the Commission:
- ☐ Resolution **[REDACTED]**, "Adoption of Program of Projects for the Active Transportation Program", dated **[REDACTED]**
- ☐ Resolution **[REDACTED]**, "Adoption of Program of Projects for the Local Partnership Program", dated **[REDACTED]**
- ☐ Resolution **[REDACTED]**, "Adoption of Program of Projects for the Solutions for Congested Corridors Program", dated **[REDACTED]**
- ☒ Resolution **G-24-34**, "Adoption of Program of Projects for the State Highway Operation and Protection Program", dated **3/22/2024**
- ☐ Resolution **[REDACTED]**, "Adoption of Program of Projects for the Trade Corridor Enhancement Program", dated **[REDACTED]**

- 4.3 All signatories agree to adhere to the Commission's Guidelines. Any conflict between the programs will be resolved at the discretion of the Commission.
- 4.4 All signatories agree to adhere to the Commission's SB 1 Accountability and Transparency Guidelines and policies, and program and project amendment processes.
- 4.5 Caltrans agrees to secure funds for any additional costs of the project.
- 4.6 Caltrans agrees to report to Caltrans on a quarterly basis; on the progress made toward the implementation of the project, including scope, cost, schedule, and anticipated benefits/performance metric outcomes.
- 4.7 Caltrans agrees to prepare program progress reports on a on a semi-annual basis and include information appropriate to assess the current state of the overall program and the current status of each project identified in the program report.
- 4.8 Caltrans agrees to submit a timely Completion Report and Final Delivery Report as specified in the Commission's SB 1 Accountability and Transparency Guidelines.
- 4.9 Caltrans agrees to submit a timely Project Performance Analysis as specified in the Commission's SB 1 Accountability and Transparency Guidelines.
- 4.10 All signatories agree to maintain and make available to the Commission and/or its designated representative, all work related documents, including without limitation engineering, financial and other data, and methodologies and assumptions used in the determination of project benefits and performance metric outcomes during the course of the project, and retain those records for six years from the date of the final closeout of the project. Financial records will be maintained in accordance with Generally Accepted Accounting Principles.
- 4.11 The Inspector General of the Independent Office of Audits and Investigations has the right to audit the project records, including technical and financial data, of the Department of Transportation, the Project Applicant, the Implementing Agency, and any consultant or sub-consultants at any time during the course of the project and for six years from the date of the final closeout of the project, therefore all project records shall be maintained and made available at the time of request. Audits will be conducted in accordance with Generally Accepted Government Auditing Standards.

5. SPECIFIC PROVISIONS AND CONDITIONS

- 5.1 Project Schedule and Cost
See Project Programming Request Form, attached as Exhibit A.
- 5.2 Project Scope
See Project Report or equivalent, attached as Exhibit B. At a minimum, the attachment shall include the cover page, evidence of approval, executive summary, and a link to or electronic copy of the full document.
- 5.3 Performance Metrics
See Performance Metrics Form, if applicable, attached as Exhibit C.

Attachments:

- Exhibit A: Project Programming Request Form
Exhibit B: Project Report
Exhibit C: Performance Metrics Form (*if applicable*)

SIGNATURE PAGE
TO
PROJECT BASELINE AGREEMENT

Project Name **Flume Creek CAPM**
Resolution **SHOPP-P-2425-07B**

(to be completed by CTC)

Matteo D'Orio

Digitally signed by Matteo D'Orio
Date: 2025.04.29 16:14:16 -07'00'

4/29/2025

Date

Matteo D'Orio

Project Manager

Project Applicant

Kristen A Kingsley

Digitally signed by Kristen A Kingsley
Date: 2025.05.02 12:44:47 -07'00'

5/2/2025

Date

Kristen Kingsley

Deputy District Director Asset and Program Management

Implementing Agency

Dave Moore

Digitally signed by Dave Moore
Date: 2025.05.05 08:16:24 -07'00'

Date

Dave Moore

District Director

California Department of Transportation

Michael D. Keever

06/05/2025

Date

Michael D. Keever

Acting Director

California Department of Transportation

Tanisha Taylor

10/31/2025

Date

Tanisha Taylor

Executive Director

California Transportation Commission

June CTC SB1 SHOPP Baseline Agreements Review

Final Audit Report

2025-06-05

Created:	2025-06-05
By:	Lauren Matthews (s147989@dot.ca.gov)
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Baseline agreement information was extracted from Caltrans' project data systems. Project description, funding and performance measures are from CTIPS. Project delivery milestones are from PRSM. All information is current and accurate.

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

BASELINE AGREEMENT

Date: 05/13/25 10:01:42 AM

District	EA	Project ID		PPNO	Project Manager
02	0J810	0219000164		3777	D'ORIO, MATTEO G
County	Route	Begin Postmile	End Postmile	Implementing Agency	
SHA	5	58.0	67.019	PA&ED	Caltrans
				PS&E	Caltrans
				Right of Way	Caltrans
				Construction	Caltrans

Project Nickname

Flume Creek CAPM

Location/Description

In and near Dunsmuir, from 0.6 mile north of Sims Road to Siskiyou County line; also in Siskiyou County, from Shasta County line to south of Siskiyou Avenue (PM 0.0/2.7). Rehabilitate pavement, upgrade guardrails, bridge rail, concrete barrier, signs, and drainage systems. Also install lighting and wildlife fencing, rehabilitate bridge deck, and upgrade Transportation Management System (TMS) elements.

Legislative Districts

Assembly: 01 Senate: 01 Congressional: 01

PERFORMANCE MEASURES

	Primary Asset	Good	Fair	Poor	New	Total	Units
Existing Condition	Pavement		45.4			45.4	Lane-miles
Programmed Condition	Pavement	45.4				45.4	Lane-miles

Project Milestone

	Actual	Planned
Project Approval and Environmental Document Milestone	02/21/25	
Right of Way Certification Milestone		04/03/26
Ready to List for Advertisement Milestone		04/17/26
Begin Construction Milestone (Approve Contract)		09/02/26

FUNDING (Allocated amounts are shaded)

Component	Fiscal Year	SHOPP					Total
PA&ED	22/23	2,960					2,960
PS&E	24/25	2,100					2,100
RW Support	24/25	357					357
Const Support	25/26	5,850					5,850
RW Capital	25/26	415					415
Const Capital	25/26	65,900					65,900
Total		77,582					77,582

Memorandum

To: RICH STONE
SHOPP
HQ Financial Programming

Date: May 13, 2025

File: EA: 02-0J810
EFIS: 0219000164
SHA-005-58.0/67.019 and
SIS-005-0.0/2.7

From: *Matteo D'Orio*
MATTEO D'ORIO
Project Manager
District 02 Program/Project Management

Subject: **PROJECT STATUS UPDATE**

This memorandum is written to accompany the Baseline Agreement for the referenced project.

Since the Project Report was prepared, the milestones below have been updated. In addition, details of the funding changes and reasons can be found in PCR ID 6864*.

Currently Proposed Major Milestones:

Milestone	Project Report Schedule	Current Schedule
R/W Cert M410	3/2/2026	4/3/2026
RTL M460	3/13/2026	4/17/2026
Approve Contract M500	7/21/2026	9/2/2026

Current and Proposed Funds (all k\$):

Component	Originally Programmed	Allocated	PR Estimate	Concurrent PCR 6864* Addition	Current Estimate
PA&ED	2,960	2,960	3,158	300 (G12)*	2,960*
PS&E	2,100	2,100	2,100		2,100
R/W Sup	300	357	542		357
CON Sup	5,850		5,780		5,850
R/W Cap	415		234		415
Con Cap	60,390		65,892	5,510	65,900
Total	72,015	5,417	77,706		77,582

Attachment: 4 - 02-0J810 Concurrent PCR Flume Creek CAPM - HQ Correction v3 incl. D2 signatures (PCR 6864)

*This PCR includes a \$300K G12 for PA&ED that do not add to the current estimate total. G12 funds are accounted for separately, and the totals in CTIPS (COS total of \$11,267k and project total of \$77,582k) are the values included in the Baseline Agreement.

C: Kerry Molz
Kristen Kingsley



Project Report

02-SHA-005-58.0/67.019

02-SIS-005-0.0/2.7

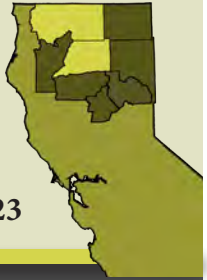
20.XX.201.121

PPNO 3777

02-1900-0164

02-0J810

AMT ID: 19223



PROJECT LOCATION

In Shasta and Siskiyou Counties at and near Dunsmuir from 0.6 mile north of Sims Road Undercrossing to 0.2 mile south of Siskiyou Avenue Overcrossing.



"This Project Report has been prepared under the direction of the following registered civil engineer. The registered civil engineer attests to the technical information contained herein and has judged the qualifications of any technical specialists providing engineering data upon which recommendations, conclusions and decisions are based."



Buster Hansen

BUSTER HANSEN, P.E.

2/19/2025

Date

I have reviewed the right of way information contained in this Project Report and R/W Data Sheet attached hereto, and find the data to be complete, current and accurate:

Tadj Ratajczak

2/20/25

TADJ RATAJCZAK
Assistant Division Chief
North Region Right of Way
Eureka/Redding

Date

Approval
Recommended:

Kelly B. Timmons

19 Feb. 2025

KELLY B. TIMMONS, P.E.
Project Manager, District 2

Date

Sean Shepard

February 20, 2025

SEAN E. SHEPARD, P.E.
Chief, Asset Management,
District 2

Date

Project
Approved:

Dave Moore

February 21, 2025

DAVE MOORE, P.E.
District Director, District 2

Date

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1. INTRODUCTION

This Draft Project Report proposes Capital Preventative Maintenance (CAPM) minor pavement rehabilitation of Interstate 5 (I-5) at and near the communities of Castella in Shasta County and Dunsmuir in Siskiyou County. The project will overlay 45.4 lane miles of pavement, repair rocking concrete slabs, and upgrade deficient median barrier and guardrail. Drainage systems will be rehabilitated, and two Intelligent Transportation Systems will be replaced. Additionally, two structures will receive deck-on-deck rehabilitation, polyester concrete overlays, and upgraded bridge railing. Lastly, a wildlife crossing will be constructed, and wildlife management fencing will be installed. Construction is estimated to take 360 working days.

A Location Map is included as Attachment A. A summary of project information is provided in the table below.

Project Information Summary

Project Limits	02-SHA-005-58.0/67.019 02-SIS-005-0.0/2.7			
Number of Alternatives	2 (Including No-build)			
	Current Cost Estimate		Escalated Cost Estimate	
Capital Outlay Support	-		\$11,580,000	
Capital Outlay Construction	\$58,975,000		\$65,892,000	
Capital Outlay Right of Way	\$214,000		\$234,000	
Funding Source	SHOPP Type (20.XX.201.121) Pavement Preservation (CAPM)			
Funding Year	2025/2026			
Construction Years	2026-2028			
Working Days	360			
Type of Facility	Four-Lane Freeway			
Number of Structures	2			
SHOPP Project Output	Class I Pavement Lane Miles	Good	Fair	Poor
	Existing Condition	0.0	45.4	0.0
	Post Condition	45.4	0.0	0.0
Environmental Document	CEQA*: Initial Study/Mitigated Negative Declaration NEPA*: Categorical Exclusion			
Legal Description	In Shasta and Siskiyou Counties at and near Dunsmuir from 0.6 mile north of Sims Road Undercrossing to 0.2 mile south of Siskiyou Avenue Overcrossing.			
Project Development Category	Category 4B			

*California Environmental Quality Act, National Environmental Policy Act

2. RECOMMENDATION

It is recommended that the project be approved using the preferred alternative, and that the project proceed to the final design phase.

3. BACKGROUND

Past/Future Projects

This stretch of I-5 was originally constructed in the 1950s by the Department of Public Works, Division of Highways. Since then, there have been numerous maintenance and improvement projects. Most recently, the Sims Road Undercrossing (UC) and Crag View Drive UC structures were replaced in 2021 as part of the Sims Crag Combined project (02-4G41U). The bridge deck of the Castella UC was rehabilitated with a polyester concrete overlay in 2020. Further, in 2014 the Flume Creek Overlay project (02-4G160) milled and filled 0.1' of pavement which is now reaching the end of its expected service life.

The latest capital improvement adjacent to the project limits were the Canyonero 2R Rehab (02-2C450) in Shasta County from PM R44.4/58.0 that was completed in 2013 and the Southbound Dunsmuir Rehab (02-4G550) in Siskiyou County from 2.7/11.4 completed in 2021. Additionally, the Sac Gap Combined project (02-3H32U) is currently in construction in Siskiyou County from PM 2.5/R15.9. This project will place concrete pavement in the northbound direction and replace the deck of the southbound Sacramento River BOH.

The Flume Creek Leftover Culverts project (02-3J570) is a follow up to the Flume Creek CAPM (02-0J810) and is scheduled to begin construction in 2028. The project scope originally included replacing 60 drainage systems, most of which were previously recommended for the CAPM. However, they were removed from the scope at the time due to fiscal constraints and delivery risks. Thirty-three of the 60 systems (64 segments) were later accelerated back into the CAPM project, via a Project Change Request (PCR), to avoid trenching through the new pavement.

Project History

In June 2021, the Project Initiation Report (PIR) was signed thus approving the CAPM strategy and project scope. In addition to extending the service life of the pavement, the PIR proposes to repair and upgrade other assets such as median barrier, guardrail, drainage facilities, TMS elements, bridge deck rehabilitation, lighting, and wildlife connectivity measures.

A Supplemental PIR was later approved in July 2021, which added scope to replace an additional two miles of deficient median barrier and install an additional two miles of wildlife management fencing.

In total, the PIR and Supplemental PIR provided for approximately six miles of wildlife management fencing, most of which was proposed for Siskiyou County from PM 0.0/1.8. This portion of fence was ultimately eliminated from the project because the steep terrain and dense timberland would make the installation and maintenance efforts unfeasible. The wildlife crossing and reduced fence limits will meet the project's mitigation requirements.

In 2022, a routine bridge inspection of the Castella UC at PM 63.58 identified extensive cracking and spalling of the polyester concrete overlay that was installed only two years prior. It was determined the overlay is failing due to unsound concrete in the bridge deck and was deemed no longer effective as an impermeable wearing surface. As a result, Structure Maintenance & Investigations proposed rehabilitation in the form of a 5.125-in reinforced concrete micro deck-on-deck and a 1-in polyester concrete overlay. As a result, the concrete median barrier and bridge railings will be upgraded, and new approach slabs will be installed.

Community Interaction

A Public and Stakeholder Engagement Summary is included as Attachment K.

Existing Facility

On this section of I-5, there are two 12-ft lanes of travel in each direction, a 12-ft to 16-ft median (separated by a concrete barrier), and 10-ft to 12-ft shoulders. The route follows a curvilinear alignment and traverses steep, mountainous terrain. The regulatory speed limit is 65 MPH.

The existing structural section is comprised of aggregate subbase, cement treated base, cracked and sealed PCC pavement, and asphalt concrete. The wearing surface is a gap-graded rubberized asphalt concrete.

Within the project limits, there are 17 structures, nine interchanges, 34 ramps, 132 drainage systems (697 culvert segments), one Roadside Weather Information Station (RWIS), and one Closed Circuit Television (CCTV), 39 traffic monitoring stations, 58 luminaires, 72 signs, and one vista point within the State Right-Of-Way.

4. NEED AND PURPOSE

4A. PROBLEM, DEFICIENCIES, JUSTIFICATION

Need

By the project delivery year of 2026, approximately 45.4 lane miles within the project limits will be in fair condition. There are approximately 100 rocking concrete slab locations causing damage to the overlying pavement. There

are drainage systems in various conditions that may cause damage to the roadway if not repaired or replaced. The Castle Creek Bridge and Castella UC have poor bridge health ratings. Much of the median barrier and guardrail is below standard height. The signing, striping, CCTV, and RWIS are also partially obsolete.

Purpose

The purpose of this project is to restore the facility to a state of good repair that requires minimal maintenance.

4B. REGIONAL AND SYSTEM PLANNING

Identify Systems

Interstate 5 is a Principal Arterial/Interstate on the National Highway System used for predominately longer interregional trips and goods movement. It links most metropolitan areas in the states of California, Oregon, and Washington, as well as trade between Mexico and Canada. In California, I-5 begins at the US-Mexico border near San Diego, runs northward through the state, and ends at the Oregon border. The route connects numerous well-populated cities throughout the state, including San Diego, Los Angeles, Sacramento, and Redding.

Per the most recent Interstate 5 Transportation Concept Report (TCR), I-5 has the following designations: National Highway System (high priority), Interregional Road System, Strategic Highway Network (STRAHNET), Surface Transportation Assistance Act (STAA), High Emphasis Route, Freeway/Expressway System, Corridor of the Future, Intermodal Corridor of Economic Significance, National Scenic Byway Volcanic Legacy-All American Road, Nomlaki Highway, Lifeline Route, and Blue Star Memorial Highway.

Regional and Local Planning

Roadway Capital Preventive Maintenance is consistent with the I-5 Transportation Concept Report (June 2008) and with a maintenance service level (MSL) of One. Caltrans provides the highest level of priority maintenance for MSL-1 facilities.

4C. TRAFFIC

Current and Forecasted Traffic

The District 2 Office of Traffic Management provided the current and forecasted traffic data for the project limits. The traffic data is shown in the table below.

Traffic data for Shasta/Siskiyou I-5 between PM 58.0 and 2.7

Year	ADT	DHV	TI
2019 (base)	20,100	2,600	-
2027 (construction)	24,582	3,180	-
2032 (5 year)	27,382	3,543	12.5
2037 (10 year)	30,182	3,905	13.5
2047 (20 year)	35,782	4,630	15
2057 (30 year)	41,382	5,354	15.5
2067 (40 year)	46,982	6,079	16.5
Directional Split (2019) = 53%			
Trucks (2019) = 33%			

ADT = Average Daily Traffic, DHV = Design Hourly Volume

TI = Traffic Index

Collision Analysis

The District 2 Office of Traffic Safety and Investigations provided the following collision history and analysis for the five-year period between October 1, 2018 and September 30, 2023. The collision rates within the project area compared to the statewide average for similar facility types are shown in the tables below.

Collision data from TASAS Table B for SHA 005 between PM 58.0 and 67.0

Collision Rates*	Actual	Statewide Average
Total Collision Rate (acc/mvm)	0.48	0.61
Fatal plus Injury Collision Rate (acc/mvm)	0.13	0.22
Fatal Collision Rate (acc/mvm)	0.003	0.010

*acc/mvm – collision per million vehicle miles

All the actual rates are below the statewide average for similar facilities.

There were 167 reported crashes on this 9-mile-long freeway segment, of which 44 were injury crashes, 122 were property damage only crashes, and one was fatal. Seventy-nine crashes happened in dark conditions and 37 in wet conditions. According to the type of collision code recorded in TASAS, of the 167 total crashes, there were 102 hit object, 26 sideswipes, 16 other (five deer & five other animal), 12 rear end, eight overturns, two broadsides and one head on. The most common primary collision factor was improper turn (56) followed by speeding (53).

Collision data from TASAS Table B for SIS 005 between PM 0.0 and 2.7

Collision Rates*	Actual	Statewide Average
Total Collision Rate (col/mvm)	0.35	0.63
Fatal plus Injury Collision Rate (col/mvm)	0.07	0.21
Fatal Collision Rate (col/mvm)	0.010	0.010

*col/mvm – collisions per million vehicle miles

All the actual rates are equal to or below the statewide average for similar facilities.

There were 34 reported crashes on this nearly 3-mile-long freeway segment, including six injury crashes, 27 property damage only crashes, and one fatal. Fourteen crashes happened in dark conditions and five in wet conditions. Of the 34 total crashes, there were 18 hit object, seven sideswipes, four deer, four rear end, and one broadside. The most common primary collision factor was improper turn (10) followed by speeding (nine).

There are no collision concentrations within the project limits, therefore the District 2 Office of Traffic Safety and Investigations currently has no recommendations to address specific safety concerns. Even so, the project proposes several safety enhancements including upgraded (standard) guardrail and median barrier, high visibility striping, and wildlife fencing with a new crossing.

5. ALTERNATIVES

There are two proposed alternatives for this project, the “build” alternative and the “no-build” alternative.

5A. VIABLE ALTERNATIVES

Alternative 1 – Build Alternative

A summary of the proposed engineering features for this project are identified below. Preliminary project plans are included as Attachment C.

Pavement Strategy

- Overlay with Rubberized Hot Mix Asphalt - Gap Graded (RHMA-G).
 - o 0.15-ft on roadway, including shoulders, median, and ramps.
 - o Conform on/off-ramps to the ramp termini.
- Perform digouts at locations of localized failed pavement prior to placement of RHMA-G.
- Install shoulder backing to support edge of pavement.
- Replace structural section at approximately 100 rocking concrete slab locations. The structural section will consist of 0.66' of PCC under 0.50' - 0.75' of Type A HMA overlaid with RHMA-G.
- Seal parking area at the Vista point at PM 62.36.

Traffic Safety

- Replace approximately 11 miles of nonstandard median barrier with Type 60M/60MC barrier. Portions of the existing type 50 barrier from PM 64.0 to PM 65.0 have a deepened footing with drainage systems integrated into the footing, which will get replaced with the median barrier.
- Replace approximately 53,000 feet of metal beam guardrail with Midwest Guardrail System, including end treatments and transition railing at structure locations.

Signs and Delineation

- Replace 72 signs utilizing steel posts when feasible.
- Apply recessed wet night enhanced thermoplastic striping.
- Install recessed retroreflective pavement markers.
- Apply recessed pavement markings, including cattle guard pavement markings at on and off ramps to connect wildlife management fencing.

Drainage

Rehabilitate 81 drainage systems (approximately 200 culvert segments). Existing 18-in diameter cross culverts will be upsized to 24-in, where feasible, for additional capacity and maintenance operations. Culverts will be replaced via open trenching (cut-and-cover) or rehabilitated with cured-in-place pipe liners. Drainage systems contained within the existing median barrier (PM 64.0 to PM 65.0) will be replaced at the inside shoulder adjacent to the new median barrier. Approximately 30 drainage inlets and 20 slotted drains will be adjusted to grade. A summary of the proposed drainage improvements is included as Attachment L.

Lighting

Replace and install new luminaires as shown in the table below.

Luminaires

Location	Replace	Add
Flume Creek Rd NB off-ramp	1	1
Conant Rd SB off-ramp	1	1
Sweetbrier Ave NB off-ramp	1	1
Sweetbrier Ave SB off-ramp	1	1
Castella NB off-ramp	2	
Castella SB off-ramp	1	1
Soda Creek Rd NB off-ramp	1	1
Soda Creek Rd SB off-ramp	1	1

Location	Replace	Add
Crag View Dr NB off-ramp	2	
Central Dunsmuir NB off-ramp	2	
Total	13	7

Structures

Castle Creek Bridge (Br. 06-0116) and Castella UC (Br. 06-0117) will receive similar rehabilitation measures which include constructing a reinforced concrete micro deck-on-deck with a 1-in polyester concrete overlay, upgrading the existing Type 25 bridge railing to Type 842 railing, replacing the existing Type 60 median barrier, and construction of new approach slabs.

Wildlife Management

Wildlife Crossing

Construct a 12-ft x12-ft precast reinforced concrete box culvert, approximately 140 feet in length, at PM 65.88 for wildlife connectivity. The geometrics of the crossing do not meet the recommended openness-ratio for large mammals per the Caltrans Wildlife Guidance Manual. Therefore, based on recommendations from the PDT, grates will be installed in the median to provide natural lighting to minimize a perceived 'tunnel effect' on wildlife.

Wildlife Fencing

Install approximately two miles of wildlife management fencing between the Soda Creek interchange at PM 65.4 and the northbound Crag View Drive off-ramp at PM 66.2, on both sides of I-5. The fence will be installed at the same location of existing access-control or right-of-way fence except where it deviates to direct wildlife to the freeway crossing. The eight-foot-tall wire-mesh fence will include animal jump outs and gates for maintenance activities. Painted cattle guard markings will be included at on and off-ramps in the vicinity.

Traffic Management Systems

Upgrade the existing Road Weather Information System (RWIS) and Closed-Circuit Television (CCTV) stations in the community of Dunsmuir at PM 2.61. Replace or modify approximately 30 traffic loops at existing traffic monitoring stations.

Nonstandard Design Features

This project is scoped as a CAPM and follows the guidance documented in Design Information Bulletin (DIB) 81. Therefore, existing nonstandard features that are being perpetuated with this project are not required to have

documented design exceptions. All new design elements proposed with the project scope (e.g., upgraded median barrier, bridge railings, etc.), will meet the minimum HDM design standards.

Utility and Other Owner Involvement

Utilities within the project limits are summarized in the table below.

Utilities

Utility Owner	Underground/Aerial	Type
AT&T	Aerial	Telephone
AT&T Legacy	Underground	Fiber Optic
City of Dunsmuir	Underground	Water
Vyve Broadband	Underground	Fiber Optic
Pacific Power	Aerial	Electrical

There is one utility (fiber optic) in conflict with the proposed work in the northbound shoulder at PM 2.65 in Siskiyou County. The utility relocation costs are shown on the Right of Way Data Sheet, which is included as Attachment F.

Railroad Involvement

This project features drainage system rehabilitation within and near the Union Pacific Railroad right of way (UPRR R/W). Railroad flaggers will be required while working within 25 feet of UPRR tracks. Right of Entries and Drainage Agreements for this work will be executed during the final design phase. The railroad costs are shown on the Right of Way Data Sheet, which is included as Attachment F.

Erosion Control

Erosion control will include temporary best management practices (BMPs) such as spray-on seed, straw, and emulsion. The wildlife crossing, and wildlife fencing will be the most significant locations of soil disturbances. The Storm Water Data Report is included as Attachment E.

Cost Estimates

The current year capital cost estimate for this project is \$58,975,000. The estimate is based on current construction trends and material availability. The most significant costs are associated with hot mix asphalt paving, the concrete median barrier, culvert rehabilitation, and structure work. The cost estimate is included as Attachment D.

5B. REJECTED ALTERNATIVE

Alternative 2 – No-Build Alternative

The no-build alternative would not make any improvements to the existing facility within the project limits. Recurring extensive and costly maintenance efforts would be required to maintain an acceptable ride quality and the existing nonstandard features would remain. This alternative does not meet the need and purpose of the project.

6. CONSIDERATIONS REQUIRING DISCUSSION

6A. HAZARDOUS WASTE

An initial site assessment (ISA) was conducted by the North Region Office of Environmental Engineering to identify hazardous materials that could be present within the project limits. The ISA identified the potential for the following hazardous materials:

- *Aerially Deposited Lead (ADL)* – Lead-contaminated soil may exist within and near the right of way due to the historical use of leaded gasoline. A site investigation (SI) will be conducted in the design phase to determine the extent and concentration of ADL throughout the project. It is expected that standard special provisions (SSPs) will be required to address handling of ADL-containing material, and a lead compliance plan will be included as a separate bid item.
- *Lead and Chromium* – Lead and chromium may be present in traffic stripe residue and will require SSPs and a lead compliance plan for safe handling and disposal of the material.
- *Treated Wood Waste* – Treated wood waste will be generated from guardrail and sign removal. Temporary storage and disposal of treated wood will be addressed in the SSPs.
- *Styrene* – Cured in Place Pipe liners will be used to rehabilitate drainage facilities. The potential for hazardous waste may exist with styrene (a highly volatile chemical used in the main liner). Styrene is also a component of polyester concrete which will be included in the structure work. Safe handling of styrene will be performed in accordance with the Manufacturer's Material Safety Data Sheet.

6B. VALUE ANALYSIS

A Value Analysis (VA) Study was conducted in October 2023. The VA team identified six alternatives and recommended four alternatives be adopted.

During the implementation meeting, management decided to accept two alternatives and rejected two alternatives. The accepted alternatives include changing the paving strategy from mill/fill to an overlay and to include gaps in the median barrier for emergency vehicles and wildlife egress. The accepted alternatives are expected to reduce construction costs by \$1,458,000 and reduce the construction duration by 25 days. The alternatives are summarized in the table below.

Value Analysis Summary

Alternative No. & Description	Assumed Cost Savings	Change in Schedule	Change in Performance	Accepted or Rejected
No.1 - Eliminate 90% of the milling and place 0.2' overlay	\$1,458,000	25-day	2.6 %	Accepted
No.2 - Allow the use of rapid set concrete for slab replacement in lieu of full depth HMA	\$14,000	5-day	2.8 %	Rejected
No.3 - Utilize existing under-crossings for wildlife connectivity in lieu of wildlife crossing	\$2,645,000	None	0.0 %	Rejected
No.4 - Install safety barrier gaps in median for emergency vehicles and wildlife egress	\$0	None	7.4 %	Accepted
No.5 - Install intermittent sections of wildlife-friendly median barrier	\$107,000	None	7.4 %	Rejected
No.6 - Use reinforced concrete pipe in lieu of corrugated steel for extended lifespan	(\$1,163,000)	None	7.8 %	Rejected

6C. RESOURCE CONSERVATION

This overlay will extend the life of the existing pavement section and extend the longevity of the roadway before full pavement reconstruction is needed. This pavement preservation strategy maximizes the use of existing infrastructure and therefore will reduce environmental impacts from the extraction and consumption of non-renewable resources associated with the production of new materials.

The project will use approximately 71,000 tons of RHMA made from non-renewable rubber tires.

6D. RIGHT OF WAY

Right of way acquisition will be required to construct this project. A summary of right of way needs is shown in the table below.

Summary of right of way acquisition needs

Type of Acquisition	Number of Parcels	Area (acres)
Temporary Construction Easement	5	0.55
Permanent Drainage Easement	5	0.35
Transfer of Jurisdiction	1	0.03
Right of Entry* / Drainage License*	5	0.49
Temporary Work Area*	5	0.32

*Railroad acquisition

A Right of Way Data Sheet is included as Attachment F.

6E. ENVIRONMENTAL COMPLIANCE

The Initial Study with Mitigated Negative Declaration has been prepared in accordance with Caltrans' environmental procedures, as well as State and Federal environmental regulations. The attached Initial Study with Mitigated Negative Declaration is the appropriate document for the proposal.

The project is Categorically Excluded under the National Environmental Policy Act (NEPA).

Wetland and Floodplain

A Floodplain Evaluation determined the project will not have any impacts to the floodplain.

The Environmental Document is included as Attachment G.

6F. AIR QUALITY CONFORMITY

Air quality conformity is not required.

6G. TITLE VI CONSIDERATIONS

Provisions for low mobility and minority groups have been considered during the development of this project. This project meets Title VI requirements.

7. OTHER CONSIDERATIONS AS APPROPRIATESlope Stabilization

During the PAED phase, Caltrans Maintenance identified an area of localized pavement subsidence in Siskiyou County at PM 1.1. At this location, the outside lane and shoulder have exhibited continued settlement requiring ongoing maintenance efforts. The PDT performed preliminary investigations and studies and recommended a Geosynthetic Reinforced Embankment (GRE), which is referenced in many of the Attachments. However, due to the additional construction capital costs to

include the GRE, the work was not added to the scope of this project. A separate Minor A project is being initiated to address the subsidence issue and is expected to be combined with this project at the time of Construction.

Public Hearing Process

A virtual open house style meeting was conducted during the public circulation of the DED. During the meeting, the PDT highlighted the project scope, schedule, cost, and environmental document and fielded questions from the public and other state agencies. All comments were addressed and incorporated into the final PR and DED.

Transportation Management Plan

Construction will mostly be conducted under Standard Plan T10 lane closures with speed reduction. A 16-ft traveled way in each direction will be maintained throughout construction. Bicyclists are allowed within the project limits and will utilize the open shoulder during construction. Existing census loops at traffic monitoring stations will be replaced or protected in place. The wildlife crossing and structure locations are expected to require 24-hr lane closures.

The Traffic Management Data Plan (TMP) Data Sheet is included as Attachment H.

Stage Construction

Staging plans are anticipated for wildlife crossing and structure locations. The use of traffic crossovers at these locations is currently being investigated and will require authorization from the Lane Closure Committee.

Equity

Within the project limits, I-5 provides the only highway access for several underserved/disadvantaged communities in northern Shasta and southern Siskiyou counties to nearby goods and services. This project will make needed improvements to the pavement, drainage, and guardrail, increasing the safety, longevity, and reliability of this section of I-5. There will be impacts to these communities during construction, primarily in the form of traffic delays. These delays and impacts will be fully analyzed and mitigated in the TMP, taking into consideration other planned construction and maintenance activities in the corridor and any local events specific to these individual communities.

Asset Management

The primary SHOPP performance measure and the associated quantity for this project is: Pavement Preservation, 45.4 lane miles.

The assets and performance measures are included as Attachment B.

Complete Streets

Bicyclists are permitted to use the outside shoulders when travelling through this section of I-5. Conditions will be improved for bicyclists by providing a smoother surface and improved delineation. Bicycle friendly grates will be used at drainage inlets.

Transit

Siskiyou Transit and General Express (STAGE) operates services within the project limits (between Yreka and Castella) one to two times a day, Monday through Friday. Coordination with STAGE is anticipated.

Climate Change Considerations

Increasing temperatures are expected to cause changing precipitation events, due to an increase in energy and moisture in the atmosphere. Heavier storm events, combined with other changes in land use and land cover, can increase the risk of damage or loss from flooding. Transportation assets in California are affected by precipitation in a variety of ways, including flooding, landslides, washouts, and structural damage from heavy rainfall.

The level of wildfire concern is considered very high within the project limits. Higher temperatures and changing precipitation patterns are expected to influence the likelihood and severity of wildfires. Decreased precipitation creates drier conditions, thus increasing wildfire risk. Increasing precipitation contributes to growth in land cover, thereby increasing the amount of fuel available for wildfires. Wildfires can also contribute to landslide and flooding exposure by burning off protective land cover and reducing the capacity of the soils to absorb rainfall.

Increasing drainage capacity in areas where wildfires are projected to occur has been considered. When feasible, existing culverts will be replaced with larger capacity culverts in areas expected to face increased flow and debris during heavy precipitation events.

Climate change adaptation measures proposed for this project include:

- The use of metal or concrete culverts, metal signposts, and metal guardrail posts to be more fire resilient.

- The upsizing of culverts where applicable to provide additional capacity for future increases in precipitation.

8. FUNDING, PROGRAMMING, AND ESTIMATE

Funding

It has been determined that this project is eligible for Federal-aid funding.

Programming

The project was originally programmed for \$57,390,000 construction capital and \$415,000 right of way capital in the 2022 SHOPP Pavement Preservation program (20.XX.201.121) for delivery in the 2025/2026 fiscal year. A PCR to include the Castella UC deck and bridge rail rehabilitation was submitted for an additional \$3,000,000 of Infrastructure Investment and Jobs Act (IIJA) funding.

A programming sheet has been prepared to identify proposed capital and support costs and is included as Attachment I. The current support to capital cost ratio for this project is 18 percent.

Estimate

The current construction cost estimate is based on recent bidding trends and material supplies. The cost has been escalated by 4.89% for the 25/26 FY and 3.8% per year thereafter to the midpoint of construction. The construction capital costs exceeding the programmed amount and PCR will be addressed at the time of allocation. The current-year engineer's estimate is included as Attachment D.

9. DELIVERY SCHEDULE

Project Milestones		Milestone Date	Milestone Designation*
Program Project	M015	03/17/2022	A
Begin Environmental	M020	01/19/2023	A
Circulate DPR & DED Externally	M120	12/12/2024	A
PA & ED	M200	02/21/2025	T
Bridge Site Submittal	M221	03/04/2024	A
R/W Requirements	M224	07/02/2024	A
Design P&E	M300	10/20/2025	T
PS&E to DOE	M377	12/15/2025	T
Draft Structures PS&E	M378	11/10/2025	T
Project PS&E	M380	02/09/2026	T
Right of Way Certification	M410	03/02/2026	T

Project Milestones		Milestone Date	Milestone Designation*
Ready to List	M460	03/13/2026	T
Headquarters Advertise	M480	04/06/2026	T
Award	M495	06/23/2026	T
Approve Contract	M500	07/21/2026	T
Contract Acceptance	M600	01/04/2030	T
End Project Expenditures	M800	01/05/2032	T
Final Project Closeout	M900	10/05/2033	T

* A Actual date milestone was met

T Target date milestone will be met

10. RISKS

Project risks have been documented in the Risk Management Plan (RMP), which is included as Attachment J. The most significant risks include potential delays associated with Right-of-way acquisitions with the railroad and increased costs due to volatile asphalt and fuel prices.

11. EXTERNAL AGENCY COORDINATION

Federal Highway Administration

This project is on the National Highway System (NHS). This project is not a Project of Division Interest. Project approvals have been delegated by FHWA to the State with the Stewardship and Oversight Agreement.

The project requires the following coordination:

U.S. Army Corps of Engineers

Department of the Army Permit for Clean Water Act Section 404.

U.S. Forest Service

Letter of Concurrence from the Shasta Trinity National Forest District.

California Department of Fish and Wildlife

California Fish and Game Code Section 1602, Lake or Streambed Alteration Agreement.

Regional Water Quality Control Board

Clean Water Act Section 401 Water Quality Certification.

Native American Tribes

Nor-Rel-Muk Wintu Nation

Pit River Tribe

Quartz Valley Indian Reservation

Redding Rancheria

Shasta Nation

Winnemem Wintu Tribe

Wintu Tribe of Northern California

Local Public Agencies

City of Dunsmuir

Siskiyou County

Siskiyou County Local Transportation Commission

Shasta County

Shasta Regional Transportation Agency (SRTA)

Transit Agencies

Siskiyou Transit and General Express (STAGE)

Railroads

Union Pacific Railroad

12. PROJECT REVIEWS

Review	Reviewer	Date
District Program Advisor	Michael Conner	5/12/2021
HQ SHOPP Program Advisor	Long Huynh	5/12/2021
PDT PA&ED Phase Field Review	PDT	10/13/2023
North Region Construction	Sheri Re	5/12/2021
District Maintenance	Willie Elder, Michael Webb	5/15/2021
HQ Project Delivery Coordinator	John Roccanova	8/28/2024
Project Manager	Eric Orr, Kelly Timmons	5/12/2021
Constructability Review (C113)	PDT	6/5/2024

13. PROJECT PERSONNEL

Name	Position
Kelly Timmons	Project Manager*
Travis Gurney	Design Branch Chief
Buster Hansen	Design Project Engineer
Carolyn Sullivan	Environmental Branch Chief
Xing Zheng	Geotechnical Engineer
John Luper	Environmental Coordinator
Ryan Bradshaw	Cultural Resource Specialist
Theresa Tillson	Biologist
Matt Lee	Structure Design Branch Chief
Sebastian Barajas	Structure Design Project Engineer
Roddy Estes	Traffic Management Chief
Bill Walker	Right of Way Branch Chief
John Hinton	Area Construction Engineer
Vance Hackney	Constructability Reviewer
Frank Rivas	Traffic Operations Chief
Rick Kuykendall	Maintenance Liaison
Charles Pepper	Gibson Field Maintenance Supervisor
Chad Massey	Mt. Shasta Field Maintenance Supervisor

*For project inquiries, please contact the project manager at (530) 945-0226.

14. ATTACHMENTS

- A. Location Map
- B. Project Performance Measures
- C. Preliminary Project Plans
- D. Cost Estimate
- E. Storm Water Data Report
- F. Right of Way Data Sheet
- G. Environmental Document
- H. Transportation Management Plan Data Sheet
- I. Programming Sheet
- J. Risk Management Plan
- K. Public Engagement Summary
- L. Drainage Assessment Summary

Attachment A

Location Map

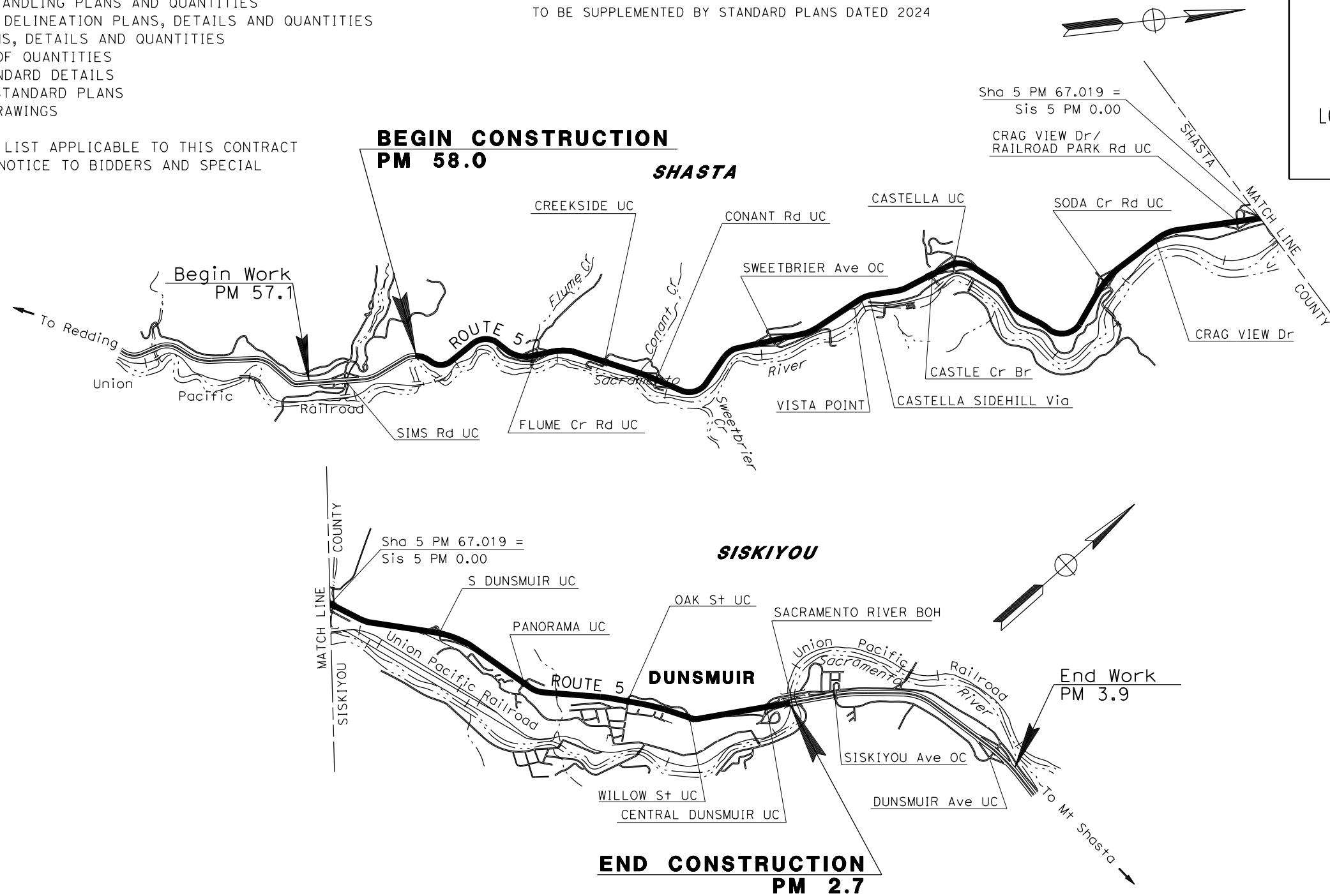
SHEET No.	DESCRIPTION
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1	TITLE AND LOCATION MAP
X-X	TYPICAL CROSS SECTIONS
X	KEY MAP AND LINE INDEX
XX-XX	LAYOUTS
XX-XX	PROFILES AND SUPERELEVATION DIAGRAMS
XX-XX	CONSTRUCTION DETAILS
XX-XX	TEMPORARY WATER POLLUTION CONTROL PLANS
XX-XX	CONTOUR GRADING PLANS
XX-XX	DRAINAGE PLANS, PROFILES, DETAILS AND QUANTITIES
XX-XX	UTILITY PLANS
XX	CONSTRUCTION AREA SIGNS
XX-XX	MOTORIST INFORMATION PLANS
XX-XX	STAGE CONSTRUCTION PLANS
XX-XX	TRAFFIC HANDLING PLANS AND QUANTITIES
XX-XX	PAVEMENT DELINEATION PLANS, DETAILS AND QUANTITIES
XX-XX	SIGN PLANS, DETAILS AND QUANTITIES
XX-XX	SUMMARY OF QUANTITIES
XX-XX	MMBN STANDARD DETAILS
XX-XX	REVISED STANDARD PLANS
XX-XX	VENDOR DRAWINGS

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

**PROJECT PLANS FOR CONSTRUCTION ON
STATE HIGHWAY
IN SHASTA AND SISKIYOU COUNTIES
AT AND NEAR DUNSMUIR FROM
0.6 MILE NORTH OF SIMS ROAD
UNDERCROSSING TO 0.2 MILE
SOUTH OF SISKIYOU AVENUE
OVERCROSSING**

TO BE SUPPLEMENTED BY STANDARD PLANS DATED 2024



NO SCALE

Dist	POST COUNTY	ROUTE	TOTAL MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Sha, Sis	5	58.0/67.0, 0.0/2.7		

LOCATION MAP

SIGNATURE XX-XX-XX
PROJECT ENGINEER DATE
REGISTERED CIVIL ENGINEER

Month, Day 20XX

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.

CONTRACT No.	02-0J8104
PROJECT ID	0219000164

Attachment B

Project Performance Measures

Shasta County PM 58.0 - 67.019

SHOPP Project - Accomplishment - Performance Measures - Benefits

District:02

Tool ID:19223

Project ID:0219000164

EA:0J810

Co-Rte-PM:SHA-005-58.0/67.019 (Primary Location)

View/Print PIR (Performance) Report

Multi-Objective Worksheet

Bridge

Pavement

Drainage

Facilities

Signs and Lighting

Mobility

Roadside

Bicycle and Pedestrian Infrastructure

Sustainability /Climate Change

Advance Mitigation /Mitigation

Major Damage & Betterments

Green-house Gases

Relinquishment

Performance & Accomplishments (PFC)

ActID	Activity Detail	Performance Objective	Unit of Measurement	Quantity	Pre-Good	Pre-Fair	Pre-Poor	New	Post-Good	Post-Fair	Post-Poor	HQ Program Review - Agree with District?	HQ Comment	Review Date	Performance Change Date After Review	Comment
1	A03 Bridge Rail (201.112)	Bridge Rail Replacement and Upgrade	Linear Feet	1365.000	1365.000				1365.000							
2	A04 Bridge Rehabilitation (201.110, .111, .113, .322)	Bridge and Tunnel Health	Square Feet	32453.000			32453.000		32453.000							
3	A06 Bridge Approach Slabs (201.110, .111, .113, .322)	No Performance Objective in the SHSMP	Square Feet	10080.000			10080.000									
4	A06 Number of Bridges	No Performance Objective in the SHSMP	Each	2.000				0.000								
5	B25 Asphalt Pavement Minor Rehab (CAPM)	Pavement Class I	Lane Miles	35.304		35.304		0.000	35.304							
6	C01 Replace/Install Culverts (201.151)	No Performance Objective in the SHSMP	Each	151.000		13.000	138.000									
7	C02 Replace/Install Culverts (201.151)	Drainage Restoration	Linear Feet	13288.000		2069.710	11213.620	4.670								
8	C07 Abandon/Remove Culvert (201.151)	No Performance Objective in the SHSMP	Each	2.000			2.000									
9	C08 Abandon/Remove Culvert (201.151)	Drainage Restoration	Linear Feet	280.520			280.520									
10	C13 New Culvert	No Performance Objective in the SHSMP	Each	1.000				1.000								
11	C14 New Culvert	Drainage Restoration	Linear Feet	140.000				140.000								
12	E01 Median Barrier (201.010, .015)	No Performance Objective in the SHSMP	Linear Feet	46770.000			46770.000	0.000	46770.000							
13	E07 Guard Rail (201.010, .015)	No Performance Objective in the SHSMP	Linear Feet	44230.000			44230.000	0.000	44230.000							
14	E24 Lighting - Rehabilitation (201.170)	Lighting Rehabilitation	Each	20.000			20.000	0.000	20.000							
15	E29 Sign Panel Replacement	Sign Panel Replacement	Each	72.000			72.000	0.000	72.000							
16	E55 Proactive Safety Vehicles	Proactive Safety	Annual Fatal & Serious Injury Collisions	0.040			0.040	0.000	0.040							
17	F09 Other Mobility Activity	No Performance Objective in the SHSMP	-	2.000			2.000	0.000	2.000							Dunsmuir CCTV and Dunsmuir RWIS (see TMS worksheet)
18	H32 Is any Location Within the Project Limits Ped/Bike Accessible?	No Performance Objective in the SHSMP	Yes/No	Yes				0.000								Yes Bikes / No Peds
19	H55 Justification for Bicycle and Pedestrian Infrastructure Not Applicable	Bike/Ped Prohib	1,2,3	0.000				0.000								CS Impractical, 15 High Speed, access controlled freeway with paved wide outside shoulders
20	N04 Defer	No Performance Objective in the SHSMP	-	0.000				0.000								Defer to PA&ED Phase

(Last Saved - 09/12/24 @ 12:30 PM by Jose Corrales)

Programming Performance Summary (All Locations)

Program Code	Activity Category	Asset Class	Asset	Performance Value	Performance Measure	Unit	Pre-Good	Pre-Fair	Pre-Poor	Pre-Total	Post Good	New	Post Good+New	Post-Fair	Post-Poor	Post-Total
201.121	Pavement - Pavement Preservation	Primary	Pavement	45.4	Lane mile(s)	Lane mile(s)	0.0	45.4	0.0	45.4	45.4	0.0	45.4	0.0	0.0	45.4

- Notes:
- The crosswalk for reporting performance in the "Programming Performance Summary" was developed to assist the districts on performance reporting requirements for CTC and PCRs. For discrepancies or errors, please notify AM Tool admins via e-mail at CT-TAM@dot.ca.gov.
 - The data summarized in the table represents the performance reported or to be reported in CTIPS.
 - Programming only requires the breakdown of Good, Fair and Poor for Primary and Supplementary Asset Classes.
 - Reporting of bridge pre and post conditions may contain errors if the project RTL is before 2024/25.
 - Reporting drainage pre-total and post good may differ whenever projects contain abandoned/removed culverts as the culvert no longer exists at post construction, is deleted from the pre-total value for posting of the post good value, and gets deleted from the statewide CIP inventory database.
 - Reactive Safety projects will temporarily use the same performance outputs of Safety Improvement projects. When the reporting requirements for CTC changes, the logic in the AM Tool will change.
 - During the transition to the new Proactive Safety objective, the performance output for projects with a primary activity category of Proactive Safety (under program codes 015, 112, or 235) will continue to be presented here in the units of measure corresponding to the activities historically reported to date. A change in units to "Annual Fatal and Serious Injury Collisions" for future programming requests is being planned.

Siskiyou County PM 0.0 - 2.7

SHOPP Project - Accomplishment - Performance Measures - Benefits

District:02

Tool ID:19223

Project ID:0219000184

EA:0J810

Co-Rte-PM:S/S-005-027 (Location 2)

View/print PIR (Performance) Report

Multi-Objective Worksheet

Bridge

Pavement

Drainage

Facilities

Signs and Lighting

Mobility

TMS

Roadside

Bicycle and Pedestrian Infrastructure

Sustainability /Climate Change

Advance Mitigation /Mitigation

Major Damage & Betterments

Green-house Gases

Relinquishment

	ActID	Activity Detail	Performance Objective	Unit of Measurement	Quantity	Pre-Good	Pre-Fair	Pre-Poor	New	Post-Good	Post-Fair	Post-Poor	HQ Program Review - Agree with District?	HQ Comment	Review Date	Performance Change Date After Review	Comment
1	B25	Asphalt Pavement Minor Rehab (CAPM)	Pavement: Class I	Lane Miles	10.112		10.112		0.000	10.112							
2	C01	Replace/Install Culverts (201.151)	No Performance Objective in the SHSMP	Each	38.000		2.000	36.000									
3	C02	Replace/Install Culverts (201.151)	Drainage Restoration	Linear Feet	2090.000		190.350	1901.110	-1.480								
4	C05	Cure in Place Line Culvert (201.151)	No Performance Objective in the SHSMP	Each	10.000			10.000									
5	C06	Cure in Place Line Culvert (201.151)	Drainage Restoration	Linear Feet	2871.000			2870.990	0.010								
6	C07	Abandon/Remove Culvert (201.151)	No Performance Objective in the SHSMP	Each	8.000			6.000									
7	C08	Abandon/Remove Culvert (201.151)	Drainage Restoration	Linear Feet	360.340			360.340									
8	C13	New Culvert	No Performance Objective in the SHSMP	Each	1.000				1.000								
9	C14	New Culvert	Drainage Restoration	Linear Feet	105.000				105.000								
10	F03	CCTV (201.315)	No Performance Objective in the SHSMP	Each	1.000			1.000		1.000							
11	F41	Roadside Weather Information Station (201.315)	No Performance Objective in the SHSMP	Each	1.000			1.000		1.000							
12	F46	TMS Technology Component	Transportation Management Systems	Each	2.000			2.000		2.000							
13	N04	Defer	No Performance Objective in the SHSMP	-	0.000				0.000								defer to PA&ED phase

(Last Saved - 09/12/24 @ 12:30 PM by Jose Corrales)

Programming Performance Summary (All Locations)

Program Code	Activity Category	Asset Class	Asset	Performance Value	Performance Measure	Unit	Pre-Good	Pre-Fair	Pre-Poor	Pre-Total	Post-Good	New	Post-Good+New	Post-Fair	Post-Poor	Post-Total
201.121	Pavement - Pavement Preservation	Primary	Pavement	45.4	Lane mile(s)	Lane mile(s)	0.0	45.4	0.0	45.4	45.4	0.0	45.4	0.0	0.0	45.4

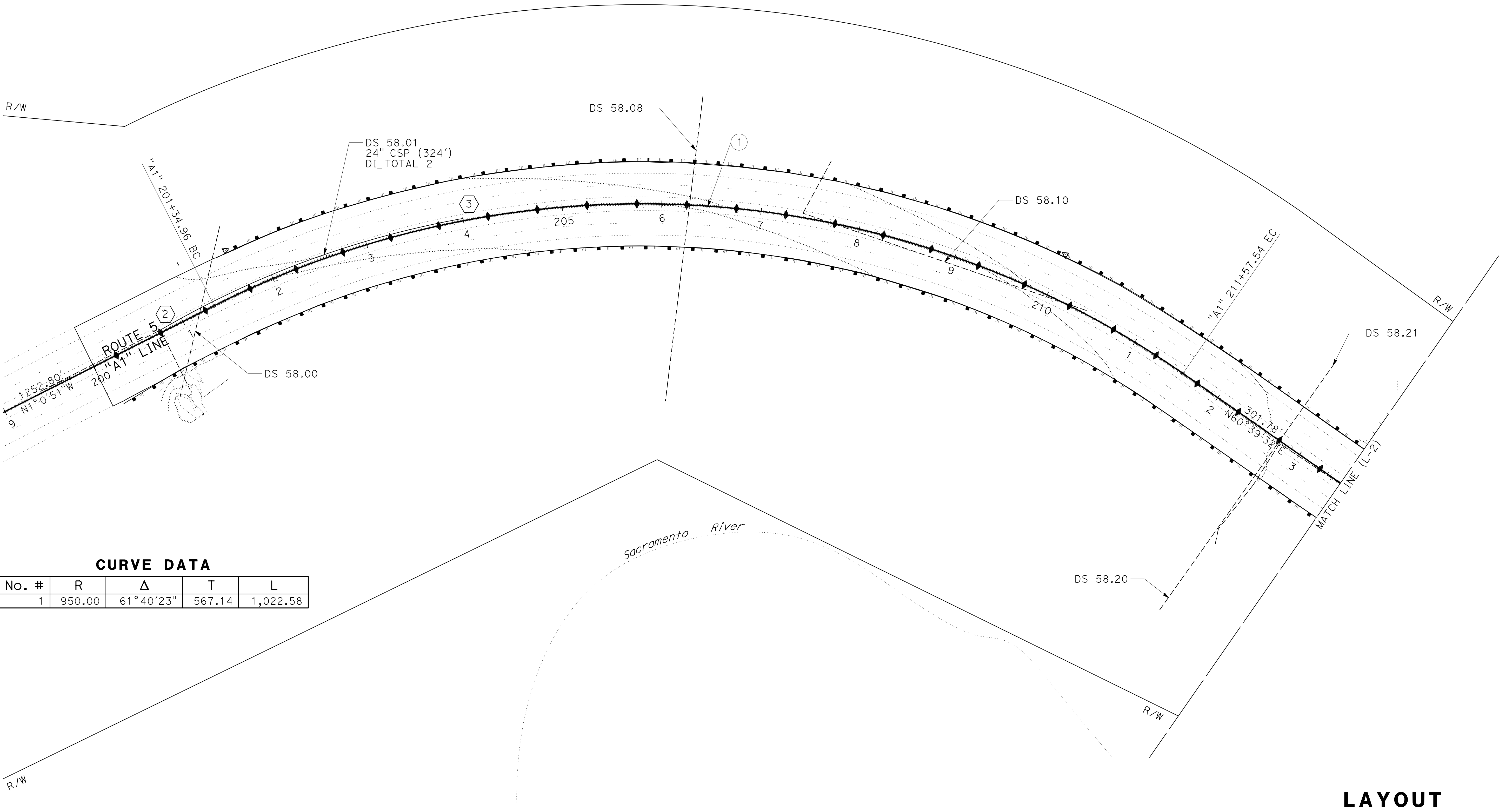
Notes:

1. The crosswalk for reporting performance in the "Programming Performance Summary" was developed to assist the districts on performance reporting requirements for CTC and PCRs. For discrepancies or errors, please notify AM Tool admins via e-mail at CT-TAM@dot.ca.gov.
2. The data summarized in the table represents the performance reported or to be reported in CTIPS.
3. Programming only requires the breakdown of Good, Fair and Poor for Primary and Supplementary Asset Classes.
4. Reporting of bridge pre and post conditions may contain errors if the project RTL is before 2024/25.
5. Reporting drainage pre-total and post good may differ whenever projects contain abandoned/removed culverts as the culvert no longer exists at post construction, is deleted from the pre-total value for posting of the post good value, and gets deleted from the statewide CIP inventory database.
6. Reactive Safety projects will temporarily use the same performance outputs of Safety Improvement projects. When the reporting requirements for CTC changes, the logic in the AM Tool will change.
7. During the transition to the new Proactive Safety objective, the performance output for projects with a primary activity category of Proactive Safety (under program codes 015, 112, or 235) will continue to be presented here in the units of measure corresponding to the activities historically reported to date. A change in units to "Annual Fatal and Serious Injury Collisions" for future programming requests is being planned.

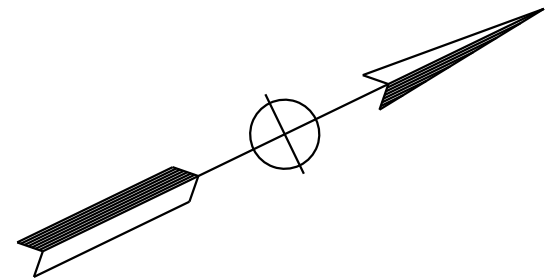
Attachment C

Preliminary Project Plans

NOTE:
1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT
RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



CURVE DATA				
No. #	R	Δ	T	L
1	950.00	61°40'23"	567.14	1,022.58



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Sha,Sis	5	58.0/67.0, 0.0/2.7		

PRELIMINARY
REGISTERED CIVIL ENGINEER

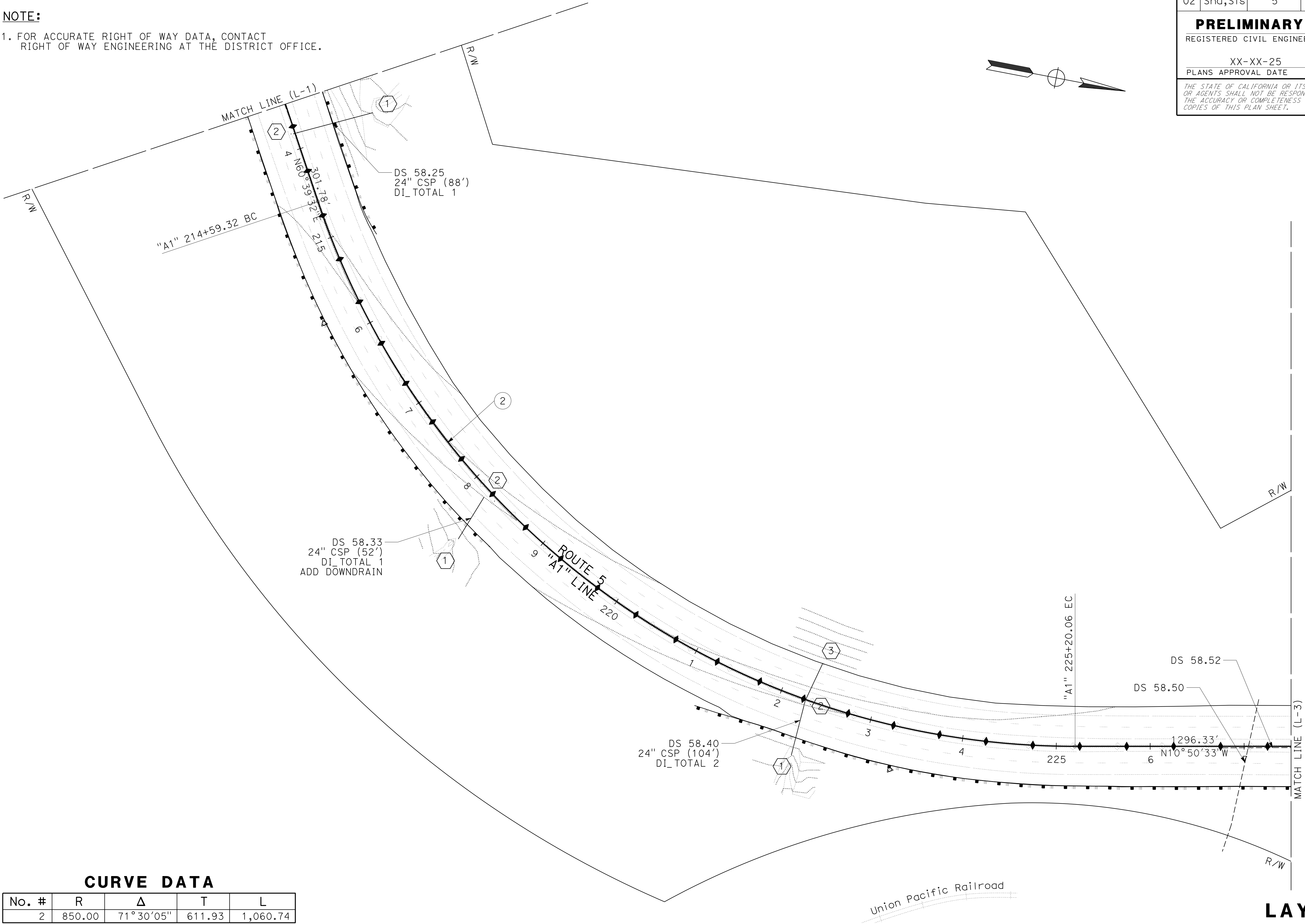
SIGD
DATE

XX-XX-25
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
BUSTER
HANSEN
No. -
Exp. -
CIVIL
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NOTE:
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CURVE DATA

No. #	R	Δ	T	L
2	850.00	71° 30' 05"	611.93	1,060.74

LAYOUT
SCALE: 1" = 50' L-2

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Sha,Sis	5	58.0/67.0, 0.0/2.7		

PRELIMINARY
REGISTERED CIVIL ENGINEER

SIGD
DATE

XX-XX-25
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
BUSTER
HANSEN

No. -
Exp. -
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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Sha,Sis	5	58.0/67.0, 0.0/2.7		

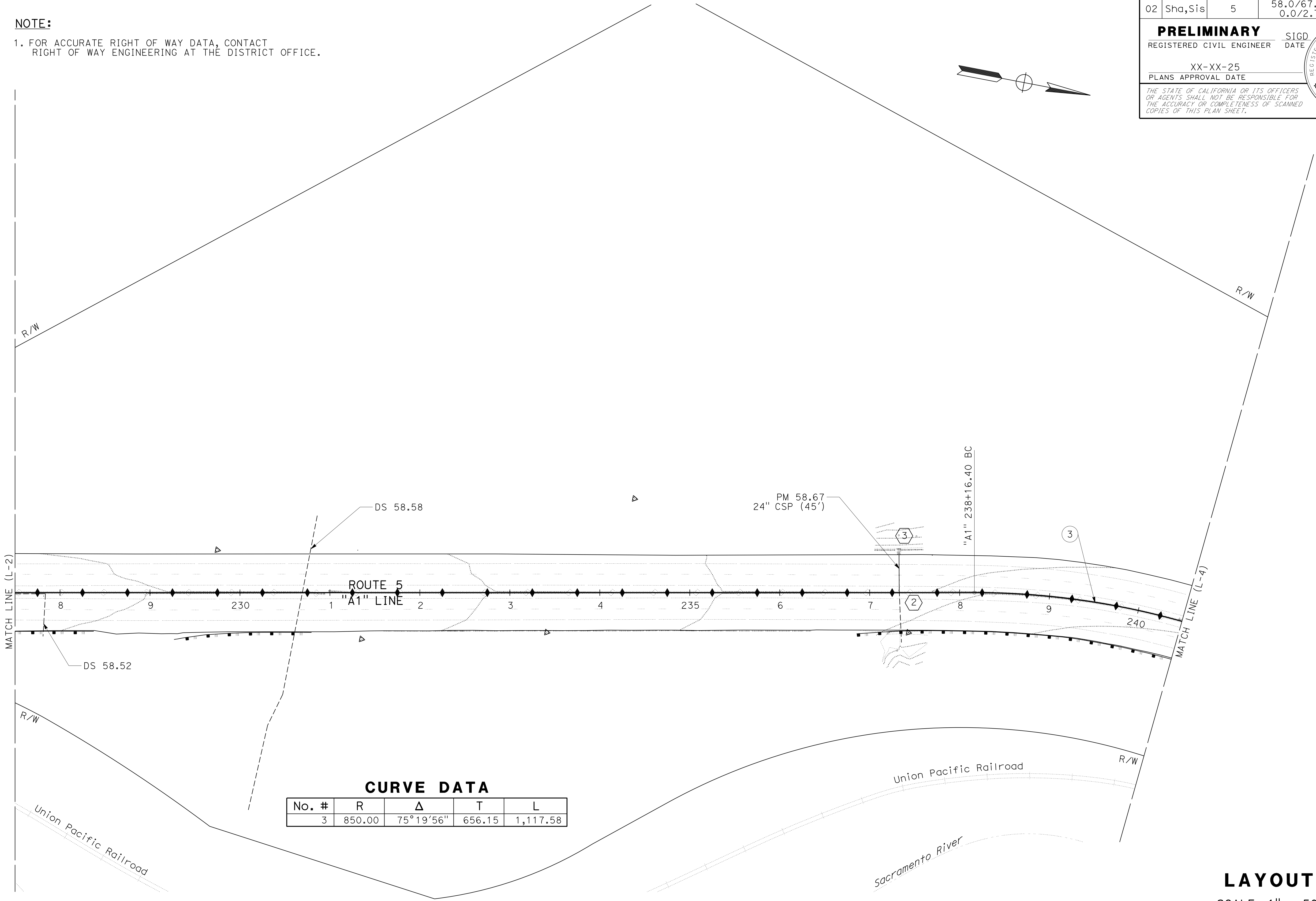
PRELIMINARY
REGISTERED CIVIL ENGINEER

SIGD
DATE

XX-XX-25
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
BUSTER HANSEN
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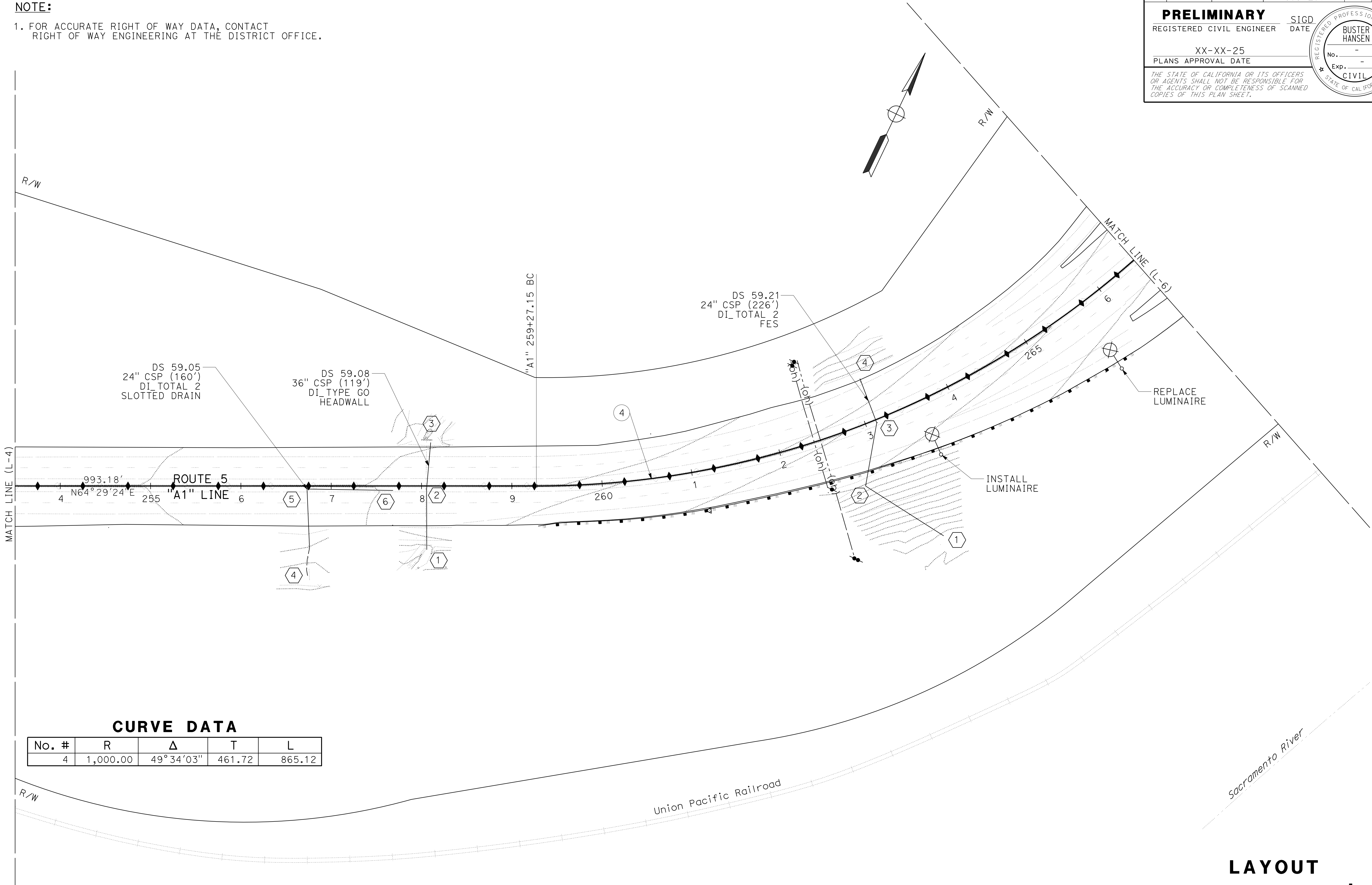


No. #	R	Δ	T	L
3	850.00	75°19'56"	656.15	1,117.58

LAYOUT
SCALE: 1" = 50' **L-3**

NOTE:

1. 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
02	Sha,Sis	5	58.0/67.0, 0.0/2.7		

PRELIMINARY
REGISTERED CIVIL ENGINEER

SIGD
DATE

XX-XX-25
PLANS APPROVAL DATE

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BUSTER
HANSEN
No. -
Exp. -
CIVIL
STATE OF CALIFORNIA

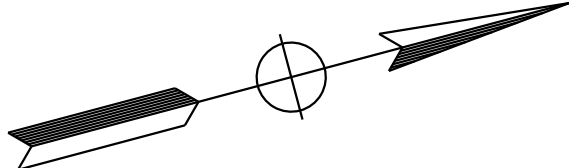
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CURVE DATA

No. #	R	Δ	T	L
4	1,000.00	49°34'03"	461.72	865.12

LAYOUT
SCALE: 1" = 50' L-5

NOTE:
1. 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
02	Sha,Sis	5	58.0/67.0, 0.0/2.7		

PRELIMINARY

REGISTERED CIVIL ENGINEER

XX-XX-25

PLANS APPROVAL DATE

SIGD

DATE

REGISTERED PROFESSIONAL ENGINEER

BUSTER HANSEN

No. -

Exp. -

CIVIL

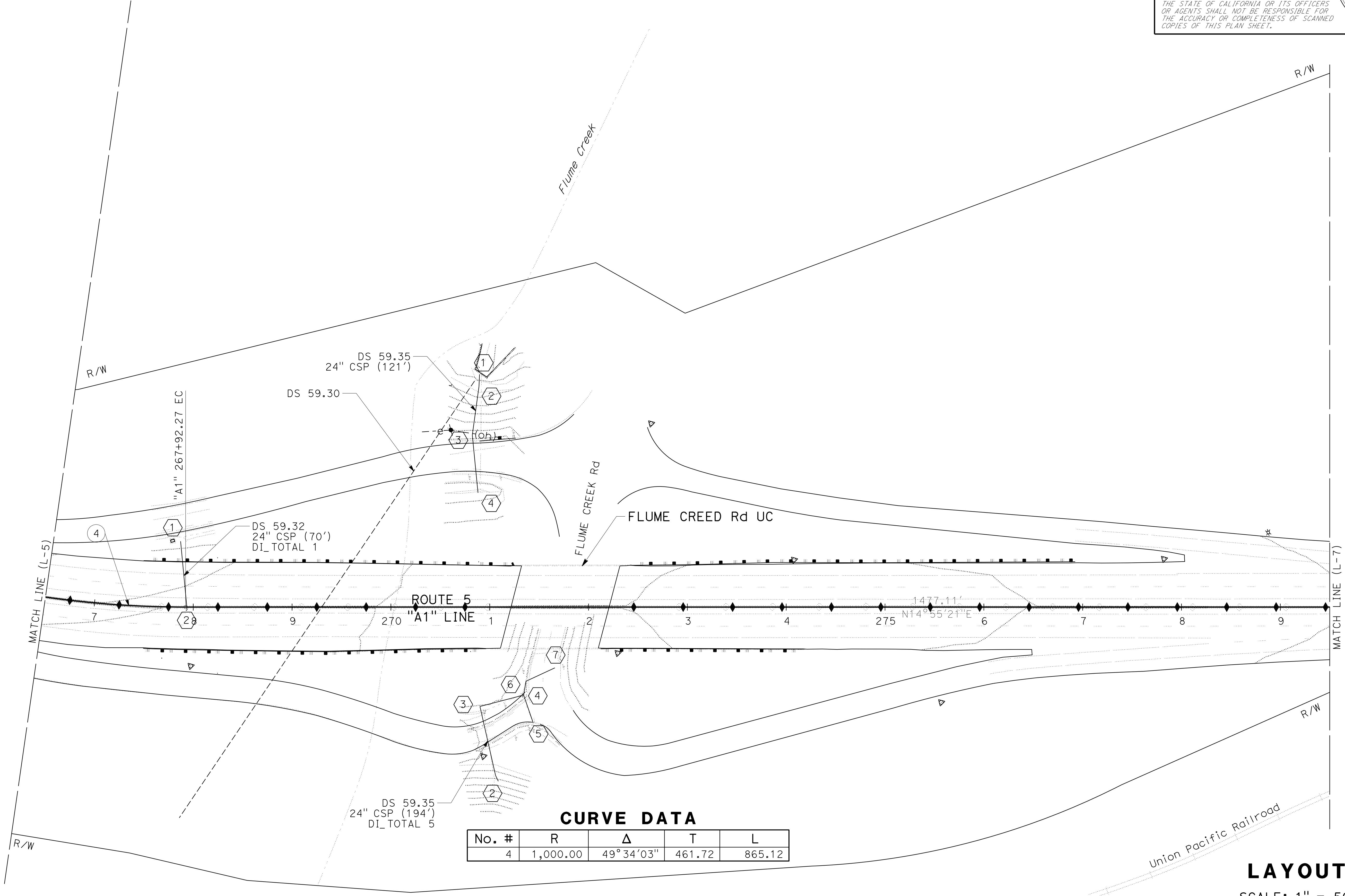
STATE OF CALIFORNIA

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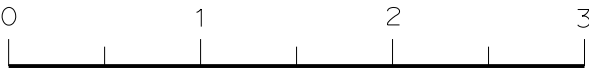
THE ACCURACY OR COMPLETENESS OF SCANNED

COPIES OF THIS PLAN SHEET.



CURVE DATA				
No. #	R	Δ	T	L
4	1,000.00	49° 34' 03"	461.72	865.12

LAYOUT
SCALE: 1" = 50' L-6



NOTE:
1. 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
02	Sha,Sis	5	58.0/67.0, 0.0/2.7		

PRELIMINARY

REGISTERED CIVIL ENGINEER

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DATE

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BUSTER
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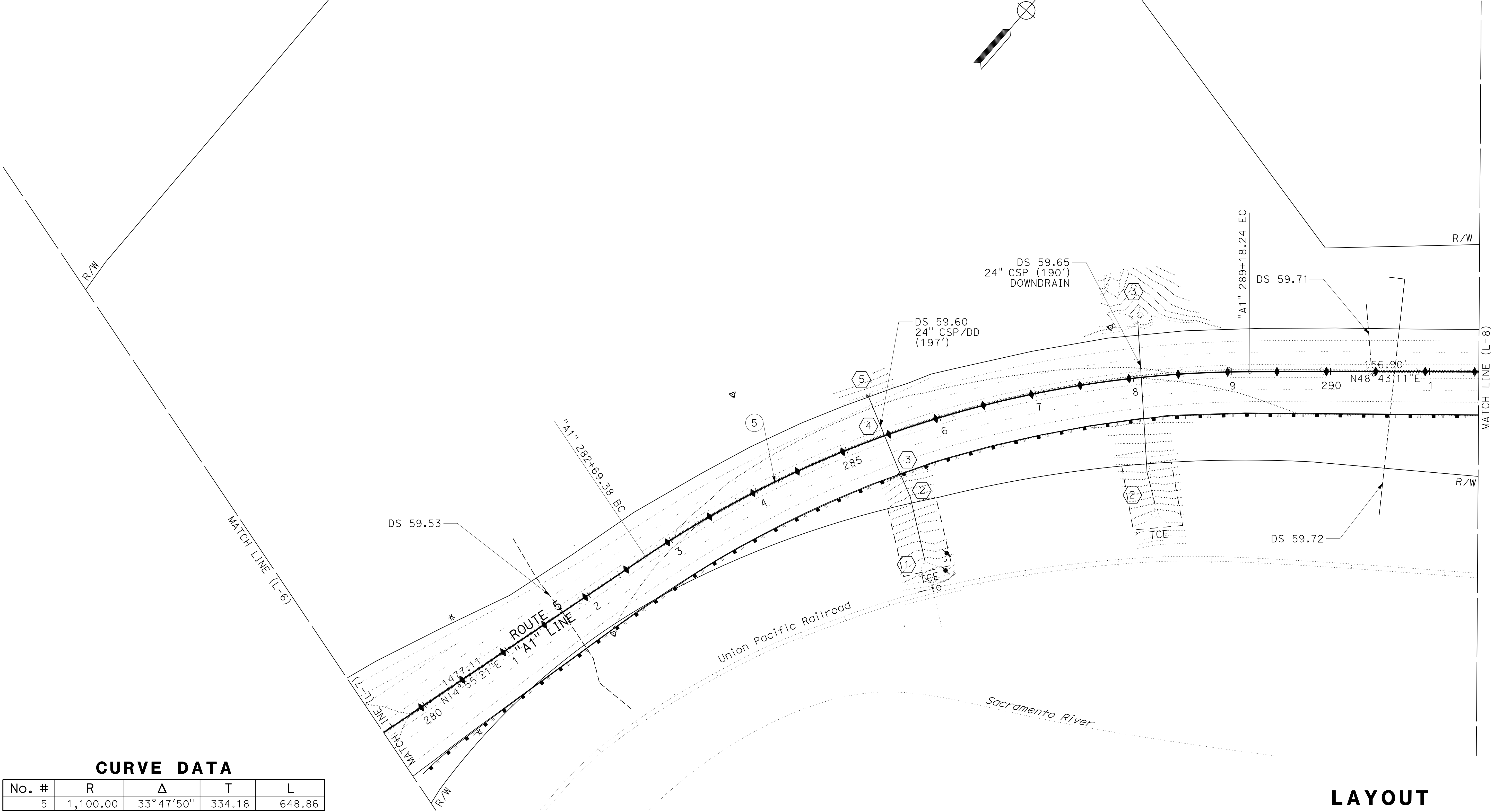
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CURVE DATA

No. #	R	Δ	T	L
5	1,100.00	33° 47' 50"	334.18	648.86

LAYOUT
SCALE: 1" = 50' L-7

NOTE:
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RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Sha,Sis	5	58.0/67.0, 0.0/2.7		

PRELIMINARY

REGISTERED CIVIL ENGINEER

SIGD
DATE

XX-XX-25

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER

BUSTER
HANSEN

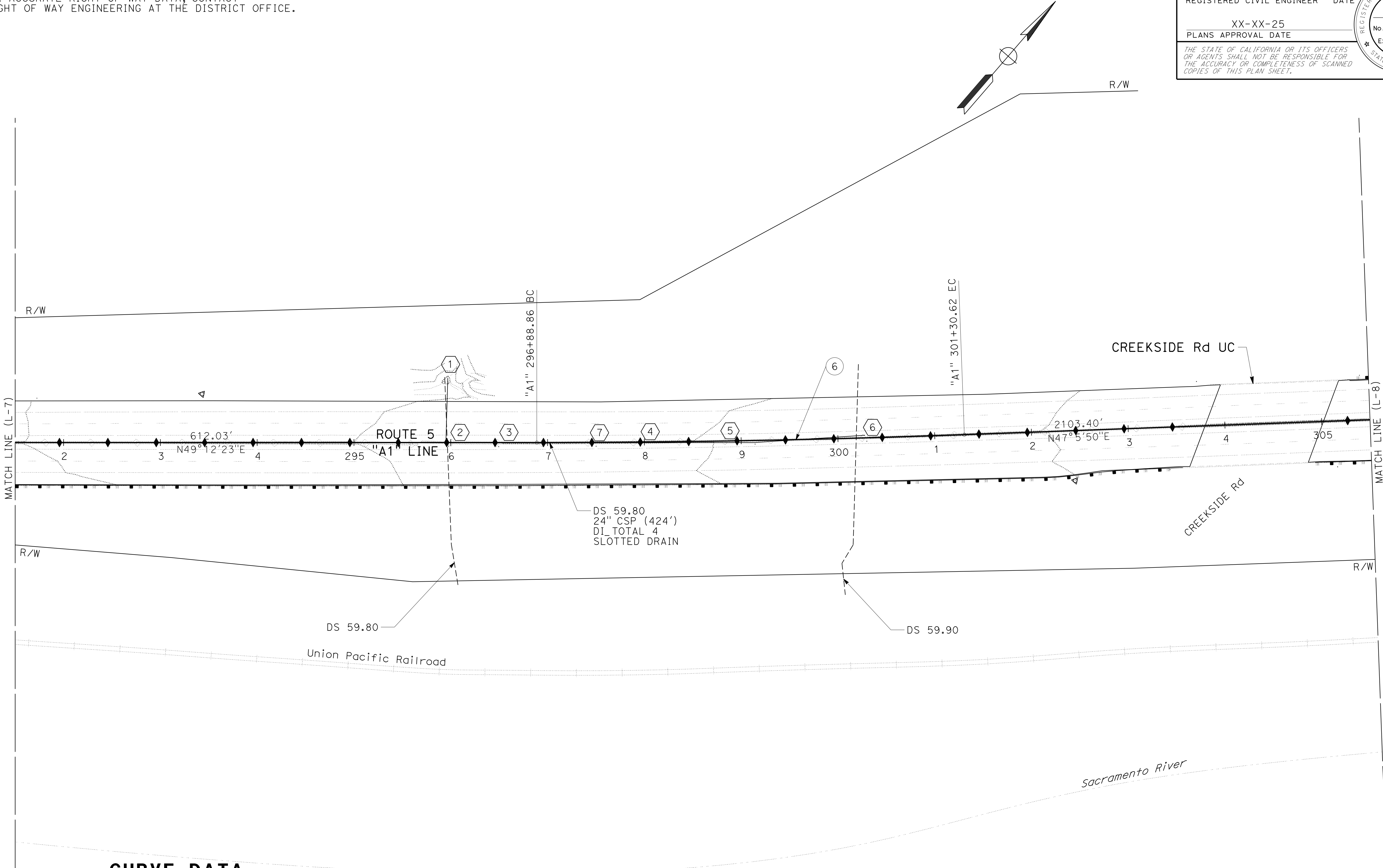
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Exp. -

CIVIL

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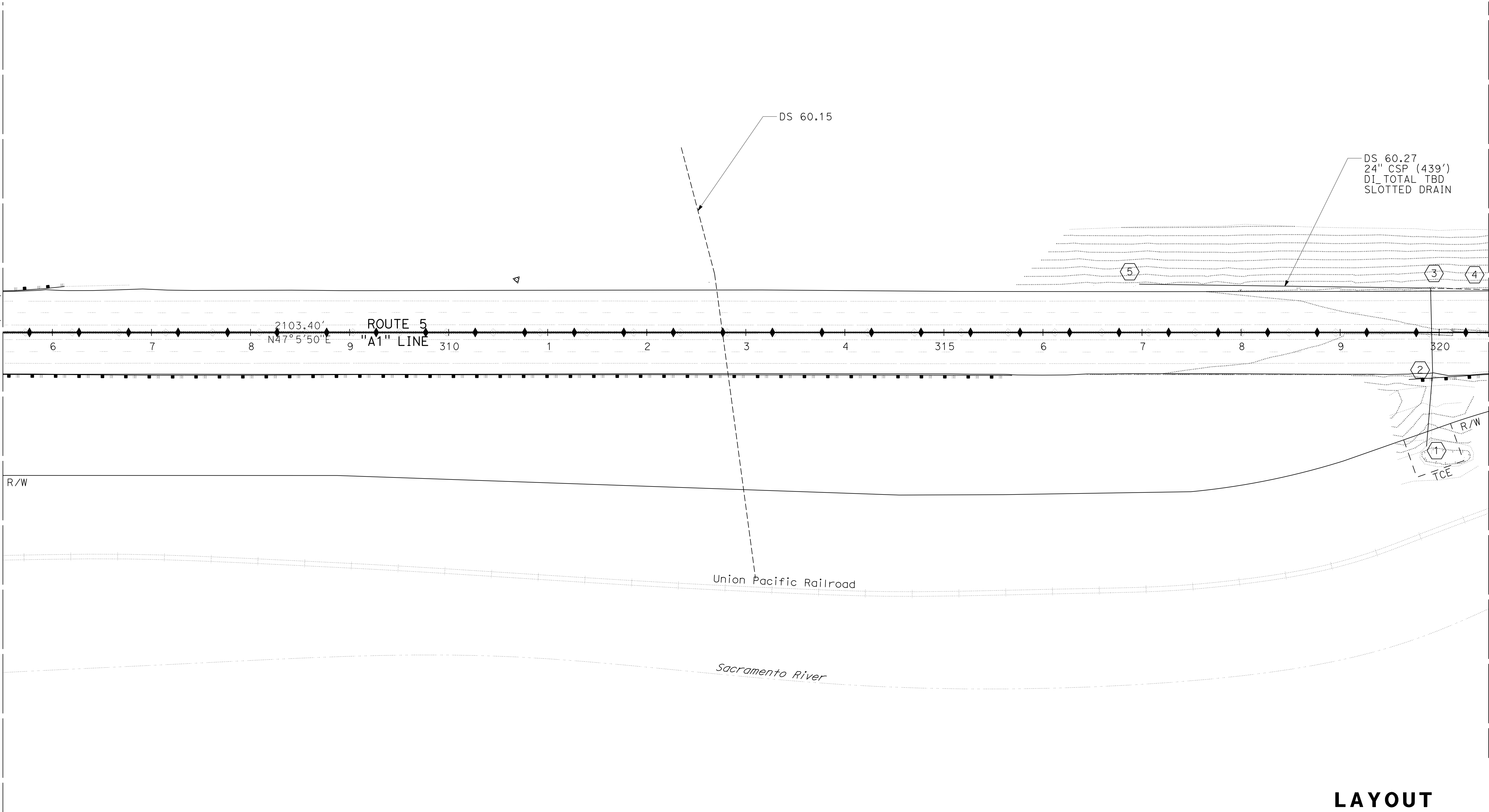
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No. #	R	Δ	T	L
6	12,000.00	02°06'33"	220.91	441.76

LAYOUT
SCALE: 1" = 50' L-8

NOTE:
1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT
RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



LAYOUT
SCALE: 1" = 50' L-9

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Sha,Sis	5	58.0/67.0, 0.0/2.7		

PRELIMINARY
REGISTERED CIVIL ENGINEER
XX-XX-25
PLANS APPROVAL DATE

SIGD
DATE

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BUSTER
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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Sha,Sis	5	58.0/67.0, 0.0/2.7		

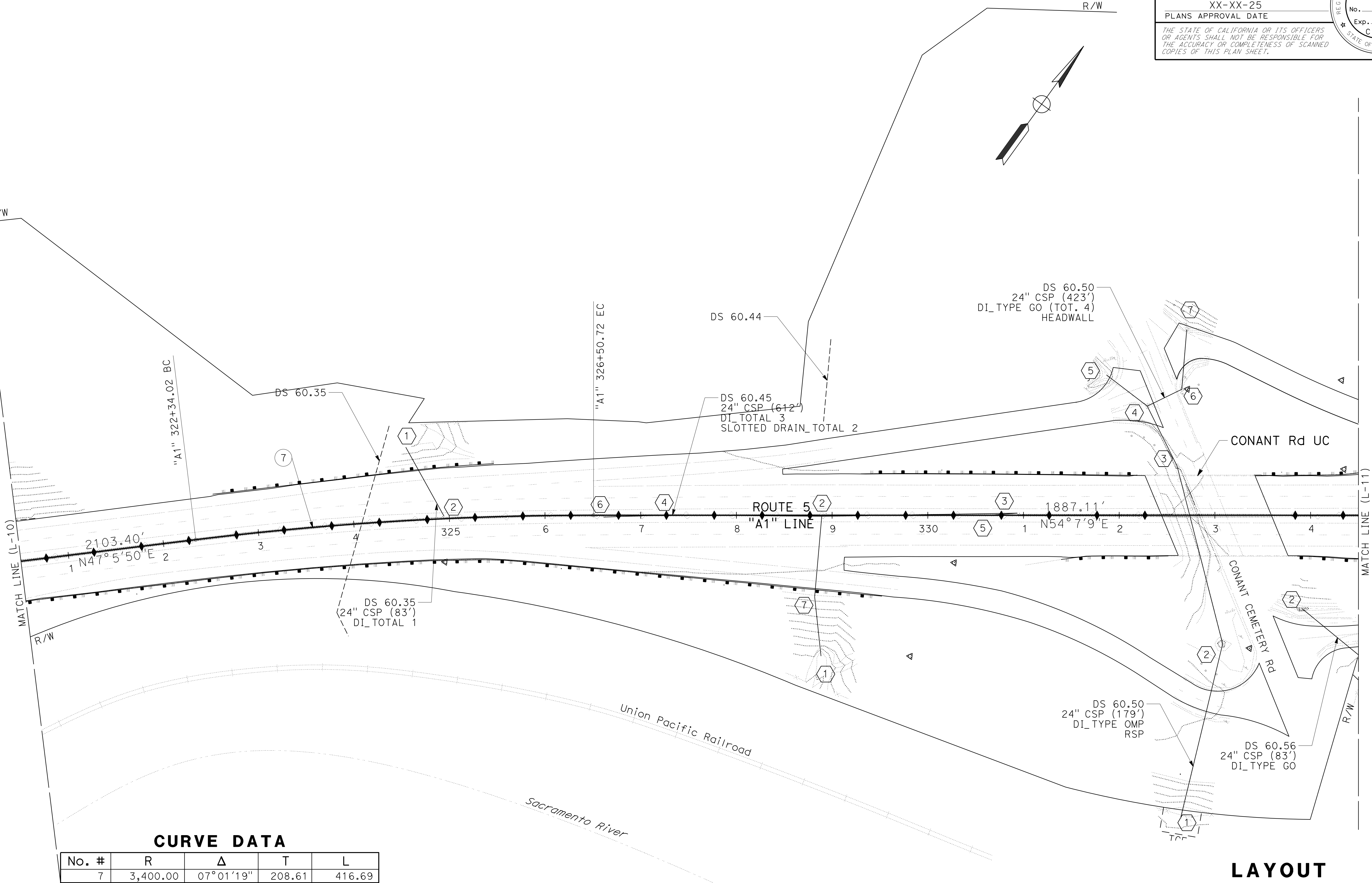
PRELIMINARY
REGISTERED CIVIL ENGINEER

SIGD
DATE

XX-XX-25
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
BUSTER
HANSEN
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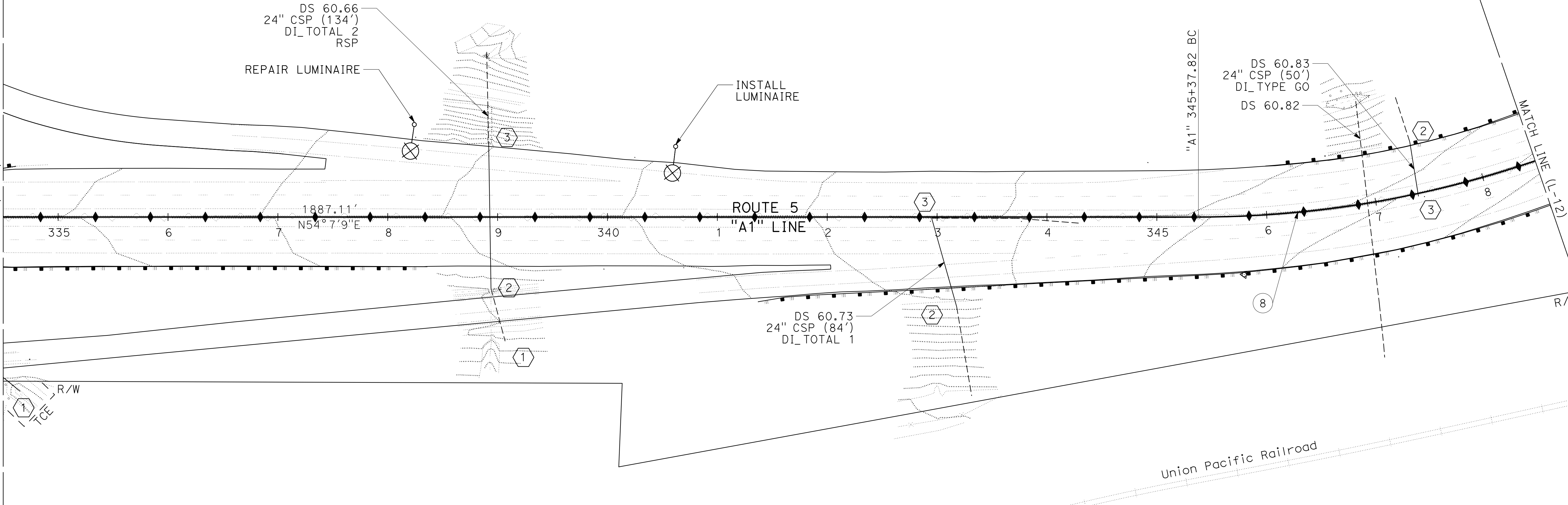
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No. #	R	Δ	T	L
7	3,400.00	07°01'19"	208.61	416.69

LAYOUT
SCALE: 1" = 50' **L-10**

NOTE:
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RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Sha,Sis	5	58.0/67.0, 0.0/2.7		

PRELIMINARY
REGISTERED CIVIL ENGINEER

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REGISTERED PROFESSIONAL ENGINEER
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No. #	R	Δ	T	L
8	945.00	72°28'53"	692.67	1,195.46

LAYOUT
SCALE: 1" = 50'
L-11

NOTE:
1. 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
02	Sha,Sis	5	58.0/67.0, 0.0/2.7		

PRELIMINARY

REGISTERED CIVIL ENGINEER

SIGD
DATE

XX-XX-25

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REGISTERED PROFESSIONAL ENGINEER

BUSTER
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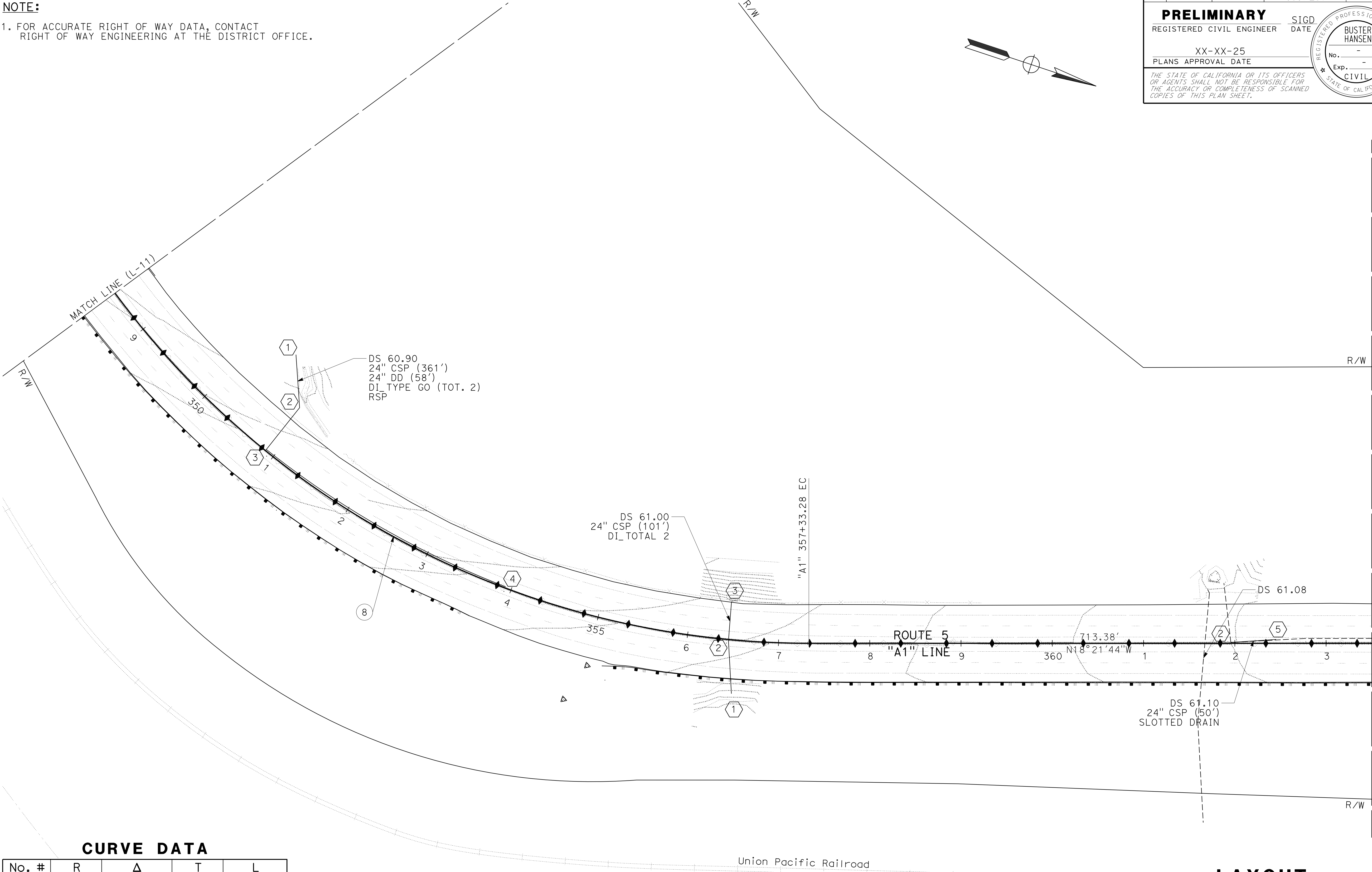
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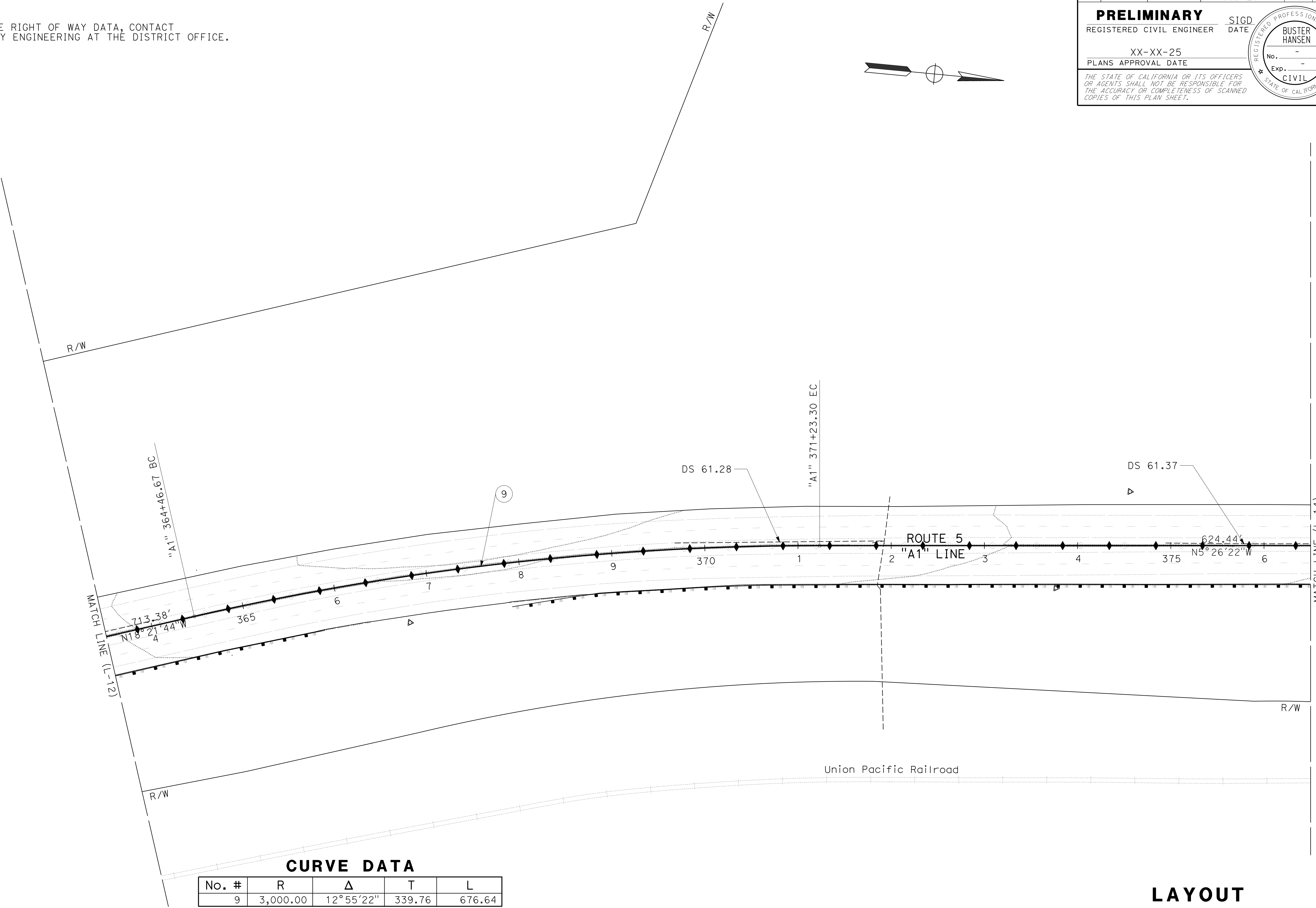
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CURVE DATA				
No. #	R	Δ	T	L
8	945.00	72°28'53"	692.67	1,195.46

LAYOUT
SCALE: 1" = 50' L-12

NOTE:
1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT
RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



CURVE DATA				
No. #	R	Δ	T	L
9	3,000.00	12°55'22"	339.76	676.64

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Sha,Sis	5	58.0/67.0, 0.0/2.7		

PRELIMINARY
REGISTERED CIVIL ENGINEER

SIGD
DATE

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LAYOUT
SCALE: 1" = 50'
L-13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Sha,Sis	5	58.0/67.0, 0.0/2.7		

PRELIMINARY

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SIGD
DATE

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PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER

BUSTER
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No. -

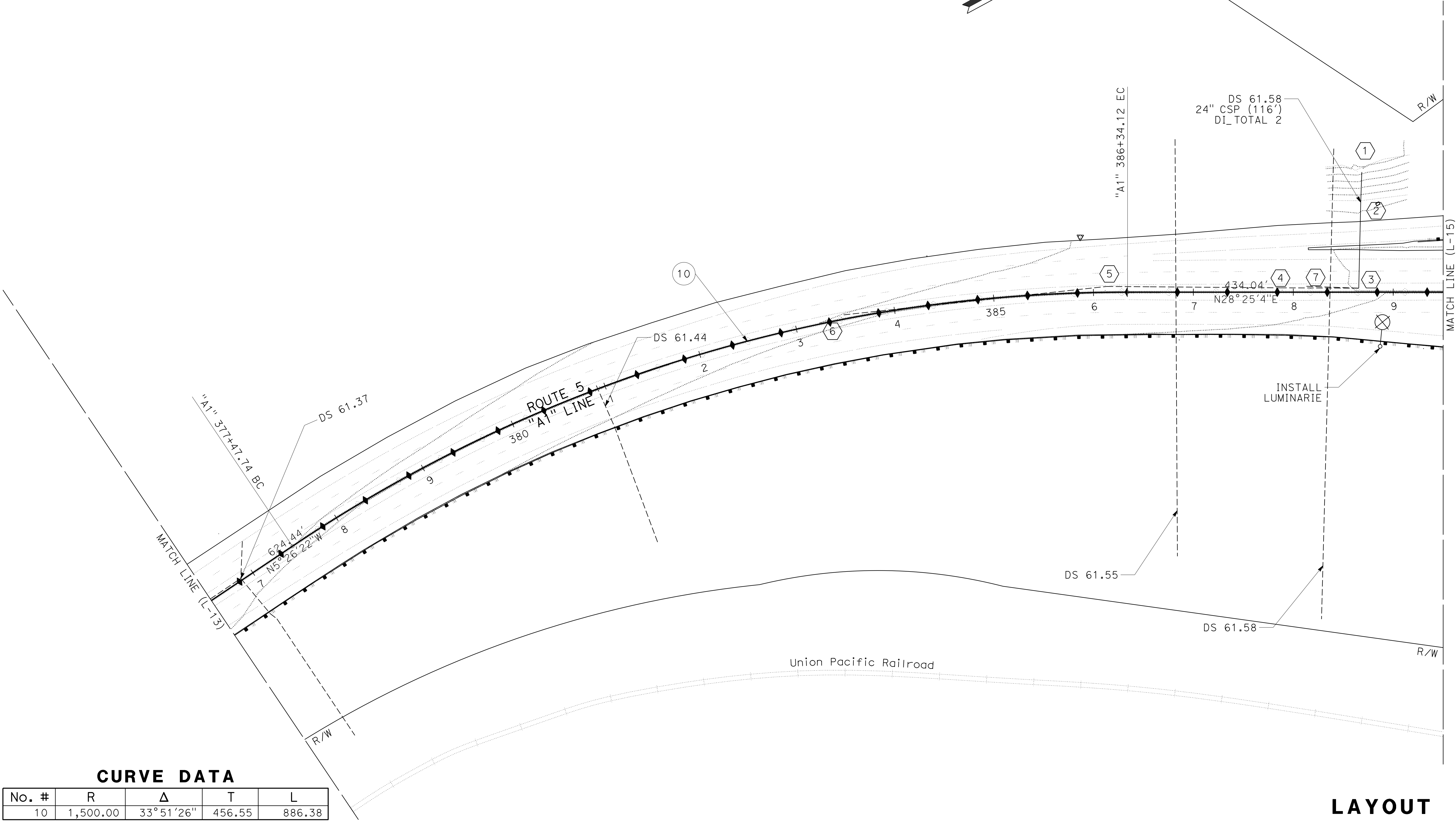
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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Sha,Sis	5	58.0/67.0, 0.0/2.7		

PRELIMINARY

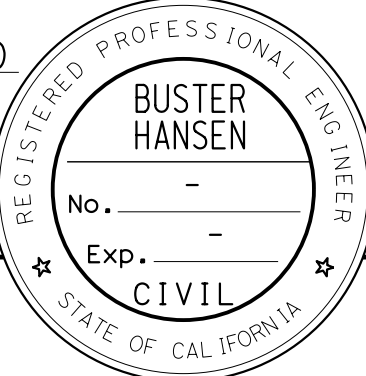
REGISTERED CIVIL ENGINEER

XX-XX-25

PLANS APPROVAL DATE

SIGD

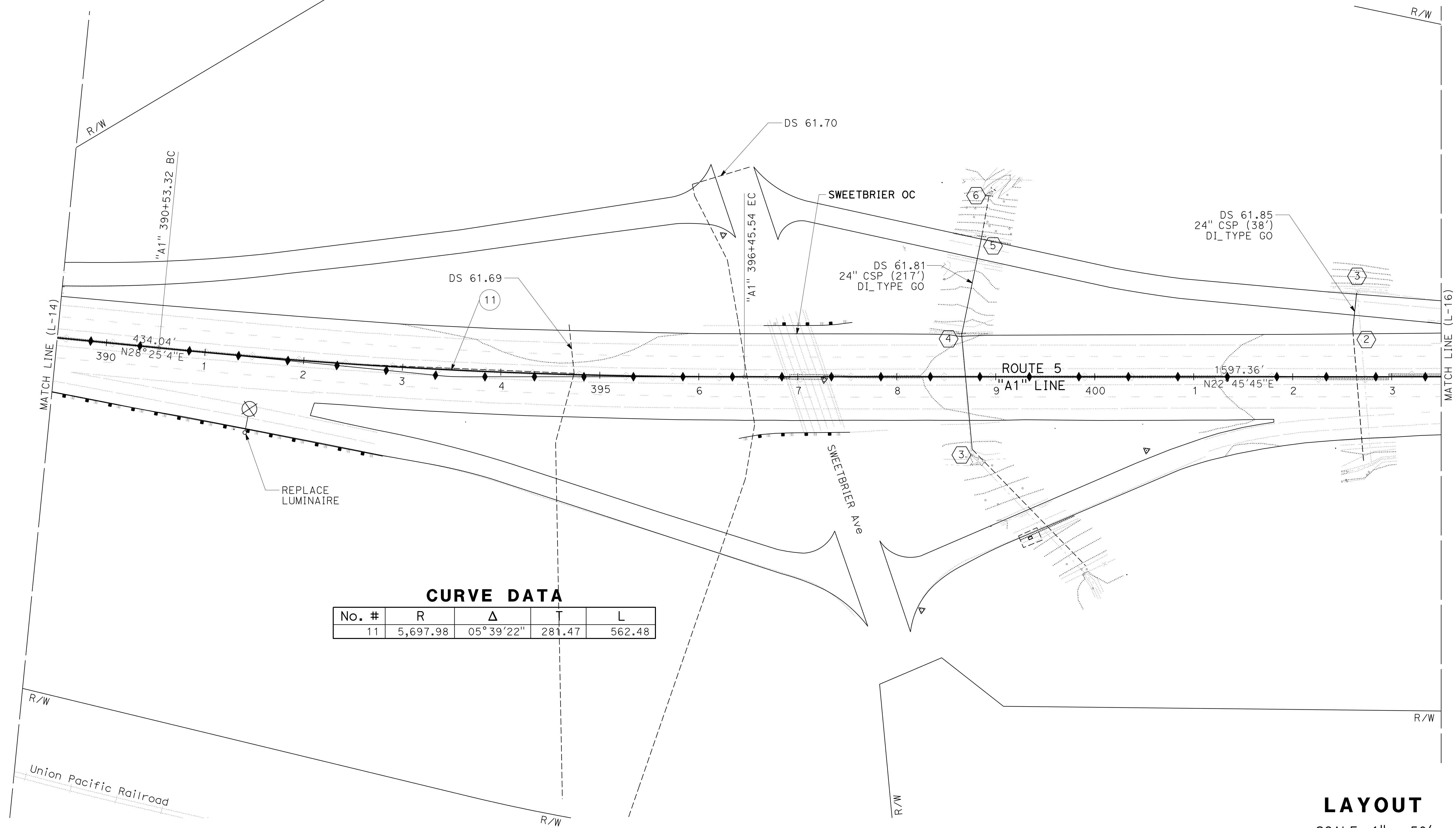
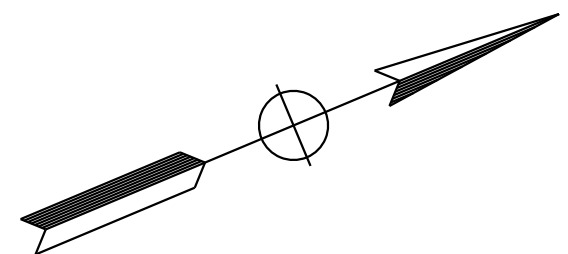
DATE



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NOTE:

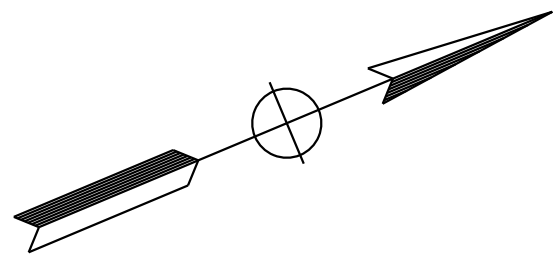
1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT
RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



CURVE DATA				
No. #	R	Δ	T	L
11	5,697.98	05° 39' 22"	281.47	562.48

LAYOUT
SCALE: 1" = 50' **L-15**

NOTE:
1. 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
02	Sha,Sis	5	58.0/67.0, 0.0/2.7		

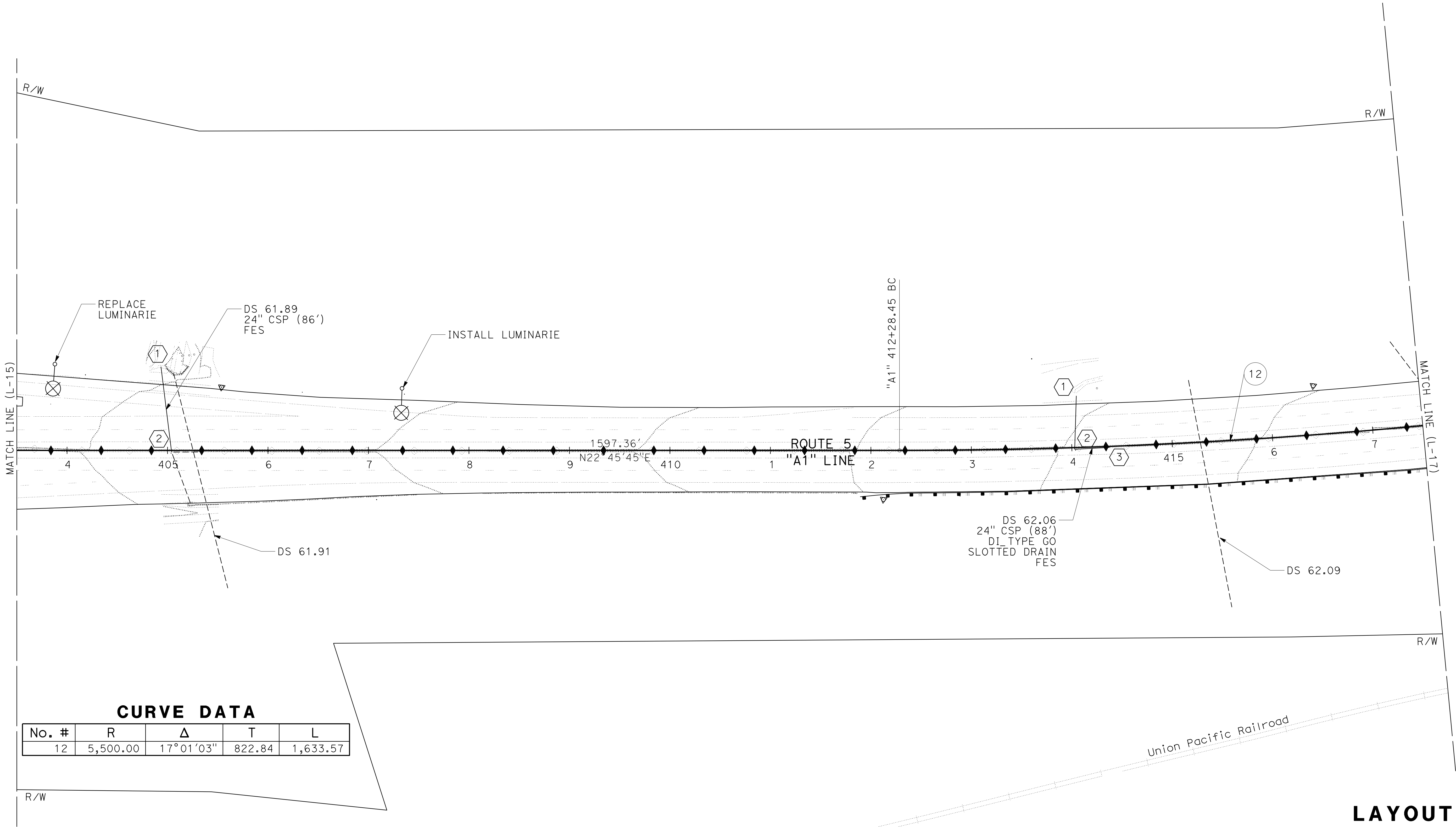
PRELIMINARY
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SIGD
DATE

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PLANS APPROVAL DATE

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CURVE DATA				
No. #	R	Δ	T	L
12	5,500.00	17°01'03"	822.84	1,633.57

LAYOUT
SCALE: 1" = 50' L-16

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

 **DESIGN**

FUNCTIONAL SUPERVISOR

TRAVIS GURNEY

CALCULATED/DESIGNED BY

CHECKED BY

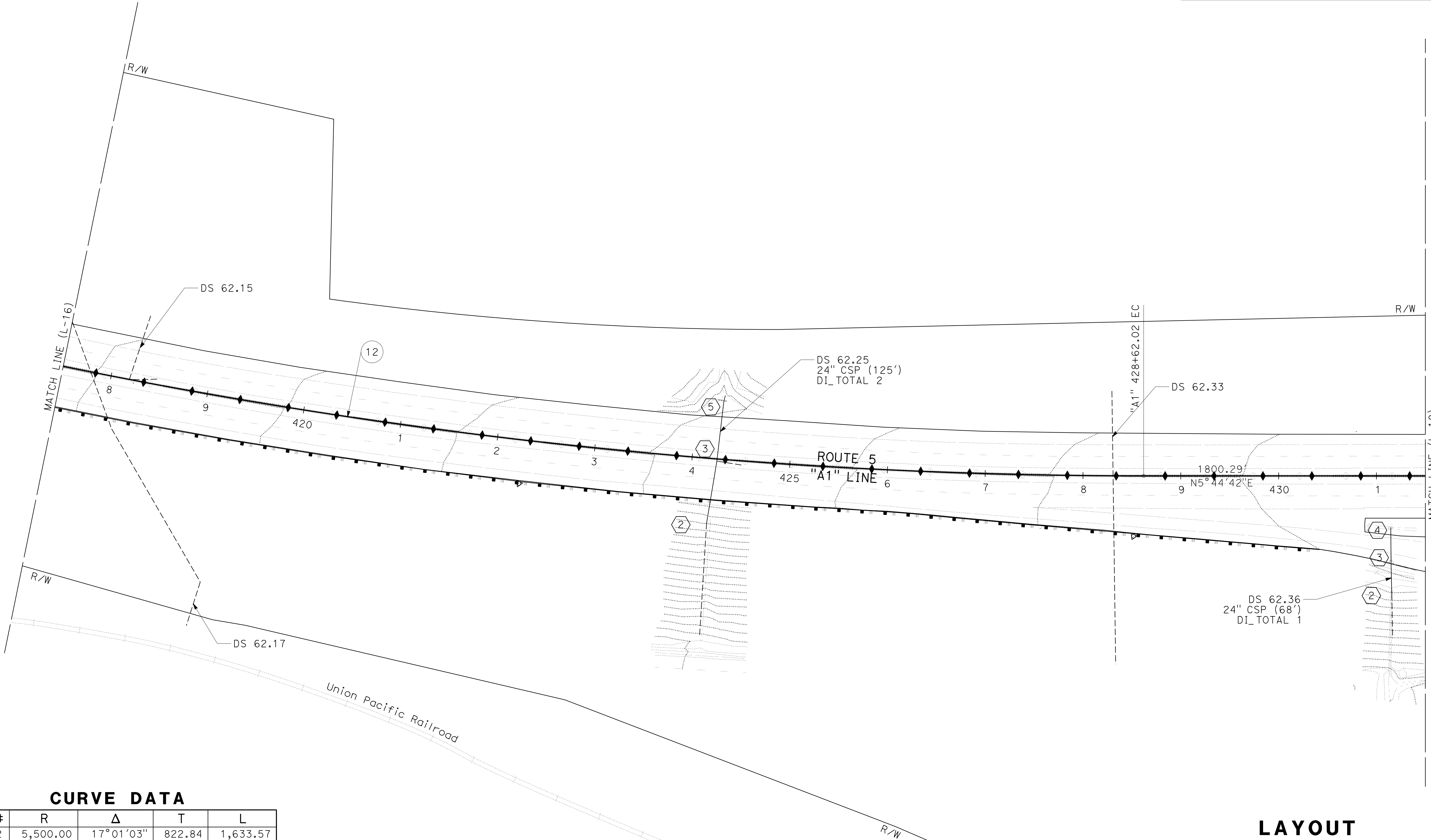
BUSTER HANSEN

ALEX PLATERO

REVISED BY

DATE REVISED

NOTE:
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RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Sha,Sis	5	58.0/67.0, 0.0/2.7		

PRELIMINARY
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CURVE DATA				
No. #	R	Δ	T	L
12	5,500.00	17°01'03"	822.84	1,633.57

LAYOUT
SCALE: 1" = 50'
L-17



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION



DESIGN

FUNCTIONAL SUPERVISOR

TRAVIS GURNEY

CALCULATED/DESIGNED BY

CHECKED BY

BUSTER HANSEN

ALEX PLATERO

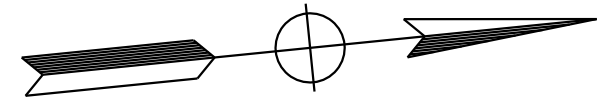
REVISED BY

DATE

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DATE

NOTE:
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RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Sha,Sis	5	58.0/67.0, 0.0/2.7		

PRELIMINARY

REGISTERED CIVIL ENGINEER

SIGD
DATE

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REGISTERED PROFESSIONAL ENGINEER

BUSTER HANSEN

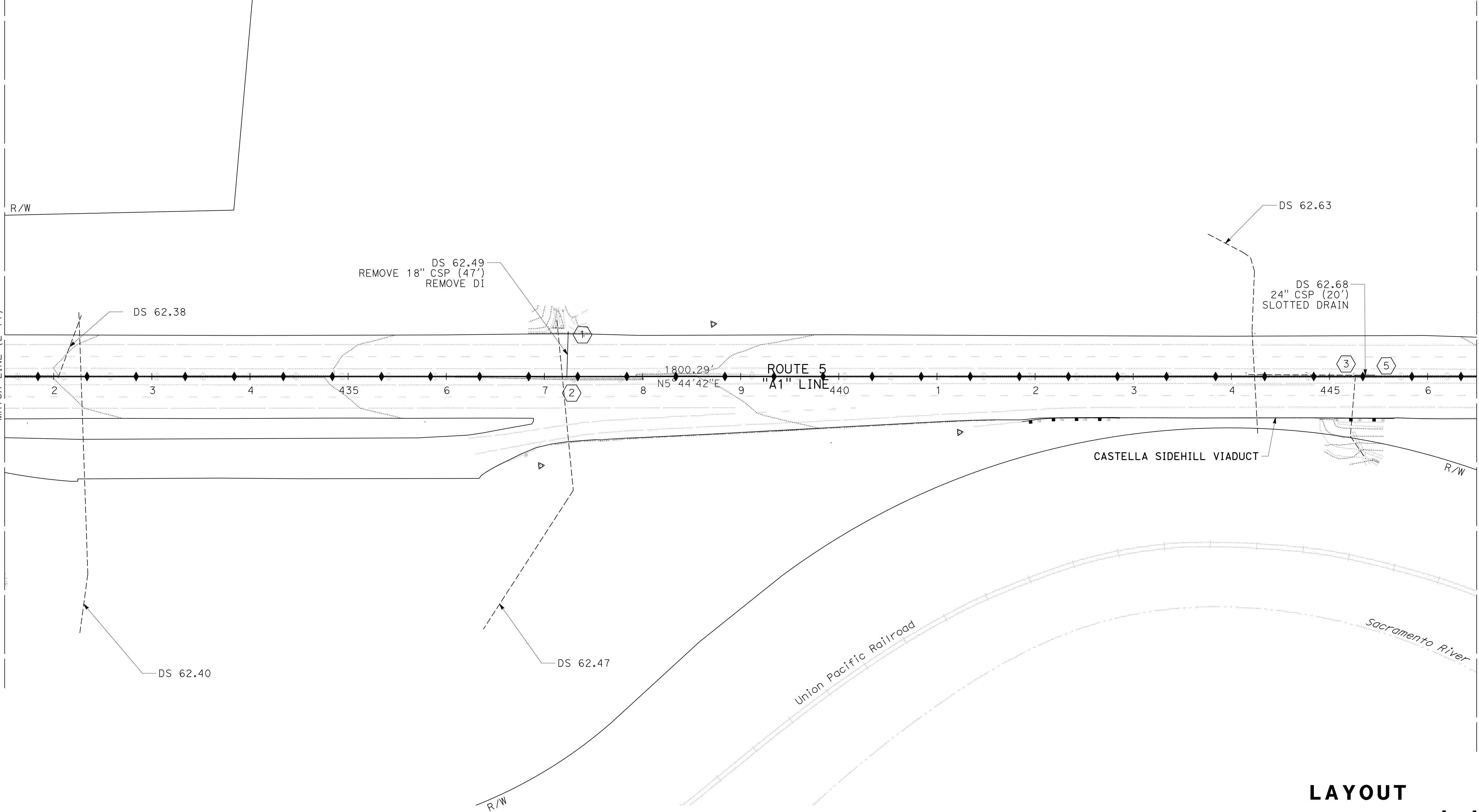
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LAYOUT
SCALE: 1" = 50'
L-18



NOTE:
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RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Sha,Sis	5	58.0/67.0, 0.0/2.7		

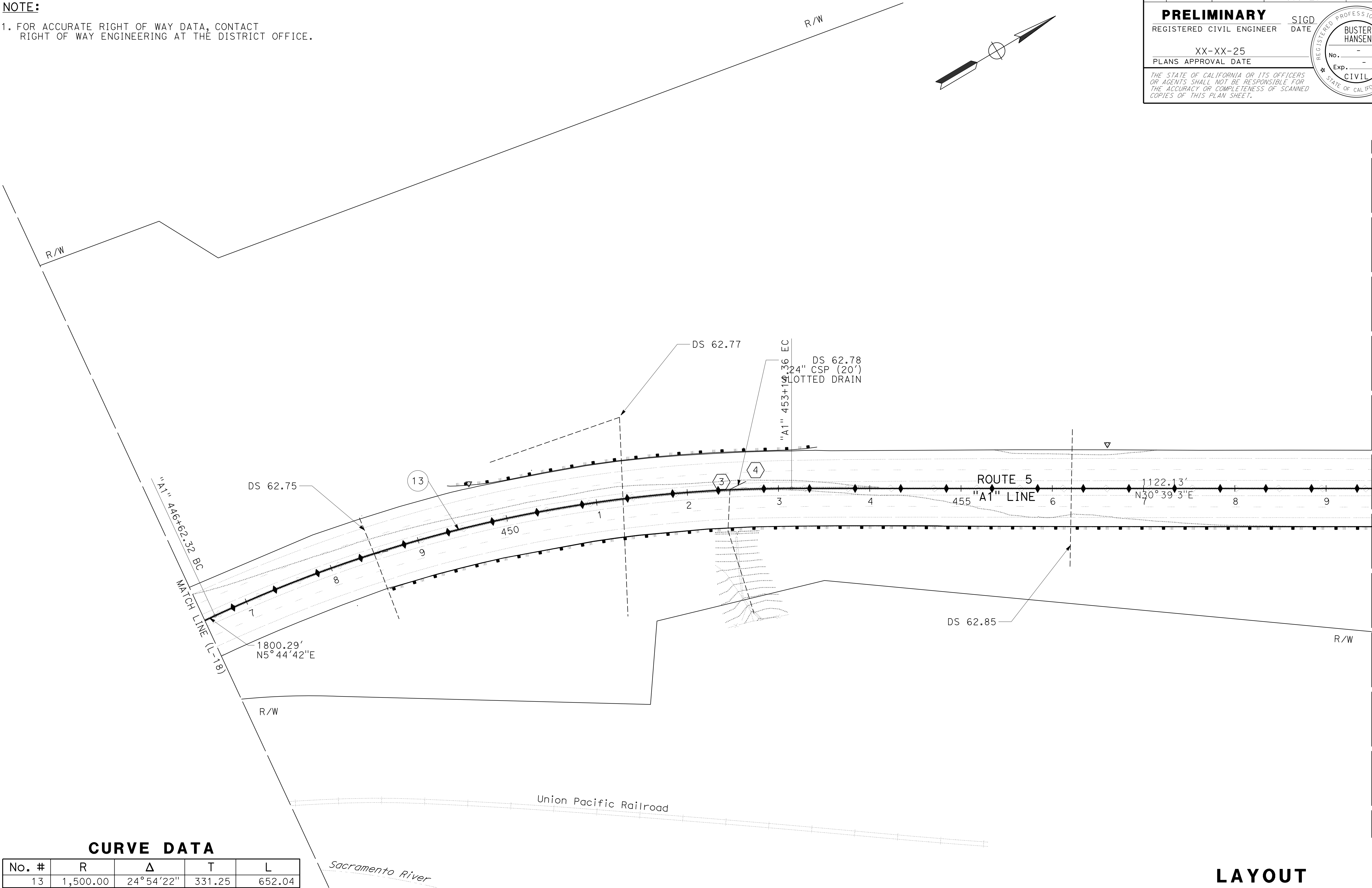
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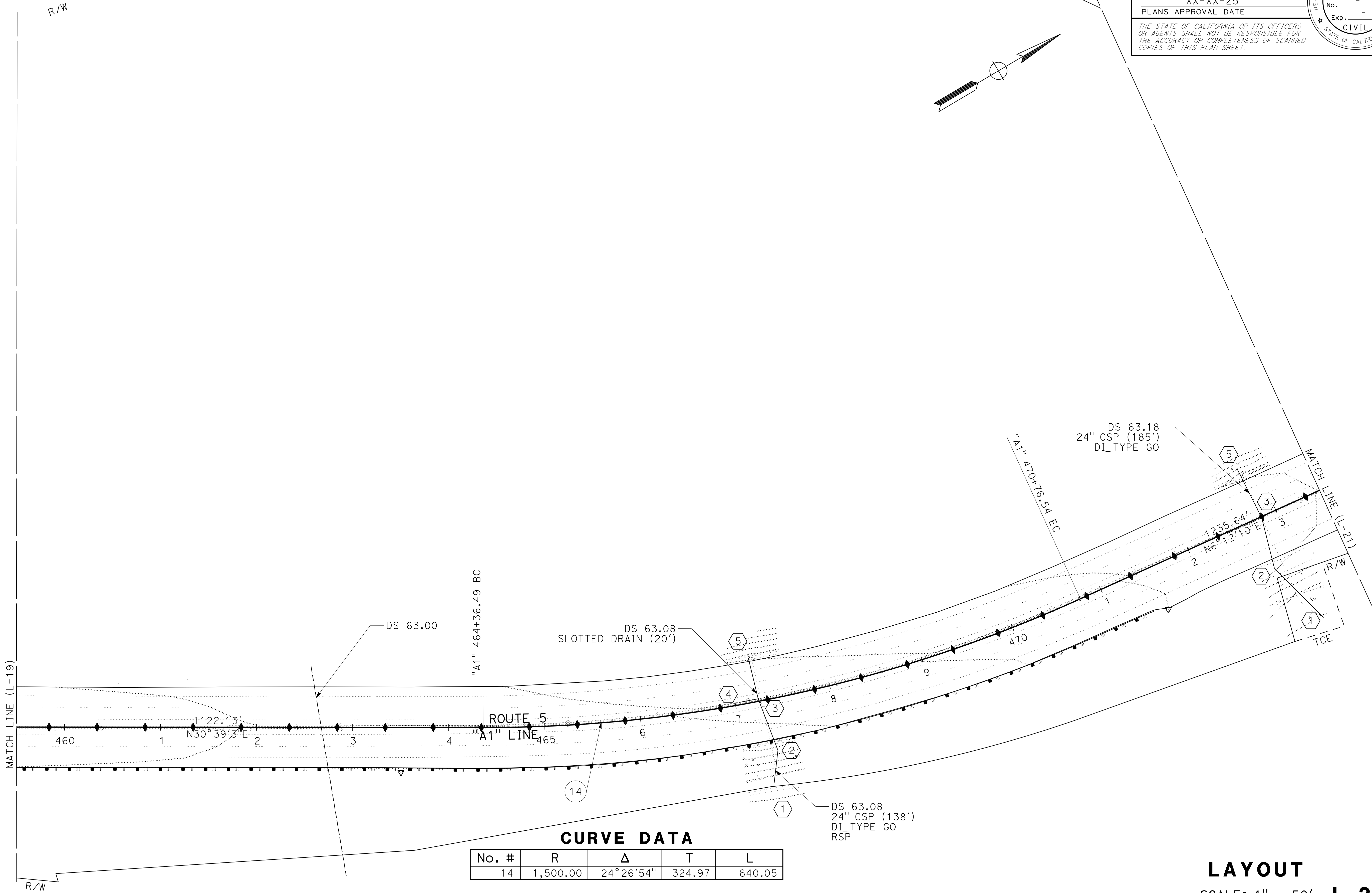
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No. #	R	Δ	T	L
13	1,500.00	24°54'22"	331.25	652.04

LAYOUT
SCALE: 1" = 50' **L-19**

NOTE:
1. 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
02	Sha,Sis	5	58.0/67.0, 0.0/2.7		

PRELIMINARY
REGISTERED CIVIL ENGINEER

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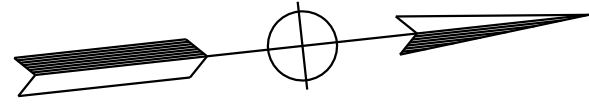
XX-XX-25
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BUSTER HANSEN
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LAYOUT
SCALE: 1" = 50' **L-20**

NOTE:
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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Sha,Sis	5	58.0/67.0, 0.0/2.7		

PRELIMINARY

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No. -

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CIVIL

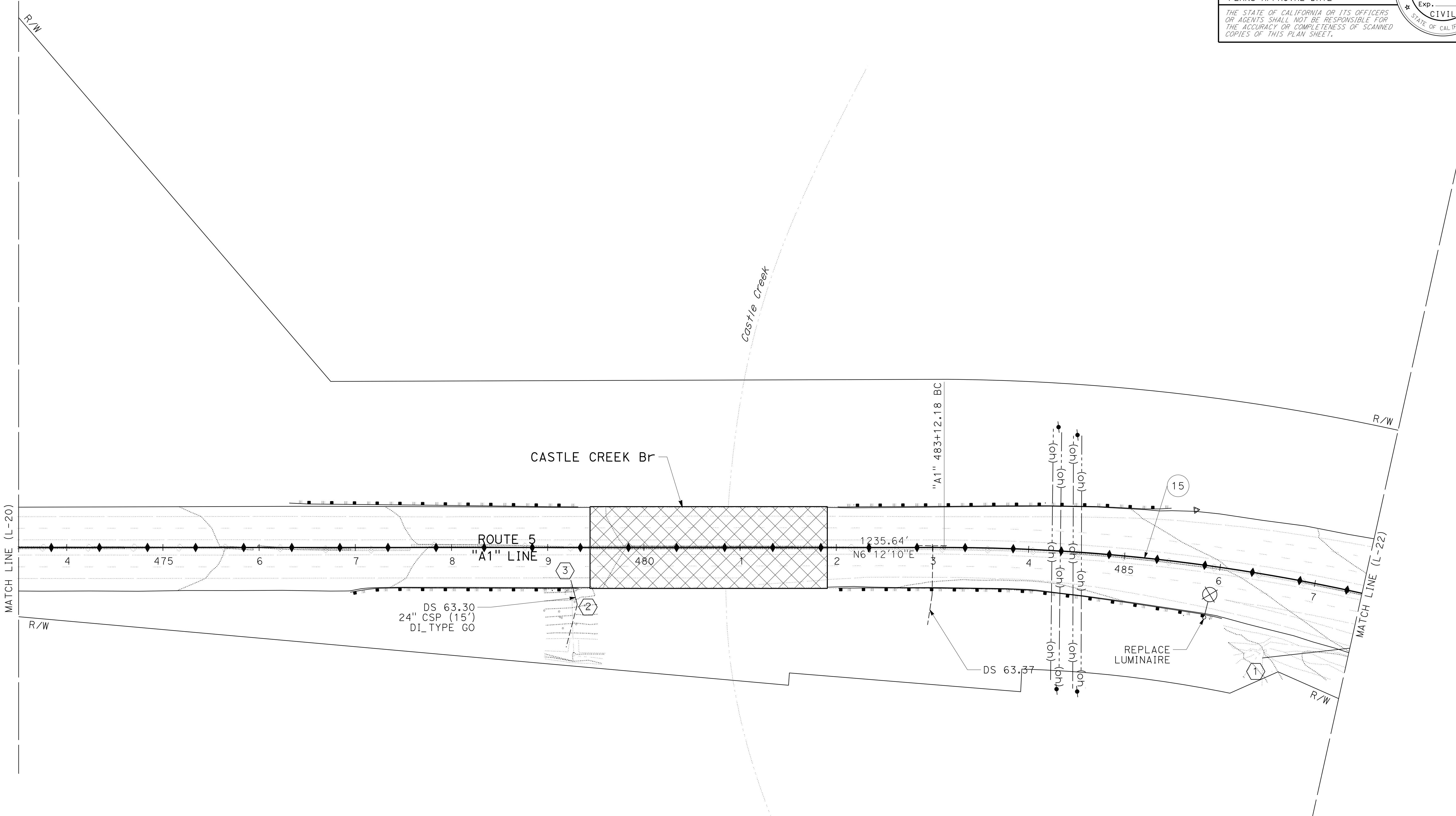
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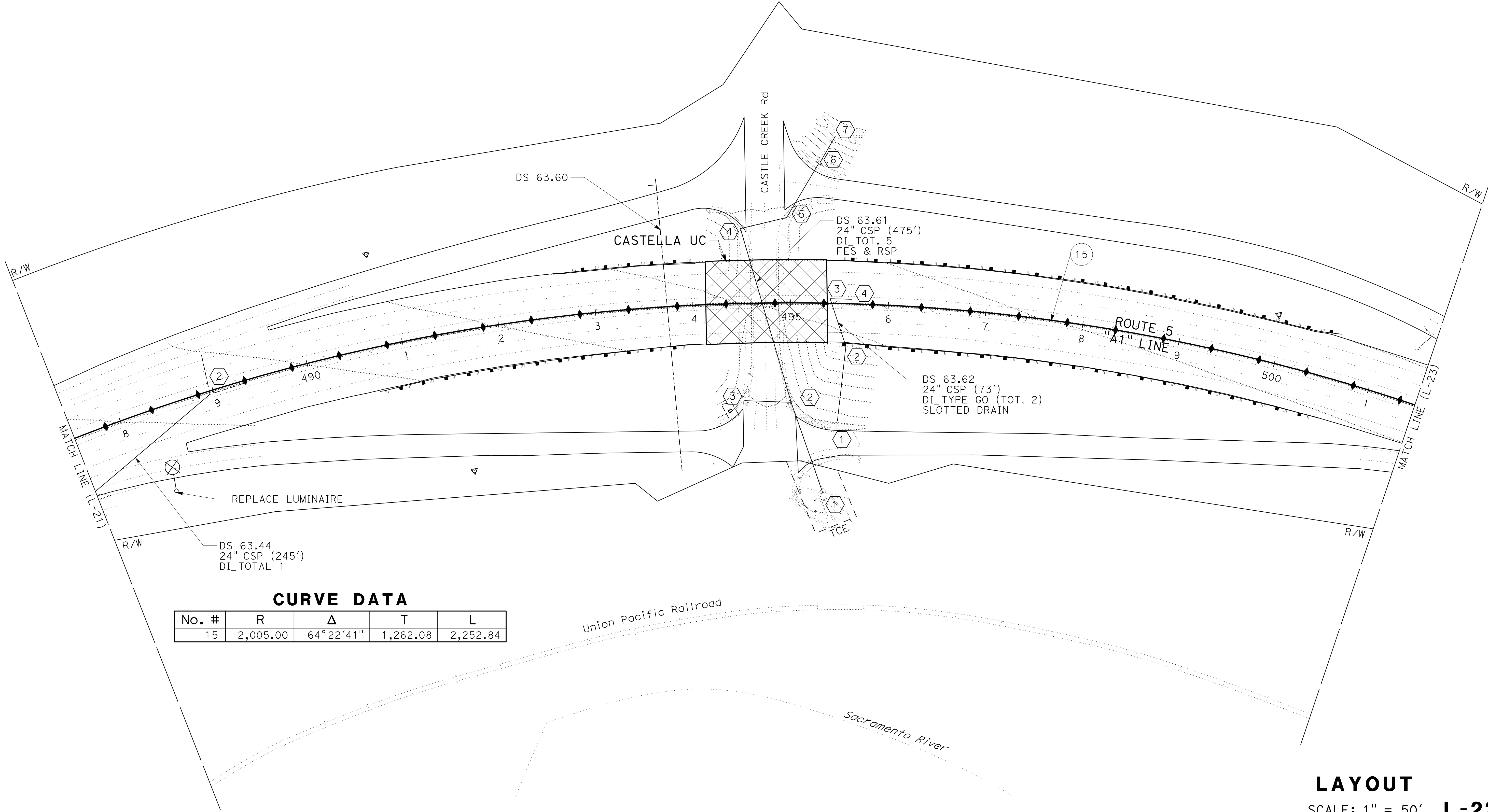


CURVE DATA

No. #	R	Δ	T	L
15	2,005.00	64° 22' 41"	1,262.08	2,252.84

LAYOUT
SCALE: 1" = 50' L - 21

NOTE:
1. 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
02	Sha,Sis	5	58.0/67.0, 0.0/2.7		

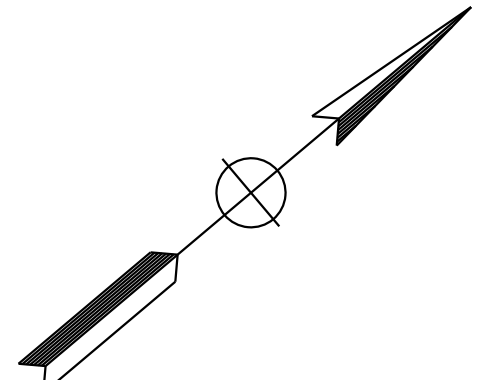
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No. #	R	Δ	T	L
15	2,005.00	64°22'41"	1,262.08	2,252.84

LAYOUT
SCALE: 1" = 50' L-22

NOTE:
1. 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
02	Sha,Sis	5	58.0/67.0, 0.0/2.7		

PRELIMINARY

REGISTERED CIVIL ENGINEER

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BUSTER
HANSEN

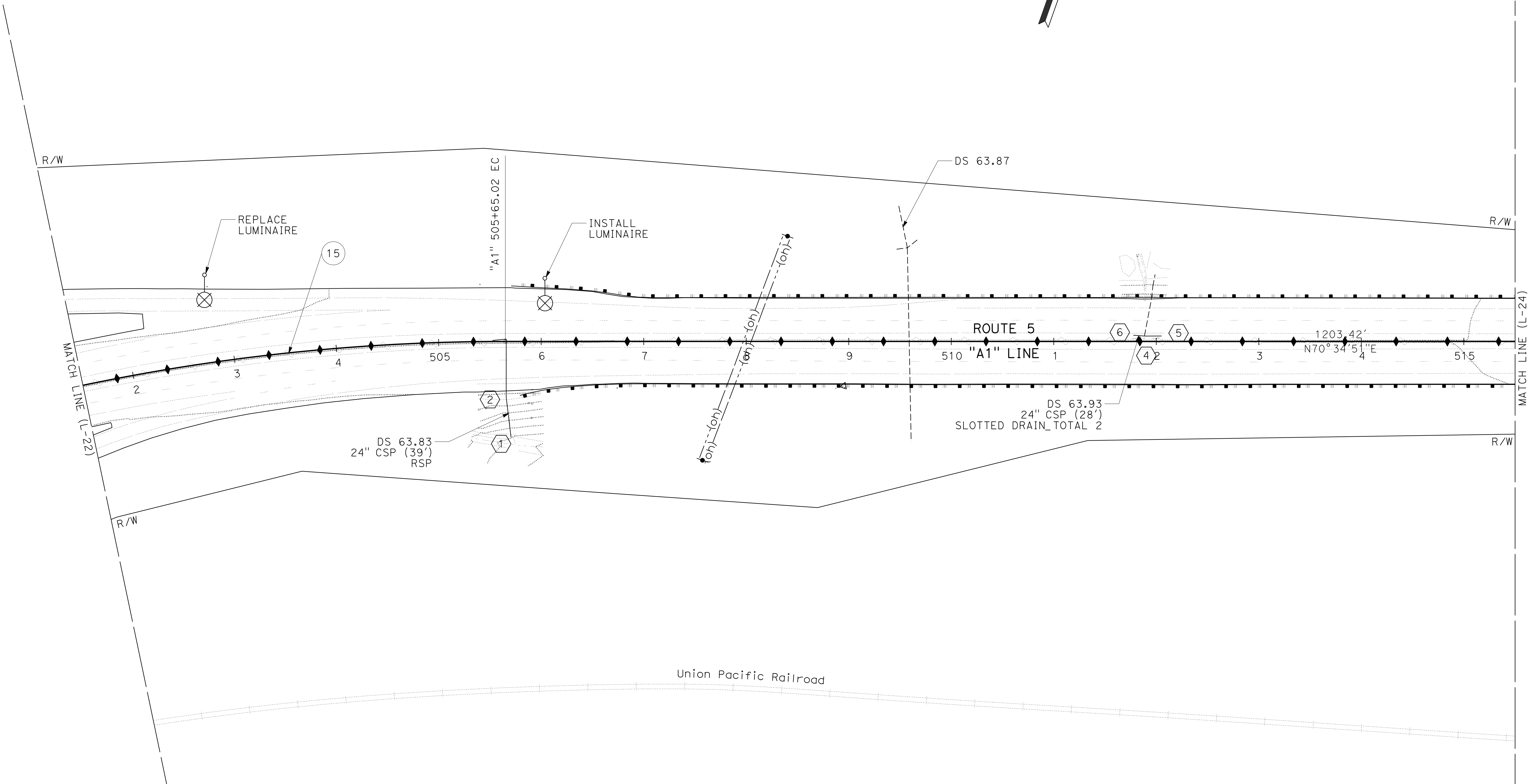
No. -

Exp. -

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CURVE DATA				
No. #	R	Δ	T	L
15	2,005.00	64°22'41"	1,262.08	2,252.84

LAYOUT
SCALE: 1" = 50' L-23

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Sha,Sis	5	58.0/67.0, 0.0/2.7		

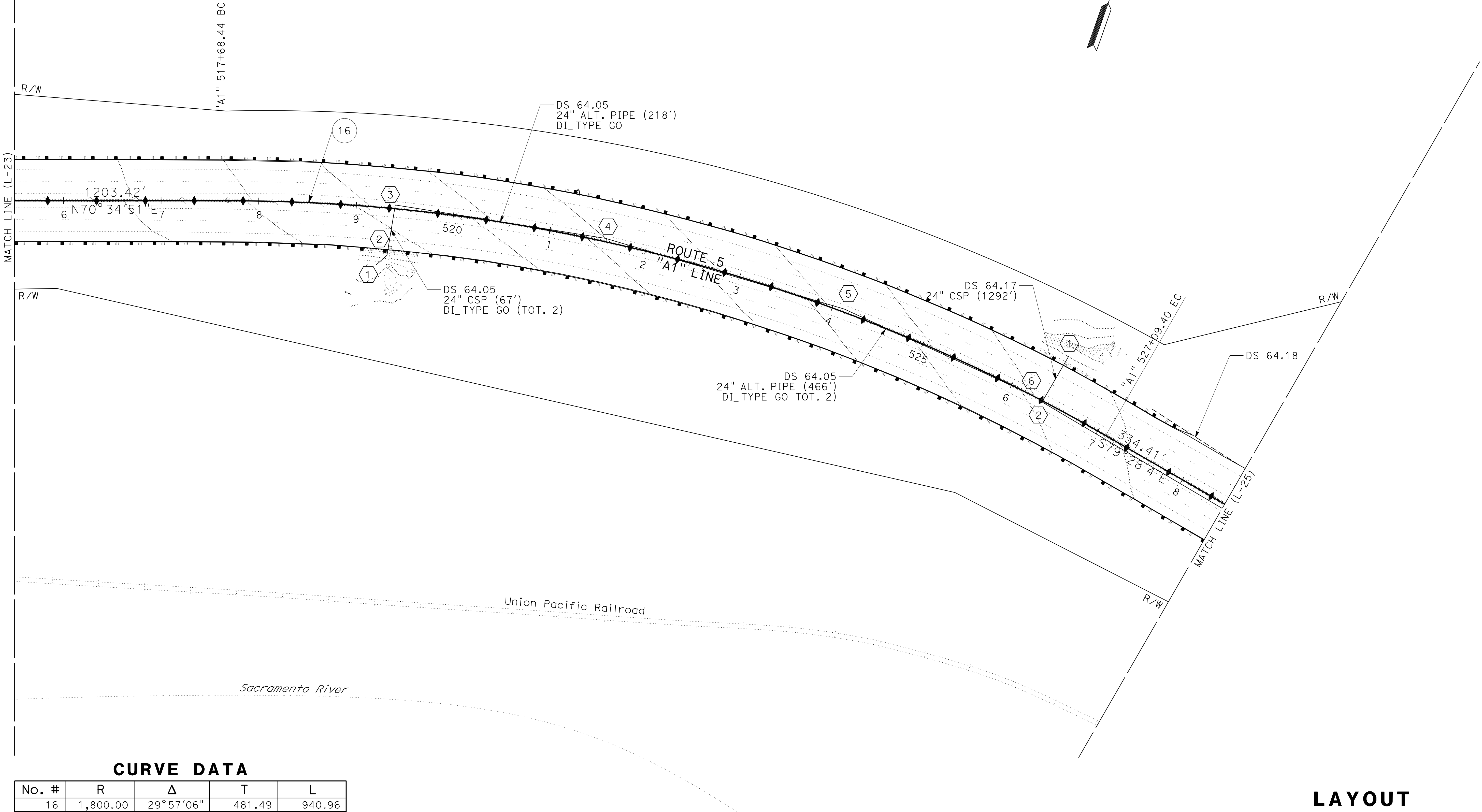
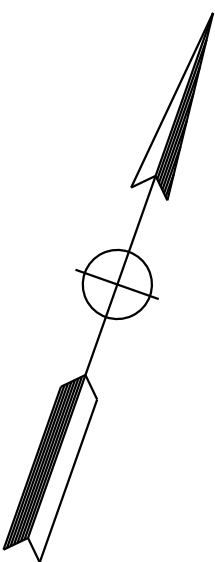
PRELIMINARY
REGISTERED CIVIL ENGINEER

SIGD
DATE

XX-XX-25
PLANS APPROVAL DATE

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BUSTER
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CURVE DATA

No. #	R	Δ	T	L
16	1,800.00	29°57'06"	481.49	940.96

LAYOUT
SCALE: 1" = 50' L-24

NOTE:
1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT
RIGHT OF WAY ENGINEER AT THE DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Sha,Sis	5	58.0/67.0, 0.0/2.7		

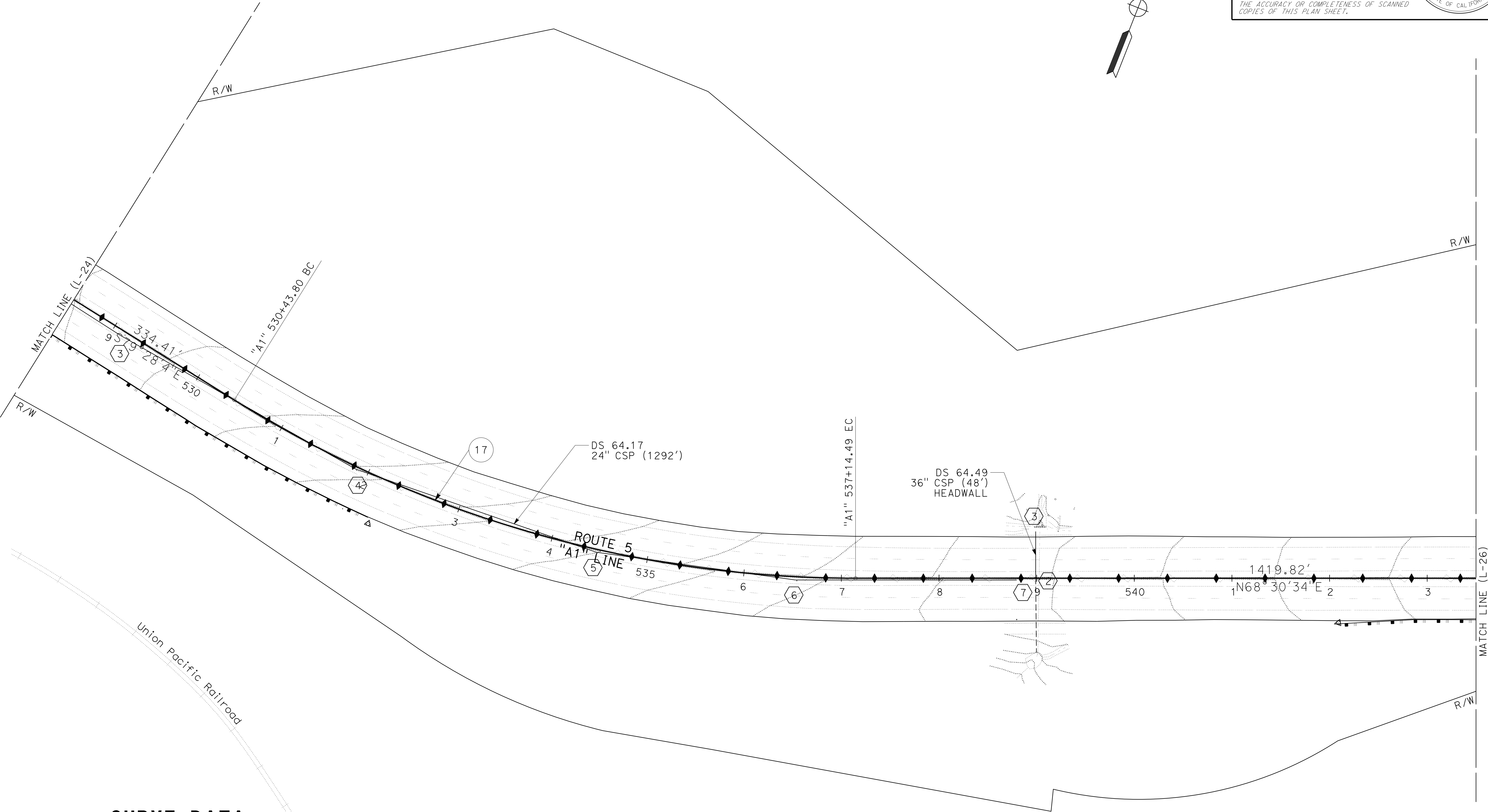
PRELIMINARY
REGISTERED CIVIL ENGINEER

SIGD
DATE

XX-XX-25
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
BUSTER
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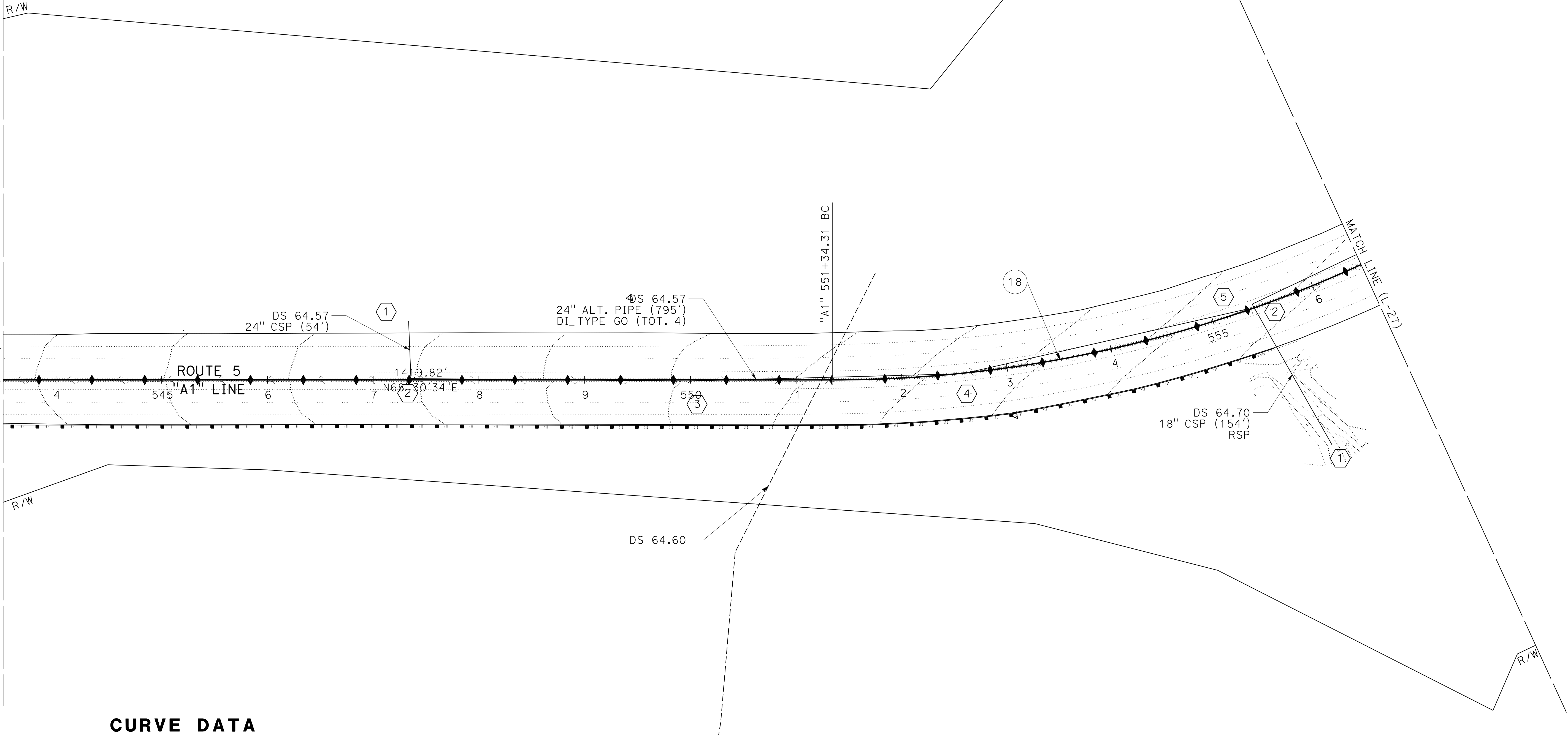
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No. #	R	Δ	T	L
17	1,200.00	32°01'22"	344.35	670.68

LAYOUT
SCALE: 1" = 50' L-25

NOTE:
1. 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
02	Sha,Sis	5	58.0/67.0, 0.0/2.7		

PRELIMINARY
REGISTERED CIVIL ENGINEER

SIGD
DATE

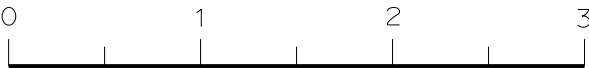
XX-XX-25
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
BUSTER
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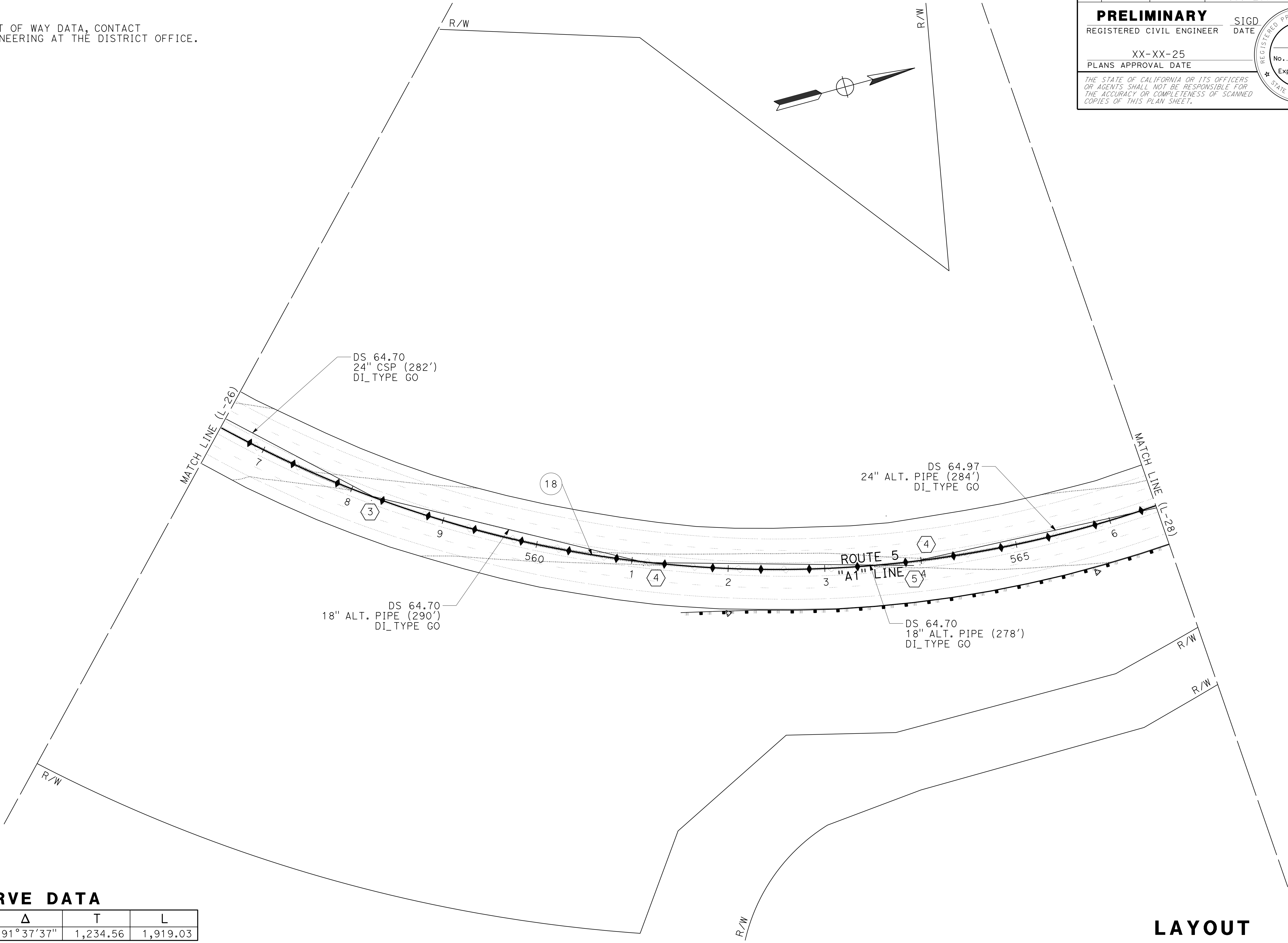
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CURVE DATA				
No. #	R	Δ	T	L
18	1,200.00	91° 37' 37"	1,234.56	1,919.03

LAYOUT
SCALE: 1" = 50' L - 26



NOTE:
1. 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
02	Sha,Sis	5	58.0/67.0, 0.0/2.7		

PRELIMINARY
REGISTERED CIVIL ENGINEER

SIGD
DATE

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PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER

BUSTER HANSEN

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CURVE DATA				
No. #	R	Δ	T	L
18	1,200.00	91° 37' 37"	1,234.56	1,919.03

LAYOUT
SCALE: 1" = 50'
L-27

NOTE:
1. 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
02	Sha,Sis	5	58.0/67.0, 0.0/2.7		

PRELIMINARY

REGISTERED CIVIL ENGINEER

SIGD
DATE

XX-XX-25

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER

BUSTER
HANSEN

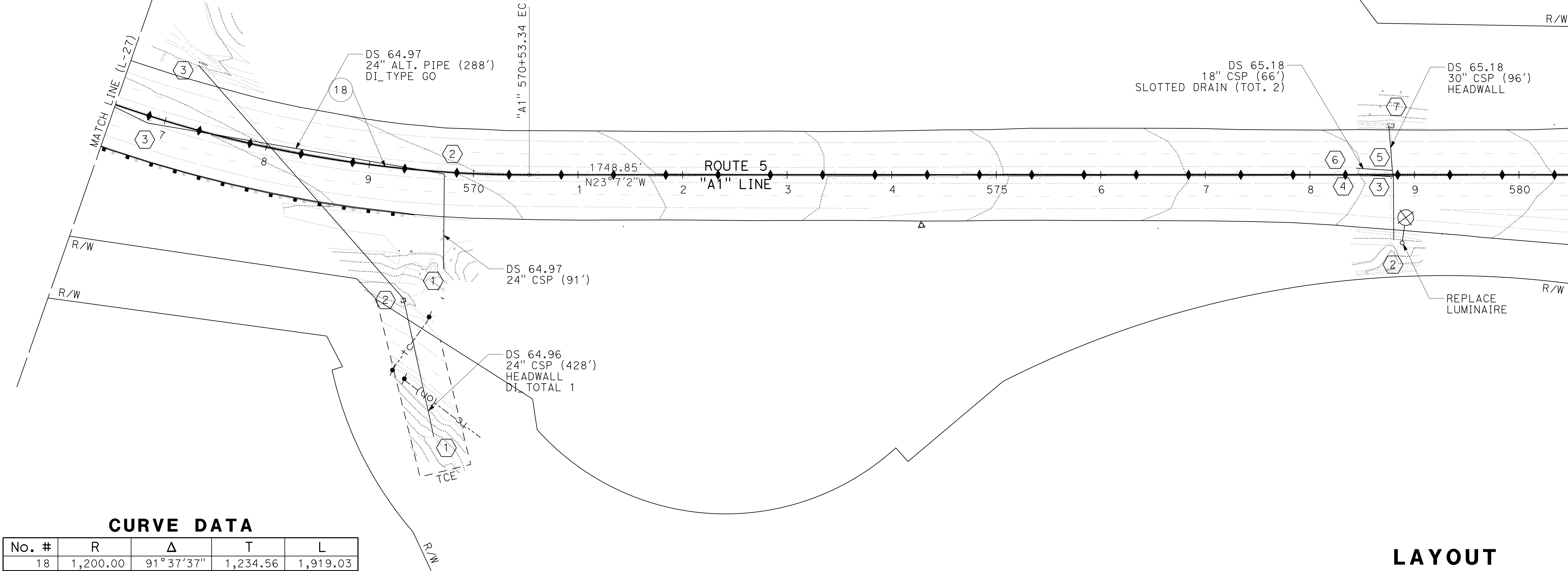
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Exp. -

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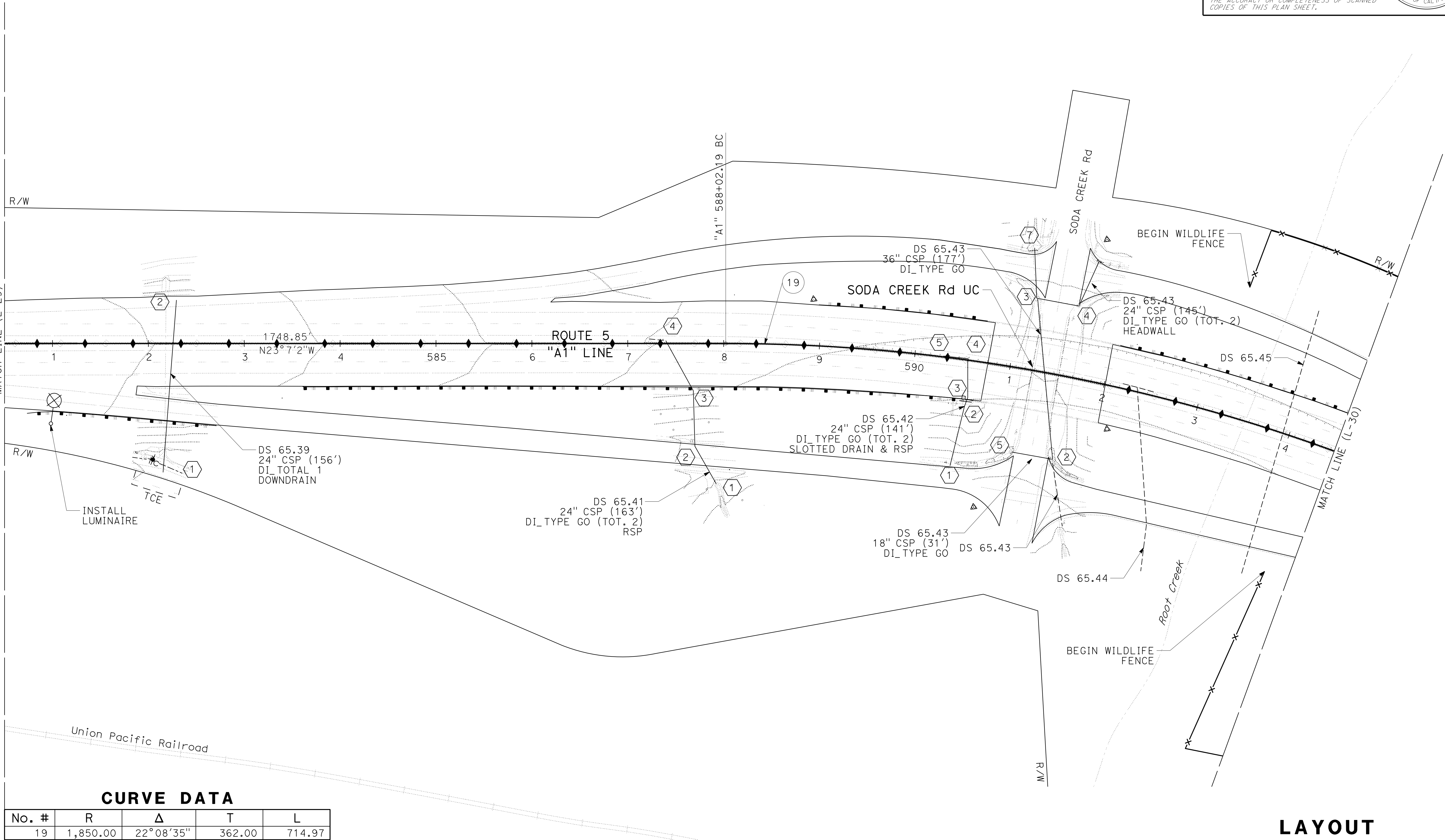
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CURVE DATA				
No. #	R	Δ	T	L
18	1,200.00	91° 37' 37"	1,234.56	1,919.03

LAYOUT
SCALE: 1" = 50' L-28

NOTE:
1. 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
02	Sha,Sis	5	58.0/67.0, 0.0/2.7		

PRELIMINARY
REGISTERED CIVIL ENGINEER

SIGD
DATE

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CURVE DATA				
No. #	R	Δ	T	L
19	1,850.00	22°08'35"	362.00	714.97

LAYOUT
SCALE: 1" = 50' L -29

NOTE:
1. 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
02	Sha,Sis	5	58.0/67.0, 0.0/2.7		

PRELIMINARY

REGISTERED CIVIL ENGINEER

SIGD
DATE

XX-XX-25

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER

BUSTER
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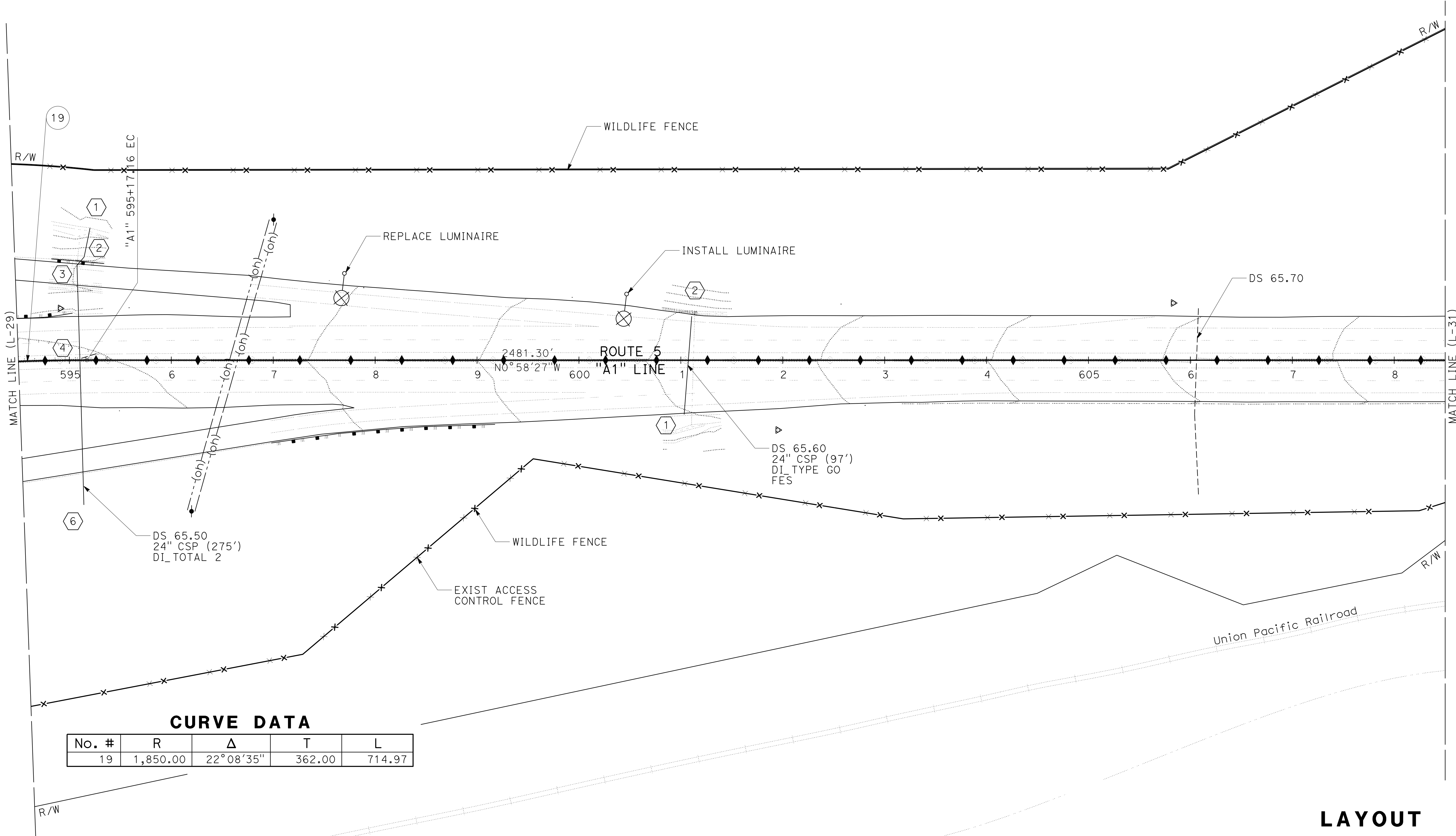
No. -

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CURVE DATA				
No. #	R	Δ	T	L
19	1,850.00	22°08'35"	362.00	714.97

LAYOUT
SCALE: 1" = 50' L-30

NOTE:
1. 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
02	Sha,Sis	5	58.0/67.0, 0.0/2.7		

PRELIMINARY

REGISTERED CIVIL ENGINEER

SIGD
DATE

XX-XX-25

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER

BUSTER HANSEN

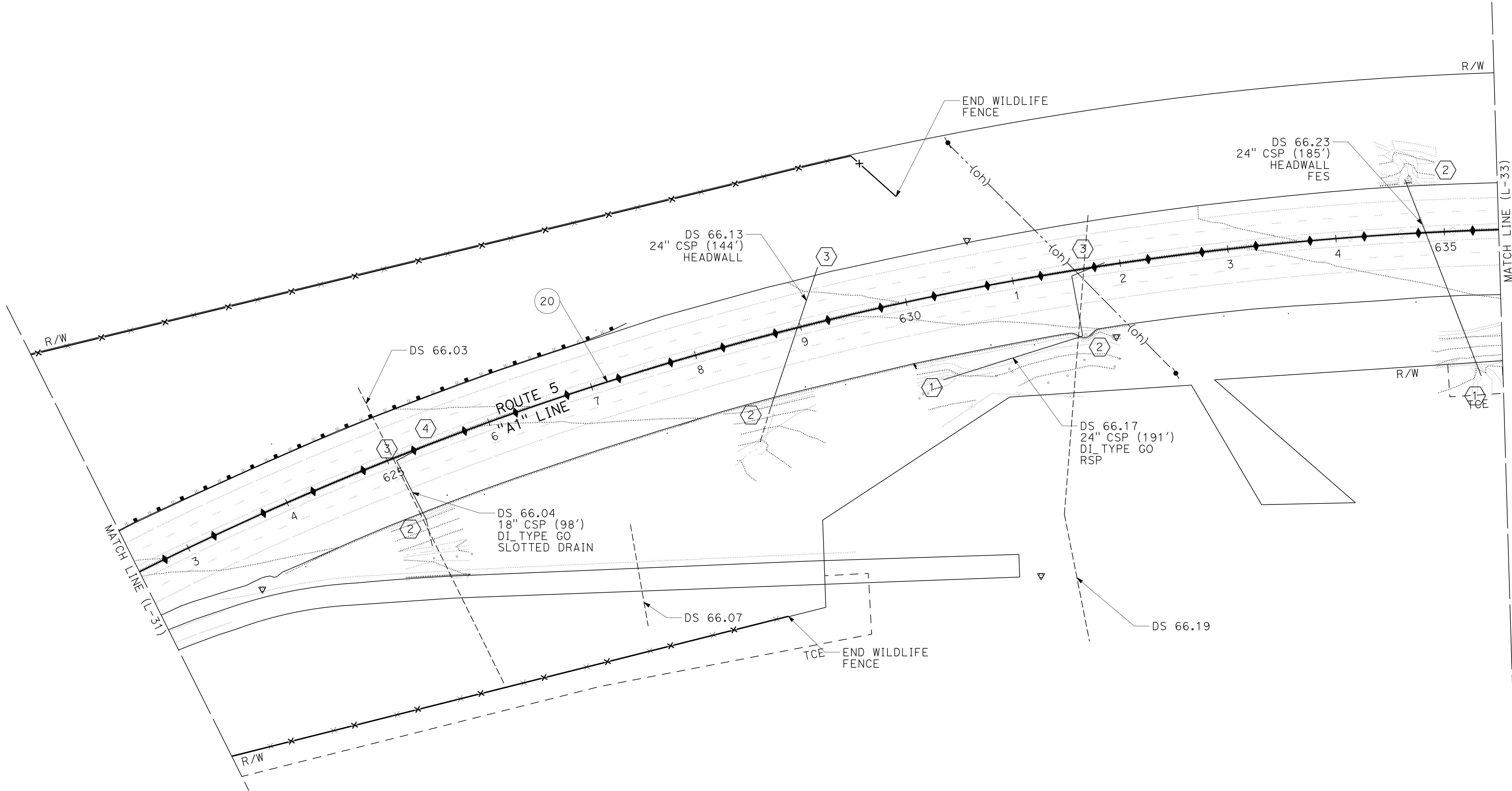
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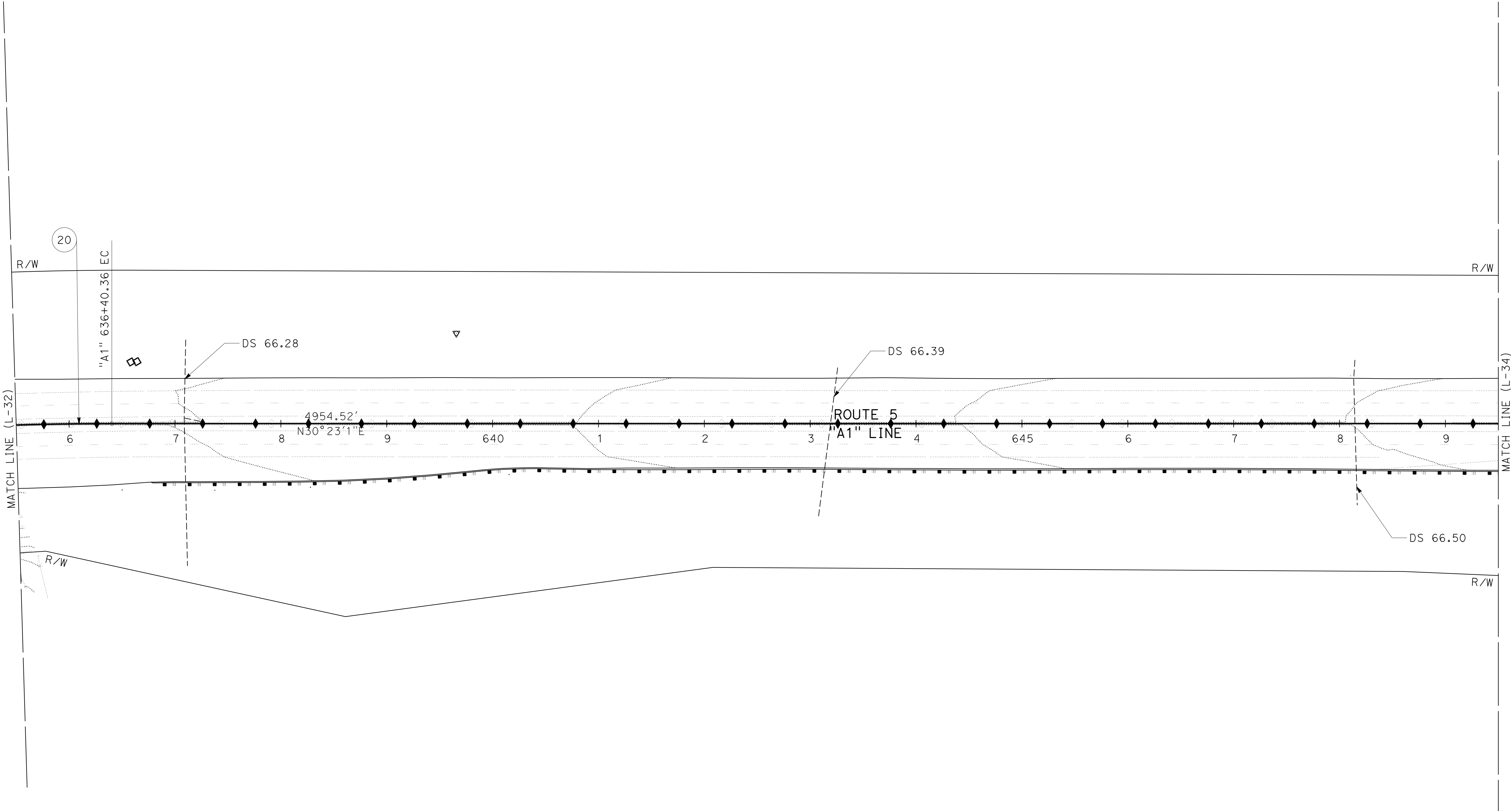


CURVE DATA

No. #	R	Δ	T	L
20	3,000.00	31°21'28"	842.07	1,641.89

LAYOUT
SCALE: 1" = 50' L-32

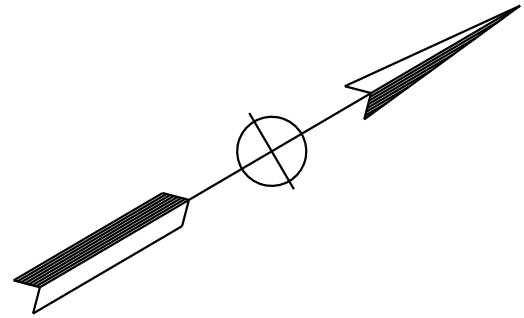
NOTE:
1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT
RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



CURVE DATA

No. #	R	Δ	T	L
20	3,000.00	31°21'28"	842.07	1,641.89

LAYOUT
SCALE: 1" = 50' L - 33



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Sha,Sis	5	58.0/67.0, 0.0/2.7		

PRELIMINARY
REGISTERED CIVIL ENGINEER

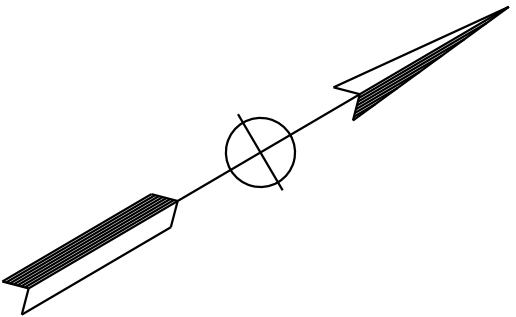
SIGD
DATE

XX-XX-25
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
BUSTER
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RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Sha,Sis	5	58.0/67.0, 0.0/2.7		

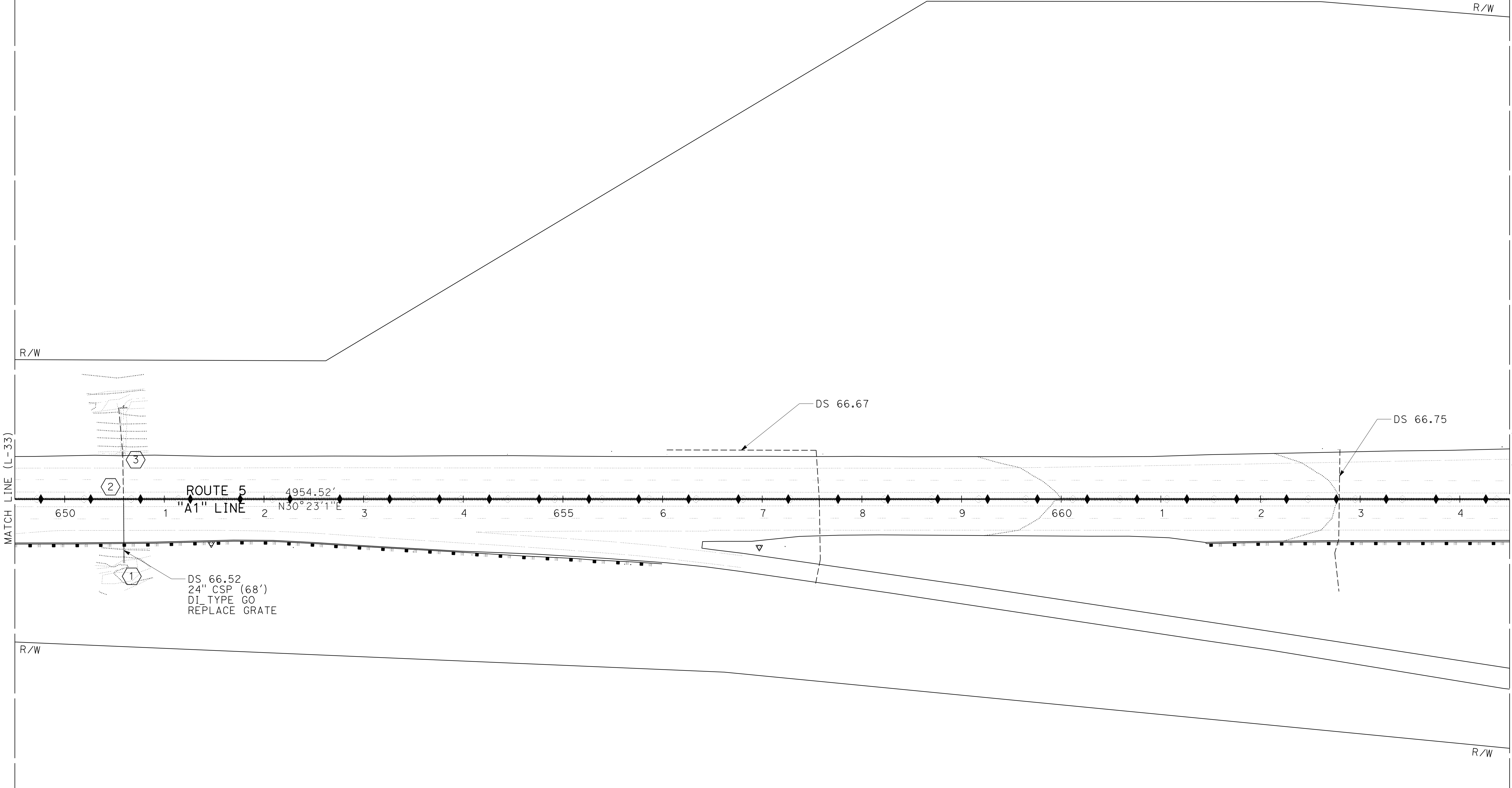
PRELIMINARY
REGISTERED CIVIL ENGINEER

SIGD
DATE

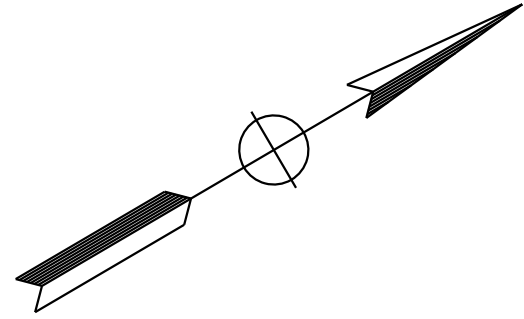
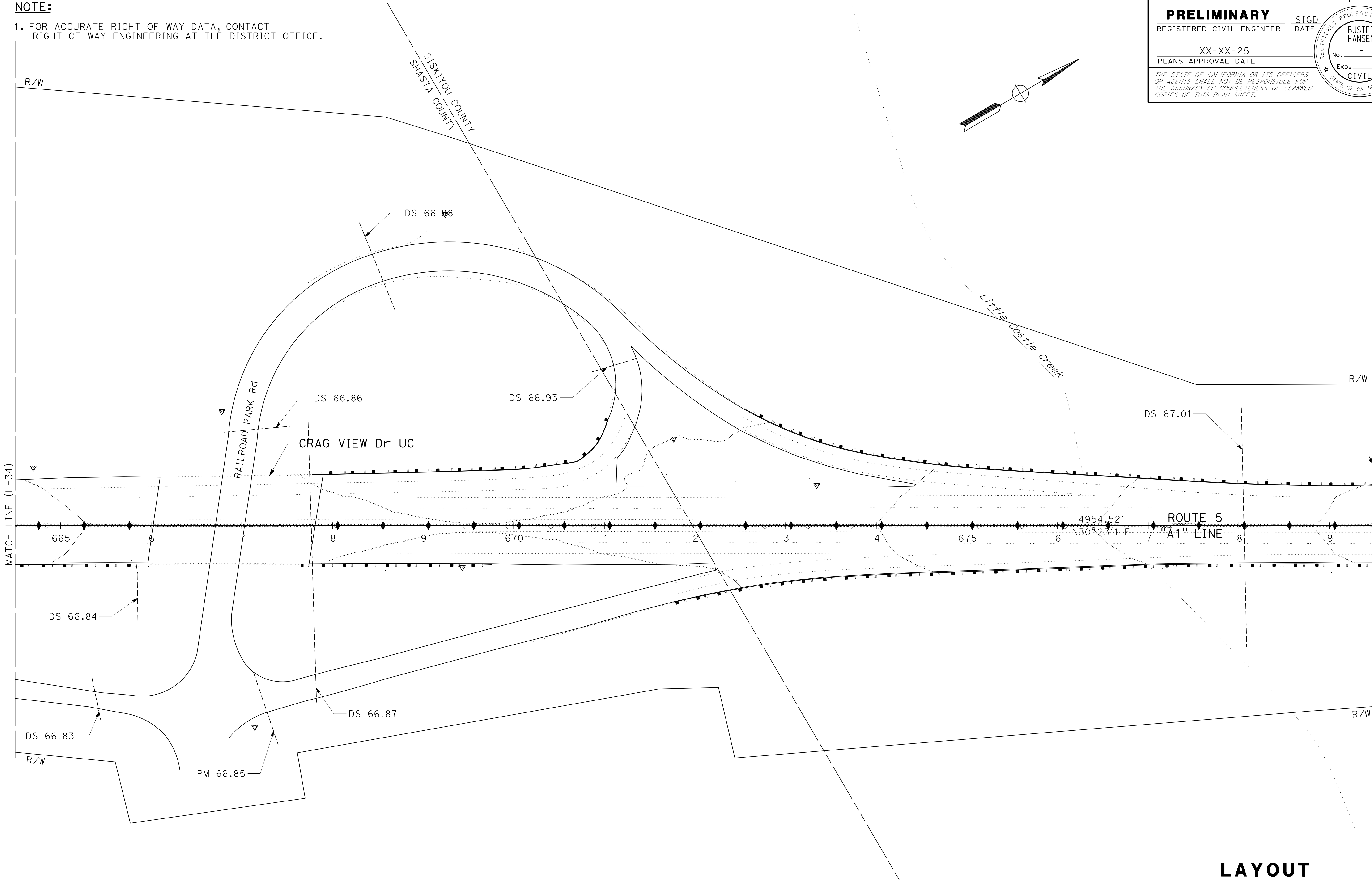
XX-XX-25
PLANS APPROVAL DATE

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BUSTER
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No. -
Exp. -
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NOTE:
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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Sha,Sis	5	58.0/67.0, 0.0/2.7		

PRELIMINARY
REGISTERED CIVIL ENGINEER

SIGD
DATE

XX-XX-25
PLANS APPROVAL DATE

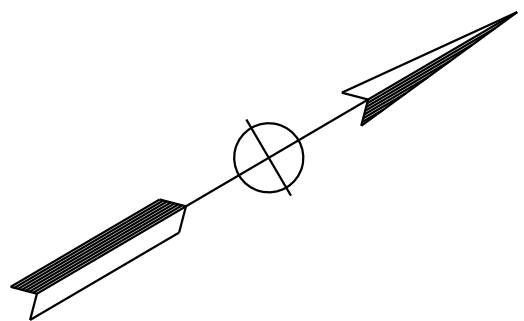
REGISTERED PROFESSIONAL ENGINEER
BUSTER
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LAYOUT
SCALE: 1" = 50' L - 35



NOTE:
1. 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
02	Sha,Sis	5	58.0/67.0, 0.0/2.7		

PRELIMINARY

REGISTERED CIVIL ENGINEER

XX-XX-25

PLANS APPROVAL DATE

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DATE

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BUSTER HANSEN

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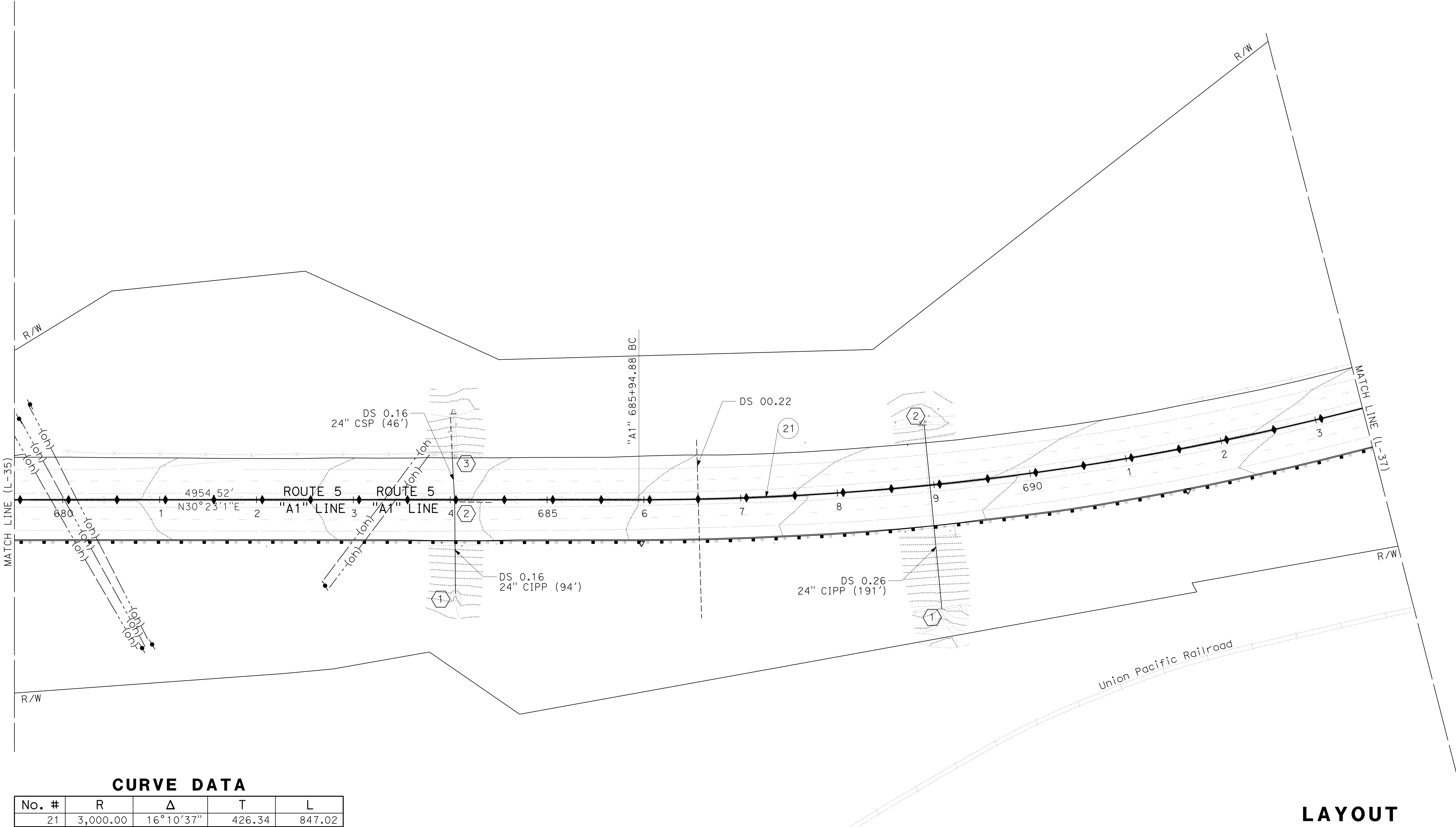
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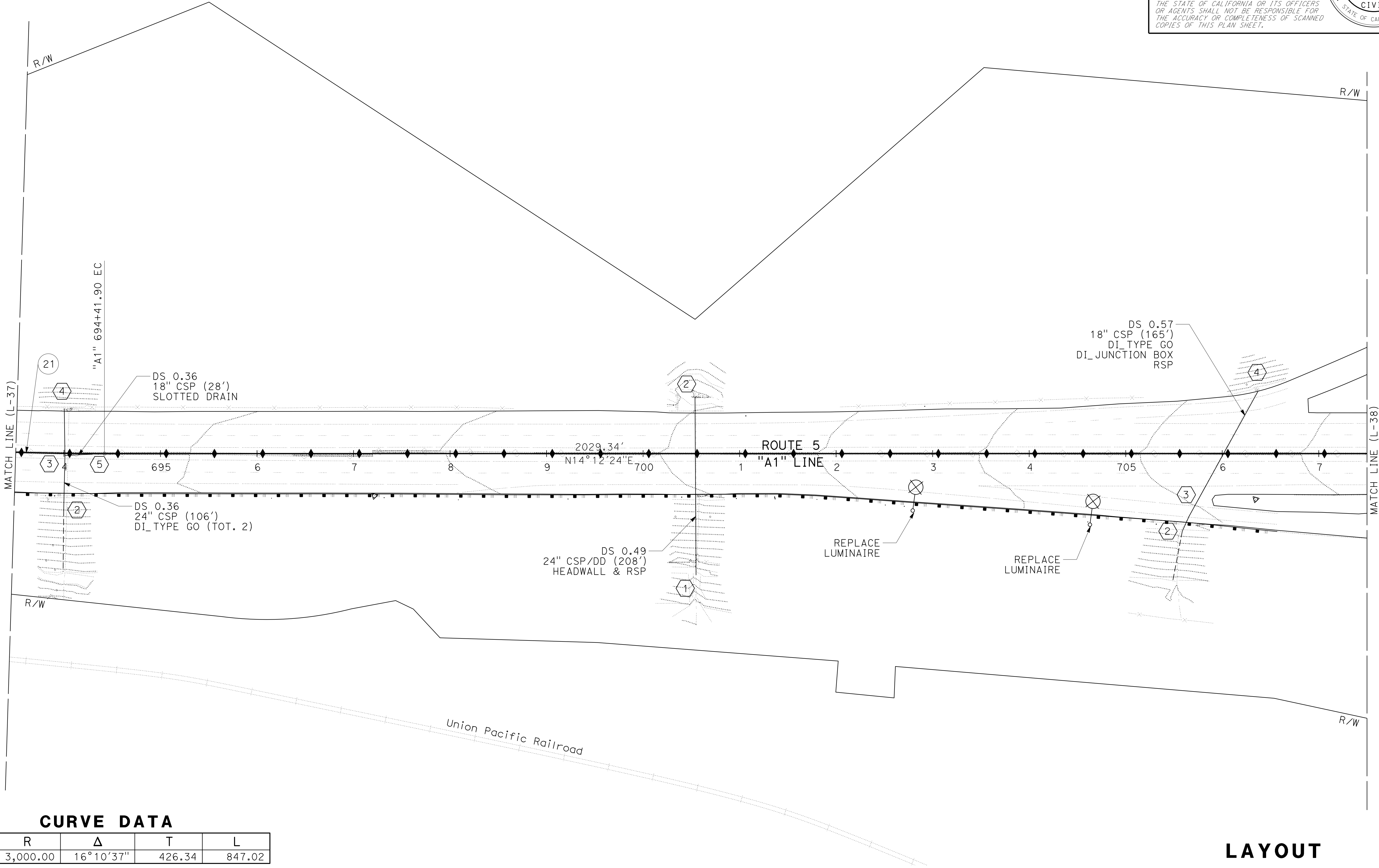


CURVE DATA

No. #	R	Δ	T	L
21	3,000.00	16°10'37"	426.34	847.02

LAYOUT
SCALE: 1" = 50'
L -36

NOTE:
1. 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
02	Sha,Sis	5	58.0/67.0, 0.0/2.7		

PRELIMINARY
REGISTERED CIVIL ENGINEER

SIGD
DATE

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PLANS APPROVAL DATE

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CURVE DATA				
No. #	R	Δ	T	L
21	3,000.00	16°10'37"	426.34	847.02

LAYOUT
SCALE: 1" = 50' L-37

NOTE:

1. 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
02	Sha,Sis	5	58.0/67.0, 0.0/2.7		

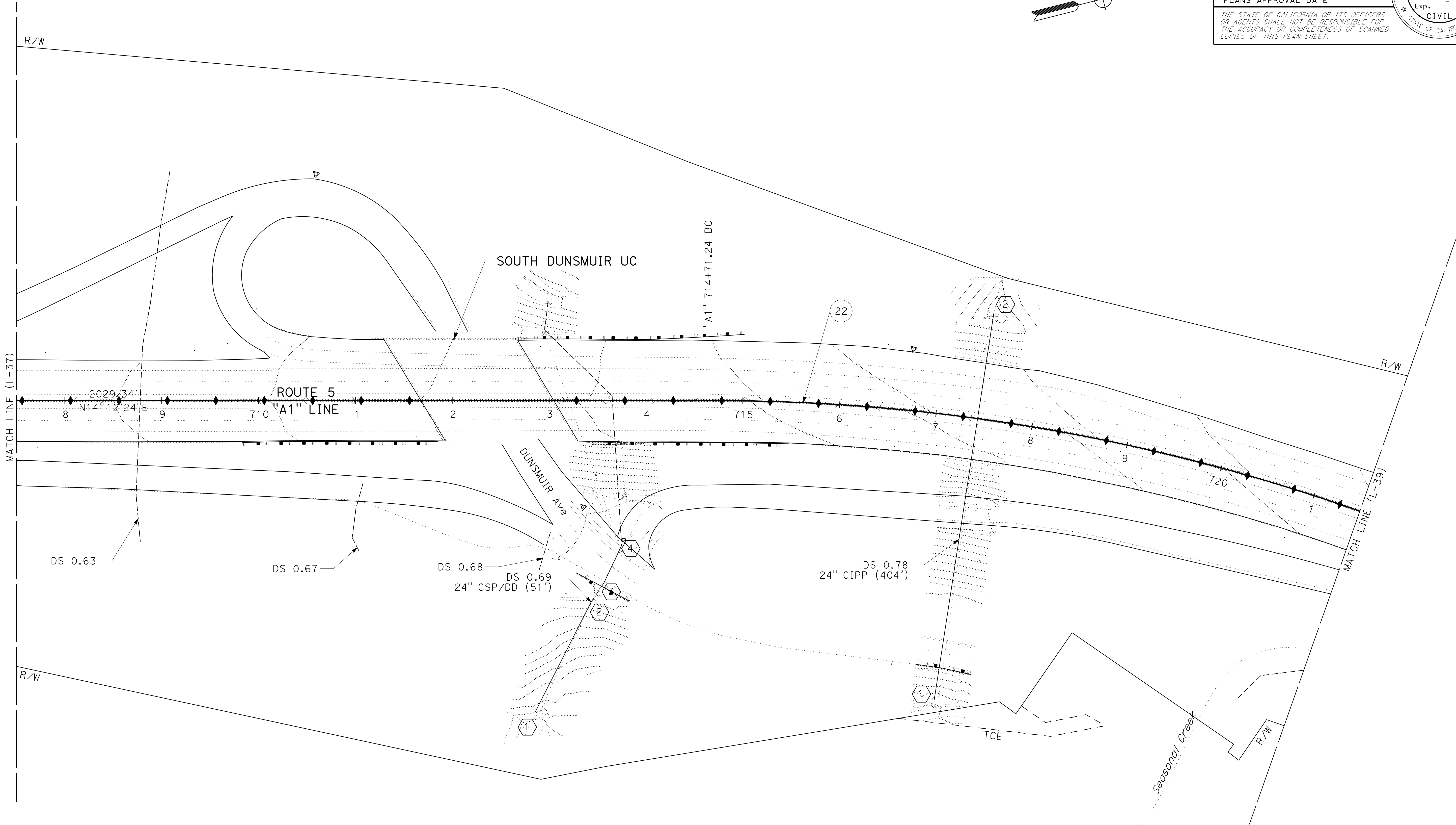
PRELIMINARY
REGISTERED CIVIL ENGINEER

SIGD
DATE

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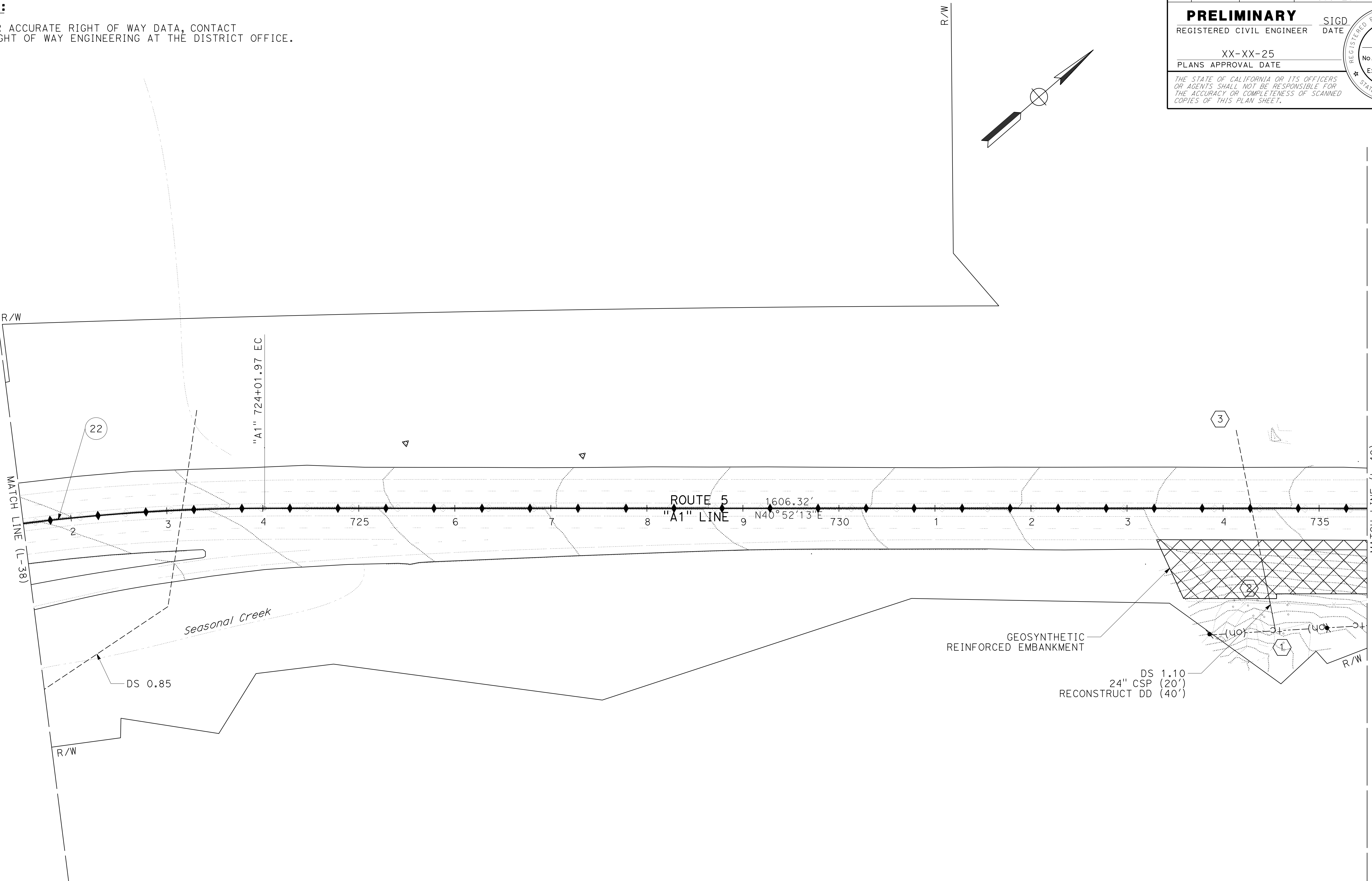
CURVE DATA

No. #	R	Δ	T	L
22	2,000.00	26° 39' 48"	473.95	930.73

LAYOUT
SCALE: 1" = 50' **L-38**

NOTE:
1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT
RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

No. #	R	Δ	T	L
22	2,000.00	26° 39' 48"	473.95	930.73



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Sha,Sis	5	58.0/67.0, 0.0/2.7		

PRELIMINARY
REGISTERED CIVIL ENGINEER

SIGD
DATE

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NOTE:
1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT
RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

No. #	R	Δ	T	L
23	1,500.00	33° 44' 43"	454.95	883.45

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Sha,Sis	5	58.0/67.0, 0.0/2.7		

PRELIMINARY

REGISTERED CIVIL ENGINEER

SIGD
DATE

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REGISTERED PROFESSIONAL ENGINEER

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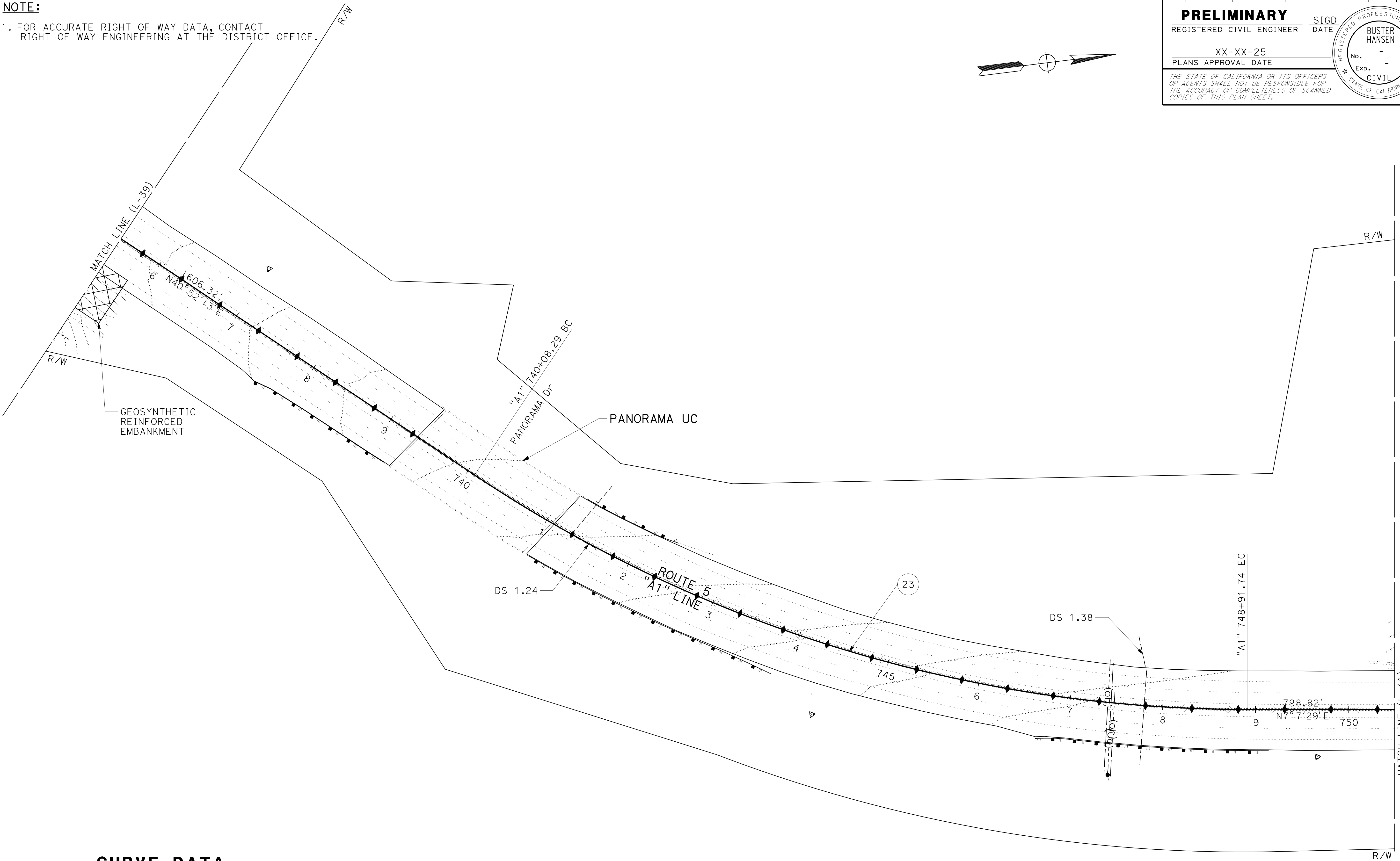
STATE OF CALIFORNIA

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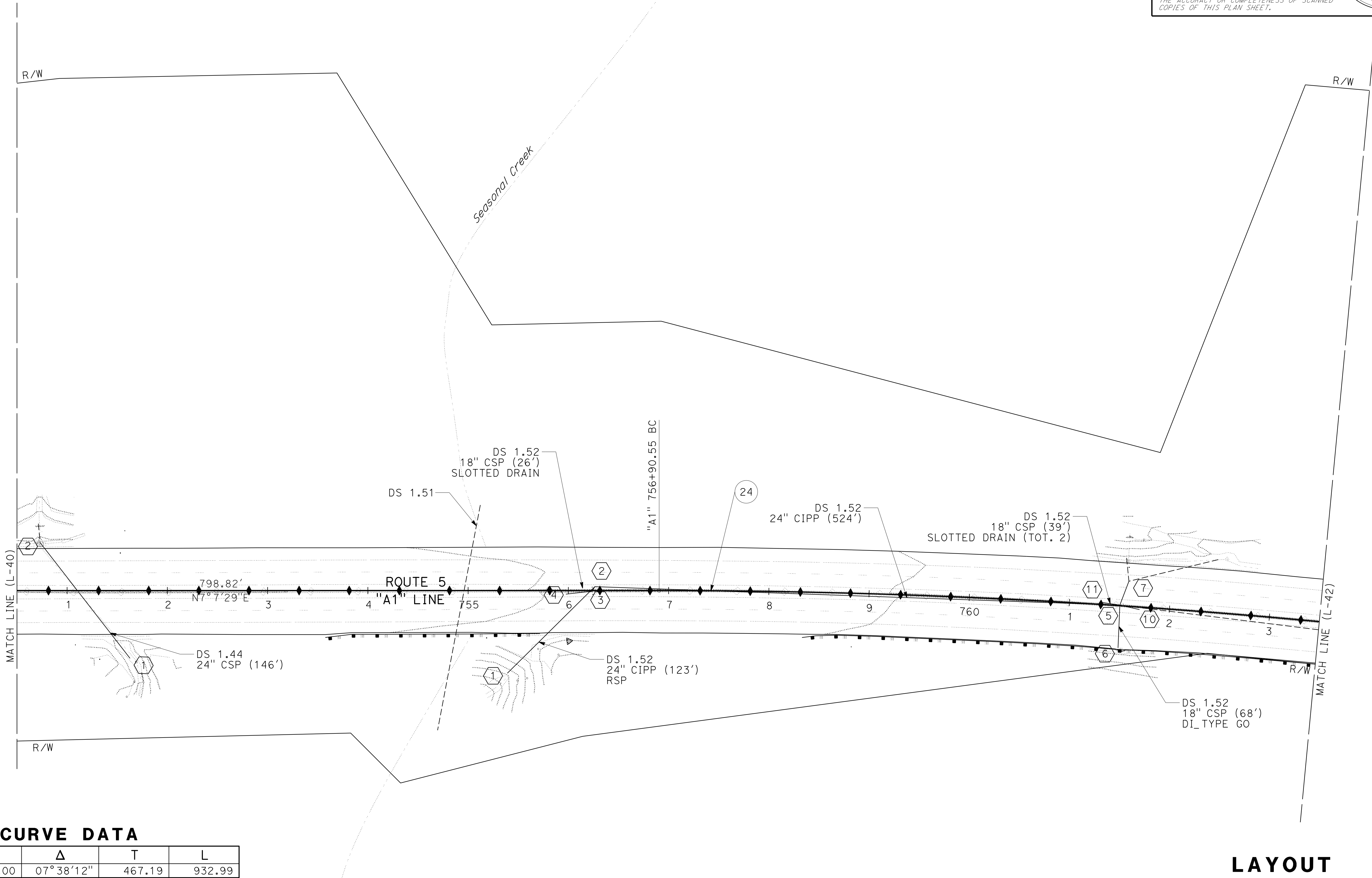
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LAYOUT
SCALE: 1" = 50' L-40

NOTE:
1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT
RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



CURVE DATA

No. #	R	Δ	T	L
24	7,000.00	07° 38' 12"	467.19	932.99

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Sha,Sis	5	58.0/67.0, 0.0/2.7		

PRELIMINARY
REGISTERED CIVIL ENGINEER

SIGD
DATE

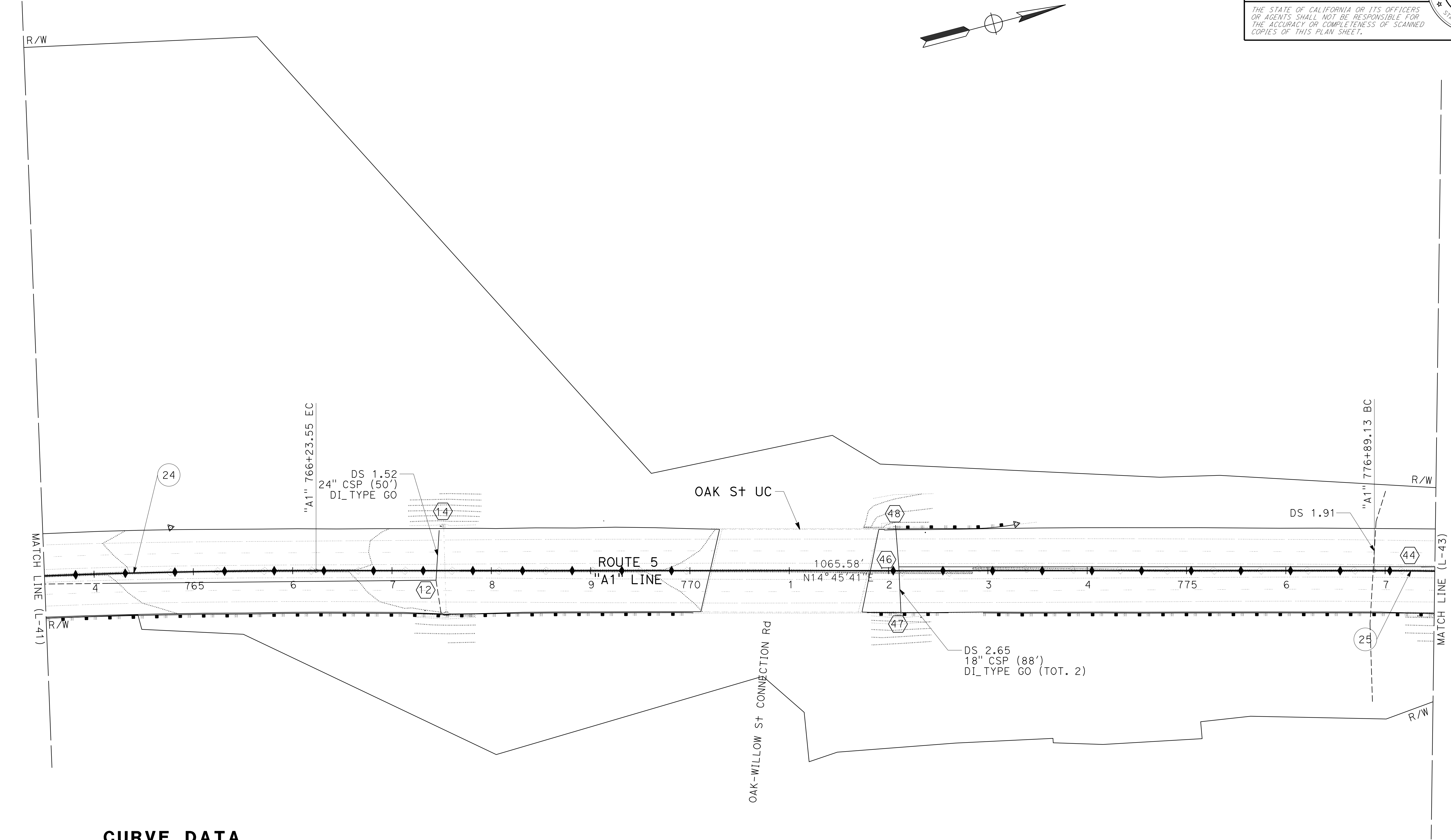
XX-XX-25
PLANS APPROVAL DATE

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BUSTER
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LAYOUT
SCALE: 1" = 50'
L-41

NOTE:
1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT
RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



CURVE DATA				
No. #	R	Δ	T	L
24	4,500.00	08°27'15"	332.60	663.99
25	4,500.00	08°27'15"	332.60	663.99

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Sha,Sis	5	58.0/67.0, 0.0/2.7		

PRELIMINARY
REGISTERED CIVIL ENGINEER

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LAYOUT
SCALE: 1" = 50' L-42

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Sha,Sis	5	58.0/67.0, 0.0/2.7		

PRELIMINARY
REGISTERED CIVIL ENGINEER

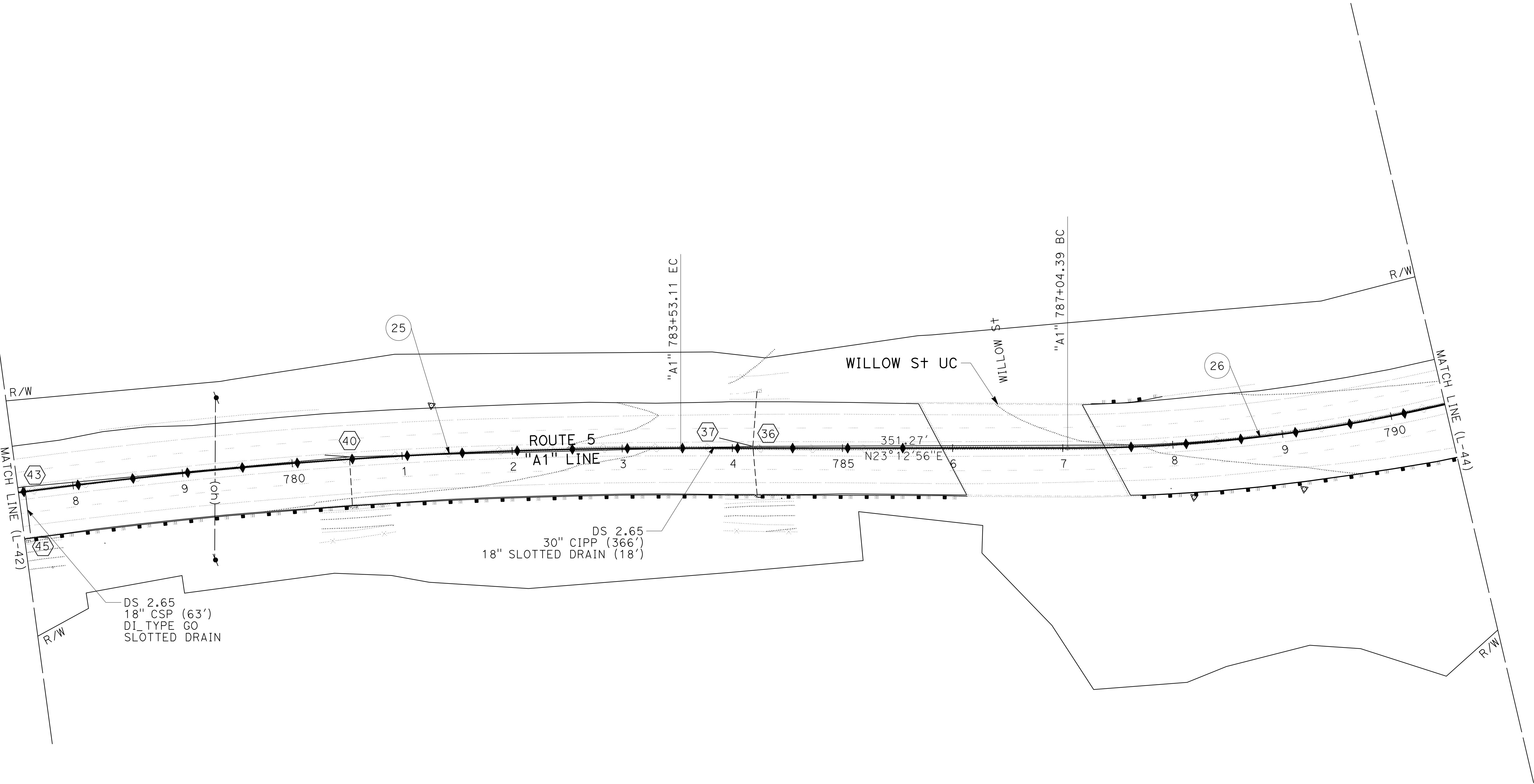
SIGD
DATE

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BUSTER
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NOTE:
1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT
RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



CURVE DATA

No. #	R	Δ	T	L
25	4,500.00	08°27'15"	332.60	663.99
26	1,500.00	28°59'13"	387.75	758.88

LAYOUT
SCALE: 1" = 50' L-43

NOTE:
1. 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
02	Sha,Sis	5	58.0/67.0, 0.0/2.7		

PRELIMINARY

REGISTERED CIVIL ENGINEER

SIGD
DATE

XX-XX-25

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER

BUSTER HANSEN

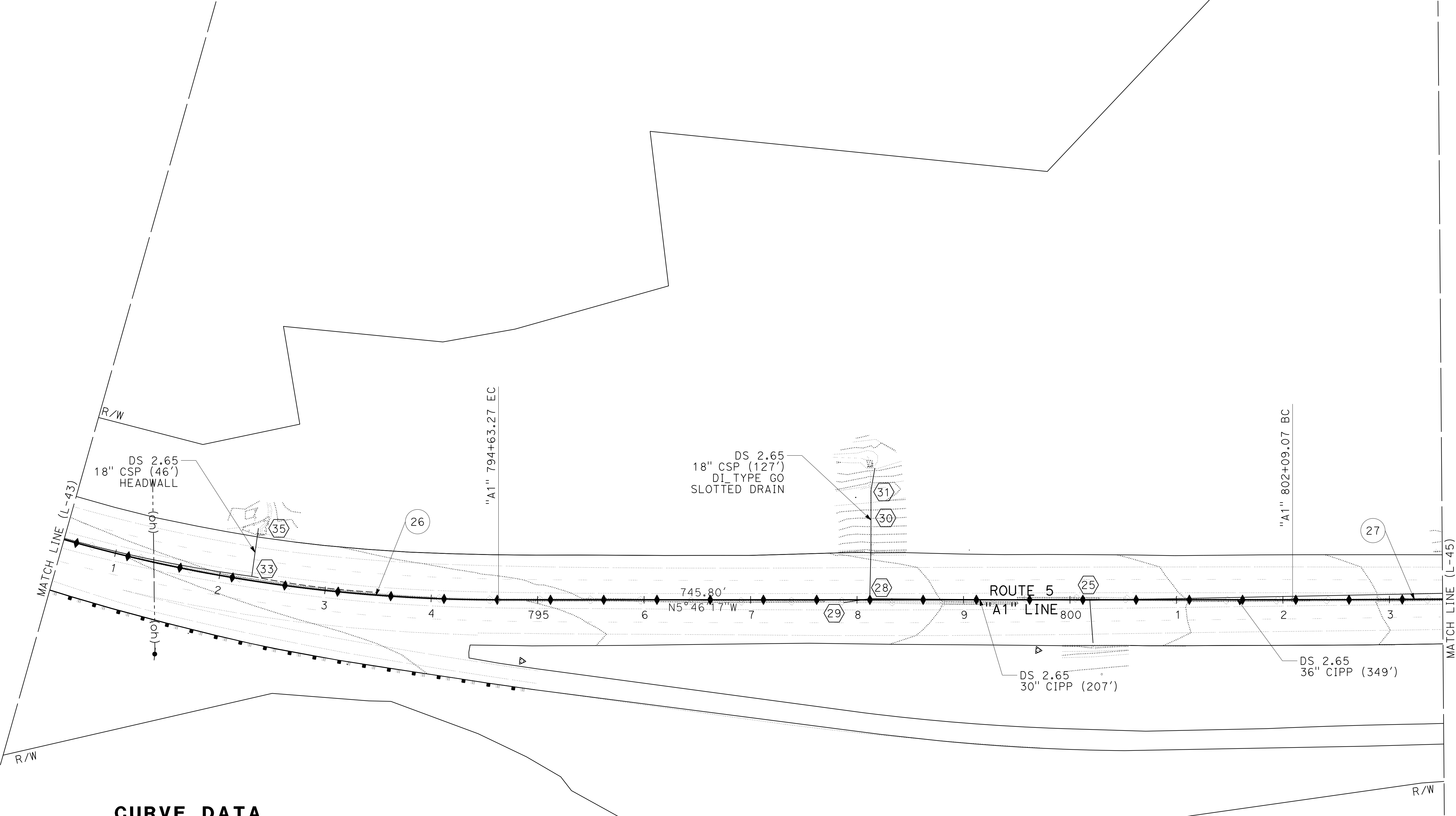
No. -

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CURVE DATA				
No. #	R	Δ	T	L
26	1,500.00	28°59'13"	387.75	758.88
27	18,000.00	01°49'18"	286.17	572.29

LAYOUT
SCALE: 1" = 50' L-44

NOTE:
1. 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
02	Sha,Sis	5	58.0/67.0, 0.0/2.7		

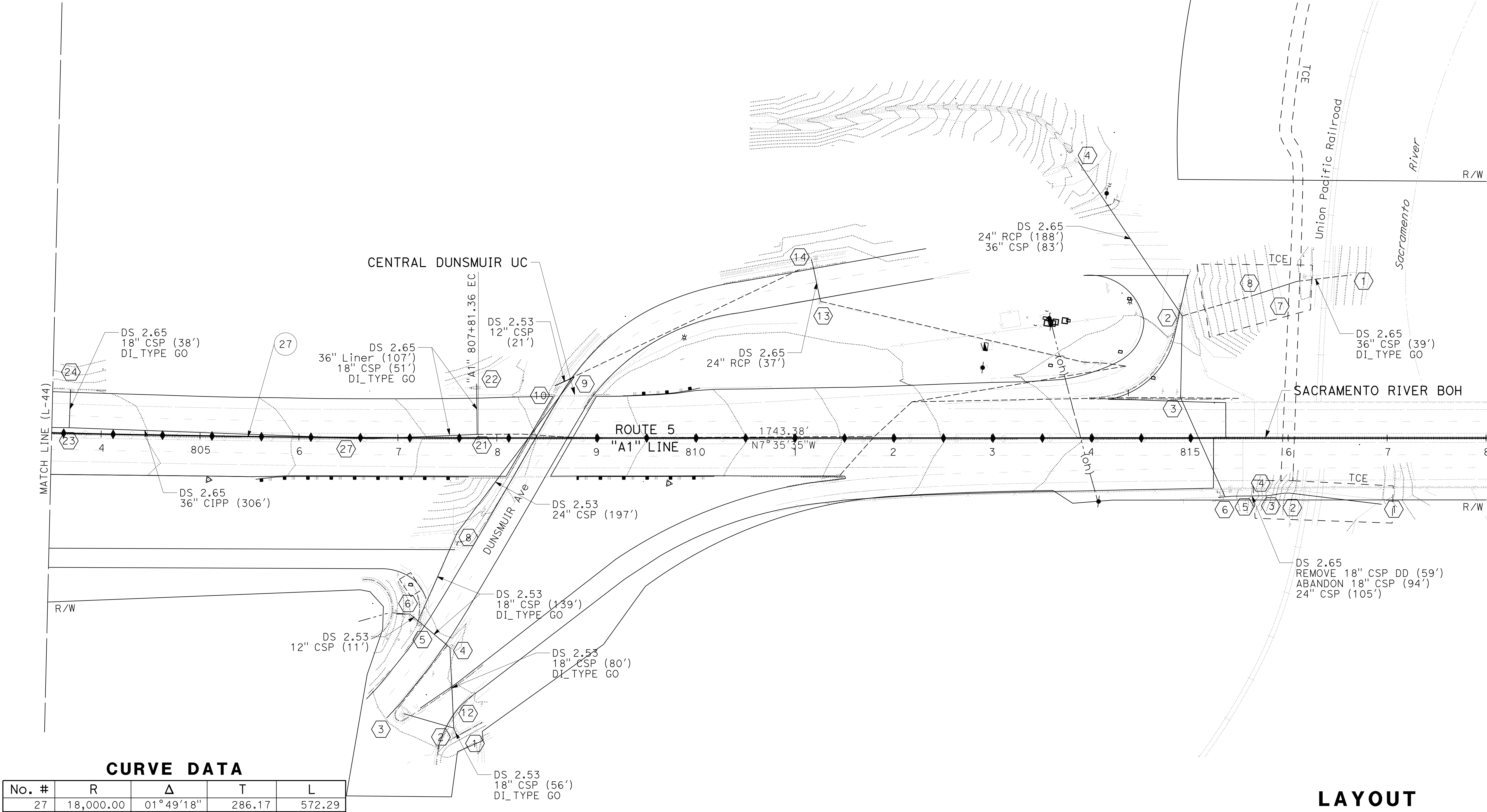
PRELIMINARY
REGISTERED CIVIL ENGINEER

SIGD
DATE

XX-XX-25
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
BUSTER
HANSEN
No. -
Exp. -
CIVIL
STATE OF CALIFORNIA

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



LAYOUT
SCALE: 1" = 50' L-45

Attachment D

Cost Estimate



State of California
Department of Transportation

District EA: 02-0J8104

Proposal Preliminary Estimate of Cost

01/31/2025

Page 1 of 8

Project ID: 0219000164

IN SHASTA AND SISKIYOU COUNTIES AT AND NEAR
DUNSMUIR FROM 0.6 MILE NORTH OF SIMS ROAD
UNDERCROSSING TO 0.2 MILE SOUTH OF SISKIYOU
AVENUE OVERCROSSING.

DIST-CO-RTE-PM:

02 - SHA, SIS-5-58.0/2.7

CAPM PAVING

Advertisement Date:

Not Scheduled

FEDERAL AID NUMBER(S):

Bid Opening Date:

Not Scheduled

Bid Item List

Combined Estimate

No.	Item Code	Item Description	Unit	Quantity	Price	Amount
1	070030	LEAD COMPLIANCE PLAN	LS	LUMP SUM	\$3,200.00	\$3,200.00
2	080060	LEVEL 2 CRITICAL PATH METHOD SCHEDULE	LS	LUMP SUM	\$10,000.00	\$10,000.00
3	090100	TIME-RELATED OVERHEAD (WDAY)	WDAY	360.0	\$5,000.00	\$1,800,000.00
4	090205	DISPUTE RESOLUTION BOARD ON-SITE MEETING	EA	6.0	\$6,000.00	\$36,000.00
5	090210	HOURLY OFF-SITE DISPUTE-RESOLUTION-BOARD-RELATED TASKS	HR	120.0	\$200.00	\$24,000.00
6	100100	DEVELOP WATER SUPPLY	LS	LUMP SUM	\$10,000.00	\$10,000.00
7	120090	CONSTRUCTION AREA SIGNS	LS	LUMP SUM	\$10,000.00	\$10,000.00
8	120100	TRAFFIC CONTROL SYSTEM	LS	LUMP SUM	\$1,000,000.00	\$1,000,000.00
9	120103	STATIONARY IMPACT ATTENUATOR VEHICLE	DAY	200.0	\$800.00	\$160,000.00
10	010413	PORTABLE RADAR SPEED FEEDBACK SIGN SYSTEMS (LS)	LS	LUMP SUM	\$60,000.00	\$60,000.00
11	120320	TEMPORARY BARRIER SYSTEM	LF	1,800.0	\$60.00	\$108,000.00
12	128652	PORTABLE CHANGEABLE MESSAGE SIGN (LS)	LS	LUMP SUM	\$100,000.00	\$100,000.00
13	129108	TEMPORARY CRASH CUSHION TL-3	EA	2.0	\$40,000.00	\$80,000.00

No.	Item Code	Item Description	Unit	Quantity	Price	Amount
14	130100	JOB SITE MANAGEMENT	LS	LUMP SUM	\$67,000.00	\$67,000.00
15	130301	STORMWATER POLLUTION PREVENTION PLAN	LS	LUMP SUM	\$24,400.00	\$24,400.00
16	130320	STORM WATER SAMPLING AND ANALYSIS DAY	EA	19.0	\$250.00	\$4,750.00
17	130330	STORM WATER ANNUAL REPORT	EA	4.0	\$2,000.00	\$8,000.00
18	130530	TEMPORARY HYDRAULIC MULCH (BONDED FIBER MATRIX)	SQYD	18,000.0	\$4.50	\$81,000.00
19	130640	TEMPORARY FIBER ROLL	LF	6,500.0	\$7.00	\$45,500.00
20	130730	STREET SWEEPING	LS	LUMP SUM	\$12,000.00	\$12,000.00
21	130900	TEMPORARY CONCRETE WASHOUT	LS	LUMP SUM	\$20,000.00	\$20,000.00
22	131103	WATER QUALITY SAMPLING AND ANALYSIS DAY	EA	36.0	\$500.00	\$18,000.00
23	131104	WATER QUALITY MONITORING REPORT	EA	12.0	\$500.00	\$6,000.00
24	131105	WATER QUALITY ANNUAL REPORT	EA	3.0	\$2,000.00	\$6,000.00
25	131201	TEMPORARY CREEK DIVERSION SYSTEMS	LS	LUMP SUM	\$50,000.00	\$50,000.00
26	141120	TREATED WOOD WASTE	LB	590,000.0	\$1.00	\$590,000.00
27	015639	REMOVE CONCRETE (ANCHOR BLOCK)	CY	60.0	\$3,000.00	\$180,000.00
28	170103	CLEARING AND GRUBBING (LS)	LS	LUMP SUM	\$50,000.00	\$50,000.00
29	190112	ROADWAY EXCAVATION (TYPE A)	CY	1,200.0	\$400.00	\$480,000.00
30	190185	SHOULDER BACKING	TON	3,600.0	\$100.00	\$360,000.00
31	200002	ROADSIDE CLEARING	LS	LUMP SUM	\$20,000.00	\$20,000.00
32	210010	MOVE-IN/MOVE-OUT (EROSION CONTROL)	EA	2.0	\$10,000.00	\$20,000.00
33	210212	DRY SEED (SQFT)	SQFT	8,200.0	\$0.30	\$2,460.00
34	210430	HYDROSEED	SQFT	100,000.0	\$0.50	\$50,000.00
35	220101	FINISHING ROADWAY	LS	LUMP SUM	\$10,000.00	\$10,000.00
36	260203	CLASS 2 AGGREGATE BASE (CY)	CY	670.0	\$120.00	\$80,400.00
37	375020	PARKING AREA SEAL	TON	42.0	\$3,000.00	\$126,000.00
38	390095	REPLACE ASPHALT CONCRETE SURFACING	CY	2,450.0	\$550.00	\$1,347,500.00

No.	Item Code	Item Description	Unit	Quantity	Price	Amount
39	390132	HOT MIX ASPHALT (TYPE A)	TON	670.0	\$280.00	\$187,600.00
40	390136	MINOR HOT MIX ASPHALT	TON	440.0	\$280.00	\$123,200.00
41	390137	RUBBERIZED HOT MIX ASPHALT (GAP GRADED)	TON	71,000.0	\$140.00	\$9,940,000.00
42	394060	DATA CORE	LS	LUMP SUM	\$2,950.00	\$2,950.00
43	394073	PLACE HOT MIX ASPHALT DIKE (TYPE A)	LF	20,000.0	\$3.70	\$74,000.00
44	394076	PLACE HOT MIX ASPHALT DIKE (TYPE E)	LF	30,000.0	\$3.30	\$99,000.00
45	394090	PLACE HOT MIX ASPHALT (MISCELLANEOUS AREA)	SQYD	800.0	\$210.00	\$168,000.00
46	397005	TACK COAT	TON	160.0	\$1,000.00	\$160,000.00
47	398100	REMOVE ASPHALT CONCRETE DIKE	LF	36,000.0	\$3.60	\$129,600.00
48	398200	COLD PLANE ASPHALT CONCRETE PAVEMENT	SQYD	100,000.0	\$3.00	\$300,000.00
49	016057	PORTLAND CEMENT CONCRETE (PCC)	CY	450.0	\$500.00	\$225,000.00
50	510092	F STRUCTURAL CONCRETE, HEADWALL	CY	66.0	\$3,000.00	\$198,000.00
51	510094	F STRUCTURAL CONCRETE, DRAINAGE INLET	CY	260.0	\$3,200.00	\$832,000.00
52	039042	12' X 12' PRECAST REINFORCED CONCRETE BOX CULVERT	LF	140.0	\$7,500.00	\$1,050,000.00
53	610108	18" ALTERNATIVE PIPE CULVERT	LF	1,000.0	\$220.00	\$220,000.00
54	610112	24" ALTERNATIVE PIPE CULVERT	LF	2,600.0	\$300.00	\$780,000.00
55	650018	24" REINFORCED CONCRETE PIPE	LF	230.0	\$288.00	\$66,240.00
56	665010	12" CORRUGATED STEEL PIPE	LF	11.0	\$160.00	\$1,760.00
57	665018	18" CORRUGATED STEEL PIPE (.109" THICK)	LF	1,300.0	\$225.00	\$292,500.00
58	665025	24" CORRUGATED STEEL PIPE (.138" THICK)	LF	9,800.0	\$260.00	\$2,548,000.00
59	665033	30" CORRUGATED STEEL PIPE (.138" THICK)	LF	550.0	\$370.00	\$203,500.00
60	665037	36" CORRUGATED STEEL PIPE (.109" THICK)	LF	390.0	\$380.00	\$148,200.00
61	690117	18" CORRUGATED STEEL PIPE DOWNDRAIN (.079" THICK)	LF	300.0	\$149.00	\$44,700.00
62	690123	24" CORRUGATED STEEL PIPE DOWNDRAIN (.079" THICK)	LF	800.0	\$190.00	\$152,000.00

No.	Item Code	Item Description	Unit	Quantity	Price	Amount
63	690148	48" CORRUGATED STEEL PIPE DOWNDRAIN (.138" THICK)	LF	20.0	\$470.00	\$9,400.00
64	692307	18" ANCHOR ASSEMBLY	EA	10.0	\$550.00	\$5,500.00
65	692309	24" ANCHOR ASSEMBLY	EA	24.0	\$580.00	\$13,920.00
66	700639	36" CORRUGATED STEEL PIPE INLET (.109" THICK)	LF	6.0	\$550.00	\$3,300.00
67	703233	GRATED LINE DRAIN	LF	320.0	\$238.00	\$76,160.00
68	705015	24" STEEL FLARED END SECTION	EA	3.0	\$700.00	\$2,100.00
69	710102	ABANDON CULVERT (LF)	LF	330.0	\$40.00	\$13,200.00
70	710132	REMOVE CULVERT (LF)	LF	7,500.0	\$25.00	\$187,500.00
71	710150	REMOVE INLET	EA	69.0	\$380.00	\$26,220.00
72	710152	REMOVE HEADWALL	EA	6.0	\$1,600.00	\$9,600.00
73	710196	ADJUST INLET	EA	34.0	\$800.00	\$27,200.00
74	710230	ADJUST SLOTTED DRAIN TO GRADE	LF	18.0	\$2,500.00	\$45,000.00
75	710240	MODIFY INLET	EA	1.0	\$1,000.00	\$1,000.00
76	710370	SAND BACKFILL	CY	40.0	\$148.00	\$5,920.00
77	710384	24" CURED-IN-PLACE PIPELINER	LF	1,400.0	\$230.00	\$322,000.00
78	710388	30" CURED-IN-PLACE PIPELINER	LF	210.0	\$300.00	\$63,000.00
79	710390	36" CURED-IN-PLACE PIPELINER	LF	770.0	\$320.00	\$246,400.00
80	723050	ROCK SLOPE PROTECTION (1/4 T, CLASS V, METHOD B) (CY)	CY	108.0	\$250.00	\$27,000.00
81	729011	ROCK SLOPE PROTECTION FABRIC (CLASS 8)	SQYD	320.0	\$7.00	\$2,240.00
82	750001	F MISCELLANEOUS IRON AND STEEL	LB	38,683.0	\$2.50	\$96,707.50
83	013248	PAINTED CATTLEGUARD	EA	3.0	\$2,000.00	\$6,000.00
84	037023	WILDLIFE ESCAPE RAMP	EA	4.0	\$4,000.00	\$16,000.00
85	801190	12' WIRE MESH GATE	EA	2.0	\$4,000.00	\$8,000.00
86	036950	WILDLIFE FENCE	LF	8,900.0	\$40.00	\$356,000.00
87	810250	PAVEMENT MARKER (RETROREFLECTIVE-RECESSED)	EA	5,600.0	\$10.00	\$56,000.00

No.	Item Code	Item Description	Unit	Quantity	Price	Amount
88	820250	REMOVE ROADSIDE SIGN	EA	72.0	\$134.00	\$9,648.00
89	820790	FURNISH SINGLE SHEET ALUMINUM SIGN (0.080"-FRAMED)	SQFT	3,700.0	\$16.50	\$61,050.00
90	820850	ROADSIDE SIGN - TWO POST	EA	72.0	\$709.00	\$51,048.00
91	832006	MIDWEST GUARDRAIL SYSTEM (STEEL POST)	LF	53,000.0	\$34.00	\$1,802,000.00
92	016055	TRANSITION RAILING (TYPE AGT)	EA	41.0	\$5,500.00	\$225,500.00
93	839580	END ANCHOR ASSEMBLY (TYPE SFT-M)	EA	40.0	\$1,054.00	\$42,160.00
94	839584	ALTERNATIVE IN-LINE TERMINAL SYSTEM	EA	42.0	\$3,500.00	\$147,000.00
95	839588	BURIED POST END ANCHOR (TYPE B-F)	EA	15.0	\$5,500.00	\$82,500.00
96	839640	CONCRETE BARRIER (TYPE 60M)	LF	49,000.0	\$120.00	\$5,880,000.00
97	839642	CONCRETE BARRIER (TYPE 60MC)	LF	10,000.0	\$200.00	\$2,000,000.00
98	839648	CONCRETE BARRIER (TYPE 60MGF)	LF	90.0	\$500.00	\$45,000.00
99	839752	REMOVE GUARDRAIL	LF	52,000.0	\$4.00	\$208,000.00
100	839774	REMOVE CONCRETE BARRIER	LF	59,000.0	\$30.00	\$1,770,000.00
101	846046	6" RUMBLE STRIP (ASPHALT CONCRETE PAVEMENT)	STA	2,470.0	\$35.00	\$86,450.00
102	847104	6" THERMOPLASTIC TRAFFIC STRIPE (ENHANCED WET NIGHT VISIBILITY) (RECESSED)	LF	33,000.0	\$3.30	\$108,900.00
103	847126	THERMOPLASTIC CROSSWALK AND PAVEMENT MARKING (ENHANCED WET NIGHT VISIBILITY) (RECESSED)	SQFT	3,000.0	\$11.30	\$33,900.00
104	870009	MAINTAINING EXISTING TRAFFIC MANAGEMENT SYSTEM ELEMENTS DURING CONSTRUCTION	LS	LUMP SUM	\$10,000.00	\$10,000.00
105	037927	ROADSIDE WEATHER INFORMATION SYSTEM	LS	LUMP SUM	\$210,000.00	\$210,000.00
106	870111	INDUCTIVE LOOP DETECTOR (EA)	EA	33.0	\$3,000.00	\$99,000.00
107	036891	CLOSED CIRCUIT TELEVISION SYSTEM	LS	LUMP SUM	\$130,000.00	\$130,000.00
108	NS-EA	REPLACE LUMINAIRE	EA	12.0	\$15,000.00	\$180,000.00
109	NS-EA	INSTALL LUMINAIRE	EA	8.0	\$15,000.00	\$120,000.00
110	NS-LS	CASTLE CREEK BRIDGE_DECK,RAILS, APPROACH SLABS	LS	LUMP SUM	\$3,100,000.00	\$3,100,000.00

No.	Item Code	Item Description	Unit	Quantity	Price	Amount
111	NS-LS	CASTELLA UC _ DECK, RAILS, APPROACH SLABS	LS	LUMP SUM	\$1,900,000.00	\$1,900,000.00
112	999990	MOBILIZATION	10.00% LS	LUMP SUM	\$4,992,700.00	\$4,992,700.00
Bid Item List Subtotal:						\$49,926,683.50

Supplemental Work

Item Code	Item Description	Units	Quantity	Price	Amount
066015	FEDERAL TRAINEE PROGRAM	LS	LUMP SUM	8,800.00	8,800.00
066070	MAINTAIN TRAFFIC	LS	LUMP SUM	25,000.00	25,000.00
066094	VALUE ANALYSIS	LS	LUMP SUM	10,000.00	10,000.00
066393	HOT MIX ASPHALT SMOOTHNESS INCENTIVE	LS	LUMP SUM	75,000.00	75,000.00
066596	ADDITIONAL WATER POLLUTION CONTROL	LS	LUMP SUM	3,800.00	3,800.00
066597	STORM WATER SAMPLING AND ANALYSIS	LS	LUMP SUM	5,000.00	5,000.00
066610	PARTNERING	LS	LUMP SUM	50,000.00	50,000.00
066670	PAYMENT ADJUSTMENTS FOR PRICE INDEX FLUCTUATIONS	LS	LUMP SUM	304,000.00	304,000.00
SW Subtotal:					\$481,600.00

Department Furnished Materials and Expenses

Item Code	Item Description	Units	Quantity	Price	Amount
066020	RAILROAD WORK	LS	LUMP SUM	24,000.00	24,000.00
066062	COZEEP CONTRACT	LS	LUMP SUM	450,000.00	450,000.00
066063	TRAFFIC MANAGEMENT PLAN - PUBLIC INFORMATION	LS	LUMP SUM	36,000.00	36,000.00
066105	RESIDENT ENGINEERS OFFICE	LS	LUMP SUM	320,000.00	320,000.00
066186A	CULTURAL MONITORING	LS	LUMP SUM	10,000.00	10,000.00
066234	REVEGETATION	LS	LUMP SUM	30,000.00	30,000.00
066915	BOE TREATED WOOD WASTE GENERATION FEE	LS	LUMP SUM	412.00	412.00
066916	ANNUAL CONSTRUCTION GENERAL PERMIT FEE	LS	LUMP SUM	3,648.00	3,648.00

DF Subtotal: \$874,060.00

Project Subtotal (Bid and Non-Bid Items): \$51,282,343.50

Contingencies: 15.00 % \$7,692,351.53

Project Total (with Contingency): \$58,974,695.03

Attachment E

Storm Water Data Report



Dist-County-Route: 02-SHA/SIS-005
Post Mile Limits: PM 58.0/67.019, 0.0/2.7
Type of Work: CAPM
Project ID (EA): 0219000164 (02-OJ810)

Phase: ☐ PID ☒ PA/ED ☐ PS&E

Applicable Caltrans Post Construction Treatment Requirement: 2012 ☐ 2022 ☒

Regional Water Quality Control Board(s): Central Valley

Total Disturbed Soil Area: 7.85 Acres

PCTA: 0.01 Acres

Alternative Compliance (acres): 0 Acres

ATA 2 (50% Rule)? Yes ☐ No ☒

Estimated Const. Start Date: 7/2026

Estimated Const. Completion Date: 10/2028

Risk Level: RL 1 ☐ RL 2 ☒

RL 3 ☐ WPCP ☐ Other: _____

Is (M)WELo applicable?

Yes ☐ No ☒

Is the Project within a TMDL watershed?

Yes ☐ No ☒

Does the project require trash treatment?

Yes ☐ No ☒

Notification of ADL reuse (if yes, provide date):

Yes ☐ Date: _____ No ☒

This Report has been prepared under the direction of the following Licensed Person. The Licensed Person attests to the technical information contained herein and the date upon which recommendations, conclusions, and decisions are based. Professional Engineer or Landscape Architect stamp required at PS&E only.

Buster Hansen

8/07/24

Buster Hansen, Registered Project Engineer

Date

I have reviewed the stormwater quality design issues and find this report to be complete, current, and accurate:

Kelly Timmons

7 Aug. 2024

Kelly Timmons, Project Manager

Date

Kaylie Humbert

8/8/2024

Kaylie Humbert, District Maintenance Stormwater Coordinator

Date

Nicki Johnson

8/8/2024

Nicki Johnson, Designated Landscape Architect Representative

Date

Robert Nixon

8/9/24

Robert Nixon, District SW Coordinator

Date

[Stamp Required at PS&E only]

1. Project Description

- This Project Report proposes Capital Preventative Maintenance (CAPM) minor pavement rehabilitation of Interstate 5 (I-5) at and near the communities of Castella in Shasta County and Dunsmuir in Siskiyou County. The project will overlay 45.4 lane miles of pavement, repair rocking concrete slabs, and upgrade deficient median barrier and guardrail. Drainage systems will be rehabilitated, a geosynthetic reinforced embankment will be constructed, and two Intelligent Transportation Systems will be replaced. Additionally, two structures will receive deck-on-deck rehabilitation, polyester concrete overlays, and upgraded bridge railing. Lastly, a wildlife crossing will be constructed, and wildlife management fencing will be installed.
 - Total project area: 756.99 acres
 - Total disturbed soil area (DSA): 7.85 acres
 - NIS = NNI + RIS – EIA = 0.01 acres
 - NNI: 0.01 acres
 - RIS: 0 acres
 - EIA: 0 acres
 - PCTA = NIS + ATA 1 + ATA 2 = 0.01 acres
 - ATA Condition 1 = 0 acres (No existing treatment BMPs within the project limits)
 - ATA Condition 2 = 0 acres (0.01 acres NNI/143.69 acres pre-project impervious area = 0.01%)

Table 1

Project Areas (acres)								
Existing Impervious Area	Post Impervious Area	Net New Impervious (NNI) Area	Replaced Impervious (RIS) Area	Excluded Impervious (EIA) Area	New Impervious Surface (NIS) Area	ATA #1	ATA #2	PCTA
143.69	143.70	0.01	0	0	0.01	0	0	0.01

- The project is subject to the treatment threshold requirements of the 2022 CT MS4 Permit.

2. Site Data and Stormwater Quality Design Issues

- The hydrologic data for Flume Creek CAPM project includes:
 - 1.) Hydrologic Area – Mount Shasta
 - 2.) Hydrologic Sub-area # - 505.21
 - 3.) There are no 303d listed receiving water bodies.
- The project area has an annual precipitation of 68 inches, and a snowfall of 41 inches.
- There are no drinking water reservoirs or recharge facilities within the project limits.
- There are no local agency requirements or concerns, nor any seasonal construction restrictions.

3. Construction Site BMPs to be used on Project

- This project qualifies for the Construction General Permit due to the total Disturbed Surface Area being greater than 5.0 Acres and does not qualify for an erosivity waiver.
- The project has a Sediment Risk Factor of Low as determined by the location-specific R factor, K factor, and LS factor. Table 2 below documents the project-specific values. The combined Risk Level is RL 2.

Table 2. Risk Level Determination Factors

Factor	Value	Comments
R	86.54	From EPA(Cumulative Construction Seasons)
K	0.15	From Water Quality Planning Tool
LS	16.39	From Water Quality Planning Tool

- Construction work for this project is anticipated to be approximately 360 working days. Construction site BMPs should be installed prior to start of construction or as early as feasibly possible during construction to avoid and minimize any potential sediment-laden or contaminated runoff or run-on. The construction site BMP strategy will be in accordance with Caltrans' Standard Specifications and will address construction site management, water quality monitoring, soil stabilization, sediment control measures, concrete washouts, stockpile management, and tracking controls.
- Anticipated construction site BMP bid items and quantities are summarized in the attached Temporary Construction BMP Cost Estimator.

4. Maintenance BMPs

- The project is not within the boundaries of an Urban MS4 Permit Area, drain inlet stenciling is not required.

5. Other Water Quality Requirements and Agreements

- There are no negotiated agreements with the Central Valley Regional Water Quality Control Board for this project.

6. Permanent BMPs

Permanent BMPs are strategies and measures to minimize and avoid post-construction water quality impacts. Permanent BMPs include design pollution prevention (DPP) and treatment BMP strategies. Use of treatment BMPs is considered within all ROWs because the PCTA is greater than 10,000 sqft.

Rapid Stability Assessment

- The NNI is less than 10,000 sqft, therefore Rapid Stability Assessment (RSA) is not required.
- Typical DPP BMPs incorporated into this project include dike, inlet HMA aprons, reconstructed earthen ditches, rock-lined ditches, rock slope protection energy dissipators, flared end sections, and permanent erosion control. Overside drains will be replaced as needed.
- Existing mature vegetation and landscaping within project limits will be protected in place where possible. Areas of clearing and grubbing will be limited to those areas impacted by new construction. Existing wetlands, and other environmentally sensitive areas (ESA), will be preserved to the maximum extent practicable.
- Disturbed Soil Areas (DSA) will be stabilized and vegetated by plans approved by the District Landscape Architect.
- There are no new Cut or Fill slopes included in the project scope. Existing slopes range from 4:1 to 1:1 (width:height) throughout the project limits.
- A 250-foot long Geosynthetic Reinforced Embankment (GRE) is proposed in Siskiyou County at PM 1.1. The GRE will be constructed by excavating an existing 1.5:1 slope and reconstructing with the geosynthetic reinforcing and native material to the preexisting configuration.

Treatment BMP Strategy

- The project PCTA is less than 10,000 sqft and not required to consider Treatment BMPs.

Required Attachments

- Vicinity Map
- Evaluation Documentation Form (EDF)
- Risk Level Determination Documentation
- NR Construction BMP Cost Estimator

Evaluation Documentation Form

No.	Criteria	Yes ✓	No ✓	Supplemental Information for Evaluation
1.	Begin Project evaluation regarding requirement for implementation of Treatment BMPs	✓		Continue to 2.
2.	Is the scope of the Project to install Treatment BMPs (e.g., Alternative Compliance or TMDL requirement)?		✓	If Yes , go to 8. If No , continue to 3.
3.	Is there a direct or indirect discharge to surface waters?	✓		If Yes , continue to 4. If No , go to 9.
4.	As defined in the WQAR or ED, does the project: a. discharge to Areas of Special Biological Significance (ASBS), or b. discharge to a TMDL watershed where Caltrans is named stakeholder, or c. have other pollution control requirements for surface waters within the project limits (e.g. STGA)?		✓	If Yes to any , contact the District/Regional Design Stormwater Coordinator or District/Regional NPDES Coordinator to discuss the Department's obligations, go to 8 or 5. <u>RN</u> (Dist./Reg. Coordinator initials) If No to all, continue to 5.
5.	Are any existing Treatment BMPs partially or completely removed? (ATA Condition 1, Section 4.3.1)		✓	If Yes , go to 8 AND continue to 6. If No , continue to 6.
6.	Is this a Routine Maintenance Project?		✓	If Yes , go to 9. If No , continue to 7.
7.	Does the project result in an increase of <u>10,000 ft² or more</u> of new impervious surface (NIS)?		✓	If Yes , go to 8. If No , go to 9.
8.	Project is required to implement Treatment BMPs.	Complete Checklist T-1, Part 1.		
9.	Project is not required to implement Treatment BMPs. <u>RN</u> (Dist./Reg. Design SW Coord. Initials) <u>BH</u> (Project Engineer Initials) <u>7/28/2024</u> (Date)	Document for Project Files by completing this form and attaching it to the SWDR.		

Combined Risk Level Matrix			
<u>Receiving Water Risk</u>	<u>Sediment Risk</u>		
	Low	Medium	High
	Low	Level 1	Level 2
High	Level 2		Level 3

Project Sediment Risk: **High**
 Project RW Risk: **Low**
 Project Combined Risk: **Level 2**

TEMPORARY CONSTRUCTION BMP COST ESTIMATOR						
FOR INTERNAL USE ONLY- DO NOT PROVIDE TO CONTRACTOR					Rev	10/11/23
EXPENDITURE AUTHORIZATION:		02-0J810		Risk Level	RL2	CONTRACT WORKING DAYS:
COUNTY, ROUTE, PM:		02 - SHA,SIS - 005 - 58.0/67.019,0.0/2.7				360
DESCRIPTION:		Flume Creek CAPM		Erodible Surface to be stabilized (acres):	7.9	P&E DATE:
REGIONAL BOARD:		Central Valley				PS&E DATE:
						Begin Construction
						End Construction
SS/SSP (2018)	ITEM CODE	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT PRICE ¹	AMOUNT ¹
13-3	130301	SWPPP	LS	1	\$24,400	\$24,400
13-2	130201	WPCP	LS	0	\$0	\$0
13-3.01C(3)	130310	Rain Event Action Plan (REAP)	EA	0	\$1,000	\$0
13-3.01C(4)	130330	Stormwater Annual Report	EA	4	\$2,000	\$8,000
13-3.01C(2)(b)(vi)	130320	Stormwater Sampling and Analysis Day	EA	19	\$250	\$4,750
13-4	130100	Job Site Management	LS	1	\$67,000	\$67,000
		Tracking Controls				
13-7.02	130730	Street Sweeping	LS	1	\$12,000	\$12,000
13-7.03	130710	Temporary Construction Entrance/Exit	EA	0	\$0	\$0
		Sediment Control/Perimeter Control				
13-10.02B	130640	Temporary Fiber Roll (6")	FT	5,000	\$8	\$40,000
13-10.03D	130660	Temporary Large Sediment Barrier (18-22" Fiber Roll)	FT	0	\$0	\$0
13-10.03F	130680	Temporary Silt Fence	FT	0	\$0	\$0
13-10.03E	130670	Temporary Reinforced Silt Fence	FT	0	\$0	\$0
13-6.03B	130610	Temporary Check Dam	LF	0	\$0	\$0
13-6.03F	130650	Temporary Gravel Bag Berm	LF	0	\$0	\$0
13-6.03C	130620	Temporary Drainage Inlet Protection	EA	0	\$0	\$0
		Non-Stormwater				
13-9	130900	Temporary Concrete Washout - Portable	LS	1	\$20,000	\$20,000
13-11.01D(2)	131103	Water Quality Sampling and Analysis Day	EA	36	\$500	\$18,000
13-11.01C(3)	131104	Water Quality Monitoring Report	EA	12	\$500	\$6,000
13-11.01C(4)	131105	Water Quality Annual Report	EA	3	\$2,000	\$6,000
		Temporary Soil Stabilization				
13-5.01	130505	Move-in/Move-out (Temporary Erosion Control)	EA	0	\$0	\$0
13-5.03E	130530	Temporary Hydraulic Mulch (Bonded Fiber Matrix)	SQ YDS	12,000	\$3	\$36,000
13-5.03D	130520	Temporary Hydraulic Mulch	SQ YDS	0	\$0	\$0
13-5.03H	130540	Temporary Tacked Straw	SQ YDS	0	\$0	\$0
13-5.02E	130560	Temporary Soil Binder	SQ YDS	0	\$0	\$0
13-5.02C	130510	Temporary Mulch	SQ YDS	0	\$0	\$0
13-5.03B	130500	Temporary Erosion Control Blanket	SQ YDS	0	\$0	\$0
13-5.03K	130570	Temporary Cover	SQ YDS	0	\$0	\$0
		State Furnished Items				
	066916	Construction General Permit Fees (State Furnished Item)	LS	1	\$3,648	\$3,648
		Supplemental Items				
	066596	Additional Water Pollution Control	LS	1	\$3,800	\$3,800
	066595	Water Pollution Control Maintenance Sharing	LS	0	\$0	\$0
	066597	Stormwater Sampling and Analysis	LS	1	\$5,000	\$5,000
FOR INTERNAL USE ONLY- DO NOT PROVIDE TO CONTRACTOR					Total =	\$254,598
1. - No Time Related Overhead should be included in the Unit Price or Amount 2. - Use the PPDG Table F-2 to show the percentage of cost allocated for Stormwater BMP's 3. - This reflects the amount that would be estimated if the PPDG planning level formula was used. 4. - Percentage of the Estimated Project Cost allocated for CBMPs				Estimated Project Cost =		\$56,000,000
				Percent Allocated ² (PPDG) =		1.25%
				Planning Estimate ³ =		\$700,000.00
				CBMPs Percentage of Project Estimate ⁴ =		0.5%

Attachment F

Right of Way Data Sheet

MEMORANDUM

To: KELLY TIMMONS
Project Manager

Attention: SHERRY JAMES
Assistant Project Manager

Date: April 8, 2024
File: 02-Sis-5 PM 0/2.7; Sha-5 PM
58/67.019
EFIS: 02 1900 0164
EA: 0J810

Project : Flume Creek CAPM
CAPM near the communities of
Castella in Shasta County and
Dunsmuir in Siskiyou County.
Project will cold plane, repave and
repair culverts, Installing wildlife
fencing and crossing, and update
Closed Circuit Television station.

From: TADJ A. RATAJCZAK *TR*
Assistant Chief
North Region Right of Way
Eureka/Redding

Subject: PRSM Resource Hours for Right of Way

Please adjust the hours in PRSM for this project as follows and remove all other resource line items
except those previously charged to. Do not include this document in the Project Report.

Task	Task Description	ETC	ACTUAL	EAC
K Phase (PID)				
100.05	Project Management-PID Component	30	-	30
150	Develop Project Initiation Document (PID)	140	22	162
D Phase (PA&ED)				
100.10	Project Management-PA&ED Component	48	8	56
160.10	Engineering Studies	281	199	480
160.30	Environmental Study Request (ESR)	91	-	91
165.10	General Environmental Studies	-	-	-
170.10	Permits	6	1	7
170.15	Railroad Agreements	200	36	236
170.25	Agreement for Non Commercial Material Sites	-	-	-
175.10	Public Hearings	-	-	-
180.05	Final Project Report	6	-	6
180.10	Final Environmental Document	-	-	-
I Phase (PS&E)				
100.15	Project Management-PS&E Component	64	-	64
185.05	Update Project Information	20	-	20
185.20	Engineering Reports	-	-	-
185.25	Right of Way Requirements Determination	200	-	200
205.10	Permits	20	-	20
205.15	Railroad Agreements	150	-	150
205.25	Agreement Material Sites	-	-	-
235.05	Environmental Mitigation	4	-	4
235.10	Detailed Site Investigation for Hazardous Waste	-	-	-
255	Circulate, Review and Prepare Final District PS&E Package	-	-	-
2 Phase (R/W)				
100.25	Project Management-RW Component	95	-	95
195.40	Property Management	-	-	-
195.45	Excess Land	-	-	-
200.15	Approve Utility Relocation Plan	-	-	-
200.20	Utility Relocation Package	250	-	250
200.25	Utility Relocation Management	-	-	-
200.30	Utility Close Out	-	-	-
225.50	Parcel and Project Documentation	104	-	104
225.60	RW Appraisals	850	-	850
225.65	RW Acquisitions	914	-	914
225.70	RW Relocation Assistance	-	-	-
225.75	RW Clearance	-	-	-
225.80	RW Condemnation	-	-	-
245.50	Parcel and Project Documentation	110	-	110
245.60	RW Appraisals	20	-	20
245.65	RW Acquisitions	26	-	26
245.70	RW Relocation Assistance	-	-	-
245.75	RW Clearance	-	-	-
245.80	RW Condemnation	-	-	-
3 Phase (CONSTRUCTION)				
270.25	Construction Contract Administration Work	-	-	-
285	Contract Change Order Administration	-	-	-
Total Hours for This Project:		3,629	266	3,895

MEMORANDUM

To:

Design Engineer
Department of Transportation

Date: April 8, 2024

File: 02-Sis-5 PM 0/2.7; Sha-5 PM
58/67.019

EFIS No.: 02 1900 0164

EA: 0J810

Attention: BUSTER HANSEN
Project Engineer

From:

TADJ A. RATAJCZAK *TR*
Assistant Chief
North Region Right of Way
Eureka/Redding

Subject:

CURRENT ESTIMATED RIGHT OF WAY COSTS

Project Description: CAPM near the communities of Castella in Shasta County and Dunsmuir in Siskiyou County. Project will cold plane, repave and repair culverts, Installing wildlife fencing and crossing, and update Closed Circuit Television station.

We have completed an estimate of the right of way costs for the above referenced project based on information received from you on January 10, 2024.

Right of Way deliverables received from Environmental on February 29, 2024.

Right of Way Lead Time will require a minimum of 15 months after receipt of appraisals maps, utility conflict maps, environmental clearances (HMDD) and Certificate of Sufficiency (COS) to complete the Right of Way Certification. Shorter lead times may require additional support resources and may adversely affect delivery of Right of Way Certification.

Attachment:
Right of Way Data Sheet

cc. Kelly Timmons

California State Transportation Agency
RIGHT OF WAY DATA SHEET



EA: 0J810
PROJECT NO.: 02 1900 0164
LOCATION: 02-Sis-5 PM 0/2.7; Sha-5 PM 58/67.019
DESCRIPTION: Flume Creek CAPM
 CAPM near the communities of Castella in Shasta County and Dunsmuir in Siskiyou County. Project will cold plane, repave and repair culverts, Installing wildlife fencing and crossing, and update Closed Circuit Television station.
DATE: 4/8/2024
DATA SHEET TYPE: Initial
 Project Report

1. Right of Way Cost Estimate:

	Current Value Future Use	Escalation Rate	Escalated Value
A. Total Acquisition Cost	\$95,444	5%	\$104,708
B. Appraisal Fees Estimate	\$10,000	N/A	\$10,000
C. Mitigation Acquisition & Credits	\$63,000	5%	\$69,115
D. Project Development Permit Fees	\$20,707	5%	\$22,716
Subtotal	\$189,150		\$206,539
E. Utility Relocation (State's Share)	\$10,000	5%	\$10,971
(Owner's Share: \$250,000)			
F. Relocation Assistance (RAP)	\$0		\$0
G. Clearance/Demolition	\$0		\$0
H. Title & Escrow	\$15,000	5%	\$16,456
I. Total Estimated Right of Way Cost	\$214,150		
J. Phase 4 estimated expenses			
Railroad	\$16,000		
Construction Contract Work	\$0		
		Rounded	\$234,000 *

2. Current Date of Project Approval (PA&ED)

February 21, 2025

Current Date of Right of Way Certification

March 2, 2026

3. Parcel Data:

Type	Dual/Appr	Utilities	Railroad
X 0		U4 - 1 2	C&M Agreement 0
A 10		- 2 0	Service Contract 0
B 0		- 3 0	Easements 0
C 0	0	- 4 0	Rights of Entry 5
D 0	0	U5 - 7 6	Clauses 0
USA 0		- 8 0	
RR 0		- 9 2	
Total 11			
Excess 0			

Areas:

R/W	0.35 AC
TCE	0.55 AC
Excess	N/A
Mitigation	N/A

Mitigation

Impacts	0
Parcels	0
Credits	0
Lump Sum	0
Env PTE	2

Misc. R/W Work

RAP Displaces	N/A
Clear/Demo	N/A
PTE Construct	N/A
Condemnation	0
USA Involvement	Yes

4. **Provide a general description of the right of way and excess lands required (zoning, use, major improvements, critical or sensitive parcels, etc.).**

Multiple Temporary Construction Easements and Drainage Easements will be required from property zoned Residential, Misc., and Commercial. USA Lands and Rights Affected. For more information, see Assumptions and Limiting Conditions.

5. **Are any properties acquired for this project expected to be rented, leased, or sold?**

Yes _____ No X

6. **Are RAP displacements required?**

Yes _____ No X

No. of single family N/A

No. of multi-family N/A

No. of business/nonprofit N/A

No. of farms N/A

Based on Draft/Final Relocation Impact Statement/Study dated _____ N/A

 N/A Sufficient replacement housing will be available without last resort housing.

 N/A Sufficient replacement housing will not be available without last resort housing.

7. **Is there an effect on assessed valuation?**

Yes _____ No X Not Significant _____

8. **Are there any items of Construction Contract Work?**

Yes _____ No X

There is no Construction Contract Work associated with the project.

9. **Are utility facilities or rights of way affected?**

Yes X No _____ Phase 4 Capital \$0

Names of Utility Companies requiring verification only.

Pacific Power - Electric (aerial/underground); Vyve - CATV (Aerial); City of Dunsmuir - Water (underground); City of Dunsmuir - Sewer (underground); Cal-Ore Telephone - Telecommunications (aerial); Snowcrest Telephone - Telephone (aerial)

Names of Utility Companies with conflicts.

AT&T Legacy - Fiber Optic (underground); AT&T - Telephone

Additional information concerning Utility Involvement on this project.

Per PE, there is a culvert near postmile 2.65 in Siskiyou County that cannot be restored without shutting down RR which is not an option. Culvert would need to be re-routed and will create conflict with a fiber optic line. PE confirmed that wildlife crossing and any other culvert work will not be impacting utilities.

10. **Are railroad facilities or rights of way affected?**

Yes X No _____ Phase 4 Capital \$16,000

A Right of Entry on railroad property (UPRR) will be required on Interstate 5 in Siskiyou County at post mile 2.65 near Sac River BOH (DOT Crossings 748857G & 980350V). One culvert will be abandoned and a second culvert will be replaced. In addition, four locations (Post Mile 59.60, 59.65, 60.27, & 60.50) will require a Drainage/Pipeline Agreement for replacement of existing culverts and Drainage Inlets.

11. Are USA Lands or Rights Affected?

Yes X No Phase 4 Capital \$0

Agencies Involved:

US Forest Service <u> X </u>	BLM <u> </u>	Army Corps of Engineers <u> </u>
National Parks <u> </u>	BIA <u> </u>	Veterans Administration <u> </u>
US Fish & Wildlife <u> </u>	GSA <u> </u>	<u> </u>

Rights or Permissions to acquire:

Easement <u> </u>	Special Use Permit <u> </u>	Courtesy Letter <u> X </u>
Right of Way Grant <u> </u>	Cooperative Work Agreement <u> </u>	Cost Recovery <u> </u>
Mineral Agreement <u> </u>	Letter of Concurrence <u> </u>	Timber Sale <u> </u>

Project work is within the State's Department of Transportation Easement (DOTE) from Shasta-Trinity National Forest (south end of project.) The DOTE is between Post Miles 58-58.6. A courtesy letter will be required to notify the Forest of the project.

12. Is an RE Office required for the project?

Yes No X

13. Were any previously unidentified sites with hazardous waste and/or material found?

Yes None Evident X

14. Are there material borrow and/or disposal site agreements required (Form RW 8-10 or RW 8-11)?

No X Optional Mandatory

15. Are there potential relinquishments and/or abandonments?

Yes No X

16. Are there any existing and/or potential airspace sites?

Yes No X

17. What type of mitigation is required for the project?

Permits and In Lieu Fee will be required for the project. Estimates provided by John Luper 2/29/24.

18. Is it anticipated that Caltrans will perform all Right of Way work?

Yes X No

19. Indicate the anticipated Right of Way schedule and lead time requirements.

Right of Way Lead Time will require a minimum of **15** months after we receive final appraisal maps, utility conflict maps, necessary environmental clearances, and freeway agreements have been approved and obtained, to complete the Right of Way Certification process.

20. Assumptions and limiting conditions: (Check boxes that apply.)

- ☐ Mapping did not provide sufficient detail to determine the limits of the right of way required.
- ☐ Transportation facilities have not been sufficiently designed to determine the damages to any of the remainder parcels affected by the project.
- ☐ Additional right of way requirements are anticipated, but are not defined due to the preliminary nature of the early design requirements.
- ☒ Design will secure necessary encroachment permits from local agencies, Reclamation Districts, Central Valley Flood Protection Board, etc. in advance of construction.
- ☐ Project permits are not required for the project.
- ☐ This estimate is based off of preliminary Environmental information.
- ☐ The data sheet assumes Environmental Permits to Enter for studies will not be required. This estimate does not include support costs for Right of way to obtain permission to enter.
- ☒ Requested lead time provides insufficient time to acquire Orders of Possession if condemnations are required.
- ☐ Based on project history it is assumed multiple parcels will require resources in order to generate a Resolution of Necessity. Many of the parcels will reach successful negotiation, however, only after resources have been spent.
- ☒ Railroad lead time begins when we have received final/approved plans and funds have been certified.
- ☒ Utility lead time begins after PA&ED is met and we have received conflict maps.
- ☒ Right of Way Certification is at risk. The current project schedule does not provide Right of Way with sufficient lead time.
- ☐ All work and access will be within the State's current Right of Way.
- ☒ If the contractor requires a staging area, Standard Specifications (Sections 5-1.32) indicates that the contractor will be responsible for securing locations for staging and storage.
- ☒ The data sheet estimate does not include Right of Way Engineering support costs.
- ☒ This estimate assumes the property owners will be reimbursed for a appraisal fees pursuant to CCP § 1263.025(a).
- ☒ Revised to adjust acquisition size based off appraisal maps 2/20/25.
- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____

Evaluation Prepared By:

Right of Way:

Stephanie Bushnell

STEPHANIE BUSHNELL
Associate Right of Way Agent

Date 02/20/2025

Reviewed By:

Anna Garner

ANNA GARNER
RW Project Coordinator

Date 02/20/2025

I have personally reviewed this Right of Way Data Sheet and all supporting information. I certify that the probable Highest and Best Use, estimated values, escalation rates and assumptions are reasonable and proper, subject to the limiting conditions set forth, and I find this Data Sheet to be complete and current.

William Walker

WILLIAM WALKER FOR
CAROL DETWILER
Senior Right of Way Agent
Project Delivery Branch
Redding

Tadj Ratajczak

TADJ A. RATAJCZAK
Assistant Chief
North Region Right of Way
Eureka/Redding

02/20/2025

Date

02/20/2025

Date

Attachment G

Environmental Document

FLUME CREEK CAPM PROJECT

INITIAL STUDY

with Mitigated Negative Declaration



SHASTA AND SISKIYOU COUNTIES, CALIFORNIA

DISTRICT 2 – SHA – 5 (Post Miles 58.0 to 67.019)

DISTRICT 2 – SIS – 5 (Post Miles 0.0 to 2.7)

EA 02-0J810 / EFIS 0219000164

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



January 2025



For individuals with sensory disabilities, this document can be made available in Braille, in large print, on audiocassette, or on computer disk. To obtain a copy in one of these alternate formats, please write to or call Caltrans, Attention: Mario Montalvo, North Region Environmental-District 2, 1657 Riverside Drive, MS-50, Redding, CA 96001; (530) 356-5304 Voice, or use the California Relay Service 1 (800) 735-2929 (TTY to Voice), 1 (800) 735-2922 (Voice to TTY), 1 (800) 855-3000 (Spanish TTY to Voice and Voice to TTY), 1-800-854-7784 (Spanish and English Speech-to-Speech) or 711.

FLUME CREEK CAPM PROJECT

**Perform Pavement, Drainage, and Safety Improvements on Interstate 5
between Post Miles 58.0 and 67.019 in Shasta County, and Post Miles 0.0 to 2.7
in Siskiyou County**

INITIAL STUDY

With Proposed Mitigated Negative Declaration

Submitted Pursuant to: Division 13, California Public Resources Code

**THE STATE OF CALIFORNIA
Department of Transportation**

11/15/2024

Date of Approval



David DeMar, *Acting* Office Chief
North Region Environmental-District 2
California Department of Transportation
CEQA Lead Agency

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

North Region Environmental-District 2
Attn: Mario Montalvo
1657 Riverside Drive, MS-50
Redding, CA 96001
(530) 356-5304

or use the California Relay Service TTY number, 711 or 1-800-735-2922.



Mitigated Negative Declaration

Pursuant to: Division 13, California Public Resources Code

SCH Number: 2024120559

Project Description

The California Department of Transportation (Caltrans) proposes to perform pavement, drainage, and safety improvements on Interstate 5 between Post Miles 58.0 and 67.019 in Shasta County and Post Miles 0.0 to 2.7 in Siskiyou County.

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 project would have ***No Effect/No Impact*** on the following resources:

- Agriculture and Forest Resources
- Cultural Resources
- Land Use and Planning
- Mineral Resources
- Population and Housing
- Recreation
- Tribal Cultural Resources

The project would have ***Less than Significant Impacts*** to the following resources:

- Aesthetics
- Air Quality
- Energy
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Noise
- Public Services
- Transportation
- Utilities and Service Systems
- Wildfire
- Mandatory Findings of Significance

With the following mitigation measures incorporated, the project would have Less than Significant Impacts to Biological Resources:

Table of Contents

- To offset potential impacts to wildlife connectivity resulting from the raising of the median barrier, project implementation includes the following wildlife connectivity improvements:
 - Construct a 12-foot-wide by 12-foot-tall reinforced concrete box culvert under I-5 at PM 65.88.
 - To help direct wildlife to the proposed crossing, install an eight-foot-tall chain-link fence or other applicable fence type along both sides of the highway.
- To reduce the potential for wildlife to become trapped on the highway:
 - Install jump outs and/or deer gates along the proposed fence.
 - Include intermittent gaps as feasible along the length of the median barrier to allow wildlife to exit the roadway.

If approved, all project components could be constructed.


 David DeMar, Acting Office Chief
 California Department of Transportation
 North Region Environmental District 2

1/22/2025
 Date

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List of Acronyms and Abbreviated Terms

Acronym/Abbreviation	Description
AADT	Annual Average Daily Traffic
AB	Assembly Bill
APE	Area of Potential Effects
AQAP	Air Quality Attainment Plan
AQMD	Air Quality Management District
BMPs	Best Management Practices
BSA	Biological Study Area
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CAFE	Corporate Average Fuel Economy
CAL-CET	Caltrans Construction Emissions Tool
CAL EPA	California Environmental Protection Agency
CAL FIRE	California Department of Forestry and Fire Protection
Cal/OSHA	California Occupational Safety and Health Administration
Caltrans	California Department of Transportation
CAP(s)	Criteria Area Pollutant
CAPM	Capital Preventative Maintenance
CAPTI	Climate Action Plan for Transportation Infrastructure
CARB	California Air Resources Board
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFGF	California Fish and Game Code
CFR	Code of Federal Regulations
CGP	Construction General Permit
CH ₄	methane
CHP	California Highway Patrol
CIA	Cumulative Impact Analysis
CNPS	California Native Plant Society
CO	Carbon monoxide
CO ₂	carbon dioxide
CO ₂ e	carbon dioxide equivalent
CTP	California Transportation Plan
CWA	Clean Water Act
dB	decibels
Dbh	Diameter-at-Breast-Height

Department	Caltrans
DBH	Diameter Breast Height
DOT	Department of Transportation
DP	Director's Policy
ECL	Environmental Construction Liaison
EEP	Emergency Evacuation Plan
EIR	Environmental Impact Report
EO(s)	Executive Order(s)
EPA	Environmental Protection Agency
ESA	Endangered Species Act
ESA(s)	Environmentally Sensitive Area(s)
ESL	Environmental Study Limits
°F	degrees Fahrenheit
FAA	Federal Aviation Administration
FC	Federal candidate species
FE	Federally endangered
FED	Final Environmental Document
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FHSZ	Fire Hazard Severity Zone
FHWA	Federal Highway Administration
FP	fully protected
FT	Federally threatened
GHG	greenhouse gas
GRE	Geosynthetic Reinforced Embankment
GWP	Global Warming Potential
H ₂ S	Hydrogen sulfide
H&SC	Health & Safety Code
HCP	Habitat Conservation Plan
HFCs	hydrofluorocarbons
I-5	Interstate 5
IS	Initial Study
ISA	Initial Site Assessment
IS/MND	Initial Study / Mitigated Negative Declaration
MMT	million metric tons
MMTCO ₂ e	million metric tons of carbon dioxide equivalent
MMRP	Mitigation Monitoring and Reporting Program
MND	Mitigated Negative Declaration
MPO	Metropolitan Planning Organization
N ₂ O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAGPRA	Native American Graves Protection and Repatriation Act of 1990

Department	Caltrans
NAHC	Native American Heritage Commission
NCCP	Natural Community Conservation Plan
NEPA	National Environmental Policy Act
NES	Natural Environment Study
NHTSA	National Highway Traffic and Safety Administration
NMFS	National Marine Fisheries Service
NO ₂	nitrogen dioxide
NO _x	Nitrogen oxide
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NSVPA	Northern Sacramento Valley Planning Area
O ₃	ozone
OHWM	Ordinary High Water Mark
OPR	Governor's Office of Planning and Research
PDT	Project Development Team
PM	particulate matter
PM(s)	post mile(s)
Porter-Cologne Act	Porter-Cologne Water Quality Control Act
Project	Flume Creek CAPM Project
PRC	Public Resources Code (California)
RTP	Regional Transportation Plan
RTPA	Regional Transportation Planning Agency
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCAQMD	Shasta County Air Quality Management District
SCS	Sustainable Communities Strategy
SC	State candidate species
SE	State endangered
SF ₆	sulfur hexafluoride
SHS	State Highway System
SIP	State Implementation Plan (Air Quality)
SNC(s)	Sensitive Natural Community(is)
SO ₂	sulfur dioxide
SO ₄	sulfate
SR	State Route
SRA	State Responsibility Area
SSC	Species of Special Concern
SS	Standard Specification
SSP	Standard Special Provision
STAGE	Siskiyou Transit and General Express

Department	Caltrans
SWMP	Storm Water Management Plan
SWPPP	Stormwater Pollution Prevention Plan
THVF	Temporary High Visibility Fencing
TMP	Transportation Management Plan
U.S. or US	United States
USACE	United States Army Corps of Engineers
USC	United States Code
USDOT	U.S. Department of Transportation
USFS	United States Forest Service
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 Compound
WPCP	Water Pollution Control Program

CHAPTER 1. PROPOSED PROJECT

1.1 Project History

The California Department of Transportation (Caltrans) is proposing to rehabilitate approximately 12 miles of Interstate 5 (I-5) in northern Shasta County (between Post Miles [PMs] 58.0 and 67.019) and southern Siskiyou County (between PMs 0.0 and 2.7).

Interstate 5 is a principal arterial/interstate in the National Highway System and is used predominately for the movement of goods and longer interregional trips. The interstate links most of the metropolitan areas occurring in California, Oregon, and Washington, as well as trade between Mexico and Canada. Further, I-5 provides a continuous freeway connection between all major ports on the West Coast, including the ports of Los Angeles and Long Beach—the first and second busiest ports in the US, respectively.

Highway maintenance activities were last performed on this segment of highway in 2014. At present, various sections are exhibiting uneven pavement throughout the roadway, especially on the uphill (cut slope) sides, typically in the southbound lanes. Sub-surface moisture is compounding the movement of the underlying Portland Cement Concrete slabs.

Between 2019 and 2021, a minimum of 18 maintenance task orders were issued to maintain the structural integrity of the road.

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

1.2 Project Description

Project Objective

Purpose

The purpose of this project is to restore the facility to a state of good repair that requires minimal maintenance.

Need

By the project delivery year of 2026, approximately 45.4 lane miles within the project limits will be in fair condition. There are approximately 100 rocking concrete slab locations causing damage to the overlying pavement. There are drainage systems in various conditions that may cause damage to the roadway if not repaired or replaced. The Castle Creek Bridge and Castella Undercrossing have poor bridge health ratings. Much of the median barrier and guardrail are below standard height. The signing, striping, CCTV, and RWIS are also partially obsolete.

Proposed Project

The California Department of Transportation, using federal and state funding, proposes to rehabilitate Interstate 5 (I-5) through repaving activities, structural repairs, drainage improvements, and construction of supporting infrastructure. The limits of work occur between post miles 58.0 and 67.019 in Shasta County, and post miles 0.0 and 2.7 in Siskiyou County (Figures 1 and 2).

The proposed project would include the following improvements:

Roadway Improvements

- Overlay activities – rubberized hot-mixed asphalt
 - o Overlay roadway, including the shoulders and median
 - o Conform on- and off-ramps
 - o Perform digouts at various locations
- Install shoulder backing to support edge of pavement
- Repair approximately 100 rocking concrete slabs
- Seal parking area at PM 62.36

Structures

Project implementation would include rehabilitation of the Castle Creek Bridge (PM 63.31) and Castella Bridge (PM 63.58) as follows:

- Install a 4.5-inch reinforced concrete 'deck-on-deck' with a 1-inch polyester concrete overlay
- Upgrade the existing bridge railing
- Replace the existing median barrier
- Construct new approach slabs

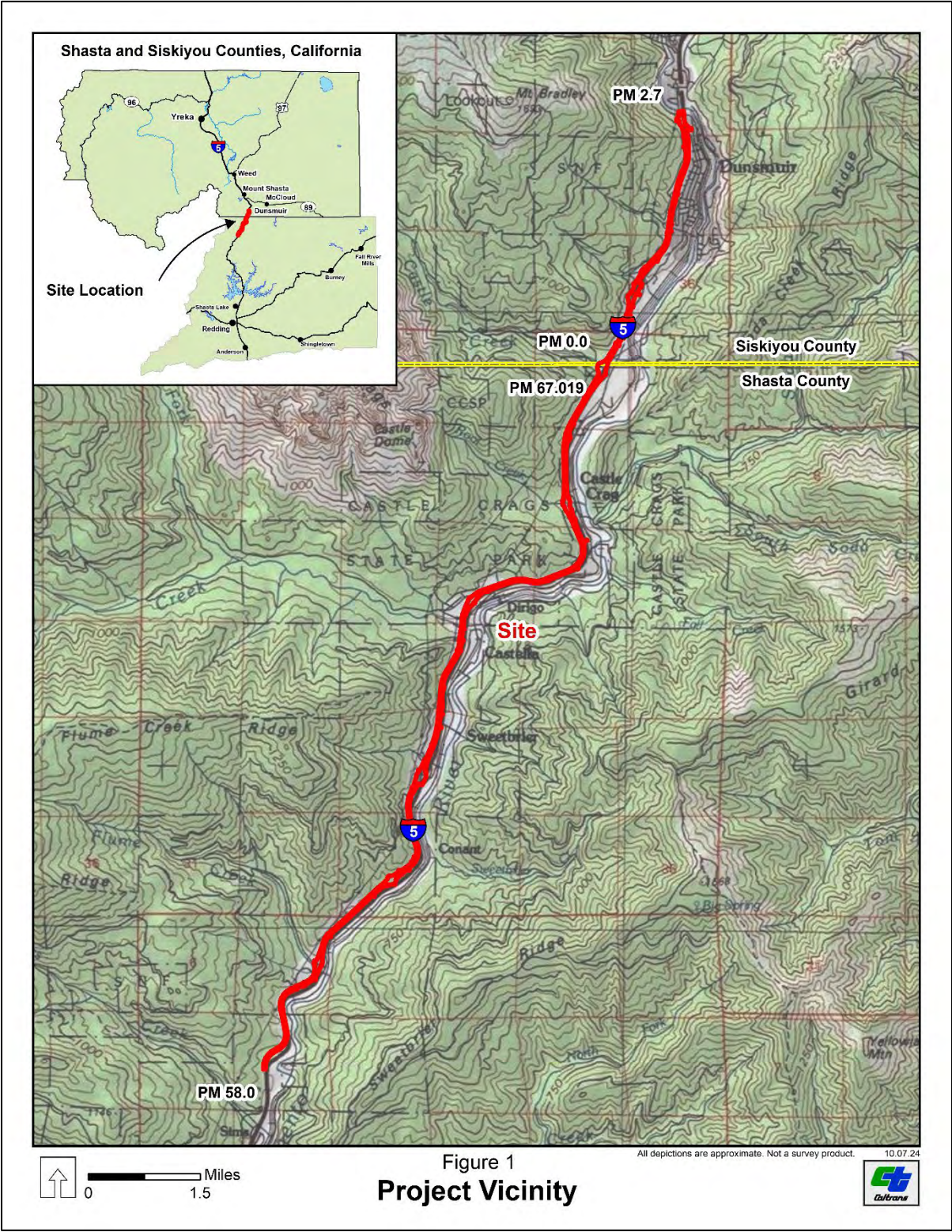


Figure 1. Project Vicinity

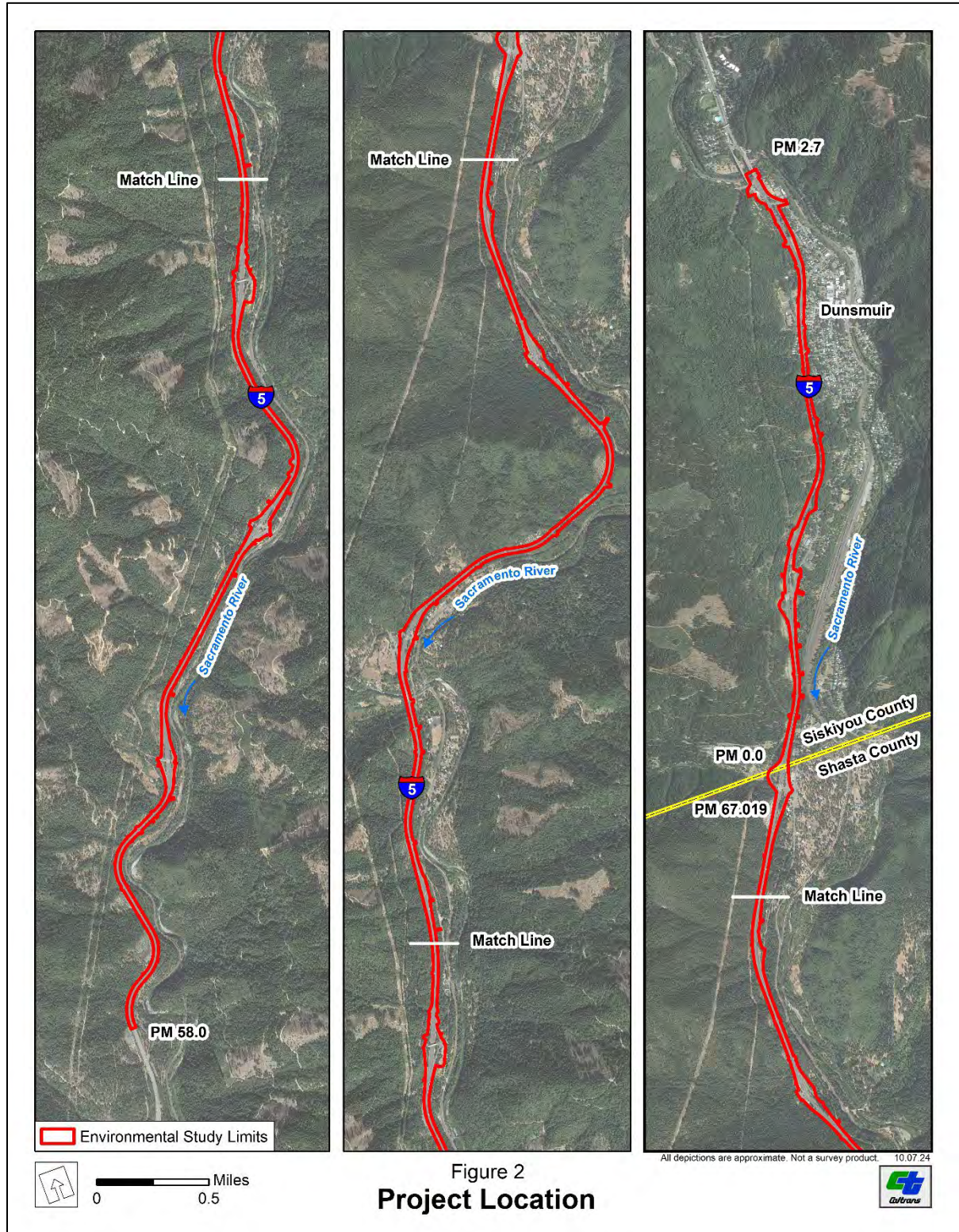


Figure 2. Project Location

Signs and Delineation

- Upgrade/replace signs to current standards.
- Install/apply recessed retroreflective pavement markers, as well as sprayable thermoplastic pavement striping/markings throughout the project corridor.

Traffic Safety

- Replace metal beam guardrail with Midwest Guardrail System steel-post guardrail in-place, and transition railing at bridge sites.
- Remove and replace approximately 11 miles of median barrier. The current median barrier height varies between 26 and 35 inches. To meet current standards, the median barrier height would be increased to 42 inches.

Transportation Management Systems

Upgrade the existing Road Weather Information System and Closed-Circuit Television stations in the community of Dunsmuir (PM 2.61). Replace ±30 damaged loops at the existing traffic monitoring stations.

Lighting

As part of the proposed project, seven new luminaires would be installed, and 13 luminaires replaced along various off-ramps. Luminaire installation would include minor trenching to provide power. The lighting locations/improvements are summarized in Table 1.

Table 1. Proposed Lighting Improvements

Luminaire Location	Replace	Add
Flume Creek Road - Northbound off-ramp	1	1
Conant Road - Southbound off-ramp	1	1
Sweetbrier Avenue - Northbound off-ramp	1	1
Sweetbrier Avenue - Southbound off-ramp	1	1
Castella - Northbound off-ramp	2	—
Castella - Southbound off-ramp	1	1
Soda Creek Road - Northbound off-ramp	1	1
Soda Creek Road - Southbound off-ramp	1	1
Crag View Drive - Northbound off-ramp	2	—

Luminaire Location	Replace	Add
Central Dunsmuir - Northbound off-ramp	2	—
Total:	13	7

Disposal/Borrow Sites

Project implementation would include approximately seven acres of ground disturbance; with a maximum excavation depth estimated at 10 feet. Excess soil material and construction debris would become the property of the contractor. No disposal and/or borrow sites are proposed.

Drainage Improvements

As part of the proposed project, drainage improvements, consisting of culvert installation/replacement, liner installation, drainage inlet replacement, headwall installation, and down drain replacement, would be performed on 81 drainage systems. Additionally, various drainage inlets may need to be adjusted to grade. Further, culvert replacement activities may necessitate temporary clearwater diversions. The proposed drainage improvements would require vegetation removal. A detailed description of the proposed drainage improvements is provided below in Table 2. Culvert systems are often comprised of multiple segments, which are separated by drainage inlets or other structures. Culvert segments subject to replacement, including the number of drainage inlets are identified in the table.

Slope Stabilization

To address minor settling in the northbound lane at PM 1.1 in Siskiyou County, the roadway would be excavated and stabilized through construction of a geosynthetic reinforced embankment (GRE). The roadway would be excavated and backfilled in alternating horizontal layers of fill soil and geosynthetic reinforcement. The layers would extend up to the structural portion of the roadway. A drainage system would be included in the GRE.

Wildlife Management

Wildlife Crossing

A 12-foot-wide by 12-foot-tall reinforced concrete box culvert would be installed at PM 65.88 via cut and cover to allow wildlife to safely cross the highway.

Wildlife Fencing

An eight-foot-tall chain-link fence or other applicable fence type would be installed to direct wildlife under I-5. Wildlife fencing would be installed in conjunction with the proposed wildlife crossing. The estimated limits are included below.

- West of Highway—PMs 65.45 to 66.17
- East of Highway—PMs 65.45 to 66.10

To improve safety for animals and the traveling public, fence installation would include jump outs and/or deer gates, while the median barrier would include intermittent gaps along the length to allow wildlife to exit the roadway. Both elements would reduce the potential for wildlife to become trapped on the highway. Additionally, the fence design would include vehicle and/or pedestrian gates to accommodate maintenance activities.

New Impervious Area

The new impervious area is estimated at 0.01 acres.

Staging

Four staging areas have been identified along the project corridor: PMs 60.47 (northbound), 61.65 (northbound), 65.41 (southbound), and 0.95 (southbound).

Utilities

Within the project limits, I-5 supports overhead and underground utilities, including electric and fiber optic lines. Culvert replacement activities at PM 2.65 would require relocating an existing fiber optic line.

Right of Way

Caltrans would acquire temporary construction easements, including right-of-way acquisition at various locations to accommodate project activities.

Traffic Management

Project construction would utilize lane and ramp closures as needed.

Schedule

The work would be completed in three construction seasons and would require approximately 360 working days.

Table 2. Proposed Culvert Improvements

Post Mile	Segment Replacement Between Structures	Installation Method	Replace Drainage Inlet	Install Headwall at Inlet	Install Rock Slope Protection	Proposed Improvements
Shasta County						
58.01	2-3	Cut and Cover	2	—	—	Replace 18-inch-diameter by 324-foot-long culvert with a 24-inch-diameter culvert of the same length.
58.25	1-2	Cut and Cover	1	—	—	Replace 18-inch-diameter by 88-foot-long culvert with a 24-inch-diameter culvert of the same length.
58.33	1-2	Cut and Cover	1	—	—	Replace 18-inch-diameter by 52-foot-long culvert with a 24-inch-diameter culvert of the same length.
58.40	1-3	Cut and Cover	2	—	—	Replace 18-inch-diameter by 104-foot-long culvert system with a 24-inch-diameter culvert system of the same length.
58.67	2-3	Cut and Cover	—	—	—	Replace 18-inch-diameter by 45-foot-long culvert system with a 24-inch-diameter culvert system of the same length.
58.77	1-2	Cut and Cover	1	—	—	Replace 18-inch-diameter by 56-foot-long culvert with a 24-inch-diameter culvert of the same length.
58.90	1-4	Cut and Cover	2	—	—	Replace 18-inch-diameter by 126-foot-long culvert with a 24-inch-diameter culvert of the same length. Add rock drain.
58.98	1-3	Cut and Cover	1	—	Yes	Replace 18-inch-diameter by 111-foot-long culvert with a 24-inch-diameter culvert of the same length. Install new flared end section at outfall.
59.05	4-6	Cut and Cover	2	—	—	Replace 18-inch-diameter by 160-foot-long culvert system with a 24-inch-diameter culvert system of the same length. Install slotted drain.
59.08	1-3	Cut and Cover	1	1	—	Replace 30-inch-diameter by 119-foot-long culvert with a 36-inch-diameter culvert of the same length.

Post Mile	Segment Replacement Between Structures	Installation Method	Replace Drainage Inlet	Install Headwall at Inlet	Install Rock Slope Protection	Proposed Improvements
59.21	1-4	Cut and Cover	2	—	—	Replace 18-inch-diameter by 226-foot-long culvert system with a 24-inch-diameter culvert system of the same length. Install flared end section.
59.32	1-2	Cut and Cover	1	—	—	Replace 18-inch-diameter by 70-foot-long culvert with a 24-inch-diameter culvert of the same length.
59.35 (SB)	1-4	Cut and Cover	—	—	—	Replace 18-inch-diameter by 121-foot-long culvert system with a 24-inch-diameter culvert system of the same length.
59.35 (NB)	2-7	Cut and Cover	5	—	—	Replace 18-inch-diameter by 194-foot-long culvert system with a 24-inch-diameter culvert system of the same length.
59.60	1-5	Cut and Cover	—	—	—	Replace 18-inch-diameter by 197-foot-long culvert with a 24-inch-diameter culvert of the same length.
59.65	1-3	Cut and Cover	1	—	—	Replace 18-inch-diameter by 190-foot-long culvert system with a 24-inch-diameter culvert system of the same length.
59.80	1-2	Cut and Cover	1	—	—	Replace 18-inch-diameter by 67-foot-long culvert system with a 24-inch-diameter culvert system of the same length.
59.80	4-6	Cut and Cover	4	—	—	Replace 18-inch-diameter by 280-foot-long culvert system with a 24-inch-diameter culvert system of the same length.
59.80	3-7	Cut and Cover	3	—	—	Replace 18-inch-diameter by 77-foot-long slotted drain culvert system with a 24-inch-diameter culvert system of the same length.
60.27	1-3	Cut and Cover	2	—	—	Replace 18-inch-diameter by 145-foot-long culvert system with a 24-inch-diameter culvert system of the same length.

Post Mile	Segment Replacement Between Structures	Installation Method	Replace Drainage Inlet	Install Headwall at Inlet	Install Rock Slope Protection	Proposed Improvements
60.27	3-5	Cut and Cover	4	—	—	Replace 12-inch-diameter by 294-foot-long slotted drain culvert with a 24-inch-diameter culvert system of the same length.
60.35	1-2	Cut and Cover	1	—	—	Replace 18-inch-diameter by 83-foot-long culvert with a 24-inch-diameter culvert of the same length.
60.45	1-7	Cut and Cover	3	—	—	Replace 18-inch-diameter by 612-foot-long culvert system with a 24-inch-diameter culvert system of the same length. Install slotted drain.
60.50	1-7	Cut and Cover	5	1	Yes	Replace 18-inch-diameter by 602-foot-long culvert system with a 24-inch-diameter culvert system of the same length.
60.56	1-2	Cut and Cover	1	—	—	Replace 18-inch-diameter by 83-foot-long culvert with a 24-inch-diameter culvert of the same length.
60.66	2-3	Cut and Cover	2	—	Yes	Replace 24-inch-diameter by 134-foot-long culvert with a culvert of the same dimensions.
60.73	2-3	Cut and Cover	1	—	—	Replace 18-inch-diameter by 84-foot-long culvert with a 24-inch-diameter culvert of the same length.
60.83	2-3	Cut and Cover	1	—	—	Replace 18-inch-diameter by 50-foot-long culvert with a 24-inch-diameter culvert of the same length.
60.90	1-2	Cut and Cover	—	—	Yes	Replace 18-inch-diameter by 58-foot-long downdrain with a 24-inch-diameter downdrain of the same length.
60.90	2-4	Cut and Cover	2	—	—	Replace 18-inch-diameter by 361-foot-long culvert system with a 24-inch-diameter culvert system of the same length.
61.00	1-3	Cut and Cover	2	—	—	Replace 18-inch-diameter by 101-foot-long culvert system with a 24-inch-diameter culvert system of the same length.

Post Mile	Segment Replacement Between Structures	Installation Method	Replace Drainage Inlet	Install Headwall at Inlet	Install Rock Slope Protection	Proposed Improvements
61.10	2-5	Cut and Cover	—	—	—	Replace 18-inch-diameter by 50-foot-long slotted drain culvert with a 24-inch-diameter slotted drain culvert of the same length.
61.58	1-3	Cut and Cover	1	—	—	Replace 18-inch-diameter by 116-foot-long culvert system with a 24-inch culvert system of the same length.
61.58	5-6	Cut and Cover	1	—	—	Replace 18-inch-diameter by 265-foot-long culvert system with a 24-inch culvert system of the same length.
61.81	3-5	Cut and Cover	1	—	—	Replace 24-inch-diameter by 217-foot-long culvert system with a culvert system of the same length.
61.85	2-3	Cut and Cover	1	—	—	Replace 18-inch-diameter by 38-foot-long culvert with a 24-inch-diameter culvert of the same length.
61.89	1-2	Cut and Cover	—	—	—	Replace 18-inch-diameter by 86-foot-long culvert with a 24-inch-diameter culvert of the same length. Add flared-end section to inlet.
62.06	1-3	Cut and Cover	1	—	—	Replace 18-inch-diameter by 88-foot-long culvert with 24-inch-diameter culvert of the same length. Work includes flared-end section at inlet and slotted drain installation.
62.25	2-3	Cut and Cover	1	—	—	Replace 24-inch-diameter by 64-foot-long culvert with a culvert of the same length.
62.25	3-5	Cut and Cover	1	—	—	Replace 24-inch-diameter by 61-foot-long culvert with a culvert of the same length.
62.36	2-4	Cut and Cover	1	—	—	Replace 24-inch-diameter by 68-foot-long culvert system with a culvert system of the same length.

Post Mile	Segment Replacement Between Structures	Installation Method	Replace Drainage Inlet	Install Headwall at Inlet	Install Rock Slope Protection	Proposed Improvements
62.49	1-2	Cut and Cover	—	—	—	Remove existing 18-inch-diameter by 47-foot-long culvert, including the drainage inlet.
62.68	3-5	Cut and Cover	—	—	—	Replace 18-inch-diameter by 20-foot-long slotted drain culvert with 24-inch-diameter slotted drain culvert of the same length.
62.78	3-4	Cut and Cover	—	—	—	Replace 18-inch-diameter by 20-foot-long slotted drain culvert with 24-inch-diameter slotted drain culvert of the same length.
63.08	1-3, 3-5	Cut and Cover	1	—	Yes	Install shallow 18-inch-diameter by 138-foot-long culvert system with 24-inch-diameter culvert system of the same length.
63.08	3-4	Cut and Cover	—	—	—	Replace 18-inch-diameter by 20-foot-long slotted drain culvert with a 24-inch-diameter slotted drain culvert of the same length.
63.18	1-5	Cut and Cover	1	—	—	Replace 18-inch-diameter by 185-foot-long culvert system with 24-inch-diameter culvert system of the same length.
63.30	2-3	Cut and Cover	1	—	—	Replace 12-inch-diameter by 15-foot-long culvert with 18-inch-diameter culvert of the same length.
63.44	1-2	Cut and Cover	1	—	—	Replace 18-inch-diameter by 245-foot-long culvert with 24-inch-diameter culvert of the same length.
63.61	1-7	Cut and Cover	5	—	Yes	Replace 24-inch-diameter by 475-foot-long culvert system with a culvert system of the same dimensions. Install new flared-end section at culvert inlet.
63.62	1-2	Cut and Cover	—	—	—	Replace 12-inch-diameter by 63-foot-long downdrain with a 24-inch-diameter downdrain of the same length.

Post Mile	Segment Replacement Between Structures	Installation Method	Replace Drainage Inlet	Install Headwall at Inlet	Install Rock Slope Protection	Proposed Improvements
63.62	2-4	Cut and Cover	2	—	—	Replace 18-inch-diameter by 73-foot-long culvert system with a 24-inch-diameter culvert system of the same length.
63.83	1-2	Cut and Cover	—	—	Yes	Replace 24-inch-diameter by 39-foot-long culvert with a culvert of the same dimensions.
63.93	4-6	Cut and Cover	—	—	—	Replace 18-inch-diameter by 28-foot-long slotted drain culvert system with a 24-inch-diameter slotted drain culvert system of the same length.
64.05	1-6	Cut and Cover	5	—	—	Replace 18-inch-diameter by 751-foot-long culvert system with 24-inch-diameter culvert system of the same length.
64.17	1-7	Cut and Cover	5	—	—	Replace 18-inch-diameter by 1,292-foot-long culvert system with a 24-inch-diameter culvert system of the same length.
64.49	2-3	Cut and Cover	—	1	—	Replace 36-inch-diameter by 48-foot-long culvert with a culvert of the same dimensions.
64.57	1-5	Cut and Cover	4	—	—	Replace 18-inch-diameter by 849-foot-long culvert system with a 24-inch-diameter culvert system of the same length.
64.70	1-2	Cut and Cover	—	—	Yes	Replace 18-inch-diameter by 154-foot-long culvert with a culvert of the same dimensions.
64.70	2-3	Cut and Cover	1	—	—	Replace 18-inch-diameter by 282-foot-long culvert with a 24-inch-diameter culvert of the same length.
64.70	3-5	Cut and Cover	2	—	—	Replace 18-inch-diameter by 568-foot-long culvert system with culvert system of the same dimensions.
64.96	1-3	Cut and Cover	1	1	—	Replace 24-inch-diameter by 428-foot-long culvert system with a culvert system of the same dimensions.

Post Mile	Segment Replacement Between Structures	Installation Method	Replace Drainage Inlet	Install Headwall at Inlet	Install Rock Slope Protection	Proposed Improvements
64.97	1-4	Cut and Cover	2	—	—	Replace 18-inch-diameter by 663-foot-long culvert system with a 24-inch-diameter culvert system of the same length.
65.18	3-4, 5-6	Cut and Cover	—	—	—	Replace 18-inch-diameter by 66-foot-long slotted drain culvert system with a slotted drain culvert system of the same dimensions.
65.18	2-3, 5-7	Cut and Cover	—	1	—	Replace 30-inch-diameter by 96-foot-long culvert with a culvert of the same dimensions.
65.39	1-2	Cut and Cover	1	—	—	Replace 24-inch-diameter by 156-foot-long culvert with a culvert of the same dimensions.
65.41	1-4	Cut and Cover	2	—	Yes	Replace 18-inch-diameter by 163-foot-long culvert system with a 24-inch-diameter culvert system of the same length.
65.42	1-5	Cut and Cover	2	—	Yes	Replace 18-inch-diameter by 141-foot-long culvert system with 24-inch-diameter culvert system of the same length. Work includes slotted drain installation.
65.43	2-3	Cut and Cover	1	—	—	Replace 30-inch-diameter by 177-foot-long culvert with 36-inch-diameter culvert of the same length.
65.43	3-4, 4-6, 3-7	Cut and Cover	2	1	—	Replace 24-inch-diameter by 145-foot-long culvert system with a culvert system of the same dimensions.
65.43	2-5	Cut and Cover	1	—	—	Replace 18-inch-diameter by 31-foot-long culvert with a culvert of the same dimensions.
65.50	1-4, 4-6	Cut and Cover	2	—	—	Replace 18-inch-diameter by 275-foot-long culvert system with 24-inch-diameter culvert system of the same length.
65.60	1-2	Cut and Cover	1	—	—	Replace 18-inch-diameter by 97-foot-long culvert with 24-inch-diameter culvert of the same length. Install flared-end section at inlet.

Post Mile	Segment Replacement Between Structures	Installation Method	Replace Drainage Inlet	Install Headwall at Inlet	Install Rock Slope Protection	Proposed Improvements
65.78	1-3	Cut and Cover	2	—	—	Replace 18-inch-diameter by 97-foot-long culvert with 24-inch-diameter culvert of the same length.
65.88	1-3	Cut and Cover	—	—	—	Replace 30-inch-diameter by 253-foot-long culvert with a 12-foot-wide by 12-foot-tall by 140-foot-long precast reinforced concrete box culvert. This will serve as a wildlife crossing, while also conveying flow.
65.90	1-3	Cut and Cover	2	—	—	Replace 18-inch-diameter by 100-foot-long culvert system with a 24-inch-diameter culvert system of the same length.
66.04	2-4	Cut and Cover	1	—	—	Replace 18-inch-diameter by 98-foot-long culvert system with culvert system of the same dimensions. Work includes slotted drain installation.
66.13	3-2	Cut and Cover	—	1	—	Replace 24-inch-diameter by 144-foot-long culvert with a culvert of the same dimensions.
66.17	1-3	Cut and Cover	1	—	Yes	Replace 18-inch-diameter by 191-foot-long culvert system with a 24-inch-diameter culvert system of the same length.
66.23	1-2	Cut and Cover	—	1	—	Replace 18-inch-diameter by 185-foot-long culvert with a 24-inch-diameter culvert of the same length. Install flared-end section at inlet.
66.52	1-2, 3	Cut and Cover	2	—	Yes	Replace 24-inch-diameter by 68-foot-long culvert with a culvert of the same dimensions. Replace grate at Inlet 3.
Siskiyou County						
0.16	1-2	Cure-in-Place Liner	—	—	—	Install cured-in-place liner within existing 24-inch-diameter by 94-foot-long culvert.
0.16	2-3	Cut and Cover	—	—	—	Replace 24-inch-diameter by 46-foot-long culvert with a culvert of the same dimensions.

Post Mile	Segment Replacement Between Structures	Installation Method	Replace Drainage Inlet	Install Headwall at Inlet	Install Rock Slope Protection	Proposed Improvements
0.26	1-2	Cure-in-Place Liner	—	—	—	Install cured-in-place liner within existing 24-inch-diameter by 191-foot-long culvert.
0.36	2-4	Cut and Cover	2	—	—	Replace 24-inch-diameter by 106-foot-long culvert with a culvert of the same dimensions.
0.36	3-5	Cut and Cover	—	—	—	Replace 18-inch-diameter by 28-foot-long slotted drain culvert with a slotted drain culvert of the same dimensions.
0.49	1-2	Cut and Cover	—	1	Yes	Install shallow 24-inch-diameter by 208-foot-long culvert/downrain system. The existing system would be abandoned in place.
0.57	2-4	Cut and Cover	1	—	Yes	Replace 18-inch-diameter by 165-foot-long culvert system with a culvert system of the same dimensions. Install subsurface junction box.
0.69	1-2, 3-4	Cut and Cover	—	—	—	Perform joint repair on existing downrain (1-2). For 3-4, replace 24-inch-diameter by 51-foot-long culvert with a culvert of the same dimensions.
0.78	1-2	Cure-in-Place Liner	—	—	—	Install cured-in-place liner within existing 24-inch-diameter by 404-foot-long culvert.
1.10	1-3	Cut and Cover	—	—	—	Replace eastern 20-foot section of 24-inch-diameter culvert (section 2-3); remove/reinstall 40-foot-long downrain (section 1-2).
1.44	1-2	Cut and Cover	—	—	—	Replace 24-inch-diameter by 146-foot-long culvert with a culvert of the same dimensions.
1.52	1-2	Cure-in-Place Liner	—	—	Yes	Install cured-in-place liner within existing 24-inch-diameter by 123-foot-long culvert.
1.52	3-4	Cut and Cover	—	—	—	Replace 18-inch-diameter by 26-foot-long slotted drain culvert with a slotted drain culvert of the same dimensions.

Post Mile	Segment Replacement Between Structures	Installation Method	Replace Drainage Inlet	Install Headwall at Inlet	Install Rock Slope Protection	Proposed Improvements
1.52	2-5	Cure-in-Place Liner	—	—	—	Install cured-in-place liner within existing 24-inch-diameter by 524-foot-long culvert.
1.52	10-5, 11-5	Cut and Cover	—	—	—	Replace 18-inch-diameter by 39-foot-long slotted drain culvert with a slotted drain culvert of the same dimensions.
1.52	5-6, 5-7	Cut and Cover	1	—	—	Replace 18-inch-diameter by 68-foot-long culvert system with a culvert system of the same dimensions.
1.52	12-14	Cut and Cover	1	—	—	Replace 18-inch-diameter by 50-foot-long culvert with 24-inch-diameter culvert of the same length.
2.53	1-12	Cut and Cover	1	—	—	Replace 18-inch-diameter by 10-foot-long culvert with a culvert of the same dimensions.
2.53	2-3	Cut and Cover	1	—	—	Replace 18-inch-diameter by 46-foot-long culvert with a culvert of the same dimensions.
2.53	4-12	Cut and Cover	1	—	—	Replace 18-inch-diameter by 80-foot-long culvert with a culvert of the same dimensions.
2.53	4-6	Cut and Cover	1	—	—	Replace 18-inch-diameter by 53-foot-long culvert system with a culvert of the same dimensions.
2.53	5-8	Cut and Cover	—	—	—	Replace 18-inch-diameter by 97-foot-long culvert with a culvert of the same dimensions.
2.53	8-9	Cut and Cover	—	—	—	Replace 24-inch-diameter by 197-foot-long culvert with a culvert of the same dimensions.
2.53	9-10	Cut and Cover	—	—	—	Replace 18-inch-diameter by 21-foot-long culvert with a culvert of the same dimensions.
2.65	46-48, 46-47	Cut and Cover	2	—	—	Replace 18-inch-diameter by 88-foot-long culvert system with a culvert system of the same dimensions.
2.65	43-44, 43-45	Cut and Cover	1	—	—	Replace 18-inch-diameter by 63-foot-long culvert system with a culvert system of the same dimensions. Work includes slotted drain installation.

Post Mile	Segment Replacement Between Structures	Installation Method	Replace Drainage Inlet	Install Headwall at Inlet	Install Rock Slope Protection	Proposed Improvements
2.65	36-40	Cure-in-Place Liner	—	—	—	Install cured-in-place liner within existing 30-inch-diameter by 366-foot-long culvert.
2.65	36-37	Cut and Cover	—	—	—	Replace 18-inch-diameter by 18-foot-long culvert with a slotted drain of the same dimensions.
2.65	33-35	Cut and Cover	—	1	—	Replace 18-inch-diameter by 46-foot-long culvert with a culvert of the same dimensions.
2.65	28-31	Cut and Cover	2	—	—	Replace 18-inch-diameter by 127-foot-long culvert system with a culvert system of the same dimensions. Work includes slotted drain installation.
2.65	25-28	Cure-in-Place Liner	—	—	—	Install cured-in-place liner within existing 30-inch-diameter by 207-foot-long culvert.
2.65	23-24	Cut and Cover	1	—	—	Replace 18-inch-diameter by 38-foot-long culvert with a culvert of the same dimensions.
2.65	23-25	Cure-in-Place Liner	—	—	—	Install cured-in-place liner within existing 36-inch-diameter by 349-foot-long culvert.
2.65	23-27	Cure-in-Place Liner	—	—	—	Install cured-in-place liner within existing 36-inch-diameter by 306-foot-long culvert.
2.65	21-27	Cure-in-Place Liner	—	—	—	Install cured-in-place liner within existing 36-inch-diameter by 107-foot-long culvert.
2.65	21-22	Cut and Cover	1	—	—	Replace 18-inch-diameter by 51-foot-long culvert with a culvert of the same dimensions.
2.65	13-14	Cut and Cover	—	—	—	Replace 24-inch-diameter by 37-foot-long concrete pipe with a pipe of the same dimensions.
2.65	2-4	Cut and Cover	—	—	—	Replace 24-inch-diameter by 188-foot-long culvert with a culvert of the same dimensions.
2.65	2-3	Cut and Cover	—	—	—	Replace 36-inch-diameter by 83-foot-long culvert with culvert of the same dimensions.

Post Mile	Segment Replacement Between Structures	Installation Method	Replace Drainage Inlet	Install Headwall at Inlet	Install Rock Slope Protection	Proposed Improvements
2.65	7-8	Cut and Cover	1	—	—	Replace 36-inch-diameter by 39-foot-long culvert with a culvert of the same dimensions.
2.65	3-6	Cut and Cover	1	—	—	Install new 24-inch-diameter by 105-foot-long culvert between structures 3 and 6.
2.65	2-6	Cut and Cover	—	—	—	Remove 18-inch-diameter by 59-foot-long downdrain system.
2.65	1-2	Abandon	—	—	—	Abandon existing 18-inch-diameter by 94-foot-long culvert and drainage inlet.



No-Build Alternative

This 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.

General Plan Description, Zoning, and Surrounding Land Uses

The project site primarily occurs within Caltrans right of way. Several temporary construction easements would be required on private lands. Permanent right of way take is required to accommodate the project. Land uses within the city of Dunsmuir are primarily commercial and residential. Surrounding lands uses along the remainder of I-5 consist primarily of public lands and undeveloped private lands. The Union Pacific Railroad tracks parallel the east side of I-5 along the entire project limits.

1.3 Permits and Approvals Needed

The following table indicates the permitting agency, permits/approvals and status of permits required for the project.

Table 3. Agency, Permit/Approval Status

Agency	Permit/Approval	Status
California Department of Fish and Wildlife (CDFW)	Lake and Streambed Alteration Agreement	Following Final Environmental Document (FED)
State Water Resources Control Board (SWRCB)	Construction General Permit	Following FED
Regional Water Quality Control Board (RWQCB)	Water Quality Certification	Following FED
U.S. Army Corps of Engineers (USACE)	Nationwide Permit	Following FED

1.4 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 to a project situation. They are measures that typically result from laws, permits, agreements, guidelines, resource management plans, and resource agency directives and policies. They predate the project’s proposal, and apply to all similar projects. For this reason, these measures and practices do not qualify as project mitigation under CEQA; rather, they are included as part of the project description in environmental document. and the effects of the project are analyzed with these measures in place.

The following section provides a list of project features, standard practices (measures), and Best Management Practices (BMPs) that 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 in relevant sections of Chapter 2.

Standard measures relevant to the protection of natural resources deemed applicable to the proposed project include:

Aesthetics Resources

- AR-1:** 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-2:** Where feasible, guardrail terminals would be buried; otherwise, an appropriate terminal system would be used, if appropriate.
- AR-3:** Where feasible, construction lighting would be temporary, and directed specifically on the portion of the work area actively under construction.
- AR-4:** Where feasible, the removal of established trees and vegetation would be minimized. Environmentally sensitive areas would have Temporary High Visibility Fencing (THVF) installed before start of construction to demarcate areas where vegetation would be preserved and root systems of trees protected.

Biological Resources

BR-1: General

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

BR-2: Animal Species

- A. To protect migratory and nongame birds (occupied nests and eggs), if possible, vegetation removal would be limited to the period outside of the bird breeding season (removal would occur between October 1 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 the California Department of Fish and Wildlife (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 and 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. 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. Surveys would be performed for foothill yellow-legged frog and nesting birds during the breeding season for each construction season (every year of construction). If species are discovered during construction, work would stop in the area of discovery and coordination with the appropriate resource agencies would occur.
- H. A Limited Operating Period would be observed, whereby all construction activities would occur during daytime hours and between January 31 and October 1, which is the time of year when nesting birds would not be expected to have dependent young.

- I. A Limited Operating Period would be observed, whereby all in-stream work below the ordinary high water mark (OHWM) would be restricted to the period between June 15 and October 15 to protect water quality.

BR-3: Invasive Species

- A. Invasive non-native species control would be implemented. Measures would include:
- B. Straw, straw bales, seed, mulch, or other material used for erosion control or landscaping would be free of noxious weed seed and propagules.
- C. 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 2016) for all field gear and equipment in contact with water.

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

- 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 2018).
- B. If applicable, a Revegetation Plan would be prepared which would include a plant palette, establishment period, watering regimen, monitoring requirements, and pest control measures. The Revegetation Plan would also address measures for riparian areas temporarily impacted by the project.
- C. Prior to the start of work, THVF and/or flagging would be installed around sensitive natural communities, environmentally sensitive habitat areas, rare plant occurrences, and intermittent streams, where appropriate. No work would occur within fenced/flagged areas.

- D. Where feasible, the structural root zone 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: Streams

- 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-2F). 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 (see also BR-2I). Construction activities restricted to this period include any work below the OHWM. Construction activities performed above the 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-4C for THVF information.

Cultural Resources

- CR-1:** Caltrans would coordinate with applicable Native American 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.
- 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.

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 United States Code [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 (CCR), which includes restricting idling of diesel-fueled commercial motor vehicles and equipment with gross weight ratings of greater than 10,000 pounds to no more than 5 minutes.
- GHG-3:** Caltrans Standard Specification "Emissions Reduction" ensures that construction activities adhere to the most recent emissions reduction regulations mandated by the California Air Resource Board (CARB) (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 CO₂. This replanting would help offset any potential CO₂ emissions increase.

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 Yellow Traffic Stripes and Pavement Markings with Hazardous Waste Residue” (SSP 14-11.12).
- 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.”

Noise

- N-1:** The contractor would be required to conform to the 2022 Caltrans Standard Specification, Section 14-8.02 “Noise Control” which states, “Control and monitor noise from work activities.” and, “Do not exceed 86 dBA LMax at 50 feet from the job site activities from 9 p.m. to 6 a.m.”

Transportation

- TT-1:** A Transportation Management Plan (TMP) would be applied to the project.

Utilities and Emergency Services

- UE-1:** All emergency response agencies in the project area would be notified of the project construction schedule and would have access to Interstate 5 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 a “*Very High*” CAL FIRE Fire Hazard Severity Zone (FHSZ). The contractor would be required to submit a jobsite Fire Prevention Plan as required by the California Division of Occupational Safety and Health 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 CGP), 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 CGP), 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 (State Water Resources Control Board [SWRCB] 2016). This Plan complies with the requirements of the Caltrans Statewide NPDES Permit (Order 2022-0033-DWQ).

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

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

1.5 Discussion of the NEPA Categorical Exclusion

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



CHAPTER 2. CEQA ENVIRONMENTAL CHECKLIST

Environmental Factors Potentially Affected

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

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

The CEQA Environmental Checklist identifies physical, biological, social, and economic factors that might be affected by the proposed project. In many cases, background studies performed in connection with the project will indicate there are no impacts to a particular resource. A “NO IMPACT” answer in the last column of the checklist reflects this determination.

The words “significant” and “significance” used throughout the CEQA Environmental Checklist are only related to potential impacts pursuant to CEQA. The questions in the CEQA Environmental Checklist are intended to encourage the thoughtful assessment of impacts and do not represent thresholds of significance.

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

Project Impact Analysis Under CEQA

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

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

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

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

If the action may have a potentially significant effect on any environmental resource (even with mitigation measures implemented), then an Environmental Impact Report (EIR) must be prepared. Under CEQA, the lead agency may adopt a negative declaration (ND) if there is no substantial evidence that the project may have a potentially significant effect on the environment (14 CCR § 15070(a)). A proposed negative declaration must be circulated for public review, along with a document known as an Initial Study. CEQA allows for a “Mitigated Negative Declaration” in which mitigation measures are proposed to reduce potentially significant effects to less than significant (14 CCR § 15369.5).

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

Compliance with a regulatory permit or other similar processes may be identified as mitigation if compliance would result in implementation of measures that would be reasonably expected, based on substantial evidence in the record, to reduce the significant impact to the specified performance standards (§ 15126.4(a)(1)(B)).

Per CEQA, measures may also be adopted, but are not required, for environmental impacts that are not found to be significant (14 CCR § 15126.4(a)(3)). Under CEQA, mitigation is defined as avoiding, minimizing, rectifying, reducing/eliminating, 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 Code § 21065.3). They are to focus on significant impacts (14 CCR § 15126.2(a)). Impacts that are less than significant need only be briefly described (14 CCR § 15128). All potentially significant effects must be addressed.

No-Build Alternative

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

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 of 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 needed for different biological resources.

Biological Study Area (BSA): The BSA encompasses the ESL plus a 200-foot buffer outside of the ESL for biological resources which could potentially be affected by the project (e.g., noise, visual, etc.).

2.1 Aesthetics

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

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]).

Affected Environment

The proposed project is located within the California's Northern Sacramento Valley. The Central Valley of California meets at the convergence of the Klamath and Coastal Mountain Ranges to the northwest and west, with the Cascade Mountain range to the northeast and east. Terrain of the area varies from low valleys to steep forested mountains. Interstate 5 (I-5) is bounded by the Cascade Mountain range to the east and north and the Coast Mountain range to the west. Mount Lassen, located in Lassen Volcanic National Park, is the county's highest peak at 10,457 feet above mean sea level, whereas the lower elevations of 400 to 700 feet above mean sea level occur on the valley floor around the city of Redding. Coniferous forest is the main vegetation in the mountain regions. Other areas are characterized by grassland, oak woodland, and cultivated/pastureland.

The Sacramento River and Union Pacific railroad tracks occur immediately east of the site.

Environmental Consequences

The *Visual Impact Assessment* (VIA) (Caltrans 2024a) prepared for the project concluded that project activities would result in negligible visual changes to the environment. As discussed further below, the project would not have a substantial adverse effect on a scenic vista; would not damage scenic resources; would not substantially degrade the existing visual character or quality of public views of the site and its surroundings; and would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area. As part of the proposed project, Standard Measures AR-1 through AR-4 (Section 1.4) would be implemented.

Avoidance, Minimization and 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

a) Would the project have a substantial adverse effect on a scenic vista?

NO IMPACT. Scenic vistas consist of expansive views of highly valued landscapes from publicly accessible viewpoints. Scenic vistas include views of natural features such as mountains, hills, valleys, watercourses, outcrops, and natural vegetation, as well as man-made scenic structures. Scenic resources in the project area include the Klamath, Coastal Mountain, and Cascade Mountain ranges. These scenic resources would remain intact. Visual impacts associated with the project are limited to minor tree removal at various culvert locations. Project implementation would not have an adverse effect on a scenic vista. Thus, there would be no impact.

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

NO IMPACT. No State Scenic Highways have been designated within the project limits. The nearest officially designated State Scenic Highway is State Route 151 (Shasta Dam Boulevard) in Shasta County. The nearest eligible highway is a segment of I-5 between the city of Redding and the Pit River Bridge, which is located approximately 30 highway miles south of the project site. Neither the designated nor eligible scenic route are visible from the project site. Therefore, the proposed project would have no impact to scenic resources within a designated State Scenic Highway.

c) Would the project, 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.)

NO IMPACT. Principal viewers in the project area include motorists on I-5 and people residing in the area. As described above, scenic resources in the project area include the Klamath, Coastal Mountain, and Cascade Mountain ranges. These resources would not be impacted. Given the nature of the proposed improvements, the project would not substantially degrade the existing character or quality of the public views of the site and its surroundings. Therefore, there would be no impact.

d) Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

LESS THAN SIGNIFICANT IMPACT. The proposed project includes additional highway on- and off-ramp lighting at select locations along I-5. The purpose of the lighting is to improve public safety. The proposed locations already support highway lighting. As such, the proposed lights would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area. Therefore, potential impacts associated with new lighting would be less than significant.

2.2 Agriculture and Forest Resources

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

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

Question	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project: 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, as well as data maintained by the California Department of Conservation. Given the absence of agricultural lands, and that tree removal would be limited (i.e., select culvert locations and portions of the wildlife fencing alignment), agricultural and forest lands would not be impacted.

Discussion of CEQA Environmental Checklist Question 2.2—Agriculture and Forest Resources

- a) Would the project 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?*

NO IMPACT. According to the California Department of Conservation (2024a), the project would not convert prime farmland, unique farmland, or farmland of statewide importance to non-agricultural use. Thus, there would be no impact.

- b) Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?*

NO IMPACT. The Williamson Act, also known as the California Land Conservation Act of 1965, enables local governments to enter into contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or related open space use. As proposed, the project would not convert prime farmland, unique farmland, or farmland of statewide importance, nor does it include any components that would have a direct or indirect effect on farmland. According to the California Department of Conservation (2024b), project implementation would not affect a Williamson Act contract. Thus, there would be no impact.

- c) Would the project conflict with existing zoning or cause rezoning of forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?*

NO IMPACT. Areas abutting the project site largely consist of forest land. Further, according to the County of Shasta and County of Siskiyou zoning maps (County of Shasta 2023 and County of Siskiyou 2023), a few areas are zoned timberland and timberland production. Project implementation may require minor tree removal; however, said activities would not conflict with or cause rezoning of timberland and/or timber production lands. Thus, there would be no impact.

- d) Would the project result in the loss of forest land or conversion of forest land to non-forest use?*

NO IMPACT. As described above in Question C, the project may result in minor tree removal. This activity would not result in the loss of forest land or conversion of forest land to non-forest use. Thus, there would be no impact.

- e) Would the project 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. As described above in Question A, the proposed project would not result in the conversion of farmland to non-agricultural use or conversion of forest land to non-forest use. Thus, there would be no impact.

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?			✓	

Regulatory Setting

The federal Clean Air Act (CAA), as amended, is the primary federal law that governs air quality, while the California Clean Air Act is its corresponding state law. These laws, and related regulations by the United States Environmental Protection Agency (U.S. EPA) and California Air Resources Board (CARB) set standards for the concentration of Criteria Area Pollutants (CAPs).

For the federal CAA, ambient concentrations are known as the National Ambient Air Quality Standards (NAAQSs). There are six federal CAPs: Ozone (O₃), carbon monoxide (CO), particulate matter (PM₁₀ and PM_{2.5}), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), and lead.

The California CAA establishes maximum concentrations for the six federal CAPs, as well as four additional air pollutants: sulfate (SO₄), hydrogen sulfide (H₂S), visibility reducing particles, and vinyl chloride. The four additional standards are intended to address regional air quality conditions, not project-specific emissions. These maximum concentrations are known as the California Ambient Air Quality Standards (CAAQSS). The CARB has jurisdiction over local air districts and has established its own standards for each CAP under the CAAQS. For areas within the State that have not attained air quality standards, the CARB works with local air districts to develop and implement attainment plans to obtain compliance with both federal and State air quality standards.

The NAAQS and state standards are set at levels that protect public health with a margin of safety, and are subject to periodic review and revision. Both state and federal regulatory schemes also cover toxic air contaminants (air toxics); some criteria pollutants are also air toxics or may include certain air toxics in their general definition.

Federal air quality standards and regulations provide the basic scheme for project-level air quality analysis under NEPA. In addition to this analysis, a parallel “Conformity” requirement under the federal CAA also applies. U.S. EPA regulations at 40 Code of Federal Regulations (CFR) 93 govern the conformity process. Conformity requirements do not apply in unclassifiable/attainment areas for NAAQS and do not apply at all for state standards regardless of the status of the area.

Affected Environment

The project site occurs in the northern end of the Sacramento Valley surrounded by the Cascade Mountains to the northeast and east and the Klamath and Coastal Mountains to the northwest and west. Sea breezes flow over the San Francisco Bay Area and into the Sacramento Valley, transporting pollutants from the large urban areas. Pollutant concentrations may intensify when a temperature inversion layer traps air at lower levels below an overlying layer of warmer air. Due to relatively stable atmospheric conditions, pollutants will not disperse until atmospheric conditions become unstable. Shasta County is located in the Sacramento Valley Air Basin and Siskiyou County is located in the Northeast Plateau Air Basin.

The project site is located in Shasta County (PMs 58.0 to 67.019) and Siskiyou County (PMs 0.0 to 2.7). The segment occurring in Shasta County is under the jurisdiction of the Shasta County Air Quality Management District (SCAQMD); the Siskiyou County segment is under the jurisdiction of the Siskiyou County Air Pollution Control District (Siskiyou County

AQMD). Both segments are also under the jurisdiction of the CARB. The project site is located in an attainment/unclassified area for all current NAAQS. Therefore, conformity requirements do not apply. Regarding state air quality standards, the project site is located in an attainment or unclassified area for carbon monoxide (CO), nitrogen dioxide (NO₂), particulate matter (PM_{2.5}), particulate matter (PM₁₀), lead, and sulfur dioxide (SO₂), while ozone (O₃) is considered non-attainment (Shasta County only) (CARB 2022a).

Environmental Consequences

The *Air Quality Analysis* prepared for the project (Caltrans 2024b) concluded that because the project is not a capacity-increasing project, no long-term air quality impacts resulting from highway operation would occur. However, during construction, short-term degradation of air quality may occur due to the release of particulate emissions (airborne dust) generated by excavation, grading, hauling, and other construction-related activities. Emissions from construction equipment also are expected and would include CO, nitrogen oxides (NO_x), volatile organic compounds (VOCs), directly emitted PM₁₀ and PM_{2.5}, and toxic air contaminants such as diesel exhaust particulate matter. Ozone is a regional pollutant that is derived from NO_x and VOCs in the presence of sunlight and heat.

Site preparation and roadway construction typically involves clearing, cut and fill activities, grading, removing or improving existing roadways, and paving roadway surfaces. Construction-related effects on air quality from most highway projects would be greatest during the site preparation phase because most engine emissions are associated with the excavation, handling, and transport of soils to and from the site. These activities could temporarily generate enough PM₁₀, PM_{2.5}, and small amounts of CO, SO₂, NO_x, and VOCs to be of concern. Sources of fugitive dust would include disturbed soils at the construction site, and trucks carrying uncovered loads of soils. Unless properly controlled, vehicles leaving the site could deposit mud on local streets, which could be an added source of airborne dust after it dries. PM₁₀ emissions would vary from day to day, depending on the nature and magnitude of construction activity and local weather conditions. PM₁₀ emissions would depend on soil moisture, silt content of soil, wind speed, and the amount of equipment operating. Larger dust particles would settle near the source, while fine particles would be dispersed over greater distances from the construction site.

Construction activities for large development projects are estimated by the United States Environmental Protection Agency (U.S. EPA) to add 1.2 tons of fugitive dust per acre of soil disturbed per month of activity. If water or other soil stabilizers are used to control dust, the emissions can be reduced by up to 50 percent. Caltrans' standard specifications on dust

minimization require use of water or dust palliative compounds which would reduce potential fugitive dust emissions during construction.

In addition to dust-related PM₁₀ emissions, heavy-duty trucks and construction equipment powered by gasoline and diesel engines would generate CO, SO₂, NO_x, VOCs and some soot particulate (PM₁₀ and PM_{2.5}) in exhaust emissions. If construction activities were to increase traffic congestion in the area, CO and other emissions from traffic would increase slightly while those vehicles are delayed. However, these emissions would be temporary and limited to the immediate area surrounding the construction site.

Sulfur dioxide is generated by oxidation during combustion of organic sulfur compounds contained in diesel fuel. Under California law and CARB regulations, off-road diesel fuel used in California must meet the same sulfur and other standards as on-road diesel fuel (not more than 15 ppm sulfur); therefore, SO₂-related issues due to diesel exhaust would be minimal.

Some phases of construction, particularly asphalt paving, may result in short-term odors in the immediate area of each paving site(s). Such odors would quickly disperse to below detectable levels as distance from the site increases.

Avoidance, Minimization and 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 2.3—Air Quality

a) Would the project conflict with or obstruct implementation of the applicable air quality plan?

NO IMPACT. As previously described, the project site is located in an attainment/unclassified area for all current NAAQS. Regarding state air quality standards, with the exception of ozone (Shasta County only), the project is located in an attainment or unclassified area for all criteria pollutants. As described under the Regulatory Setting section, for areas within the State that have not attained air quality standards, the CARB works with local air districts to develop and implement attainment plans to obtain compliance with both federal and state air quality standards.

The SCAQMD, along with other air districts in the Northern Sacramento Valley Air Basin, jointly prepared an Air Quality Attainment Plan (AQAP) for the purpose of achieving and maintaining healthful air quality throughout the air basin. The Northern Sacramento Valley Planning Area (NSVPA) 2021 Triennial AQAP constitutes the region's State Implementation Plan (SIP). The NSVPA 2021 AQAP includes updated strategies and regulations for the three-year period of 2021 through 2024. Shasta County has determined that their primary emphasis in implementing the 2021 Attainment Plan is to attempt to reduce emissions from mobile sources through public education and grant programs. With AQAP compliance, the project would not conflict with or obstruct implementation of the area's air quality plan; thus, there would be no impact.

b) Would the project 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?

LESS THAN SIGNIFICANT IMPACT. The proposed project would not increase operational emissions; however, there would be a temporary increase in criteria pollutants during project construction. As construction emissions are temporary in nature, the project would not result in a cumulatively considerable net increase of any criteria pollutant. Thus, impacts would be considered less than significant.

c) Would the project expose sensitive receptors to substantial pollutant concentrations?

LESS THAN SIGNIFICANT IMPACT. Sensitive receptors are individuals or groups of people that are more affected by air pollution than others, including young children, the elderly, and people weakened by disease or illness. Locations that may contain high concentrations of sensitive receptors include residential areas, schools, playgrounds, childcare centers, hospitals, convalescent homes, and retirement homes. For the purposes of this project, pollutants consist of construction emissions and fugitive dust associated with earthwork. With the exception of the city of Dunsmuir (I-5 in Siskiyou County PMs 1.3 to 2.7), the project corridor primarily comprises forested lands, with sparse pockets of residential properties. Two sensitive receptors, Castle Rock Elementary School (I-5 Shasta County PM 63.1) and Dunsmuir High School (I-5 Siskiyou County PM 2.0), are located within a 0.25-mile of the project corridor. Given the linear nature of the project, work occurring adjacent to the schools would be of relatively short duration; thus, potential impacts to sensitive receptors would be less than significant.

d) Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

LESS THAN SIGNIFICANT IMPACT. Construction activities have the potential to emit odors from diesel equipment, fugitive dust, and paving (asphalt). Odors from construction are intermittent and temporary, and generally would not extend beyond the construction area. Due to the temporary and intermittent nature of construction odors, impacts would be less than significant.

2.4 Biological Resources

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

Question	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project: e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				✓
Would the project: f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				✓

Affected Environment

The proposed project is located within California's Northern Sacramento Valley. The Central Valley of California meets at the convergence of the Klamath and Coastal Mountain Ranges to the northwest and west, with the Cascade Mountain range to the northeast and east. The areas' terrain varies from low valleys to steep forested mountains. I-5 is bounded by the Cascade Mountain range to the east and north and the Coast Mountain range to the west. The site is bisected by several major streams, including Root, Flume, Little Castle, and Castle Creeks. Bisecting streams discharge to the Sacramento River. Coniferous forest is the main vegetation in the mountain regions. Other areas are characterized by grassland and oak woodland.

The climate of the project vicinity consists of hot summers and cool winters. The average annual temperature is approximately 54.1 degrees Fahrenheit (°F). Monthly mean maximum temperatures range from a high of 103°F in July to a low of 21°F in December and January. Daily high temperatures commonly exceed 95°F during the summer. The average precipitation is 58.12 inches per year.

A *Natural Environment Study* (NES) (Caltrans 2024c) was prepared for the project. Caltrans coordinated with fisheries biologists and water quality specialists, as well as agency personnel from CDFW. See Chapter 3 for a summary of these coordination efforts and professional contacts.

Sensitive Natural Communities

During the field review, Caltrans identified riparian habitat (i.e., sensitive natural communities) along select streams within the project limits.

Wetlands and Other Waters

During the field review, Caltrans identified multiple streams (i.e., other waters) that bisect the site via bridges and culverts. On-site streams flow east across the site and ultimately discharge to the Sacramento River. No wetlands were observed during the field review.

Plant Species

This section addresses special-status plant species, including USFWS Candidate and sensitive species, CDFW Species of Special Concern, and CNPS rare and endangered plants.

As documented in Appendix C—USFWS, CDFW-CNDDDB, and CNPS species lists with Potential to Occur Table, 69 special-status plant could potentially occur in the region. Based on habitat requirements, the following 16 species could potentially occur within the Environmental Study Limits (ESL):

- Butte County fritillary (CNPS 3.2)
- California globe mallow (CNPS 1B.2)
- Cantelow's lewisia (CNPS 1B.2)
- Clustered lady's-slipper (CNPS 4.2)
- Mountain lady's-slipper (CNPS 4.2)
- Niles' harmonia (CNPS 1B.1)
- Northern clarkia (CNPS 4.3)
- Oregon fireweed (CNPS 1B.2)
- Redwood lily (CNPS 4.2)
- Shasta County arnica (CNPS 4.2)
- Shasta maidenhair fern (CNPS 4.3)
- Shasta snow-wreath (CNPS 1B.2)
- Stebbins' harmonia (CNPS 1B.2)

- Thread-leaved beardtongue (CNPS 4.2)
- Tracy's eriastrum (CNPS 3.2)
- Waldo daisy (CNPS 2B.3)

As documented in the Potential to Occur Table (Appendix C), given the lack of suitable habitat, the ESL is outside the geographical/elevational range of the species, and/or the species were not observed during botanical surveys, the species would not be present. See Appendix C for an evaluation of the potential for each listed species to occur within the ESL.

Animal Species

This section addresses special-status animal species, including USFWS and NMFS Federal candidate (FC) species, and CDFW State candidate (SC) species and Species of Special Concern (SSC).

As documented in Appendix C, 12 special-status animal species could potentially occur in the region. However, based on habitat requirements, six species could potentially occur within the ESL.

- Fisher (SSC)
- Foothill yellow-legged frog–North Coast DPS (Pop. 1) (SSC)
- Monarch butterfly (FC)
- Spotted bat (SSC)
- Townsend's big-eared bat (SSC)
- Western mastiff bat (SSC)

As documented in the Potential to Occur Table (Appendix C), given the lack of suitable habitat and the species were not observed during field surveys, the species would not be present. See Appendix C for an evaluation of the potential for each listed species to occur within the ESL.

Threatened and Endangered Species

This section addresses plant and animal species that are specifically listed as “threatened” or “endangered” under the Federal or State Endangered Species Acts, including Federally threatened (FT), Federally endangered (FE), and State endangered (SE).

As documented in Appendix C, two threatened or endangered plant species, Lassics lupine and whitebark pine, could potentially occur within the region. However, because the site is outside the elevation range of these species, neither Lassics lupine or whitebark pine have the potential to occur within the ESL.

As documented in Appendix C, 12 threatened and/or endangered animal species could potentially occur in the region. However, based on habitat requirements, Caltrans has determined only one species, bald eagle—State Endangered and State Fully Protected—could potentially occur within the ESL.

As documented in the Potential to Occur Table (Appendix C), no stick nests were observed during the field survey; thus, the species would not be present. See Appendix C for an evaluation of the potential for each threatened and/or endangered species to occur within the ESL.

Invasive Species

The following invasive species were observed with the project footprint: scotch broom, bullthistle, tree of heaven, and fig.

Environmental Consequences

The proposed culvert improvements would result in temporary and permanent impacts to riparian habitat and streams (i.e., other waters). Temporary and permanent impacts to riparian habitat are estimated at ± 0.02 and ± 0.005 acres, respectively. Temporarily disturbed riparian areas would be restored to preconstruction contours and replanted with a regionally appropriate seed mix.

With respect to streams, culvert replacement activities would be performed in-kind (i.e., no change in length) along the entire project corridor via cut and cover or liner installation. Depending on the maintenance needs of the applicable culvert system, improvements may also include installation of the following features: flared end sections, inlet headwalls, drainage inlets, subsurface junction boxes, and/or rock slope protection. Temporary and permanent impacts to streams are estimated at ± 265 linear feet (± 0.01 acres) and ± 11 linear

feet (± 0.002 acres), respectively. Temporarily disturbed stream areas would be restored to preconstruction contours. Permanent impacts to riparian habitat and streams would be mitigated through the purchase of in-lieu fee credits.

With respect to special-status species and threatened and/or endangered species, given the lack of suitable habitat, the ESL is outside the geographical/elevational range of the species, and/or the species were not observed during surveys, none of these species would be impacted by the proposed project.

To improve wildlife connectivity across I-5, a 12-foot-wide by 12-foot-tall reinforced concrete box culvert and associated fencing would be installed near PM 65.88.

Standard Measures BR-1 through BR-5 (Section 1.4) would be implemented.

Avoidance, Minimization and Mitigation Measures

To offset potential impacts to wildlife connectivity resulting from the raising of the median barrier, the project would include the following wildlife connectivity improvements:

- Construct a 12-foot-wide by 12-foot-tall reinforced concrete box culvert at PM 65.88.
- To help direct wildlife to the proposed crossing, install an eight-foot-tall chain-link fence or other applicable fence type along both sides of the highway. The estimated fence limits include:
 - Western fence - PMs 65.45 to 66.17
 - Eastern fence – PMs 65.45 to 66.10
- To reduce the potential for wildlife to become trapped on the highway:
 - Install jump outs and/or deer gates along the proposed fence
 - Include intermittent gaps along the length of the median barrier to allow wildlife to exit the roadway

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

NO IMPACT. As previously discussed under the Affected Environment section, as documented in the Potential to Occur Table (Appendix C), 16 special-status species could potentially occur within the ESL. However, given the lack of suitable habitat, the ESL is outside the geographical/elevational range of the species, and the species were not observed during botanical surveys, the species would not be present. Thus, there would be no impact.

Animal Species

NO IMPACT. As previously discussed under the Affected Environment section, as documented in the Potential to Occur Table (Appendix C), five special-status animal species could potentially occur within the ESL. However, as documented in the Potential to Occur Table (Appendix C), given the lack of suitable habitat and the species were not observed during field surveys, the species would not be present. Thus, there would be no impact.

Threatened and Endangered Species

As discussed earlier under the Affected Environment section, two threatened and endangered plant species and two threatened, endangered, or candidate animal species could potentially occur within the ESL. However, given the lack of suitable habitat, the ESL is outside the geographical/elevational range of the species, and/or the species were not observed during the field surveys, the species would not be present.

Under FESA, Caltrans has determined there would be *no effect* to the following federally listed and federal candidate species :

- Lassics lupine—federal and state endangered
- Monarch butterfly—federal candidate

Under CESA, Caltrans has determined there would be *no effect* to the following state listed, state candidate, and state fully protected species:

- Lassics lupine—state endangered
- Bald eagle—state endangered and state fully protected

Invasive Species

As previously discussed, several invasive species were observed with the project footprint. Implementation of Standard Measure BR-3 (Section 1.4) would serve to minimize the introduction and/or spread of invasive species.

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

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

LESS THAN SIGNIFICANT IMPACT. The proposed culvert improvements would result in temporary and permanent impacts to riparian habitat and streams (i.e., other waters), both of which are considered sensitive natural communities. Temporary and permanent impacts to riparian habitat are estimated at ± 0.02 and ± 0.005 acres, respectively. Temporarily disturbed riparian areas would be restored to preconstruction contours and replanted with a regionally appropriate seed mix.

Temporary and permanent impacts to streams are estimated at ± 265 linear feet (± 0.01 acres) and ± 11 linear feet (± 0.002 acres), respectively. Temporarily disturbed stream areas would be restored to preconstruction contours. Permanent impacts would be mitigated through the purchase of in-lieu fee credits. Based on the proposed scope of work, impacts to sensitive natural communities would be less than significant.

***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?*

NO IMPACT. As discussed earlier under the Affected Environment section, no wetlands were observed during the field review. Thus, there would be no impact.

***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?*

LESS THAN SIGNIFICANT IMPACT WITH MITIGATION INCORPORATED. The project area is located within the Pacific Flyway, and it is possible that birds could nest in or adjacent to the study area. Nesting birds, if present, could be directly or indirectly affected by construction activities. Direct effects could include mortality resulting from tree removal and/or construction equipment operating in an area with an active nest with eggs or chicks. Indirect effects could include nest abandonment by adults in response to loud noise levels or human encroachment, or a reduction in the amount of food available to young birds due to changes in feeding behavior by adults.

Construction activities, particularly those involving vegetation removal, have the potential to directly impact nesting birds, if present. In the local area, most birds nest between February 1 and September 30. In accordance with Standard Measure BR-2, the potential for adversely affecting nesting birds would be greatly minimized by removing vegetation and conducting construction activities either before February 1 or after September 30. If this is not possible, a nesting survey would be conducted within one week prior to removal of vegetation and/or the start of construction.

If active nests are found in the project site, Caltrans would implement measures to comply with the Migratory Bird Treaty Act and California Fish and Game Code. Compliance measures may include, but are not limited to, exclusion buffers, sound-attenuation measures,

seasonal work closures based on the known biology and life history of the species identified in the survey, as well as ongoing monitoring by biologists.

According to the California Essential Habitat Connectivity Project (Spencer et. al. 2010), the project corridor occurs within an essential connectivity area (i.e., a wildlife migratory corridor) (Figure 3). As part of the Project, the limits of I-5 between the cities of Redding and Mt. Shasta were identified as a barrier to wildlife.

Deer, bear, and other animals known to the region are commonly observed traveling within the project limits. The project corridor includes a limited number of undercrossings (e.g., highway overpasses), which are utilized by wildlife to cross the highway. Further, small to medium diameter (e.g., 18 to 36 inch) culverts are available to smaller animals. The project corridor includes barbed-wire fencing along portions of the right-of-way; however, it does not serve as a wildlife barrier. Given on-site conditions, animals are able to access the highway, creating a safety issue for animals and the traveling public.

Traffic volumes along I-5, in combination with high vehicle speeds, result in periodic animal strikes within the project limits. Further, the existing median barrier (26 to 35 inches tall) serves as a potential impediment to animals crossing the highway. As proposed, the median barrier height would be increased to 42 inches tall to meet current safety standards. The raising of the median barrier could potentially make it more difficult for animals to cross the highway.

To improve wildlife connectivity across I-5, project implementation includes construction of a 12-foot-wide by 12-foot-tall reinforced concrete box culvert at PM 65.88 (Figure 3). The crossing site is centrally located within the essential connectivity area. To help direct wildlife to the proposed crossing, an eight-foot-tall chain-link fence or other applicable fence type would be installed along both sides of the highway. The western fence would be installed between approximately PM 65.45 and 66.17, while the eastern fence would be installed between approximately PM 65.45 and 66.10.

To improve safety for animals and the traveling public, fence installation would include jump outs and/or deer gates, while the median barrier would include intermittent gaps to allow wildlife to exit the roadway. Both elements would reduce the potential for wildlife to become trapped on the highway. Additionally, the fence design includes vehicle and/or pedestrian gates to accommodate maintenance activities. During final design, the Caltrans Project Development Team would determine the appropriate median barrier gap width and interval.

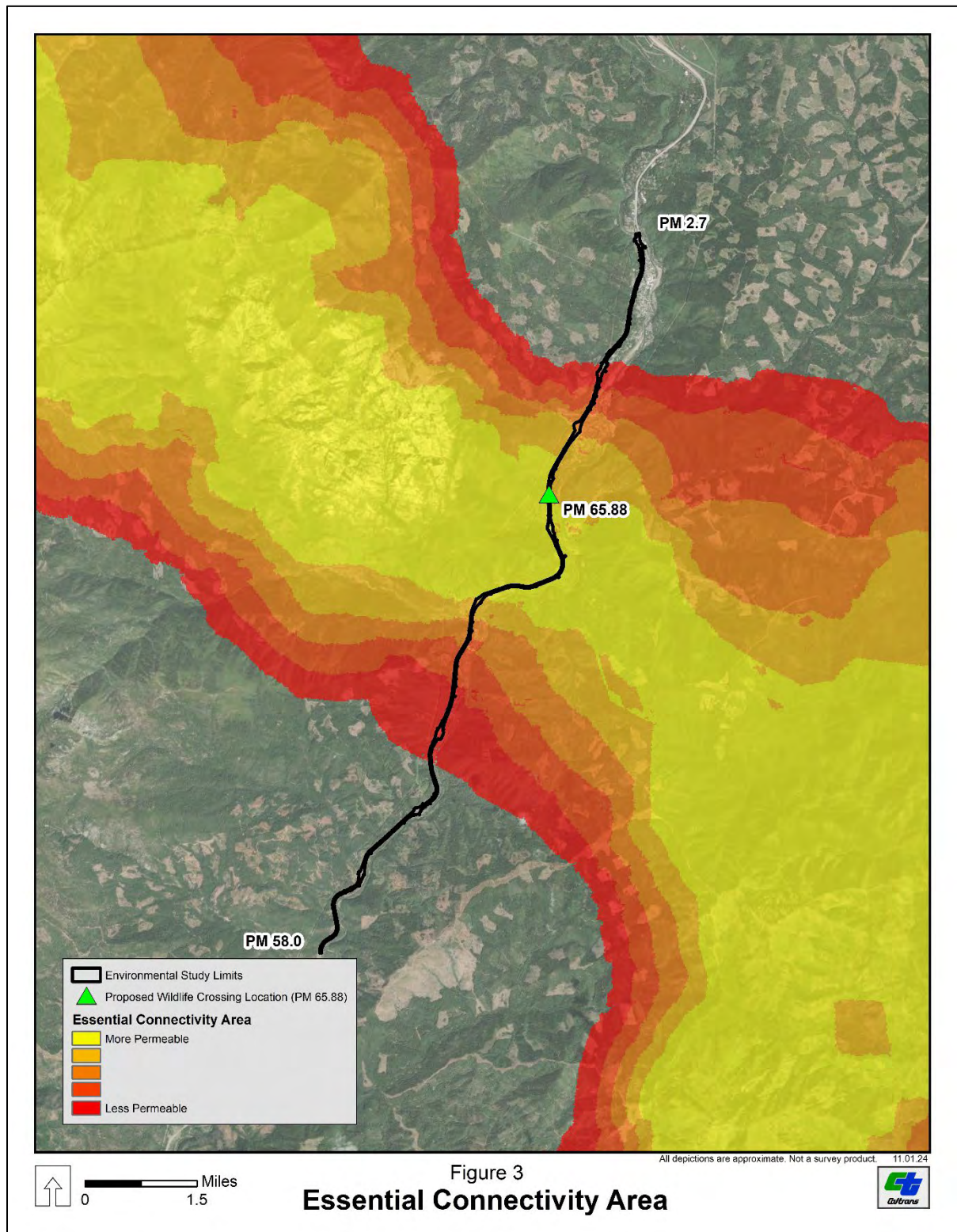


Figure 3. Essential Connectivity Area

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

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

NO IMPACT. The project site occurs on lands managed by the State of California (i.e., Caltrans), which is not subject to local policies or ordinances. Therefore, there would be no conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. Thus, there would be no impact.

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

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

NO IMPACT. A Habitat Conservation Plan (HCP) is a federal planning document that is prepared pursuant to Section 10 of the FESA. A Natural Community Conservation Plan (NCCP) is a State planning document administered by CDFW. No HCPs, NCCPs, or other habitat conservation plans occur on the project site or in the surrounding area. As such, there would be no conflict with an HCP, NCCP, or other approved local, regional, or State habitat conservation plan. Thus, there would be no impact.

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 *Historic Properties Survey Report* dated July 9, 2024 (Caltrans 2024d). Caltrans consulted with applicable California Native American tribes; none of the tribes consulted provided notification of the presence or potential presence of tribal cultural resources, defined in Public Resources Code Section 2107, within the project area. Further, no cultural resources were observed within the project area during the field surveys.

It is Caltrans’ policy to avoid cultural resources whenever possible. Compliance with Caltrans Standard Specifications to protect buried cultural materials, including human remains, that may be encountered during construction would ensure that the project would have no adverse effect on historic/archaeological resources pursuant to § 15064.5 or on buried human remains.

Given the determinations above, the project would have no impact on cultural resources.

Discussion of CEQA Environmental Checklist Question 2.5—Cultural Resources

a) Would the project cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?

NO IMPACT. The cultural resources study included literature and records review of the project area, Native American outreach, and an archaeological field survey of the project area. The purpose of these efforts was to identify and evaluate any cultural resources that may exist within the project area and to assess any effects that the project might have related to the cultural resources.

Based on the results of the records search and field review, the site does not support historical resources. Because the project Area of Potential Effects (APE) does not contain historic resources listed or eligible for listing on the California Register of Historical Resources, the project would have no impact to historical resources pursuant to § 15064.5. Thus, there would be no impact.

b) Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?

NO IMPACT. Based on the results of the records search and field review, the site does not support archaeological resources. It is Caltrans' policy to avoid cultural resources whenever possible. To ensure the project would have no adverse effects on archaeological resources, as discussed in Section 1.4, Caltrans would implement Standard Measures CR-1 through CR-3 to ensure no adverse effects to unknown archaeological resources. With implementation of these standard measures, the project would not cause a substantial adverse change to an archaeological resource. Thus, there would be no impact.

c) Would the project disturb any human remains, including those interred outside of dedicated cemeteries?

NO IMPACT. The project area does not include any known cemeteries, burial sites, or human remains. Caltrans would implement Standard Measure CR-3 in the unlikely event human remains are encountered. The project is not expected to disturb any human remains, including those interred outside of dedicated cemeteries. Thus, there would be no impact.

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?				✓

Regulatory Setting

The National Environmental Policy Act (NEPA) (42 United States Code [USC] Part 4332) requires the identification of all potentially significant impacts to the environment, including energy impacts.

CEQA Guidelines Section 15126.2(b) and CEQA Guidelines Appendix F—Energy Conservation require an analysis of a project’s energy use to determine if the project may result in significant environmental effects due to wasteful, inefficient, or unnecessary use of energy, or wasteful use of energy resources.

Affected Environment

The project area supports existing infrastructure within Caltrans’ right-of-way that requires the input of electricity to operate. This includes closed-circuit television systems, changeable message signs, roadside weather information systems, and luminaires.

Energy use in the project area is also affected by the amount of traffic that passes through the project area, the rate of travel, and patterns of travel. Depending on the location, this section of highway currently supports an annual average daily traffic volume between 19,100 and 21,300 vehicles.

Environmental Consequences

An *Energy Analysis Report* was prepared for the project (Caltrans 2024e). Project implementation includes the construction of new and replacement luminaires at select locations along I-5 (Section 1.2, Table 1). Luminaire installation would result in construction and operational energy usage. During construction, there would be a minor short-term increase in energy use due to the operation of construction vehicles/equipment, as well as traffic control operations. Additionally, the as-built project would result in a minor increase in energy consumption resulting from luminaire usage.

Avoidance, Minimization and 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 2.6—Energy

- a) Would the project result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation?*

LESS THAN SIGNIFICANT IMPACT. Project implementation would result in construction and operational energy usage. During construction, there would be a minor short-term increase in energy use due to the operation of construction vehicles/equipment, and traffic control (e.g., lane closures would increase vehicle idling - an inefficient energy use). Additionally, the as-built project would result in a minor increase in energy consumption resulting from streetlight installation/usage. The proposed lighting would not be wasteful or inefficient. The purpose of the lighting is to improve vehicle safety. The minor temporary increase in energy usage associated with construction activities, including the operation of streetlighting would result in a less-than-significant impact.

- b) Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?*

NO IMPACT. As proposed, new energy usage associated with the project is limited to a minor amount of street lighting. The proposed street lighting would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency. Thus, there would be no impact.

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?				✓

Regulatory Setting—Geology and Soils

The primary laws governing geology and soils include:

- Historic Sites Act of 1935–16 USC 461 et seq.
- CEQA–California Public Resources Code (PRC) 21000

Affected Environment—Geology and Soils

The project site occurs in the northern Sacramento Valley, which is surrounded by the Cascade Mountains to the northeast and east and the Klamath and Coastal Mountains to the northwest and west. According to the *Paleontological Resources Assessment* (Caltrans 2024f), the underlying geology in the project area consists of ultramafic rocks, volcanic (igneous) rocks, or nonmarine (continental) sedimentary rocks of sandstone, shale, and conglomerate that are moderately to well consolidated. The volcanic rocks date to the Mesozoic and Tertiary periods, while the sedimentary rocks likely date to the Eocene.

The project site is not located in an area that has a known active earthquake fault, as delineated on the most recent Alquist-Priolo earthquake fault zoning map (California Department of Conservation 2024c). The project location occurs in an area with a low potential for seismic ground shaking from earthquakes (California Department of Conservation 2024d). The project location is not characterized by seismic-related ground failure and/or liquefaction (California Department of Conservation 2024). Based on data maintained by the Department of Conservation (2024f), the project site does not occur within a mapped slide area.

Expansive soils are those that contain clays that expand when moisture is absorbed into the crystal structure. When these soils swell, the change in volume can exert significant pressure on loads that are upon them. A soil's shrink-swell potential is determined through linear extensibility. Linear extensibility refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. The amount and type of clay minerals in the soil influence the change in volume. According to data maintained by the Natural Resources Conservation Service (NRCS 2024), the linear extensibility of on-site soils is considered low to moderate. Road rehabilitation would primarily occur within the existing road prism, which is constructed on fill and overtopped with pavement (i.e., impervious surface). As such, the presence of expansive soils would not impact the proposed project.

Environmental Consequences

The project would include grading and excavation, which would disturb approximately seven acres of topsoil. These activities have the potential to cause soil erosion and may result in the minimal loss of soil. To minimize the potential for soil erosion, the contractor will prepare a Storm Water Pollution Prevention Plan (SWPPP). All construction site Best Management Practices will follow the most current edition of the Construction Site Best Management Practices (BMPs) Manual.

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 Questions 2.7a-e)— Geology and Soils

- a) Would the project 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.*

NO IMPACT. According to the Alquist-Priolo Earthquake Fault Zoning Maps, the closest known fault is the Stephens Pass Fault Zone, located approximately 25 miles northeast of the project area. Given the absence of known earthquake faults in the area, the project would not result in a rupture. Thus, there would be no impact.

- ii) Strong seismic ground shaking?*

NO IMPACT. According to seismic ground shaking data maintained by the California Department of Conservation, the potential for strong seismic ground shaking is low. Based on the project location and work scope, the project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking. Thus, there would be no impact.

- iii) Seismic-related ground failure, including liquefaction?*

NO IMPACT. Liquefaction results from an applied stress on the soil, such as earthquake shaking or other sudden change in stress condition, and is primarily associated with saturated, cohesionless soil layers located close to the ground surface. During liquefaction, soils lose strength and ground failure may occur. This is most likely to occur in alluvial (geologically recent, unconsolidated sediments) and stream channel deposits, especially when the groundwater table is high. According to data maintained by the California Department of Conservation, California regions susceptible to liquefaction are limited to the San Francisco Bay Area and the Los Angeles Basin. Thus, there is no potential for impacts resulting from seismic-related ground failure, including liquefaction.

- iv) Landslides?*

NO IMPACT. The project site occurs in the northern end of the Sacramento Valley surrounded by the Cascade Mountains to the northeast and east and the Klamath and Coastal Mountains to the northwest and west. Based on data maintained by the Department of Conservation, the project site does not occur within a mapped slide area. Further, the nearest mapped slide area is located approximately 90 miles to the west. Thus, the project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides.

b) Would the project result in substantial soil erosion or the loss of topsoil?

LESS THAN SIGNIFICANT IMPACT. Project activities would primarily be performed within the existing road prism, minimizing the potential for substantial soil erosion or the loss of topsoil. Additionally, BMPs for erosion and sediment control would be implemented in accordance with standard practices. Further, Caltrans would obtain coverage under the State's Construction General Permit, which requires development of a SWPPP that includes BMPs to control erosion and sedimentation and prevent damage to streams and aquatic habitat. With implementation of Caltrans standard erosion and sediment control practices, coverage under the State's Construction General Permit, and implementation of Standard Measure GS-1 (Section 1.4), the potential for soil erosion and loss of topsoil would be less than significant.

c) Would the project 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?

NO IMPACT. On-site slope stability is addressed in Question a(iv) above. Considering site topography, the absence of slides in the surrounding area, and implementation of Standard Measure GS-1 (Section 1.4), the project would not result in on- or off-site landslides, lateral spreading, subsidence, liquefaction, or collapse. Thus, there would be no impact.

d) Would the project 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?

NO IMPACT. Some soils have a potential to swell when they absorb water and shrink when they dry out. These expansive soils generally contain clays that expand when moisture is absorbed into the crystal structure. When these soils swell, the change in volume can exert significant pressure on loads that are upon them. A soil's shrink-swell potential is determined through linear extensibility. Linear extensibility refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. The amount and type of clay minerals in the soil influence the change in volume. According to data maintained by the Natural Resources Conservation Service, the linear extensibility of on-site soils is considered low to moderate. Road rehabilitation would primarily occur within the existing road prism, which is constructed on fill and overtopped with pavement (i.e., impervious surface). Based on the above information, the proposed project would not create substantial risks to life or property. Therefore, there would be no impact.

- e) *Would the project 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?*

NO IMPACT. The proposed project does not include the installation or use of alternative wastewater disposal systems. Therefore, there would be no impact.

Regulatory Setting—Paleontological Resources

Several sections of the California Public Resources Code protect paleontological resources, including Sections 5097.5 and 30244.

Affected Environment

Paleontological resources and fossils are found primarily in sedimentary rock deposits. According to the *Paleontological Resources Assessment* (Caltrans 2024f) prepared for the project, rock formations on the project site consist of tertiary volcanic (igneous) rocks or nonmarine (continental) sedimentary rocks of sandstone, shale, and conglomerate that are moderately to well consolidated.

Environmental Consequences

On-site rock formations are unlikely to support paleontological resources. No impacts are anticipated.

Avoidance, Minimization and 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 2.9f)—Paleontological Resources

- f) *Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?*

NO IMPACT. The *Paleontological Resources Assessment* concluded that on-site volcanic and sedimentary rocks are unlikely to contain scientifically significant fossils. Based on the results of the Paleontological Resources Assessment, as well as implementation of Standard Measure GS-2 (Section 1.4), there would be no impact to paleontological resources.

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 (CO₂), methane (CH₄), nitrous oxide (N₂O), tetrafluoromethane, hexafluoroethane, sulfur hexafluoride (SF₆), and various hydrofluorocarbons (HFCs). CO₂ is the most abundant GHG; while it is a naturally occurring and necessary component of Earth's atmosphere, fossil-fuel combustion is the main source of additional, human-generated CO₂ that is the main driver of climate change. In the U.S. and in California, transportation is the largest source of GHG emissions, mostly CO₂.

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

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 National Environmental Policy Act (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 Federal Regulation 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 Environmental Protection Agency (U.S. EPA) calculates average fuel economy levels for manufacturers, and also sets related GHG emissions standards for vehicles under the Clean Air Act (U.S. EPA 2021). Raising CAFE standards leads automakers to create a more fuel-efficient fleet, which improves our nation’s energy security, saves consumers money at the pump, and reduces GHG emissions (U.S. DOT 2014). These standards are periodically updated and published through the federal rulemaking process.

STATE

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

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

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

Environmental Setting

The proposed project site occurs in a rural area, with an economy based on natural resources and agriculture. I-5 is the main transportation route to and through the area for both passenger and commercial vehicles. The nearest alternate route is SR 3, which is located approximately 25 miles to the west. Traffic counts are moderate. Generally speaking, the Union Pacific Railroad tracks parallel the east side of I-5 along the entire project limits. The Shasta Regional Transportation Agency and Siskiyou County Transportation Commission facilitate transportation development in the project area. The Shasta County General Plan Air Quality, Circulation, and Energy elements address GHGs in the project area. The Siskiyou County General Plan does not reference GHGs.

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 CO₂, 11% were CH₄, and 6% were N₂O; the balance consisted of fluorinated gases. From 1990 to 2022, CO₂ emissions decreased by only 2% (U.S. EPA 2024a).

The transportation sector's share of total GHG emissions remained at 28% in 2022 and continues to be the largest contributing sector (Figure 3). Transportation activities accounted for 37% of U.S. CO₂ emissions from fossil fuel combustion in 2022. This is a decrease of 0.5% from 2021 (U.S. EPA 2024a, 2024b)).

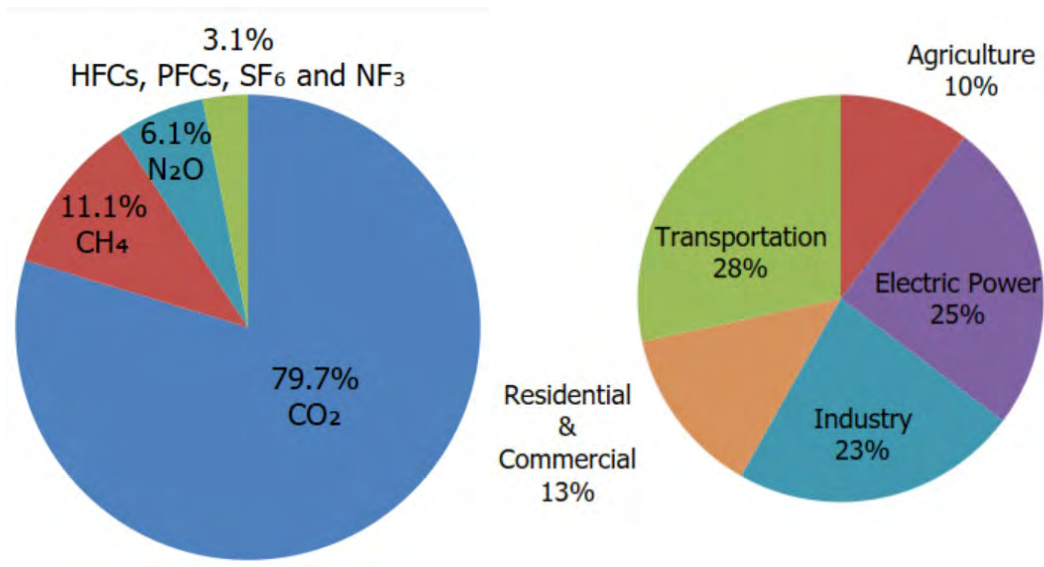


Figure 4. U.S. 2022 Greenhouse Gas Emissions

STATE GHG INVENTORY

The CARB collects GHG emissions data for transportation, electricity, commercial and residential, industrial, agricultural, and waste management sectors each year. It then summarizes and highlights major annual changes and trends to demonstrate the state's progress in meeting its GHG reduction goals. Overall statewide GHG emissions declined from 2000 to 2021 despite growth in population and state economic output (Figure 4). Transportation emissions remain the largest contributor to GHG emissions in the state (Figure 5) (CARB 2023).

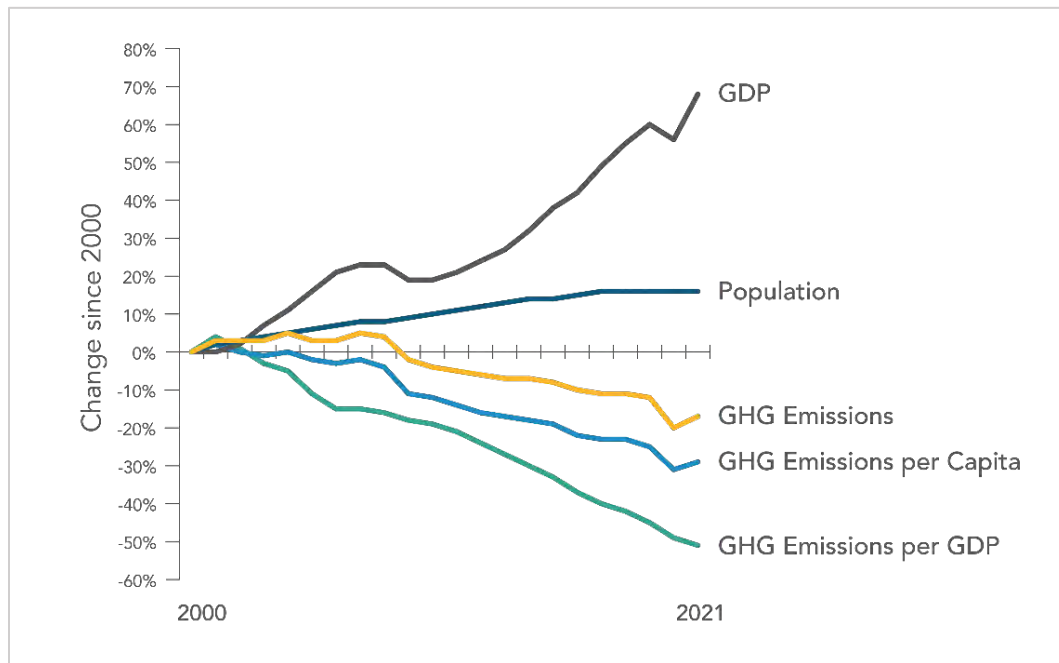


Figure 5. Change in California GDP, Population, and GHG Emissions since 2000

(Source: CARB 2023)

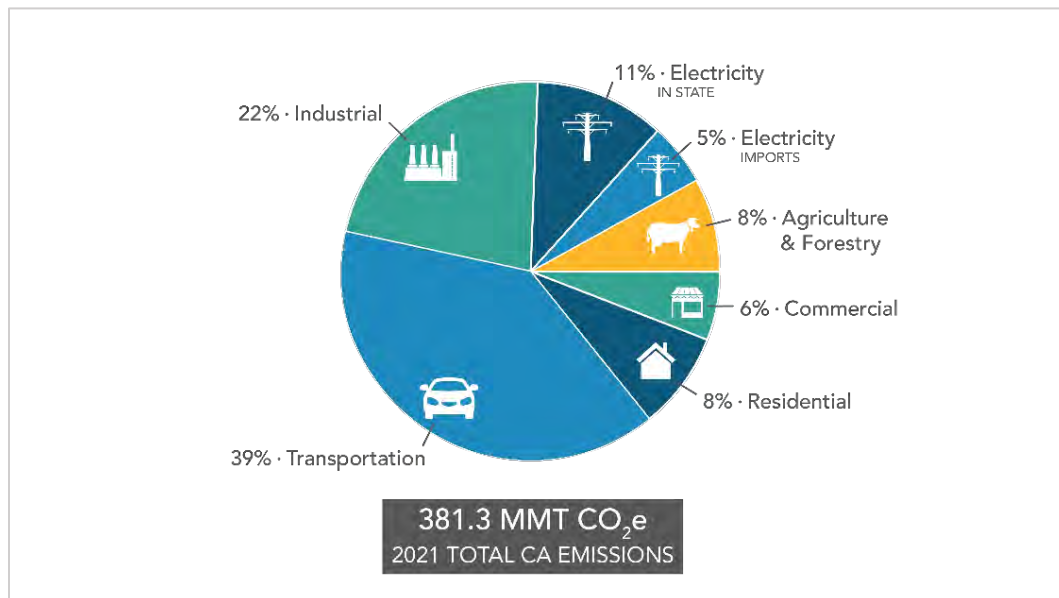


Figure 6. California Greenhouse Gas Emissions by Economic Sector

(Source: CARB 2023)

Assembly Bill (AB) 32 required 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. 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 Senate Bill (SB) 32. The 2022 Scoping Plan for Achieving Carbon Neutrality, adopted September 2022, assesses progress toward the statutory 2030 reduction goal and defines a path to reduce human-caused emissions to 85 percent below 1990 levels and achieve carbon neutrality no later than 2045, in accordance with AB 1279 (CARB 2022b).

REGIONAL PLANS

As required by The Sustainable Communities and Climate Protection Act of 2008, 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 proposed project (southern portion only) is included in the RTP/SCS for the Shasta County Regional Transportation Agency (the area's Regional Transportation Planning Agency (RTPA)). The regional reduction target for the Shasta County RTPA is 4% percent by 2035 (CARB 2021). With respect to Siskiyou County (northern portion of project site), the Siskiyou County Transportation Commission is the regional transportation planning agency for the project area. As provided in Table 4, regional policies and strategies have been established to help reduce greenhouse gases.

Table 4. Regional and Local Greenhouse Gas Reduction Plans

Title	GHG Reduction Policies or Strategies
Shasta County	
Shasta County Regional Transportation Agency <i>2022 Regional Transportation Plan & Sustainable Communities Strategy for the Shasta Region</i> (adopted December 14, 2023) (Shasta County Regional Transportation Agency 2022)	Potential Strategies: • Population and employment shift to Strategic Growth Areas and Increased Residential Densities to Strategic Growth Areas • Increase public transportation frequency on select routes • Accelerate delivery of active transportation investments • Improve bus stops • Implement GoShasta Regional Active Transportation Plan • Accelerate utilization of regional Zero-Emission Vehicle Charging Infrastructure • Accelerate car sharing in traffic analysis zones that have sufficient residential densities to support car sharing • Implement planned bike and scooter share programs
Shasta County Bicycle Transportation Plan (adopted June 2010)	Commuting Goal • Strive for a 5% increase in bicycle commuters in Shasta County by 2020 by encouraging bicycling for reasons of reducing traffic congestion, energy conservation, air quality, reducing of greenhouse gas emissions, health, economy and employment.
Siskiyou County	
Siskiyou County Local Transportation Commission <i>2021 Regional Transportation Plan</i> (August 2021)	Goal 17 • Include climate change strategies in transportation investment decisions

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 CO₂, CH₄, N₂O, and HFCs. CO₂ emissions are a product of burning gasoline or diesel fuel in internal combustion engines, along with relatively small amounts of CH₄ and N₂O. 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. CO₂ is the most important GHG, so amounts of other gases are expressed relative to CO₂, using a metric called “carbon dioxide equivalent”, or CO₂e. The global warming potential of CO₂ is assigned a value of 1, and the GWP of other gases is assessed as multiples of CO₂).

The CEQA Guidelines generally address greenhouse gas emissions as a cumulative impact due to the global nature of climate change (Public Resources Code § 21083(b)(2)). As the California Supreme Court explained, “because of the global scale of climate change, any one project's contribution is unlikely to be significant by itself.” (Cleveland National Forest Foundation v. San Diego Assn. of Governments (2017) 3 Cal.5th 497, 512.). In assessing cumulative impacts, it must be determined if a project’s incremental effect is “cumulatively considerable” (CEQA Guidelines Sections 15064(h)(1) and 15130).

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

Operational Emissions

The purpose of the proposed project is to perform pavement rehabilitation and culvert replacement/drainage improvements, which 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 I-5, 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 traffic management plans, and changes in materials can also help offset GHG emissions produced during construction by allowing longer intervals between maintenance and rehabilitation activities.

The CAL-CET2021 v1.0.2 was used to estimate average carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), black carbon (BC), and hydrofluorocarbon-134a (HFC-134a) emissions from construction activities. (Caltrans 2024b). Table 4 below summarizes estimates of GHG emissions during the construction period for the project.

Table 5. Estimate of Total GHG Emissions during Construction

Construction Year	CO ₂	CH ₄	N ₂ O	BC	HFC-134a	CO ₂ e*
	tons					metric
2026	272	0.007	0.012	0.014	0.006	264
2027	769	0.017	0.041	0.025	0.022	752
2028	158	0.002	0.004	0.004	0.006	156
Total	1,199	0.027	0.065	0.052	0.034	1,172

*Quantity of GHG is expressed as carbon dioxide equivalent (CO₂e) that can be estimated by the sum after multiplying each amount of CO₂, CH₄, N₂O, and HFC134a by its global warming potential (GWP). Each GWP of CO₂, CH₄, N₂O, BC and HFC-134a is 1, 25, 298, 460 and 1,430, respectively. Totals may not add due to rounding.

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

CEQA Conclusion

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

Greenhouse Gas Reduction Strategies

STATEWIDE EFFORTS

In response to AB 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 2022c).

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

- (1) Increasing the share of renewable energy in the State's energy mix to at least 50 percent 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 vehicle miles traveled (VMT). Reducing today's petroleum use in cars and trucks is a key state goal for reducing greenhouse gas emissions by 2030 (OPR 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 EO 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 (2016), set an interim target to cut GHG emissions to 40 percent below 1990 levels by 2030. The following major initiatives are underway at Caltrans to help meet these targets.

Climate Action Plan For Transportation 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 percent of all polluting emissions, to reach the state's climate goals. Under CAPTI, where feasible and within existing funding program structures, the state will invest discretionary transportation funds in sustainable infrastructure projects that align with its climate, health, and social equity goals (California State Transportation Agency 2021).

California Transportation Plan

The California Transportation Plan (CTP) is a statewide, long-range transportation plan to meet our future mobility needs and reduce GHG emissions. It serves as an umbrella document for all the other statewide transportation planning documents. The CTP 2050 presents a vision of a safe, resilient, and universally accessible transportation system that supports vibrant communities, advances racial and economic justice, and improves public and environmental health. The plan's climate goal is to achieve statewide GHG emissions reduction targets and increase resilience to climate change. It demonstrates how GHG emissions from the transportation sector can be reduced through advancements in clean fuel technologies; continued shifts toward active travel, transit, and shared mobility; more efficient land use and development practices; and continued shifts to telework (Caltrans 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 in the project to reduce GHG emissions and potential climate change impacts from the project.

- GHG 1: Caltrans Standard Specification "Air Quality" requires compliance by the contractor with all applicable laws and regulations related to air quality (Caltrans Standard Specification [SS] 14-9).
- GHG 2: Compliance with Title 13 of the California Code of Regulations 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 five minutes.
- GHG 3: Caltrans Standard Specification "Emissions Reduction" ensures that construction activities adhere to the most recent emissions reduction regulations mandated by the California Air Resource Board (CARB) (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 CO₂. This replanting would help offset any potential CO₂ emissions increase.

Adaptation

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 that 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. Department of Transportation 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 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) (State of California 2018) provides information to help decision makers across sectors and at state, regional, and local scales protect and build the resilience of the state's people, infrastructure, natural systems, working lands, and waters. The 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 2023).

Project Adaptation Analysis

Sea Level Rise

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

Precipitation and Flooding

According to the Flood Emergency Management Agency (FEMA) Flood Map Service Center (Panels 06093C3432D, 06093C3433D, 06093C3434D, 06093C3441D, effective January 19, 2011; Panels 06089C0050G and 06089C0325G, effective March 17, 2011), the project site is located within several designated flood hazard zones. The Caltrans District 2 Climate Change Vulnerability Assessment (Caltrans 2018) mapped projected changes in 100-year storm precipitation under a business-as-usual GHG emissions scenario. The 100-year storm metric is commonly used in highway design. The District Climate Change Vulnerability Assessment does not indicate precipitation changes during the project's design life that would require adaptive changes to the drainage design. The proposed culverts have been sufficiently sized to maintain flows and would accommodate the 100-year storm event.

Wildfire

According to CAL FIRE's Fire Hazard Severity Zone mapping tool (CAL FIRE 2024), the project site primarily comprises State Responsibility Areas, while the City of Dunsmuir is a Local Responsibility Area. The State Responsibility Area's Hazard Severity Zone designation is considered "very high". Pavement rehabilitation and supporting infrastructure would be confined to the project footprint and would not introduce structures or users into the area that would be vulnerable to wildfire. To minimize potential wildfire damage to

highway infrastructure, guardrail replacement would include steel posts, while culvert replacement would consist of concrete or corrugated steel pipes. Further, Caltrans Standard Specifications mandate fire prevention procedures, including a Fire Prevention Plan, to avoid accidental fire starts during construction. Based on the above information, the project would not cause or exacerbate the risk of wildfire, regardless of climate conditions.

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.

2.9 Hazards and Hazardous Materials

Question	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project: a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			✓	
Would the project: b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?				✓
Would the project: c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?			✓	
Would the project: d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				✓
Would the project: e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?				✓

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

Regulatory Setting

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

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

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

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

Affected Environment

An *Initial Site Assessment* (ISA) was completed on February 21, 2024 (Caltrans 2024g). The purpose of the ISA was to identify any hazardous wastes/materials within and adjacent to the project area that could affect the design, constructability, feasibility, and/or the cost of the project.

The records review included a review of federal, state, and local databases and maps. As documented in the ISA, lead-contaminated soils may exist throughout the project limits due to the historical use of leaded gasoline on the roadway, pollutants may be present in treated wood, and lead/chromium may be present in yellow and white road striping.

Environmental Consequences

Project construction would not impact any Cortese sites. Implementation of the project would include culvert replacement activities, treated wood post guardrail replacement, pavement rehabilitation, removal of a small amount of yellow and white road striping from the roadway surface, and excavation activities along the roadway. Project activities have the potential to release a minimal amount of hazardous wastes/materials into the environment.

Compliance with Caltrans Standard Specifications related to the proper handling of soils containing aerially deposited lead, treated wood, and asphalt grindings associated with road striping would ensure that these activities do not release hazardous wastes/materials into the environment.

Avoidance, Minimization and 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 2.9—Hazards and Hazardous Materials

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

LESS THAN SIGNIFICANT IMPACT. The project would not result in any long-term impacts related to the transport of hazardous materials. During construction activities, it is anticipated that limited quantities of hazardous substances, such as gasoline, diesel fuel, etc., would temporarily be brought into the project area.

As documented in the ISA, lead-contaminated soils may exist throughout the project limits due to the historical use of leaded gasoline on the roadway. Additionally, hazardous levels of lead and chromium are known to exist in the yellow color traffic stripes. Further, pollutants may be present in treated wood (i.e., guardrail posts). As discussed in Section 1.4, implementation of Standard Measures for lead contamination (Standard Measure HW-1), traffic strip paint (Standard Measure HW-2), and treated wood posts (Standard Measure HW-

3) would address such activities. Further, construction contractors would be required to comply with applicable federal and state environmental and workplace safety laws and implement BMPs for the storage, use, and transportation of hazardous materials. Therefore, impacts would be less than significant.

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

NO IMPACT. Project construction could potentially result in the accidental release of hazardous substances into the environment, such as spilling petroleum-based fuels used for construction equipment. However, construction contractors would be required to comply with applicable federal and State environmental and workplace safety laws and implement BMPs for the storage, use, and transportation of hazardous materials. Therefore, the project is not expected to create a significant hazard to the public or the environment involving the release of hazardous materials into the environment. Thus, there would be no impact.

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

LESS THAN SIGNIFICANT IMPACT. According to the Shasta and Siskiyou County Offices of Education, Castle Rock Union Elementary School and Dunsmuir High School are located within 0.25 miles of the project site. As described under Questions A and B, the project would not result in any long-term impacts related to the transport of hazardous materials. Although project construction would involve the use of relatively small quantities of hazardous substances, work would be conducted in accordance with applicable federal and state environmental and workplace safety laws, and potential impacts could occur only during construction activities. Thus, impacts would be less than significant.

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

NO IMPACT. The ISA did not identify any active clean-up sites occurring within the project limits.

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

NO IMPACT. According to the Federal Aviation Administration (FAA) (FAA 2024), the nearest airport is Dunsmuir Municipal Mott Airport, approximately 3.6 miles north of the project site. Due to the distance between the airport and the project site, there would be no impact.

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

LESS THAN SIGNIFICANT IMPACT. The proposed project does not involve a use or activity that could interfere with long-term emergency response or emergency evacuation plans for the area. A temporary increase in traffic could occur during construction and could interfere with emergency response times. However, construction-related traffic would be spread over the duration of the construction schedule and would be minimal on a daily basis. In addition, construction activities would be subject to a Transportation Management Plan (TMP) (Standard Measure TT-1) (Section 1.4). Furthermore, Caltrans would notify and coordinate with local emergency authorities to ensure the proper function of public services. With implementation of a TMP, and advanced coordination with local emergency authorities, the project would not impair or physically interfere with an adopted emergency response or emergency evacuation plan. Therefore, impacts during construction would be less than significant.

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

NO IMPACT. As part of the proposed project, the contractor would prepare an Emergency Evacuation Plan (EEP) for work activities that restrict passage through the work zone. The EEP would outline protocol for ensuring safe evacuation of local residents and the traveling public in the event of a fire or other natural disaster. With preparation and implementation of the EEP, the project would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires. Thus, there would be no impact.

2.10 Hydrology and Water Quality

Question	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project: a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?			✓	
Would the project: b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?				✓
Would the project: c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:			✓	
(i) result in substantial erosion or siltation on- or 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 (CFGF)–Sections 1600–1607
- State: Porter-Cologne Water Quality Control Act– Sections 13000 et seq.

Affected Environment

The project area is located within the Sacramento Hydrologic Basin Planning Area, which is located within the Sacramento River watershed and is managed by the Central Valley Regional Water Quality Control Board. The project area receives moderate rainfall. The average annual precipitation recorded in nearby Mt. Shasta between 1948 and 2010 is 39.94 inches.

On-site streams are tributary to the Sacramento River, which flows south along the eastern margin of the site. The project site does not support wetlands.

As documented in the *Water Quality Assessment Report* (Caltrans 2024h), beneficial uses in the Sacramento River for the project area are identified as:

- **Agricultural Supply (AGR)**—Uses of water for farming, horticulture, or ranching including, but not limited to, irrigation (including leaching of salts), stock watering, or support of vegetation for range grazing.
- **Water Contact Recreation (REC-1)**—Uses of water for recreational activities involving body contact with water, where ingestion of water is reasonably possible. These uses include, but are not limited to, swimming, wading, water-skiing, skin and scuba diving, surfing, white water activities, fishing, or use of natural hot springs.
- **Non-Contact Water Recreation (REC-2)**—Uses of water for recreational activities involving proximity to water, but where there is generally no body contact with water, nor any likelihood of ingestion of water. These uses include, but are not limited to, picnicking, sunbathing, hiking, beachcombing, camping, boating, tidepool and marine life study, hunting, sightseeing, or aesthetic enjoyment in conjunction with the above activities.
- **Cold Freshwater Habitat (COLD)**—Uses of water that support cold water ecosystems including, but not limited to, preservation or enhancement of aquatic habitats, vegetation, fish, or wildlife, including invertebrates.
- **Wildlife Habitat (WILD)**—Uses of water that support terrestrial or wetland ecosystems including, but not limited to, preservation and enhancement of terrestrial habitats or wetlands, vegetation, wildlife (e.g., mammals, birds, reptiles, amphibians, invertebrates), or wildlife water and food sources.

Environmental Consequences

Construction activities that have the potential to impact hydrology include culvert work, the addition of new/redeveloped impervious surfaces, and excavation/grading activities. No FEMA regulatory base floodplains would be affected by the project.

Culvert replacement activities would require a minor amount of work within streams (i.e., install flared-end sections, rock slope protection, etc.). Construction-related impacts on the hydrology and water quality of affected streams would be negligible. The project would increase the impervious area by ± 0.01 acres. Due to the small increase in impervious area, no permanent treatment best management practices (BMP) are warranted. Additionally, post-construction stormwater flows would not exceed pre-construction stormwater flows. Further, excavation/grading activities would minimally alter the natural topography of the project area, but would not substantially alter the hydrology.

Avoidance, Minimization and 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 2.10—Hydrology and Water Quality

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

LESS THAN SIGNIFICANT IMPACT. The proposed project would result in the permanent fill of waters, which are under the jurisdictions of the U.S. Army Corps of Engineers, Regional Water Quality Control Board, and California Department of Fish and Wildlife. Compliance with the resource agency permit conditions would ensure that the project would not violate any waste discharge requirements or otherwise substantially degrade surface or groundwater quality (e.g., use of silt fencing, straw wattles, gravel berms, rock check dams, as well as revegetating disturbed areas through hydroseeding or other similar measure). Thus, impacts would be less than significant.

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

NO IMPACT. The proposed project would not require groundwater supplies for construction or operation. As part of the proposed project, steel-post guardrail, including transition railing at bridge sites, would be installed to maintain public safety. These safety elements would result in approximately 0.01 acres of new impervious area. As the new impervious area would be spread out along miles of roadway, these safety elements would not interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin. Thus, there would be no impact.

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

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

LESS THAN SIGNIFICANT IMPACT. Project activities would primarily be performed within the existing road prism, minimizing the potential for substantial soil erosion or the loss of topsoil. Additionally, as discussed in Section 1.4, Standard Measures WQ-1 and WQ-2 would be implemented during construction activities. Because BMPs for erosion and sediment control would be implemented in accordance with standard practices, the potential for substantial erosion or siltation on- or off-site would be less than significant.

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

NO IMPACT. As stated in Question B, guardrail and bridge railing installation would result in a minor increase in the amount of impervious surface, which would result in a minor increase in surface runoff. Further, new impervious surfaces would increase the runoff rate. However, with guardrail and bridge rail installation representing a narrow margin along the project limits, the project would not substantially increase the rate or amount of surface runoff, nor would it result in flooding on- or off-site. Thus, there would be no impact.

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

NO IMPACT. The existing I-5 drainage system, including the proposed drainage improvements, exhibit sufficient flow capacity to accommodate the minor increase in runoff. As the project would not provide substantial additional sources of polluted runoff, nor would it exceed the capacity of existing or planned stormwater drainage facilities, there would be no impact.

(iv) impede or redirect flood flows?

NO IMPACT. The proposed culverts have been sufficiently sized to maintain flows associated with the 100-year storm event. The project would not impede or redirect flood flows; thus, there would be no impact.

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

NO IMPACT. A tsunami is a wave generated in a large body of water (typically the ocean) by fault displacement or major ground movement. Given that the Pacific Ocean is approximately 95 miles west of the project area, there is no risk of inundation of the project area by a tsunami. (California Department of Conservation 2023g). A seiche is a large wave generated in an enclosed body of water in response to ground shaking. The closest large body of water to the project site is the Sacramento River, which flows south along the eastern portion of the site. It is not expected that seismic activity could create a large wave in the Sacramento River that would inundate the project area. Therefore, there would be no potential for release of pollutants due to inundation by seiche or tsunami.

As previously described (Chapter 2.8 Greenhouse Gas Emissions – Precipitation and Flooding), the project site is located within several designated flood hazard zones. There is a possibility of accidental release of hazardous substances in flood zones due to project inundation. In accordance with Standard Measure WQ-1, the project would be subject to a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP would include such measures as stockpiling materials, storing liquid waste containers, washing vehicles and equipment, and fueling/maintaining vehicles and equipment at least 100 feet from a concentrated flow of stormwater, a drainage course, or an inlet within the floodplain; or at least 50 feet outside the floodplain. Compliance with existing state regulations would ensure there is no potential for release of pollutants due to inundation by a flood. Thus, there would be no impact.

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

NO IMPACT. The proposed project would result in the permanent fill of waters, which are under the jurisdictions of U.S. Army Corps of Engineers, Regional Water Quality Control Board, and California Department of Fish and Wildlife. Compliance with resource agency permit conditions would ensure that the project would not violate a Water Quality Control Plan or Sustainable Groundwater Management Plan. Thus, there would be no 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. As proposed, the project is consistent with existing zoning, plans, and other applicable land use controls. Because the proposed project would not divide an established community, nor would it conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect, potential impacts are not anticipated.

Discussion of CEQA Environmental Checklist Question 2.11—Land Use and Planning

a) Would the project physically divide an established community?

NO IMPACT. Land use impacts are considered significant if a proposed project would physically divide an existing community (a physical change that interrupts the cohesiveness of the neighborhood). The proposed highway improvements would not create a barrier for existing or planned development. Therefore, there would be no impact.

b) Would the project 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. As discussed in each resource section of this Initial Study, the proposed project is consistent with applicable laws and regulations. Therefore, the proposed project would not conflict with any plans, policies, or regulations 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. As proposed, the project would not result in the loss of availability of a known mineral resource or a locally-important mineral resource recovery site. Thus, potential impacts to mineral resources are not anticipated.

Discussion of CEQA Environmental Checklist Question 2.12—Mineral Resources

a) Would the project 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?

NO IMPACT. According to the Department of Conservation (2024h), two active mines, Spring Hill and Mt. Shasta Pit (sand and gravel operations), occur approximately nine miles north of the project site. The project would have no impact on nearby mining operations. According to the Department of Conservation (2024i), there are no occurrences of mineral resources in Siskiyou County. Regarding Shasta County, a Surface Mining and Reclamation Act mineral land classification study of alluvial sand and gravel, crushed stone, volcanic cinders, limestones, and diatomite has been conducted. The southernmost portion of the project site is mapped as Mineral Resource Zone-3 (MRZ-3)—areas containing known and/or inferred occurrences of resources of undetermined quality, quantity, or significance.

Given the distance to active mining operations, and that project activities would primarily be limited to the existing road prism, the proposed project would not result in the loss of availability of a known mineral resource. Thus, there would be no impact.

b) 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?

NO IMPACT. As stated in Question A, the project site does not support mines. Further, with project activities primarily limited to the existing road prism, the project would not impact mapped mineral resources. The project would not result in the loss of availability of a locally-important mineral resource recovery site. Thus, there would be no impact.

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?				✓

Regulatory Setting

The primary laws governing noise are NEPA and CEQA.

Affected Environment

Interstate 5 within the project area is subject to a moderate level of noise disturbance on a daily basis due to vehicles traveling at high speeds on I-5. Based on surrounding land uses, the project site is exposed to moderate background noise levels.

In noise/vibration studies, the following are considered sensitive receptors: hospitals, schools, homes, daycare facilities, elderly housing, and convalescent facilities. These are areas where the occupants are more susceptible to the adverse effects of exposure to noise and vibration. Several sensitive receptors (i.e., homes and schools) occur within a 1/4-mile radius of the project site within the City of Dunsmuir.

Environmental Consequences

According to the *Noise Study* (Caltrans 2024i), the project is considered a Type III project (i.e., no permanent noise). Because the project would not involve permanent noise-producing activities, noise abatement is not warranted.

During construction, temporary noise impacts would occur from the use of stationary and mobile construction equipment and vehicles during construction. Construction vehicles and equipment could include excavators, compressors, generators, haul trucks, pavers, and material loaders. Project construction noise levels would fluctuate depending on the construction phase, equipment type, and quantity and duration of use. Project noise levels could be up to 90 decibels. Once built, noise levels would not increase above existing baseline noise levels. Once built, the project would not be a source of permanent ground-borne vibrations. Although ground-borne vibrations may be noticeable during construction, they would be temporary in duration and minimal in magnitude.

Compliance with Caltrans Standard Measure N-1 (Section 1.4) would ensure that any noise impacts during construction would be minimal.

Avoidance, Minimization and 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 2.13—Noise

- a) *Would the project result in 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?*

LESS THAN SIGNIFICANT IMPACT. The project would not involve the introduction of permanent noise-producing activities. Temporary noise impacts would occur from the use of mobile construction equipment and vehicles during construction.

Construction vehicles and equipment could include excavators, compressors, generators, haul trucks, pavers, and material loaders. Project construction noise levels would fluctuate depending on the construction phase, equipment type, and quantity and duration of use. Project construction would not result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project, nor would it substantially impact sensitive receptors. As discussed in Section 1.4, Standard Measure N-1 would be implemented to control and monitor noise from work activities. Although the proposed project would result in elevated noise levels during construction activities, such noise levels would not be in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. Therefore, impacts would be less than significant.

b) Would the project result in generation of excessive groundborne vibration or groundborne noise levels?

NO IMPACT. Once built, the project would not be a source of permanent ground-borne vibrations. Although ground-borne vibrations may occur during construction, they would be temporary in duration and minimal in magnitude and would not be considered excessive. Thus, there would be no impact.

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. The nearest airport is the Dunsmuir Municipal Mott Airport, approximately 3.6 miles north of the project site. Due to the distance between the airport and the project site, the project would not expose people residing or working in the project area to excessive noise levels. Thus, there would be no impact.

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. As proposed, the project would not induce substantial unplanned population growth in an area, either directly, nor would it displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere. Thus, potential impacts to population and housing are not anticipated.

Discussion of CEQA Environmental Checklist Question 2.14—Population and Housing

- a) Would the project 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)?*

NO IMPACT. Because the proposed project does not involve construction of residences or businesses, nor does it include applicable infrastructure improvements, the project would not induce population growth. Therefore, there would be no impact.

b) Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

NO IMPACT. Project activities primarily consist of pavement rehabilitation and culvert replacement activities. Project activities would not displace existing people or housing, necessitating the construction of replacement housing elsewhere. Therefore, there would be no impact.

2.15 Public Services

Question	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
Fire protection?			✓	
Police protection?			✓	
Schools?			✓	
Parks?				✓
Other public facilities?				✓

Regulatory Setting

The primary law governing public services is CEQA.

Affected Environment

The project site is located on I-5, which facilitates public services for surrounding residential, commercial, and industrial users. Siskiyou Transit and General Express (STAGE) is Siskiyou County's public transit service provider; no bus services are offered along the corridor within Shasta County. In addition to STAGE, school districts provide transit services for students. The nearest schools are Castle Rock Elementary School (Shasta County PM 63.1) and Dunsmuir High School (Siskiyou County PM 2.0). Emergency service providers that operate within the project area include various firefighting agencies (e.g.,

Shasta County and Siskiyou County fire departments and CAL FIRE); Shasta County and Siskiyou County Sheriff's departments and the California Highway Patrol (CHP); and ambulances that transport patients to local hospitals. The nearest medical facility is Mercy Medical Center in the city of Mt. Shasta, located approximately nine road miles northwest of the proposed project site.

Environmental Consequences

The project would include traffic control measures when partial closure of the roadway is required during construction. During traffic control operations, travel time through the work locations is expected to be delayed by only a few minutes for all modes of travel. As such, impacts to school buses transporting students to schools, public transportation services, and emergency response agencies would be minimal. Upon project completion, the project would not result in operational impacts to public services.

Avoidance, Minimization and 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 2.15—Public Services

- a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: fire protection, police protection, schools, parks, or other public facilities.*

LESS THAN SIGNIFICANT IMPACT. The project would primarily consist of pavement rehabilitation, culvert rehabilitation/drainage improvements, structural repairs, and construction of supporting infrastructure. These activities would not result in the need for new or physically altered facilities, including fire or police protection services, schools, parks, or other public facilities. As traffic delays associated with construction activities are temporal in nature, impacts to fire or police protection, and schools are considered less than significant. Construction activities would not result in impacts to parks or other public facilities. Overall, project implementation would result in a less than significant impact.

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. As proposed, the project would not increase the use of existing neighborhood and regional parks or other recreational facilities, nor would it include recreational facilities or require the construction or expansion of recreational facilities. Thus, potential impacts to are not anticipated.

Discussion of CEQA Environmental Checklist Question 2.16—Recreation

- a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?*

NO IMPACT. Site development would not increase the use of existing neighborhood and regional parks or other recreation facilities. Therefore, there would be no impact.

- 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. Site development does not include recreational facilities or require the construction or expansion of recreational facilities. Therefore, there would be no impact.

2.17 Transportation

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

Regulatory Setting

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

Affected Environment

Interstate 5 (I-5) is a principal arterial/interstate in the National Highway System used for predominately longer interregional trips and the movement of goods. I-5 links most metropolitan areas in the states of California, Oregon, and Washington, as well as trade between Mexico and Canada. I-5 provides a continuous freeway connection between all major ports on the west coast, including the ports of Los Angeles and Long Beach—the first and second busiest ports in the U.S., respectively.

Within the project area, I-5 consists of four 12-foot-wide paved lanes, each with 6 to 8-foot-wide inside and 10 to 12-foot-wide outside shoulders. The posted speed limit is 65 miles per hour. Pursuant to the *Traffic Study* (Caltrans 2024j), the annual average daily traffic (AADT) is approximately 20,100, with trucks representing 33.4 percent.

The project is consistent with transportation goals/objectives included in the Circulation Elements of the Shasta County and Siskiyou County General Plans, as well as the Shasta County Regional Transportation Plan and Siskiyou County Regional Transportation Plan.

Environmental Consequences

As proposed, the project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities. No geometric design features or alternate uses are proposed. Project implementation includes traffic control measures when partial closure of the roadway is required during construction. During traffic control operations, travel time through the work locations is expected to be delayed by only a few minutes for all modes of travel. Prior to the start of construction, all emergency response agencies in the project area will be notified of the project construction schedule and will have access to I-5 throughout the construction period.

Avoidance, Minimization and 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 2.17— Transportation and Traffic

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

NO IMPACT. With no proposed changes to highway operations, as well as preparation/implementation of a Transportation Management Plan (Standard Measure TT-1) (Section 1.4), the project would not conflict with a program, plan, ordinance, or policy addressing the circulation system. Thus, there would be no impact.

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

NO IMPACT. Section 15064.3 of the CEQA Guidelines describes the specific considerations for evaluating a project's transportation impacts. Generally, Vehicle Miles Traveled (VMT) is the most appropriate measure of transportation impacts. For the purposes of this section, VMT refers to the amount and distance of automobile travel attributable to a project.

Construction of the project would not increase capacity of the State Highway System or induce an increase in VMT. Therefore, an induced travel analysis for VMT is not required under CEQA. Once built, the project would result in no operational impacts on the traveling public. Project implementation includes traffic control measures when partial closure of the roadway is required during construction. During traffic control operations, travel time through the work locations is expected to be delayed by only a few minutes for all modes of travel. As such, impacts to the traveling public (e.g., motorists, school buses transporting students to schools, bicyclists, and pedestrians) would be minimal. As described above, the project would not result in an increase in VMT; thus, there would be no impact.

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

NO IMPACT. The proposed project would not result in the geometric alteration of I-5 or result in an incompatible use; therefore, would not substantially increase hazards to the traveling public. Thus, there would be no impact.

d) Would the project result in inadequate emergency access?

LESS THAN SIGNIFICANT IMPACT. Emergency access would be maintained throughout construction. Further, all emergency response agencies in the project area would be notified of the project construction schedule and would have access to I-5 throughout the construction period (Standard Measure UE 1) (Section 1.4). Although emergency personnel would be subject to traffic control-related measures, impacts would be less than significant.

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 *Historic Property Survey Report* dated July 9, 2024 (Caltrans 2024d). During Caltrans’ tribal consultation efforts and the records review, no listed or eligible for listing sites in the California Register of Historical Resources or in a local register of historical resources, as defined in Public Resources Code § 5024.1(k), were identified. Further, Caltrans did not identify any resources meeting the criteria set forth in subdivision (c) of Public Resources Code 5024.1. Thus, there would be no impact.

Discussion of CEQA Environmental Checklist Question 2.18—Tribal Cultural Resources

Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in the 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).*

NO IMPACT. Between September 2023 and April 2024, Caltrans contacted applicable tribal representatives through e-mail, telephone, and letter correspondence to inform the tribe of the project. Caltrans provided detailed information on the proposed project. The tribes have not yet responded; however, consultation is ongoing. No known tribal cultural resources are known to occur on the project site. Thus, there would be no impact.

- b) Determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code § 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code § 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.*

NO IMPACT. Caltrans, as lead agency, has not identified any resources in the project area that would be significant to a California Native American tribe. As the project does not have the potential to cause a substantial adverse change in the significance of a tribal cultural resource, there would be no impact.

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?				✓

Regulatory Setting

The primary law governing utilities and service systems is CEQA.

Affected Environment

Within the project limits, I-5 supports overhead and underground utilities, including electric and fiber optic lines.

Environmental Consequences

Project implementation would include various drainage improvements along I-5 and lighting improvements at various on- and off-ramps. Further, culvert replacement activities at PM 2.65 would require relocating an existing fiber optic line. Based on the scope of work, the project would not require a water supply or wastewater treatment facilities. Solid waste generated during pavement rehabilitation would be disposed of in accordance with all federal, state, and local statutes.

Avoidance, Minimization and 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 2.19—Utilities and Service Systems

- a) *Would the project 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?*

LESS THAN SIGNIFICANT IMPACT. Project implementation would include various drainage improvements along I-5 and lighting improvements at various on- and off-ramps. Regarding relocation, an existing fiber optic line would be relocated at PM 2.65 to allow for culvert replacement activities. Stormwater drainage improvements, light installation, and fiber optic line relocation are not expected to cause significant environmental effects. Therefore, impacts would be less than significant.

- b) Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?*

NO IMPACT. As the project primarily consists of pavement rehabilitation and culvert replacement, the project would not require a water supply. Thus, there would be no impact.

- c) Would the project 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?*

NO IMPACT. As the project primarily consists of pavement rehabilitation and culvert replacement, the project would not require wastewater treatment facilities. Thus, there would be no impact.

- d) Would the project 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?*

NO IMPACT. The proposed project would generate solid waste, mainly from removal of pavement on I-5. The construction contractor would be responsible for disposing of all construction waste in accordance with all federal, state, and local statutes related to solid waste disposal. Thus, there would be no impact.

- e) Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?*

NO IMPACT. Caltrans would ensure through contractual obligations that the contractor complies with all federal, state, and local statutes related to solid waste disposal. Thus, there would be no impact.

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 <i>very high</i> 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 Office of Planning and Research, the Natural Resources Agency, and the California Department of Forestry and Fire Protection (CAL FIRE) to develop amendments to the “CEQA Environmental Checklist” for the inclusion of questions related to fire hazard impacts for projects located on lands classified as *very high* Fire Hazard Severity Zones (FHSZ). The 2018 updates to the CEQA Guidelines expanded this to include projects “near” these *very high* Fire Hazard Severity Zones.

Regulatory Setting

The primary law governing wildfire is CEQA.

Affected Environment

Areas abutting the project site largely comprise forest lands. The project site is primarily located in a State Responsibility Area, which is designated as a “very high” Fire Hazard Severity Zone (CAL FIRE 2024).

Environmental Consequences

During construction activities, work activities could restrict passage through the work area. To ensure local residents and the traveling public can safely evacuate during an emergency, the contractor would prepare an Emergency Evacuation Plan (EEP). The EEP would outline safety protocols in the event of a fire or other natural disaster.

Avoidance, Minimization and 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 2.20—Wildfire

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

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

LESS THAN SIGNIFICANT IMPACT. According to CAL FIRE’s Fire Hazard Severity Zone mapping tool (CAL FIRE 2024), the project site primarily comprises State Responsibility Areas, while the city of Dunsmuir is considered a Local Responsibility Area. The State Responsibility Area’s Fire Hazard Severity Zone designation is considered “very high” (Figure 6).

As part of the proposed project, the contractor would prepare an EEP for work activities that restrict passage through the work zone. The EEP would outline protocols for ensuring safe evacuation of local residents and the traveling public in the event of a fire or other natural disaster. The project would not substantially impair an adopted emergency response or evacuation plan; thus, impacts would be less than significant.

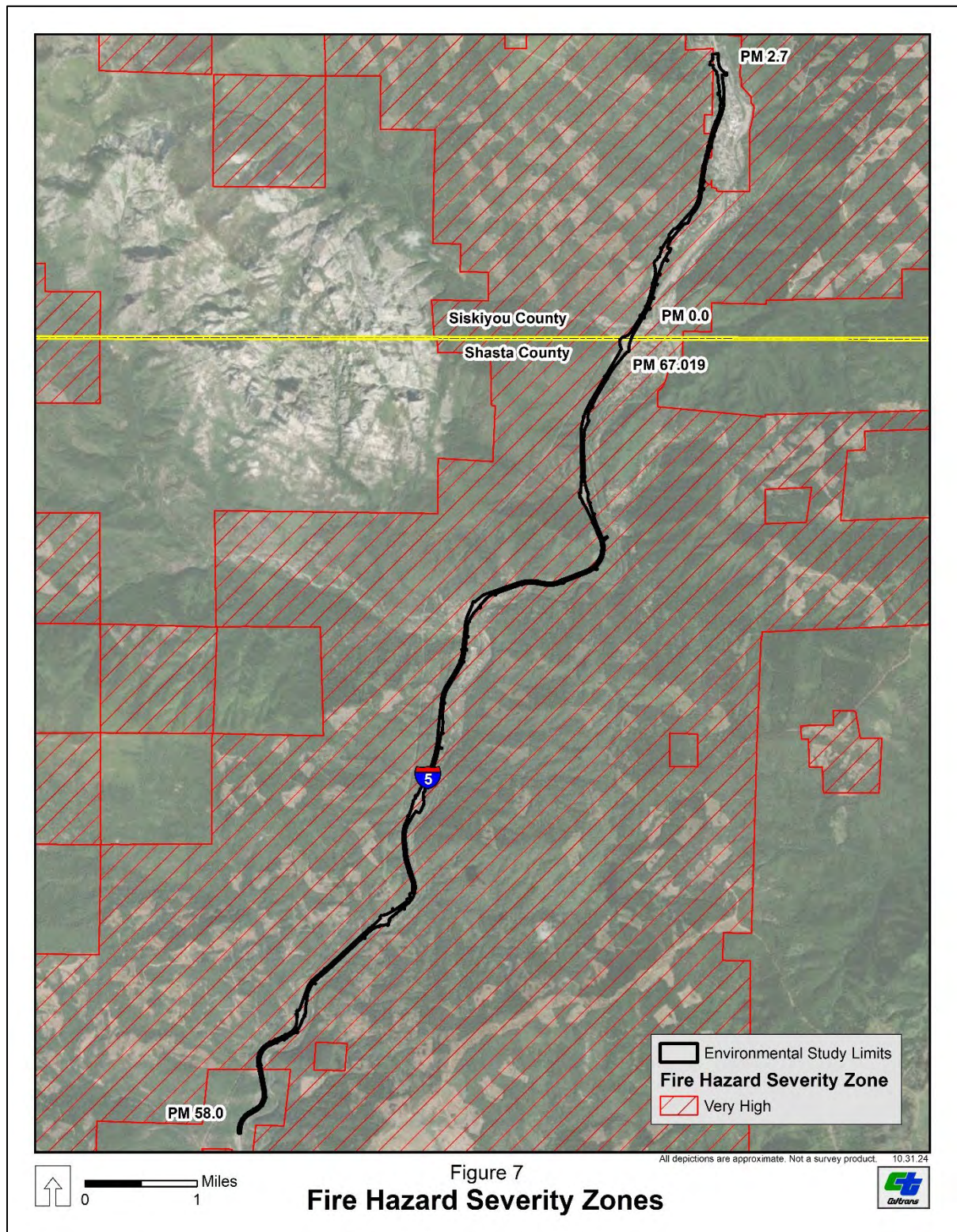


Figure 7. Fire Hazard Severity Zones

- 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?*

NO IMPACT. Project activities are primarily limited to pavement rehabilitation and culvert replacement; thus, site occupancy is not applicable. Therefore, project implementation would not expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. Thus, there would be no impact.

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

NO IMPACT. Project activities primarily consist of pavement rehabilitation and culvert replacement. The project does not include fuel breaks, emergency water sources, power lines, or other utilities that may exacerbate fire risk or result in temporary or ongoing impacts to the environment. Thus, there would be no impact.

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

NO IMPACT. As discussed in Section 2.7 (Geology and Soils) under Question A(iv), no mapped slide areas occur within the project area. Although some sections of I-5 are in a designated flood hazard area, the project does not include any components that would increase flood risks. Therefore, there is minimal risk for downslope or downstream flooding or landslides as a result of runoff, post-fire slope instability, or drainage changes. Thus, there would be no impact.

2.21 Mandatory Findings of Significance

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

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

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

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED. As discussed in Section 2.4, with implementation of the proposed mitigation measure (wildlife fencing), potential impacts would be less than significant.

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

NO IMPACT. As proposed, the project would not contribute to any potential cumulatively considerable impacts to waters. Project-related impacts to other resources referenced in this document would have a negligible contribution to any potential cumulatively considerable impacts. Thus, there would be no impact .

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

LESS THAN SIGNIFICANT IMPACT. As discussed in the applicable environmental resource sections above, the proposed project is expected to result in environmental effects. However, these effects would not cause substantial adverse effects on human beings, either directly or indirectly. Thus, impacts would be less than significant.

2.22 Cumulative Impacts

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

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

Per Section 15130 of CEQA, a Cumulative Impact Analysis (CIA) discussion is only required in "...situations where the cumulative effects are found to be significant." An EIR is required in all situations when a project might result in a "significant" direct, indirect, or cumulative impact on any resource. As proposed, the project would not result in a significant cumulative impact to resources. Given this, an Environmental Impact Report (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

See Table 6 below.

Circulation

The Draft Initial Study/Mitigated Negative Declaration was circulated between December 13, 2024 and January 13, 2025. An online public hearing was conducted on December 19. Public comments were received from various members of the public. These comments and Caltrans response to comments are presented in Appendix D. Following circulation of this draft document, including review and response to public comments, the project development team determined the Flume Creek CAPM Project was the preferred alternative.

Table 6. Agency Coordination and Professional Contacts

Date	Personnel	Notes
April 27, 2023	John Carroll, Caltrans Archaeologist, Northeast Information Center (NEIS)–California Historical Resources Information System (CHRIS)	Caltrans submitted records search request to NEIC/CHRIS
May 5, 2023	John Carroll, Caltrans Archaeologist; NEIS–CHRIS	NEIC/CHRIS provided results of records search to Caltrans

Date	Personnel	Notes
September 13, 2023	John Carroll, Caltrans, Archaeologist; NAHC	Caltrans submitted records search request to NAHC
October 12, 2023	Ryan Rzab, Castle Crags State Park Peace Officer; John Luper, Caltrans Coordinator	Telephone discussion regarding wildlife connectivity
November 13, 2023	John Carroll, Caltrans Archaeologist; NAHC	NAHC provided results of requested records search
November 25, 2023	Ryan Rzab, Castle Crags State Park Peace Officer; Deborah Petersen, Caltrans Right of Way Agent	E-mail correspondence regarding wildlife connectivity
April 24, 2024	Theresa Tillson, Caltrans Biologist; Richard Lis, California Department of Fish and Wildlife	Impact discussion regarding riparian and stream resources.
June 14, 2024	Ryan Bradshaw, Caltrans Archaeologist; Shasta-Trinity National Forest	Caltrans sent initial letter and records search request to Shasta-Trinity National Forest
June 18, 2024	Ryan Bradshaw, Caltrans Archaeologist; Shasta-Trinity National Forest	Shasta-Trinity National Forest provided record search results and requested copy of project documentation
September 16, 2024	Michelle Clark, Caltrans Biologist; Richard Lis, California Department of Fish and Wildlife	Field meeting regarding wildlife connectivity

CHAPTER 4. LIST OF PREPARERS

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

California Department of Transportation, District 2

Cody Barr	Water Quality Specialist
Ryan Bradshaw	Archaeologist
John Carroll	Archaeologist
Rajive Chadja	Hazardous Waste Specialist
Christopher Dennis	Paleontological Specialist
Buster Hansen	Engineer
Jason Lee	Air Quality, Noise, and Energy Specialist
John Luper	Associate Environmental Planner
Julia Riggins	Landscape Architect
Carolyn Sullivan	Senior Environmental Planner
David DeMar	<i>Acting</i> Environmental Office Chief
Theresa Tillson	Biologist
Kelly Timmons	Project Manager



CHAPTER 5. DISTRIBUTION LIST

Federal and State Agencies

California Department of Fish and Wildlife
601 Locust Street
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Central Valley Regional Water Quality Control Board
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P.O Box 3044
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CHAPTER 6. REFERENCES

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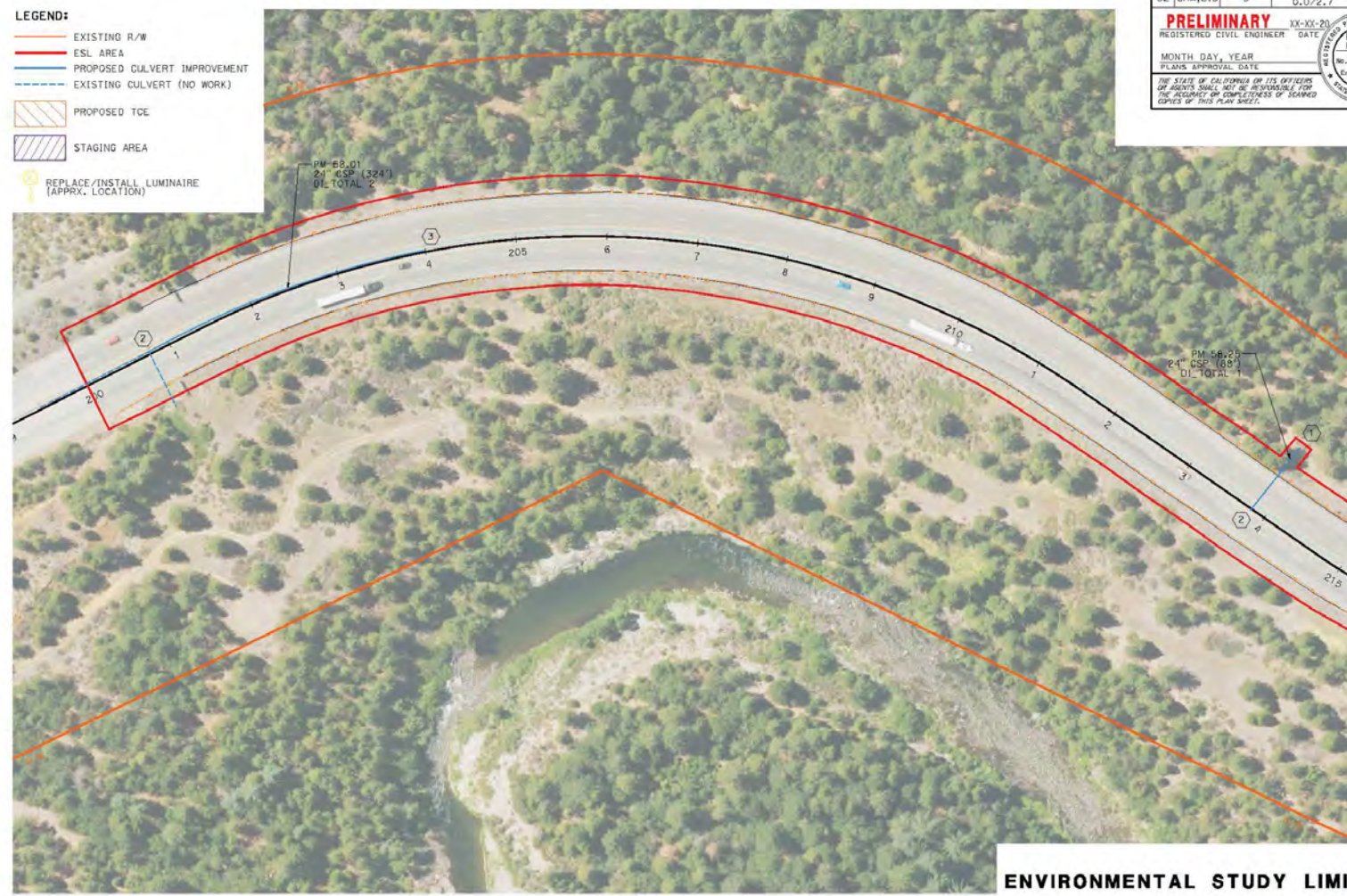
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APPENDIX A. PROJECT LAYOUTS



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 RELATIVE BORDER SCALE: 15 IN INCHES
 UNIT: 0315
 PROJECT NUMBER & PHASE: 0219000164
 DESIGN: TRAVIS A. GOREY
 CALCULATED: FABIO ROMERO
 CHECKED BY: BUSTER HANSEN
 REVISIONS:

- LEGEND:**
- EXISTING R/W
 - ESL AREA
 - PROPOSED CULVERT IMPROVEMENT
 - EXISTING CULVERT (NO WORK)
 - PROPOSED TCE
 - STAGING AREA
 - REPLACE/INSTALL LUMINAIRE (APPROX. LOCATION)



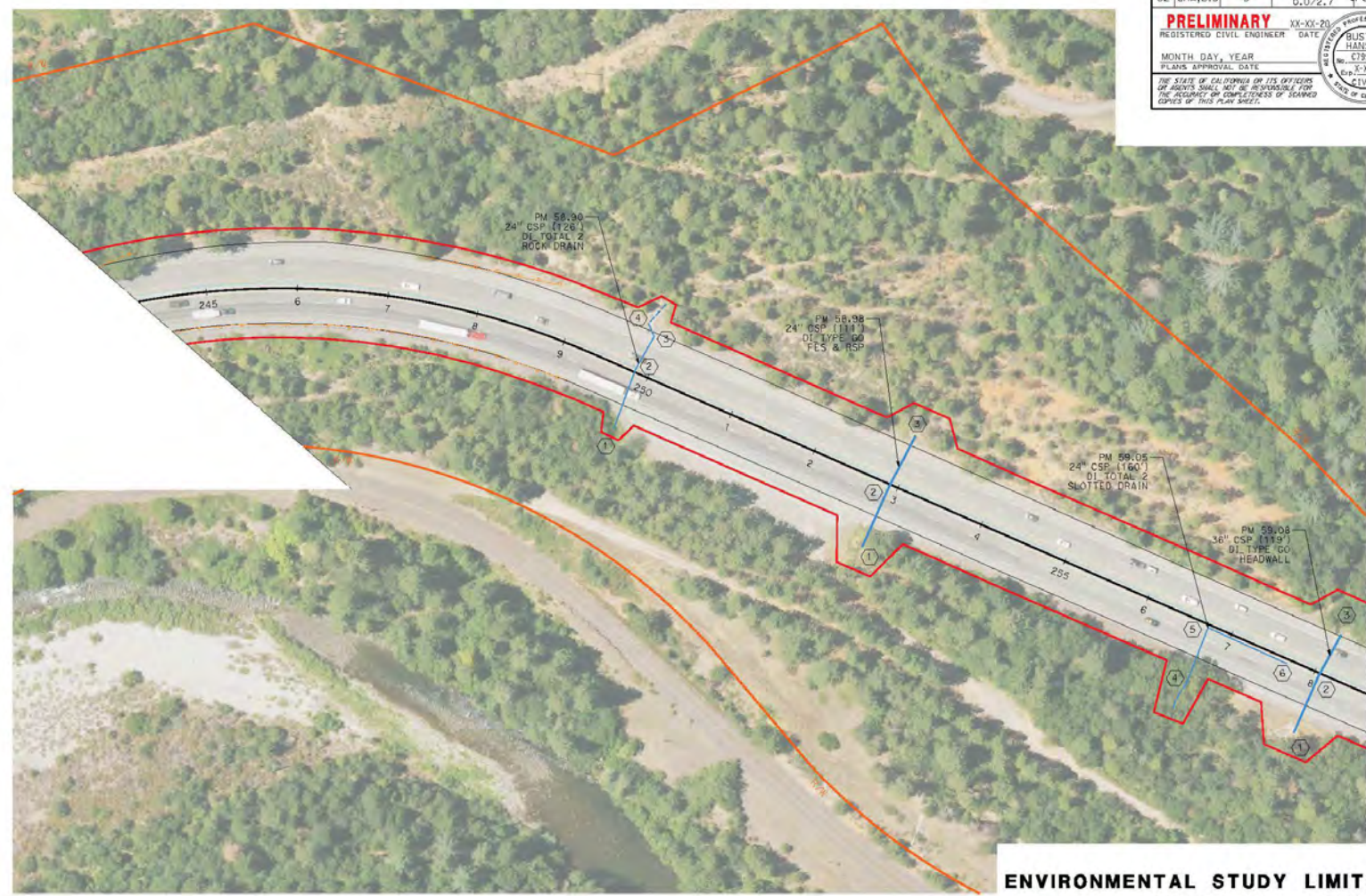
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02	SHASTA	5	58.0/67.02 0.0/2.7	68/70
PRELIMINARY REGISTERED CIVIL ENGINEER DATE MONTH DAY, YEAR PLANS APPROVAL DATE				
THE STATE OF CALIFORNIA ON ITS OFFICIALS OF AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SKETCHES COPIES OF THIS PLAN SHEET.				

ENVIRONMENTAL STUDY LIMITS
 SCALE: 1" = 50'
ESL-1

DATE PLOTTED: 10/20/2024
 TIME PLOTTED: 12:22:46 PM

DESIGN	FUNCTIONAL SUPERVISOR	CALCULATED/DESIGNED BY	REVISOR	DATE
TRAVIS A. GOREY	TRAVIS A. GOREY	FABIO ROMERO	BUSTER HANSEN	

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION



Sheet	COUNTY	ROUTE	POST MILES	SHEET TOTAL
02	SHASTA	5	58.0/67.02 0.0/2.7	8/GRU/TOTPG
PRELIMINARY				
REGISTERED CIVIL ENGINEER			DATE	
MONTH DAY, YEAR				
PLANS APPROVAL DATE				

ENVIRONMENTAL STUDY LIMITS
SCALE: 1" = 50'
ESL-4

DATE PLOTTED => 10/20/2024
TIME PLOTTED => 12:34:15 PM

DESIGN	FUNCTIONAL SUPERVISOR	CALCULATED/DESIGNED BY	REVISOR	DATE
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	TRAVIS A. GOREY	FABIO ROMERO	BUSTER HANSEN	

El-Gabbara

BORDER LAST REVISED 7/2/2010

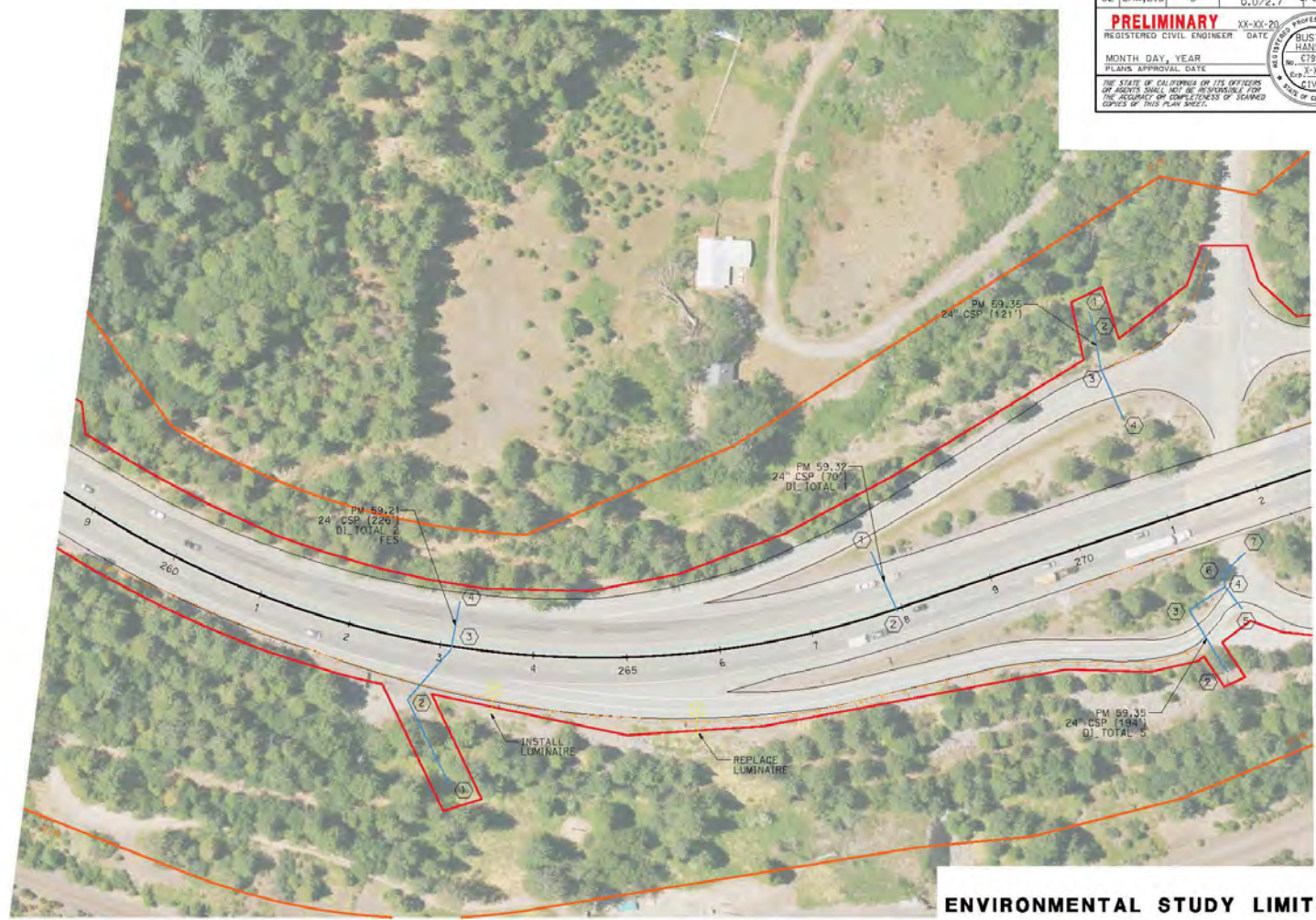
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RELATIVE BORDER SCALE
IS IN INCHES

UNIT 0315

PROJECT NUMBER & PHASE

0219000164



ENVIRONMENTAL STUDY LIMITS
SCALE: 1" = 50'
ESL-5

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PRELIMINARY				
REGISTERED CIVIL ENGINEER			DATE	
MONTH DAY, YEAR			XX-XX-20	
PLANS APPROVAL DATE				
THE STATE OF CALIFORNIA ON ITS OFFICIALS OF AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SKETCHES COPIES OF THIS PLAN SHEET.				
REGISTERED PROFESSIONAL ENGINEER BUSTER HANSEN No. C79597 Exp. XX-XX-XX CIVIL STATE OF CALIFORNIA				

DATE PLOTTED => 10/20/2024
TIME PLOTTED => 12:40:15 PM

REGISTERED PROFESSIONAL ENGINEER
BUSTER HANSEN
No. C79597
Exp. X-XX-XX
CIVIL
STATE OF CALIFORNIA



DATE PLOTTED => 11/6/2024	
TIME PLOTTED => 12:03:20 PM	

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

EE-Graphics DESIGN

TRAVIS A GURNEY

DESIGNED BY

FABIO ROMERO

REVISOR BY	DATE REVISED
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BORDER LAST REVISED 7/2/2010

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RELATIVE BORDER SCALE
IS IN INCHES



UNIT 0315

PROJECT NUMBER & PHASE

0219000164

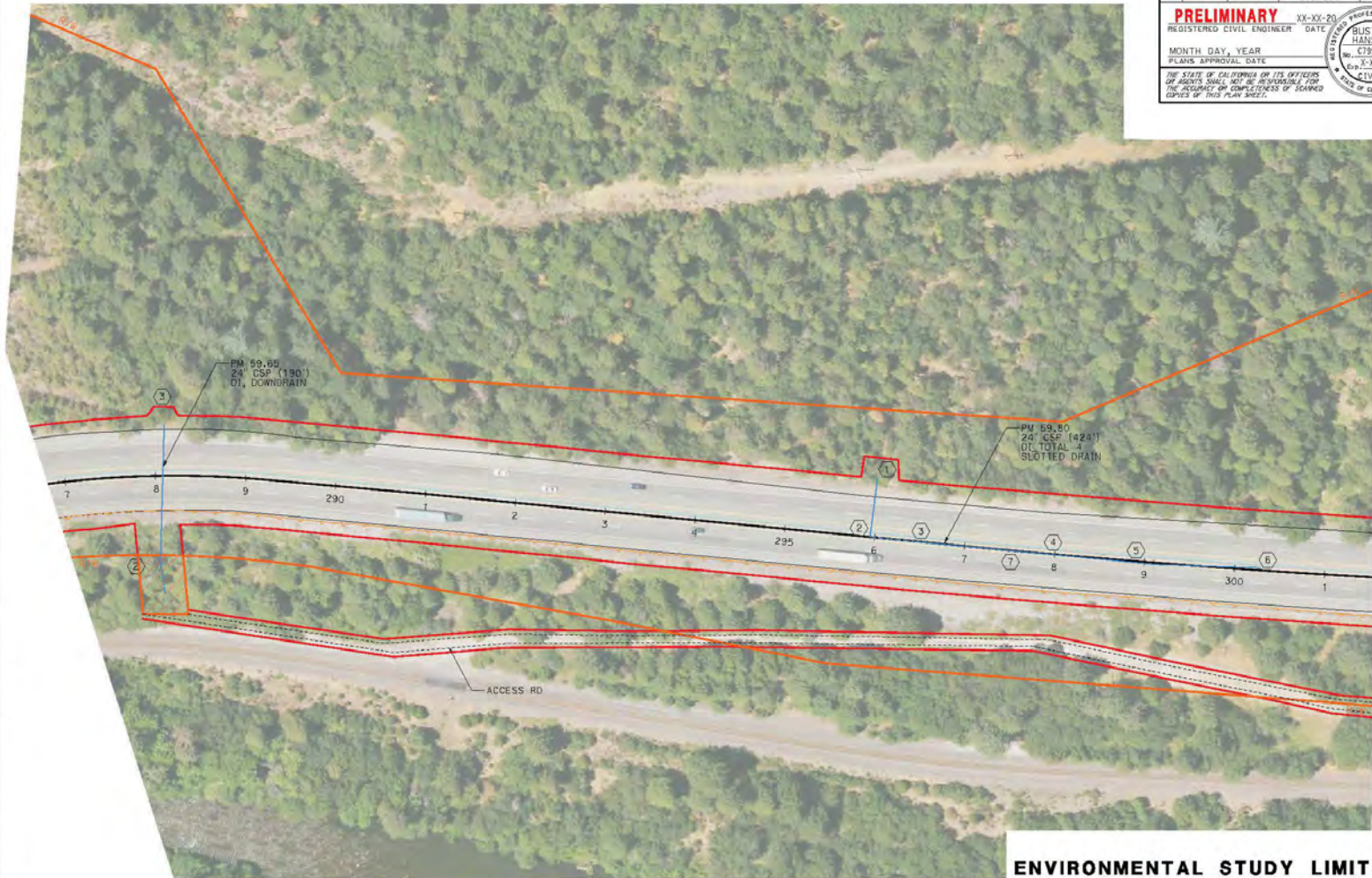
Dist#	COUNTY	ROUTE	POST MILES	TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	SHA,SIS	5	58.0/67.02	0.0/2.0	0F	GNUL07.0

PRELIMINARY **XX-XX-20**
 REGISTERED CIVIL ENGINEER DATE

MONTH DAY, YEAR
 PLANS APPROVAL DATE

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

REGISTERED PROFESSIONAL CIVIL ENGINEER
 BUSTER HANSEN
 C79597
 No. XX-XX-XX
 CIVIL
 STATE OF CALIFORNIA



ENVIRONMENTAL STUDY LIMITS
SCALE: 1" = 50' **ESL-7**

DATE PLOTTED => 11/6/2024
TIME PLOTTED => 12:09:02 PM

X
D:\pro\3\0220\010\0001\gn\Map\img\ESL\0219000164r007.dgn

BORDER LAST REVISED 7/2/2010

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USERNAME =>
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RELATIVE BORDER SCALE
IS IN INCHES



UNIT 0315

PROJECT NUMBER & PHASE

0219000164

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	SHA,SIS	5	50.0/67.02 0.0/2.7	SPGNL	TOTPR

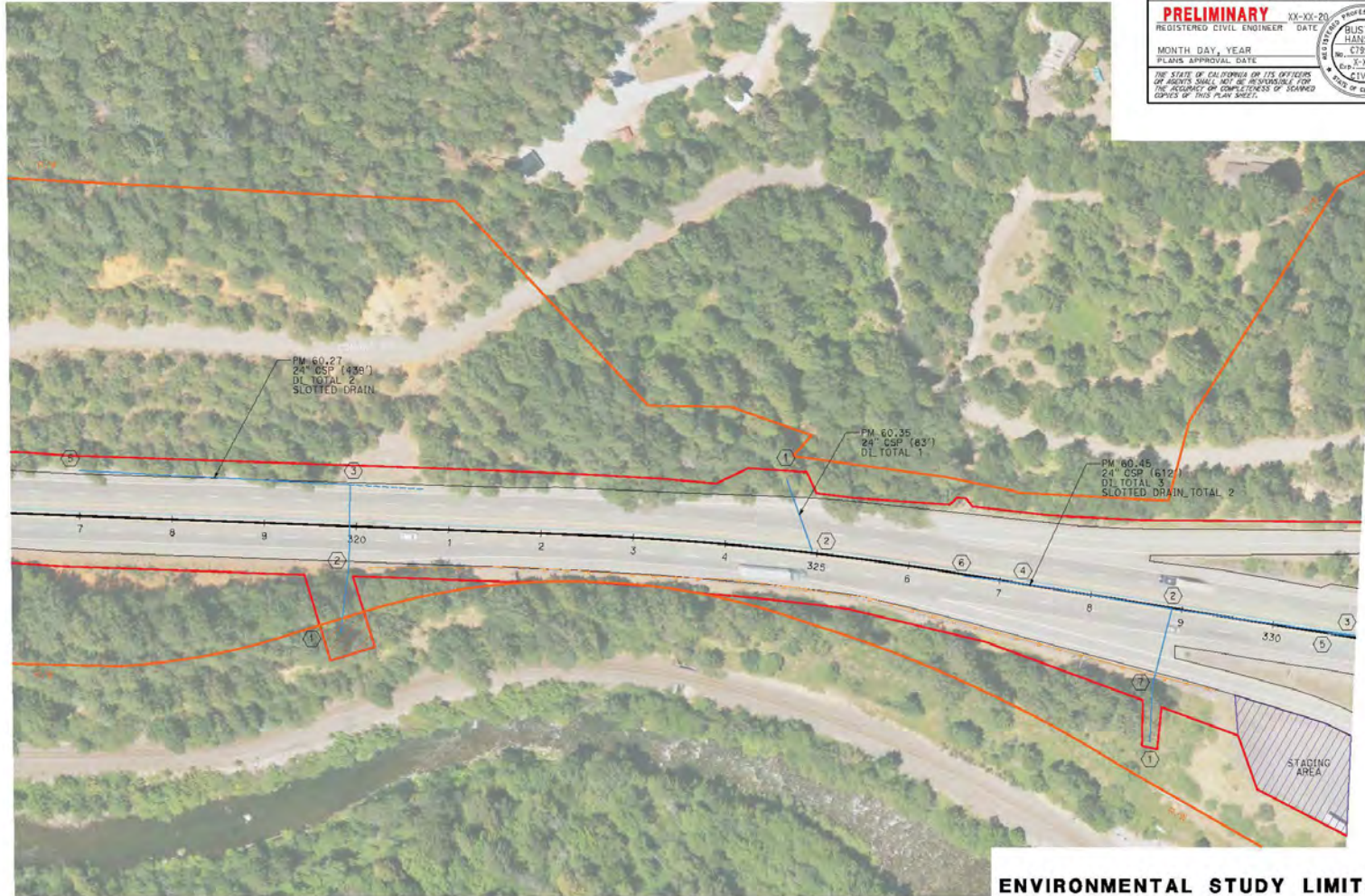
PRELIMINARY
REGISTERED CIVIL ENGINEER

MONTH DAY, YEAR

PLANS APPROVAL DATE

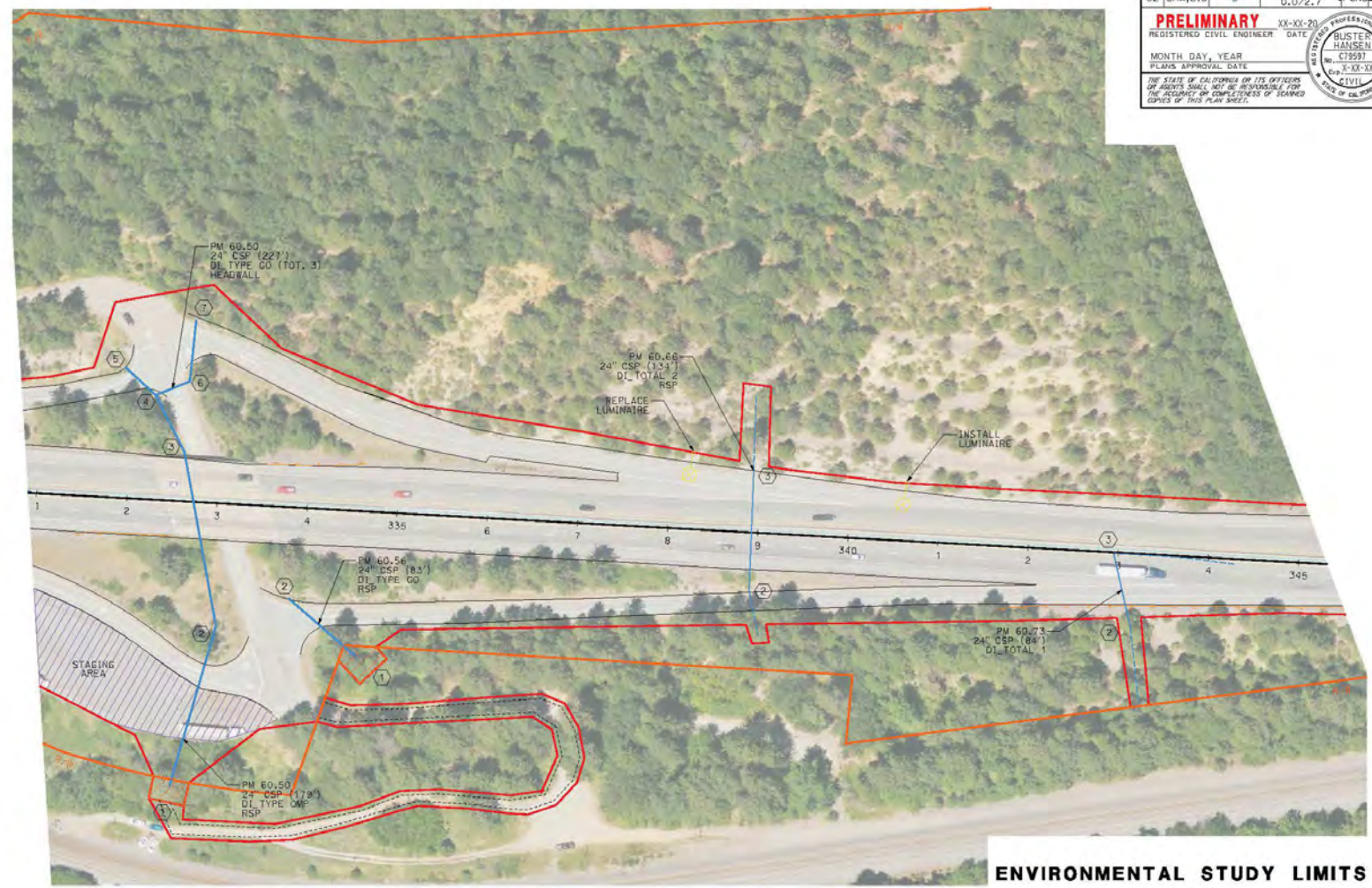
THE STATE OF CALIFORNIA OR ITS
OR AGENTS SHALL NOT BE HELD
THE ACCURACY OR COMPLETENESS
COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER
BUSTER HANSEN
No. C79597
Exp. X-XX-XX
CIVIL
STATE OF CALIFORNIA



DATE PLOTTED => 11/6/2024
TIME PLOTTED => 12:13:13 PM

DESIGN	FUNCTIONAL SUPERVISOR TRAVIS A. GOREY	CALCULATED- DESIGNED BY	REVISOR	DATE
			FABIO ROMERO	
		CHECKED BY	BUSTER HANSEN	



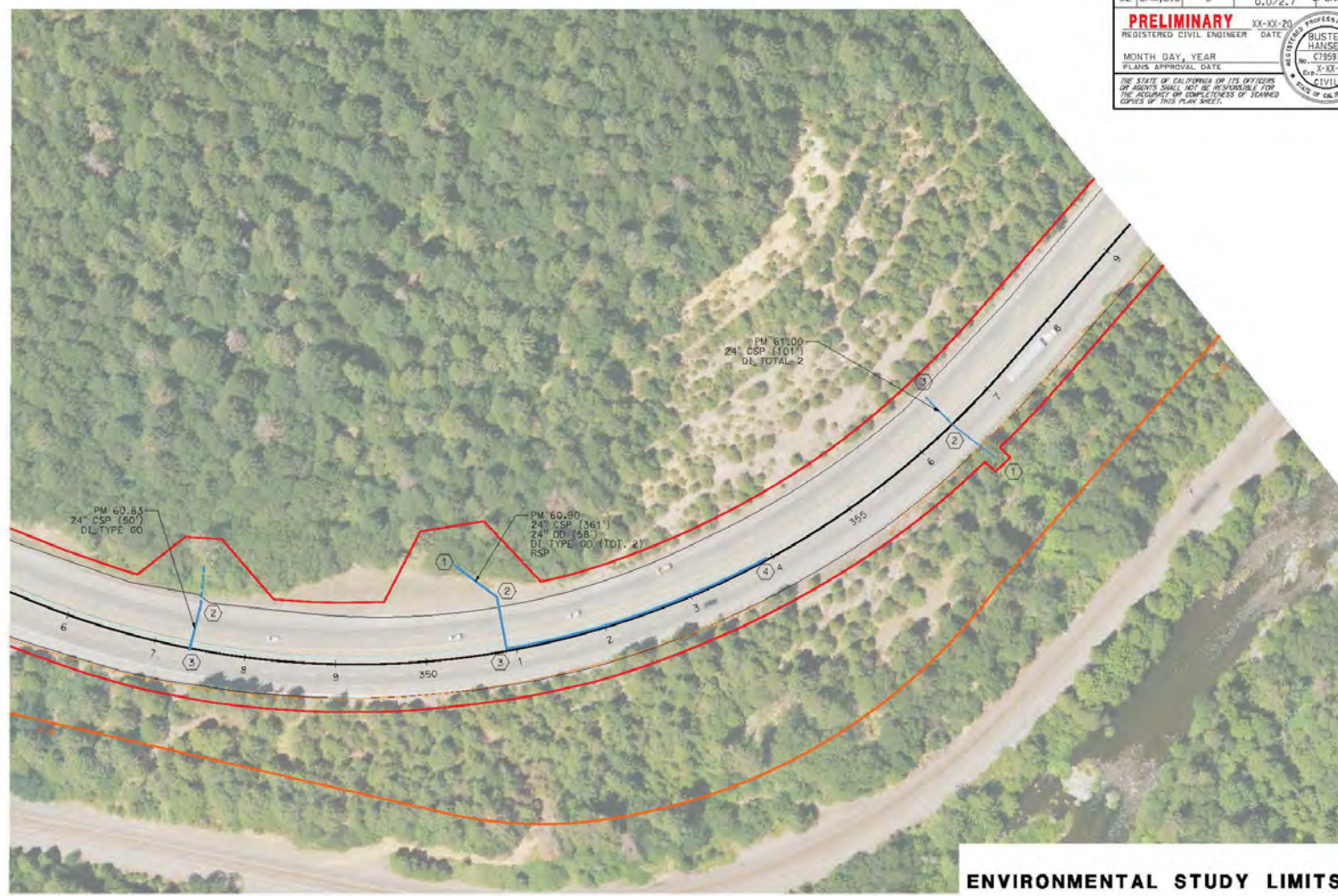
Dist	COUNTY	ROUTE	PORT MILES	(SHEET) TOTAL
02	SHASTA	5	58.0/67.02	58.0/67.02
			0.0/2.7	0.0/2.7
PRELIMINARY				
REGISTERED CIVIL ENGINEER			DATE	
MONTH DAY, YEAR				
PLANS APPROVAL DATE				
THE STATE OF CALIFORNIA ON ITS OFFICIALS OF AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SKETCHES COPIES OF THIS PLAN SHEET.			PROFESSIONAL ENGINEER BUSTER HANSEN No. C79597 Exp. 1-XX-XX CIVIL STATE OF CALIFORNIA	

ENVIRONMENTAL STUDY LIMITS
 SCALE: 1" = 50'
ESL-10

LAST MODIFIED DATE PLOTTED => 11/6/2020
 TIME PLOTTED => 12:16:50 PM

DESIGN	FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	REVISOR	DATE
TRAVIS A. GOREY	TRAVIS A. GOREY	TRAVIS A. GOREY	FABIO ROMERO	DATE
			BUSTER HANSEN	DATE

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 0219000164.dgn



ENVIRONMENTAL STUDY LIMITS
 SCALE: 1" = 50'
ESL-11

Sheet	COUNTY	ROUTE	PORT MILES	(SHEET) TOTAL
02	SHASTA	5	58.0/67.02	8/GRU/TOTPG
PRELIMINARY REGISTERED CIVIL ENGINEER DATE MONTH DAY, YEAR PLANS APPROVAL DATE			XX-XX-20 BUSTER HANSEN No. C79597 Exp. XX-XX-XX CIVIL STATE OF CALIFORNIA	

THE STATE OF CALIFORNIA ON ITS OFFICIALS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SKETCHES COPIED OF THIS PLAN SHEET.

DATE PLOTTED: 10/31/2024
 TIME PLOTTED: 9:02:21 AM

DESIGN	FUNCTIONAL SUPERVISOR TRAVIS A. GORREY	CALCULATED/DESIGNED BY	FABIO ROMERO	REVISED BY	
		CHECKED BY	BUSTER HANSEN	DATE REVISED	

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BORDER LAST REVISED 7/2/2010

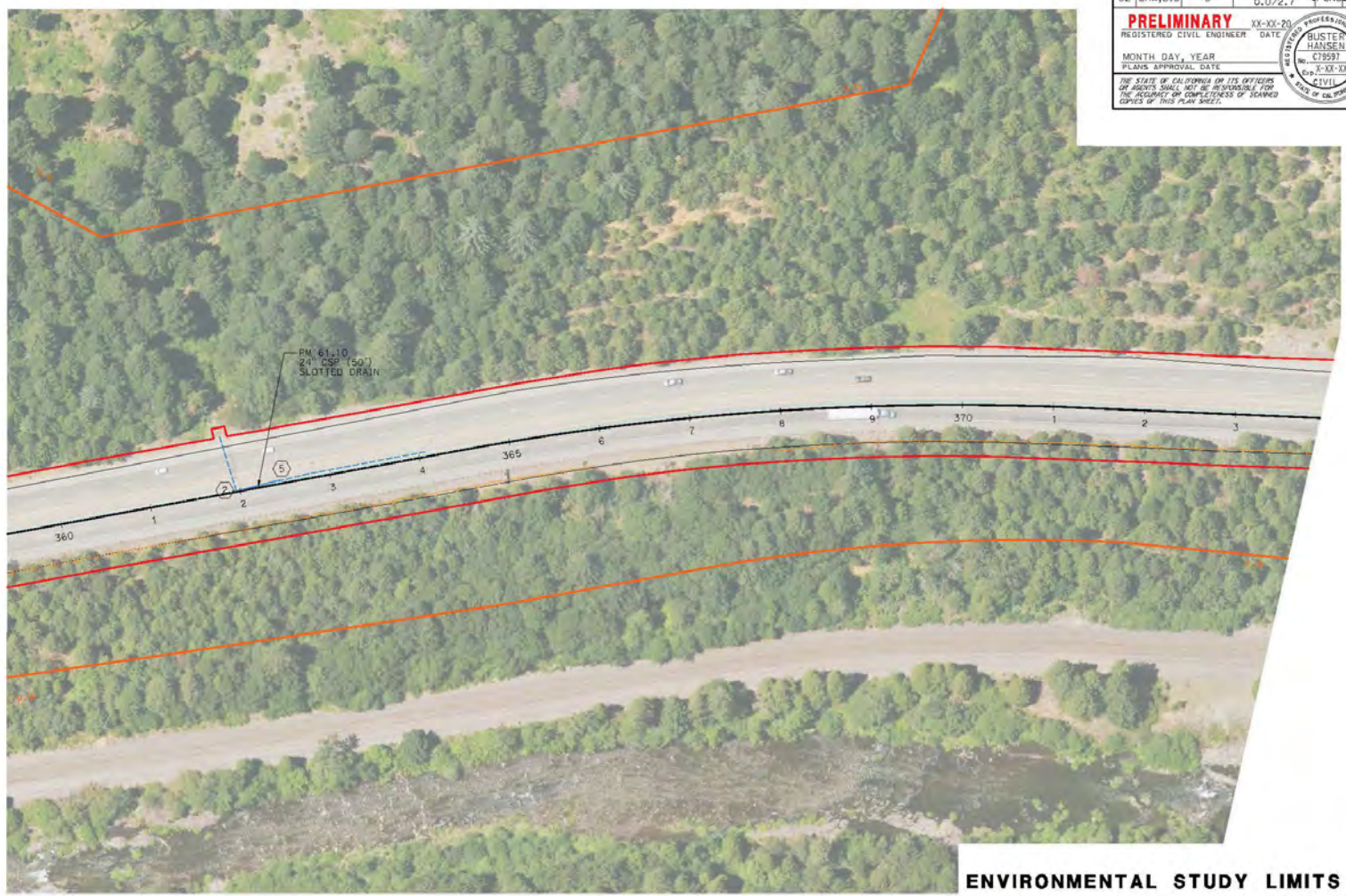
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RELATIVE BORDER SCALE
IS IN INCHES

UNIT 0315

PROJECT NUMBER & PHASE

0219000164



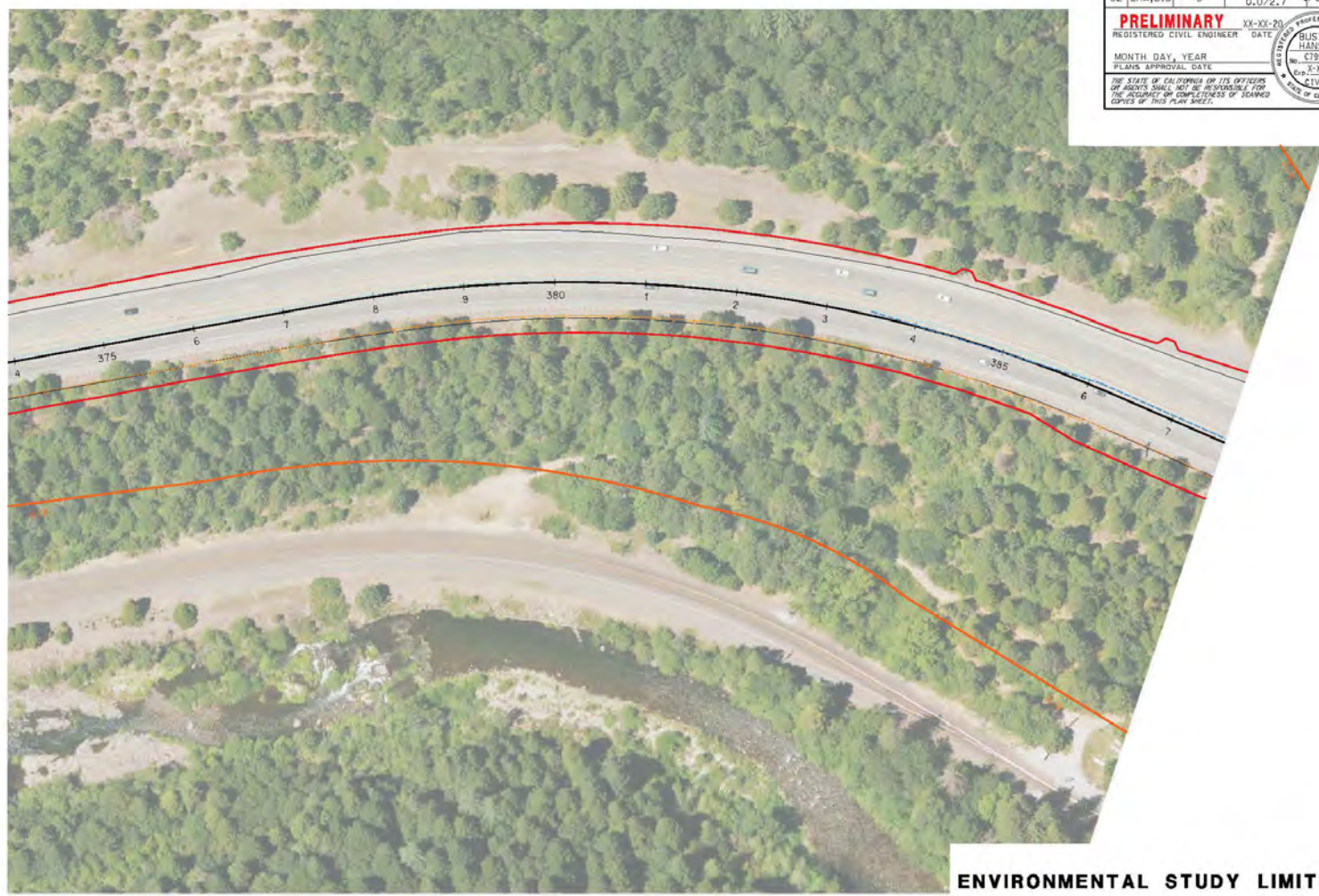
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02	SHASTA	5	58.0/67.02	8/GRU/TOTPG
			0.0/2.7	
PRELIMINARY			XK-XY-20	
REGISTERED CIVIL ENGINEER			DATE	
MONTH DAY, YEAR				
PLANS APPROVAL DATE				
THE STATE OF CALIFORNIA ON ITS OFFICIALS OF AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SKETCHES COPIED OF THIS PLAN SHEET.			REGISTERED PROFESSIONAL ENGINEER BUSTER HANSEN No. C79597 Exp. 1-XX-XX CIVIL STATE OF CALIFORNIA	

ENVIRONMENTAL STUDY LIMITS
SCALE: 1" = 50'
ESL-12

LAST MODIFIED DATE PLOTTED => 10/20/2024
TIME PLOTTED => 11:01:32 PM

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED/DESIGNED BY	REVISOR	DATE
DESIGN	TRAVIS A. GOREY	CHECKED BY	FABIO ROMERO	DATE
			BUSTER HANSEN	

PROJECT: 02 SHA, SIS
 DRAWING: 02 SHA, SIS
 DATE: 7/2/2010



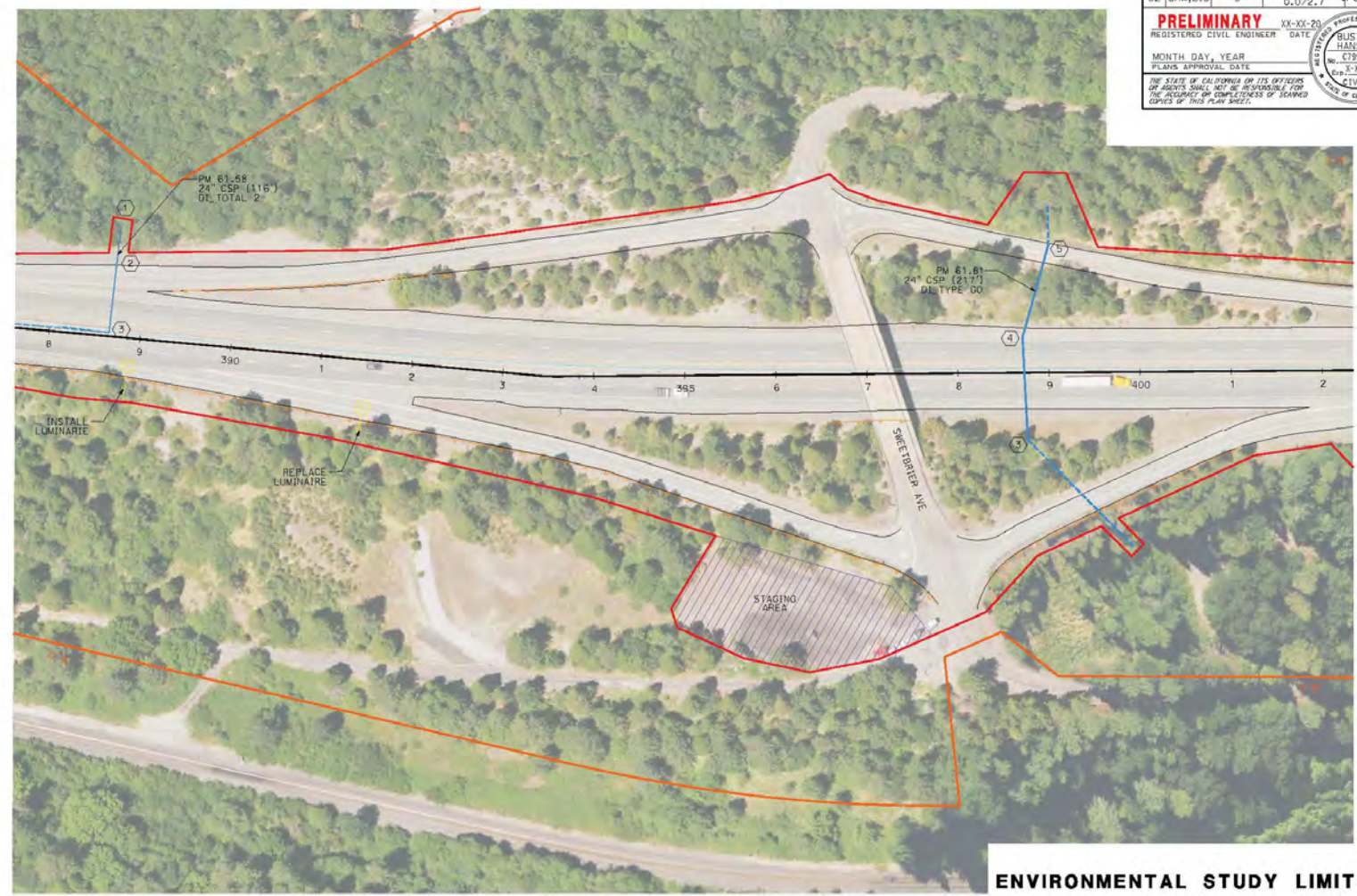
Sheet	COUNTY	ROUTE	POST MILES	(SHEET) TOTAL
02	SHA, SIS	5	58.0/67.02	67/100
			0.0/2.7	2/7
PRELIMINARY				
REGISTERED CIVIL ENGINEER			DATE	
MONTH DAY, YEAR				
PLANS APPROVAL DATE				
BUSTER HANSEN No. C79597 Exp. 12-31-11 CIVIL STATE OF CALIFORNIA			XX-XX-20 BUSTER HANSEN No. C79597 Exp. 12-31-11 CIVIL STATE OF CALIFORNIA	

ENVIRONMENTAL STUDY LIMITS
 SCALE: 1" = 50'
ESL-13

DATE PLOTTED => 10/20/2024
 TIME PLOTTED => 1:24:15 PM

DESIGN	FUNCTIONAL SUPERVISOR	CALCULATED/DESIGNED BY	REVISOR	DATE
	TRAVIS A. GORREY		FABIO ROMERO	
		CHECKED BY	BUSTER HANSEN	

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 PROJECT: 0219000164
 SHEET: 0219000164-014.dgn



Sheet	COUNTY	ROUTE	PORT MILES	(SHEET) TOTAL
02	SHASTA	5	58.0/67.02	1/80
			0.0/2.7	8/GRU/10TP

PRELIMINARY
 REGISTERED CIVIL ENGINEER DATE
 MONTH DAY, YEAR
 PLEASE APPROVAL DATE

XX-XX-20
 BUSTER HANSEN
 No. C79597
 Exp. XX-XX-XX
 CIVIL
 STATE OF CALIFORNIA

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ENVIRONMENTAL STUDY LIMITS
 SCALE: 1" = 50'
ESL-14

LAST MODIFIED DATE PLOTTED => 10/20/2024
 TIME PLOTTED => 1:28:39 PM

DESIGN	FUNCTIONAL SUPERVISOR TRAVIS A. GOREY	CALCULATED- DESIGNED BY	REVISOR	DATE
			FABIO ROMERO	
		CHECKED BY	BUSTER HANSEN	

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

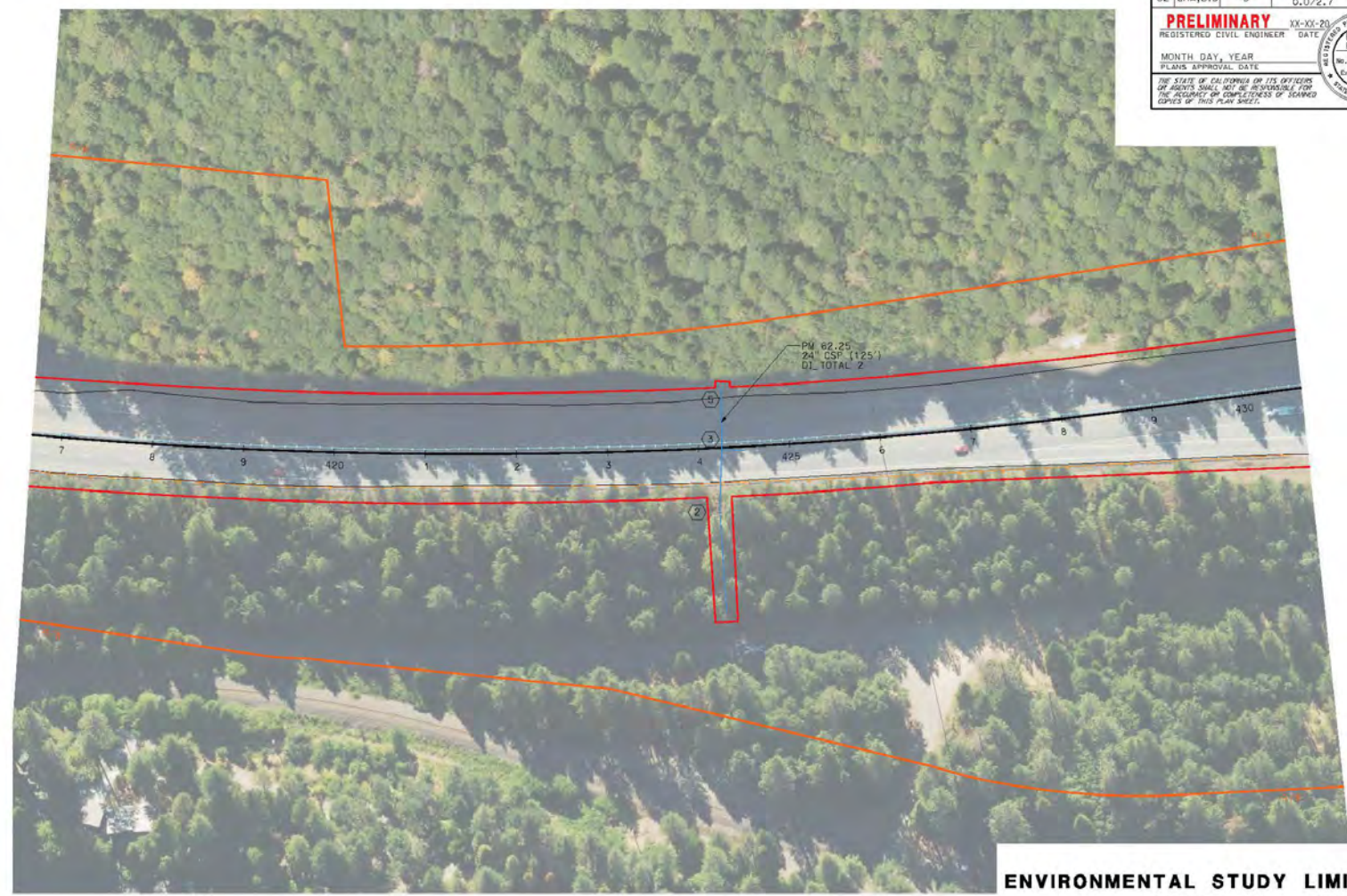


ENVIRONMENTAL STUDY LIMITS
SCALE: 1" = 50'
ESL-15

Sheet	COUNTY	ROUTE	POST MILES	(SHEET) TOTAL
02	SHASTA	5	TOTAL PROJECT 58.0/67.02 0.0/2.1	1 No. SHEETS
PRELIMINARY			DATE	
REGISTERED CIVIL ENGINEER			DATE	
MONTH DAY, YEAR			DATE	
PLANS APPROVAL DATE			DATE	
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SKETCHES COPIES OF THIS PLAN SHEET.				

DATE PLOTTED => 11/6/2021
TIME PLOTTED => 12:25:07 PM

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED/DESIGNED BY	REVISOR	DATE
DESIGN	TRAVIS A. GOREY	CHECKED BY	FABIO ROMERO	DATE
			BUSTER HANSEN	DATE



ENVIRONMENTAL STUDY LIMITS
SCALE: 1" = 50'
ESL-16

Sheet	COUNTY	ROUTE	PORT MILES	(SHEET) TOTAL
02	SHASTA	5	58.0/67.02	67/100
			0.0/2.7	2/100
PRELIMINARY				
REGISTERED CIVIL ENGINEER			DATE	
MONTH DAY, YEAR				
PLANS APPROVAL DATE				
BUSTER HANSEN No. C79597 Exp. 1-XX-XX CIVIL STATE OF CALIFORNIA			XX-XX-20 8/11/2020	

LAST MODIFIED DATE PLOTTED => 11/6/2020
TIME PLOTTED => 12:28:15 PM

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN	FUNCTIONAL SUPERVISOR TRAVIS A. GOREY	CALCULATED/DESIGNED BY	FABIO ROMERO	REVISED BY	DATE REVISED
El-Gottman			CHECKED BY	BUSTER HANSEN		

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BORDER LAST REVISED 7/2/2010

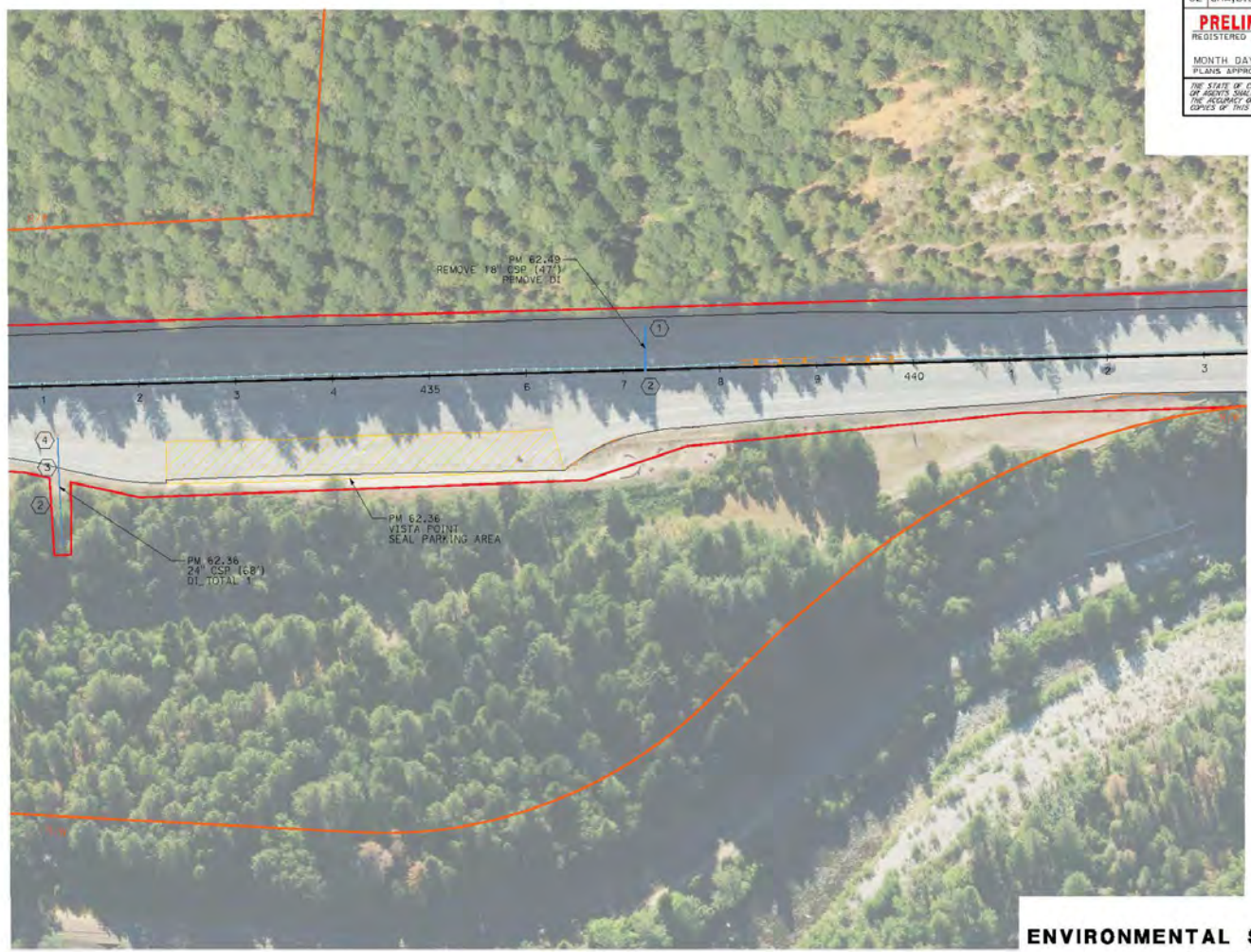
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RELATIVE BORDER SCALE
IS IN INCHES

UNIT 0315

PROJECT NUMBER & PHASE

0219000164



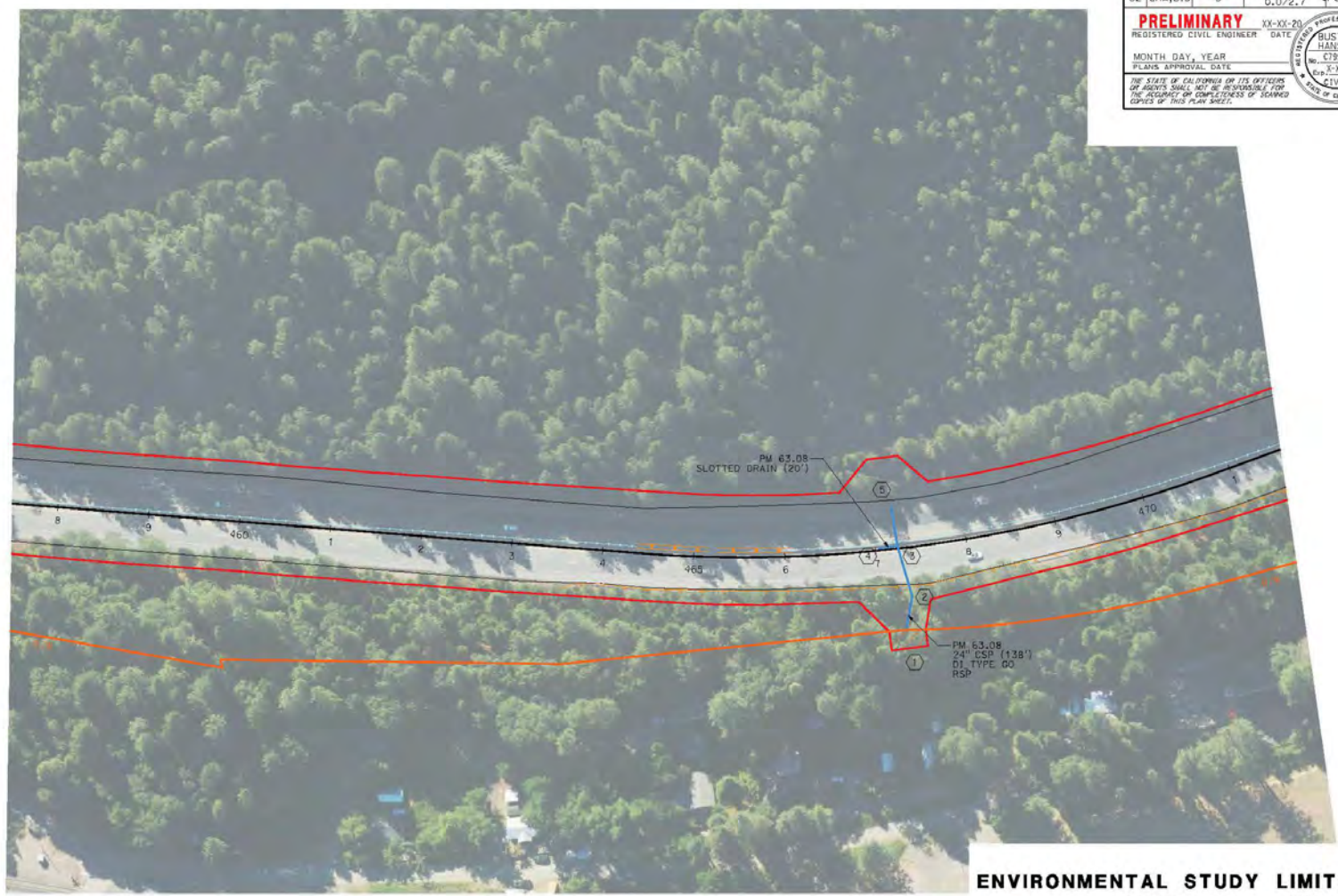
Sheet	COUNTY	ROUTE	PORT MILES	(SHEET) TOTAL
02	SHASTA	5	TOTAL PROJECT 58.0/67.02 0.0/2.7	No. SHEETS 8/GRU/TOTPG
PRELIMINARY				
REGISTERED CIVIL ENGINEER		DATE	XV-XX-20	
MONTH DAY, YEAR		BUSTER HANSEN		
PLANS APPROVAL DATE		C79597		
		No. CIVIL		
THE STATE OF CALIFORNIA ON ITS OFFICIALS OF AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SKETCHES COPIES OF THIS PLAN SHEET.				

ENVIRONMENTAL STUDY LIMITS
SCALE: 1" = 50'
ESL-17

LAST MODIFIED DATE PLOTTED => 10/20/2024
TIME PLOTTED => 1:47:05 PM

DESIGN	FUNCTIONAL SUPERVISOR	CALCULATED/DESIGNED BY	REVISOR	REVISOR
	TRAVIS A. GOREY		FABIO ROMERO	
		CHECKED BY	BUSTER HANSEN	
				DATE REVISED

P:\Projects\34260\GIS\MapInfo\MapInfo\MapInfo\MapInfo.dgn
 STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 0219000164



Sheet	COUNTY	ROUTE	POST MILES	(SHEET) TOTAL
02	SHASTA	5	58.0/67.02 0.0/2.2	No. SHEETS 8/GRU/TOTPG
PRELIMINARY REGISTERED CIVIL ENGINEER DATE MONTH DAY, YEAR PLANS APPROVAL DATE				
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SKETCHES COPIES OF THIS PLAN SHEET.				



ENVIRONMENTAL STUDY LIMITS
 SCALE: 1" = 50'
ESL-19

LAST MODIFIED DATE PLOTTED => 11/6/2020
 TIME PLOTTED => 12:32:28 PM

DESIGN	FUNCTIONAL SUPERVISOR TRAVIS A. GOREY	CALCULATED- DESIGNED BY CHECKED BY	FABIO ROMERO BUSTER HANSEN	REVISED BY DATE REVISED
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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION



NOTE: SCOPE OF WORK AT CASTLE CREEK BRIDGE INCLUDES A 4.5" REINFORCED CONCRETE DECK-ON-DECK WITH 1" POLYESTER CONCRETE OVERLAY, TYPE 842 BRIDGE RAILING, AND A TYPE 60 MEDIAN BARRIER



City	COUNTY	ROUTE	PORT MILES	(SHEET) TOTAL
OZ SHA, SIS	5		58.0/67.02	8/GRU/TOTPG
PRELIMINARY				
REGISTERED CIVIL ENGINEER			DATE	
MONTH DAY, YEAR				
PLANS APPROVAL DATE				
THE STATE OF CALIFORNIA ON ITS OFFICIALS OF AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SKETCHES COPIES OF THIS PLAN SHEET.			X-XX-20 BUSTER HANSEN C79597 CIVIL STATE OF CALIFORNIA	

ENVIRONMENTAL STUDY LIMITS
SCALE: 1" = 50'
ESL-20

LAST MODIFIED DATE PLOTTED => 10/31/2024 TIME PLOTTED => 10:41:55 AM

DESIGN	FUNCTIONAL SUPERVISOR TRAVIS A. GURNEY	CALCULATED DESIGNED BY	REVISOR FABIO ROMERO	REVISION DATE
		CHECKED BY	DESIGNED BY BUSTER HANSEN	REVISION DATE

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION



NOTE: SCOPE OF WORK AT CASTELLA UC INCLUDES A 4.5" REINFORCED CONCRETE DECK-ON-DECK WITH 1" POLYESTER CONCRETE OVERLAY, TYPE B42 BRIDGE RAILING, AND A TYPE 60 MEDIAN BARRIER



DIS#	COUNTY	ROUTE	POST MILES	SHEET TOTAL
02	SHASTA	5	58.0/67.02	0.0/2.7
			SPGNL	TOTL
			0.0/2.7	0.0/2.7

PRELIMINARY
REGISTERED CIVIL ENGINEER DATE
MONTH DAY, YEAR
PLANS APPROVAL DATE

XX-XX-20
BUSTER
HANSEN
CIVIL
ENGINEER
STATE OF CALIFORNIA

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

ENVIRONMENTAL STUDY LIMITS
SCALE: 1" = 50'
ESL-21

BORDER LAST REVISED 7/2/2010

USERNAME =>
DDW FILE => ...\\ESL\\0219000164e021.dgn

RELATIVE BORDER SCALE
15 IN INCHES

UNIT 0315

PROJECT NUMBER & PHASE

0219000164

LAST MODIFIED DATE PLOTTED => 11/8/2008
TIME PLOTTED => 12:17:56 PM

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN	FUNCTIONAL SUPERVISOR TRAVIS A. GOREY	CALCULATED/DESIGNED BY	FABIO ROMERO	REVISED BY	
			CHECKED BY	BUSTER HANSEN	DATE REVISED	

PROJECT: J:\2024\01\01\MapInfo\ESL\0219000164\ESL-23.dgn
 STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION



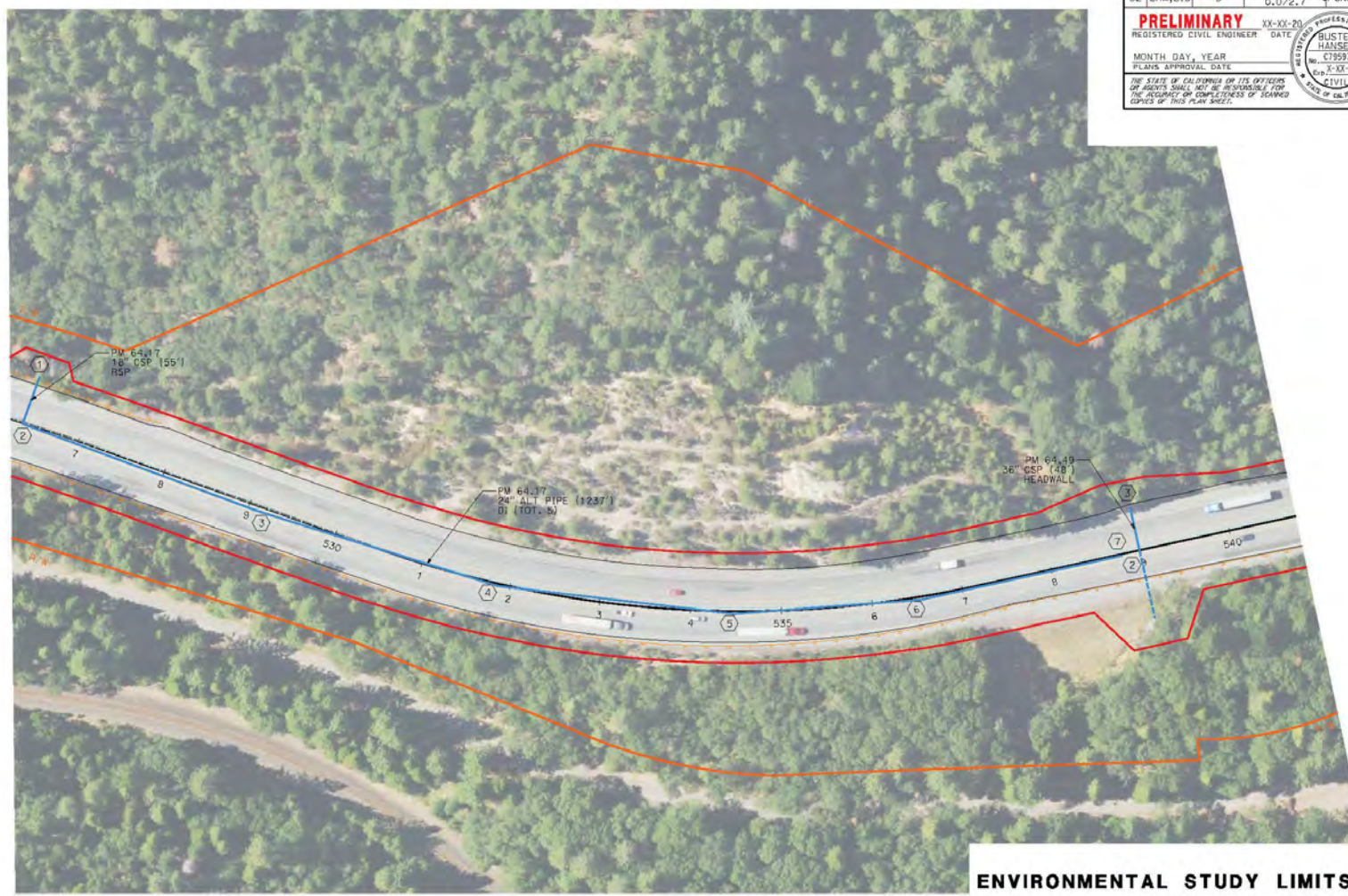
Dist	COUNTY	ROUTE	PORT MILES	(SHEET) TOTAL
02	SHASTA	5	58.0/67.02	No. SHEETS
			0.0/2.7	8/GRU/TOTPG
PRELIMINARY				
REGISTERED CIVIL ENGINEER			DATE	
MONTH DAY, YEAR				
PLANS APPROVAL DATE				
BUSTER HANSEN No. C79597 Exp. 1-XX-XX CIVIL			REGISTERED PROFESSIONAL ENGINEER STATE OF CALIFORNIA	

ENVIRONMENTAL STUDY LIMITS
 SCALE: 1" = 50'
ESL-23

LAST MODIFIED DATE PLOTTED => 10/20/2024
 TIME PLOTTED => 2:48:50 PM

DESIGN	FUNCTIONAL SUPERVISOR	CALCULATED/DESIGNED BY	REVISOR	DATE
TRAVIS A. GOREY	FABIO ROMERO	BUSTER HANSEN		

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 0219000164.dgn



Sheet	COUNTY	ROUTE	PORT MILES	(SHEET) TOTAL
02	SHASTA	5	58.0/67.02	No. SHEETS
			0.0/2.1	8/GRU/TOTPG

PRELIMINARY
 REGISTERED CIVIL ENGINEER DATE
 MONTH DAY, YEAR
 PLANS APPROVAL DATE

XX-XX-20
 BUSTER HANSEN
 No. C79597
 CIVIL
 STATE OF CALIFORNIA

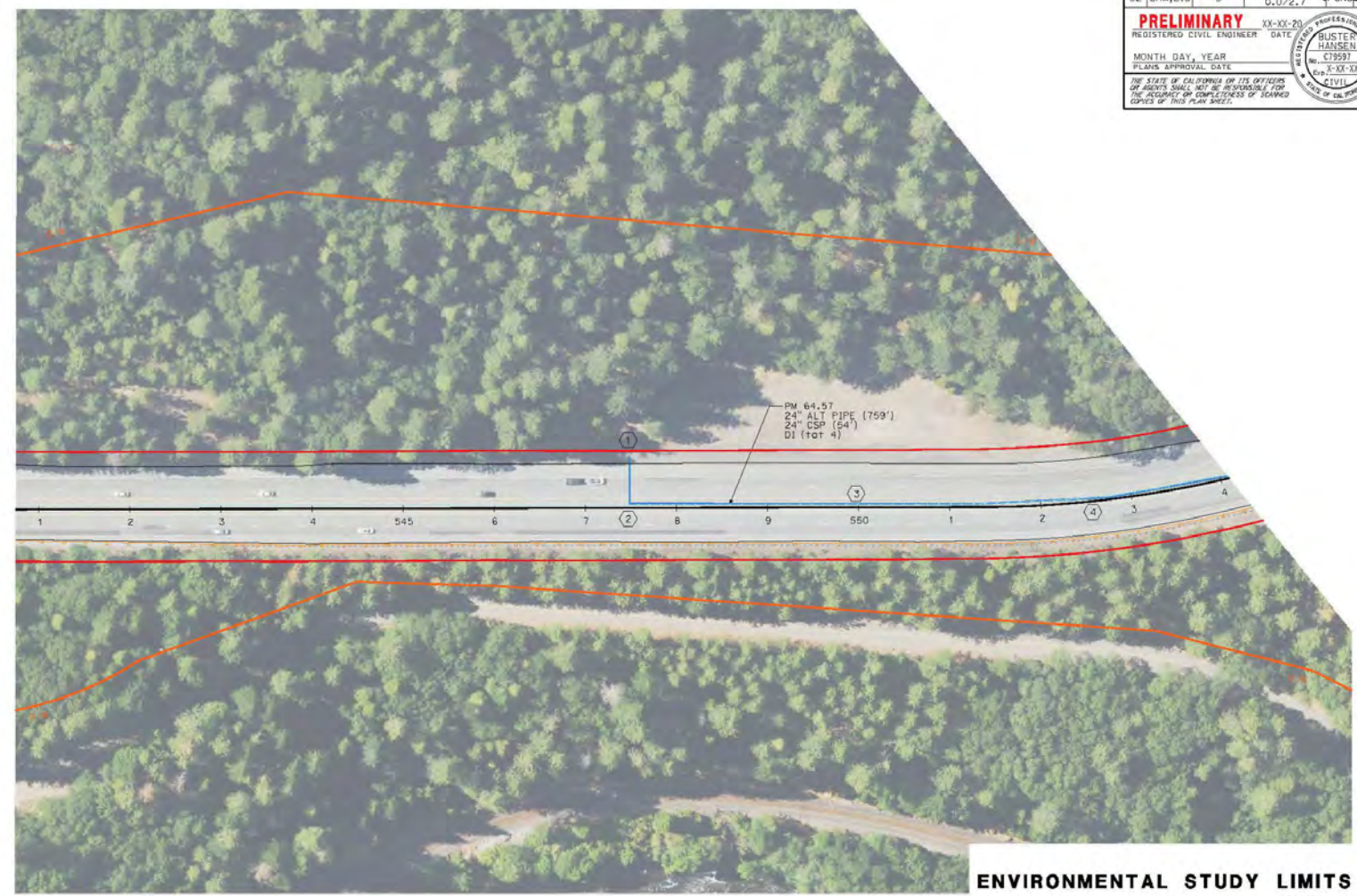
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SKETCHES COPIED BY THIS PLAN SHEET.

ENVIRONMENTAL STUDY LIMITS
 SCALE: 1" = 50'
ESL-24

DATE PLOTTED => 10/20/2024
 TIME PLOTTED => 2:53:26 PM

DESIGN	FUNCTIONAL SUPERVISOR TRAVIS A. GOREY	CALCULATED/DESIGNED BY	FABIO ROMERO	REVISED BY	
		CHECKED BY	BUSTER HANSEN	DATE REVISED	

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
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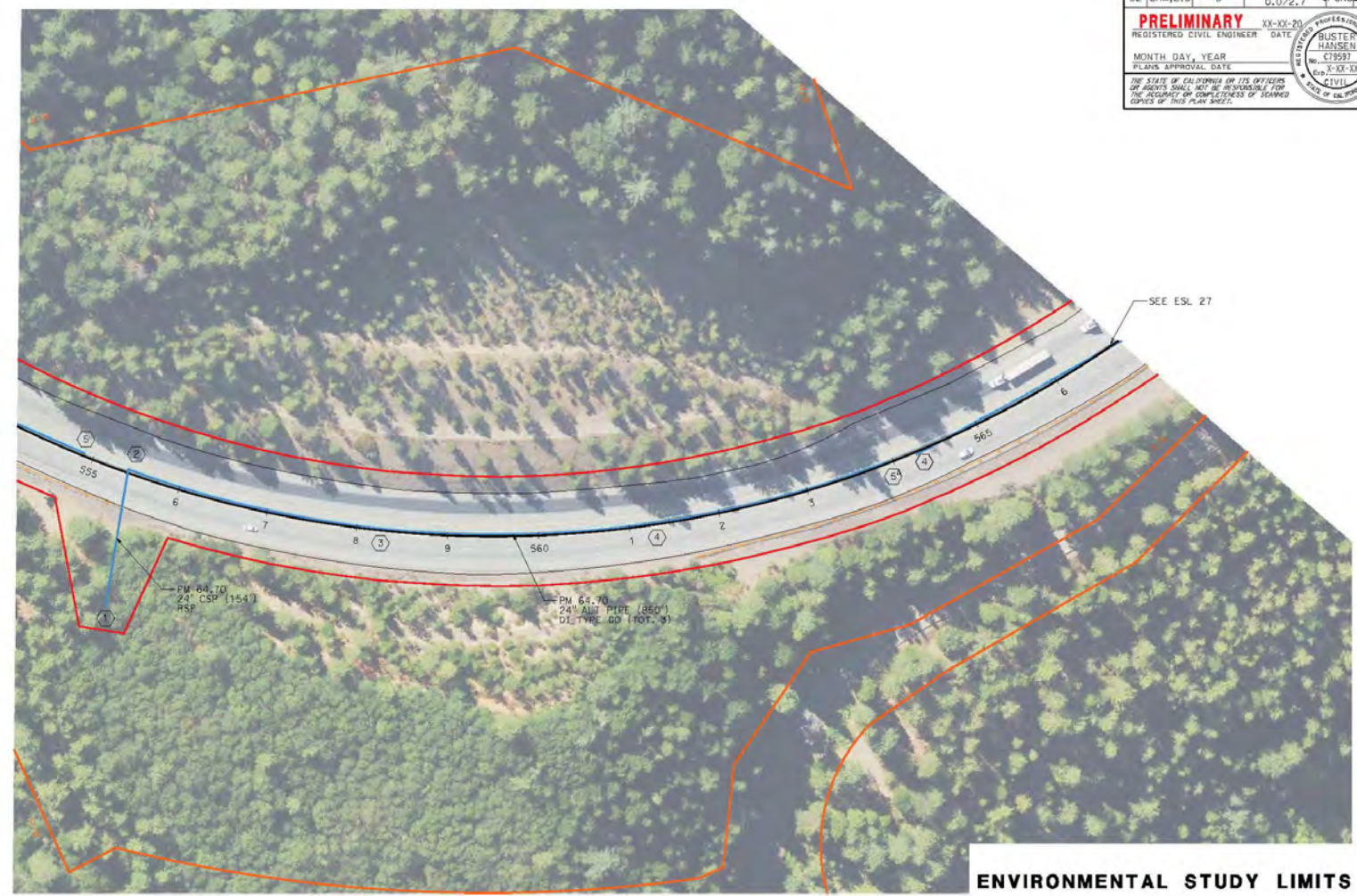


ENVIRONMENTAL STUDY LIMITS
 SCALE: 1" = 50'
ESL-25

Sheet	COUNTY	ROUTE	POST MILES	(SHEET) TOTAL
02	SHASTA	5	58.0/67.0/2	67/107/107
PRELIMINARY REGISTERED CIVIL ENGINEER DATE MONTH DAY, YEAR PLANS APPROVAL DATE				
XX-XX-20 BUSTER HANSEN No. C79597 CIVIL STATE OF CALIFORNIA				

DESIGN	FUNCTIONAL SUPERVISOR	CALCULATED/DESIGNED BY	REVISOR	REVISION
	TRAVIS A. GOREY		FABIO ROMERO	
		CHECKED BY	BUSTER HANSEN	
				DATE REVISION

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 STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 0219000164



Sheet	COUNTY	ROUTE	PORT MILES	(SHEET) TOTAL
02	SHASTA	5	58.0/67.02 0.0/2.7	68/107
PRELIMINARY REGISTERED CIVIL ENGINEER DATE MONTH DAY, YEAR PLANS APPROVAL DATE				
THE STATE OF CALIFORNIA ON ITS OFFICIALS OF AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SKETCHES COPIES OF THIS PLAN SHEET.				

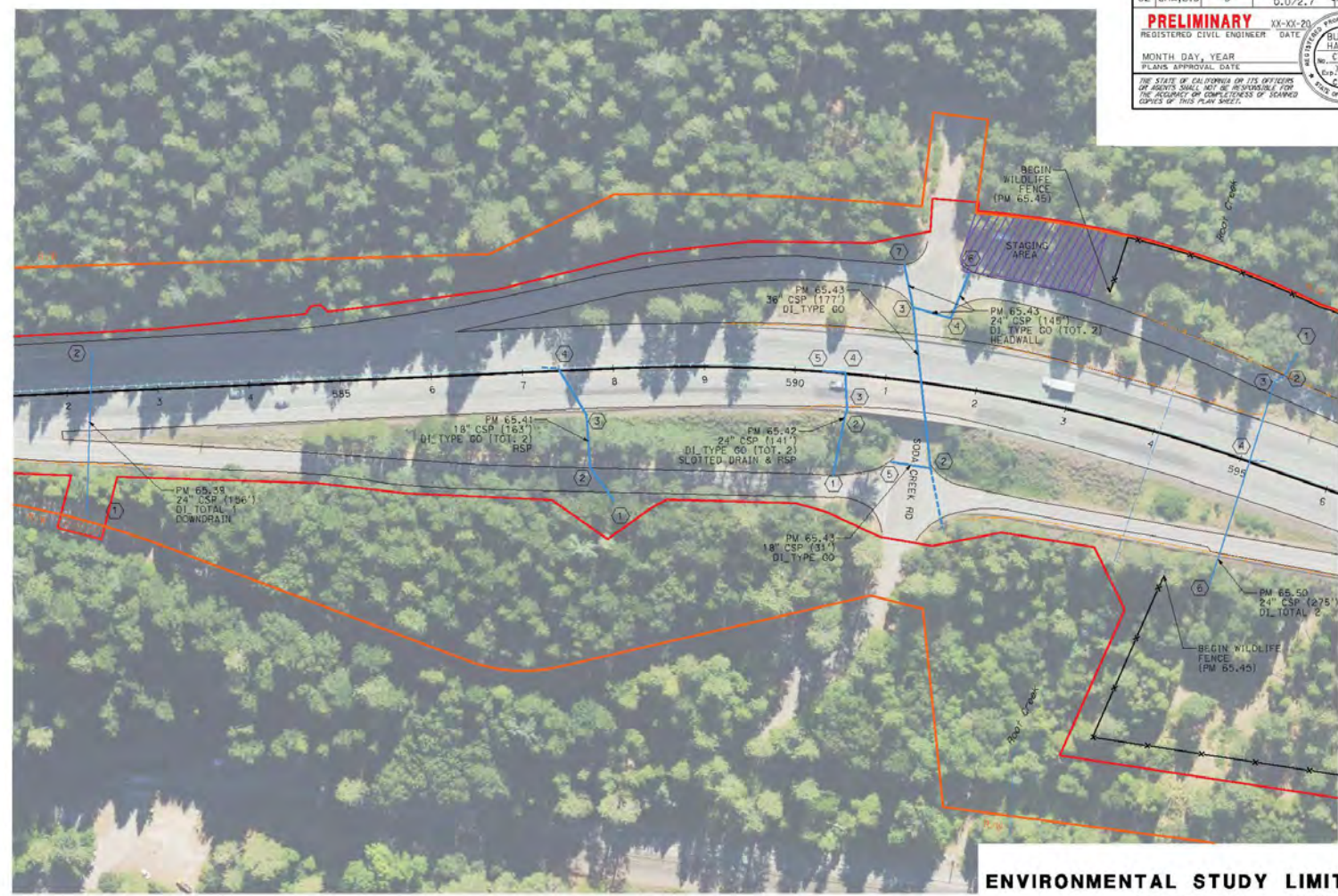


ENVIRONMENTAL STUDY LIMITS
 SCALE: 1" = 50'
ESL-26

DATE PLOTTED => 11/6/2024
 TIME PLOTTED => 12:42:54 PM

DESIGN	FUNCTIONAL SUPERVISOR TRAVIS A. GOREY	CALCULATED/DESIGNED BY	FABIO ROMERO	REVISED BY	
		CHECKED BY	BUSTER HANSEN	DATE REVISED	

PROJECT: 342-02 (10-00-01) Map/Plan/Spec/10/19/0001/0000-0000.dgn
 STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION



Sheet	COUNTY	ROUTE	POST MILES	SHEET TOTAL
02	SHASTA	5	58.0/67.02 0.0/2.7	8/GRU/TOTPG

PRELIMINARY
 REGISTERED CIVIL ENGINEER DATE
 MONTH DAY, YEAR
 PLANS APPROVAL DATE

STATE OF CALIFORNIA ON ITS OFFICIALS
 OF AGENTS SHALL NOT BE RESPONSIBLE FOR
 THE ACCURACY OR COMPLETENESS OF SKETCHES
 COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER
 BUSTER HANSEN
 No. C79597
 Exp. 12-31-11
 CIVIL
 STATE OF CALIFORNIA

ENVIRONMENTAL STUDY LIMITS
 SCALE: 1" = 50'
ESL-28

LAST MODIFIED DATE PLOTTED => 11/6/2020
 TIME PLOTTED => 12:51:57 PM

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 DESIGN
 FUNCTIONAL SUPERVISOR
 TRAVIS A. GOREY
 CALCULATED BY
 CHECKED BY
 FABIO ROMERO
 REVISOR
 DATE
 BUSTER HANSEN

NOTE: DRAINAGE SYSTEM DS65.88 MAY BE IN CONFLICT
 WITH PROPOSED WILDLIFE CROSSING.



Sheet	COUNTY	ROUTE	PORT MILES	(SHEET) TOTAL
02	SHASTA	5	58.0/67.02	67/100
			0.0/2.1	2/100
PRELIMINARY REGISTERED CIVIL ENGINEER DATE MONTH DAY, YEAR PLANS APPROVAL DATE				
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SKETCHES COPIES OF THIS PLAN SHEET.				

ENVIRONMENTAL STUDY LIMITS
 SCALE: 1" = 50'
ESL-30

DATE PLOTTED => 10/20/2024
 TIME PLOTTED => 3:26:10 PM

DESIGN	FUNCTIONAL SUPERVISOR TRAVIS A. GOREY	CALCULATED- DESIGNED BY	FABIO ROMERO	REVISOR BY	DATE	REVISOR	DATE
		CHECKED BY	BUSTER HANSEN				

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BORDER LAST REVISED 7/2/2010

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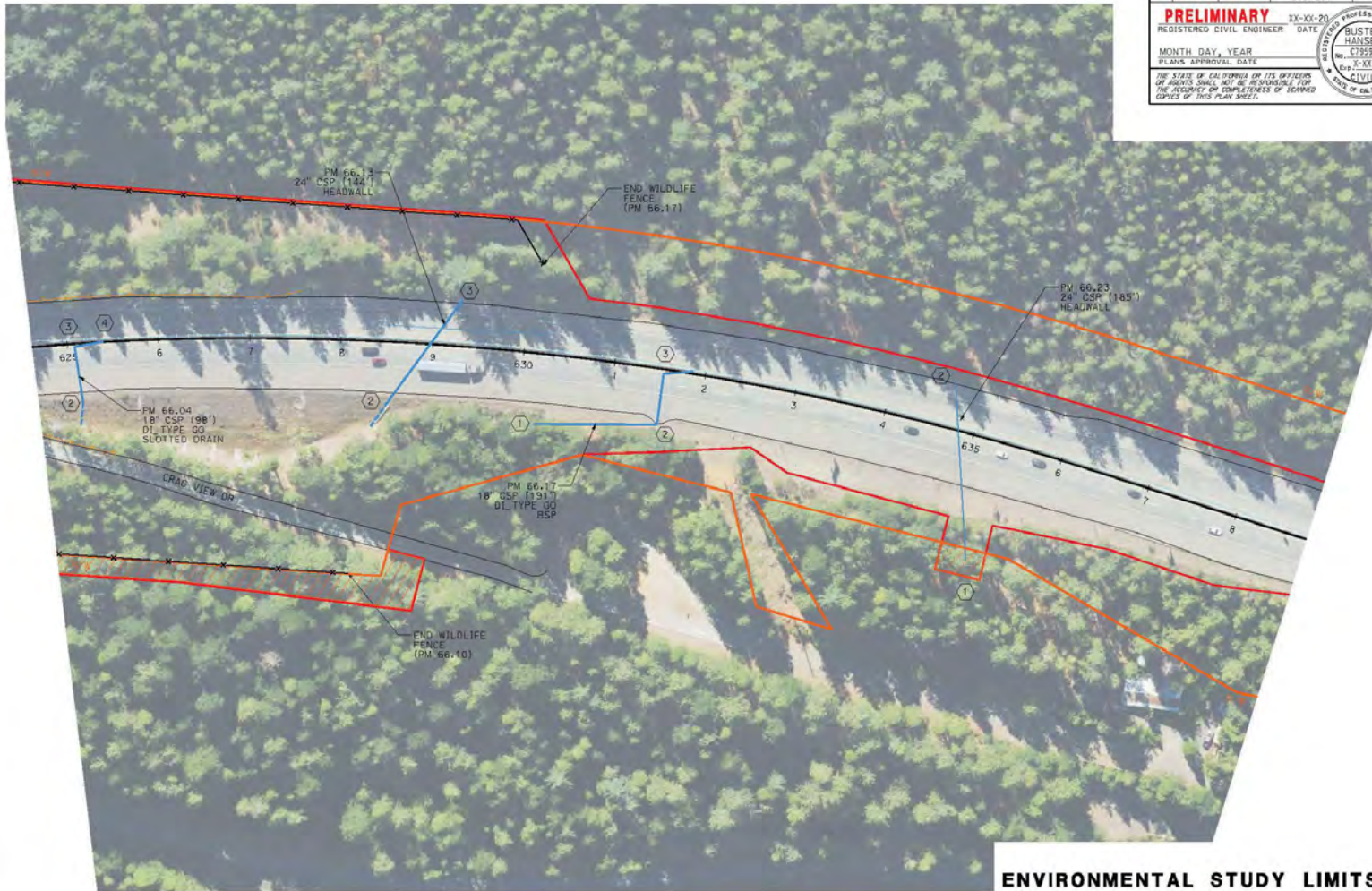
RELATIVE BORDER SCALE
IS IN INCHES

0 1 2 3

UNIT 0315

PROJECT NUMBER & PHASE

0219000164



ENVIRONMENTAL STUDY LIMITS
SCALE: 1" = 50'
ESL-31

Sheet	COUNTY	ROUTE	PORT MILES	(SHEET) TOTAL
02	SHASTA	5	TOTAL PROJECT 58.0/67.02 0.0/2.7	8/GRU/TOTPG
PRELIMINARY				
REGISTERED CIVIL ENGINEER		DATE	XV-XX-20	
MONTH DAY, YEAR		BUSTER HANSEN		
PLANS APPROVAL DATE		C79597		
		No. 1-XX-XX		
		CIVIL		
		STATE OF CALIFORNIA		

THE STATE OF CALIFORNIA ON ITS OFFICIALS
OF AGENTS SHALL NOT BE RESPONSIBLE FOR
THE ACCURACY OR COMPLETENESS OF SKETCHES
COPIES OF THIS PLAN SHEET.

DATE PLOTTED => 10/20/2024
TIME PLOTTED => 3:28:05 PM

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION El-Gabbara DESIGN	FUNCTIONAL SUPERVISOR	CALCULATED/DESIGNED BY	FABIO ROMERO	REVISED BY	
	TRAVIS A. GOREY	CHECKED BY	BUSTER HANSEN	DATE REVISED	



ENVIRONMENTAL STUDY LIMITS
 SCALE: 1" = 50'
ESL-32

Sheet	COUNTY	ROUTE	PORT MILES	(SHEET) TOTAL
02	SHASTA	5	TOTAL PROJECT 58.0/67.02 0.0/2.7	58/67 0/2
PRELIMINARY REGISTERED CIVIL ENGINEER DATE MONTH DAY, YEAR PLANS APPROVAL DATE				
NO. 79597 CIVIL BUSTER HANSEN CIVIL CIVIL				

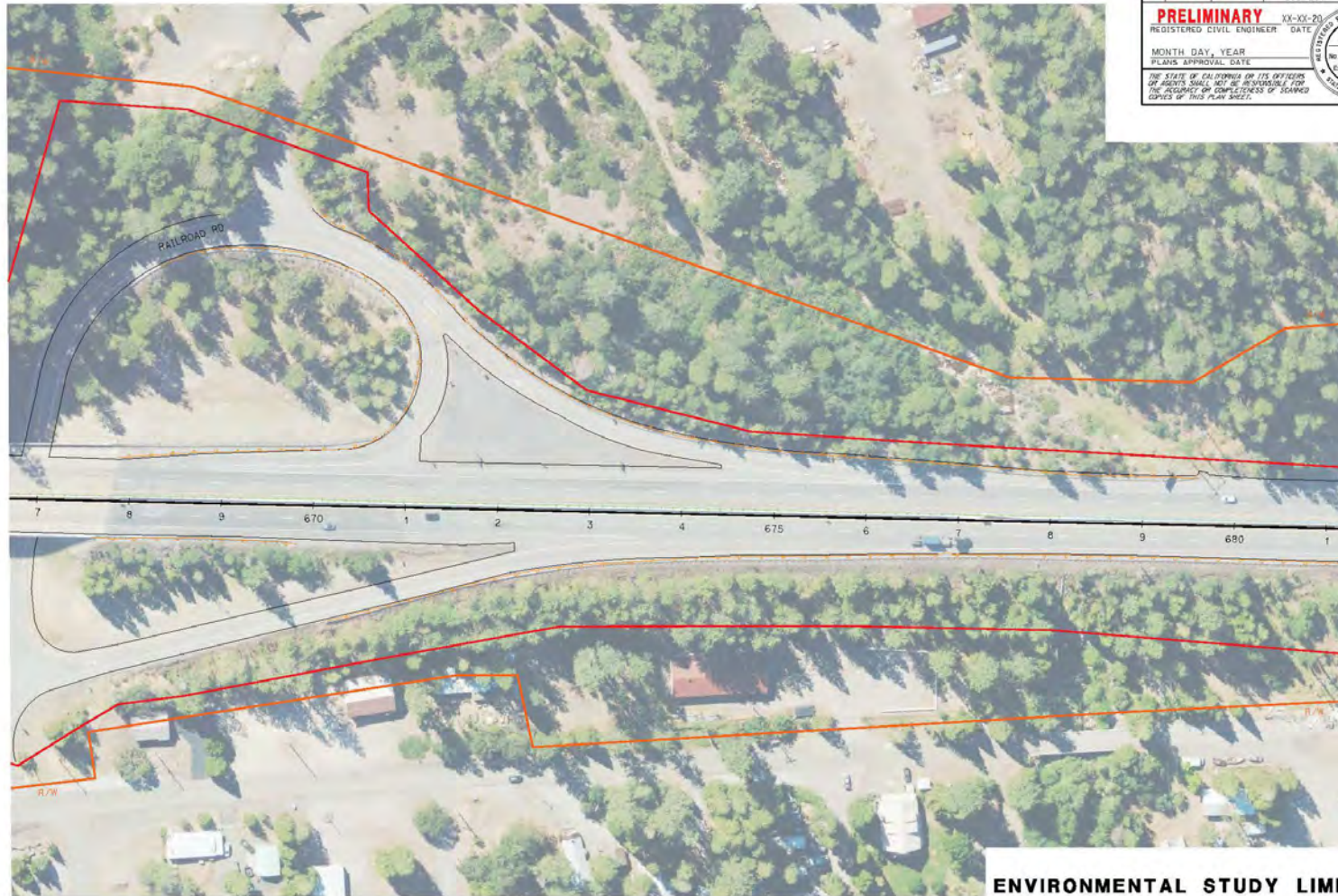
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02	SHA, SIS	5	58.0/67.0 0.0/2.7	1	1

PRELIMINARY XX-XX-20
REGISTERED CIVIL ENGINEER DATE

MONTH DAY, YEAR
PLANS APPROVAL DATE

THE STATE OF CALIFORNIA ON ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE LOSS OF OR CORRUPTION OF OR DESTRUCTION OF COPIES OF THIS PLAN SHEET.

SEAL: BUSTER HANSEN, CIVIL ENGINEER, No. C78997, State of California



ENVIRONMENTAL STUDY LIMITS
SCALE: 1" = 50' **ESL-34**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	REVISED BY	
	TRAVIS A GURNEY	DATE REVISED	
ST. CATHARINE'S	DESIGN	FABIO ROMERO	
		BUSTER HANSEN	

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El-Galton® DESIGN

BORDER LAST REVISED 7/2/2010

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USERNAME =>
DGN FILE => ...\\ESL\\0219000164en034.dgn

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RELATIVE BORDER SCALE
IS IN INCHES

Q	1	2
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UNIT 0315

PROJECT NUMBER & PHASE

0219000164

DATE PLOTTED => 11/6/2024
TIME PLOTTED => 12:59:20 PM

DESIGN	FUNCTIONAL SUPERVISOR	CALCULATED/DESIGNED BY	REVISOR	DATE
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	TRAVIS A. GORREY		FABIO ROMERO	
		CHECKED BY	BUSTER HANSEN	

PROJECT: 342-01 (10-01-01) Map/Plan/Spec/UT/19000164e035.dgn

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

El-Goterra

BORDER LAST REVISED 7/2/2010

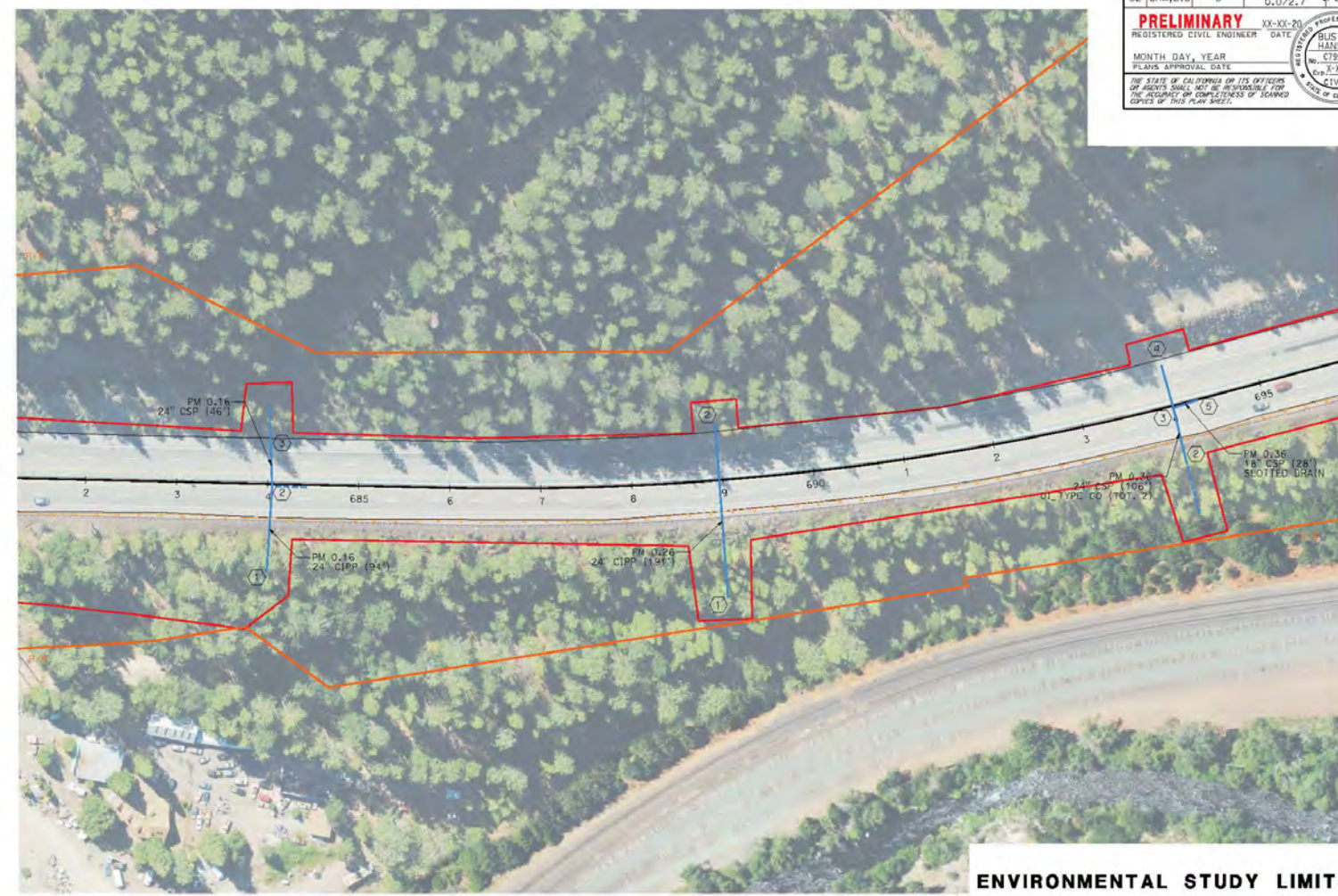
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DGN FILE => ...\\ESL\\0219000164e035.dgn

RELATIVE BORDER SCALE
15 IN INCHES

UNIT 0315

PROJECT NUMBER & PHASE

0219000164



ENVIRONMENTAL STUDY LIMITS
SCALE: 1" = 50'
ESL-35

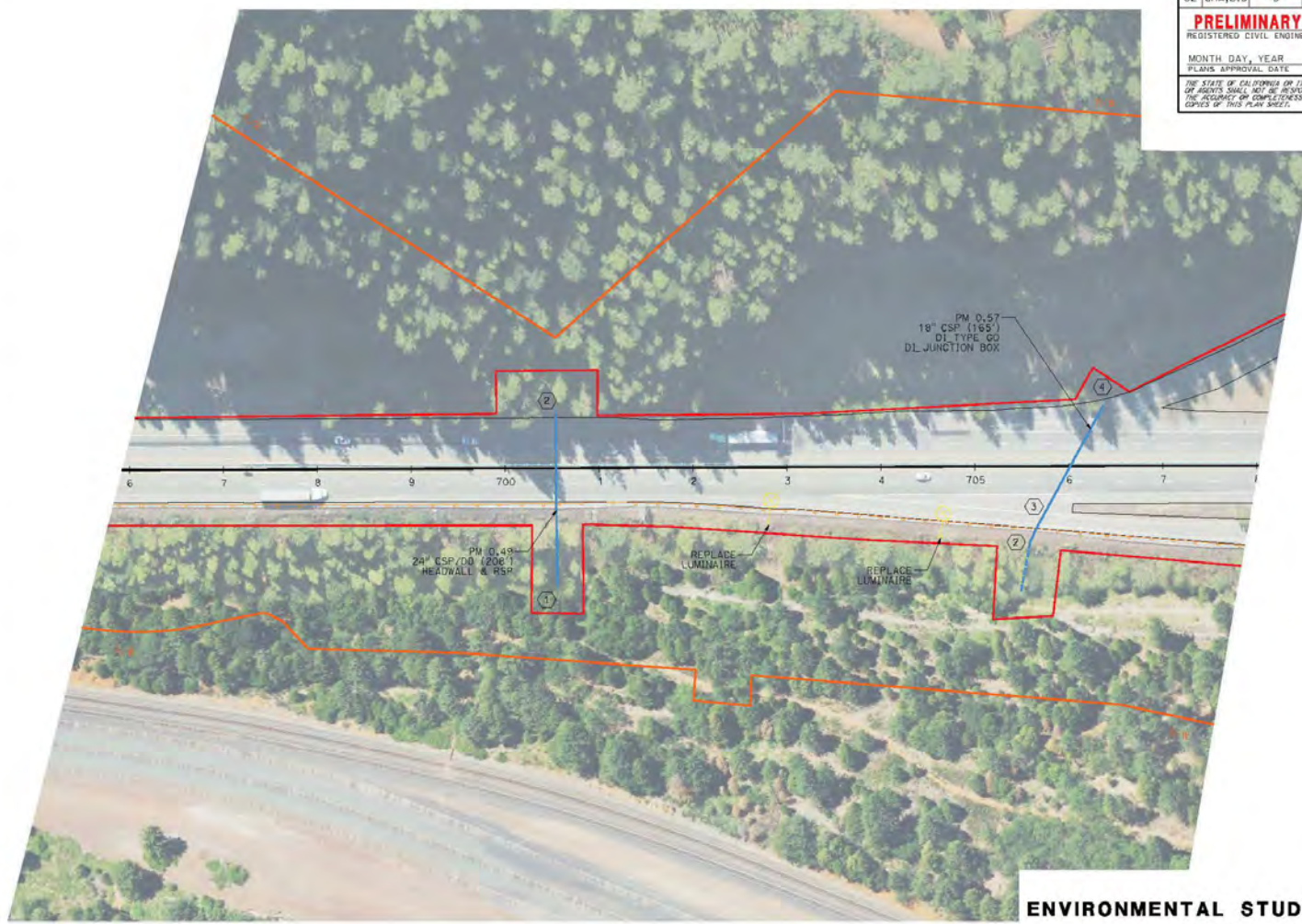
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PRELIMINARY				
REGISTERED CIVIL ENGINEER			DATE	
MONTH DAY, YEAR				
PLANS APPROVAL DATE				
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DATE PLOTTED => 10/20/2024
TIME PLOTTED => 4:00:56 PM

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			BUSTER HANSEN		

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 PROJECT: 0219000164
 SHEET: 0219000164-036.dgn

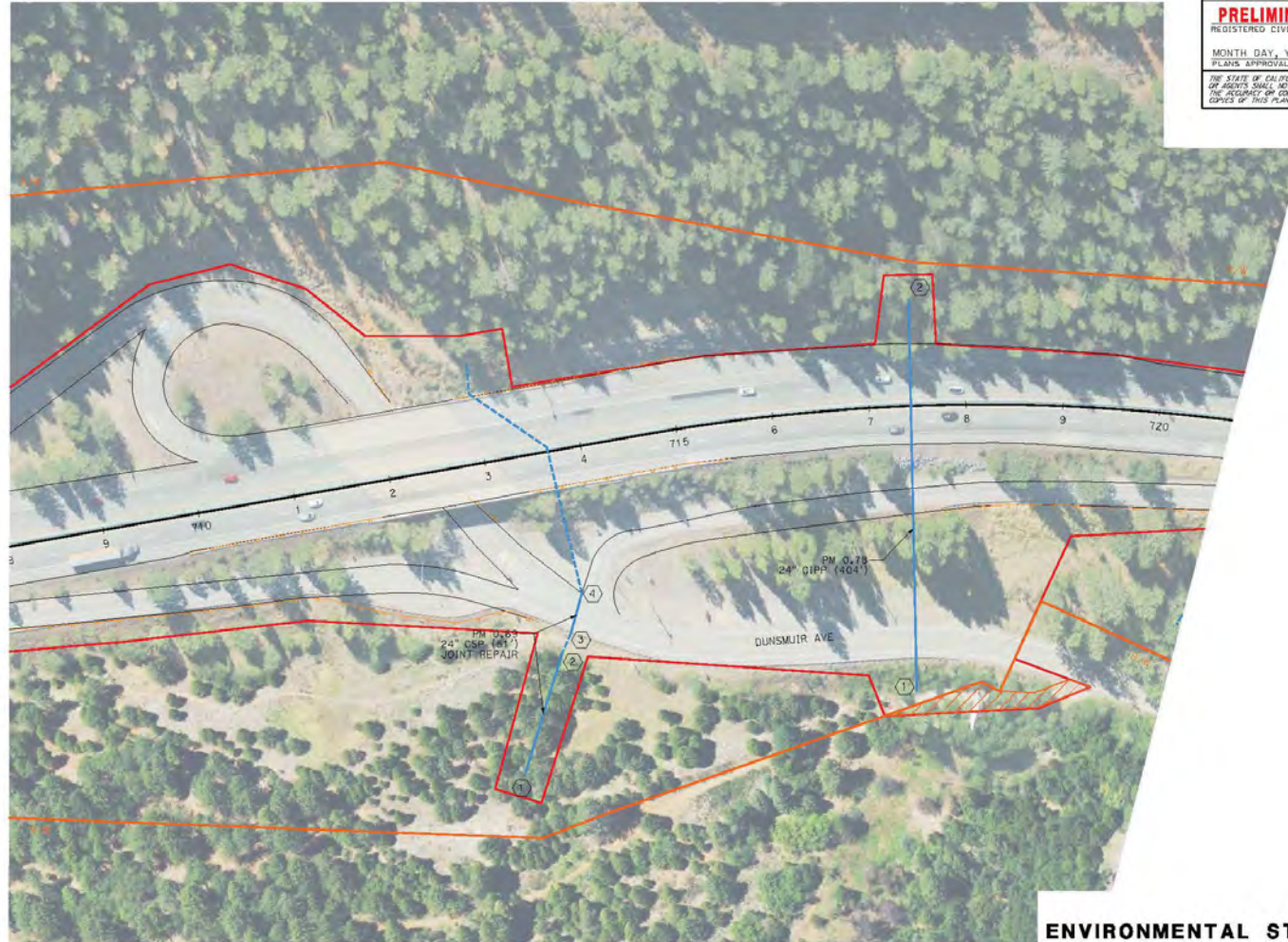


Sheet	COUNTY	ROUTE	POST MILES	(SHEET) TOTAL
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PRELIMINARY				
REGISTERED CIVIL ENGINEER		DATE	XV-XX-20	
MONTH DAY, YEAR		BUSTER HANSEN C79597		
PLANS APPROVAL DATE		NO. 1-XX-XX CIVIL		
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ENVIRONMENTAL STUDY LIMITS
 SCALE: 1" = 50'
ESL-36

DATE PLOTTED => 10/20/2024
 TIME PLOTTED => 4:05:20 PM

DESIGN	FUNCTIONAL SUPERVISOR TRAVIS A. GORNEY	CALCULATED- DESIGNED BY	FABIO ROMERO	REVISED BY	
		CHECKED BY	BUSTER HANSEN	DATE REVISED	



Sheet	COUNTY	ROUTE	PORT MILES	(SHEET) TOTAL
02	SHASTA	5	58.0/67.02	67/100
			0.0/2.7	2/100
PRELIMINARY				
REGISTERED CIVIL ENGINEER			DATE	
MONTH DAY, YEAR				
PLANS APPROVAL DATE				
BUSTER HANSEN No. C79597 Exp. 1-XX-XX CIVIL STATE OF CALIFORNIA			XX-XX-20 BUSTER HANSEN No. C79597 Exp. 1-XX-XX CIVIL STATE OF CALIFORNIA	

ENVIRONMENTAL STUDY LIMITS
SCALE: 1" = 50'
ESL-37

DATE PLOTTED => 11/6/2020
TIME PLOTTED => 1:14:49 PM

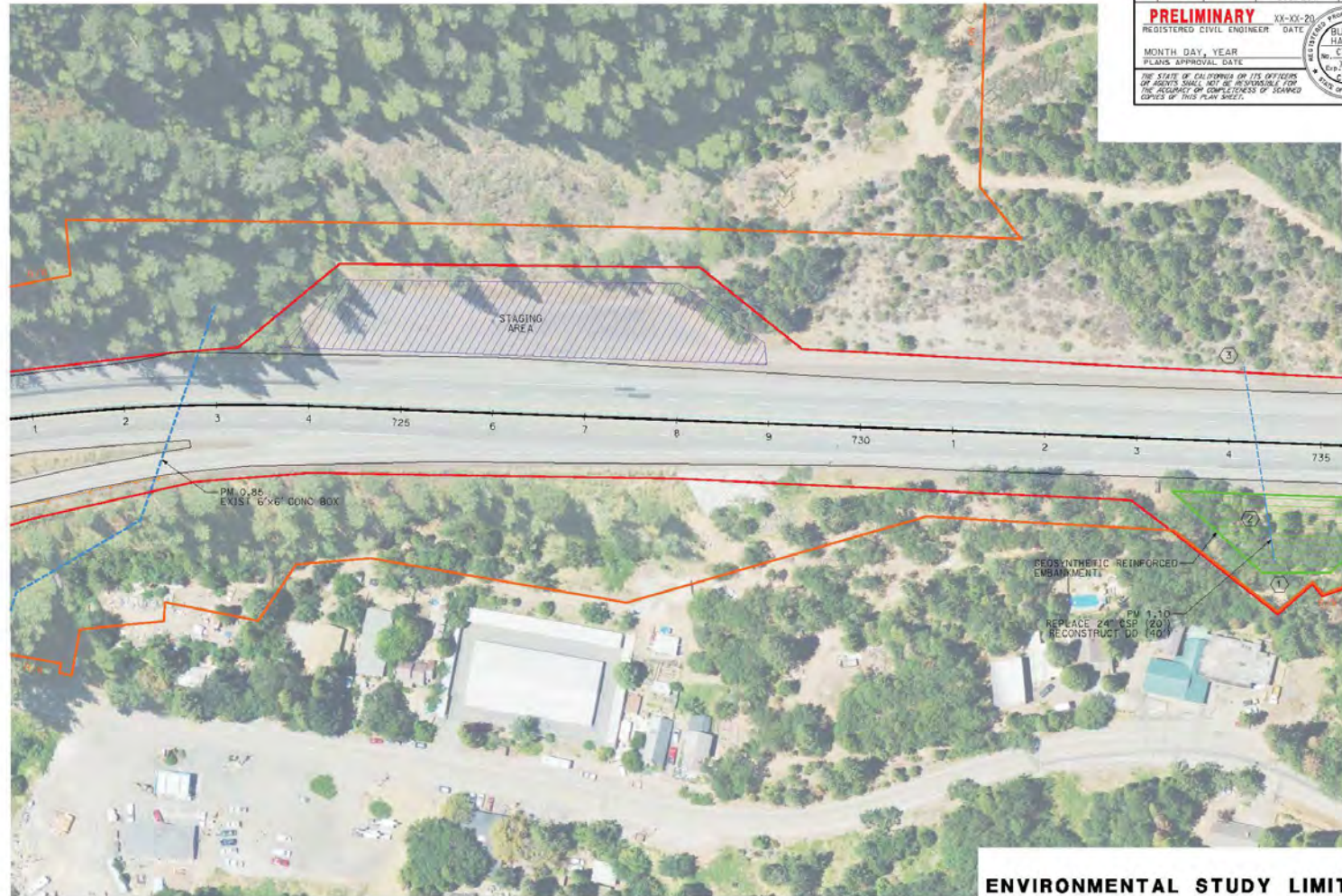
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PRELIMINARY **XX-XX-20**
 REGISTERED CIVIL ENGINEER DATE

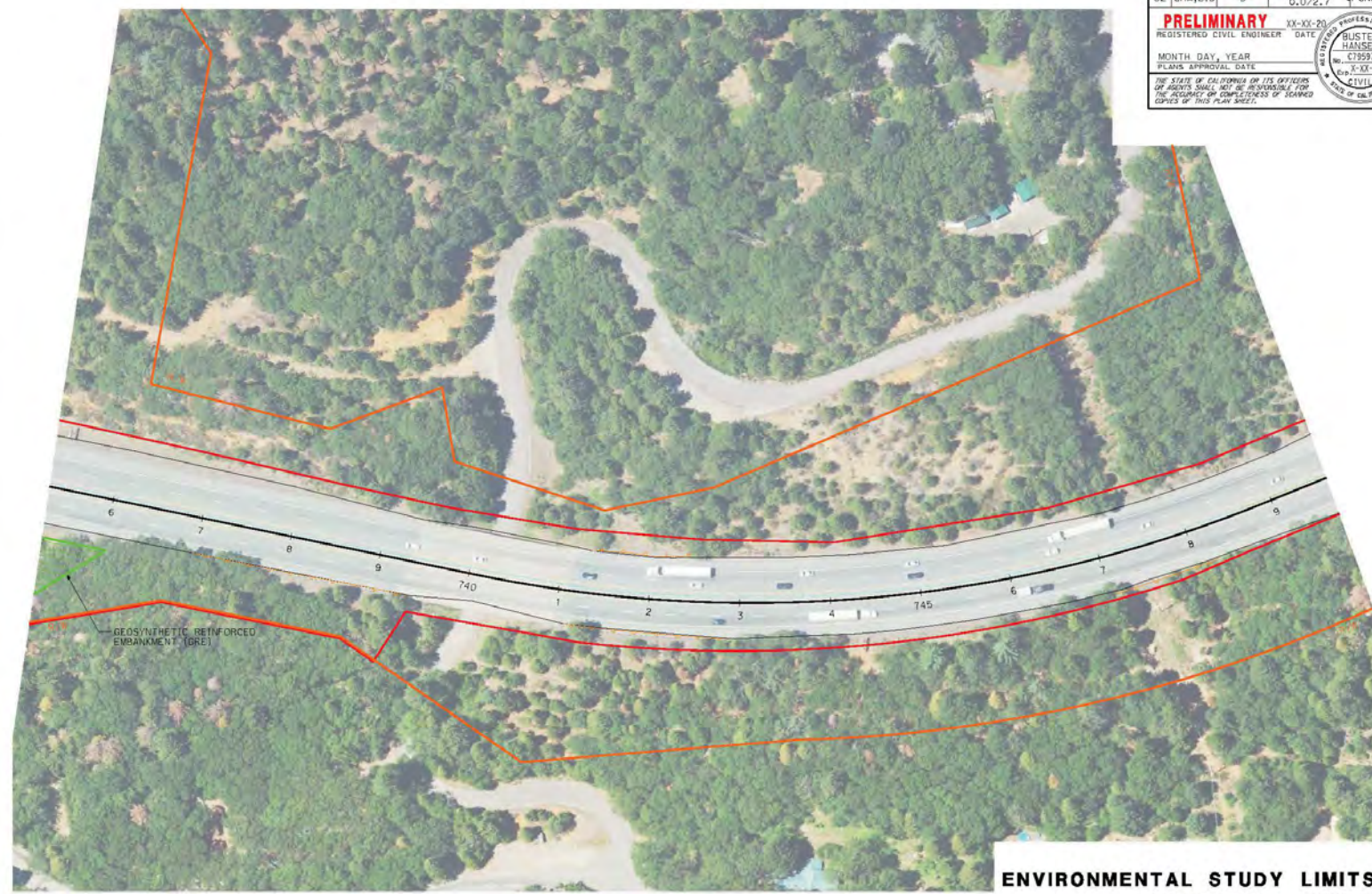
MONTH DAY YEAR
 PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL CIVIL ENGINEER
 BUSTER HANSEN
 C79597
 No. XX-XX-XX
 CIVIL
 STATE OF CALIFORNIA



DESIGN	FUNCTIONAL SUPERVISOR	CALCULATED- DESIGNED BY	REVISOR	REVISOR
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	TRAVIS A. GOREY	CHIEF ENGINEER	FABIO ROMERO	DATE
El-Gottman		CHECKED BY	BUSTER HANSEN	DATE

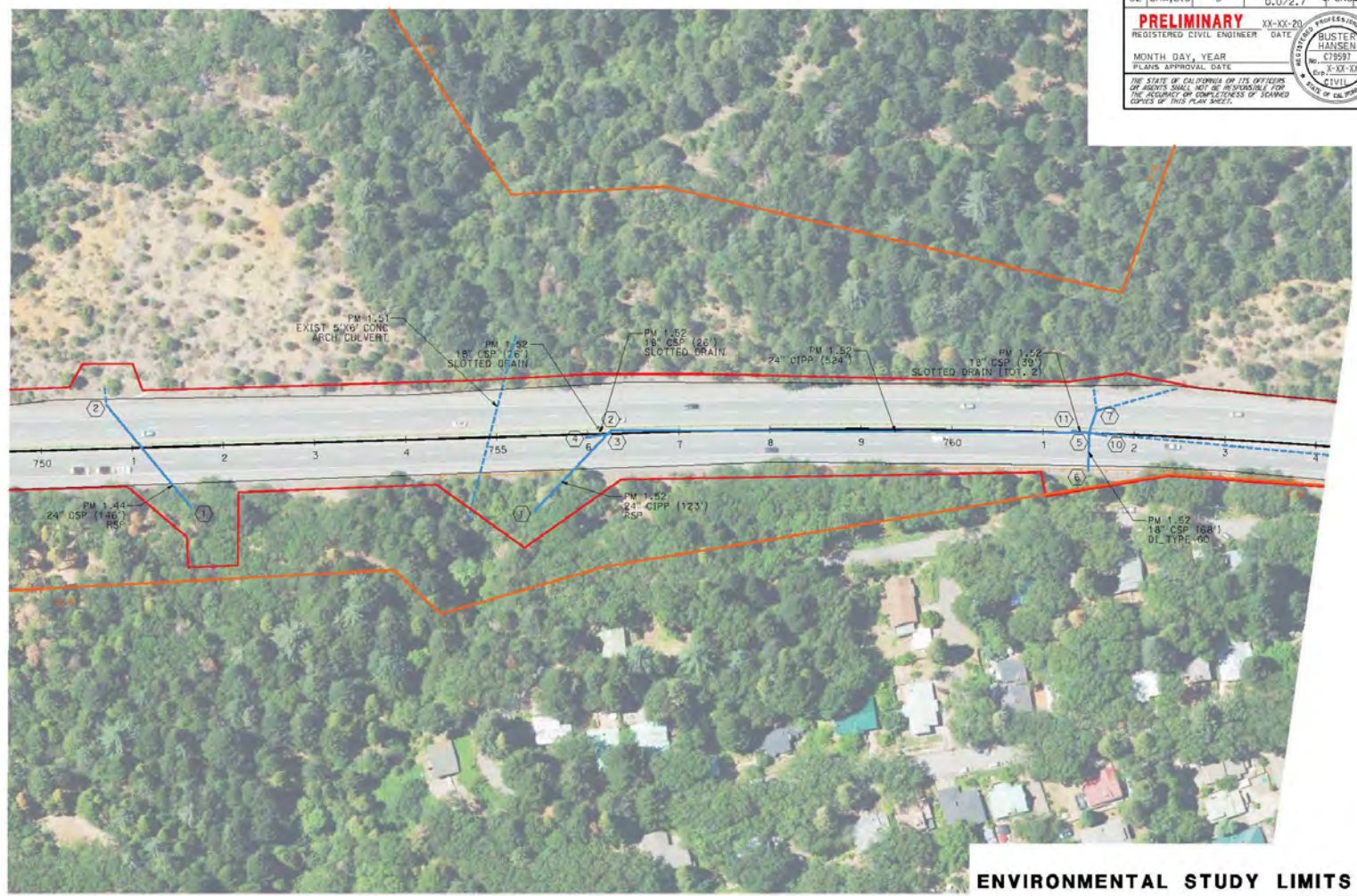


ENVIRONMENTAL STUDY LIMITS
SCALE: 1" = 50'
ESL-39

Sheet	COUNTY	ROUTE	PORT MILES	(SHEET) TOTAL
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PRELIMINARY				
REGISTERED CIVIL ENGINEER		DATE		
MONTH DAY, YEAR		XV-XX-20		
PLANS APPROVAL DATE		BUSTER HANSEN		
		C79597		
		11-XX-XX		
		CIVIL		
THE STATE OF CALIFORNIA ON ITS OFFICIALS OF AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SKETCHES COPIES OF THIS PLAN SHEET.				

DATE PLOTTED => 10/21/2024
TIME PLOTTED => 1:57:55 AM

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DESIGN
FUNCTIONAL SUPERVISOR
TRAVIS A. GURNEY
CALCULATED BY
CHECKED BY
FABIO ROMERO
BUSTER HANSEN
REVISED BY
DATE REVISED



Sheet	COUNTY	ROUTE	PORT MILES	(SHEET) TOTAL
02	SHASTA	5	TOTAL PROJECT 58.0/67.02 0.0/2.1	No. SHEETS 8/GRU/TOTPG
PRELIMINARY REGISTERED CIVIL ENGINEER DATE MONTH DAY, YEAR PLANS APPROVAL DATE				
XV-XX-20 BUSTER HANSEN C79597 CIVIL STATE OF CALIFORNIA				
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SKETCHES COPIED OF THIS PLAN SHEET.				

ENVIRONMENTAL STUDY LIMITS
SCALE: 1" = 50'
ESL-40

DATE PLOTTED => 10/31/2024
TIME PLOTTED => 8:01:50 AM

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

DESIGN

FUNCTIONAL SUPERVISOR

TRAVIS A. GIBNEY

CALCULATED BY

REVISOR

DATE

REVISOR

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REVISOR

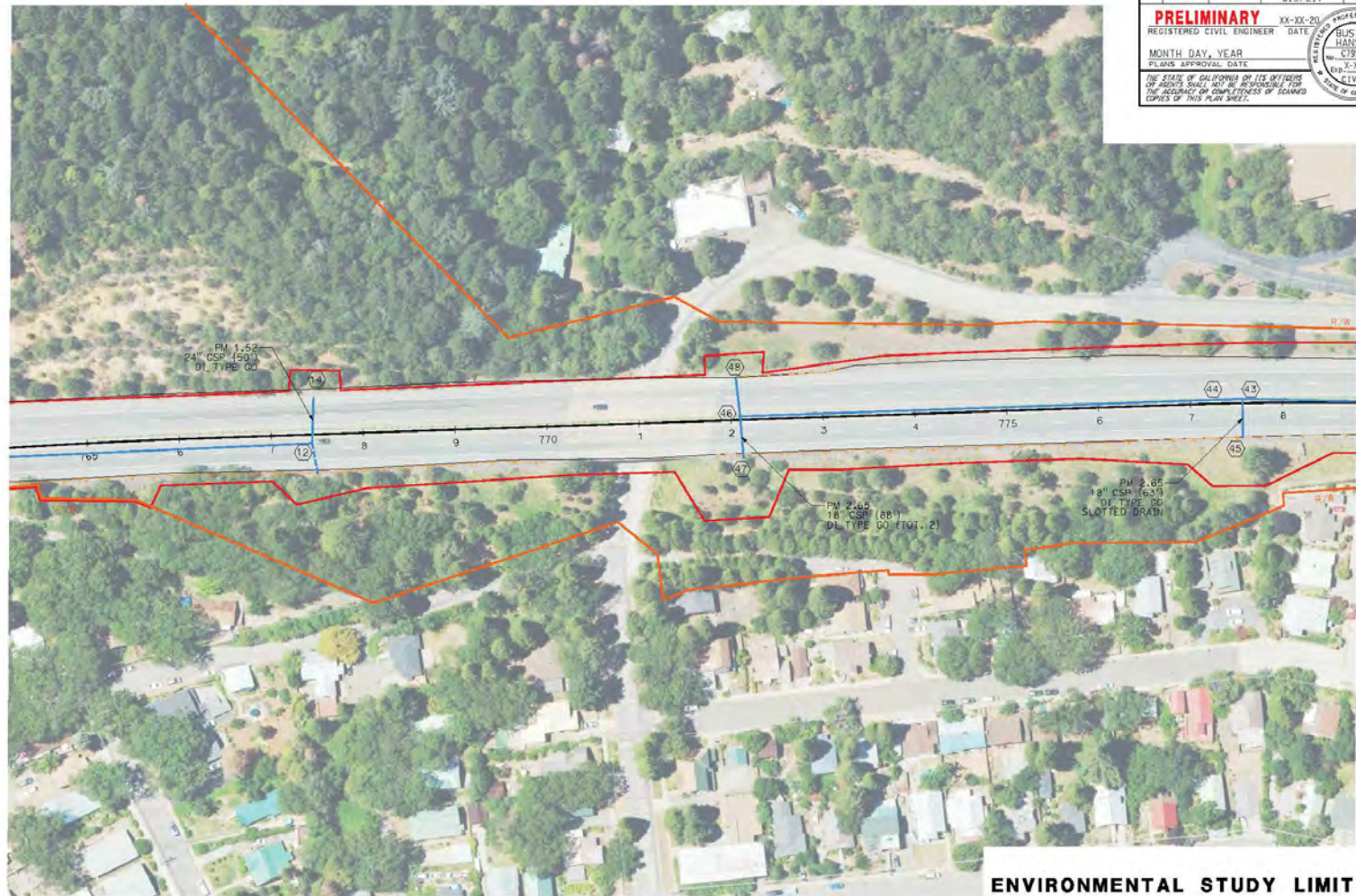
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DATE

REVISOR

DATE



DIS#	COUNTY	ROUTE	POST MILES	SHEET TOTAL
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PRELIMINARY			XK-XX-20	
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MONTH, DAY, YEAR			DATE	
PLANS APPROVAL DATE			DATE	
THE STATE OF CALIFORNIA BY ITS OFFICERS			OF RECORDS SHALL NOT BE RESPONSIBLE FOR	
THE ACCURACY OR COMPLETENESS OF SCANNED			COPIES OF THIS PLAN SHEET.	

REGISTERED PROFESSIONAL CIVIL ENGINEER

BUSTER HANSEN

C19587

EXP. 12-31-23

CIVIL

STATE OF CALIFORNIA

ENVIRONMENTAL STUDY LIMITS
SCALE: 1" = 50'
ESL-41

BORDER LAST REVISED 7/2/2010

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RELATIVE BORDER SCALE
15 IN INCHES

UNIT 0315

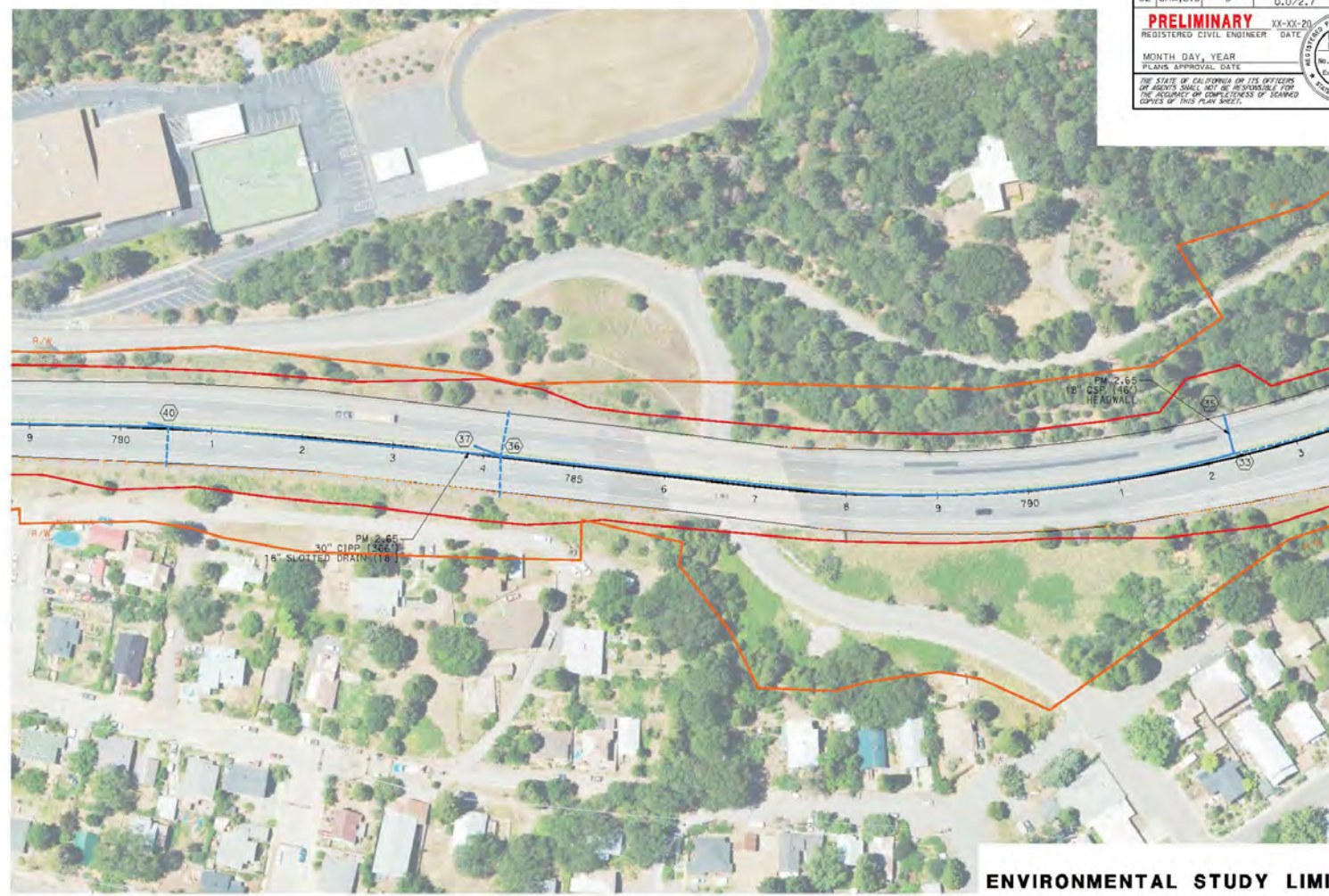
PROJECT NUMBER & PHASE

0219000164

LAST MODIFIED DATE PLOTTED => 10/31/2024
TIME PLOTTED => 8:05:20 AM

DESIGN	FUNCTIONAL SUPERVISOR TRAVIS A. GOREY	CALCULATED- DESIGNED BY	FABIO ROMERO	REVISED BY	
		CHECKED BY	BUSTER HANSEN	DATE REVISED	

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 10/21/2024 8:08:16 AM



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			0.0/2.1	1/10
PRELIMINARY REGISTERED CIVIL ENGINEER DATE MONTH DAY, YEAR PLANS APPROVAL DATE				
THE STATE OF CALIFORNIA ON ITS OFFICIALS OF AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SKETCHES COPIES OF THIS PLAN SHEET.				

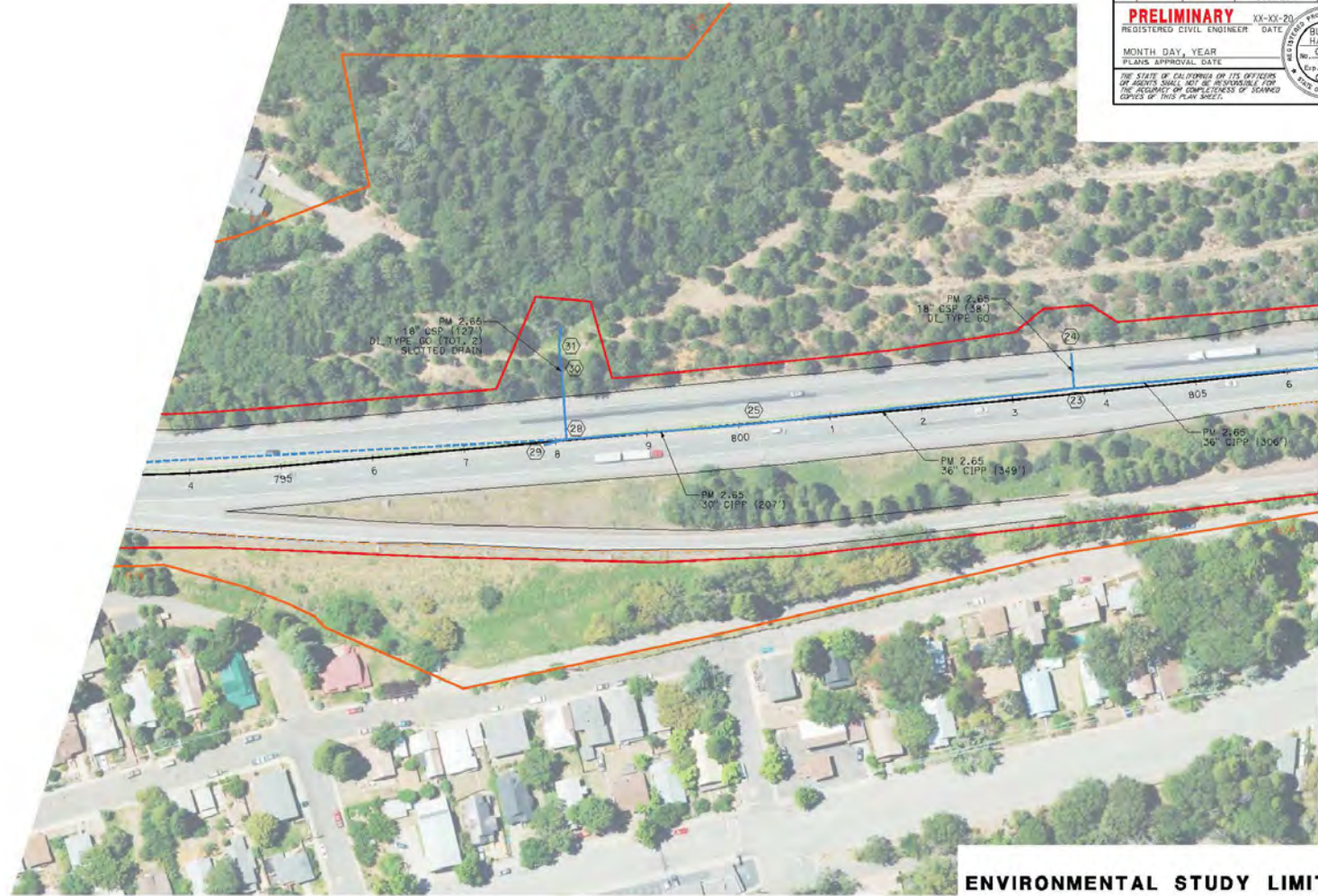


ENVIRONMENTAL STUDY LIMITS
 SCALE: 1" = 50'
ESL-42

DESIGN	FUNCTIONAL SUPERVISOR TRAVIS A. GORREY	CALCULATED- DESIGNED BY	REVISOR	DATE
			FABIO ROMERO	
		CHECKED BY	BUSTER HANSEN	

Project: J:\2010\10100001\MapInfo\10100001.dgn
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

ES&S

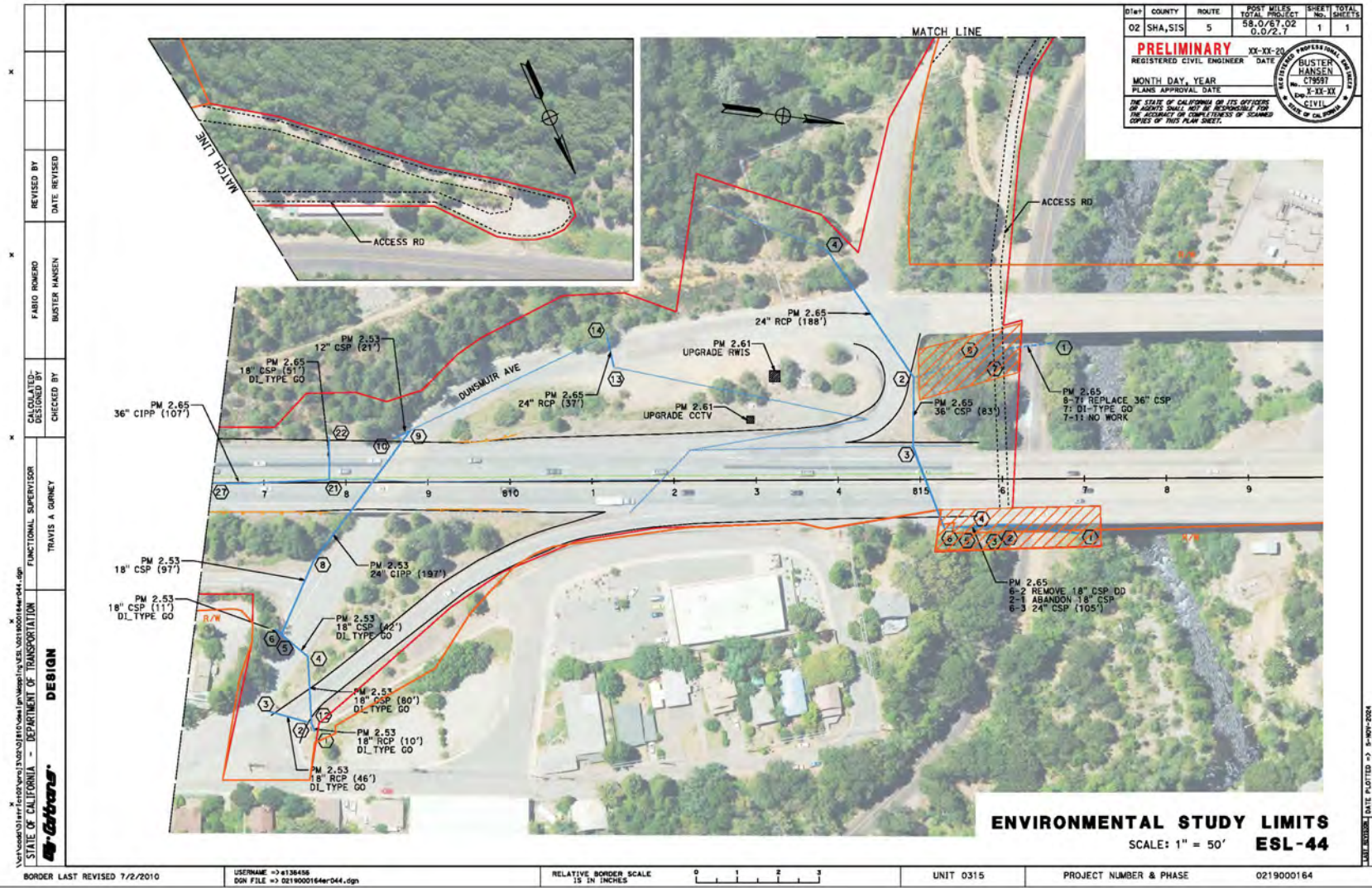


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ESL-43

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PRELIMINARY REGISTERED CIVIL ENGINEER DATE MONTH DAY, YEAR PLANS APPROVAL DATE				
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TIME PLOTTED => 1:20:20 PM



01	COUNTY	ROUTE	POST MILES	SHEET TOTAL
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PRELIMINARY
REGISTERED CIVIL ENGINEER
MONTH DAY, YEAR
PLANS APPROVAL DATE

XX-XX-XX
BUSTER HANSEN
CH5917
CIVIL
STATE OF CALIFORNIA

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DESIGNED BY	REVISOR	DATE	REVISION
TRAVIS A. GURNEY	FABIO ROMERO		
FUNCTIONAL SUPERVISOR	CHECKED BY	DATE	REVISION
TRAVIS A. GURNEY	BUSTER HANSEN		
DESIGN			

APPENDIX B. TITLE VI POLICY STATEMENT



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.

A handwritten signature in black ink, appearing to read 'Tony Tavares'.

TONY TAVARES
Director

"Provide a safe and reliable transportation network that serves all people and respects the environment"



APPENDIX C. USFWS, NMFS, CDFW-CNDDDB, AND CNPS SPECIES LISTS, WITH POTENTIAL TO OCCUR TABLE





United States Department of the Interior

FISH AND WILDLIFE SERVICE

Yreka Fish And Wildlife Office

1829 South Oregon Street

Yreka, CA 96097-3446

Phone: (530) 842-5763 Fax: (530) 842-4517



In Reply Refer To:

11/07/2024 22:49:55 UTC

Project Code: 2024-0016603

Project Name: Flume Creek CAPM (02-0J810)

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological

evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf>

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see <https://www.fws.gov/program/migratory-bird-permit/what-we-do>.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see <https://www.fws.gov/library/collections/threats-birds>.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit <https://www.fws.gov/partner/council-conservation-migratory-birds>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

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:

Yreka Fish And Wildlife Office

1829 South Oregon Street

Yreka, CA 96097-3446

(530) 842-5763

PROJECT SUMMARY

Project Code: 2024-0016603
Project Name: Flume Creek CAPM (02-0J810)
Project Type: Culvert Repair/Replacement/Maintenance
Project Description: The California Department of Transportation, using State and federal funding, proposes to rehabilitate Interstate 5 (I-5) through repaving activities, structural repairs, drainage improvements, and construction of appurtenant infrastructure. The limits of work occur between post mile (PM) 58.0 to 67.019 in Shasta County, and PM 0.0 to 2.7 in Siskiyou County.

The purpose of the project is to restore the facility to a state of good repair so that the roadway would be in a condition that requires minimal maintenance. The project is needed because the pavement within the project limits is in a fair state of repair, requiring ongoing maintenance efforts.

Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@41.15031505,-122.31224696565585,14z>



Counties: Shasta and Siskiyou counties, California

ENDANGERED SPECIES ACT SPECIES

There is a total of 10 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 Fisheries¹, 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.

-
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

NAME	STATUS
Gray Wolf <i>Canis lupus</i> Population: U.S.A.: All of AL, AR, CA, CO, CT, DE, FL, GA, IA, IN, IL, KS, KY, LA, MA, MD, ME, MI, MO, MS, NC, ND, NE, NH, NJ, NV, NY, OH, OK, PA, RI, SC, SD, TN, TX, VA, VT, WI, and WV; and portions of AZ, NM, OR, UT, and WA. Mexico. There is final critical habitat for this species. Species profile: https://ecos.fws.gov/ecp/species/4488	Endangered
North American Wolverine <i>Gulo gulo luscus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5123	Threatened

BIRDS

NAME	STATUS
Northern Spotted Owl <i>Strix occidentalis caurina</i> 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
Yellow-billed Cuckoo <i>Coccyzus americanus</i> 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
Northwestern Pond Turtle <i>Actinemys marmorata</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1111	Proposed Threatened

INSECTS

NAME	STATUS
Franklin's Bumble Bee <i>Bombus franklini</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/7022	Endangered
Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

CRUSTACEANS

NAME	STATUS
Conservancy Fairy Shrimp <i>Branchinecta conservatio</i> There is final critical habitat for this species. Your location does not overlap the critical habitat.	Endangered

NAME	STATUS
Species profile: https://ecos.fws.gov/ecp/species/8246	
Vernal Pool Fairy Shrimp <i>Branchinecta lynchi</i> There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/498	Threatened
Vernal Pool Tadpole Shrimp <i>Lepidurus packardii</i> There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2246	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 2

Name: Theresa Tillson

Address: 1031 Butte Steet

City: Redding

State: CA

Zip: 96001

Email: theresa.tillson@dot.ca.gov

Phone: 5307593417

From: [Tillson, Theresa@DOT](mailto:Tillson.Theresa@DOT)
To: [NMFS SpeciesList - NOAA Service Account](#)
Subject: 02-0J810 Flume Creek CAPM
Date: Wednesday, September 11, 2024 9:16:00 AM

Project: 02-0J810 Flume Creek CAPM
California
Interstate 5
PM 58-67.0 Shasta County
PM 0-2.7 Siskiyou County

This project is outside of NMFS jurisdiction.

Theresa Tillson
Environmental Scientist
District 2 Fish Passage Coordinator
North Region Redding
530-759-3417

From: [NMFS SpeciesList - NOAA Service Account](#)
To: Tillson.Theresa@DOT
Subject: Federal ESA - - NOAA Fisheries Species List Re: 02-0J810 Flume Creek CAPM
Date: Wednesday, September 11, 2024 9:17:06 AM

EXTERNAL EMAIL. Links/attachments may not be safe.

Please retain a copy of each email request that you send to NOAA at nmfs.wcrca.specieslist@noaa.gov as proof of your official Endangered Species Act SPECIES LIST. The email you send to NOAA should include the following information: your first and last name; email address; phone number; federal agency name (or delegated state agency such as Caltrans); mailing address; project title; brief description of the project; and a copy of a list of threatened or endangered species identified within specified geographic areas derived from the NOAA Fisheries, West Coast Region, California Species List Tool. You may only receive this instruction once per week. If you have questions, contact your local NOAA Fisheries liaison.

Query Summary:

Quad **IS** (Tombstone Mtn. (4112213) **OR** Dunsmuir (4112223))

CNDDDB Element Query Results

Scientific Name	Common Name	Taxonomic Group	Element Code	Total Occs	Returned Occs	Federal Status	State Status	Global Rank	State Rank	CA Rare Plant Rank	Other Status	Habitats
Accipiter atricapillus	American goshawk	Birds	ABNKC12061	433	1	None	None	G5	S3	null	BLM_S-Sensitive, CDFW_S-Sensitive, CDFW_SSC-Species of Special Concern, USFS_S-Sensitive	North coast coniferous forest, Subalpine coniferous forest, Upper montane coniferous forest
Ageratina shastensis	Shasta ageratina	Dicots	PDASTBX0R0	27	1	None	None	G3	S3	1B.2	SB_UCSC-UC Santa Cruz	Chaparral, Limestone, Lower montane coniferous forest
Ascaphus truei	Pacific tailed frog	Amphibians	AAABA01010	491	4	None	None	G4	S3S4	null	CDFW_SSC-Species of Special Concern, IUCN_LC-Least Concern	Aquatic, Klamath/North coast flowing waters, Lower montane coniferous forest, North coast coniferous forest, Redwood, Riparian forest
Bombus caliginosus	obscure bumble bee	Insects	IIHYM24380	181	1	None	None	G2G3	S1S2	null	IUCN_VU-Vulnerable	null
Bombus occidentalis	western bumble bee	Insects	IIHYM24252	306	1	None	Candidate Endangered	G3	S1	null	IUCN_VU-Vulnerable, USFS_S-Sensitive	null
Botrypus virginianus	rattlesnake fern	Ferns	PPOPH010H0	41	6	None	None	G5	S2	2B.2	null	Bog & fen, Lower montane coniferous forest, Meadow & seep, Riparian forest, Upper montane coniferous forest, Wetland
Campanula shetleri	Castle Crags harebell	Dicots	PDCAM020W0	6	5	None	None	G2	S2	1B.3	SB_BerrySB-Berry Seed Bank, USFS_S-Sensitive	Lower montane coniferous forest
Chaenactis suffrutescens	Shasta chaenactis	Dicots	PDAST200H0	38	1	None	None	G2G3	S2S3	1B.3	BLM_S-Sensitive, SB_BerrySB-Berry Seed Bank, USFS_S-Sensitive	Lower montane coniferous forest, Ultramafic, Upper montane coniferous forest
Clarkia borealis ssp. borealis	northern clarkia	Dicots	PDONA05062	131	1	None	None	G3T4	S4	4.3	BLM_S-Sensitive, SB_UCSC-UC Santa Cruz, USFS_S-Sensitive	Chaparral, Cismontane woodland, Lower montane coniferous forest
Cryptochia shasta	confusion caddisfly	Insects	IITRI11040	1	1	None	None	G1G2	S1	null	null	Aquatic
Cypseloides niger	black swift	Birds	ABNUA01010	46	1	None	None	G4	S3	null	CDFW_SSC-Species of Special Concern, IUCN_VU-Vulnerable, USFWS_BCC-Birds of Conservation Concern	null
Emys marmorata	western pond turtle	Reptiles	ARAAD02030	1559	2	Proposed Threatened	None	G3G4	S3	null	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, IUCN_VU-	Aquatic, Artificial flowing waters, Klamath/North coast flowing waters,

											Vulnerable, USFS_S-Sensitive	Klamath/North coast standing waters, Marsh & swamp, Sacramento/San Joaquin flowing waters, Sacramento/San Joaquin standing waters, South coast flowing waters, South coast standing waters, Wetland
Epilobium oregonum	Oregon fireweed	Dicots	PDONA060P0	61	1	None	None	G2	S2	1B.2	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden, USFS_S-Sensitive	Bog & fen, Lower montane coniferous forest, Meadow & seep, Ultramafic, Upper montane coniferous forest, Wetland
Erigeron bloomeri var. nudatus	Waldo daisy	Dicots	PDAST3M0M2	17	1	None	None	G5T4	S3	2B.3	null	Lower montane coniferous forest, Ultramafic, Upper montane coniferous forest
Erythranthe taylorii	Shasta limestone monkeyflower	Dicots	PDPHR01080	31	2	None	None	G2	S2	1B.1	null	Cismontane woodland, Lower montane coniferous forest
Erythronium klamathense	Klamath fawn lily	Monocots	PMLIL0U090	14	2	None	None	G4	S2	2B.2	SB_UCSC-UC Santa Cruz	Meadow & seep, Upper montane coniferous forest
Euderma maculatum	spotted bat	Mammals	AMACC07010	68	1	None	None	G4	S3	null	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, IUCN_LC- Least Concern	null
Eumops perotis californicus	western mastiff bat	Mammals	AMACD02011	296	1	None	None	G4G5T4	S3S4	null	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern	Chaparral, Cismontane woodland, Coastal scrub, Valley & foothill grassland
Falco peregrinus anatum	American peregrine falcon	Birds	ABNKD06071	75	1	Delisted	Delisted	G4T4	S3S4	null	CDF_S-Sensitive	null
Gonidea angulata	western ridged mussel	Mollusks	IMBIV19010	158	1	None	None	G3	S2	null	IUCN_VU-Vulnerable	Aquatic
Gulo gulo	wolverine	Mammals	AMAJF03010	174	2	Threatened	Threatened	G4	S1	null	CDFW_FP-Fully Protected, IUCN_LC-Least Concern, USFS_S-Sensitive	Alpine, Alpine dwarf scrub, Meadow & seep, Montane dwarf scrub, North coast coniferous forest, Riparian forest, Subalpine coniferous forest, Upper montane coniferous forest, Wetland
Hydromantes shastae	Shasta salamander	Amphibians	AAAAD09030	75	1	None	Threatened	G3	S3	null	BLM_S-Sensitive, IUCN_VU-Vulnerable, USFS_S-Sensitive	Cismontane woodland, Limestone
Iliamna bakeri	Baker's globe mallow	Dicots	PDMAL0K010	48	1	None	None	G4	S3	4.2	SB_UCSC-UC Santa Cruz	Chaparral, Pinon & juniper woodlands
Ivesia longibracteata	Castle Crag ivesia	Dicots	PDROS0X0U0	1	1	None	None	G1	S1	1B.3	SB_BerrySB-Berry Seed Bank, USFS_S-Sensitive	Lower montane coniferous forest

Lewisia cantelovii	Cantelow's lewisia	Dicots	PDPOR04020	73	2	None	None	G3	S3	1B.2	BLM_S-Sensitive, SB_UCSC-UC Santa Cruz, USFS_S-Sensitive	Broadleaved upland forest, Chaparral, Cismontane woodland, Lower montane
												coniferous forest, Ultramafic
Margaritifera falcata	western pearlshell	Mollusks	IMBIV27020	78	1	None	None	G5	S1S2	null	IUCN_NT-Near Threatened	Aquatic
Megomphix californicus	Natural Bridge megomphix	Mollusks	IMGASB2010	2	1	None	None	G3	S3	null	null	Oldgrowth, Riparian forest
Myotis evotis	long-eared myotis	Mammals	AMACC01070	139	2	None	None	G5	S3	null	BLM_S-Sensitive, IUCN_LC-Least Concern	null
Pandion haliaetus	osprey	Birds	ABNKC01010	504	4	None	None	G5	S4	null	CDF_S-Sensitive, CDFW_WL-Watch List, IUCN_LC-Least Concern	Riparian forest
Parnassia cirrata var. intermedia	Cascade grass-of-Parnassus	Dicots	PDSAX0P0E1	31	2	None	None	GNRTNR	S3	2B.2	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden, USFS_S-Sensitive	Bog & fen, Meadow & seep, Wetland
Pekania pennanti	Fisher	Mammals	AMAJF01020	555	6	None	None	G5	S2S3	null	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, IUCN_LC-Least Concern, USFS_S-Sensitive	North coast coniferous forest, Oldgrowth, Riparian forest
Penstemon filiformis	thread-leaved beardtongue	Dicots	PDSCR1L2A0	95	4	None	None	G4	S4	4.2	SB_UCSC-UC Santa Cruz	Cismontane woodland, Lower montane coniferous forest, Ultramafic
Ptilidium californicum	Pacific fuzzwort	Bryophytes	NBHEP2U010	177	1	None	None	G4G5	S3S4	4.3	BLM_S-Sensitive	Lower montane coniferous forest, Upper montane coniferous forest
Rana boylei pop. 1	foothill yellow-legged frog - north coast DPS	Amphibians	AAABH01051	1608	15	None	None	G3T4	S4	null	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, USFS_S-Sensitive	Aquatic, Klamath/North coast flowing waters, Riparian forest, Riparian scrub, Riparian woodland
Rana cascadae	Cascades frog	Amphibians	AAABH01060	464	3	None	Candidate Endangered	G3	S3	null	CDFW_SSC-Species of Special Concern, IUCN_NT-Near Threatened, USFS_S-Sensitive	Aquatic, Lower montane coniferous forest
Rhyacophila lineata	Castle Crags rhyacophilan caddisfly	Insects	IITRI19060	1	1	None	None	G1	S1	null	null	Aquatic
Rhyacophila mosana	bilobed rhyacophilan caddisfly	Insects	IITRI19070	1	1	None	None	G1Q	S1	null	null	Aquatic, Sacramento/San Joaquin flowing waters
Vespericola shasta	Shasta hesperian	Mollusks	IMGASA4070	8	1	None	None	G3	S3	null	USFS_S-Sensitive	Riparian forest



CALIFORNIA NATIVE PLANT SOCIETY

CNPS Rare Plant Inventory

Search Results

23 matches found.

Search Criteria: Quad is one of [4112213:4112223], 1000 feet between Plant low elevation and high elevation, 3000 feet between Plant low elevation and high elevation.

Scientific Name	Common Name	Family	Lifeform	Blooming Period	Fed List	State List	Global List	State Ranking	CA Rare Plant Rank	CA Endemic	Date Added
<i>Adiantum shastense</i>	Shasta maidenhair	Pteridaceae	Perennial herb	Apr-Aug	None	None	G3	S3	4.3	Yes	2016-11-18
<i>Ageratina shastensis</i>	Shasta ageratina	Asteraceae	perennial herb	Jun-Oct	None	None	G3	S3	1B.2	Yes	1974-01-01
<i>Arnica venosa</i>	Shasta County arnica	Asteraceae	Perennial rhizomatous herb	May-Jul (Sep)	None	None	G3	S3	4.2	Yes	1974-01-01
<i>Botrypus virginianus</i>	rattlesnake fern	Ophioglossaceae	Perennial herb	Jun-Sep	None	None	G5	S2	2B.2	—	2001-01-01
<i>Chaenactis suffrutescens</i>	Shasta chaenactis	Asteraceae	Perennial herb	May-Sep	None	None	G2G3	S2S3	1B.3	—	1974-01-01
<i>Clarkia borealis</i> ssp. <i>borealis</i>	northern clarkia	Onagraceae	Annual herb	Jun-Sep	None	None	G3T4	S4	4.3	Yes	1980-01-01
<i>Cypripedium californicum</i>	California lady's-slipper	Orchidaceae	Perennial rhizomatous herb	Apr-Aug (Sep)	None	None	G3	S4	4.2	—	1980-01-01
<i>Cypripedium fasciculatum</i>	clustered lady's-slipper	Orchidaceae	Perennial rhizomatous herb	Mar-Aug	None	None	G4	S4	4.2	—	1980-01-01
<i>Cypripedium montanum</i>	mountain lady's-slipper	Orchidaceae	Perennial rhizomatous herb	Mar-Aug	None	None	G4G5	S4	4.2	—	1980-01-01
<i>Darlingtonia californica</i>	California pictureplant	Sarraceniaceae	Perennial rhizomatous herb (carnivorous)	Apr-Aug	None	None	G4	S4	4.2	—	1980-01-01
<i>Doellingeria glabrata</i>	Siskiyou aster	Asteraceae	Perennial herb	Jun-Sep	None	None	G4	S3	4.3	—	2018-08-28
<i>Epilobium oreganum</i>	Oregon fireweed	Onagraceae	Perennial herb	Jun-Sep	None	None	G2	S2	1B.2	—	1980-01-01
<i>Erigeron bloomeri</i> var. <i>nudatus</i>	Waldo daisy	Asteraceae	Perennial herb	Jun-Jul	None	None	G5T4	S3	2B.3	—	1980-01-01
<i>Eriogonum congdonii</i>	Congdon's buckwheat	Polygonaceae	Perennial deciduous shrub	(May) Jun-Aug (Sep)	None	None	G4	S4	4.3	—	1974-01-01
<i>Eriogonum ursinum</i> var. <i>erubescens</i>	blushing wild buckwheat	Polygonaceae	Perennial herb	Jun-Sep	None	None	G3G4T3	S3	1B.3	Yes	2006-10-24
<i>Erythranthe taylorii</i>	Shasta limestone monkeyflower	Phrymaceae	Annual herb	(Feb) Apr-May	None	None	G2	S2	1B.1	Yes	2013-10-16
<i>Lewisia cantelovii</i>	Cantelow's lewisia	Montiaceae	Perennial herb	May-Oct	None	None	G3	S3	1B.2	Yes	1974-01-01

Scientific Name	Common Name	Family	Lifeform	Blooming Period	Fed List	State List	Global List	State Ranking	CA Rare Plant Rank	CA Endemic	Date Added
<i>Lilium rubescens</i>	redwood lily	Liliaceae	Perennial bulbiferous herb	(Mar) Apr-Aug (Sep)	None	None	G3	S3	4.2	Yes	1974-01-01
<i>Parnassia cirrata</i> var. <i>intermedia</i>	Cascade grass-of-Parnassus	Perennial herb	(Jul) Aug-Sep (Oct)	(Jul) Aug-Sep (Oct)	None	None	GNRTNR	S3	2B.2	—	2007-09-19
<i>Penstemon filiformis</i>	thread-leaved beardtongue	Plantaginaceae	Perennial herb	May-Aug (Sep)	None	None	G4	S4	4.2	Yes	1974-01-01
<i>Sedum paradisum</i> ssp. <i>paradisum</i>	Canyon Creek stonecrop	Crassulaceae	Perennial herb	May-Jun	None	None	G3G4T3	S3	1B.3	Yes	1980-01-01
<i>Sidalcea celata</i>	Redding checkerbloom	Malvaceae	Perennial herb	Apr-Aug	None	None	G2G3	S2S3	3	Yes	2012-07-11
<i>Veratrum insolitum</i>	Siskiyou false-hellebore	Melanthiaceae	Perennial herb	Jun-Aug	None	None	G3	S4	4.3	—	1974-01-01

Common Name	Scientific Name	Status ¹	General Habitat Description	Habitat Present/ Absent	Rationale
Plants, Mosses, and Lichen					
Baker's globe mallow	<i>Iliamna bakeri</i>	4.2	Chaparral, pinon & juniper woodlands, mountain slopes, juniper woodland, lava beds. Elevation range 3,280 to 8,200 feet. Bloom period: June – September.	Absent	The project area is outside the known elevation range of the species; therefore, Baker's globe mallow would not be present.
Blushing wild buckwheat	<i>Eriogonum ursinum</i> var. <i>erubescens</i>	1B.3	Gravel between 5,240 to 6,230 feet elevation range. Bloom period: June – September.	Absent	The project area is outside the known elevation range of the species; therefore, blushing wild buckwheat would not be present.
Broad-nerve hump moss	<i>Meesia uliginosa</i>	2B.2	Bogs, fens, meadows, seeps, subalpine coniferous forest, upper montane coniferous forest, damp soil between 6,200 to 7,480 feet elevation range. Bloom period: October.	Absent	The project area is outside the known elevation range of the species; therefore, broad-nerve hump-moss would not be present.
Butte County fritillary	<i>Fritillaria eastwoodiae</i>	3.2	Yellow pine forest, foothill woodland, chaparral, lower montane coniferous forest (openings) between 1,245 to 4,005 feet elevation range. Bloom period: March – June.	Present	Suitable habitat present within the project area. However, the species was not observed during surveys. Thus, no impacts to Butte County fritillary are anticipated.
California globe mallow	<i>Iliamna latibracteata</i>	1B.2	Conifer forest, stream sides and recovering burned areas between 1,575 to 5,050 feet elevation range. Bloom period: June – August.	Present	Suitable habitat present within the project area. However, the species was not observed during surveys. Thus, no impacts to California globe mallow are anticipated.
California lady's-slipper	<i>Cypripedium californicum</i>	4.2	Streambanks, moist slopes, fens, partial shade to full sun, mixed-evergreen, or conifer forest, between 160 to 7,220 elevation range. Bloom period: April – September.	Absent	No suitable habitat present within the project area. Thus, California lady's-slipper would not be impacted.
California pitcher plant	<i>Darlingtonia californica</i>	4.2	Seeps, boggy places with running water, generally serpentine, between 190 to 7,220 feet elevation range. Bloom period: April – August.	Absent	No suitable habitat present within the project area. Thus, California pitcher plant would not be impacted.
Cantelow's lewisia	<i>Lewisia cantelovii</i>	1B.2	Granite cliff faces, rocky outcrops, ravines, serpentine seeps, chaparral, woodland, conifer forest between 1,250 to 4,500 feet elevation range. Bloom period: May – October.	Present	Suitable habitat present within the project area. However, the species was not observed during surveys. Thus, no impacts to Cantelow's lewisia are anticipated.
Canyon Creek stonecrop	<i>Sedum paradisum</i> ssp. <i>paradisum</i>	1B.3	Dry to mesic outcrops, rocky slopes, lava flows, not on serpentine soils. Occurs between 650 and 6,880 feet in elevation. Bloom period: May – June.	Absent	No suitable habitat present in the project area. Thus, Canyon Creek stonecrop would not be impacted.

Common Name	Scientific Name	Status ¹	General Habitat Description	Habitat Present/ Absent	Rationale
Cascade grass-of-Parnassus	<i>Parnassia cirrata</i> var. <i>intermedia</i>	2B.2	Bogs, fens, meadows, seeps, and wetlands between 2,290 to 9,520 feet elevation range. Bloom period: July – October.	Absent	No suitable habitat present in the project area. Thus, Cascade grass-of-Parnassus would not be impacted.
Castle Crag harebell	<i>Campanula shetleri</i>	1B.3	Lower montane coniferous forest, ultramafic upper montane coniferous forest, rock crevices, between 4,250 to 4,950 feet elevation range. Bloom period: June – September.	Absent	No suitable habitat present within the project area. Thus, Castle Crag harebell would not be impacted.
Castle Crag ivesia	<i>Ivesia longibracteata</i>	1B.3	Broadleaved upland forest, chaparral, cismontane woodland, lower montane coniferous forest, ultramafic. Elevation range 3,930 to 4,600 feet. Bloom period: June.	Absent	The project area is outside the known elevation range of the species; therefore, Castle Crag ivesia would not be present.
Clustered lady's-slipper	<i>Cypripedium fasciculatum</i>	4.2	Mesic to moist, shady conifer forest, between 320 to 6,600 feet elevation range. Bloom period: March – August.	Present	Suitable habitat present within the project area. However, the species was not observed during surveys. Thus, no impacts to Clustered lady's-slipper are anticipated.
Columbia yellow cress	<i>Rorippa columbiae</i>	1B.2	Lower montane coniferous forest, meadows, seeps, playas, vernal pools. Elevation range 4,100 to 5,185 feet. Bloom period: May – September.	Absent	The project area is outside the known elevation range of the species; therefore, Columbia yellow cress would not be present.
Congdon's buckwheat	<i>Eriogonum congdonii</i>	4.3	Serpentine between 3,280 to 7,540 feet elevation range. Bloom period: May – September.	Absent	The project area is outside the known elevation range of the species; therefore, Congdon's buckwheat would not be present.
Cooke's phacelia	<i>Phacelia cookei</i>	1B.1	Great basin scrub, sagebrush scrub, yellow pine forest, lower montane coniferous forest, sandy, volcanic between 4,365 to 5,510 feet elevation range. Bloom period: June – July.	Absent	The project area is outside the known elevation range of the species; therefore, Cooke's phacelia would not be present.
Elongate copper moss	<i>Mielichhoferia elongata</i>	2B.2	Exposed soil or rock containing copper minerals, between 1,640 to 4,265 feet elevation range.	Absent	No suitable soils present within the project area. Thus, elongate copper moss would not be impacted.
Greene's mariposa-lily	<i>Calochortus greenei</i>	1B.2	Affinity to serpentine soil, volcanic, red fir forest, northern juniper woodland, cismontane woodland, meadows and seeps, pinyon and juniper woodland, upper montane coniferous forest between 2,360 to 3,675 feet elevation range. Bloom period: June – August.	Absent	No suitable habitat present within the project area. Thus, Greene's mariposa-lily would not be impacted.

Common Name	Scientific Name	Status ¹	General Habitat Description	Habitat Present/ Absent	Rationale
Howell's draba	<i>Draba howellii</i>	4.3	Rocky crevices between 6,390 to 8,700 feet elevation. Bloom period: June – July.	Absent	The project area is outside the known elevation range of the species; therefore, Howell's draba would not be present.
Hutchison's lewisia	<i>Lewisia kelloggii</i> ssp. <i>hutchisonii</i>	3.2	Decomposed granite, slate, or volcanic rubble in conifer forests between 5,185 to 7,285 feet elevation range. Bloom period: June – August.	Absent	The project area is outside the known elevation range of the species; therefore, Hutchinson's lewisia would not be present.
Klamath fawn lily	<i>Erythronium klamathense</i>	2B.2	Meadows and seeps, upper montane coniferous forest, montane meadows, forest openings between 3,930 to 6,100 feet elevation range. Bloom period: April – July.	Absent	The project area is outside the known elevation range of the species; therefore, Klamath fawn lily would not be present.
Klamath mountain catchfly	<i>Silene salmonacea</i>	1B.2	Affinity to serpentine soil. Openings in lower montane coniferous forest, patchy shrub understory. Elevation range 2,500 to 3,800 feet. Bloom period: June – July.	Absent	No suitable soils present within the project area. Thus, Klamath mountain catchfly would not be impacted.
Klamath rock daisy	<i>Erigeron petrophilus</i> var. <i>viscidulus</i>	4.3	Rocky foothills to montane forest, sometimes on serpentine between 4,920 to 8,850 feet elevation range. Bloom period: July – September.	Absent	The project area is outside the known elevation range of the species; therefore, Klamath rock daisy would not be present.
Lassics lupine	<i>Lupinus constancei</i>	FE, SE, 1B.1	Serpentine barrens, openings in lower montane coniferous forest between 4,930 and 6,562 feet in elevation. Bloom period: July.	Absent	The project area is outside the known elevation range of the species; therefore, Lassics lupine would not be present.
Long-haired star-tulip	<i>Calochortus longebarbatus</i> var. <i>longebarbatus</i>	1B.2	Yellow pine forest, wetland-riparian, meadows and seeps, vernal pools, lower montane coniferous forest, Great Basin scrub, clay, mesic between 490 to 4,560 feet elevation range. Bloom period: June – August.	Absent	No suitable soils present within the project area. Thus, long-haired star-tulip would not be impacted.
Marsh claytonia	<i>Claytonia palustris</i>	4.3	Marshy meadows, springs, streambanks, between 3,280 to 8,200 feet elevation range. Bloom period: May – October.	Absent	The project area is outside the known elevation range of the species; therefore, marsh claytonia would not be present.
Mingan moonwort	<i>Botrychium minganense</i>	2B.2	Yellow pine forest/bogs, fens, upper and lower montane coniferous forest, meadows, and seeps, between 5,185 to 10,105 feet elevation range. Bloom period: July – September.	Absent	The project area is outside the known elevation range of the species; therefore, Mingan moonwort would not be present.
Mason's sky pilot	<i>Polemonium chartaceum</i>	1B.3	Subalpine coniferous forest, alpine fell-fields, alpine boulder, and rock fields/rocky, serpentine, granitic, volcanic rock. Elevation range 8,170 to 14,270 feet. Bloom period: June – August.	Absent	The project area is outside the known elevation range of the species; therefore, Mason's sky pilot would not be present.

Common Name	Scientific Name	Status ¹	General Habitat Description	Habitat Present/ Absent	Rationale
Mountain lady's-slipper	<i>Cypripedium montanum</i>	4.2	Moist areas. Dry slopes, mixed-evergreen, or conifer forest, between 650 to 7,220 feet elevation range. Bloom period: March – August.	Present	Suitable habitat present within the project area. However, the species was not observed during surveys. Thus, no impacts to Mountain lady's-slipper are anticipated.
Mt. Eddy draba	<i>Draba carnosula</i>	1B.3	High elevation ridges and summits on rocky serpentine soils between 6,000 to 8,000 feet elevation range. Bloom period: July – August.	Absent	The project area is outside the known elevation range of the species; therefore, Mt. Eddy draba would not be present.
Mt. Tedoc leptosiphon	<i>Leptosiphon nuttallii</i> ssp. <i>howellii</i>	1B.3	Yellow pine forest, lower montane coniferous forest. Affinity to serpentine soil between 3,740 to 5,150 feet elevation range. Bloom period: May – August.	Absent	The project area is outside the known elevation range of the species; therefore, Mt. Tedoc leptosiphon would not be present.
Niles' harmonia	<i>Harmonia doris-nilesiae</i>	1B.1	Rock ultramafic ridgetops and slopes with Jefferey pine, gray pine, and shrubs between 2,100 to 5,500 feet elevation range. Bloom period: May – July.	Present	Suitable habitat present within the project area. However, the species was not observed during surveys. Thus, no impacts to Niles' harmonia are anticipated.
Northern adder's tongue	<i>Ophioglossum pusillum</i>	2B.2	Valley grassland, freshwater wetlands, wetland-riparian, freshwater marshes, swamps, meadows and seeps, edges. Elevation range 3,740 to 6,265 feet. Bloom period: July.	Absent	The project area is outside the known elevation range of the species; therefore, northern adder's tongue would not be present.
Northern clarkia	<i>Clarkia borealis</i> ssp. <i>borealis</i>	4.3	Chaparral, Cismontane woodland, Lower montane coniferous forest, foothill woodland, forest margin, between 1,300 to 2,650 feet elevation range. Bloom period: June – September.	Present	Suitable habitat present within the project area. However, the species was not observed during surveys. Thus, no impacts to northern clarkia are anticipated.
Northwestern moonwort	<i>Botrychium pinnatum</i>	2B.2	Lodgepole forest, red fir forest, yellow pine forest/ meadows, seeps, lower and upper montane coniferous forest between 6,233 to 9,186 feet elevation range. Bloom period: July – October.	Absent	The project area is outside the known elevation range of the species; therefore, northwestern moonwort would not be present..
Oregon fireweed	<i>Epilobium oreganum</i>	1B.2	Bogs, small streams between 1,800 to 5,900 feet elevation. Bloom period: June – September.	Present	Suitable habitat present within the project area. However, the species was not observed during surveys. Thus, no impacts to Oregon fireweed are anticipated.

Common Name	Scientific Name	Status ¹	General Habitat Description	Habitat Present/ Absent	Rationale
Pacific fuzzwort	<i>Ptilidium californicum</i>	4.3	Lower montane coniferous forest, Upper montane coniferous forest. Found on small conifers in old growth forests. Bloom period: May – August.	Absent	No old growth forests present within the project area. Thus, Pacific fuzzwort would not be impacted.
Pallid bird's-beak	<i>Cordylanthus tenuis</i> ssp. <i>pallidus</i>	1B.2	Yellow pine forest, lower montane coniferous forest between 3,180 to 4,460 feet elevation range. Bloom period: July – September.	Absent	The project area is outside the known elevation range of the species; therefore, pallid bird's beak would not be present.
Peanut sandwort	<i>Minuartia rosei</i>	4.2	Gravelly, serpentine barrens and openings in Jeffery pine/mixed conifer forest between 2,495 to 5,350 feet elevation range. Bloom period: May – July.	Absent	No serpentine barrens or openings are present within the project area. Thus, peanut sandwort would not be present.
Pickering's ivesia	<i>Ivesia pickeringii</i>	1B.2	Yellow pine forest, wetland-riparian, seeps, meadows. Affinity to serpentine soil between 2,820 to 4,725 feet elevation range. Bloom period: June – August.	Absent	The project area is outside the known elevation range of the species; therefore, Pickering's ivesia would not be present.
Pumice moonwort	<i>Botrychium pumicola</i>	2B.2	Volcanic/ alpine boulder and rock field, subalpine coniferous forest between 8,858 to 9,186 feet elevation range. Bloom period: July – September.	Absent	The project area is outside the known elevation range of the species; therefore, pumice moonwort would not be present.
Rattlesnake fern	<i>Botrychium virginianum</i>	2B.2	Bog & fen, lower montane coniferous forest, meadow & seep, Riparian Forest, Upper montane coniferous forest, Wetland, moist shaded valleys along small streams between elevation range 2,300 to 3,940 feet. Bloom period: June – September	Absent	The project area is outside the known elevation range of the species; therefore, rattlesnake fern would not be present.
Redding checkerbloom	<i>Sidalcea celata</i>	3	Open oak woodland, serpentine or not between 490 to 1,220 feet elevation range. Bloom period: April – August.	Absent	The project area is outside the known elevation range of the species; therefore, Redding checkerbloom would not be present.
Redwood lily	<i>Lilium rubescens</i>	4.2	Dry soils in chaparral, gaps in conifer forest between 90 to 5,900 feet elevation range. Bloom period: March – September.	Present	Suitable habitat is present within the project area. However, the species was not observed during surveys. Thus, no impacts to redwood lily are anticipated.
Scabrid alpine tarplant	<i>Anisocarpus scabridus</i>	1B.3	Red fir forest, upper montane coniferous forest. Rocky, open subalpine slopes. Elevation range 4,825 to 7,775 feet. Bloom period: July - August.	Absent	The project area is outside the known elevation range of the species; therefore, scabrid alpine tarplant would not be present.
Scalloped moonwort	<i>Botrychium crenulatum</i>	2B.2	Yellow pine forest, freshwater wetlands, wetland-riparian/meadows, freshwater-marsh, bogs, and fens between 6,005 to 10,140 feet elevation range. Bloom period: June – September.	Absent	The project area is outside the known elevation range of the species; therefore, scalloped moonwort would not be present.

Common Name	Scientific Name	Status ¹	General Habitat Description	Habitat Present/ Absent	Rationale
Scott Mountain sandwort	<i>Minuartia stolonifera</i>	1B.3	Rocky slopes with serpentine soils, montane mixed conifer forest between 4,200 to 5,120 feet elevation range. Bloom period: May – August.	Absent	The project area is outside the known elevation range of the species; therefore, Scott Mountain sandwort would not be present.
Scott Valley phacelia	<i>Phacelia greenei</i>	1B.2	Gravelly serpentine slopes and forest openings. Elevation range 3,020 to 12,715 feet. Bloom period: April – June.	Absent	The project area is outside the known elevation range of the species; therefore, Scott Valley phacelia would not be present.
Shasta ageratina	<i>Ageratina shastensis</i>	1B.2	Chaparral, limestone, metavolcanic, lower montane coniferous forest, between 1,300 to 5,900 feet elevation range. Carbonate and rocky microhabitats. Bloom period: June – October.	Absent	No rocky or carbonate microhabitats present in the project area. Thus, Shasta ageratina would not be impacted.
Shasta chaenactis	<i>Chaenactis suffrutescens</i>	1B.3	Lower montane coniferous forest, Ultramafic, Upper montane coniferous forest, unstable sandy to rocky, generally serpentine soils, scree, and drainages, between 2,290 to 7,550 feet elevation range. Bloom period: May – September.	Absent	The project area is outside the known elevation range of the species; therefore, Shasta chaenactis would not be present.
Shasta County arnica	<i>Arnica venosa</i>	4.2	Open, often disturbed oak/ pine woodland, between 1,300 to 4,600 feet elevation range. Bloom period: May – September.	Present	Suitable habitat occurs within the project area. However, the species was not observed during surveys. Thus, no impacts to Shasta County arnica are anticipated.
Shasta limestone monkeyflower	<i>Erythranthe taylorii</i>	1B.1	Meadow & seep, Upper montane coniferous forest, crevices in limestone cliffs and outcrops between 2,950 to 3,600 feet elevation range. Bloom period: February – May.	Absent	The project area is outside the known elevation range of the species; therefore, Shasta limestone monkeyflower would not be present.
Shasta maidenhair fern	<i>Adiantum shastense</i>	4.3	Shaded forest, rocky or moist banks, northern or eastern exposures, <5,250 ft elevation. Bloom period: April – August.	Present	Suitable habitat occurs within the project area. However, the species was not observed during surveys. Thus, no impacts to Shasta maidenhair fern are anticipated.
Shasta snow-wreath	<i>Neviusia cliftonii</i>	1B.2	Yellow pine forest, riparian between 1,085 to 1,805 feet elevation range. Bloom period: April – June.	Present	Suitable habitat occurs within the project area. However, the species was not observed during surveys. Thus, no impacts to Shasta snow-wreath are anticipated.

Common Name	Scientific Name	Status ¹	General Habitat Description	Habitat Present/ Absent	Rationale
Showy raillardella	<i>Raillardella pringlei</i>	1B.2	Wet serpentine meadows, seeps, and stream banks. Elevation range 4,920 to 6,695 feet. Bloom period: July – September.	Absent	The project area is outside the known elevation range of the species; therefore, showy raillardella would not be present.
Siskiyou aster	<i>Doellingeria glabrata</i>	4.2	Dry oak or conifer forest, rocky places between 2,290 to 7,900 feet elevation range. Bloom period: June – September.	Absent	The project area is outside the known elevation range of the species; therefore, Siskiyou aster would not be present.
Siskiyou false-hellebore	<i>Veratrum insolitum</i>	4.3	Openings in thickets, mixed-evergreen forest on red clay, > 3,000 feet in elevation. Bloom period: June – August.	Absent	No red clay soils present within the project area. Thus, Siskiyou false-hellebore would not be impacted.
Siskiyou fritillaria	<i>Fritillaria glauca</i>	4.2	Talus slopes, serpentine between 1,960 to 6,880 feet elevation range. Bloom period: April – July.	Absent	No talus slopes present within the project area. Thus, Siskiyou fritillaria would not be impacted.
Stebbins' harmonia	<i>Harmonia stebbinsii</i>	1B.2	Yellow pine forest, chaparral, lower montane coniferous forest, affinity to serpentine soil between 2,000 to 6,000 feet elevation range. Bloom period: May – June.	Present	Suitable habitat occurs within the project area. However, the species was not observed during surveys. Thus, no impacts to Stebbins' harmonia are anticipated.
Talus collomia	<i>Collomia larsenii</i>	2B.2	Closed-cone pine forest, red fir forest, lodgepole forest, alpine fell-fields between 5,085 to 10,400 feet elevation range. Bloom period: July – September.	Absent	The project area is outside the known elevation range of the species; therefore, talus collomia would not be present.
Thread-leaved beardtongue	<i>Penstemon filiformis</i>	4.2	Cismontane woodland, Lower montane coniferous forest, Ultramafic, open rocky places among shrubs, yellow-pine forest between 1,300 to 5,600 feet elevation range. Bloom period: May – September.	Present	Suitable habitat occurs within the project area. However, the species was not observed during surveys. Thus, no impacts to thread-leaved beardtongue are anticipated.
Tracy's beardtongue	<i>Penstemon tracyi</i>	1B.3	Red fir forest, upper montane coniferous forest, rocky outcrops between 6,495 to 7,250 feet elevation range. Bloom period: June – August.	Absent	The project area is outside the known elevation range of the species; therefore, Tracy's beardtongue would not be present.
Tracy's eriastrum	<i>Eriastrum tracyi</i>	3.2	Chaparral, cismontane woodland, valley and foothill grassland between 2,495 to 6,560 feet elevation range. Bloom period: June – July.	Present	Suitable habitat occurs within the project area. However, the species was not observed during surveys. Thus, no impacts to Tracy's eriastrum are anticipated.
Trinity buckwheat	<i>Eriogonum alpinum</i>	1B.2	Subalpine forest, alpine fell-fields, red fir forest, affinity to serpentine soil between 6,070 to 8,660 feet elevation range. Bloom period: June – September.	Absent	The project area is outside the known elevation range of the species; therefore, Trinity buckwheat would not be present.

Common Name	Scientific Name	Status ¹	General Habitat Description	Habitat Present/ Absent	Rationale
Trinity River jewel-flower	<i>Streptanthus oblaceolatus</i>	1B.2	Cismontane woodland, steep meta-volcanic bluffs. Elevation range 70 to 1,600 feet. Bloom period: April – June.	Absent	The project area is outside the known elevation range of the species; therefore, Trinity River jewel-flower would not be present.
Umpqua green-gentian	<i>Frasera umpquaensis</i>	2B.2	Cool, moist Douglas-fir/ white fir forest margins or openings between 5,250 to 6,070 feet elevation range. Bloom period: June – July.	Absent	The project area is outside the known elevation range of the species; therefore, Umpqua green-gentian would not be present.
Veined water lichen	<i>Peltigera gowardii</i>	4.2	Rocks in cool water, perennial mountain streams, riparian forest between 2,750 to 8,100 feet elevation range.	Absent	The project area is outside the known elevation range of the species; therefore, Veined water lichen -gentian would not be present.
Wayside aster	<i>Eucephalis vialis</i>	1B.2	Lower and upper montane coniferous forest. Gravelly/ grassy areas between 2,990 to 5,070 feet elevation range. Bloom period: June to September.	Absent	The project area is outside the known elevation range of the species; therefore, wayside aster would not be present.
Waldo daisy	<i>Erigeron bloomer</i> var. <i>nudatus</i>	2B.3	Lower montane coniferous forest, Ultramafic, Upper montane coniferous forest, serpentine slopes, rocky ridges between 1,960 to 7,540 feet elevation range. Bloom period: June – July.	Present	Suitable habitat occurs within the project area. However, the species was not observed during surveys. Thus, no impacts to Waldo daisy are anticipated.
Whitebark pine	<i>Pinus albicaulis</i>	FT	Dry, rocky mountainsides, subalpine and alpine forest. Elevation range 6,005 to 13,715 feet. Bloom period: July - August.	Absent	The project area is outside the known elevation range of the species; therefore, whitebark pine would not be present.
Wilkin's harebell	<i>Campanula wilkinsiana</i>	1B.2	Streambanks and springs in red fir and subalpine forests. Affinity to serpentine soil between 5,500 to 8,600 feet elevation range. Bloom period: July – September.	Absent	The project area is outside the known elevation range of the species; therefore, Wilkin's harebell would not be present.
Amphibians					
Cascades frog	<i>Rana cascadae</i>	SCE	Clean aquatic resources: lower montane coniferous forest, wet meadows, damp forest bogs, lakes, ponds, and small streams above 2,400 feet in elevation.	Absent	The site does not support clean aquatic resources; therefore, Cascades frog would not be present.
Foothill yellow-legged frog-north coast DPS	<i>Rana boylei</i> pop. 1	SSC	Aquatic, Klamath/ North coast flowing waters, Riparian Forest, riparian scrub, riparian woodland.	Present	Some small streams are present within the project area. No impacts are anticipated.
Northern red-legged frog	<i>Rana aurora</i>	FT, SSC	Breeding habitat is in permanent water sources, lakes, ponds, reservoirs, slow streams, marshes, bogs, and swamps. Found in forests, woodlands, grasslands, and stream sides with plant cover.	Absent	The project area is outside the known elevation range of the species; therefore, northern red-legged frog would not be present.

Common Name	Scientific Name	Status ¹	General Habitat Description	Habitat Present/ Absent	Rationale
Pacific tailed frog	<i>Ascaphus truei</i>	SSC	Aquatic, Klamath/ North coast flowing waters, Lower montane coniferous forest, North coast coniferous forest, Redwood, Riparian Forest. Occupies cool, clear, fast-flowing mountain streams and adjacent older forest.	Absent	No fast-flowing waters or older forests are present within the project area. Thus, Pacific tailed frog would not be present.
Shasta salamander	<i>Hydromantes shastae</i>	ST	Cismontane woodland, limestone, vertical cavern walls, level ground in mixed forests of Douglas fir, pines, and oaks. Elevation range 800-2000 feet. Found in Kennett Formation, McCloud Limestone, and Hosselkus Limestone.	Absent	No limestone formations occur the project area. Thus, Shasta salamander would not be present.
Birds					
American peregrine falcon	<i>Falco peregrinus anatum</i>	FD	Nests typically on ledges of large cliff faces, bridges, and city bridges.	Absent	No nesting habitat present within project area. Thus, American peregrine falcon would not be impacted.
Bald eagle	<i>Haliaeetus leucocephalus</i>	FD, SE, SFP	Bald eagles nest in large, old-growth trees or snags in mixed stands near open bodies of water. Adults tend to use the same breeding areas year after year and often use the same nest, though a breeding area may include one or more alternate nests. Bald eagles usually do not begin nesting if human disturbance is evident. In California, the bald eagle nesting season is from February through July.	Present	The Sacramento River, which flows along the eastern portion of the project site, provides foraging habitat for bald eagle, while the site provides suitable nesting habitat. However, no stick nests were observed during the survey. Impacts to bald eagle are not anticipated.
Black swift	<i>Cypseloides niger</i>	SSC	Aquatic, artificial flowing waters, Klamath/ North coast flowing and standing waters, marsh & swamp, Sacramento/ San Joaquin flowing and standing waters, South coast flowing and standing waters, wetlands. Nesting habitat on cliffs near waterfalls.	Absent	No nesting habitat present within project area. Thus, black swift would not be impacted.
Marbled murrelet	<i>Brachyramphus marmoratus</i>	FT	Nest in old growth trees within in 37 miles inland from ocean.	Absent	The project area is outside the known elevation range of the species; therefore, marbled murrelet would not be present.
Northern goshawk	<i>Accipiter gentilis</i>	SSC	North coast coniferous forest, subalpine coniferous forest, upper montane coniferous forest. Prefer mature or old growth conifer, mixed hardwood forest for nesting.	Absent	No nesting habitat occurs within project area. Thus, northern goshawk would not be present.
Northern spotted owl	<i>Strix occidentalis caurina</i>	FT	Coniferous and coniferous hardwood forests. Closed-canopy, uneven-aged, late-successional, and old growth forests.	Absent	No suitable habitat within the project area. Thus, northern spotted owl would not be present.
Yellow-billed cuckoo	<i>Coccyzus americanus</i>	FT, SE	Riparian habitat with dense cover, woodlands with low, scrubby vegetation.	Absent	No dense cover riparian habitat within the project area. Thus, yellow-billed cuckoo would not be present.

Common Name	Scientific Name	Status ¹	General Habitat Description	Habitat Present/ Absent	Rationale
Invertebrates					
Conservancy fairy shrimp	<i>Branchinecta conservatio</i>	FE	Turbid, slightly alkaline vernal pools	Absent	No vernal pools present within action area. Thus, Conservancy fairy shrimp would not be present.
Franklin's bumble bee	<i>Bombus franklini</i>	FE	Grassy coastal prairies and coast range mountain meadows, near seeps and other wet meadow environments. Select food plant genera: <i>Ceanothus</i> , <i>Centaurea</i> , <i>Eriogonum</i> , <i>Lupinus</i> , <i>Trifolium</i> , and <i>Veratrum</i> . Only found in Siskiyou and Trinity counties in California.	Absent	No suitable habitat present within the project area. Thus, Franklin's bumble bee would not be present.
Monarch butterfly	<i>Danaus plexippus</i>	FC	Monarchs leave overwintering sites in February and March and typically reach the northern limit of their North American range in early to mid-June. Adult females lay eggs singly on milkweed species which the caterpillars rely upon for energy and protective toxins. Milkweeds are critical for successful development of the caterpillar into an adult butterfly. Once an egg is laid, the full cycle to adulthood may last 20 to 35 days (sometimes longer) depending on temperature. The caterpillars develop and eventually form a chrysalis and pupating into an adult butterfly. During the spring and summer, an adult monarch spends its 2–5-week lifespan mating and nectaring on flowers, with females searching for milkweed upon which to lay their eggs. Multiple generations are produced during this time, with the final fall generation migrating to overwintering sites and living for 6–9 months. In September and early October monarchs migrate to wintering areas. During the winter, western monarchs aggregate in clusters at forested groves scattered along 620 miles of the Pacific coast from California's Mendocino County to Baja California, Mexico. Small aggregations inland from the coast have also been reported in Inyo and Kern Counties in California. Monarchs seek out very specific microclimate conditions, including dappled sunlight, high humidity, access to fresh water, and an absence of freezing temperatures or high winds.	Present	The project site contains suitable foraging habitat for Monarch because there are nectar producing plants. However, the quantity is low, and most bloom in the spring and early summer. Moreover, removal of flowering plants that provide food would be limited, as most work would occur on the pavement or roadway prism. There were no observed milkweed plants. Thus, no impacts to Monarch butterfly are anticipated.

Common Name	Scientific Name	Status ¹	General Habitat Description	Habitat Present/ Absent	Rationale
Vernal pool fairy shrimp	<i>Branchinecta lynchi</i>	FT	Vernal pool fairy shrimp are endemic to the grasslands of the Central Valley, Central Coast mountains, and South Coast mountains. They inhabit astatic rain-filled pools; small, clear-water sandstone-depression pools; or grassed swale, earth slump, or basalt flow depression pools.	Absent	No vernal pools occur within the project area. Thus, vernal pool fairy shrimp would not be present.
Vernal pool tadpole shrimp	<i>Lepidurus packardii</i>	FE	Ephemeral freshwater habitats including alkaline pools, clay flats, vernal lakes, vernal pools, vernal swales, and other seasonal wetlands.	Absent	No vernal pools occur within project area. Thus, vernal pool tadpole shrimp would not be present.
Western bumble bee	<i>Bombus occidentalis</i>	SCE	Assorted abundant floral resources. Largely confined to high-elevation sites. Select food plant genera: <i>Melilotus</i> , <i>Cirsium</i> , <i>Centaurea</i> , <i>Eriogonum</i> , <i>Trifolium</i> , and <i>Chrysothamnus</i> .	Absent	No suitable habitat occurs within the project area. Thus, western bumble bee would not be present.
Mammals					
Fisher	<i>Pekania pennanti</i>	SSC	Fishers inhabit mixed conifer forests dominated by Douglas-fir, although they also are encountered frequently in higher elevation fir and pine forests, and mixed evergreen/broadleaf forests. Suitable habitat for fishers consists of large areas of mature, dense forest stands with snags and greater than 50 percent canopy cover. Fishers den in cavities in large trees, snags, logs, rocky areas, or shelters provided by slash or brush piles. Fishers are very sensitive to human activities. Den sites are most often found in areas with no human disturbance.	Present	Suitable habitat occurs within the project area. Fisher could traverse the project area; however, based on their sensitivity to human disturbance, fisher is not expected to den within the project area.

Common Name	Scientific Name	Status ¹	General Habitat Description	Habitat Present/ Absent	Rationale
Gray wolf	<i>Canis lupus</i>	FE	Gray wolves are habitat generalists and populations can be found in any type of habitat in the Northern Hemisphere from about 20° latitude to the polar ice pack. Key components of preferred wolf habitat include a year-round abundance of natural prey, secluded denning and rendezvous sites, and sufficient space with minimal human disturbance. Dens may be a hollow log or a tunnel excavated in loose soil. A den may have two or more entrances, which are usually indicated by a large pile of dirt. Den sites are often near water, and are usually elevated to detect approaching enemies. Wolf packs establish and defend territories that may range from 20 to 400 square miles. Wolves travel over large areas to hunt, and may cover as much as 30 miles in a day. Young wolves may disperse several hundred miles to seek out a mate or to establish their own pack.	Absent	A gray wolf pack, known as the “Shasta Pack” became established in southeastern Siskiyou County in the spring of 2015. Continued dispersal of wolves into California is expected. Although gray wolves can travel approximately 30 miles each day, and could potentially stray near the project site, gray wolves would not be expected to den on the project site given the extent of human activity.
Pallid bat	<i>Antrozous pallidus</i>	SSC	Forages in oak woodlands and roosts in caves and within rock crevices in cliffs. This species is also associated with riparian habitat.	Absent	No oak woodlands or suitable roosting habitat occur within the project area. Thus, pallid bat would not be present.
Spotted bat	<i>Euderma maculatum</i>	SSC	Chaparral, Cismontane woodland, coastal scrub, valley and foothill grassland. Roost on cliffs, in caves, and trees.	Present	No roosting habitat is present within the project area. Foraging habitat is present adjacent to the project area. Given the lack of roosting habitat, no impacts to spotted bat are anticipated.
Townsend’s big-eared bat	<i>Corynorhinus townsendii</i>	SSC	Roosts in caves, bridges, and old buildings in a variety of habitats that include deserts, grasslands, scrubland, conifer forest and oak woodlands.	Present	Suitable habitat occurs within the project area. Bats are present at Castella and Castle Creek bridges. With bridge work limited to the top of the bridge deck (i.e., no work under the bridge), no impacts are anticipated.
Western mastiff bat	<i>Eumops perotis californicus</i>	SSC	Chaparral, cismontane woodland, Coastal scrub, valley and foothill grassland. Prefers more open habitats for foraging. Roosts in cliff faces, high buildings, trees, and tunnels.	Present	No roosting habitat occurs within the project area. Foraging habitat is present adjacent to the project area. Given the lack of roosting habitat, no impacts to western mastiff bat are anticipated.

Common Name	Scientific Name	Status ¹	General Habitat Description	Habitat Present/Absent	Rationale
Wolverine	<i>Gulo gulo luscus</i>	FPT, ST, SFP	Wolverines are dependent on areas in high mountains, near the treeline, where conditions are cold year-round and snow cover persists well into the month of May. Female wolverines use birthing dens that are excavated in snow. Persistent, stable snow greater than 1.5 meters deep appears to be a requirement for birthing dens. Birthing dens consist of tunnels that contain well-used runways and bed sites and may naturally incorporate shrubs, rocks, and downed logs as part of their structure. Birthing dens may occur on rocky sites, such as north-facing boulder talus or subalpine cirques. Wolverines are very sensitive to human activities and often abandon den sites in response to human disturbance.	Absent	No suitable habitat occurs in the project site for the wolverine. The wolverine would thus not be present.
Reptiles					
Western pond turtle	<i>Actinemys marmorata</i>	FPT, SSC	Aquatic, artificial flowing waters, Klamath/ North coast flowing and standing waters, marsh and swamp, Sacramento/San Joaquin flowing and standing waters, south coast flowing and standing waters, and wetland.	Absent	No suitable habitat occurs within the project area. Thus, western pond turtle would not be present.

¹ Status Codes

Federal:

FE Federally Listed – Endangered
FT Federally Listed – Threatened
FC Federal Candidate Species
FP Federal Proposed Species
FPT Federal Proposed – Threatened
FD Federal Delisted
USFS-S U.S. Forest Service-Sensitive

State:

SFP State Fully Protected
SR State Rare
SE State Listed - Endangered
ST State Listed - Threatened
SC State Candidate Species
SCE State Candidate Endangered
SSSC State Species of Special Concern
SD State Delisted
WL CDFW Watchlist

Rare Plant Rank

1A Plants Presumed Extinct in California
1B Plants Rare, Threatened or Endangered in California and Elsewhere

Rare Plant Threat Rank

0.1 Seriously Threatened in California
0.2 Fairly Threatened in California

2A	Presumed Extirpated in California, but More Common Elsewhere	0.3	Not Very Threatened in California
2B	Rare or Endangered in California, but More Common Elsewhere		
3	Plants about which More Information is Needed		
4	Plants of Limited Distribution		

APPENDIX D. MITIGATION AND MONITORING PLAN



This Mitigation Monitoring and Reporting Program (MMRP) has been prepared pursuant to Public Resources Code (PRC) Section 21081.6 and CEQA Guidelines Section 15097, which requires a Lead Agency to adopt a program for monitoring or reporting on the revisions it has required for a project and the measures it has imposed to mitigate or avoid significant environmental effects. The public agency may choose whether its program will monitor mitigation, report on mitigation, or both. "Reporting" generally consists of a written compliance review that is presented to the decision-making body or authorized staff person. A report may be required at various stages during project implementation or upon completion of the mitigation measure. "Monitoring" is generally an ongoing or periodic process of project oversight. There is often no clear distinction between monitoring and reporting and the program best suited to ensuring compliance in any given instance will usually involve elements of both.

During project design, avoidance, minimization, and/or mitigation measures will be incorporated into the project's final plans, specifications, and cost estimates, as appropriate. All permits will be obtained prior to implementation of the project. During construction, environmental and construction/engineering staff will ensure the commitments contained in this MMRP are fulfilled. Following construction and appropriate phases of project delivery, long-term mitigation maintenance and monitoring will take place, as applicable. As the following MMRP is a draft, some fields have not been completed, and will be filled out as each of the measures is implemented. Some measures may apply to more than one resource area, and these duplicative or redundant measures have not been included in the MMRP.

Environmental Commitments Record (ECR)

DIST-CO-RTE: 02 - VAR - 005 **PM/PM:** 0.000/0.000 **EA/Project ID:** 02-0J810 / 0219000164

Project Description: CAPM

Date (Last modification): 1/22/25

Environmental Planner: John Luper

Phone: 530-720-5928

Construction Liaison: Not yet identified

Phone: Not yet identified

Resident Engineer: Not yet identified

Phone: Not yet identified

PERMITS

Permits	Agency	Application Submitted	Permit Received	Permit Expiration	Permit Requirements Completed by	Permit Requirements Completed on	Comments
1600	California Department of Fish & Wildlife	Not Yet Applied	N/A	N/A	N/A	N/A	N/A
401	Regional Water Quality Control Board	Not Yet Applied	N/A	N/A	N/A	N/A	N/A
404 Non-reporting	U.S. Army Corps of Engineers	Not Yet Applied	N/A	N/A	N/A	N/A	N/A

ENVIRONMENTAL COMMITMENTS

PRE-CONSTRUCTION

Category	Task and Brief Description	Source	Included in PS&E Package	Responsible Branch/Staff	Action to Comply	Due Date	Task Completed by	Tasks Completed on	Remarks	Mitigation for significant impacts under CEQA
Biology	Complete floristic surveys for sensitive plant species	NES	N/A	RE / ECL	Complete surveys prior to any ground disturbance activities	N/A	N/A	N/A	N/A	N/A

Category	Task and Brief Description	Source	Included in PS&E Package	Responsible Branch/Staff	Action to Comply	Due Date	Task Completed by	Tasks Completed on	Remarks	Mitigation for significant impacts under CEQA
Biology	Comply with SSP 14-1.02 Environmentally Sensitive Areas	NES	N/A	RE / ECL	Complete surveys prior to any ground disturbance activities	N/A	N/A	N/A	N/A	N/A
Biology	Complete foothill yellow-legged frog surveys	NES	N/A	RE / ECL	Install ESA fencing prior to start of construction. Have CSB present to help with delineation.	N/A	N/A	N/A	N/A	N/A
Biology	Comply with SSP 14-1.02 Environmentally Sensitive Areas	NES	N/A	RE / ECL	Submit resumes to ECL for review and acceptance.	N/A	N/A	N/A	N/A	N/A
Hazardous Waste	Comply with SSP 7-1.02K(6)(j)(iii)	ISA	N/A	RE	Submit LCP to safety officer for review and acceptance.	N/A	N/A	N/A	N/A	N/A

CONSTRUCTION

Category	Task and Brief Description	Source	Included in PS&E Package	Responsible Branch/Staff	Action to Comply	Due Date	Task Completed by	Tasks Completed on	Remarks	Mitigation for significant impacts under CEQA
Air Quality	Comply with Caltrans Standard Specifications in Section 14-9.02.	Env Doc	Std. Spec.	RE	N/A	N/A	N/A	N/A	N/A	N/A
Biology	Comply with 14-6.05 Invasive Species Control	NES	NSSP	RE	Comply with Invasive Species Control Plan	N/A	N/A	N/A	N/A	N/A

Category	Task and Brief Description	Source	Included in PS&E Package	Responsible Branch/Staff	Action to Comply	Due Date	Task Completed by	Tasks Completed on	Remarks	Mitigation for significant impacts under CEQA
Biology	Comply with NSSP 14-6.03B Bird Protection	NES	NSSP	RE / ECL	N/A	N/A	N/A	N/A	N/A	N/A
Biology	Comply with SSP 14-1.02 Environmentally Sensitive Area	NES	SSP	RE / ECL	Maintain ESA fencing throughout construction.	N/A	N/A	N/A	N/A	N/A
Biology	Comply with SSP 14-6.03D(1) Contractor Supplied Biologist	NES	SSP	RE	Survey before trees are removed.	N/A	N/A	N/A	N/A	N/A
Hazardous Waste	Comply with SSP 14-11.14 Treated Wood Waste	ISA	SSP	RE	Submit as an informational submittal a copy of each completed shipping record and weight receipt.	N/A	N/A	N/A	N/A	N/A
Hazardous Waste	Comply with SSP 36-4 – Residue containing lead from paint and thermoplastic	ISA	SSP	RE	N/A	N/A	N/A	N/A	N/A	N/A
Hazardous Waste	Comply with SSP 7-1.02K(6)(j)(iii) Unregulated Earth Material Containing Lead	ISA	SSP	RE	Comply with plan	N/A	N/A	N/A	N/A	N/A
Noise	Comply with Standard Specification 14-8.02. Noise Standards	Env Doc	Std. Spec	RE	N/A	N/A	N/A	N/A	N/A	N/A

Category	Task and Brief Description	Source	Included in PS&E Package	Responsible Branch/Staff	Action to Comply	Due Date	Task Completed by	Tasks Completed on	Remarks	Mitigation for significant impacts under CEQA
Construction	Mitigation for Significant Impacts under CEQA	Env Doc	N/A	RE	N/A	N/A	N/A	N/A	N/A	Assuming project is constructed per IS/MND, CEQA mitigation has been met.

APPENDIX E. RESPONSE TO COMMENTS

DEPARTMENT OF TRANSPORTATION

NORTH REGION ENVIRONMENTAL

1031 BUTTE STREET

REDDING, CA 96001

(530) 945-1932

www.dot.ca.gov

TTY 711

*Making Conservation
a California Way of Life.*

January 10, 2025

Jerred Ferguson
Environmental Scientist
Storm Water & Water Quality Certification Unit

Dear Jerrod:

The California Department of Transportation (Caltrans) would like to thank you for participating in the project delivery process for the Flume Creek CAPM Project by providing written comments. Your comments are important to us because they help inform the project team, refine the project scope, and reveal and highlight aspects of special concern. All submitted comments and the responses provided have been incorporated into the final Initial Study being prepared for this project. Your comment and Caltrans' response are below.

Comment:Clean Water Act (CWA) Section 401, Water Quality Certification

The Central Valley Water Board has regulatory authority over wetlands and waterways under the Federal Clean Water Act (CWA) and the California Water Code, Division 7 (CWC). Discharge of dredged or fill material to waters of the United States requires a CWA Section 401 Water Quality Certification from the Central Valley Water Board. Typical activities include any modifications to these waters, such as stream crossings, stream bank modifications, filling of wetlands, etc. 401 Certifications are issued in combination with CWA Section 404 Permits issued by the Army Corps of Engineers. The proposed project must be evaluated for the presence of jurisdictional waters, including wetlands and other waters of the State. Steps must be taken to first avoid and minimize impacts to these waters, and then mitigate for unavoidable impacts. Both the Section 404 Permit and Section 401 Water Quality

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703 B Street, Marysville, CA 95901

Certification must be obtained prior to site disturbance. Any person discharging dredge or fill materials to waters of the State must file a report of waste discharge pursuant to Sections 13376 and 13260 of the California Water Code. Both the requirements to submit a report of waste discharge and apply for a Water Quality Certification may be met using the same application form, found at Water Boards 401 Water Quality Certification and/or WDRs Application(https://www.waterboards.ca.gov/water_issues/programs/cwa401/#resources).

Isolated wetlands and other waters not covered by the Federal Clean Water Act

Some wetlands and other waters are considered "geographically isolated" from navigable waters and are not within the jurisdiction of the Clean Water Act. (e.g., isolated wetlands, vernal pools, or stream banks above the ordinary high-water mark). Discharge of dredged or fill material to these waters may require either individual or general waste discharge requirements from the Central Valley Water Board. If the U.S. Army Corps of Engineers determine that isolated wetlands or other waters exist at the project site, and the project impacts or has potential to impact these non-jurisdictional waters, a Report of Waste Discharge and filing fee must be submitted to the Central Valley Water Board. The Central Valley Water Board will consider the information provided and either issue or waive Waste Discharge Requirements. Failure to obtain waste discharge requirements or a waiver may result in enforcement action.

Any person discharging dredge or fill materials to waters of the State must file a report of waste discharge pursuant to Sections 13376 and 13260 of the CWC. Both the requirements to submit a report of waste discharge and apply for a Water Quality Certification may be met using the same application form, found at Water Boards 401 Water Quality Certification and/or WDRs Application (https://www.waterboards.ca.gov/water_issues/programs/cwa401/#resources).

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General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (CGP)

Construction activity, including demolition, resulting in a land disturbance of one acre or more must obtain coverage under the CGP. The Project must be conditioned to implement storm water pollution controls during construction and post-construction as required by the CGP. To apply for coverage under the CGP the property owner must submit Permit Registration Documents electronically prior to construction. Detailed information on the CGP can be found on the State Water Board website NPDES 2022 Construction Stormwater General Permit | California State Water Resources Control Board (https://www.waterboards.ca.gov/water_issues/programs/stormwater/construction/general_permit_reissuance.html).

Response to Comment:

Comments noted.

If you have questions or need additional information, please contact me at your convenience.

Sincerely,

Kelly Timmons, P.E.
Project Manager
District 2
Kelly.Timmons@dot.ca.gov
(530) 945-0226

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January 10, 2025

Lee Ann Lyons

Dear Lee Ann:

The California Department of Transportation (Caltrans) would like to thank you for participating in the project delivery process for the Flume Creek CAPM Project by providing written comments. Your comments are important to us because they help inform the project team, refine the project scope, and reveal and highlight aspects of special concern. All submitted comments and the responses provided have been incorporated into the final Initial Study being prepared for this project. Your comment and Caltrans' response are below.

Comment:

I attended the virtual meeting yesterday regarding the flume Creek rehab pavement project that is scheduled to begin in 2026. I might have missed it in the first few minutes of the meeting but my question is what is the length of this project as far as distance I understand It includes the bridge at Castella and Castle Creek but what is the complete mileage distance of paving that will be taking place? Is it 1 mile or 2 miles or 6 miles? Where does the paving start and end?

Response to Comment:

Hello, Lee Ann ... thank you for attending Thursday's meeting, and thank you again for reaching out. I've attached the map that was used in the presentation showing the project limits. It runs from Post Mile SHA-58.00 to Post Mile SIS-2.70. I realize those numbers don't mean much to most folks, so I've also attached a close up for each location of where they lie on the map. All in all, it's a little more

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Lee Ann Lyons
Flume Creek CAPM Project
EA: 02-0J810
January 10, 2025
Page 2

than 11 miles. I hope I was able to answer all of your questions. Feel free to reach out if you have any additional inquiries or comments.

Mario Montalvo
Public Information Officer
Caltrans District 2

If you have questions or need additional information, please contact me at your convenience.

Sincerely,

Kelly Timmons, P.E.
Project Manager
District 2
Kelly.Timmons@dot.ca.gov
(530) 945-0226

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703 B Street, Marysville, CA 95901

Attachment H

Transportation Management Plan Data Sheet

TRANSPORTATION MANAGEMENT PLAN DATA SHEET

To: Buster Hansen, PE
North Region Design R1
02-0315, MS #71
(530) 812-7443

Date: May 7, 2024

File: Sha-5-PM 58.0/67.019
Sis-5-PM 0.0/2.7

From: Department of Transportation
District 2 - Office of Traffic Management

EA: 02-0J810 (02-1900-0164)

Work: Flume Creek CAPM

1. POLICY

The Caltrans Deputy Directive titled "Transportation Management Plans" ([DD-60-R2](#)) establishes the current policy for mitigating traffic impacts resulting from construction, maintenance, encroachment permit, planned emergency restoration, locally or specially funded, or other activities. The directive states that Transportation Management Plans (TMPs) and contingency plans must be completed for all work activities on the State highway system. **The purpose of this Transportation Management Plan Data Sheet is to ensure all anticipated TMP costs are included in the Project Report (PR).**

2. PROJECT INFORMATION

This project in Shasta and Siskiyou County on Interstate 5, is a Capital Preventative Maintenance (CAPM) minor pavement rehabilitation and will cold plane and pave approximately 45.41 lane miles of I-5, repair 100 rocking concrete slab locations, repair 81 drainage systems in varying condition, repair the deck on the Castella Undercrossing and Castle Creek Bridge, remove and replace 11 miles of deficient median barrier, upgrade non-standard Metal Beam Guard Rail, construct a geosynthetic reinforced embankment, remove and replace 72 signs, update an existing Roadside Weather Information Station (RWIS), and update an existing Closed Circuit Television (CCTV) station. Additionally, 2 miles of wildlife fencing will be installed, and a 12'x12' wildlife crossing will be constructed. There are 360 working days (WDAYS) for this project. All WDAYs will require traffic control. Construction is scheduled to occur between July 2026 and November 2028.

3. FACILITY

ROADWAY: Interstate 5 is a 4-lane freeway that is the main north-south route in the Western United States, and is the principal arterial in District 2. Alignment is long tangent on mountainous terrain. There are two 12-ft paved lanes with approximate 6-ft inside and 12-ft outside paved shoulders at the project location. The regulatory speed limit is 65 MPH.

RAMPS: There are 34 ramps associated with 1 overcrossing (OC) and 11 undercrossings (UC) within the project limits. Ramp closures are required for construction activities. Detours will be provided. Only one ramp closure in each direction of travel is allowed at any one time.

TRAFFIC VOLUMES:

2019 AADT Volumes			
Description	Co-Rte-Reference PM (Leg)	Vehicle AADT Total*	Truck % Total Vehicles
Flume Creek	Sha-5-59.35 (A)	19,100	34.58
Central Dunsmuir	Sis-5-2.514 (A)	21,300	33.5

*(AADT) Annual Average Daily Traffic is for both directions.

TSN Volumes for Project Traffic Delay			
Description	Peak VPH** (1 Direction)		Data Source for Peak VPH Co-Rte-Reference PM (Leg) Count Date
	WD	WE	
Sims Road	1,422	1,365	TMS #179, SHA-005-PM 57.41 July 2019

**Peak vehicle per hour volumes: WD = Weekday; WE=Weekend

STRUCTURES: There are 17 structures within the project limits. This project does include structure work. There are anticipated ramp closures.

Location	Structure Number	Name	Length (ft)	*Width (ft)
Sha-5-PM 59.35	06-0112	Flume Creek Road UC	99	87
Sha-5-PM 59.97	06-0113	Creekside Road UC	122	87
Sha-5-PM 60.51	06-0114	Conant Road UC	115	87
Sha-5-PM 61.75	06-0115	Sweetbrier OC	229	41
Sha-5-PM 62.63	06-0120R	Castella Sidehill Viaduct	104	35
Sha-5-PM 63.31	06-0116	Castle Creek	250	87
Sha-5-PM 63.58	06-0117	Castella UC	125	87
Sha-5-PM 65.41	06-0119	Soda Creek Road UC	125	87
Sha-5-PM 66.84	06-0095	Crag View Drive UC	136	87
Sis-5-PM 0.04	02-0045	Little Castle Creek	26	0
Sis-5-PM 0.69	02-0065	South Dunsmuir UC	134	108
Sis-5-PM 1.21	02-0066	Panorama UC	172	87
Sis-5-PM 1.79	02-0073	Oak Street UC	159	87
Sis-5-PM 2.09	02-0078	Willow Street UC	145	87
Sis-5-PM 2.51	02-0089	Central Dunsmuir UC	45	84
Sis-5-PM 2.65	02-0002	Sacramento River BOH	579	89
Sis-5-PM 2.65	02-0002Y	Sacramento River BOH	831	37

* Zero width is shown for non-grade-top culverts or structures not carrying vehicular traffic, such as underpasses or pedestrian overcrossings.

CENSUS LOOPS: There are 39 existing traffic monitoring stations within 1 mile of the project limits. Of these:

- 8 must be protected in place or replaced if damaged during construction.
- 30 will be replaced or modified as part of this project, by bid item.
- 1 station will have 1 new loop installed as part of this project.

For more information regarding traffic monitoring stations, contact Traffic Census, Griffin Lemoine at 530-949-7311.

TMS #	Cabinet*	Location Co-Rte-Actual PM	Description	Potential Impact	Condition
823	0	Sims Rd NB off Sha-5-57.209	PB shared w/ R79, Located 441' N/O S end MBGR of off ramp, where ramps come together, by fwy entrance signs of on ramp	Protect in place (1 Loop)	Active
824	0	Sims Rd NB on Sha-5-57.209	PB shared w/ R78, Located 441' N/O S end MBGR of off ramp, where ramps come together, by fwy entrance signs of on ramp	Protect in place (1 Loop)	Active
825	0	Sims Rd SB on Sha-5-57.408	PB on W shoulder 170' S/O Sims Rd.	Protect in place (1 Loop)	Active
179	1	Sims Rd Sha-5-57.41	24' South of Sims Road UC Cabinet on Lt shld 24' south of U.C.	Protect in place (4 Loops)	Active
826	0	Sims Rd SB off Sha-5-57.461	PB on E shoulder, 191' N/O Sims Rd., 206' S/O PM 57.5	Protect in place (1 Loop)	Active
827	0	Flume Cr SB on Sha-5-59.269	PB on E shldr, 430' S/O Flume Cr. CL, 11' ETW, 37' N/O yield sign	Replace (1 Loop)	Active
828	0	Flume Cr NB off Sha-5-59.291	PB on W shldr, 310'S/O Flume Cr., 259' N/O exit sign	Replace (1 Loop)	Active
829	0	Flume Cr NB on Sha-5-59.428	PB on E shldr, 409' N/O Flume Cr. CL, 16' ETW	Replace (1 Loop)	Active
830	0	Flume Cr SB off Sha-5-59.431	PB on W shoulder, 428' n/o Flume Creek CL, 422' s/o of light standard 59531	Replace (1 Loop)	Active
831	0	Conant Rd SB on Sha-5-60.442	PB on E shldr, 349' S/O Conant, 21' N/O merge sign, 10' ETW	Replace (1 Loop)	Active
832	0	Conant Rd NB off Sha-5-60.438	PB on W shldr, 113' N/O exit sign, 371' S/O Conant CL, 10' ETW	Replace (1 Loop)	Active
833	0	Conant Rd SB off Sha-5-60.571	PB on E shldr, 192' S/O exit sign, 331' N/O Conant CL, 9' ETW	Replace (1 Loop)	Active
834	0	Conant Rd NB on Sha-5-60.648	PB on E shldr, 741' N/O Conant CL, 45' S/O merge sign, 13' ETW	Replace (1 Loop)	Active
835	0	Sweetbrier Ave SB on Sha-5-61.580	Pb located 70' N/O edge of paved gore	Replace (1 Loop)	Active
836	0	Sweetbrier Ave NB off Sha-5-61.642	PB on W shldr, 83' N/O paved gore, 14' ETW	Replace (1 Loop)	Active
837	0	Sweetbrier Ave NB on Sha-5-61.844	PB on E shldr, 380' N/O Sweetbrier, 50' S/O paved	Replace (1 Loop)	Active

TMS #	Cabinet*	Location Co-Rte-Actual PM	Description	Potential Impact	Condition
			gore, 10' N/O elect. PB, 14' ETW		
838	0	Sweetbrier Ave SB off Sha-5-61.875	PB located 175' S/O exit 723 sign	Replace (1 Loop)	Active
839	0	Vista Point NB off Sha-5-62.371	Pb located behind MBGR, 16' S/O end of MBGR	Replace (1 Loop)	Active
840	0	Castella 6-117 NB off Sha-5-63.460	PB on W shldr, 468' S/O Castle Cr. Rd.	Replace (1 Loop)	Active
841	0	Castella 6-117 SB on Sha-5-63.475	PB Located on W shoulder 111' N/O edge paved gore	Replace (1 Loop)	Active
842	0	Castella 6-117 NB on Sha-5-63.723	PB at an angle against the E slope of ramp, approx. 2' N/O mkr, 97' S/O paved gore	Replace (1 Loop)	Active
843	0	Castella 6-117 SB off Sha-5-63.69	PB on W shoulder 21' S/O exit sign, 106' N/O fuel sign	Replace (1 Loop)	Active
844	0	Soda Creek 6-199 NB off Sha-5-65.223	PB on W shldr, 144' N/O paved gore, 2' N of mkr, 9' ETW	Replace (1 Loop)	Active
845	0	Soda Creek 6-119 SB on Sha-5-65.305	Pb on W shldr, 115' N/O paved gore, 2' S/O mkr, PB is on a slant	Replace (1 Loop)	Active
846	0	Soda Creek 6-119 SB off Sha-5-65.546	PB on E shldr, 43' N/O PM 65.5	Replace (1 Loop)	Active
847	0	Soda Creek 6-119 NB on Sha-5-65.558	PB on W shldr, 114' S/O paved gore, 8' ETW	Replace (1 Loop)	Active
848	0	Crag View Dr NB off Sha-5-66.000	TBD in Design Phase	Install (1 Loop)	Proposed
849	0	Castle Crag 6-95 NB off Sha-5-66.633	PB on E shoulder 61' N/O paved gore, 972' S/o Crag View Dr, 10' ETW, PB is on a slope	Replace (1 Loop)	Active
850	0	Castle Crag 6-95 SB on Sha-5-66.913	PB located on N side of loop ramp 2' E of freeway entrance sign	Protect in place Or Replace (1 Loop)	Active
851	0	Castle Crag 6-95 NB on Sha-5-66.953	PB located on W shoulder 60' S/O edge paved gore	Replace (1 Loop)	Active
852	0	Castle Crag 6-95 SB off Sha-5-66.995	PB located JSO exit 728 sign	Protect in place Or Replace (1 Loop)	Active
853	0	S Dunsmuir NB off Sis-5-0.554	PB on W shldr, 97' N/O paved gore, 632' S/O Dunsmuir Ave., 12' ETW	Replace (1 Loop)	Active
854	0	S Dunsmuir SB on Sis-5-0.569	PB on E shldr, 48' N/O paved gore, 11' ETW	Replace (1 Loop)	Active
855	0	S Dunsmuir SB off Sis-5-0.729	PB on left shldr, near the top of arc, 8' ETW. Loop visible	Replace (1 Loop)	Active
856	0	S Dunsmuir NB on Sis-5-0.906	PB on W shldr, 174' S/O paved gore, 775' N/O Dunsmuir Ave, 9' ETW	Replace (1 Loop)	Active

TMS #	Cabinet*	Location Co-Rte-Actual PM	Description	Potential Impact	Condition
857	0	Central Dunsmuir NB off Sis-5-2.289	PB on W shldr, 157' N/O paved gore, 9' ETW, loop visible	Replace (1 Loop)	Active
858	0	Central Dunsmuir NB on Sis-5-1.535	PB on E side of ramp, 229' S/O gore tip, 17' ETW	Replace (1 Loop)	Active
859	0	Central Dunsmuir SB on Sis-5-2.617	PB on W shldr, 35' S/O DI, 67' N/O CCTV, 21' ETW	Replace (1 Loop)	Active
860	0	Central Dunsmuir- Siskiyou Ave SB off Sis-5-2.926	Approximately 73' from the stop bar at the PEDESTRIANS PROHIBITED sign.	Protect in place (1 Loop)	Active

*Cabinet: 0 = A station that does not connect to the Traffic Management Office via phone line or wireless modem.
1 = A station that does connect to the Traffic Management Office via phone line or wireless modem.

ITS FIELD ELEMENTS: There are 7 existing ITS Field Elements within the 1.25 miles of project limits that must be protected in place or replaced if damaged during construction. **Therefore, sections 10-1.02B, "Traffic Elements", and 87-21.03B(2), "Maintaining Existing Traffic Management System Elements During Construction" of the Standard Specifications will apply. Include bid item 870009 for "Maintaining Existing Traffic Management System Elements During Construction" and the ITS Field Elements Pre-Bid Cert List.** Further information regarding ITS field elements can be obtained by contacting Jeremiah Pearce, Chief, Office of ITS Engineering & Support at 530-225-3320.

Of the 7 existing elements 2 are being upgraded.

If funds become available, one new element has been proposed.

Element	Location	Description	Potential Impact	Condition
HAR Flasher	Sha-5-57.37	Sims Road	Not Likely - Protect in place	Active
NIPS	Sha-5-57.85	Sims Road	Not Likely - Protect in place	Active
RWIS	Sha-5-57.87	Sims Road	Not Likely - Protect in place	Active
CCTV	Sha-5-57.87	Sims Road	Not Likely - Protect in place	Active
CMS	Sha-5-57.87	Sims Road	Not Likely - Protect in place	Active
CCTV	Sha-5-61.75	Sweetbrier Avenue	Proposed	N/A
RWIS	Sis-5-2.61	Central Dunsmuir	Upgrade Element	Active
CCTV	Sis-5-2.61	Central Dunsmuir	Upgrade Element	Active

4. TRAFFIC IMPACTS

TRAFFIC CONTROL: Construction will be conducted under Standard Plan T10 Lane and Shoulder Closures with T18 for speed reduction. Most operations can be conducted during typical 12-hour work shifts. Based on traffic volumes, lane and shoulder closures will be allowed to work from 7:00 pm – 7:00 am, except after 3:00 p.m. Fridays, on weekends, and "designated holidays". Only one lane or shoulder closure per direction of travel will be allowed at any one time. Use of Temporary barrier is anticipated. In addition, the use of traffic crossovers at the wildlife crossing and GRE are being investigated by the PDT. These crossovers will require authorization from the Lane Closure Committee prior to being implemented.

I-5 PEDESTRIANS: Not allowed on I-5.

I-5 BICYCLES: During operations, bicyclists will be required to travel past the work zone using the open shoulder. When there is no open shoulder, bicycle travel is not advisable because vehicle speeds are high and there is a high percentage of trucks.

TRUCKS: Interstate 5 is designated as a National Network (STAA) for California State Highways. It is not anticipated that traffic control for this project will significantly alter the requirement for this route. Annual permit trucks up to 12-ft wide are common, and single trip permit trucks between 12-ft and 16-ft in width can occur several times a week. A 12-ft paved lane with paved shoulder to provide a 16-ft horizontal clearance must be provided at all locations.

5. TRAFFIC IMPACT MITIGATION

LANE CLOSURES: Lane closures on I-5 are not allowed when traffic volumes exceed the carrying capacity of the remaining open lane. For this segment of I-5 the carrying capacity is estimated at 1,200 vehicles per lane. Based on a review of traffic volumes, lane and shoulder closures could cause the capacity to be exceeded during peak times. Discussion with the PDT and Construction will be required to determine if daytime lane closures are feasible. Lane closure charts will be provided.

COORDINATE CONSTRUCTION: There are 3 other projects scheduled on this route in close proximity during the 2026-2028 Const. Yr. (known of at the time of this Data Sheet). The PE should review the project status (and the route conflicts spreadsheet) as the 2026-2028 Const. Yr. approaches to identify any other projects that may pose closure conflicts. The TMP will include a list of any overlapping or adjacent projects.

PORTABLE CHANGEABLE MESSAGE SIGNS: PCMSs are typically used for safety reasons on roadways where high approach speeds are present, sight distance is limited, night work is anticipated, or there is a history of work zone accidents related to high approach speeds. At least two PCMS are required for this project. One PCMS must be placed before the first traffic control sign for each approach. Additional PCMSs may be needed for speed reduction or prior to and during ramp closures.

POSITIVE PROTECTION DEVICES: Positive protection devices should be considered in work zone situations that place workers on foot at increased risk from motorized traffic traveling over 45 mph. When the protection is only needed during the work hours and the situation is expected to last only a few days a Stationary Impact Attenuator Vehicle or Mobile Barrier could be used. Contact Construction and Traffic Safety regarding the most appropriate device for this project.

WORK ZONE SPEED LIMIT REDUCTION: Per 2020 California Manual for Setting Speed Limits, for construction work zones on the State highway system, the speed limit shall be reduced by 10 mph from the posted speed limit unless an exception is granted. Authorized exceptions to the Work Zone Speed Limit Reduction are listed in Section 2.3.2. The decisions regarding speed reduction should be discussed at the PDT meeting and documented on the Decision Log. The PE must have team concurrence for un-authorized exceptions and obtain approval from the Deputy District Directors for Traffic Operations and Construction.

When physical roadway conditions will affect traffic safety around the clock, implement 24/7 construction work zone speed limit reduction using RSP T21 or Traffic Handling Sheets.

The PE must document decisions made regarding the speed reduction on the [Construction Work Zone Speed Limit Reduction Determination Form](#) (CEM-1301) and obtain approvals if required. Contact Construction Safety and Traffic Safety for questions regarding specific project conditions. This form must be submitted with the TMP Request.

TMP PUBLIC INFORMATION CAMPAIGN: The PE should include \$21,000 in the estimate to cover preparation of news releases to the local media as needed throughout the duration of the project.

WORKER SAFETY MEDIA CAMPAIGN: Worker safety media campaigns have been shown to reduce work zone vehicle collisions. With safety and reliability being the Department's #1 and #2 goals respectively, it is appropriate for funding to be set aside for worker safety media advertisements. To assist in filling these goals, the PE must add to the estimate \$15,000 for item #066063 - Transportation Management Plan Public Information.

COSTS: In addition to costs associated with typical traffic control measures for Standard Plan T10 Lane Closures, the following must be incorporated into the project estimate:

- PCMS: Include cost for at least two PCMS.
- Positive Protection Measures: Consider including a bid item for Stationary Impact Attenuator Vehicle or Mobile Barrier if workers on foot will be working next to a traffic lane, discuss need with construction.
- Ramp Detours: Include cost for ramp detours if closures are expected.
- Contingency Costs: Include Contingency costs for equipment breakdowns, shortage of materials, etc.
- Speed Zone Reduction: Cost for lane closure on I-5.
- Department Furnished Item #066063 - Transportation Management Plan Public Information: Include \$36,000; \$21,000 for TMP Public Information Campaign and \$15,000 for Worker Safety Media Campaign

TMP: The TMP for this project will summarize the traditional traffic handling practices and other traffic mitigation strategies that will be implemented during construction. These traffic handling practices and mitigation strategies will include, but not be limited to: pre-notification of closures (lane closure schedule), DTM evaluation of cumulative traffic corridor delays for multiple projects, California Highway Information Network (CHIN), Road Work Information Bulletin (RIB), local agency contacts, ITS field element locations, census loop locations, CHP commander contacts, incident response (accident, natural event) contacts, contingency plans, and maintenance contacts. **A TMP for this project is required and should be requested when the design is complete enough to determine specific traffic impacts but early enough to make design changes/additions required for traffic mitigation.**

This TMP Data Sheet was prepared by Gracie Holland and reviewed by Khoi Nguyen. I have personally reviewed this document and all supporting information. I certify that the assumptions are reasonable and proper subject to the limiting conditions set forth and I find the Data Sheet complete and current.


Roddy Estes, P.E.
Acting Chief, Office of Traffic Management
District 2
530-806-5600

5/7/2024
Date


Jeremiah Pearce, P.E.
Chief, Office of ITS Engineering & Support
District 2
530-225-3320

5-29-24
Date

REV 8/30/2024 KAN
Update work description
Update traffic control
No Impacts to ITS

Attachment I

Programming Sheet

EA 02-0J810		CAPITAL & SUPPORT COSTS BY PROGRAM AND PROJECT FUNDING									
EFIS 0219000164		Flume Creek CAPM									
Program	Component	Project Funding				Expended to Date			Estimate at Complete		
		Programmed Fiscal Year	Programmed (x1,000)	Approved Budget	Programmed Support/ Capital (%)	\$ (x1,000)	% Expended	% Complete	Current Escalated Estimate (x1,000)	Support/ Capital (%)	EAC / Budget
201.121	PA&ED	22/23	\$2,960	\$2,960	5%	\$2,891	98%	92%	\$3,158	5%	107%
201.121	PS&E	24/25	\$2,100	\$2,100	4%	\$0	0%	0%	\$2,100	3%	100%
201.121	R/W	24/25	\$300	\$300	1%	\$0	0%	0%	\$542	1%	181%
201.121	CON	25/26	\$5,780	\$5,780	10%	\$0	0%	0%	\$5,780	9%	100%
SUPPORT SUBTOTAL			\$11,140	\$11,140	19%	\$2,891		25%	\$11,580	18%	
		Programmed Fiscal Year	Programmed	Current Escalated Estimate		Capital Contingency Rate				15%	
201.121	R/W Capital	25/26	\$415	\$234		 PPM Office Chief Concurrence					
201.121	CON Capital	25/26	\$57,390	\$65,892							
CAPITAL SUBTOTAL		\$57,805		\$66,126							
PROJECT TOTALS		\$68,945		\$77,706							

Form Revision Date: 10/11/2024 CAB

- Notes:**
1. All support components Estimates at Complete are escalated at 3.7% per year past the current fiscal year to the mid point of the component.
 2. Construction Capital is escalated at 4.89% for 25/26 and 3.8% for future years to the mid point of construction.
 3. R/W Capital escalated per the R/W datasheet.
 4. The district will use G-12 funding authority to complete PAED if needed.
 5. Additional funding will be requested for R/W support.
 6. 201.116 funding will be requested at the March 2025 CTC Mtg. for PS&E (\$20k), CON Support (\$50k), and CON Capital (\$3,000k) to add the Castella Bridge deck repair.
 7. The district will apply 25/26 FY variance funds for the balance of the CON Capital needs.

Attachment J

Risk Management Plan

Project Information		
Checkpoint:	PA&ED	Project Manager: TIMMONS, KELLY B
Date:	2/13/2025	Program: shopp
EA:	02-0J810	Capital Costs: \$66,126,000
EFIS ID:	02-1900-0164	Support Costs: \$11,580,000
Project Nickname:	Flume Creek CAPM	Total Costs: \$77,706,000
County/Route/PM:	59V02-005-0/0	RTL Target: 3/13/2026

Calculated Risk Reserve				Last Run Date:	
Project Phase	Confidence Level	Resource Hours	Reserve \$'s	Confidence Level	Schedule Reserve
0 (PA&ED)	50%	-	\$0	50%	days
1 (PS&E)	40%	-	\$0	50%	days
2 (RW Sup)	50%	-	\$0	50%	days
3 (Con Sup)	50%	-	\$0	50%	days
4 (Con Cap)	50%	-	\$0		-
9 (RW Cap)	50%	-	\$0		-
Project Total		-	\$ -		days

Risk Register													version 2.02 03/01/2023
Risk Identification			Phase	Initial Risk Assessment		Risk Response		Residual Risk		Risk Status			
RISK ID #	Risk Statement "As a result of <root cause>, <uncertain event> may occur, which would lead to <effect on objective(s)>."	Proactive Response (prior to risk occurring)		Initial Risk Probability		Response Strategy		Residual Risk Probability		Risk Assumptions and Status	Date Risk Identified		
Status				Response if Risk Occurs	Cost Impact (\$k)	Schedule Impact	Cost Impact (\$k)	Schedule Impact	Cost Impact (\$k) (Y indicates Residual Risk will be included in Reserve Calculations)		Schedule Impact (Y indicates Residual Risk will be included in Reserve Calculations)	Anticipated Resolution Date	
Type		Risk Trigger										Risk Owner	Date Last Updated
RiBS Sub Category													
1	As a result of balancing Const and Surveys workloads, using A&E consultants may occur, which would lead to increased support costs.	Determine workload prior to allocation of 3-phase.		2 - Low (11-30%)		Passive Acceptance		2 - Low (11-30%)		[01-24-25: 0-phase did not require additional funding. 1-phase EAC is \$235k under programmed amount. The PDT does not anticipate any A&E in the 1-phase. Con and Surveys will evaluate their workload closer to RTL for the 3-phase.] [08-12-24: A&E was used for Surveys, but not Enviro during the 0-phase. Very low probability Surveys will use A&E for 3-phase.] [08-01-23: Assume most work can be performed with CT staff. There is a shortage of biologists and surveyors in the District.]	8/1/2023		
Active			0-PA&ED								12/1/2025		
Threat			1-PS&E										
PPM: Consultant Services	Update workplan if A&E is needed prior to Con Allocation	Offset A&E costs by reducing CT staff resources. Manage additional costs with tools.	2-RW Sup								1/24/2025		
			3-Con Sup	<\$290	Insignificant			\$0 - \$425 N	0 - 30 days N				
				4-Con Cap									
	Surveys & Con		9-RW Cap										
2	As a result of RR involvement, multiple iterations and long reviews by the RR may occur, which would lead to a delay to the RW Cert. and added support costs.	Design uses the recently developed guidelines for RR coordination. A focus PDT is meeting 1/27/25 to discuss strategy of providing package now vs waiting.		3 - Moderate (31-50%)		Passive Acceptance		3 - Moderate (31-50%)		[01-24-25: There are five culverts on RR RW. One, lying under the tracks, is planned to be abandoned. The other 4 do not lie under the tracks. The RR is requesting a geotech report, shoring, drainage report and plans as part of the package to review. A geotech report was not part of the workplan. Other deliverables may take time to complete, which possibly delay the RR's review.] [10-23-24: Proposed RR Agreements were submitted to the RR for their review.] [08-15-24: Applications for Right of Entry and Drainage Easements were submitted to UPRR. Reduce risk to moderate.] [08-01-23: District RW recently developed guidelines to	8/1/2023		
Active			0-PA&ED								11/22/2025		
Threat			1-PS&E										
ROW: Acquisitions	RR Clearance for RW Cert.	Determine a drop deadline for RR approval. If not met, evaluate if locations can be removed from project to not affect the overall delivery schedule. Evaluate if locations can be done with the Flume Creek Leftover project.	2-RW Sup	>\$60	90 - 180 days			\$51 - \$135 N	90 - 180 days N		1/24/2025		
			3-Con Sup										
			4-Con Cap										
	RW		9-RW Cap										
3	As a result of unknown utilities during mapping, conflicts during construction may occur, which would lead to construction delay and increased costs.	Potholing for the fiber optic/ATT Legacy line is being scheduled.		2 - Low (11-30%)		Passive Acceptance		2 - Low (11-30%)		[01-24-25: Utility mapping was completed. Only discovered the one ATT Legacy line in conflict.] [10-23-24: Fiber optic line is the only utility in conflict. The PDT assumes the FO line requires relocation.] [08-15-24: Fiber optic most likely requires relocation.] [08-01-23: Assume RW mapping will capture all utilities and conflicts.]	8/1/2023		
Active			0-PA&ED								10/1/2028		
Threat			1-PS&E										
ROW: R/W Utilities	Fiber optic was identified. However, discovery of unknown utilities during construction may still occur.	If the risk is realized, the RE will work with the Contractor to minimize any delays and costs.	2-RW Sup								1/24/2025		
			3-Con Sup	<\$290	0 - 30 days			\$0 - \$404 N	0 - 30 days N				
			4-Con Cap	<\$150					\$0 - \$2800 N				
	RW - Utilities		9-RW Cap										

Risk Identification			Phase	Initial Risk Assessment		Risk Response		Residual Risk		Risk Status		
RISK ID #	Risk Statement "As a result of <root cause> , <uncertain event> may occur, which would lead to <effect on objective(s)> ."	Proactive Response (prior to risk occurring)		Initial Risk Probability		Response Strategy		Residual Risk Probability		Risk Assumptions and Status	Date Risk Identified	
Status				Cost Impact (\$k)	Schedule Impact	Cost Impact (\$k)	Schedule Impact	Cost Impact (\$k) (Y indicates Residual Risk will be included in Reserve Calculations)	Schedule Impact (Y indicates Residual Risk will be included in Reserve Calculations)		Anticipated Resolution Date	
Type		Response if Risk Occurs									Date Last Updated	
RiBS Sub Category	Risk Trigger											
	Risk Owner											
8	As a result the USFS workload, a delay to the special use permit (SUP) review process may occur, which would lead to a delay to the project schedule and increased support costs.	Submit the USFS in a timely manner and have early conversations to determine if there are any issues the USFS may know.		2 - Low (11-30%)		Passive Acceptance		2 - Low (11-30%)		[08-01-23: Recently, the USFS review process is taking extra time. There may be requirements by the USFS which are currently unknown.]	8/1/2023	
Active			0-PA&ED									
Threat		1-PS&E										11/22/2025
ROW: Acquisitions	delay to reviewing the SUP application	If the risk is realized, the PDT will incorporate the SUP requirements.	2-RW Sup	\$20 - \$30	30 - 90 days			\$20 - \$30	N		30 - 90 days	N
			3-Con Sup		0 - 30 days				0 - 30 days	N		
			4-Con Cap	<\$150				\$0 - \$2800	N			
	RW - USA Lands		9-RW Cap									
9	As a result of compressing Environmental and RW's requested time to meet the 4th year delivery schedule, a delay to the major milestones may occur, which would lead to added support and capital costs and a delay to the schedule.	The PDT functions will manage their workload and communicate any delays (risk or realized).		3 - Moderate (31-50%)		Passive Acceptance		3 - Moderate (31-50%)		[01-24-25: RTL is scheduled at the end of the 2nd qtr., 12/22/25.] [08-01-23: Assume the current schedule will be met per the scope of the project. If other work is added, the risk to a delay increases.]	8/1/2023	
Active			0-PA&ED									
Threat		1-PS&E	<\$110	30 - 90 days			\$0 - \$110	N	30 - 90 days		N	3/2/2026
PPM: Schedule and Delivery	Meeting M120, 200, 410 and 460.	If the risk is realized, the PDT will strategize how to reduce schedule and deliver the project on time. This may require OT.	2-RW Sup	<\$30	30 - 90 days			\$0 - \$20	N		30 - 90 days	N
			3-Con Sup									
			4-Con Cap									
	Project Manager		9-RW Cap									
13	As a result of higher than anticipated escalation rates, higher bids than programmed amounts may occur, which would lead to added Construction Capital costs.	The PDT will continue to monitor the engineer's estimate on an annual basis, or more frequent for milestones.		5 - Very High (>70%)		Passive Acceptance		5 - Very High (>70%)		[08-12-24: Construction Capital escalation rates were increased to 4.89% and Support to 3.7% on 8/2/24 and implemented into the funding table. Unit prices increased, affecting the EE by ~\$6 million.] [08-01-23: The current estimate uses 3.2% escalation.]	8/1/2023	
Active			0-PA&ED									
Threat		1-PS&E										4/7/2026
PPM: Funding	Bid Opening	Variance is planned to be used, but need to evaluate the District's needs across all projects before determining the amount this project will receive.	2-RW Sup									1/24/2025
			3-Con Sup		Insignificant							
			4-Con Cap	\$300 - \$590				\$5740 - \$11480	N			
	Project Manager		9-RW Cap									
14	As a result of unanticipated CDFW 1600 permit conditions, permit driven compensatory mitigation may be required to offset impacts to riparian habitat, which could result in impacts to the project's cost, scope, and schedule.	Coordinate with CDFW to use hydroseeding as the mitigation measure.		2 - Low (11-30%)		Passive Acceptance		2 - Low (11-30%)		[12-09-24: Construction related access is expected to result in 0.02 acres of temporary impacts and 0.005 acres of permanent impacts to riparian habitat. The current CDFW 1600 permitting strategy does not propose to offset those impacts with a revegetation plan as the site does not offer a suitable location for planting and is expected to regenerate naturally. Two years of hydroseed monitoring is proposed.]	12/9/2024	
Active			0-PA&ED									
Threat		1-PS&E										11/1/2025
ENV: Biological	CDFW Permit	If CDFW does not accept the proposed strategy of two years of hydroseed monitoring, up to \$100k may be needed for Stewardship to fund a 3rd party (e.g., RCD) to plant/monitor riparian vegetation. This would likely be a 5-year post-construction requirement/commitment.	2-RW Sup		Insignificant							1/28/2025
			3-Con Sup									
			4-Con Cap									
	Environmental		9-RW Cap	\$300 - \$80				\$50 - \$100	N			

Risk Identification			Phase	Initial Risk Assessment		Risk Response		Residual Risk		Risk Status	
RISK ID #	Risk Statement "As a result of <root cause>, <uncertain event> may occur, which would lead to <effect on objective(s)>."	Proactive Response (prior to risk occurring)		Initial Risk Probability		Response Strategy		Residual Risk Probability		Risk Assumptions and Status	Date Risk Identified
Status				Cost Impact (\$k)	Schedule Impact	Cost Impact (\$k)	Schedule Impact	Cost Impact (\$k) (Y indicates Residual Risk will be included in Reserve Calculations)	Schedule Impact (Y indicates Residual Risk will be included in Reserve Calculations)		Anticipated Resolution Date
Type		Response if Risk Occurs									Date Last Updated
RiBS Sub Category	Risk Trigger										
	Risk Owner										
15	As a result of an ongoing slipout, correcting the slipout may occur, which would lead to additional support and construction costs.	Provided prelim investigation for Enviro, RW, Design and Cons impacts. Request Variance funds for Con Cap and Support. If Variance funds are not available, the work can be eliminated.		4 - High (51-70%)		Passive Acceptance		4 - High (51-70%)			1/27/2025
Active			0-PA&ED								
Opportunity		Incorporate the slipout repair work into the work.	1-PS&E	<\$100	0 - 30 days			\$0 - \$110 N	0 - 30 days N		5/15/2025
			2-RW Sup								
	3-Con Sup		<\$270	0 - 30 days			\$0 - \$290 N	0 - 30 days N			
	CTC Approval of Variance		4-Con Cap	<\$150			\$0 - \$2870 N			1/28/2025	
	Design		9-RW Cap								
10	As a result of difficult access at trenchless culvert sites (and possible fish passage), revisions to the construction footprint may occur, which would lead to increased support and capital costs and a delay to the schedule.	A detailed scope of work was provided to the PDT to reduce the risk of expanding the ESL or determining the impacts to the current scope of work.		2 - Low (11-30%)		Passive Acceptance		2 - Low (11-30%)			8/1/2023
Retired			0-PA&ED	<\$160	30 - 90 days			\$150 - \$300 N	30 - 90 days N		
Threat		If the risk is realized, the PDT will evaluate the impacts to the change(s).	1-PS&E	<\$110	30 - 90 days			\$0 - \$100 N	30 - 90 days N		2/1/2024
	2-RW Sup										
	3-Con Sup		<\$290	0 - 30 days			\$0 - \$280 N	0 - 30 days N			
CONSTRUCTI ON	60% constructability review		4-Con Cap	<\$160			\$0 - \$2800 N			2/13/2025	
	Design		9-RW Cap								
12	As a result of unforeseen conditions during trenchless operations in Construction, additional work not scoped may occur, which would lead to added Construction Support and Capital costs, and a delay to Construction.	Preliminary Geotech investigations and report will be provided to Contractor(s).		3 - Moderate (31-50%)		Passive Acceptance		3 - Moderate (31-50%)		[08-01-23: Geotech will perform preliminary studies in the 0-phase. Drilling investigations may or may not be performed dependent upon surface conditions.]	8/1/2023
Retired			0-PA&ED								
Threat		If the risk is realized, Construction/Geotech will work with the Contractor to minimize the delay and cost.	1-PS&E								
	2-RW Sup										
	3-Con Sup		<\$290	30 - 90 days			\$0 - \$280 N	30 - 90 days N			
STR: Geotechnical	Complete trenchless operations		4-Con Cap	<\$160			\$0 - \$2800 N			2/13/2025	
	DES - Geotech		9-RW Cap								
4	As a result of fish and/or wildlife passage present within the project limits, mitigating for the passage may occur, which would lead to increased support and capital costs and a delay to the schedule.	Con Cap costs may be higher than escalated amount.		1 - Very Low (1-10%)		Passive Acceptance		1 - Very Low (1-10%)		[08-15-24: Wildlife X-ing includes a 12'x12' box culvert. Fencing length was reduced per Enviro studies. There are no fish passage needs. Box culvert and fencing are accounted for in PR/ED and estimate.] [08-01-23: Wildlife fencing may cause long-term, unfunded liability for Maintenance.] [08-01-23: The assumption is there is no fish and/or wildlife passages to mitigate.]	8/1/2023
Retired			0-PA&ED								
Threat		If the risk is realized, the PDT will evaluate the strategy to mitigate the passages. Additional costs can be approved through various tools such as supplemental funds, G-12, variance or allocation.	1-PS&E								
	2-RW Sup										
	3-Con Sup			0 - 30 days				30 - 90 days N			
ENV: Biological	Identify fish and/or wildlife passages		4-Con Cap	<\$160			\$0 - \$2800 N			2/13/2025	
	Construction		9-RW Cap								

Risk Identification			Phase	Initial Risk Assessment		Risk Response		Residual Risk			Risk Status		
RISK ID #	Risk Statement "As a result of <root cause> , <uncertain event> may occur, which would lead to <effect on objective(s)> ."	Proactive Response (prior to risk occurring)		Initial Risk Probability		Response Strategy		Residual Risk Probability			Risk Assumptions and Status	Date Risk Identified	
Status				Cost Impact (\$k)	Schedule Impact	Cost Impact (\$k)	Schedule Impact	Cost Impact (\$k) (Y indicates Residual Risk will be included in Reserve Calculations)	Schedule Impact (Y indicates Residual Risk will be included in Reserve Calculations)	Anticipated Resolution Date			
Type		Response if Risk Occurs								Date Last Updated			
RiBS Sub Category	Risk Trigger												
	Risk Owner												
6	As a result of archeological resources within the project limits, additional studies and/or mitigation may occur, which would lead to added support and capital costs, and a delay to the schedule.	PDT develop a detailed scope of work and check specific resources for conflicts.		3 - Moderate (31-50%)		Passive Acceptance		3 - Moderate (31-50%)			[08-01-23: There are multiple archeological and cultural resources in this corridor of I-5. Need to check actual sites during the 0-phase to determine if there are any conflicts.]	8/1/2023	
Retired			0-PA&ED	<\$160	30 - 90 days			\$0 - \$150	N	30 - 90 days		N	2/1/2024
Threat			1-PS&E										
ENV: Archeological & Cultural		Archeological/Cultural studies	If the risk is realized, the PDT will determine how to revise work to avoid the archeology/cultural resource. If not avoidable, then additional studies and mitigation may be needed. Added funds can be obtained through Supplemental request, G-12, variance and/or allocation.	2-RW Sup		30 - 90 days				30 - 90 days		N	2/13/2025
	3-Con Sup												
	4-Con Cap												
Enviro - Archeology	9-RW Cap	\$320 - \$50						\$20 - \$40	N				
7	As a result of unforeseen hazardous wastes during the K-phase, higher levels requiring mitigation may occur, which would lead to added support and capital costs and a delay to the schedule.	Perform an ISA early in the 0-phase.			2 - Low (11-30%)		Passive Acceptance		2 - Low (11-30%)			[08-01-23: Low levels of ADL and are assumed. MBGR is assumed to be haz. waste.]	8/1/2023
Retired				0-PA&ED	<\$160	0 - 30 days			\$0 - \$150	N	0 - 30 days		N
Threat			1-PS&E										
ENV: Hazardous Waste		Initial Site Assessment	If the risk is realized, the PDT will determine a strategy to reduce the mitigation.	2-RW Sup									2/13/2025
	3-Con Sup				0 - 30 days				0 - 30 days	N			
	4-Con Cap	<\$160					\$0 - \$2800	N					
Environmental - Haz Waste	9-RW Cap												
11	As a result of additional funds, upgrading additional median barrier may occur, which would lead to additional support and capital costs and delayed schedule.	IIJA Safety funds were received. A PCR was approved.			5 - Very High (>70%)		Passive Acceptance		5 - Very High (>70%)			[08-01-23: IIJA Safety funding was approved for upgrading more median barrier.]	8/1/2023
Occurred				0-PA&ED	<\$160	Insignificant			\$0 - \$150	N			5/1/2024
Opportunity			1-PS&E	<\$110	0 - 30 days			\$0 - \$100	N	0 - 30 days	N		
DSN: Roadway Design		Obtain additional funding.		2-RW Sup									2/13/2025
	3-Con Sup			<\$290	0 - 30 days			\$0 - \$280	N	0 - 30 days	N		
	4-Con Cap	<\$160					\$0 - \$2800	N					
Project Manager	9-RW Cap												
5	As a result of identifying biological resources during studies and investigations (0-phase), mitigation and/or permits may occur, which would lead to added support and capital costs and a delay to the schedule.	Mitigation and permitting costs are accounted in the estimate and RWDS.			2 - Low (11-30%)		Passive Acceptance		2 - Low (11-30%)			[08-15-24: Mitigation and permitting costs are accounted in the RWDS (9-phase). The EE includes \$30k in DFM-Revegetation. There maybe up to \$100k total in Reveg and Stewardship.] [08-01-23: There are potential state and/or federally listed species. An IS level enviro document is assumed.]	8/1/2023
Retired				0-PA&ED									12/1/2024
Threat			1-PS&E										
ENV: Biological		Biological studies.	If the risk is realized, the PDT will try to minimize the impacts to the bio resources.	2-RW Sup		Insignificant							2/13/2025
	3-Con Sup				Insignificant								
	4-Con Cap	<\$160					\$0 - \$3370	N					
Environmental	9-RW Cap	>\$50						\$20 - \$40	N				

Attachment K Public Engagement Summary

Engagement Summary

Flume Creek CAPM
Shasta-005-PM 58.0/67.019
Siskiyou-005-PM 0.0/2.7
EA 02-0J810; Project ID 02-1900-0164
PPNO 3777; AM # 19223

SECTION I: Engagement/Outreach

June 25, 2019: Shasta Regional Transportation Agency Board of Directors Meeting

- **Project Phase:** Pre-PID, PID, PA&ED, PS&E, R/W, CON, Post-CON
- **Attendees:**
 - o Caltrans: Eric Orr (Project Manager)
 - o SRTA Board Members: Kristen Schreder (Chair), Joe Chimenti (Board member), Mary Rickert (Board member), Leonard Moty (Vice-Chair), Baron Browning (Board member), Julie Winter (Board member), Greg Watkins (Board member)
 - o SRTA Staff: Sean Tiedgen (Senior Transportation Planner)
 - o Agency: Name (Role)
 - o Community: Name (Role)
 - o Special Interest Groups: Name (Role)
 - o Other: Name (Role)
- **Purpose:** Provide an update on projects within the Shasta Region that are in planning, development or construction, utilizing the May 2019 State Highway Projects Map/Project list.
- **Agenda Topics:** Item #18 – Receive Presentation from Caltrans regarding Major Projects
- **Outcome:** Informational item with no comments from the board.

July 18, 2019: Shasta 2020 STIP State Highway Needs Meeting

- **Project Phase:** Pre-PID, PID, PA&ED, PS&E, R/W, CON, Post-CON
- **Attendees:**
 - o Caltrans: Kelly Zolotoff (NonSHOPP/STIP Coordinator); Aaron Casas (Regional Planner); Tom Balkow (Deputy District Director Planning and Local Assistance); Derek Willis (Deputy District Director Program Project Management); Sean Shepard (Project Manager); Tamy Quigley (Complete Streets/Active Transportation)
 - o Shasta Regional Transportation Agency: Dan Little (Executive Director); Jennifer Pollom (Senior Transportation Planner)
- **Purpose:** State highway needs consultation for the 2020 STIP cycle between Caltrans, District 2 and the Shasta Region.
- **Agenda Topics:** Program Updates – 2020 STIP Cycle (Draft Schedule, Draft Fund Estimate, Draft Guidelines, Projects – Redding to Anderson Six Lane and North Redding Six Lane); Program Updates – Active Transportation (Next ATP Cycle, Legislation or Guideline changes proposed); Program Updates – SHOPP/Asset Management (Current Programmed Projects – Burney CAPM, Route 273 Gaps, I-5 Workers Safety, Sims & Crag View Bridges, O'Brien SRRA, Eskimo Hill Safety, etc.; 2020 SHOPP Candidate Projects – O'Brien CAPM, Lake Blvd Rehab/CAPM, Lake Britton CAPM, etc.; Ten-Year SHOPP

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– Fawndale CAPM, Flume Creek CAPM, Old Station CAPM, Downtown Redding Bridges, Potato Cut Safety, Viola CAPM, Dana to Cedro CAPM, Shasta Lake City CAPM, SR 273 ADA, Four Corners to Big Valley Rehab, Downtown Redding Rehab, Hatchet Mountain CAPM, etc.); Potential Partnership Projects - 2022 SHOPP and 2022 SHOPP and beyond (Proposed State Highway Needs, Identified SHOPP/Asset Management Projects to Partner, Other); Other

- **Outcome:** Continued financial partnership on Redding to Anderson Six Lane and North Redding Six Lane. Identifying financial partnerships in the future once the two I-5 projects are constructed. Discussed Active Transportation Program and SRTA's prioritization of projects within the Shasta Region.

November 12, 2020: Flume Creek CAPM Consultation/Partnership Discussion

- **Project Phase:** PID
- **Attendees:**
 - Caltrans: Kelly Zolotoff (NonSHOPP/STIP Coordinator); Cassie Mitchell (Advance Planning); Brett Ditzler (Advance Planning); Eric Orr (Project Manager); Luke Fortkamp (Advance Planning)
 - City of Dunsmuir: Todd Juhasz (City Manager); Blake Michaelson (Finance Director); Bill Willman (Public Works)
- **Purpose:** Consultation with the City of Dunsmuir regarding proposed 2022 SHOPP project, Flume Creek CAPM.
- **Agenda Topics:** Review purpose of the meeting; Project scope and status of proposed Flume Creek CAPM; Communication/Consultation/Partnership; Proposed project schedule; Other; Actions
- **Outcome:** Initiated a communication plan with the City of Dunsmuir and were provided with other stakeholders to reach out throughout the course of the project. Coordinate with the City of Dunsmuir regarding ramp closures during construction. Recommended consultation with Castle Crags State Park, Dunsmuir-Castella Fire Department, and Castella Water District.

January 27, 2021: Caltrans/Shasta Region Partnership and Consultation Meeting

- **Project Phase:** PID
- **Attendees:**
 - Caltrans: Kelly Zolotoff (SHOPP/NonSHOPP Coordinator); Sean Shepard (Asset Manager); Steve Rogers (Ofc Chief -Asset Management); Tamy Quigley (Complete Streets); Kathy Grah (Regional Planning); Eric Orr (Project Manager); Cassie Mitchell (Advance Planning)
 - Shasta Regional Transportation Agency (SRTA): Dan Little (Executive Director)

Engagement Summary

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- o City of Redding: Chuck Aukland (Director of Public Works); John Abshier (Assistant Director of Public Works)
 - o City of Anderson: Russ Wenham (City Engineer)
 - o Shasta County: Al Cathey (Deputy Director Public Works)
- **Purpose:** Provide program updates and have a high-level discussion of projects proposed to be on (or off) the State Highway System in the Shasta Region specifically to identify partnering opportunities (projects in need of project specific consultation).
- **Agenda Topics:** Provide update on various Caltrans/CTC programs; Definition of partnering; Identify partnering opportunities for candidate SHOPP projects (project specific consultation/engagement); COVID-19 impacts to Transportation Funding; Upcoming federal transportation bill; Earmarks, Federal Discretionary Grants; Active Transportation Program update; Complete Streets assets included in the 2024 SHOPP; ATP Cycle 5 review; ATP Cycle 6 candidate projects with any impact on State Right of Way need early coordination; Maintenance Funding on Complete Streets elements; Active Transportation Plans (locally); California Active Transportation (CAT) Plan; Ten-Year State Highway Strategic Management Plan (SHSMP); 2019 Ten Year Plan (TYP); 2021 TYP in development; 2022 SHOPP candidate projects in planning – Flume Creek CAPM, Cascade SHOPP, Fawndale Culverts, Lake Shasta Viaducts, Upgrade Warning Signs, Shingle Station Paving and Drainage, Diddy Roost Culvers, Potato Cut Curve Improvement, Pit One Grade Rock Fence; 2024 SHOPP candidate projects – D2 Weigh in Motion (WIMs), O’Brien Culverts, Downtown Redding CAPM, Redding Overhead (OH) Rail Upgrade, Hatchet Mountain CAPM; 2026 SHOPP candidate projects – D2 SRRA Water and Wastewater, Viola CAPM, Dana to Cedro CAPM, Sha 44 Landscape Upgrade, Shasta Lake City CAPM, Pine Street ADA, Redding Materials Lab, Redding Quarter Century Signals, Anderson Quarter Century Signals, Burney Maintenance Station, Four Corners to Big Valley CAPM, Burney Culverts; 2028 SHOPP candidate projects – Fawndale CAPM; Currently Programmed Projects – Construction (Redding to Anderson Six Line (RASL)), Design (Burney CAPM, Lake Blvd CAPM, Fix 5 Cascade Gateway); Regional/local areas of concern on the State Highway System
- **Outcome:** Project Specific Consultation – Shasta County (projects within Shasta County, not necessarily on a specific project), City of Redding (any projects within city limits, with a specific focus on Downtown Redding projects, South Market under railroad, West Eureka Way), City of Anderson (projects within city limits or with potential impact to the city), City of Shasta Lake (projects within the city limits I-5 and SR 151), SRTA (primarily projects within urban area of Shasta County); Establishing quarterly/semi-annual Engagement meetings with this group; further discussion needed regarding landscaping elements; opportunities to provide presentation on Asset Management; Discussion of new constraints and opportunities with transportation funding and partnering; Sustainability grants. Continued improvement of communication.

June 14, 2021: Shasta Regional Transportation Agency (SRTA) Technical Advisory Committee (TAC)

Engagement Summary

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- **Project Phase:** Pre-PID, PID, PA&ED, PS&E, R/W, CON, Post-CON
- **Attendees:**
 - o Caltrans: Tom Balkow (Deputy District Director Planning and Local Assistance); Derek Willis (Office Chief Program Project Management); Kelly Zolotoff (SHOPP and NonSHOPP Coordinator); Kathy Grah (Community and Regional Planning); Eric Orr (Project Manager); Eric Orr (Project Manager)
 - o SRTA Staff: Dan Little (Executive Director); Michael Kuker; Sean Tiedgen; Dan Wayne; Jessica Carlson (CFO); Amy Lindsey (Admin); Eamon Johnston, Kathy Urlie, Jennifer Pollom; Keith Williams
 - o City of Redding: Melissa Estrada (RABA); John Abshier (Assistant Director Public Works)
 - o City of Anderson: Matt Baker (Engineering Services Manager)
 - o City of Shasta Lake: Will Bond (Assistant City Engineer)
 - o Shasta County: John Heath (Engineer)
 - o Butte County Association of Governments (BCAG): Sara Cain (Associate Senior Planner)
 - o Other: Jami Brinson; Staci Wadley
- **Purpose:** Discussion of transportation items in preparation for the SRTA Board Meeting on June 28, 2021.
- **Agenda Topics:** Item #2 – Agenda Review for the June 28, 2021 SRTA Board of Directors Meeting; Item #3 – Agency Reports and Updates (Caltrans Strategic Partnership Grant Award \$500K for the SR 273 Northern Section Multimodal Corridor Plan); Item #4 – Receive Presentation from Caltrans Regarding the Pit River Bridge (Dale Widner); Item #5 – Receive Presentation from Caltrans Regarding the State Highway Operation and Protection Program (SHOPP) (Eric Orr)
- **Outcome:** Comments received on the Pit River Bridge presentation. SHOPP presentation included all current projects within the Shasta Region in Planning, Development, and Construction.

June 28, 2021: Shasta Regional Transportation Agency (SRTA) Board of Directors

- **Project Phase:** Pre-PID, PID, PA&ED, PS&E, R/W, CON, Post-CON
- **Attendees:**
 - o Caltrans: Kelly Zolotoff (SHOPP and NonSHOPP Coordinator); Eric Orr (Project Manager); Dale Widner (Project Manager); Marci Gonzalez (Regional Planner)
 - o SRTA Board: Baron Browning (Commissioner); Greg Watkins (Chair); Joe Chimenti (Commissioner); Mary Rickert (Commissioner); Kristen Schreder (Commissioner); Leonard Moty (Vice-Chair)
 - o Agency: Dan Little (Executive Director); Michael Kuker; Eamon Johnston; Amy Lindsey; Jessica Carlson
- **Purpose:** State highway projects within the Shasta Region before the SRTA Board

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- **Agenda Topics:** Item #10 Accept a Caltrans Strategic Partnership Award of \$500,000 for the State Route 273 Northern Section Multimodal Corridor Plan; Item #14 Receive Presentation from Caltrans Regarding Caltrans Projects – Construction Projects (e.g. - Redding to Anderson Six Lane, Sims Craig Bridge Replacement), Project Development Projects (e.g. – Fix 5 Cascade Gateway, Lake Blvd Rehab, Girvan to Canyon FCO), Planning Projects (e.g. Redding to Downtown CAPM, Cascade SHOPP, Shingle Station CAPM); Item #15 Receive Presentation from Caltrans Regarding the Pit River Bridge
- **Outcome:** Item #10 - Approved without comment; Item #14 – Question regarding the Lake Britton Bridge Rail, Dersch Road Culvert locations, Multi-modal aspects of Fix 5 Cascade Gateway (E. Palisades Complete Streets). Appreciation from Board of Directors on the Project Maps/Lists; Item #15 – Project Manager responded to questions on presentations.

August 17, 2021: Caltrans/Siskiyou State Highway Needs Consultation

- **Project Phase:** Pre-PID, PID, PA&ED, PS&E, R/W, CON, Post-CON
- **Attendees:**
 - Caltrans: Kelly Zolotoff (STIP/NonSHOPP)
 - City of Yreka: Cynthia Lynch (Analyst)
 - Siskiyou County RTPA: Jeff Schwein (Executive Director)
 - Siskiyou County: Thomas Deany (Public Works Director)
 - City of Dunsmuir: Todd Juhasz (City Manager)
 - City of Tulelake: Jenny Coelho (City Hall Administrator)
 - City of Montague: Dave Dunn (Public Works Director)
 - City of Weed: Craig Sharp (Public Works Director); Sandra Duchi (City Clerk)
 - Other: Jose Hernandez (Consultant Engineer – Etna and Fort Jones)
- **Purpose:** State Highway Needs consultation for the 2022 STIP between Caltrans, District 2 and the Siskiyou Region.
- **Agenda Topics:** NonSHOPP/STIP program updates – 2021 Mid-Cycle STIP (COVID Relief funds), 2022 STIP (Draft Fund Estimate – Funding available for programming, Draft Guidelines – CTC 2022 STIP Cycle priorities, updates to overall program guidelines); Active Transportation Program Update - Cycle 5, Cycle 5 Augmentation, Cycle 6, and Cycle 7; Complete Streets (CS) Update – Identifying projects in SHOPP with potential CS elements, CS elements include build new/fix existing (Class I, II, II Buffered, IV, Sidewalks, and Crosswalks), Fort Jones pavement need in 2026 SHOPP; California Active Transportation (CAT) Plan – Purpose to inventory condition of assets, advisory committee, draft report in Fall 2021, final report in Spring 2022; State Highway Strategic Management Plan (SHSMP) Update – presentation available to present to agencies for further understanding of Asset Management; Overview of how SHOPP projects are developed since 2017 and the implementation of Asset Management (4 Anchor Assets and 34 identified assets) – Anchor Assets are Pavement, Culverts, Bridges, and Traffic Management Systems (TMS), SHOPP is a 4 year cycle updated every 2 years; Draft 2021 Ten-Year Plan

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(TYP) – Proposed 2024 SHOPP (Hilt 2R Rehab, Weed Blvd Pavement, Bartle CAPM; Proposed 2026 and 2028 SHOPP projects will be shared once identified); Current Programmed Projects Overview – Yreka Rehab, Grenada CAPM, Black Butte Southbound Bridge Replacement, Azalea Deck and Rail Rehab, Siskiyou-161 Pavement; Malone Hill Rehab, Happy Camp CS, Wildlife Crossing, Dorris CAPM, Klamath River Bridge Replacement, Portuguese Creek/Cade Creek Bridges, etc., 2022 SHOPP Candidate Projects – Montague CAPM, McCloud CAPM, Thompson Creek Bridge Deck, Scott River Bridge Deck, Somes Bar Pavement, Grass Lake Maintenance State Rehab, Siskiyou 263 Bridge Repairs, Klamath 2R; Regional/Local areas of concern on State Highway System; Local road projects with potential impact the State Highway System; Partnering Opportunities – review of State highway needs list (SR 89/South Mt. Shasta Blvd Operational Improvement PSR completion, Shoulder widening along SR 89, Snowman Hill Operational Improvement, Dorris TMS; Contact information.

- **Outcome:** Local/Regional agencies to contact Caltrans for additional information on any specific project or program; Continue project specific coordination between local/regional agencies and Caltrans; Continually work to improve communication.

May 10, 2022: Siskiyou County Local Transportation Commission Brief

- **Project Phase:** Pre-PID, PID, PA&ED, PS&E, R/W, CON, Post-CON
- **Attendees:**
 - o Caltrans: Kerry Molz (Project Manager), Todd Kelly (Asset Manager), John Hinton (Construction), Kelly Zolotoff (SHOPP/NonSHOPP/Local Agency Coord), Kristen Kingsley (DDD Asset, Program, and Project Management)
 - o Siskiyou County Local Transportation Commission: Sue Tavalero (Chair-Weed), Joan Smith-Freeman (Commissioner-Yreka), Ed Valenzuela (Commissioner-BOS), Michael Kobseff (Commissioner – BOS), Bruce Deutsch (Commissioner-Dunsmuir), Nancy Ogren (Vice Chair-BOS), Tiffanie Lorenzini (Alternate-BOS)
 - o Siskiyou RTPA: Jeff Schwein (Executive Director)
 - o City of Weed: Craig Sharp (Public Works Director)
 - o City of Yreka: Cynthia Sharp
 - o E&S Engineers & Surveyors, Inc.: Jose Hernandez (Consultant for City of Weed)
 - o Siskiyou County: Melissa Cummins (Deputy County Administrator); Joy Hall (General Services Executive Director)
 - o STAGE: Angela Stumbaugh (Transportation Services Manager)
 - o Karuk Tribe: Misty Rickwalt (Director of Transportation)
- **Purpose:** Caltrans 2022 Project Look Ahead Presentation
- **Agenda Topics:** Item #6 – Information Caltrans Summer Project Look Ahead (Power point presentation, including project map/list of projects in pre-PID through construction; highlighted

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projects include Yreka Rehab, Dorris TMS, Siskiyou 5 CRZ, Dunsmuir Gap and Sacramento River Bridge and OH)

- **Outcome:** Yreka Rehab – questions/comments regarding Broadband Middle Mile; Dorris TMS – comments regarding benefits and usefulness of the CCTVs; Dunsmuir Gap and Sacramento River Bridge and OH – comments regarding traffic control, request for presentation to City of Dunsmuir, request by Commissioner Valenzuela to keep him in the loop; Commissioner Valenzuela requested to be cc'd on project updates in south county; Caltrans to share project maps/list for Shasta County with SCLTC; Commissioner Tavalero requested Caltrans to look an additional “Passing Lane Ahead” sign on SR 97 near Carrick.

June 14, 2022: Caltrans/Siskiyou Partnership and Consultation Meeting

- **Project Phase:** Pre-PID, PID, PA&ED, PS&E, R/W, CON, Post-CON
- **Attendees:**
 - o Caltrans: Kelly Zolotoff (SHOPP/NonSHOPP Coordinator), Kerry Molz (Project Manager), Todd Kelly (Asset Coordinator), Tamy Quigley (Complete Streets)
 - o City of Weed: Craig Sharp (Public Works Director); Sandra Duchi (City Clerk)
 - o City of Dorris: Melissa High (City Administrator)
 - o City of Tulelake: Chewy Perez (Director of Public Works)
 - o Other: John Morris and Chris Davis
- **Purpose:** Discuss projects on (or proposed to be on) the State Highway System in Siskiyou County specifically to identify partnering opportunities.
- **Agenda Topics:** Program Updates – NonSHOPP/STIP (Transportation Funding, Alternative Fund Sources, STIP); Program Updates – SHOPP (CT Asset Management overview, 2021 SHSMP, 2023 SHSMP, 2021 Ten-Year Plan, 2024 SHOPP, 2026 SHOPP, 2028 SHOPP); Program Updates – Complete Streets/Active Transportation (Active Transportation Program (Additional funds, Cycle 6, and Cycle 7), Complete Streets; Project Updates – Project Management (Current Programmed Projects); Regional/Local areas of concern on the State Highway System; Local road projects with potential impact to the State Highway System (City of Weed – Vista Drive); Partnering Opportunities (State Highway Needs List, Proposed Partnership Projects; Other
- **Outcome:** Several agencies weren't able to attend, so another consultation meeting will be held via WebEx. The cities requested training on the STIP.

September 1, 2022: Caltrans/Shasta Partnership and Consultation

- **Project Phase:** Pre-PID, PID, PA&ED, PS&E, R/W, CON, Post-CON
- **Attendees:**

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- o Caltrans: Steve Rogers (Asset Manager), Sean Shepard (Asset Coordinator), Kelly Zolotoff (NonSHOPP, Local Public Agency Coordinator), Eric Orr (Project Manager), Tamy Quigley (Complete Streets)
- o City of Redding: Chuck Aukland (Public Works Director), Josh Anthony (Deputy Public Works Director), James Triantafyllou (Deputy Public Works Director)
- o City of Anderson: Peter Wickenheiser (Deputy Public Works Director)
- o City of Shasta Lake: Will Bond (Public Works Director)
- o SRTA: Sean Tiedgen (Executive Director)
- **Purpose:** Discuss projects on (or proposed to be on) the State Highway System in Shasta Region, specifically to identify partnering opportunities.
- **Agenda Topics:** Program Updates – Non-State Highway Operations Protection Program/State Transportation Improvement Program (NonSHOPP/STIP) (Updates on Transportation Funding, Updates on Alternative Fund Sources, STIP); Program Updates – SHOPP/Asset Management (Caltrans Asset Management website, State Highway Strategic Management Plan (SHSMP), 2021 Ten-Year Plan (TYP)); Program Updates – Complete Streets (CS)/Active Transportation (Active Transportation Program (SB1), Complete Streets); Project Updates – Project Management (Current Programmed Projects – SHOPP, STIP, Other); Regional/Local areas of concern on State Highway System; Local Road Projects with potential impact to the State Highway System; Partnering Opportunities
- **Outcome:** Focus meetings to be held on the Turtle Bay ATP/STIP PS&E Programming and on the CATTLE STIP/ATP PS&E Programming; SRTA requested additional information on Mobility Hubs in the SHSMP; CT request for feedback on any projects or programs discussed; Work with City of Redding to identify potential fund sources for Bonnyview interchange; continue to share information

August 10, 2023: Shasta/Caltrans District 2 State Highway Consultation

- **Project Phase:** Pre-PID, PID, PA&ED, PS&E, R/W, CON, Post-CON
- **Attendees:**
 - o Caltrans: Kelly Zolotoff (SHOPP/NonSHOPP/Agency Coordinator); Kimi Taguchi (Asst SHOPP/NonSHOPP); Sean Shepard (Asset Manager); Jose Corrales (Asset Coordinator); Kelly Timmons (Project Manager)
 - o City of Redding: Zack Bonnin (Transportation Planner); Jon Caldwell (Public Works Manager)
 - o SRTA: Sean Tiedgen (Executive Director)
 - o City of Shasta Lake: Will Bond (Public Works Director)
- **Purpose:** Discuss projects on (or proposed to be on) the State Highway System in the Shasta Region specifically to identify partnering opportunities.
- **Agenda Topics:** Regional/Local areas of concern on State Highway System; Program Updates – Non-State Highway Operation Protection Program/State Transportation Improvement Program

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(NonSHOPP/STIP); Program Updates – SHOPP/Asset Management; Project Updates – Project Management; Other

- **Outcome:** SRTA: Supportive of Fix 5/Cascade SHOP, Funding opportunities for SR 273; City of Redding: Priorities – South Bonnyview Interchange, Oasis masterplan development, Downtown streets and circulation, Park Marina Corridor Plan, Eureka Way, Hilltop and East Palisades; City of Shasta Lake: Affordable Housing contract, Complete streets on SR 151, ATP; Shasta County: Access to Eastside Road at Latona, ATP with Pit River Bridge in Burney, Ped access across I-5 at Knighton

August 29, 2023: Caltrans/Siskiyou Partnership and Consultation

- **Project Phase:** Pre-PID, PID, PA&ED, PS&E, R/W, CON, Post-CON
- **Attendees:**
 - o Caltrans: Kelly Zolotoff (NonSHOPP/SHOPP/Strategic Investment); Kimi Taguchi (Asst SHOPP/NonSHOPP); Catherine Low (Project Manager)
 - o Siskiyou County RTPA: Melissa Cummins (Executive Director)
 - o Siskiyou County: Kyla Burton
 - o City of Yreka: Cynthia Lynch
 - o City of Dorris, City of Etna, Town of Fort Jones, & City of Weed: Morgan Eastlick
 - o City of Montague: Dave Dunn (Public Works Director)
 - o City of Mt. Shasta: Ken Kellogg (Public Works Director)
- **Purpose:** Discuss projects on (or proposed to be on) the State Highway System in the Siskiyou Region specifically to identify partnering opportunities.
- **Agenda Topics:** Regional/Local areas of concern on State highway system (Local road projects with potential impact to the State Highway System); Program Updates – Non-State Highway Operation Protection Program/State Transportation Improvement Program (NonSHOPP/STIP) (Transportation Funding, Alternative Fund Sources – Strategic Investment Program); Program Updates – SHOPP/Asset Management (State Highway System Management Plan (SHSMP), Caltrans Project Portal, 2023 Ten-Year Plan – Proposed 2026, 2028, and 2030 SHOPP); Project Updates – Project Management (Proposed 2024 SHOPP, Current Programmed Projects)
- **Outcome:** Additional information on the Yreka 3 Rehab; Intersection of SR 3/Howell Ave in Etna for school crossing; New Administrator in City of Dorris; Forest Mountain Summit speed enforcement; Intersection improvement in McCloud

August 12, 2024: Caltrans/Siskiyou Partnership and Consultation – North County

- **Project Phase:** Pre-PID, PID, PA&ED, PS&E, R/W, CON, Post-CON
- **Attendees:**

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- o Caltrans: Kimi Taguchi (Asset Management); Sean Shepard (Asset Management); Heather Anderson (Project Management); Todd Kelly (Asset Management); Tamy Quigley (Planning); Martina Schnitzler (Regional Planning)
 - o Siskiyou County RTPA: Melissa Cummins (Executive Director)
 - o Siskiyou County: Invited, not present.
 - o City of Etna: Invited, not present.
 - o Town of Fort Jones: Everett Hullquist (Public Works Supervisor)
 - o Karuk Tribe: Invited, not present.
 - o City of Montague: David Dunn (City Administrator)
 - o City of Yreka: Cindy Lynch (Municipal Projects Manager)
- **Purpose:** Discuss projects on (or proposed to be on) the State Highway System in the Siskiyou South County Region specifically to identify partnering opportunities.
- **Agenda Topics:** Regional/Local Areas of Concern on the State Highway System; Local Road Projects with Potential Impacts to State Highway System; Updates to the Region's State Highways Needs List; Strategic Investment Updates; 2026 SHOPP Updates; Project Manager Programmed Project Updates; Planning Updates.
- **Outcome:** Coordinate Letter of Support for Fort Jones' grant application to develop a plan for the Town of Fort Jones' drinking water infrastructure; Inquire with Traffic Operations about school zone speed designation in the Town of Fort Jones; Consider restriping crosswalks within the Fort Jones Pavement limits; Inform city of Yreka of potential delays on Yreka Rehab; Confirm whether Sustainable Communities Grant is eligible for alternative fueling within Caltrans right-of-way with city of Mt. Shasta; Provide an update on feasibility studies or plans on 263.

August 12, 2024: Caltrans/Siskiyou Partnership and Consultation – South County

- **Project Phase:** Pre-PID, PID, PA&ED, PS&E, R/W, CON, Post-CON
- **Attendees:**
 - o Caltrans: Kimi Taguchi (Asset Management); Sean Shepard (Asset Management); Heather Anderson (Project Management); Todd Kelly (Asset Management); Tamy Quigley (Planning); Martina Schnitzler (Regional Planning)
 - o Siskiyou County RTPA: Melissa Cummins (Executive Director)
 - o City of Dunsmuir: Invited, not present.
 - o City of Mt. Shasta: Ken Kellogg (Director of Public Works)
 - o City of Weed: Chris Davis (Acting Weed Director of Public Works)
- **Purpose:** Discuss projects on (or proposed to be on) the State Highway System in the Siskiyou South County Region specifically to identify partnering opportunities.
- **Agenda Topics:** Regional/Local Areas of Concern on the State Highway System; Local Road Projects with Potential Impacts to State Highway System; Updates to the Region's State Highways Needs List;

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Strategic Investment Updates; 2026 SHOPP Updates; Project Manager Programmed Project Updates; Planning Updates.

- **Outcome:** Provide updated information from Caltrans' Automated Pavement Condition Survey; Provide a copy of the existing Caltrans and city of Mt. Shasta maintenance agreements; Project Management to include City of Weed Chris Davis to Weed Boulevard Pavement PDT meetings to discuss crosswalk locations and review signage.

December 19, 2024 at 4:00p: Flume Creek Pavement Open House – Virtual Only

- **Project Phase:** PA&ED, PS&E
- **Attendees:**
 - Caltrans: Mario Montalvo (PIO), Denise Yergenson (PIO), Kelly Timmons (Project Management), Sherry James (Project Management)
 - California Highway Patrol: Bill Lynam, Jason Workman, Peter Jonas
 - 7 members of the general public
- **Purpose:** To inform the public of the Flume Creek Pavement Project and provide opportunity for questions.

December 19, 2024 at 6:00p: Flume Creek Pavement Open House – Virtual Only

- **Project Phase:** PA&ED, PS&E
- **Attendees:**
 - Caltrans: Mario Montalvo (PIO), Denise Yergenson (PIO), Kelly Timmons (Project Management)
 - 2 member of the general public
- **Purpose:** To inform the public of the Flume Creek Pavement Project and provide opportunity for questions.

SECTION II: Communication Plan

Shasta Regional Transportation Agency (SRTA) Board of Directors:

- Provide update at bi-annual Caltrans State Highway Project Presentations in the Spring and Fall. Coordinate with the SRTA Executive Director to get on the agenda for the Technical Advisory Committee (TAC) and the Board Meeting.

Siskiyou County Local Transportation Commission (SCLTC):

Engagement Summary

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Shasta-005-PM 58.0/67.019
Siskiyou-005-PM 0.0/2.7
EA 02-0J810; Project ID 02-1900-0164
PPNO 3777; AM # 19223

- Provide update at bi-annual Caltrans State Highway Project Presentations in the Spring and Fall. Coordinate with the SCLTC Executive Director to get on the agenda for the commission meeting.

Siskiyou County Board of Supervisors:

- Provide updates via email at major milestones to the Board of Supervisor for District 2.
- Ongoing updates during construction regarding ramp closures to the Board of Supervisors for District 2.

Dunsmuir City Council:

- Provide updates via email at major milestones to the City Manager.
- Provide presentations to the City Council during environmental and prior to construction. Consider a public open house “workshop” prior to the City Council meeting to hear comments from the community.
- Ongoing updates during construction regarding ramp closures.
- Coordinate all communication through the City Manager.

Mt. Shasta City Council:

- Provide updates via email at major milestones to the City Manager and Public Works Director.
- Provide presentation to the City Council prior to construction. Consider a public open house “workshop” prior to the City Council meeting to hear comments from the community.
- Coordinate all communication through the City Manager and Public Works Director.

Engagement Summary

Flume Creek CAPM
 Shasta-005-PM 58.0/67.019
 Siskiyou-005-PM 0.0/2.7
 EA 02-0J810; Project ID 02-1900-0164
 PPNO 3777; AM # 19223

SECTION III: Contact Information

<u>Name</u>	<u>Agency</u>	<u>Title</u>	<u>Phone #</u>	<u>Email</u>
Sean Tiedgen	Shasta Regional Transportation Agency (SRTA)	Executive Director	530-262-6190	stiedgen@srta.ca.gov
Don Renz	Shasta County Public Works	Principle Engineer – Roads and Bridges	530-225-5667	drenz@co.shastacounty.gov
Troy Bartolomei	Shasta County Public Works	Public Works Director	530-225-5661	tbartolomei@co.shasta.ca.us
Ed Valenzuela	Siskiyou County Board of Supervisors	Supervisor – District 2/SCLTC Commissioner	530-926-1733	evalenzuela@co.siskiyou.ca.us
Bruce Deutsch	Dunsmuir City Council	City Council Member/SCLTC Commissioner		Brucend75@yahoo.com
Dustin Rief	City of Dunsmuir	City Manager	530-235-4822 ext. 103	citymanager@ci.dunsmuir.ca.us
Blake Michaelsen	City of Dunsmuir	Finance Director	530-235-4822 ext. 109	bmichaelsen@ci.dunsmuir.ca.us
Ken Kellogg	City of Mt. Shasta	Director of Public Works	530-926-7526	kkellog@mtshastaca.gov
Todd Juhasz	City of Mt. Shasta	City Manager	530-926-7519	tjuhasz@mtshastaca.gov
Melissa Cummins	Siskiyou County Transportation Commission	Executive Director	(530) 709-5060	melissa@siskiyoucoltc.org
Thomas Deany	Siskiyou County Public Works	Public Works Director	(530) 842-8275	tdeany@co.siskiyou.ca.us

Attachment L

Drainage Assessment Summary

PM	SYSTEM NO	US ETNO	DS ETNO	from 3J570	Dia. (in)	Length (ft)	Scope of Work Summary	PM	Notes
58.01	60054005801	3	2	X	18	324	Replace culvert (3-2) cut/cover with 24" Alt. Pipe, DI (2), DI (3)	58.01	
58.25	60050005825	2	1	X	18	88	Replace culvert (2-1) cut/cover with 24" CSP, DI (2)	58.25	
58.33	60054005833	2	1	X	18	52	Replace culvert (2-1) cut/cover with 24" CSP, DI (2)	58.33	
58.40	60054005840	2	1	X	18	60	Replace culvert (2-1) cut/cover with 24" CSP, DI (2)	58.40	
58.40	60054005840	3	2	X	18	44	Replace culvert (3-2) cut/cover with 24" CSP, DI (3)	58.40	
58.67	60054005867	3	2		18	45	Replace culvert (3-2) cut/cover with 24" CSP	58.67	
58.77	60050005877	2	1	X	18	56	Replace culvert (2-1) cut/cover with 24" CSP, DI (2)	58.77	
58.90	60054005890	2	1	X	18	69	Replace culvert (2-1) cut/cover with 24" CSP, DI (2)	58.90	
58.90	60054005890	3	2	X	18	41	Replace culvert (3-2) cut/cover with 24" CSP, DI (3)	58.90	
58.90	60054005890	4	3	X	18	16	Replace culvert (4-3) cut/cover with 24" CSP, Surface rock drain	58.90	
58.98	60054005898	3	2		18	39	Replace culvert (3-2) cut/cover with 24" CSP, FES (3)	58.98	
58.98	60054005898	2	1		18	72	Replace culvert (2-1) cut/cover with 24" CSP, DI (2), RSP	58.98	
59.05	60054005905	5	4	X	18	65	Replace culvert (5-4) cut/cover with 24" CSP, DI (4), DI (5)	59.05	
59.05	60054005905	6	5	X	18	95	Replace slotted drain with a 24" Alt. pipe and series of inlets	59.05	
59.08	60054005908	2	1		36	67	Replace culvert (2-1) cut/cover with 36" CSP, DI (2)	59.08	
59.08	60054005908	3	2		36	52	Replace culvert (3-2) cut/cover with 36" CSP, Headwall (3)	59.08	
59.21	60054005921	2	1	X	18	103	Replace downdrain (2-1) cut/cover with 24" CSP, FES (1)	59.21	
59.21	60054005921	3	2	X	18	71	Replace culvert (3-2) cut/cover with 24" CSP, DI (3)	59.21	
59.21	60054005921	4	3	X	18	52	Replace culvert (4-3) cut/cover with 24" CSP, DI (4)	59.21	
59.32	60050005932	2	1	X	18	70	Replace culvert (2-1) cut/cover with 24" CSP, DI (2)	59.32	
59.35	60056005935	2	1	X	24	12	Replace culvert (2-1) cut/cover with 24" CSP	59.35	
59.35	60056005935	3	2	X	24	50	Replace culvert (3-2) cut/cover with 24" CSP	59.35	
59.35	60056005935	4	3	X	24	59	Replace culvert (4-3) cut/cover with 24" CSP	59.35	
59.35	60058005935	3	2	X	18	72	Replace culvert (3-2) cut/cover with 24" CSP, DI (3)	59.35	
59.35	60058005935	4	3	X	18	46	Replace culvert (4-3) cut/cover with 24" CSP, DI (4)	59.35	
59.35	60058005935	5	4	X	18	30	Replace culvert (5-4) cut/cover with 24" CSP, DI (5)	59.35	
59.35	60058005935	6	4	X	18	14	Replace culvert (6-4) cut/cover with 24" CSP, DI (6)	59.35	
59.35	60058005935	7	6	X	18	32	Replace culvert (7-6) cut/cover with 24" CSP, DI (7)	59.35	
59.60	60054005825	5	4		18	43	Replace culvert (5-4) cut/cover with 24" CSP	59.60	
59.60	60054005825	4	3		18	47	Replace culvert (4-3) cut/cover with 24" CSP	59.60	
59.60	60054005825	3	2		18	30	Replace downdrain (3-2) with 24" CSP	59.60	
59.60	60054005825	2	1		18	77	Reconstruct downdrain (2-1)	59.60	

PM	SYSTEM NO	US ETNO	DS ETNO	from 3J570	Dia. (in)	Length (ft)	Scope of Work Summary	PM	Notes
59.65	60054005965	3	2	X	18	154	Replace culvert (3-2) cut/cover with 24" CSP, DI (3)	59.65	
59.65	60054005965	2	1	X	18	36	Replace downdrain (2-1) with 24" CSP	59.65	
59.80	60050005980	2	1	X	18	67	Replace culvert (2-1) cut/cover with 24" CSP, DI (2)	59.80	
59.80	60050005980	5	4	X	18	164	Replace culvert (5-4) cut/cover with 24" Alt. Pipe, DI (4), DI (5)	59.80	
59.80	60050005980	6	5	X	18	116	Replace culvert (6-5) cut/cover with 24" Alt. Pipe, DI (6)	59.80	
59.80	60050005980	7	3	X	18	77	Replace slotted drain with a 24" Alt. pipe and series of inlets	59.80	
60.27	60054006027	2	1	X	18	60	Replace culvert (2-1) cut/cover with 24" CSP, DI (2)	60.27	
60.27	60054006027	3	2	X	18	85	Replace culvert (3-2) cut/cover with 24" CSP, DI (3)	60.27	
60.27	60054006027	5	3	X	12	294	Replace slotted drain with a 24" Alt. pipe and series of inlets	60.27	
60.35	60050006035	2	1	X	18	83	Replace culvert (2-1) cut/cover with 24" CSP, DI (2)	60.35	
60.45	60058006045	2	7	X	18	84	Replace culvert (2-7) cut/cover with 24" CSP, DI (2)	60.45	
60.45	60058006045	3	2	X	18	204	Replace culvert (3-2) cut/cover with 24" Alt. Pipe, DI (3)	60.45	
60.45	60058006045	4	2	X	18	156	Replace culvert (3-2) cut/cover with 24" Alt. Pipe, DI (4)	60.45	
60.45	60058006045	5	3	X	18	34	Replace slotted drain with a 24" Alt. pipe and series of inlets	60.45	
60.45	60058006045	6	4	X	18	72	Replace slotted drain with a 24" Alt. pipe and series of inlets	60.45	
60.45	60058006045	7	1	X	18	62	Replace culvert (7-1) cut/cover with 24" CSP	60.45	
60.50	60058006050	5	4		18	46	Replace culvert (5-4) cut/cover with 24" CSP, Headwall (5)	60.50	
60.50	60058006050	6	4		18	41	Replace culvert (6-4) cut/cover with 24" CSP, DI (6)	60.50	
60.50	60058006050	7	6		18	69	Replace culvert (7-6) cut/cover with 24" CSP, DI (7)	60.50	
60.50	60058006050	4	3		18	71	Replace culvert (4-3) cut/cover with 24" CSP, DI (4)	60.50	
60.50	60058006050	3	2		18	196	Replace culvert (3-2) cut/cover with 24" CSP, DI (3)	60.50	
60.50	60058006050	2	1		18	179	Replace culvert (2-1) cut/cover with 24" CSP, DI (2) RSP	60.50	
60.56	60058006056	2	1		18	83	Replace culvert (2-1) cut/cover with 24" CSP, Type GO DI	60.56	
60.66	60058006066	3	2	X	24	134	Replace culvert (3-2) cut/cover with 24" CSP, DI (3), DI (2)	60.66	
60.73	60058006073	3	2	X	18	84	Replace culvert (3-2) cut/cover with 24" CSP, DI (3)	60.73	
60.83	60050006083	3	2		18	50	Replace culvert (3-2) cut/cover with 24" CSP, Type GO DI	60.83	
60.90	60050006090	2	1		24	58	Replace downdrain (2-1), RSP	60.90	
60.90	60050006090	3	2		24	59	Replace culvert (3-2) cut/cover with 24" CSP, Type GO DI	60.90	
60.90	60050006090	4	3		18	302	Replace culvert (4-3) cut/cover with 24" Alt. pipe, Type GO DI	60.90	
61.00	60054006100	3	2	X	18	43	Replace culvert (3-2) cut/cover with 24" CSP, DI (3)	61.00	
61.00	60054006100	2	1	X	18	58	Replace culvert (2-1) cut/cover with 24" CSP, DI (2)	61.00	
61.10	60050006110	5	2	X	18	50	Replace slotted drain with a 24" Alt. pipe and series of inlets	61.10	

PM	SYSTEM NO	US ETNO	DS ETNO	from 3J570	Dia. (in)	Length (ft)	Scope of Work Summary	PM	Notes
61.58	60056006158	2	1	X	18	30	Replace culvert (2-1) cut/cover with 24" CSP, DI (2)	61.58	
61.58	60056006158	3	2	X	18	86	Replace culvert (3-2) cut/cover with 24" CSP, DI (3)	61.58	
61.81	60058006181	4	3		24	112	Replace culvert (4-3) cut/cover with 24" CSP, Type GO DI	61.81	
61.81	60058006181	5	4		24	105	Replace culvert (5-4) cut/cover with 24" CSP	61.81	
61.85	60058006185	3	2		18	38	Replace culvert (3-2) cut/cover with 24" CSP, Type GO DI	61.85	
61.89	60058006189	2	1		18	86	Replace culvert (2-1) cut/cover with 24" CSP, FES	61.89	
62.06	60050006206	2	1		18	53	Replace culvert (2-1) cut/cover with 24" CSP, Type GO DI, FES	62.06	
62.06	60050006206	3	2		18	35	Replace culvert (3-2) cut/cover with 24" Alt. pipe, Replace Slotted drain	62.06	
62.25	60054006225	3	2	X	24	64	Replace culvert (3-2) cut/cover with 24" CSP, DI (2)	62.25	
62.25	60054006225	5	3	X	24	61	Replace culvert (5-3) cut/cover with 24" CSP, DI (5)	62.25	
62.36	60058006236	3	2	X	18	33	Replace culvert (3-2) cut/cover with 24" CSP	62.36	
62.36	60058006236	4	3	X	18	35	Replace culvert (5-3) cut/cover with 24" CSP, DI (4)	62.36	
62.49	60050006249	2	1		18	47	Remove culvert	62.49	
62.68	60054006268	5	3	X	18	20	Replace slotted drain with a 24" Alt. pipe and series of inlets	62.68	
62.78	60054006278	4	3	X	18	20	Replace slotted drain with a 24" Alt. pipe and series of inlets	62.78	
63.08	60054006308	3	2		18	57	Replace culvert (3-2) cut/cover with 24" CSP, DI (3)	63.08	
63.08	60054006308	5	3		18	43	Replace culvert (5-3) cut/cover with 24" CSP	63.08	
63.08	60054006308	2	1		18	38	Replace downdrain (2-1) with 24" CSP, RSP	63.08	
63.08	60054006308	4	3		18	20	Replace culvert (4-3) cut/cover with 24" Alt. pipe, Slotted drain	63.08	
63.18	60054006318	3	2		18	54	Replace culvert (3-2) cut/cover with 24" CSP	63.18	
63.18	60054006318	5	3		18	58	Replace culvert (5-3) cut/cover with 24" CSP, Type GO DI	63.18	
63.18	60054006318	2	1		18	73	Replace culvert (2-1) cut/cover with 24" CSP	63.18	
63.30	60054006330	3	2		12	15	Replace culvert (3-2) cut/cover with 18" CSP, Type GO DI (3)	63.30	
63.44	60058006344	2	1	X	18	245	Replace culvert (-1) cut/cover with 24" CSP, DI (2)	63.44	
63.93	60050006393	5	4	X	18	17	Replace slotted drain with a 24" pipe and series of inlets	63.93	
63.93	60050006393	6	4	X	18	11	Replace slotted drain with a 24" pipe and series of inlets	63.93	
63.61	60058006361	3	2		24	48	Replace culvert (3-2) cut/cover with 24" CSP, Type GO DI (3)	63.61	
63.61	60058006361	2	1		24	99	Replace culvert (2-1) cut/cover with 24" CSP, GO DI (2), RSP	63.61	
63.61	60058006361	5	4		24	46	Replace culvert (5-4) cut/cover with 24" CSP, Type GDO DI (5)	63.61	
63.61	60058006361	6	5		18	63	Replace culvert (6-5) cut/cover with 24" CSP, Type GO DI (6)	63.61	
63.61	60058006361	4	2		24	187	Replace culvert (4-2) cut/cover with 24" CSP, Type GDO DI (4)	63.61	

PM	SYSTEM NO	US ETNO	DS ETNO	from 3J570	Dia. (in)	Length (ft)	Scope of Work Summary	PM	Notes
63.61	60058006361	7	6		12	32	Replace culvert (7-6) cut/cover with 24" CSP, Type FES DI	63.61	
63.62	60054006362	3	2		18	51	Replace culvert (3-2) cut/cover with 24" CSP, Type GO DI (3)	63.62	
63.62	60054006362	4	3		18	22	Replace culvert (4-3) cut/cover with 24" Alt. pipe, DI (4)	63.62	
63.83	60054006283	2	1		24	39	Replace culvert (2-1) cut/cover with 24" CSP, RSP	63.83	
64.05	60054006405	6	5		18	211	Replace culvert (6-5) cut/cover with 24" Alt. pipe, GO DI (6)	64.05	
64.05	60054006405	5	4		18	255	Replace culvert (5-4) cut/cover with 24" Alt. pipe, GO DI (5)	64.05	
64.05	60054006405	4	3		18	218	Replace culvert (4-3) cut/cover with 24" Alt. pipe, GO DI (4)	64.05	
64.05	60054006405	3	2		18	52	Replace culvert (3-2) cut/cover with 24" CSP, Type GO DI (3)	64.05	
64.05	60054006405	2	1		18	15	Replace culvert (2-1) cut/cover with 24" CSP, Type GO DI (2)	64.05	
64.17	60050006417	7	6		18	227	Replace culvert (7-6) cut/cover with 24" Alt. pipe, GO DI (7)	64.17	
64.17	60050006417	6	5		18	206	Replace culvert (6-5) cut/cover with 24" Alt. pipe, GO DI (6)	64.17	
64.17	60050006417	5	4		18	261	Replace culvert (5-4) cut/cover with 24" Alt. pipe, GO DI (5)	64.17	
64.17	60050006417	4	3		18	277	Replace culvert (4-3) cut/cover with 24" Alt. pipe, GO DI (4)	64.17	
64.17	60050006417	3	2		18	266	Replace culvert (3-2) cut/cover with 24" Alt. pipe, GO DI (3)	64.17	
64.17	60050006417	2	1		18	55	Replace culvert (2-1) cut/cover with 24" CSP	64.17	
64.49	60054006449	3	2		36	48	Replace culvert (3-2) cut/cover with 36" CSP, Headwall	64.49	
64.57	60050006457	5	4		18	274	Replace culvert (5-4) cut/cover with 24" Alt. pipe, GO DI (5)	64.57	
64.57	60050006457	4	3		18	260	Replace culvert (4-3) cut/cover with 24" Alt. pipe, GO DI (4)	64.57	
64.57	60050006457	3	2		18	261	Replace culvert (3-2) cut/cover with 24" Alt. pipe, GO DI (3)	64.57	
64.57	60050006457	2	1		18	54	Replace culvert (2-1) cut/cover with 24" CSP, Type GO DI (2)	64.57	
64.70	60054006470	5	4		18	278	Replace culvert (5-4) cut/cover with 18" Alt. pipe, GO DI (5)	64.70	
64.70	60054006470	4	3		18	290	Replace culvert (4-3) cut/cover with 18" Alt. pipe, GO DI (4)	64.70	
64.70	60054006470	3	2		18	282	Replace culvert (3-2) cut/cover with 24" Alt. pipe, GO DI (3)	64.70	
64.70	60054006470	2	1		18	154	Replace culvert (2-1) cut/cover with 18" CSP, RSP	64.70	
64.96	60054006496	3	2	X	24	298	Replace culvert (3-2) cut/cover with 24" CSP, Headwall (3)	64.96	
64.96	60054006496	2	1	X	24	130	Replace culvert (2-1) cut/cover with 24" CSP, DI (2)	64.96	
64.97	60054006497	4	3		18	284	Replace culvert (4-3) cut/cover with 24" Alt. pipe, GO DI (4)	64.97	
64.97	60054006497	3	2		18	288	Replace culvert (3-2) cut/cover with 24" Alt. pipe, GO DI (3)	64.97	
64.97	60054006497	2	1		18	91	Replace culvert (2-1) cut/cover with 24" CSP	64.97	
65.18	60054006518	6	5		18	33	Replace culvert (6-5) cut/cover with 18" CSP, Slotted drain	65.18	
65.18	60054006518	3	2		30	51	Replace culvert (3-2) cut/cover with 30" CSP	65.18	
65.18	60054006518	7	5		30	45	Replace culvert (7-5) cut/cover with 30" CSP, Headwall	65.18	

PM	SYSTEM NO	US ETNO	DS ETNO	from 3J570	Dia. (in)	Length (ft)	Scope of Work Summary	PM	Notes
65.18	60054006518	4	3		18	33	Replace culvert (4-3) cut/cover with 18" CSP, Slotted drain	65.18	
65.39	60058006539	2	1	X	24	156	Replace culvert (2-1) cut/cover, DI (2)	65.39	
65.41	60058006541	4	3		18	60	Replace culvert (4-3) cut/cover with 24" CSP	65.41	
65.41	60058006541	3	2		18	58	Replace culvert (3-2) cut/cover with 24" CSP, Type GO DI (3)(2)	65.41	
65.41	60058006541	2	1		18	45	Replace culvert (2-1) cut/cover with 24" CSP, RSP	65.41	
65.42	60054006542	5	4		18	26	Replace culvert (5-4) cut/cover with 24" CSP, Slotted drain	65.42	
65.42	60054006542	4	3		18	41	Replace culvert (4-3) cut/cover with 24" CSP, Type GO DI	65.42	
65.42	60054006542	3	2		12	10	Replace culvert (3-2) cut/cover with 24" CSP	65.42	
65.42	60054006542	2	1		12	64	Replace culvert (2-1) cut/cover with 24" CSP, Type GO DI, RSP	65.42	
65.43	60058006543	3	2		36	177	Replace culvert (3-2) cut/cover with 36" CSP, Type GDO DI	65.43	
65.43	60058006543	4	3		24	43	Replace culvert (4-3) cut/cover with 24" CSP, Type GO DI	65.43	
65.43	60058006543	6	4		24	54	Replace culvert (6-4) cut/cover with 24" CSP, Type GO DI	65.43	
65.43	60058006543	5	2		18	31	Replace culvert (5-2) cut/cover with 18" CSP, Type GO DI	65.43	
65.43	60058006543	7	3		24	48	Replace culvert (7-3) cut/cover with 24" CSP, Headwall	65.43	
65.50	60056006550	2	1	X	18	29	Replace culvert (2-1) cut/cover with 24" CSP	65.50	
65.50	60056006550	3	2	X	18	11	Replace culvert (3-2) cut/cover with 24" CSP, DI (3)	65.50	
65.50	60056006550	4	3	X	18	92	Replace culvert (4-3) cut/cover with 24" CSP, DI (4)	65.50	
65.50	60056006550	6	4	X	18	143	Replace culvert (6-4) cut/cover with 24" CSP	65.50	
65.60	60054006560	2	1		18	97	Replace culvert (2-1) cut/cover with 24" CSP, Type GO DI, FES	65.60	
65.78	60054006578	2	1		18	56	Replace culvert (2-1) cut/cover with 24" CSP, Type GO DI	65.78	
65.78	60054006578	3	2		18	41	Replace culvert (3-2) cut/cover with 24" CSP, Type GO DI	65.78	
65.88	60054006588	3	2	X	30	195	12'x12' Precast Reinforced Concrete Box Culvert (140')	65.88	WILDLIFE CROSSING
65.90	60054006590	2	1	X	18	55	Replace culvert (2-1) cut/cover with 24" CSP, DI (2)	65.90	
65.90	60054006590	3	2	X	18	45	Replace culvert (3-2) cut/cover with 24" CSP, DI (3)	65.90	
66.04	60054006604	3	2		18	66	Replace culvert (3-2) cut/cover with 18" CSP, Type GO DI (3)	66.04	
66.04	60054006604	4	3		18	32	Replace culvert (4-3) cut/cover with 18" CSP, Slotted drain	66.04	
66.13	60054006613	3	2		24	144	Replace culvert (3-2) cut/cover with 24" CSP, Headwall	66.13	
66.17	60054006617	3	2		18	56	Replace culvert (3-2) cut/cover with 18" CSP	66.17	
66.17	60054006617	2	1		18	135	Replace culvert (2-1) cut/cover with 18" CSP, GO DI (2), RSP	66.17	
66.23	60054006623	2	1	X	18	185	Replace culvert (2-1) cut/cover with 24" CSP, Replace HW	66.23	
66.52	60054006652	2	1	X	24	68	Replace culvert (2-1) cut/cover with 24" CSP, GO DI (2), RSP	66.52	
66.52	60054006652	3	-	X	-	-	Replace Grate DI (3)	66.52	

PM	SYSTEM NO	US ETNO	DS ETNO	from 3J570	Dia. (in)	Length (ft)	Scope of Work Summary	PM	Notes
0.16	20054000016	2	1		24	94	Place cured in place pipeliner (2-1)	0.16	
0.16	20054000016	3	2		24	46	Replace culvert (3-2) cut/cover with 24" CSP	0.16	
0.26	20054000026	2	1		24	191	Place cured in place pipeliner (2-1)	0.26	
0.36	20058000036	5	3		18	28	Replace culvert (5-3) cut/cover with 18" CSP, Slotted drain	0.36	
0.36	20058000036	4	3		24	49	Replace culvert (4-3) cut/cover with 24" CSP, Type GO DI	0.36	
0.36	20058000036	3	2		24	57	Replace culvert (3-2) cut/cover with 24" CSP, Type GO DI	0.36	
0.49	20054000049	2	1		24	208	Abandon culvert (2-1) Install culvert cut/cover with downdrain, Headwall (2), RSP	0.49	
0.57	20058000057	4	3		18	148	Replace culvert (4-3) cut/cover with 18" CSP, Type GO DI (4)	0.57	
0.57	20058000057	3	2		18	17	Replace culvert (3-2) cut/cover with 18" CSP, Junction box	0.57	
0.57	20058000057	-	1		-	-	Install energy dissipator (1)	0.57	
0.69	20054000069	2	1		24	-	Repair Joint (2-1)	0.69	
0.69	20054000069	4	3		24	51	Replace culvert (4-3) cut/cover with 24" CSP	0.69	
0.78	20058000078	2	1		24	404	Place cured in place pipeliner (2-1)	0.78	
1.10	20054000110	3	2		24	121	Replace 20' of culvert adjacent to (2) with 24" CSP	1.10	GRE location
1.10	20054000110	2	1		24	69	Reconstruct 40' of downdrain with existing 24" CSP	1.10	GRE location
1.44	20054000144	2	1		24	146	Replace culvert (2-1) cut/cover with 24" CSP	1.44	
1.52	20054000152	2	1		24	123	Place cured in place pipeliner (2-1), RSP	1.52	
1.52	20054000152	5	2		24	524	Place cured in place pipeliner (5-2)	1.52	
1.52	20054000152	4	3		18	26	Replace culvert (4-3) cut/cover with 18" CSP, Slotted drain (4)	1.52	
1.52	20054000152	6	5		18	43	Replace culvert (6-5) cut/cover with 18" CSP, Type GO DI (6)	1.52	
1.52	20054000152	7	5		18	25	Replace culvert (7-5) cut/cover with 18" CSP	1.52	
1.52	20054000152	10	5		18	20	Replace culvert (10-5) cut/cover with 18" CSP, Slotted drain	1.52	
1.52	20054000152	11	5		18	19	Replace culvert (11-5) cut/cover with 18" CSP, Slotted drain	1.52	
1.52	20054000152	14	12		18	50	Replace culvert (14-12) cut/cover with 24" CSP, GO DI (14)	1.52	
2.53	20058000253	12	1		18	10	Replace culvert (12-1) cut/cover with 18" CSP, DI (12)	2.53	
2.53	20058000253	3	2		18	46	Replace Type GO DI (3)	2.53	Flush/Reinspect
2.53	20058000253	5	4		18	42	Replace culvert (5-4) cut/cover with 18" CSP, Type GO DI (5)	2.53	
2.53	20058000253	6	5		12	11	Replace culvert (6-5) cut/cover with 12" CSP	2.53	
2.53	20058000253	8	5		18	97	Replace culvert (8-5) cut/cover with 18" CSP	2.53	
2.53	20058000253	9	8		24	197	Replace culvert (9-8) cut/cover with 24" CSP	2.53	
2.53	20058000253	10	9		12	21	Replace culvert (10-9) cut/cover with 18" CSP	2.53	Flush/Reinspect
2.53	20058000253	12	4		18	80	Replace culvert (4-12) cut/cover with 18" CSP, Type GO DI (4)	2.53	

PM	SYSTEM NO	US ETNO	DS ETNO	from 3J570	Dia. (in)	Length (ft)	Scope of Work Summary	PM	Notes
2.65	20050000265	3	2		36	83	Replace culvert (3-2) cut/cover with 36" CSP	2.65	
2.65	20050000265	4	2		24	188	Replace culvert (4-2) cut/cover with 24" RCP	2.65	Flush/Reinspect
2.65	20050000265	8	7		36	39	Replace culvert (8-7) cut/cover with 36" CSP, Type GO at (7)	2.65	
2.65	20050000265	14	13		24	37	Replace culvert (14-13) cut/cover with 24" Concrete pipe	2.65	Flush/Reinspect
2.65	20050000265	22	21		18	51	Replace culvert (22-21) cut/cover with 18" CSP, GO DI (22)	2.65	
2.65	20050000265	27	21		36	107	Place cured in place pipeliner (27-21) for 36" CSP	2.65	
2.65	20050000265	24	23		18	38	Replace culvert (24-23) cut/cover with 18" CSP, GO DI (24)	2.65	
2.65	20050000265	25	23		36	349	Place cured in place pipeliner (25-23)	2.65	
2.65	20050000265	28	25		30	207	Place cured in place pipeliner (28-25)	2.65	
2.65	20050000265	27	23		36	306	Place cured in place pipeliner (23-27)	2.65	
2.65	20050000265	29	28		18	25	Replace culvert (29-28) cut/cover with 18" CSP, Slotted drain, DI (29)	2.65	
2.65	20050000265	30	28		18	46	Replace culvert (30-28) cut/cover with 18" CSP, GO DI (30)	2.65	
2.65	20050000265	31	30		18	56	Replace culvert (31-30) cut/cover with 18" CSP	2.65	
2.65	20050000265	35	33		18	46	Replace culvert (35-33) cut/cover with 18" CSP, Headwall (35)	2.65	
2.65	20050000265	37	36		18	18	Replace culvert (37-36) cut/cover with 18" CSP, Slotted drain at DI (37)	2.65	
2.65	20050000265	40	36		30	366	Place cured in place pipeliner (40-36) for 30" CSP	2.65	
2.65	20050000265	44	43		18	20	Replace culvert (44-43) cut/cover with 18" CSP, Replace slotted drain at DI (44)	2.65	
2.65	20050000265	45	43		18	43	Replace culvert (45-43) cut/cover with 18" CSP, GO DI (45)	2.65	
2.65	20050000265	47	46		18	46	Replace culvert (47-46) cut/cover with 18" CSP, GO DI (47)	2.65	
2.65	20050000265	48	46		18	42	Replace culvert (48-46) cut/cover with 18" CSP, GO DI (48)	2.65	
2.65	20054000265	2	1		18	94	Abandon culvert (2-1), Remove DI (2)	2.65	
2.65	20054000265	3	2		18	7	Remove downdrain (3-2)	2.65	
2.65	20054000265	4	3		18	6	Remove downdrain (4-3)	2.65	
2.65	20054000265	5	4		18	10	Remove downdrain (5-4)	2.65	
2.65	20054000265	6	5		18	36	Remove downdrain (6-5)	2.65	
2.65	20054000265	6	3		18	105	Install 24" CSP culvert (6-3) cut/cover, DI (6)	2.65	

US ETNO - Upstream end treatment number.

DS ETNO - Downstream end treatment number