ROAD REPAIR AND ACCOUNTABILITY ACT OF 2017
PROJECT BASELINE AGREEMENT
Soda Springs Pavement Rehabilitation (03-1H990)

Resolution _____
(will 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) for the *Soda Springs Pavement Rehabilitation (03-1H990)*, effective on, _____(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

3.2 Whereas at its May 13, 2020 meeting the Commission approved the State Highway Operation and Protection Program, and included in this program of projects the *Soda Springs Pavement Rehabilitation (03-1H990)*, 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 and the Project Report attached hereto as Exhibit B, as the baseline for project monitoring by the Commission.

3.3 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 *Insert Number* , "Adoption of Program of Projects for the Active Transportation Program", dated
- ☐ Resolution *Insert Number* , "Adoption of Program of Projects for the Local Partnership Program", dated
- ☐ Resolution *Insert Number* , "Adoption of Program of Projects for the Solutions for Congested Corridors Program", dated
- ☒ Resolution G-20-40, "Adoption of Program of Projects for the State Highway Operation and Protection Program", dated 05/13/2020
- ☐ Resolution *Insert Number* , "Adoption of Program of Projects for the Trade Corridor Enhancement Program", dated

4.3 All signatories agree to adhere to the Commission's State Highway Operation and Protection Program, 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 on a quarterly basis; after July 2019, reports will be on a semi-annual basis on the progressmade toward the implementation of the project, including scope, cost, schedule, outcomes, and anticipated benefits.

4.7 Caltrans agrees to prepare program progress reports on a quarterly basis; after July 2019, reports will be 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 Accountabilityand Transparency Guidelines.

4.9 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 during the course of the project, and retain those records for four years from the date of the final closeout of the project. Financial records will be maintained in accordance with Generally Accepted Accounting Principles.

4.10 The Transportation 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 four 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 Other Project Specific Provisions and Conditions

Attachments:

Exhibit A: Project Programming Request Form
Exhibit B: Project Report

SIGNATURE PAGE
TO
PROJECT BASELINE AGREEMENT

Soda Springs Pavement Rehabilitation (03-1H990)

Resolution _____

Amarjeet S. Benipal — 3-28-2022
Amarjeet S. Benipal — Date

District Director

California Department of Transportation

Steven Keck — 4/27/2022
Steven Keck — Date

Acting Director

California Department of Transportation

_____ — _____
Mitchell Weiss — Date

Executive Director

California Transportation Commission

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:	04/14/22 09:06:40 AM

District	EA	Project ID	PPNO	Project Manager
03	1H990	0317000043	5111	BONALA, MOHAN V

County	Route	Begin Postmile	End Postmile	Implementing Agency	
NEV	80	0.0	R 2.7	PA&ED	Caltrans
				PS&E	Caltrans
				Right of Way	Caltrans
				Construction	Caltrans

Project Nickname

Soda Springs Pavement Rehabilitation

Location/Description

Near Kingvale, from Placer County line to east of Donner Pass Road (PM 0.0/R2.7L/R); also in Placer County, from west of Troy Road Undercrossing to Nevada County line (PM 68.3/69.7). Rehabilitate roadway, construct truck climbing lane in eastbound direction, replace Kingvale Undercrossing No. 19-0107R and Troy Road Undercrossing No. 19-0106R, replace sign panels, upgrade lighting and Transportation Management System (TMS) elements, and rehabilitate drainage systems. (G13 Contingency)

Legislative Districts

Assembly:	01	Senate:	01	Congressional:	01, 04

PERFORMANCE MEASURES

	Primary Asset	Good	Fair	Poor	New	Total	Units
Existing Condition	Pavement	0	9.5	1.0		10.5	Lane-miles
Programmed Condition	Pavement	10.4	0	0	0	10.4	Lane-miles

Project Milestone	Actual	Planned
Project Approval and Environmental Document Milestone	02/24/22	
Right of Way Certification Milestone		04/20/23
Ready to List for Advertisement Milestone		04/24/23
Begin Construction Milestone (Approve Contract)		10/02/23

FUNDING (Allocated amounts are shaded)

Component	Fiscal Year	SHOPP					Total
PA&ED	20/21	3,000					3,000
PS&E	21/22	3,000					3,000
RW Support	21/22	500					500
Const Support	22/23	9,000					9,000
RW Capital	22/23	1,687					1,687
Const Capital	22/23	70,239					70,239
Total		87,426					87,426

Project Report

To Authorize Project Approval

On Route 80 in Placer and Nevada Counties Near Kingvale
From 0.2 Miles West of Troy Road UC
To 0.1 Miles East of the Soda Springs OC

I have reviewed the right-of-way information contained in this report and the right-of-way data sheet attached hereto, and find the data to be complete, current, and accurate:

John Ballantyne

John Ballantyne, Chief, North Region Right of Way

APPROVAL RECOMMENDED:

Mohan Bonala, Project Manager

PROJECT APPROVED:

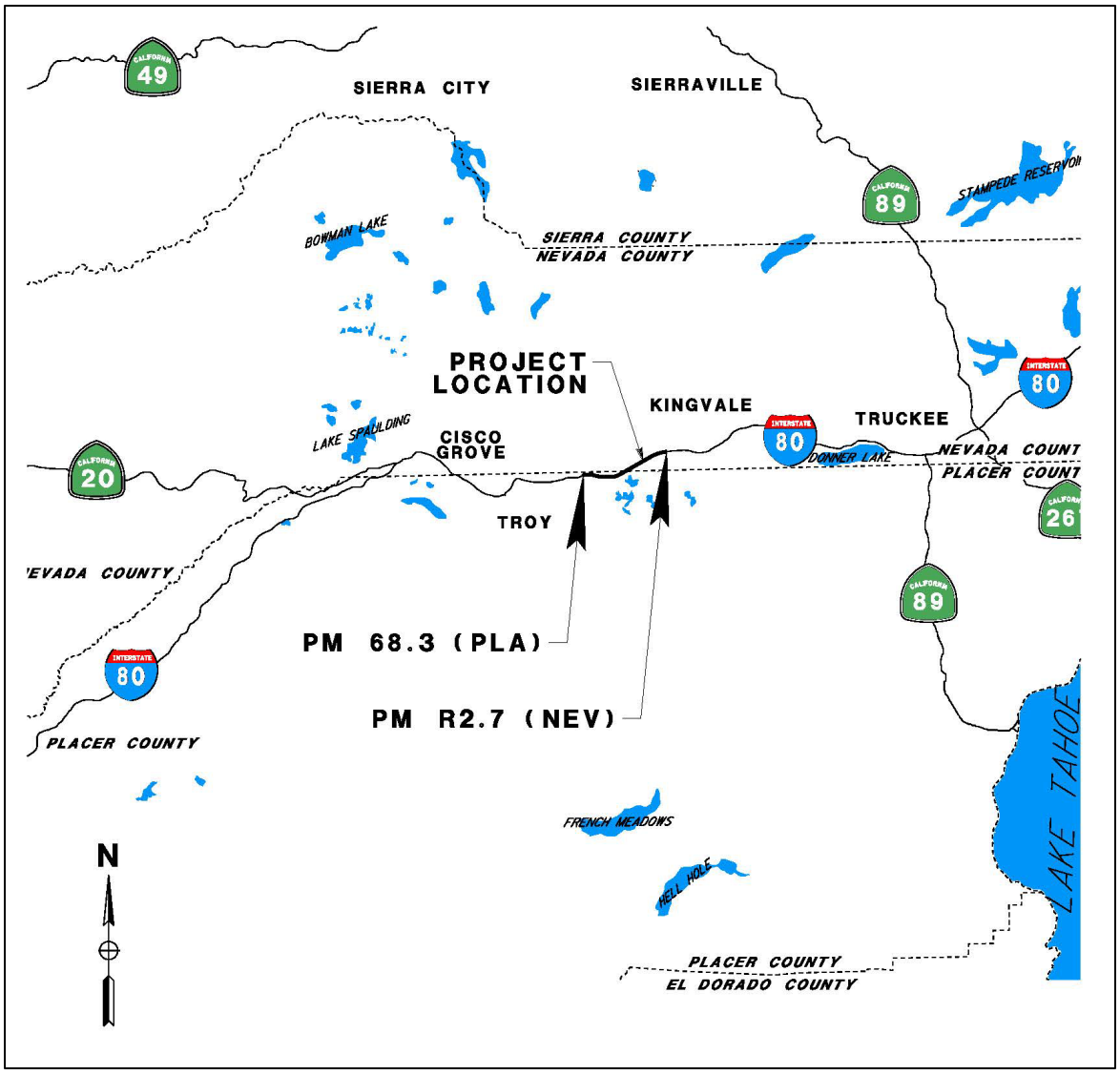
for

Amarjeet S. Benipal, District 3 Director

02/24/2022

Date

Vicinity Map



I-80 SODA SPRINGS PAVEMENT REHAB PROJECT
03-PLA/NEV-80
PM 68.3/69.7 to PM 0.0/R2.7
EA 03-1H990
EFIS 0317000043

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 the engineering data upon which recommendations, conclusions, and decisions are based.

02/08/2022

REGISTERED CIVIL ENGINEER *DATE*

REGISTERED PROFESSIONAL ENGINEER
R Scott Foster
No. C86232
Exp. 03/31/2023
CIVIL
STATE OF CALIFORNIA

Table of Contents

1. INTRODUCTION

Project Description:

The California Department of Transportation (Caltrans) proposes to rehabilitate a portion of Interstate 80 (I-80), in both Placer and Nevada Counties, from 0.2 miles west of the Troy Road undercrossing (UC) to 0.1 mile east of the Soda Springs overcrossing (OC). See **Attachment A,** *Location Map,* for more information.

This project proposes to repair areas of damaged pavement to preserve and extend pavement life on the existing eastbound (EB) and westbound (WB) lanes and shoulders. The project will also improve safety, operations, and mobility on I-80 by constructing an eastbound truck climbing lane between 0.20 mile west of the Troy Road UC and the Soda Springs OC. The EB Troy Road (19-106R) and Kingvale (19-107R) UC structures will be replaced. These structures are at the end of their service life and will be replaced with widened structures to accommodate the addition of the truck climbing lane. See **Attachment C,** *Structure General Plan,* for more information. Existing culverts will be repaired, replaced, or extended as needed. Existing overhead sign structures and sign panels will be replaced. The existing chain installation area between the Troy Road OC and Kingvale UC will be grooved to improve tire traction during snow and icy conditions. See **Attachment B,** *Typical Cross Sections and Layouts,* for more information.

Project Limits	*03-Pla, Nev-80* *PM 68.3-69.7, 0.0/R2.7*	
Number of Alternatives	*2 (including no-build)*	
	Current Cost Estimate:	**Escalated Cost Estimate:**
Capital Outlay Support		$15,143,000
Capital Outlay Construction	$63,906,000	$70,239,000
Capital Outlay Right-of-Way	$ 1,550,000	$ 1,687,000
Funding Source	*SHOPP 20.XX.201.122*	
Funding Year	2022/2023 Fiscal Year	
Type of Facility	*Freeway*	
Number of Structures	2	
SHOPP Project Output	*10.4 Lane Miles*	
Environmental Determination or Document	Initial Study/Mitigated Negative Declaration	
Legal Description	In Placer and Nevada Counties on Interstate 80 from 0.2 miles west of Troy UC to 0.1 miles east of Soda Springs OC.	
Project Development Category	*Category 4B*	

2. RECOMMENDATION

It is recommended that this project be approved to proceed to the design phase using the preferred alternative. The affected local and state agencies have been consulted with respect to the recommended structure option and their views have been considered. The local and state agencies are in general accord with the project as presented.

3. BACKGROUND

The project is located in both Placer and Nevada Counties, on I-80, from 0.2 miles west of the Troy Road UC (PM 68.6) to 0.1 mile east of the Soda Springs OC (PM R2.7).

Existing Facility

This section of I-80 is in the Sierra Mountain region, that falls within the Tahoe National Forest and is subject to heavy snow fall during the winter months. The segment also experiences a high volume of truck traffic, with I-80 serving as a vital route for transporting freight over Donner Pass, between the Bay Area, Sacramento, the Sierras, and the state of Nevada.

Within the project limits, the existing facility is a four-lane divided freeway, with two-12-foot lanes and 10-foot shoulders. The project is located along a segment of I-80 where the roadway profile is primarily in a sustained grade having significant grade difference between the eastbound and westbound lanes and separated by a forested median. In the eastbound direction, there is a chain installation area located 0.3 miles west of the Kingvale UC, where the right shoulder widens to a width of approximately 30-feet. There are two interchanges within the project limits which provide ingress and egress for the surrounding Troy, Kingvale, and Soda Springs areas.

4. PURPOSE AND NEED

Purpose:

The proposed project would restore the facility to a state of good repair and provide efficient movement of people and goods through pavement and culvert rehabilitation. The provision of a truck climbing lane would improve both traffic safety and highway operation by facilitating the passing of trucks and slow-moving vehicles whose speeds drop due to the sustained grade. Safety would also be improved by upgrading signs and detector loops, and by replacing all non-standard metal beam guardrail with shoulder concrete barrier.

Need:

Due to the heavy vehicle traffic and chain/studded tire wear during the winter months, the pavement has experienced severe rutting. The existing pavement has cracks in certain areas which indicates it is close to the end of its service life. The rutting and cracking will continue to worsen and lead to an unacceptable ride quality for the public by the construction year.

The trucks and vehicles towing trailers experience reduced speeds due the sustained grades within the project limits and this impacts the traveling public because the freeway is not operating as efficiently as one would expect.

Existing culverts are deteriorated and need rehabilitation. According to current culvert inspection log, culverts within the project limits having an existing health rating below the threshold of 60 and will have to be repaired, replaced, or extended as part of this project.

The existing overhead sign structures at the westbound Kingvale exit and eastbound Soda Springs exit are deteriorated and need to be replaced. Existing sign panels at the eastbound exit to Kingvale and the westbound exit to Soda Springs are deteriorated as well and need to be replaced with sign panels that meet current design standards.

A. **Problem, Deficiencies, Justification**

Geometrically this route segment does not meet the current Highway Design Manual (HDM) guidance in Topic 204.5 for Sustained Grades and requires the addition of a climbing lane because the running speed of trucks falls 10 miles per hour or more below the running speed of the remaining traffic. The current lane and shoulder widths for this route segment are shown in the *Roadway Geometric Information and Condition* Table below.

Roadway Geometric Information and Condition

	Through Traffic Lanes			Paved Shoulder Width		Sidewalk Width
Facility Location	Number of Lanes	Lane Width (ft)	Type (Flexible, Rigid)	Left (ft)	Right (ft)	(ft)
EB Troy Rd. UC to Kingvale UC	2	12	Rigid	10’	10’-30’	N/A
WB Kingvale UC to Soda Springs OC	2	12	Rigid	10’	10’	N/A

Structure Geometric Information and Condition

Bridge Name	Bridge Number	Location	Year Built	Structure Length	Vertical Clearance	Structure Material	Design Type
Troy UC	19-106R	03-Pla-080-PM 68.55	1959	101 ft	15'6"	RC	Girder/Beam RC
Kingvale UC	19-107R	03-Pla-080-PM 69.23	1959	110 ft	14'9"	RC	Girder/Beam RC

B. **Regional and System Planning**

State Planning

I-80 serves interregional travel between the Bay Area, Sacramento, the Sierras, and Nevada and is a vital route for recreation and tourism travel. It is a major route for commerce and for the transportation of goods between the state of Nevada and Northern California, over Donner Pass. In addition, the segment experiences a heavy volume of tourist travel during the winter and summer months due to the recreation offered by the Lake Tahoe area.

The 2017 Transportation Concept Report (TCR) lists no planned projects for Segments 13 and 14 within the limits of the project.

C. **Traffic**

Current and Forecasted Traffic Volumes

Location Description	Type of Roadway	Average Daily Traffic, vpd (2020)	Average Daily Traffic, vpd (2026)	Average Daily Traffic, vpd (2046)	Design Hourly Volume (2020)	Design Hourly Volume (2026)	Design Hourly Volume (2046)
I-80/ (PM 68.3/69.7, PM 0.0/R2.7)	Freeway	32,169	32,500	35,600	2,079	2,142	2,350

Current and Forecasted Truck Volumes

Location Description	% ADT (2020)	% ADT (2026)	% ADT (2046)
I-80/ (PM 68.3/69.7, PM 0.0/R2.7)	10.27	10.29	10.30

Collision Analysis

Collision data was queried from the Traffic Accident Surveillance and Analysis System (TASAS) Table B for a three-year period from January 1, 2017 to December 31, 2019. The data is presented in two separated segments PM 68.3 (PLA) to PM 2.24 (NEV) and PM 2.24 (NEV) to PM 2.70 (NEV). In the analyzed three-year period, a total of 42 collisions were reported within this section of I-80 from PM 68.3 (PLA) to PM 2.24 (NEV). Within the same time-period, there were a total of 9 collisions from PM 2.24 (NEV) to PM 2.70).

Location PM	Number of Collisions			Collision Rates					
	Total*	Fatal	F+I	Actual per million vehicle miles			Average per million vehicle miles		
				Fatal	F+I	Total*	Fatal	F+I	Total*
68.3/2.24	42	0	12	0	0.22	0.77	0.009	0.16	0.47
2.24/2.70	9	0	1	0	0.13	1.18	0.013	0.20	0.52

*Total collisions include fatalities and injuries, plus property only collisions.

For the segment from PM 68.3 (PLA) to PM 2.24 (NEV), "speeding/driving too fast for roadway conditions" was reported as the primary collision factor (15 collisions), "improper turn" was the second leading factor (13 collisions) followed by "other violations" (9 collisions), "other than driver" (2 collisions), “influence alcohol” (2 collisions) and "follow too close" (1 collision).

For the segment from PM 2.24 (NEV) to PM 2.70 (NEV), "improper turn" was reported as the primary collision factor (5 collisions), "speeding/driving too fast for roadway conditions" was the second leading factor (3 collisions) and "other violations" (1 collision).

The most frequent collision types are speed and improper turn (35%), followed by other violations (20%). These collision types have a pattern regarding their location. They tend to group around the chain on area near Troy Rd UC and the Kingvale grade.

The build alternatives would improve safety over the no-build alternative with the addition of the truck climbing lane. This addition would reduce speed, other violations and collisions since slow moving vehicles can use the truck climbing lane and reduce interaction with faster-moving vehicles as they approach and depart from the chain on area near the Troy Rd UC and traverse the Kingvale grade.

A Traffic Operational Analysis Report was done for the project. See **Attachment F,** *Traffic Operational Analysis Report,* for more information.

5. ALTERNATIVES

5A. Preferred Alternative

The proposed project will repair areas of damaged pavement to preserve and extend the life of the pavement. In addition, the project proposes to construct an eastbound truck climbing lane between 0.20 mile west of the Troy Road UC and the Soda Springs OC to improve traffic operations for this section of I-80.

The project will replace failed concrete pavement slabs along existing mainline I-80 lanes, shoulders, and the westbound Kingvale on and off ramps. The project will grind two channels (3.0' x 0.15' maximum) in the wheel paths of the EB and WB mainline number 2 lane and fill with polyester concrete to repair areas where rutting has occurred.

Between the Troy UC and Soda Springs OC, the existing EB inside shoulder will be removed and a 12' lane with a 10' shoulder will be constructed using Jointed Plain Concrete Pavement (JPCP). A concrete barrier (Type 60M) will be added on the inside shoulder in lieu of metal beam guard rail.

In addition, existing drainage culverts will be repaired, replaced, or extended as needed with the project.

The project will also replace the deteriorated overhead sign structures at the EB Soda Springs off ramp and WB Kingvale off ramp. The sign panels at WB Soda Springs off ramp and EB Kingvale off ramp will be upgraded to meet current design standards.

The loop detectors will be replaced as required as part of the pavement repair.

The existing EB chain installation area between the Troy and Kingvale UC will be grooved to improve traction for vehicle chain installation as well as increased tire traction during snow and icy conditions.

The existing EB Troy Road UC and Kingvale UC structures will be replaced with new structures. Each new structure will provide the required width for the three 12-foot lanes, 11-foot shoulders, and new concrete barriers. An Advanced Planning Study (APS) was prepared for the scope of work, see **Attachment C**, *Structure General Plan*, for more information.

Drainage Features

On eastbound I-80, storm water runoff primarily sheet flows to the outside shoulder and is collected by concrete roadside ditches. The ditches convey runoff to drainage inlets or culverts that convey flows under the roadway before releasing them into the existing median. There are multiple culverts that run under the eastbound and westbound lanes. These culverts transfer runoff from the inlets and ditches, into the forested median, under the westbound lanes and direct flows toward the South Yuba River. In addition, this area is subject to offsite runoff contributed by snow melt from the surrounding Sierra Nevada mountains. Within the project limits, this additional runoff drains off the slopes of the mountain regions and converges with roadway runoff before draining under the highway through the system of ditches and culverts.

The project will repair existing culverts that have a current rating below 60/100 by either replacement, Cured-In-Place Pipelining (CIPP), slip lining, or invert paving. The project will also extend culverts to account for the widened pavement section. Drainage inlets and storm drainpipe will be added along the inside shoulder where needed to convey runoff into the median due to the addition of concrete barrier.

Highway Planting and Erosion Control

A Landscape Architecture Assessment Study (LAAS) was performed on August 25, 2021. From this study, the following was recommended for highway planting and erosion control:

Areas of soil disturbance may be re-established utilizing a mixture of trees, shrubs, and a seed mix comprised of native plant species indigenous to the area. All disturbed areas shall receive soil stabilization measures that may include Erosion Control (hydroseed), Erosion Control (Bonded Fiber Matrix), Erosion Control (Compost Incorporate), Erosion Control (Compost Blanket) and Rolled Erosion Control Product (Netting/Blanket). Materials and locations will be determined during the design phase.

At the end of construction all areas used for staging, access, or other construction activities shall be repaired by contractor pursuant to Section 5-1.36 "Property and Facility Preservation." Areas shall be sufficiently de-compacted prior to final erosion control application.

Vegetation Control (Minor Concrete) is recommended as a permanent treatment installed under the Midwest Guardrail System (MGS) where repetitive maintenance activity to control vegetation would otherwise be required. Vegetation Control (Minor Concrete) consists of minor concrete applied beneath signposts, guardrails, and adjacent to median barriers. In addition, Fiber Rolls will be used with any slope work to act as an additional sediment barrier/slope interrupter.

See **Attachment G,** *Landscape Architecture Assessment Sheet,* for more information.

Utilities

Based on the mapping and information provided, the following utility facilities exist within the project location:

Overhead PG&E Electric, underground AT&T, and Kinder Morgan petroleum.

The Kinder Morgan line crosses under I-80 in two locations. No conflict or protection in place anticipated for westerly crossing, at Kingvale U.C. Easterly crossing covered by a Consent to Common Use Agreement, indicating Kinder Morgan's prior rights. Project will place fill material above petroleum line. Communication and coordination with company anticipated for assessment of potential facility impact due to added material.

5B. Rejected Alternatives

No-Build Alternative

The No-Build Alternative proposes no project improvements.

The Project Development Team (PDT) recommends rejecting the no-build alternative because this alternative does not make any improvements to address the project purpose and need of improving operations and safety.

Eastbound Outside Widening Alternative

This alternative proposes to enhance the traffic operations within the project limits through widening to the outside of mainline I-80. After discussion with the PDT, this alternative was rejected due to the potential for increased environmental and Right of Way impacts. This alternative would also have significant impact to the Kingvale Interchange, Soda Springs Interchange and Soda Springs OC structure.

Rejected Structure Options

For the rejected structures alternatives, roadway features are consistent through each option.

Structure Option 1

For the EB Troy Road UC and Kingvale UC structures, this option proposed removing the existing barrier and approximately three feet of the existing deck to expose the reinforcing steel. The structure would have been widened, matching the existing cross slope and profile of the adjoining structure, to accommodate three 12-foot lanes, 11-foot shoulders, and concrete barriers.

This option would not rehabilitate the existing bridge deck and would leave the existing structures ratings as "poor", requiring another project be programed immediately to rehabilitate the existing bridge decks.

Structure Option 2

For the EB Troy Road UC and Kingvale UC structures, this option would remove the existing barrier and approximately three feet of the existing deck to expose the reinforcing steel. The structure would have been widened, matching the existing cross slope and profile of the adjoining structure, to accommodate three 12-foot lanes, 11-foot shoulders, and concrete barriers. In this option the existing deck would have been removed from the bridge and been replaced with an 8-inch concrete deck poured over the original bridge deck. The new deck would be slightly higher than existing and would require a profile adjustment for a short distance of roadway on each side of the structure.

This option would extend the life of the deck and improve the existing structure’s rating from "poor" to "fair".

Structure Option 3

For the EB Troy Road UC and Kingvale UC structures, this option would have removed the existing barrier and approximately three feet of the existing deck to expose the reinforcing steel. The structure would have been widened, matching the existing cross slope and profile of the adjoining structure, to three 12-foot lanes, 11-foot shoulders, and concrete barriers. The existing reinforced concrete deck, girders and beams would have been removed and replaced with new precast T beams.

This option would address each structure's "poor" deck rating and "fair" superstructure rating. This option would be expected to improve the existing structure's rating from "poor" to "good".

6. CONSIDERATIONS REQUIRING DISCUSSION

6A. Hazardous Waste

Based on the proposed project scope and location, the following Hazardous Waste issues were considered:

- Naturally Occurring Asbestos (NOA) – The evaluation indicated that altered ultramafic bedrock, alluvium derived from ultramafic rock, or other rock commonly associated with NOA is not present.
- Cortese List- The proposed project is not within or impacting any site on the Cortese List.
- Lead in Soil – A Preliminary Site Investigation (PSI) for Aerially Deposited Lead (ADL) will need to be conducted prior to Ready-to-list (RTL).
- Thermoplastic/Paint Stripe/Pavement Marking – Thermoplastic paint may contain lead of varying concentrations depending upon color, type, and year of manufacture. To address this issue, SSP 36-4 should be included in the final project PS&E and listing packages.
- Treated Wood Waste (TWW) – If TWW will be generated during this project, SSP 14-11.14 should be included in the final project PS&E and listing packages.
- Structural Survey – Since this project will include work on existing structures, it is possible that asbestos containing material or lead containing paint may be disturbed during construction. A survey will be required prior to construction. Based on results of the survey special handling and/or training may be required for construction.

6B. Value Analysis

A Value Analysis (VA) was completed for this project on April 30, 2021.

The following describes the accepted alternatives along with their initial cost savings, change in schedule, and performance as validated by the PDT after the VA study.

VA Alternative No. and Description	Initial Cost Savings	Change in Schedule	Performance Change
1.0 Construct a new precast bridge in lieu of a 12' widening.	($4,960,000)	3-month reduction	+6%
2.0 Reduce the 8,000' of retaining wall by 2,000' and replace with imported	$1,520,000	No Change	No Change
3.0 Reduce JPCP thickness from 1.15' to 1.0'.	$1,820,000	No Change	No Change
5.0 For pavement striping, apply a two-component paint in lieu of methacrylate (MMA).	$60,000	No Change	+2%

In studying Alternative 2 of the Value Analysis all retaining walls have been removed from the project. A life-cycle cost analysis was performed to determine implementation of Alternative 3 of the Value Analysis. Alternative 3 saves the project $1,820,000 in today's costs by reducing the JPCP thickness, it also reduces the design life of the pavement from 40 years to 20 years. This adds an additional cost of $3,130,000 in maintenance and paving over the 40-year life. As a result, Alternative 3 will not be implemented.

6C. Resource Conservation

The project proposes to maximize the use of existing resources, including maximizing the preservation of the existing pavement by using the existing highway alignment to the greatest extent feasible and not altering the existing pavement more than needed.

6D. Right-of-Way Issues

All work will be performed within the existing Right of Way.

The existing utilities within the project limits are Kinder Morgan, PG&E Electric and AT&T. Construction of the project will place fill material above the easterly Kinder Morgan crossing. Communication and coordination with utility owner is anticipated for assessment of potential impact due to added material.

6E. Environmental Compliance

After performing initial studies, the environmental team prepared an IS/MND for the project, see **Attachment E,** *Environmental Document,* for more information.

6F. Air Quality Conformity

The proposed project is fully compatible with the design concept and scope described in the current regional transportation plan.

6G. Title VI Considerations

Within the project limits, no identifiable Title VI facilities exist, including public transit stops, curb ramps, pedestrian trails, or access roads to shopping areas, schools, or recreational areas.

6H. Noise Study Report

A Noise Study Report was prepared for this project, see **Attachment I,** *Noise Study Report,* for more information.

7. OTHER CONSIDERATIONS AS APPROPRIATE

Permits

No permits will be required for this project.

Cooperative Agreements

No cooperative agreements will be required for this project.

Transportation Management Plan

A Transportation Management Plan (TMP) has been prepared for this project, see **Attachment J,** *Transportation Management Plan Data Sheet,* for more information.

Stage Construction

The proposed project is anticipated to be constructed over 2 construction seasons and will use two different stages to construct the project. Two lanes of through traffic and access to on/off ramps will be maintained during construction. The project will widen to the median side, remove the existing shoulder, construct an additional 12-foot lane and 10-foot shoulder behind K-Rail. Traffic will then be shifted over to the new construction and any rehabilitation work will occur on the existing lanes.

Accommodation of Oversize Loads

There are no current vertical clearance issues or load restrictions on this portion of Interstate 80. With the heavy truck traffic along this corridor and after consulting with traffic safety, traffic operations, and maintenance, the project will construct 10 to11-foot inside shoulders.

Protect Wetlands and Surface Water

This project will implement Construction Site Best Management Practices (BMPs) to protect water bodies within or near the project limits during construction, but will not enhance adjacent wetlands, hydraulic connections and water functions, values, or existing deficiencies.

The project will adhere to the conditions of the Statewide National Pollutant Discharge Elimination System (NPDES) permit issued by the State Water Resources Control Board (Order No. 2012-0011-DWQ), NPDES Permit No CAS000003 along with the NPDES General Permit No. CAS000002 (Order No. 2009-0009-DWQ). The contractor will be required to prepare a Storm Water Pollution Prevention Plan (SWPPP) to incorporate appropriate BMPs into the construction of the project.

Construction site BMPs are recommended to prevent receiving water pollution due to project construction activities. Anticipated temporary BMPs are street sweeping, temporary construction entrance/exit, temporary fiber roll, temporary silt fence, temporary gravel bag berm, temporary drainage inlet protection, portable temporary concrete washout, temporary hydraulic mulch, and temporary erosion control blanket.

Stormwater Data Report

A Stormwater Data Report has been prepared for this project, see **Attachment K,** *Storm Water Data Report,* for more information.

Structural Section Recommendation

A Structural Section Recommendation has been prepared for this project, see **Attachment L,** *Structural Section Recommendation,* for more information.

8. FUNDING, PROGRAMMING AND ESTIMATE

Funding

This project is funded through the Caltrans State Highway Operations and Protection Program (SHOPP) under the funding source 20.XX.201.122 for pavement. It has been determined that this project is eligible for Federal-aid funding.

Programming

This project was programmed in accordance with the Project Initiation Document (June 2019); EA 1H9900-0317000043 in 22/23 FY. A full estimate is provided for the Preferred Alternative.

Fund Source	Fiscal Year Estimate								Programmed Amount
20.10.201.120	Prior	21/22	22/23	23/24	24/25	25/26	Future	Total	
Component	In thousands of dollars ($1,000)								
PA&ED Support	1,837	1,336						3,173	3,000
PS&E Support		1,079	2,093	97				3,269	3,000
Right-of-Way Support		5	11	5	5	5	11	43	500
Construction Support				2,107	2,901	2,988	661	8,658	9,000
Right-of-Way			1,687					1,687	990
Construction			70,239					70,239	69,100
Total	1,837	2,420	74,030	2,209	2,906	2,993	672	87,069	85,590

The estimated working days is 240.

The support cost ratio is 21.06%.

See **Attachment M,** *Programming Sheet,* for more information.

Estimate

Preferred Alternative Project Cost Estimate

- Roadway Items $60,571,664
- Structure Items $ 9,667,730

Sub-Total $70,239,394

- Right of Way/Utility Items $ 1,687,000
- Total Capital Cost Estimate (Rounded) $71,927,000

See **Attachment D,** *Cost Estimate,* for more information.

9. DELIVERY SCHEDULE

Project Milestones		Milestone Date (Month/Day/Year)	Milestone Designation (Target/Actual)
PROGRAM PROJECT	M015	05/13/2020	A
BEGIN ENVIRONMENTAL	M020	09/02/2020	A
BEGIN PROJECT	M040	07/29/2020	A
CIRCULATE DPR & DED EXTERNALLY	M120	01/03/2022	A
PA & ED	M200	02/15/2022	T
R/W REQUIREMENTS	M224	01/10/2022	A
REGULAR R/W	M225	03/01/2022	T
GENERAL PLANS	M275	04/05/2022	T
CIRCULATE PLANS IN DISTRICT	M300	12/20/2022	T
PS&E TO DOE	M377	03/20/2023	T
DRAFT STRUCTURES PS&E	M378	12/20/2022	T
PROJECT PS&E	M380	04/15/2023	T
RIGHT OF WAY CERTIFICATION	M410	04/20/2023	T
READY TO LIST	M460	04/24/2023	T
FUND ALLOCATION	M470	06/22/2023	T
HEADQUARTERS ADVERTISE	M480	06/12/2023	T
AWARD	M495	08/31/2023	T
APPROVE CONTRACT	M500	10/02/2023	T
CONTRACT ACCEPTANCE	M600	07/20/2026	T
END PROJECT EXPENDITURES	M800	09/20/2029	T
FINAL PROJECT CLOSEOUT	M900	06/20/2031	T

10. RISKS

A Risk Management Plan was completed for this project, see **Attachment N,** *Risk Register,* for more information.

11. EXTERNAL AGENCY COORDINATION

Federal Highway Administration (FHWA)
The Project has not been identified as an FHWA project of interest nor has any coordination between Caltrans and FHWA occurred.

The project requires the following coordination:

Regional Water Quality Control Board
Clean Water Act Section 401 Water Quality Certification

12. PROJECT REVIEWS

Field Review:
Jeff Rud, Dan Segur, Tad Sampson Ken Hass, Will Jansen Date 7/30/20
District 3 Pavement Prog Adv John Welch Date 10/15/21
Design Engineer Scott Foster Date 10/15/21
Project Manager Mohan Bonala Date 10/15/21
Right of Way Review Stacey Sannar Date 10/15/21
Landscape Review Julia Riggins Date 10/15/21
Environmental Review Bria Miller Date 10/15/21

13. PROJECT PERSONNEL

Name	Title	Division/Office	Phone Number
Mohan Bonala	Project Manager	Project Management	(530) 788-3259
Scott Foster	Branch Chief	Design M2	(530) 821-8031
Valeria Valenzuela	Design Engineer	Design M2	(530) 812-3325
Kendall Lim	Design Engineer	Design M2	(530) 821-8019
Kara Brimhall	Design Engineer	Design M2	(530) 720-6749
Bria Miller	Senior Environmental Planner	Environmental Planning	(530) 720-3691
Martin Clark	Resident Engineer	Construction Engineer	(916) 825-6388
Kenneth Haas	Structures Resident Engineer	Structures Construction	(530) 320-6475
Danny Mossman	Senior Bridge Engineer	Engineering Services	(916) 221-0412
Ryan Stiltz	Bridge Engineer	Engineering Services	(916) 227-1917
Kadambari Toke	Sr Transportation Engineer	Engineering Services	(916) 227-8477
Shawn Wei	Sr Transportation Engineer	Engineering Services	(916) 227-1079
Jacqueline Martin	Sr. Engineering Geologist	Engineering Services	(916) 227-1051
Hilario Tuazon Jr	Transportation Engineer	Engineering Services	(916) 227-9766
Matthew Herbert	Sr. Transportation Surveyor	Field Surveys	(530) 218-8949
Teresa Limon	Senior Highway/Traffic Ops	Highway Operations	(530) 812-7188
Mel Zeleke	Sr Transportation Engineer	Signing and Striping	(530) 821-8413
Ahmad Sohail Rahimi	Transportation Engineer	Signing and Striping	(530) 821-8946
Raquel Borrayo	Information Officer	Public Information	(530) 634-7640
Carol Alvarado	Associate R/W Agent	Right of Way Utilities	(530) 812-6862
Karen Basra	Sr R/W Agent	Right of Way	(530) 812-7143
Stacey Sannar	Associate R/W Agent	Right of Way	(530) 821-8356
Jacob Pace	Sr. Transportation Surveyor	Right of Way Engineering	(530) 218-3688
Robert J. Campos	Landscape Associate	Landscape Architect	(530) 821-8440
Pradeepa Pannirselvam	Transportation Engr (Elect)	TMC Electrical Operations	(916) 718-1978
Shahna Thomas	Sr. Transportation Engineer	Asset Management	(916) 949-4939
Theodore Vue	Transportation Engineer	Asset Management	(530) 218-4820
John Welch	Transportation Engineer	Asset Management	(530) 330-1557
Pedro Diaz	Senior Electrical Engineer	Traffic Electrical	(530) 634-7619
Aaron McClanahan	Electrical Engineer	Traffic Electrical	(614) 301-0031
Arik Jenkins	Electrical Supervisor	Electrical Maintenance	(916) 322-9608
Berhanu Zergaw	Transportation Engr (Elect)	Electrical Systems TMC	(916) 859-7935
Jose Valdez	Transportation Engineer	Maintenance Engineering	(530) 812-4697

14. ATTACHMENTS

A. Location map
B. Typical Sections and Layouts
C. Structure General Plan
D. Cost Estimate
E. Environmental Document
F. Traffic Operational Analysis Report
G. Landscape Architecture Assessment Sheet
H. Right of Way Data Sheet
I. Noise Study Report
J. Transportation Management Plan Data Sheet
K. Storm Water Data Report
L. Structural Section Recommendation
M. Programming Sheet
N. Risk Register

ATTACHMENT A
PROJECT LOCATION MAP

INDEX OF PLANS

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PROJECT PLANS FOR CONSTRUCTION ON
STATE HIGHWAY

IN PLACER AND NEVADA COUNTIES
FROM 0.2 MILES WEST OF TROY UNDERCROSSING
TO 0.1 MILES EAST OF SODA SPRINGS OVERCROSSING

TO BE SUPPLEMENTED BY STANDARD PLANS DATED 2018

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
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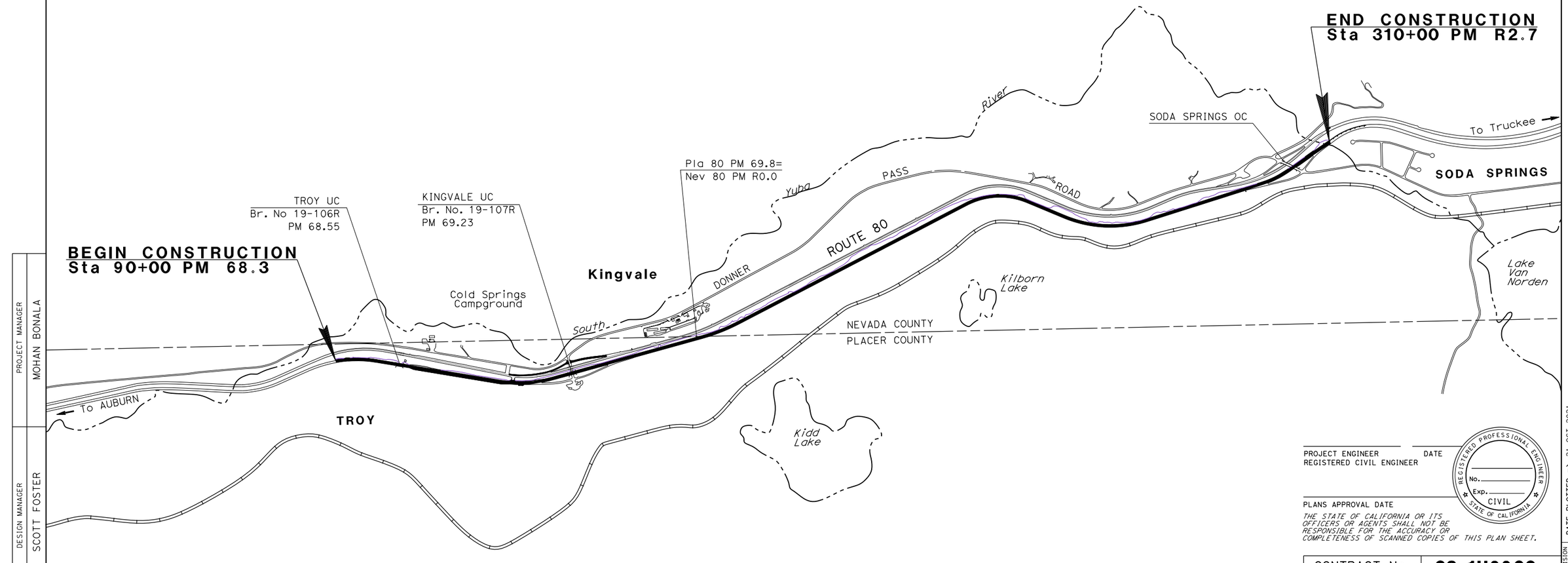
END CONSTRUCTION
Sta 310+00 PM R2.7



PROJECT MANAGER: MOHAN BONALA
DESIGN MANAGER: SCOTT FOSTER

PROJECT ENGINEER DATE
REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
No.
Exp.
CIVIL
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THE CONTRACTOR SHALL POSSESS THE CLASS (OR CLASSES) OF LICENSE AS SPECIFIED IN THE "NOTICE TO BIDDERS."

NO SCALE

CONTRACT No.	03-1H9900
PROJECT ID	0317000043

LAST REVISION

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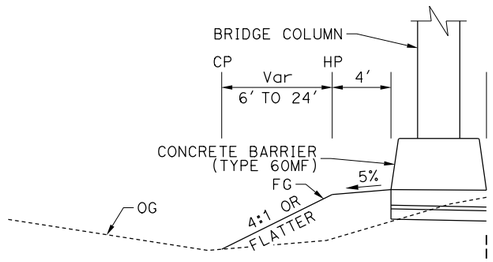
ATTACHMENT B

TYPICAL SECTIONS AND LAYOUTS

NOTES:

1. DIMENSIONS OF THE PAVEMENT STRUCTURES (STRUCTURAL SECTIONS) ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.
2. MATCH EXISTING SUPERELEVATION OR AS DIRECTED BY THE ENGINEER.
3. FOR MORE INFORMATION ON SAWCUT LOCATIONS SEE LAYOUTS.



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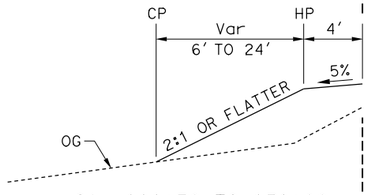
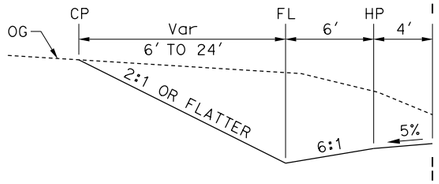


Sta 111+70 TO 131+00



Sta 105+50 TO 111+69

STRUCTURAL SECTIONS:

1. 1.15' JPCP
   0.25' HMA-A
   0.70' CLASS 2 AB
2. 0.15' GRIND Exist Conc Pvmt
   0.15' POLYESTER Conc
3. 0.02' GROOVE Exist Conc Pvmt
4. Exist SSec
   0.10' AC
   1.67' PCC
   0.33' CTS
   1.08' AS
5. Exist SSec
   0.10' AC
   1.00' PCC
   0.25' PMS
   0.50' CTB
   0.25' AB
   1.00' AS
6. Exist SSec
   0.10' AC
   0.80' PCC
   0.41'-0.57' AC
   0.75' AB
   1.00' AS
7. Exist SSec
   0.10' AC
   1.00'-1.61' PCC
   0.33' CTS
   1.08' AS

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	PLA NEV	80	68.3/69.7 0.0/R2.7		

REGISTERED CIVIL ENGINEER DATE

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DESIGN DESIGNATION

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ADT (2046)	35,600	T	13%
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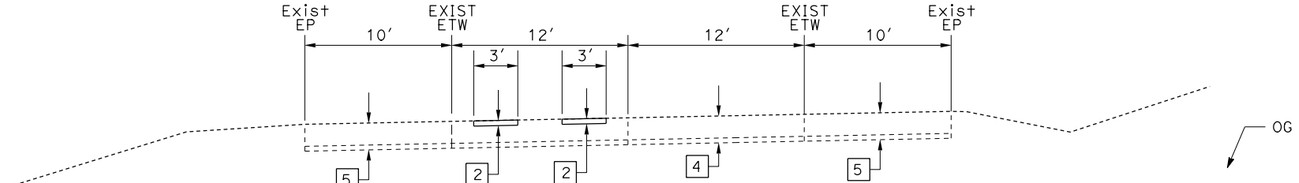
ESAL	1,553,678	TI_{20}	13.5

PAVEMENT CLIMATE REGION

HIGH MOUNTIAN



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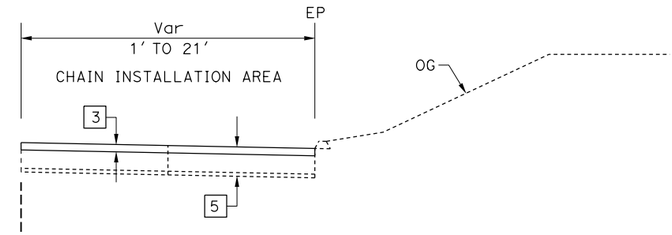
Sta 103+93 TO 126+29
Sta 128+50 TO 139+22
Sta 140+31 TO 300+01

WB ROUTE 80



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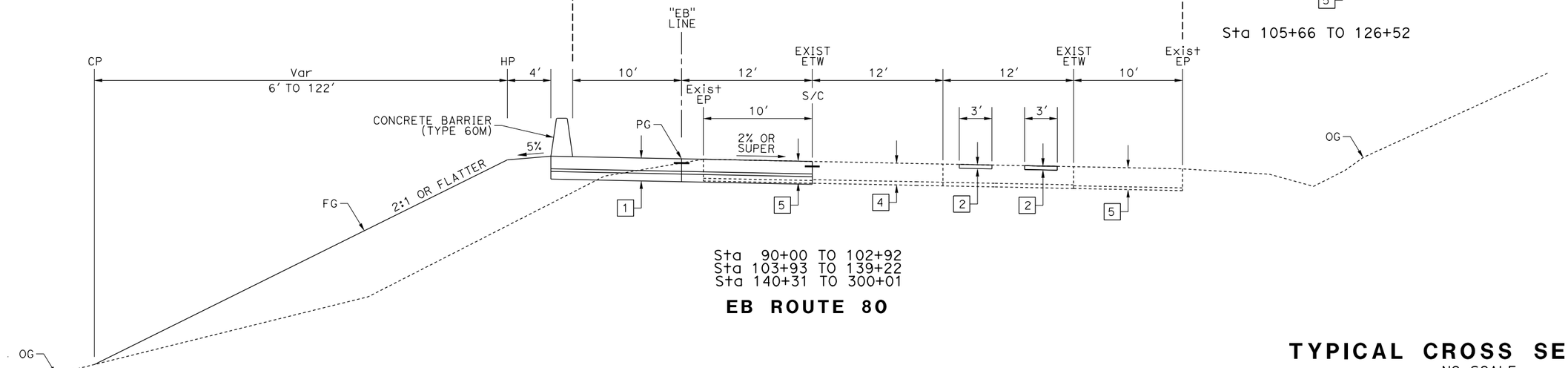

Sta 90+00 TO 102+92
Sta 103+93 TO 139+22
Sta 140+31 TO 300+01

EB ROUTE 80

TYPICAL CROSS SECTIONS

NO SCALE

X-1

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UNIT 0305
PROJECT NUMBER & PHASE 03170000430

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03	PLA NEV	80	68.3/69.7 0.0/R2.7		

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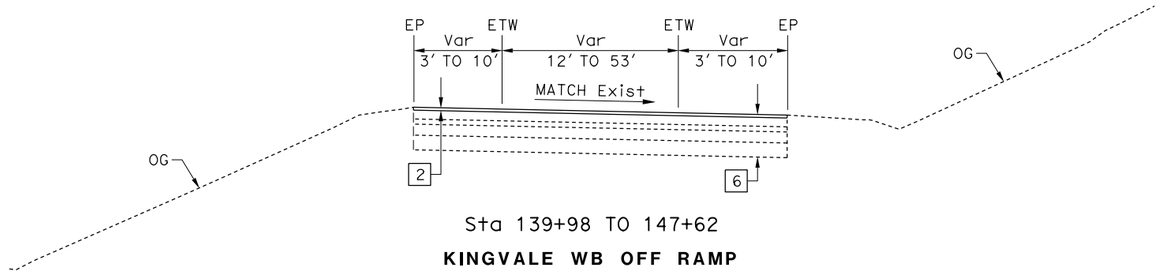
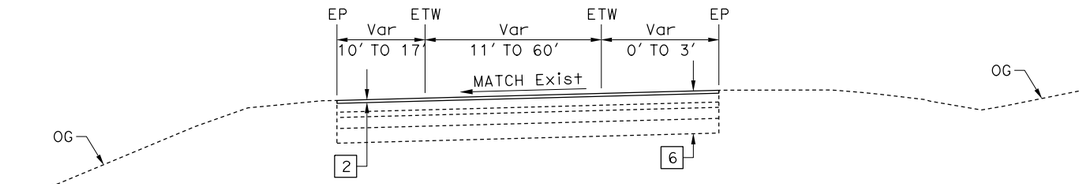


Sta 139+98 TO 147+62

KINGVALE WB OFF RAMP



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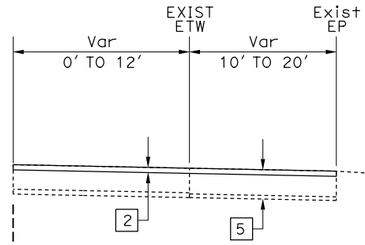
KINGVALE ON RAMP



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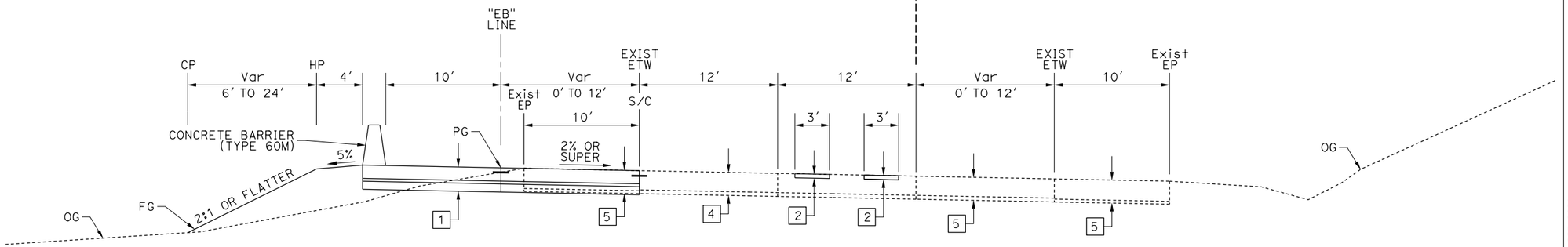

Sta 300+02 TO 309+75

EB ROUTE 80

TYPICAL CROSS SECTIONS

NO SCALE

X-2

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03	PLA NEV	80	68.3/69.7 0.0/R2.7		

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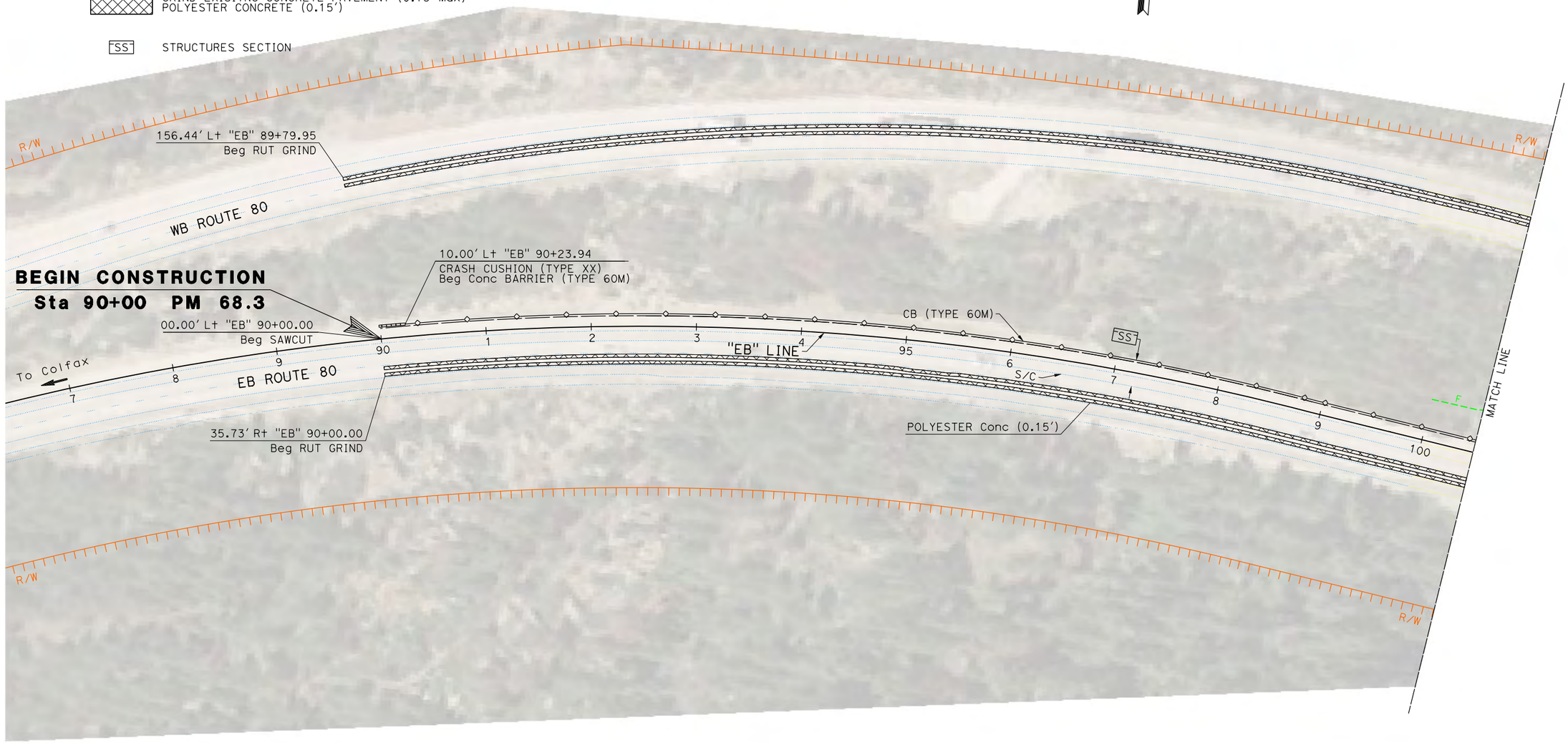
ABBREVIATIONS:

XX	XXXXXX
XXXXX	XXXXXXXXX

LEGEND

- GROVE EXISITNG CONCRETE PAVEMENT
- GRIND EXISITNG CONCRETE PAVEMENT (0.15' Max)
  POLYESTER CONCRETE (0.15')
- SS — STRUCTURES SECTION



LAYOUT

SCALE: 1" = 50'

L-1

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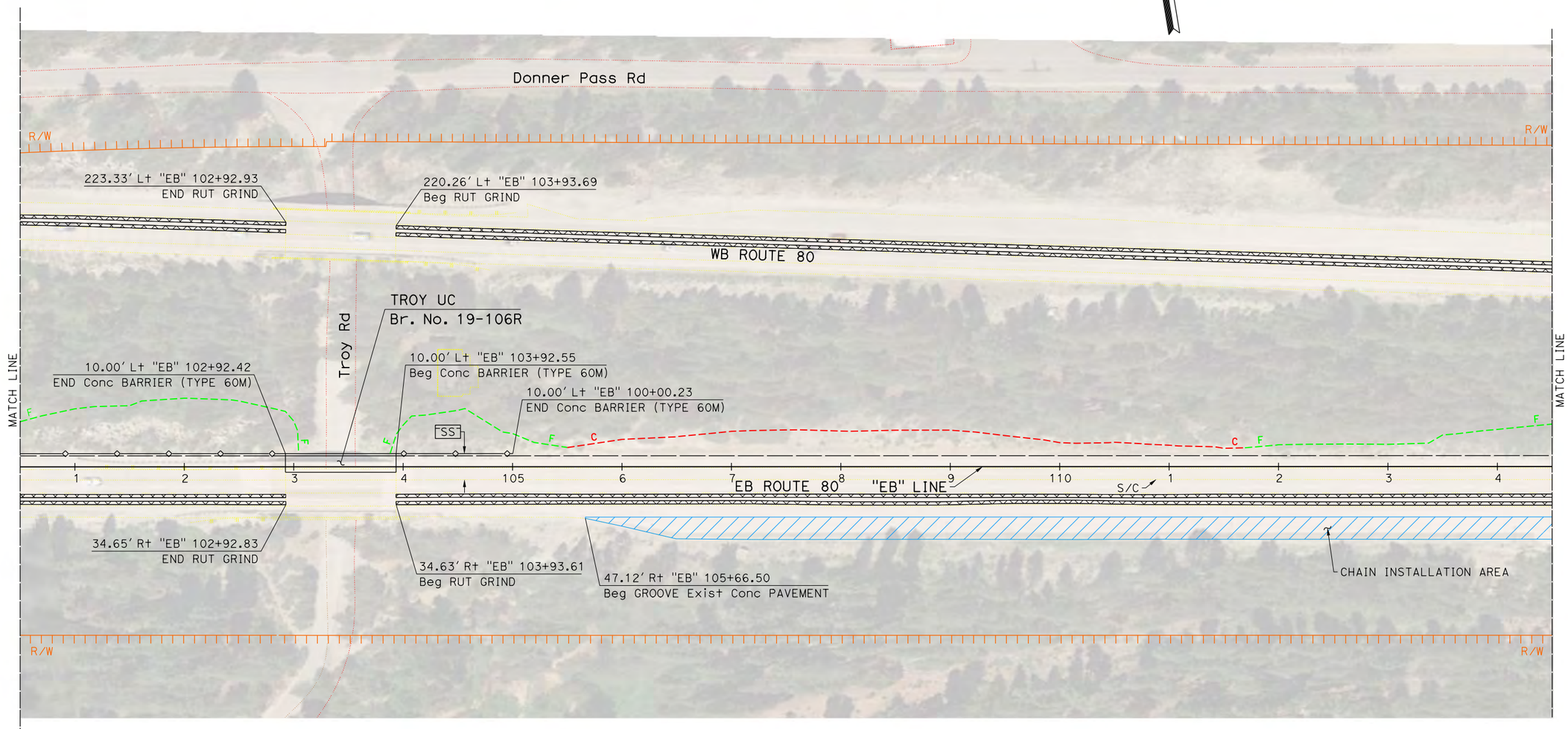

LAYOUT

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L-2

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DESIGN

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UNIT 0305

PROJECT NUMBER & PHASE 03170000430

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	PLA NEV	80	68.3/69.7 0.0/R2.7		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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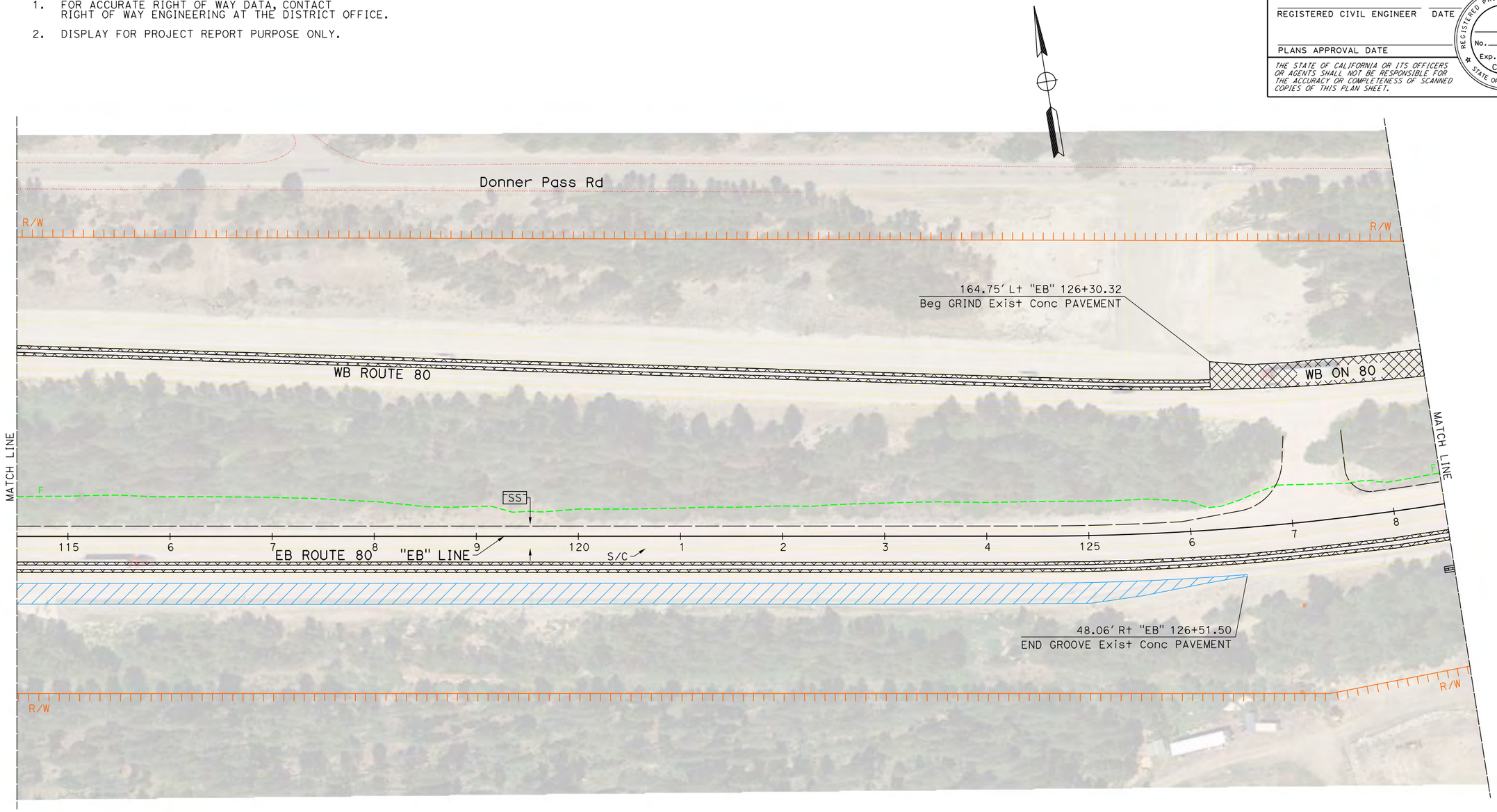

LAYOUT

SCALE: 1" = 50'

L-3

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DESIGN	SCOTT FOSTER	EDGAR ZEPEDA	DATE REVISED
		CHECKED BY	ALEX HUYNH

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03	PLA NEV	80	68.3/69.7 0.0/R2.7		

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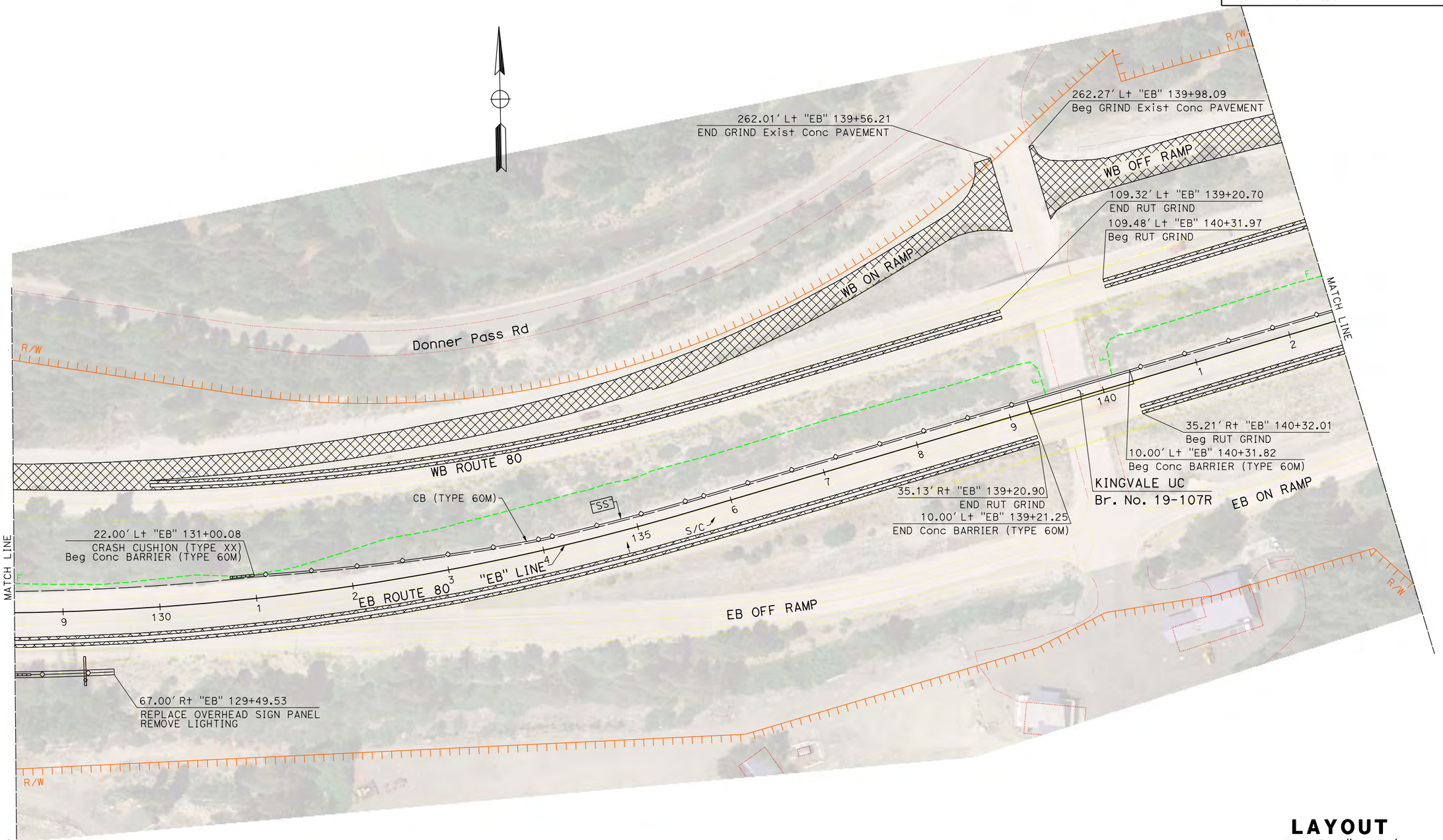

LAYOUT

SCALE: 1" = 50′

L-4

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CALCULATED-DESIGNED BY

EDGAR ZEPEDA

CHECKED BY

ALEX HUYNH

FUNCTIONAL SUPERVISOR

SCOTT FOSTER

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DATE PLOTTED => 20-OCT-2021

TIME PLOTTED => 14:26

BORDER LAST REVISED 7/2/2010

USERNAME => s152999

DGN FILE => 1H990_PR-04.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0305

PROJECT NUMBER & PHASE 03170000430

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	PLA NEV	80	68.3/69.7 0.0/R2.7		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

NOTES:

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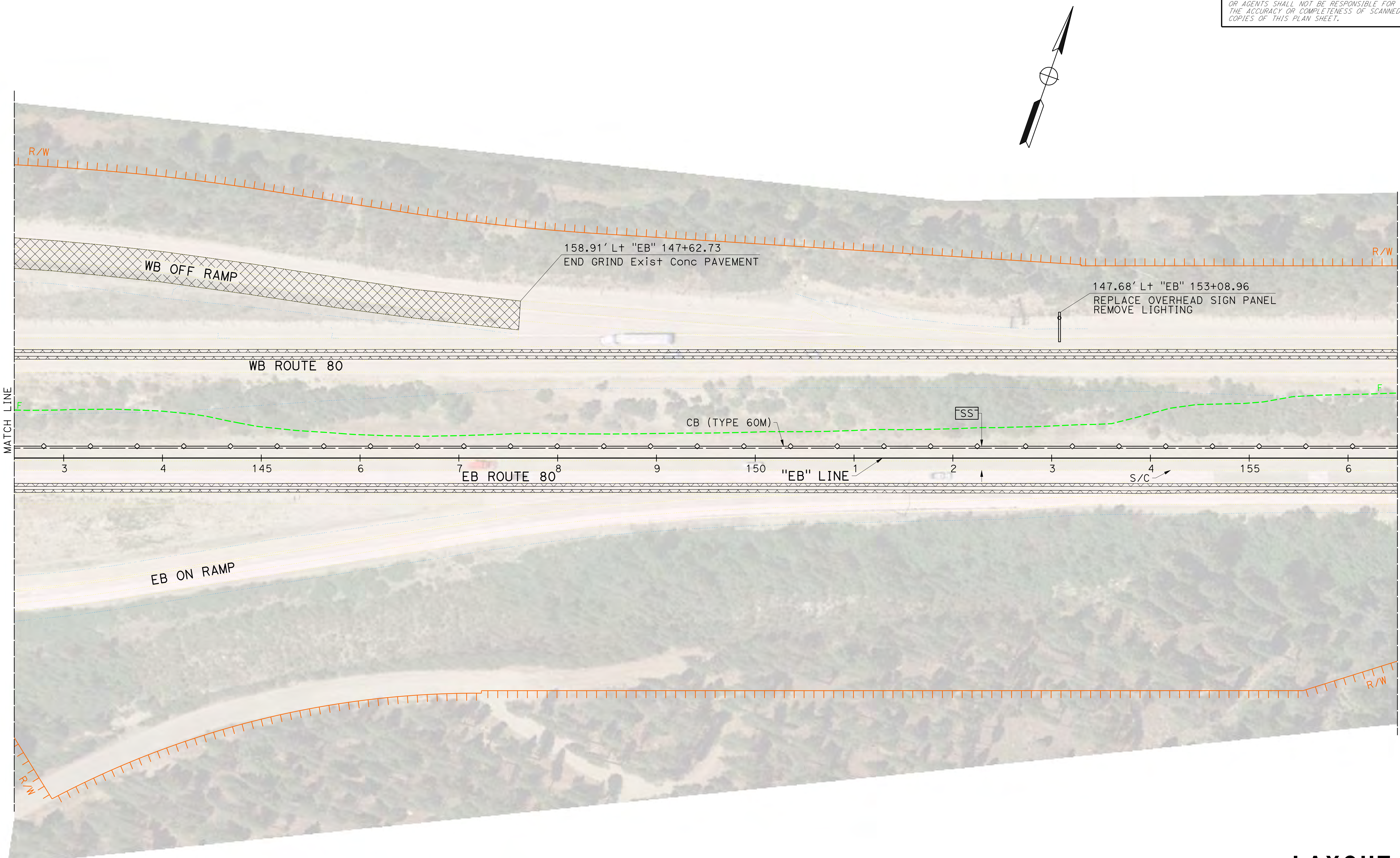
2. DISPLAY FOR PROJECT REPORT PURPOSE ONLY.



LAYOUT

SCALE: 1" = 50′

L-5

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
Caltrans

FUNCTIONAL SUPERVISOR: SCOTT FOSTER
CALCULATED-DESIGNED BY: EDGAR ZEPEDA
CHECKED BY: ALEX HUYNH
REVISED BY / DATE REVISED

FILE PATH => P:\proj5\03\1h990\design\200 Project Approval\240 Project Approval Process\242 Draft Project Report\Attachments\B_Typ-LO\1H990_PR-05.dgn

DATE PLOTTED => 20-OCT-2021
TIME PLOTTED => 14:26
LAST REVISION 00-00-00

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	PLA NEV	80	68.3/69.7 0.0/R2.7		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. — Exp. — CIVIL — STATE OF CALIFORNIA

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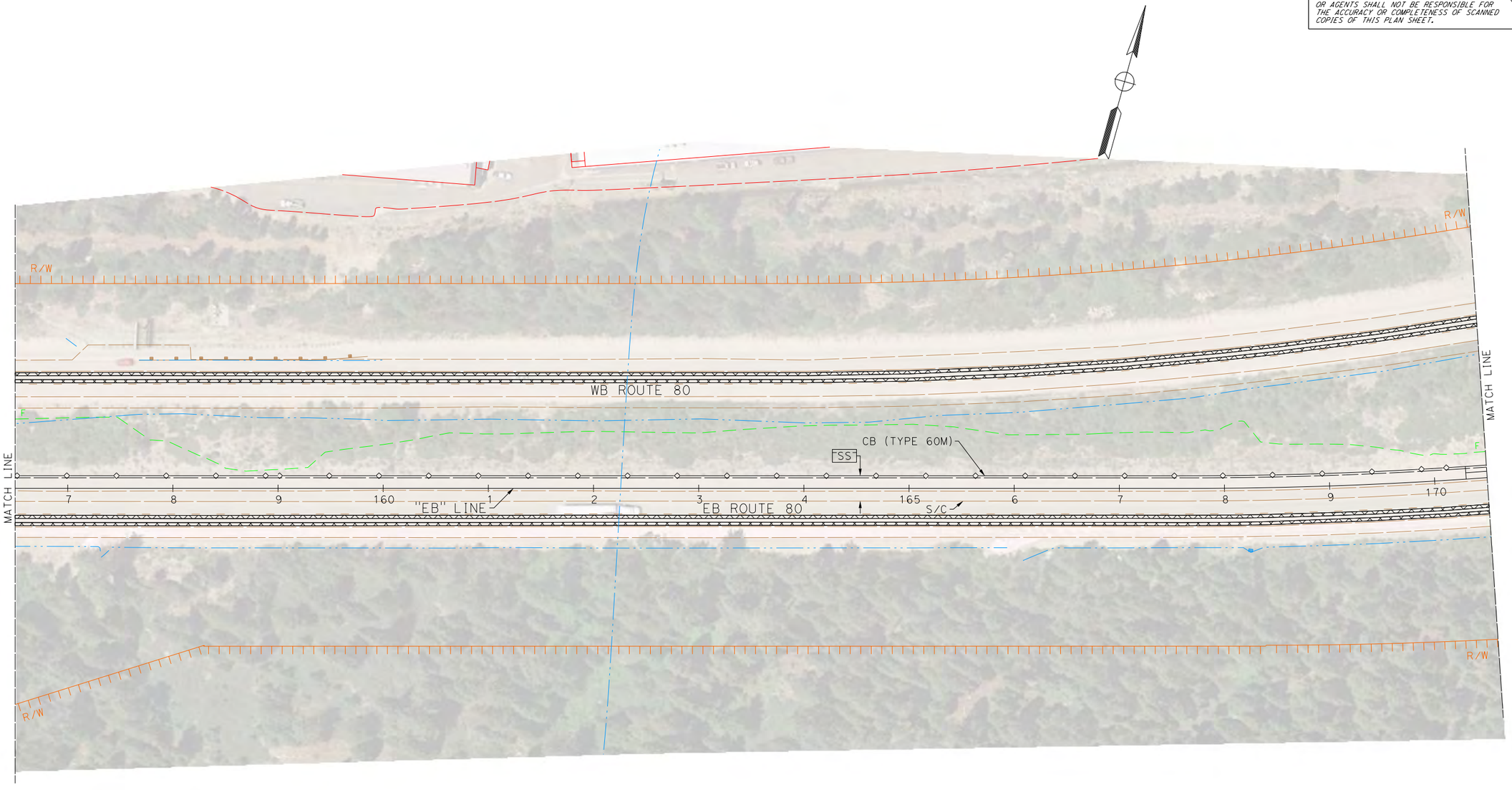

LAYOUT
SCALE: 1" = 50'

L-6

CALCULATED-DESIGNED BY: EDGAR ZEPEDA
CHECKED BY: ALEX HUYNH
REVISED BY | DATE REVISED
FUNCTIONAL SUPERVISOR: SCOTT FOSTER
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans®
DESIGN
FILE PATH => $REQUEST

LAST REVISION 00-00-00
DATE PLOTTED => $DATE
TIME PLOTTED => $TIME

BORDER LAST REVISED 7/2/2010 | USERNAME => $USER, DGN FILE => $REQUEST | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0305 | PROJECT NUMBER & PHASE 03170000430

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	PLA NEV	80	68.3/69.7 0.0/R2.7		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. — Exp. — CIVIL — STATE OF CALIFORNIA

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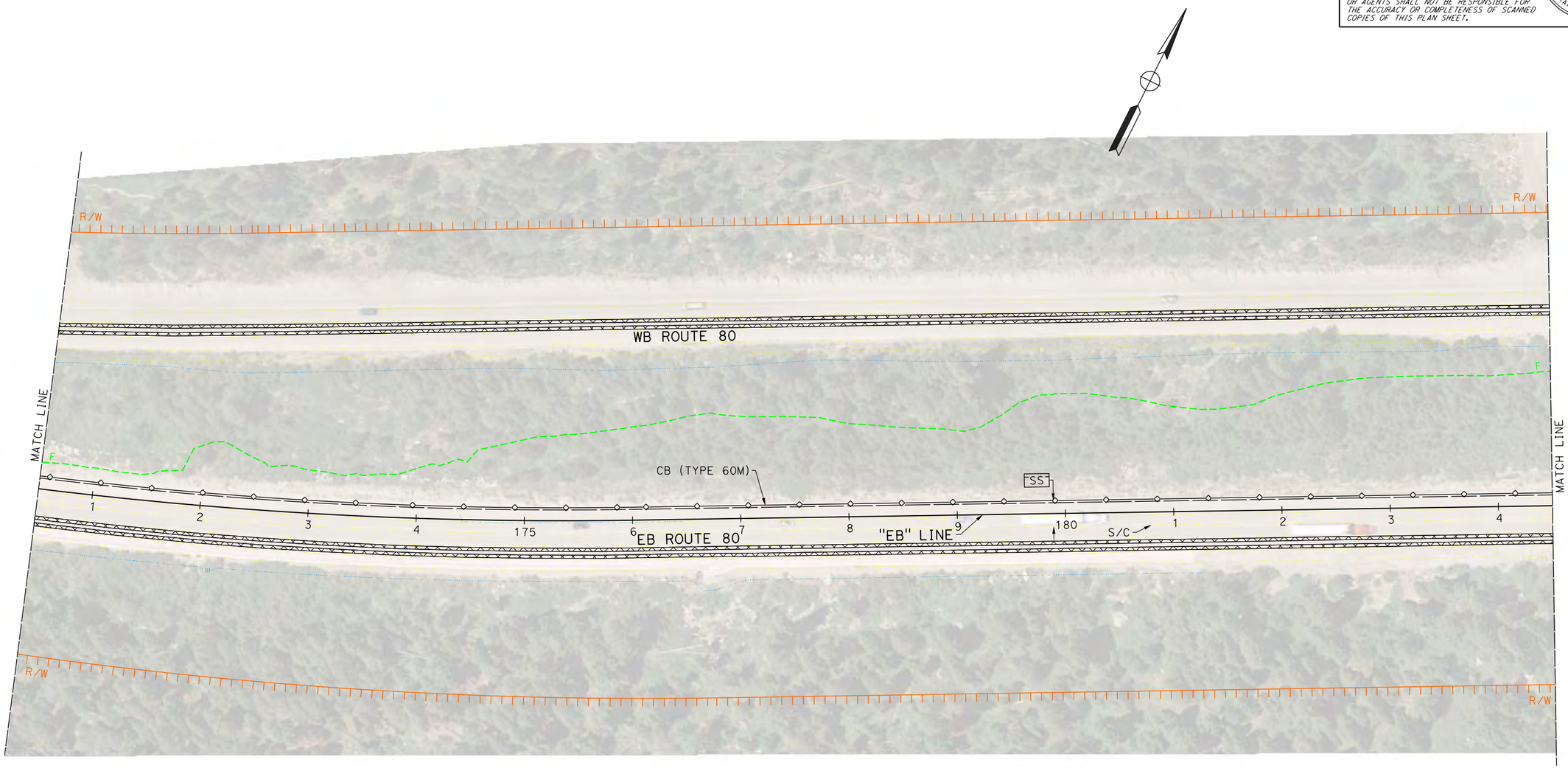

LAYOUT
SCALE: 1" = 50'

L-7

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN
FUNCTIONAL SUPERVISOR	SCOTT FOSTER
CALCULATED-DESIGNED BY	EDGAR ZEPEDA
CHECKED BY	ALEX HUYNH

REVISED BY	DATE REVISED

FILE PATH => P:\proj5\03\1h990\design\200 Project Approval Process\240 Project Approval\242 Draft Project Report\Attachments\B_Typ-L0\1H990_PR-07.dgn

LAST REVISION 00-00-00
DATE PLOTTED => 20-OCT-2021
TIME PLOTTED => 14:27

BORDER LAST REVISED 7/2/2010 | USERNAME => s152999 DGN FILE => 1H990_PR-07.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0305 | PROJECT NUMBER & PHASE 03170000430

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	PLA NEV	80	68.3/69.7 0.0/R2.7		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. — Exp. — CIVIL — STATE OF CALIFORNIA

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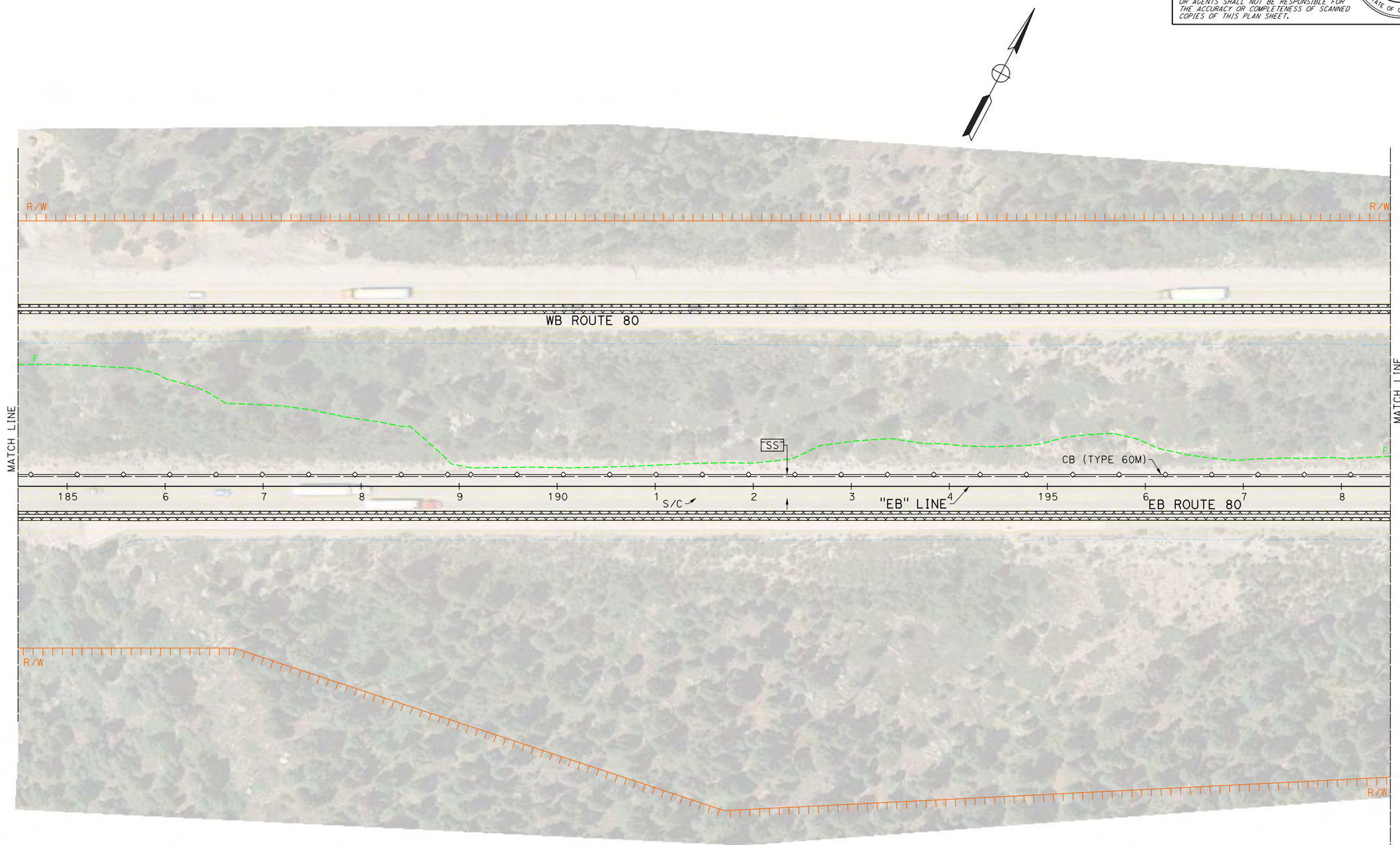

LAYOUT
SCALE: 1" = 50'

L-8

CALCULATED-DESIGNED BY	EDGAR ZEPEDA
CHECKED BY	ALEX HUYNH
FUNCTIONAL SUPERVISOR	SCOTT FOSTER
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN

REVISED BY	DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 20-OCT-2021
TIME PLOTTED => 14:27

FILE PATH => P:\proj5\03\1h990\design\200 Project Approval Process\240 Project Approval\242 Draft Project Report\Attachments\B_Typ-L0\1H990_PR-08.dgn

BORDER LAST REVISED 7/2/2010 | USERNAME => s152999 | DGN FILE => 1H990_PR-08.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0305 | PROJECT NUMBER & PHASE 03170000430

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	PLA NEV	80	68.3/69.7 0.0/R2.7		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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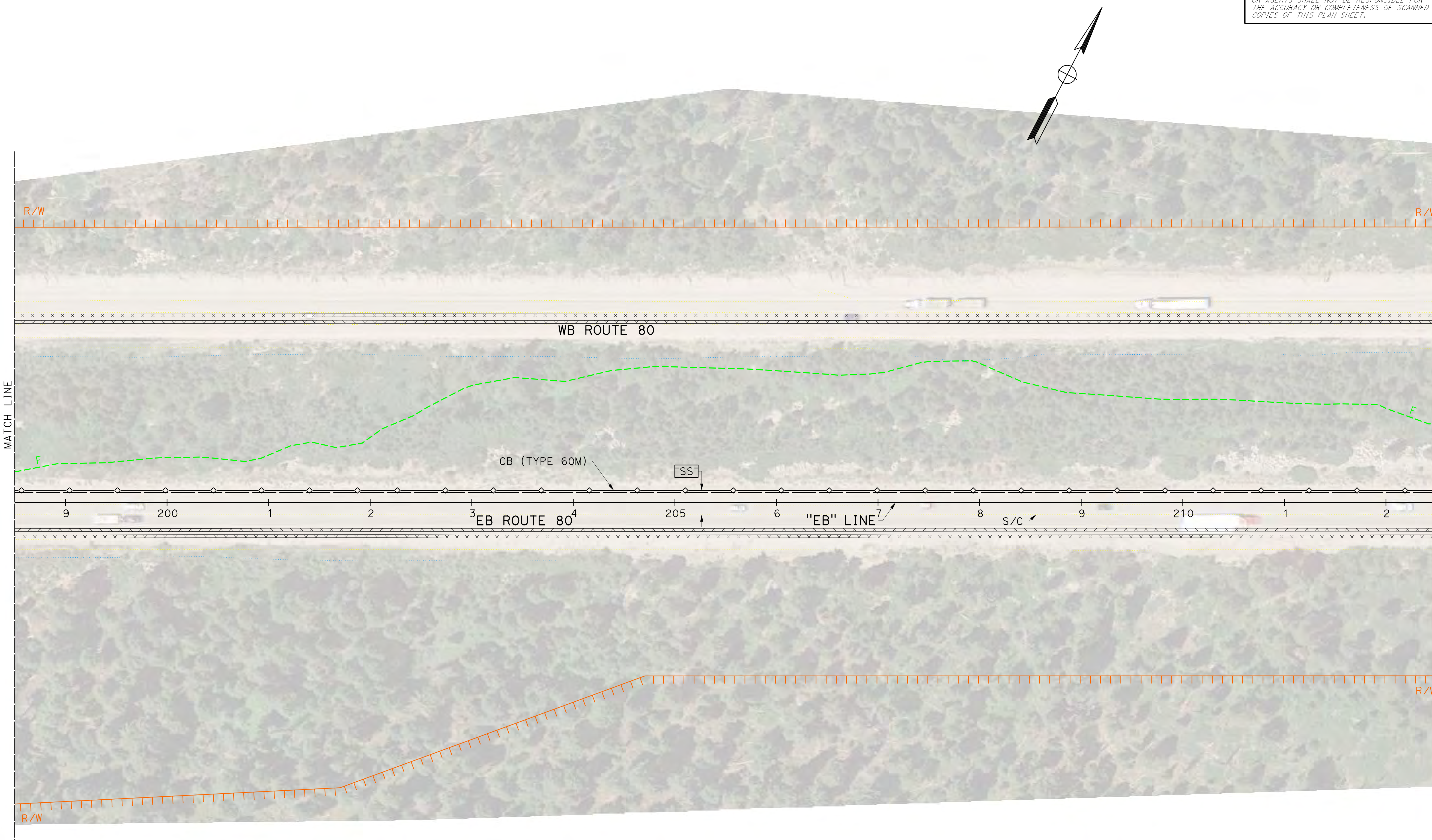

LAYOUT
SCALE: 1" = 50'

L-9

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DESIGN

FUNCTIONAL SUPERVISOR: SCOTT FOSTER
CALCULATED-DESIGNED BY: EDGAR ZEPEDA
CHECKED BY: ALEX HUYNH
REVISED BY
DATE REVISED

FILE PATH => P:\proj5\03\1h990\design\200 Project Approval Process\240 Project Approval\242 Draft Project Report\Attachments\B_Typ-LO\1H990_PR-09.dgn

DATE PLOTTED => 20-OCT-2021
TIME PLOTTED => 14:27
LAST REVISION 00-00-00

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	PLA NEV	80	68.3/69.7 0.0/R2.7		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. — Exp. — CIVIL — STATE OF CALIFORNIA

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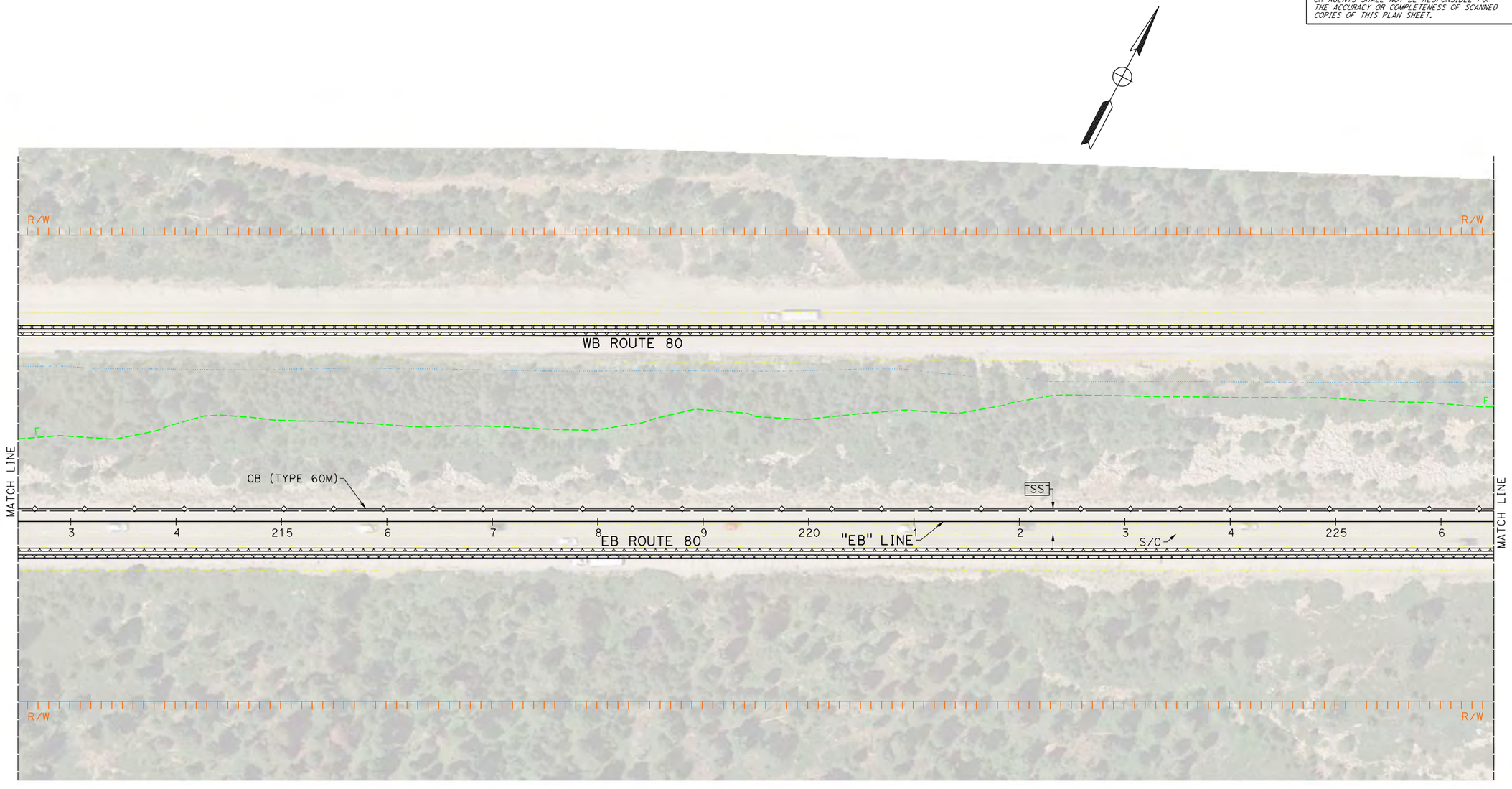

LAYOUT

SCALE: 1" = 50'

L-10

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN
FUNCTIONAL SUPERVISOR	SCOTT FOSTER
CALCULATED-DESIGNED BY	EDGAR ZEPEDA
CHECKED BY	ALEX HUYNH
REVISED BY	
DATE REVISED	

FILE PATH => P:\proj5\03\1h990\design\200 Project Approval Process\240 Project Approval\242 Draft Project Report\Attachments\B_Typ-L0\1H990_PR-10.dgn

LAST REVISION 00-00-00 | DATE PLOTTED => 20-OCT-2021 | TIME PLOTTED => 14:27

BORDER LAST REVISED 7/2/2010 | USERNAME => s152999 | DGN FILE => 1H990_PR-10.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0305 | PROJECT NUMBER & PHASE 03170000430

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	PLA NEV	80	68.3/69.7 0.0/R2.7		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. — Exp. — CIVIL — STATE OF CALIFORNIA

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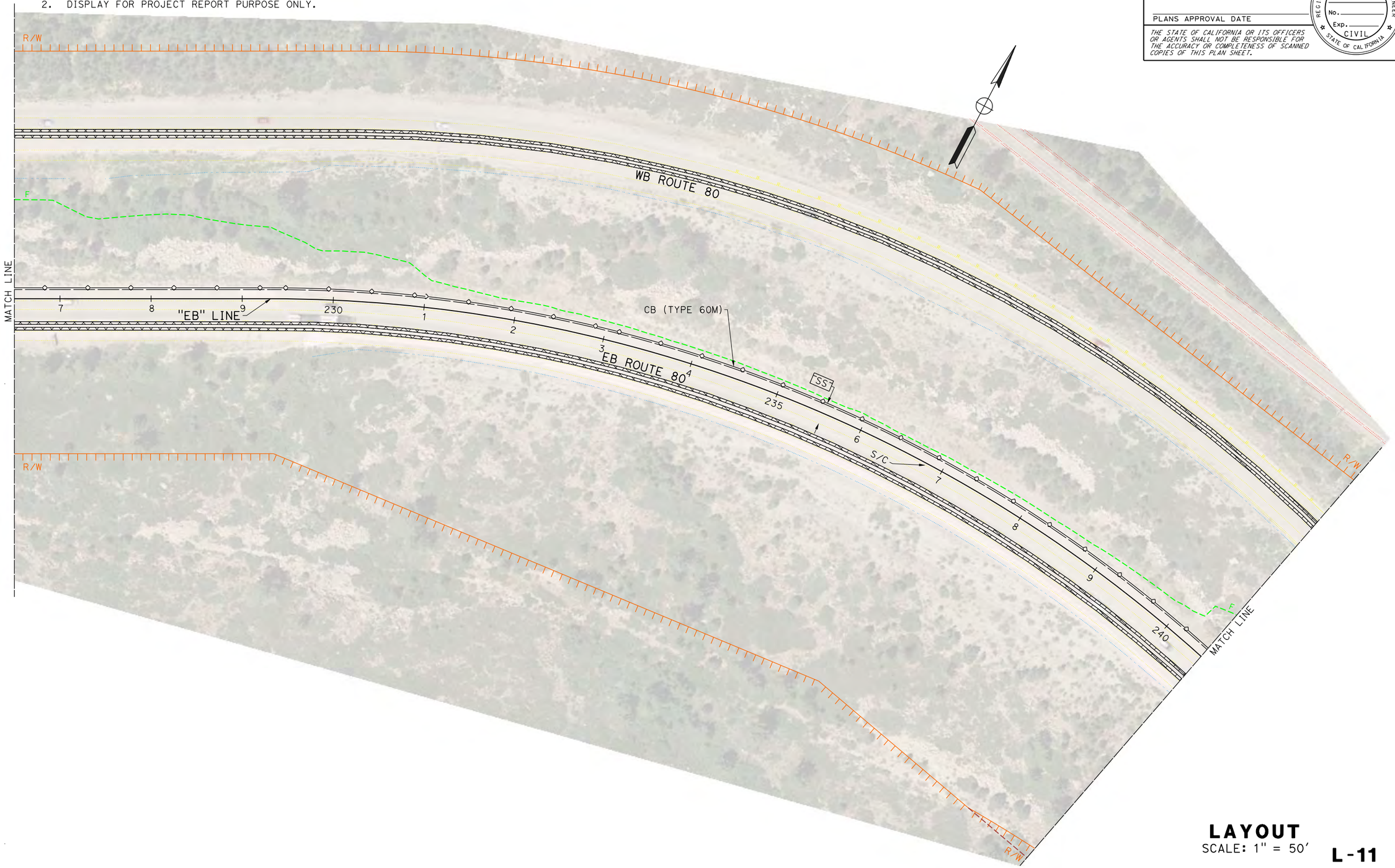
2. DISPLAY FOR PROJECT REPORT PURPOSE ONLY.



LAYOUT
SCALE: 1" = 50'

L-11

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CALCULATED-DESIGNED BY	EDGAR ZEPEDA	REVISED BY	
Caltrans® **DESIGN**	CHECKED BY	ALEX HUYNH	DATE REVISED	
	FUNCTIONAL SUPERVISOR	SCOTT FOSTER		

LAST REVISION 00-00-00
DATE PLOTTED => 20-OCT-2021
TIME PLOTTED => 14:27

FILE PATH => P:\proj5\03\1h990\design\200 Project Approval Process\240 Project Approval\242 Draft Project Report\Attachments\B_Typ-L0\1H990_PR-11.dgn

BORDER LAST REVISED 7/2/2010 | USERNAME => s152999 DGN FILE => 1H990_PR-11.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0305 | PROJECT NUMBER & PHASE 03170000430

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	PLA NEV	80	68.3/69.7 0.0/R2.7		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. — Exp. — CIVIL — STATE OF CALIFORNIA

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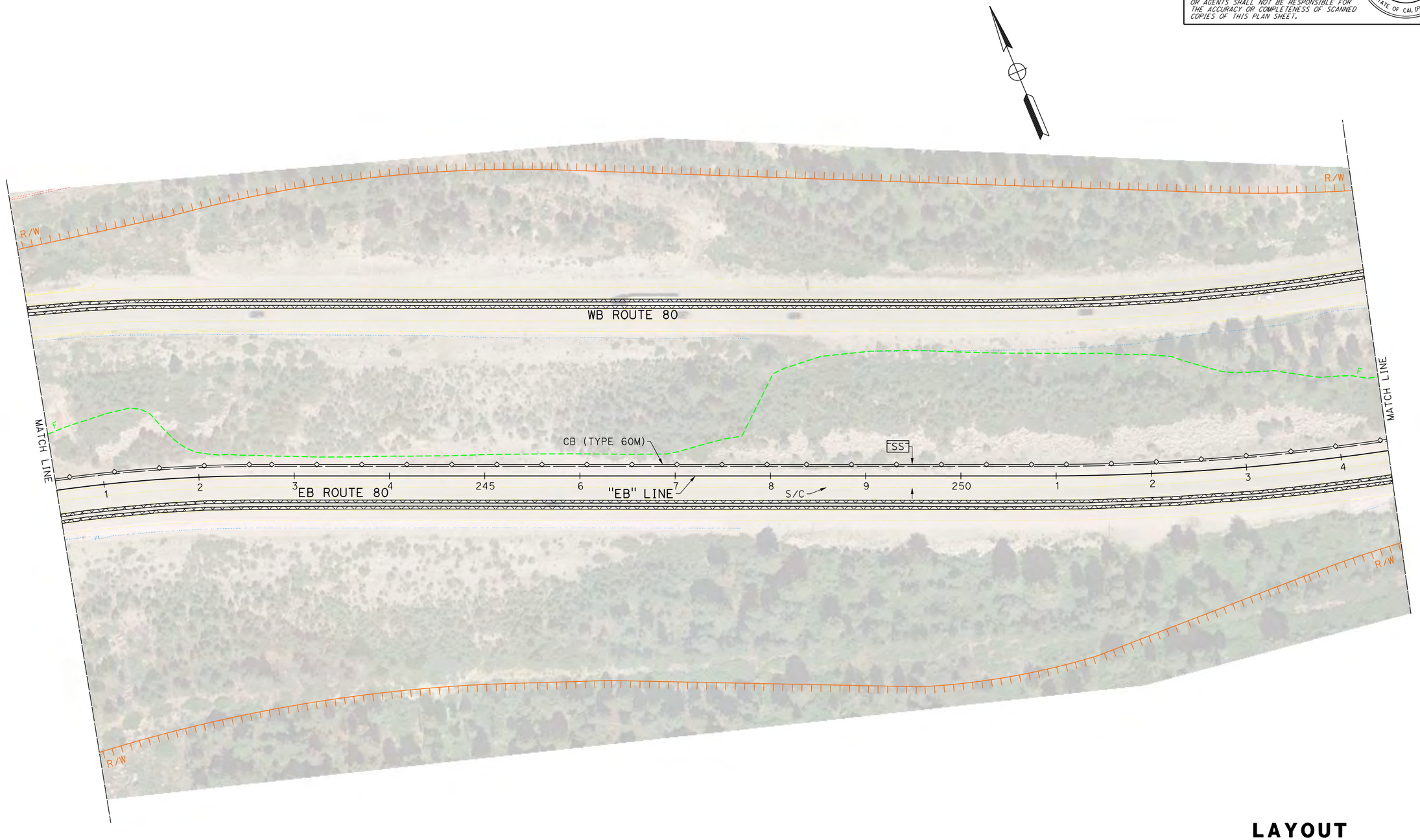

LAYOUT
SCALE: 1" = 50'

L-12

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN
FUNCTIONAL SUPERVISOR	SCOTT FOSTER
CALCULATED-DESIGNED BY	EDGAR ZEPEDA
CHECKED BY	ALEX HUYNH
REVISED BY	
DATE REVISED	

LAST REVISION 00-00-00
DATE PLOTTED => 20-OCT-2021
TIME PLOTTED => 14:27

FILE PATH => P:\proj5\03\1h990\design\200 Project Approval Process\240 Project Approval\242 Draft Project Report\Attachments\B_Typ-L0\1H990_PR-12.dgn

BORDER LAST REVISED 7/2/2010 | USERNAME => s152999 DGN FILE => 1H990_PR-12.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0305 | PROJECT NUMBER & PHASE 03170000430

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	PLA NEV	80	68.3/69.7 0.0/R2.7		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. — Exp. — CIVIL — STATE OF CALIFORNIA

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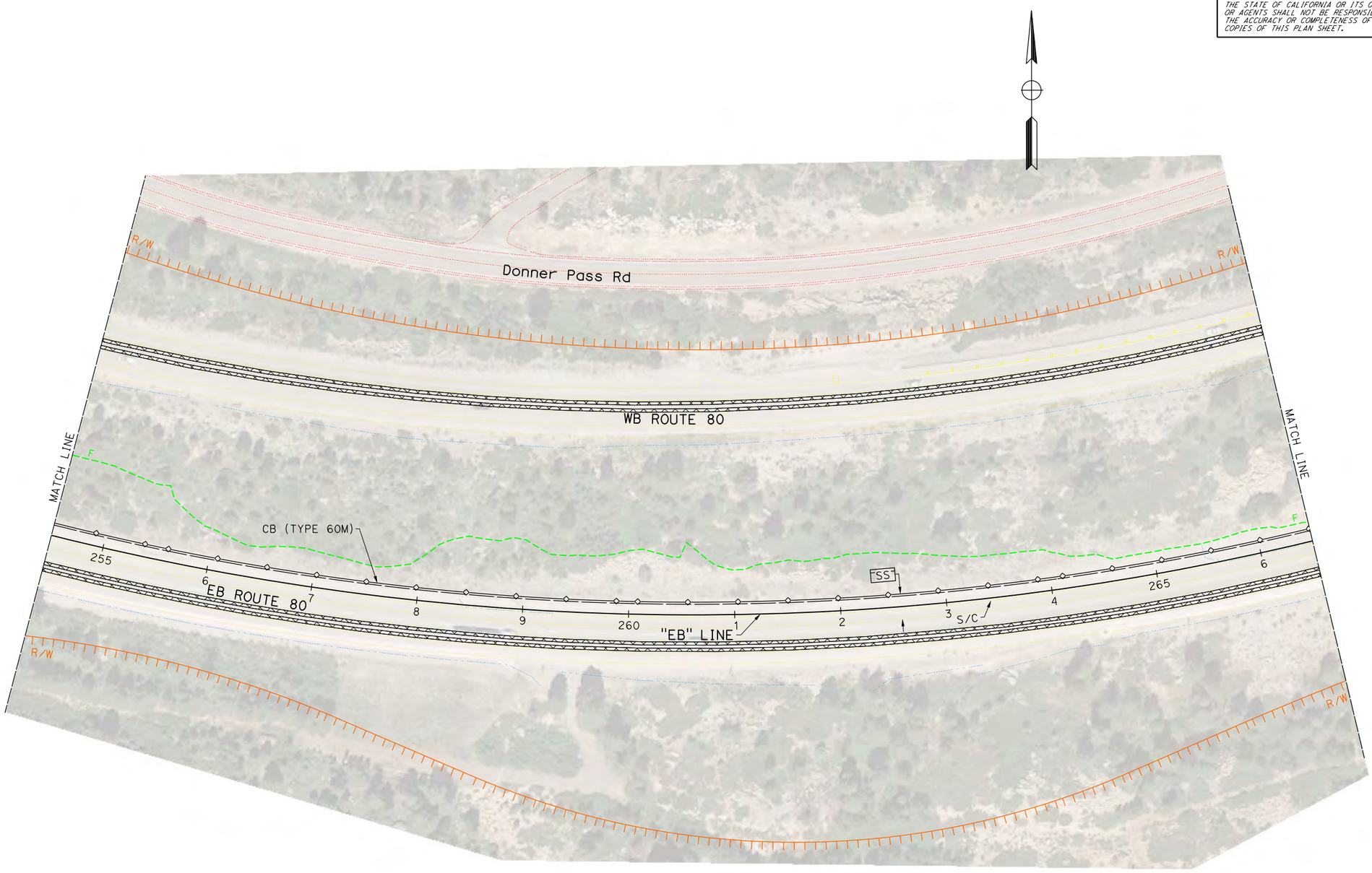

LAYOUT

SCALE: 1" = 50'

L-13

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION — DESIGN

FUNCTIONAL SUPERVISOR: SCOTT FOSTER

CALCULATED-DESIGNED BY: EDGAR ZEPEDA

CHECKED BY: ALEX HUYNH

REVISED BY	DATE REVISED

LAST REVISION 00-00-00 — DATE PLOTTED => 20-OCT-2021 — TIME PLOTTED => 14:27

FILE PATH => P:\proj5\03\1h990\design\200 Project Approval Process\240 Project Approval\242 Draft Project Report\Attachments\B_Typ-L0\1H990_PR-13.dgn

BORDER LAST REVISED 7/2/2010 | USERNAME => s152999 | DGN FILE => 1H990_PR-13.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0305 | PROJECT NUMBER & PHASE 03170000430

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	PLA NEV	80	68.3/69.7 0.0/R2.7		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. — Exp. — CIVIL — STATE OF CALIFORNIA

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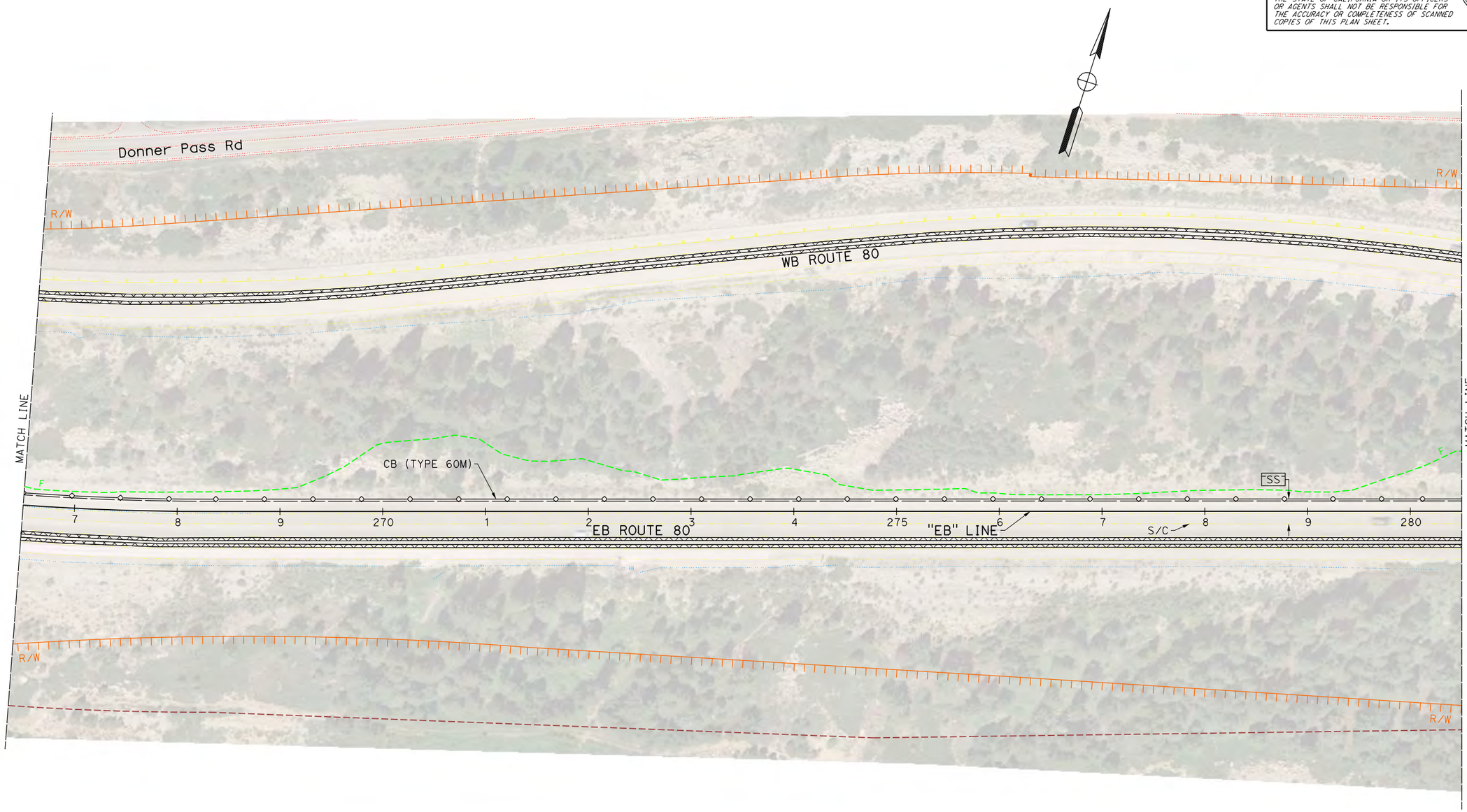

LAYOUT

SCALE: 1" = 50'

L-14

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR: SCOTT FOSTER
CALCULATED-DESIGNED BY: EDGAR ZEPEDA
CHECKED BY: ALEX HUYNH
REVISED BY
DATE REVISED

FILE PATH => P:\proj5\03\1h990\design\200 Project Approval Process\240 Project Approval\242 Draft Project Report\Attachments\B_Typ-L0\1H990_PR-14.dgn

LAST REVISION 00-00-00
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TIME PLOTTED => 14:28

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	PLA NEV	80	68.3/69.7 0.0/R2.7		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. — Exp. — CIVIL — STATE OF CALIFORNIA

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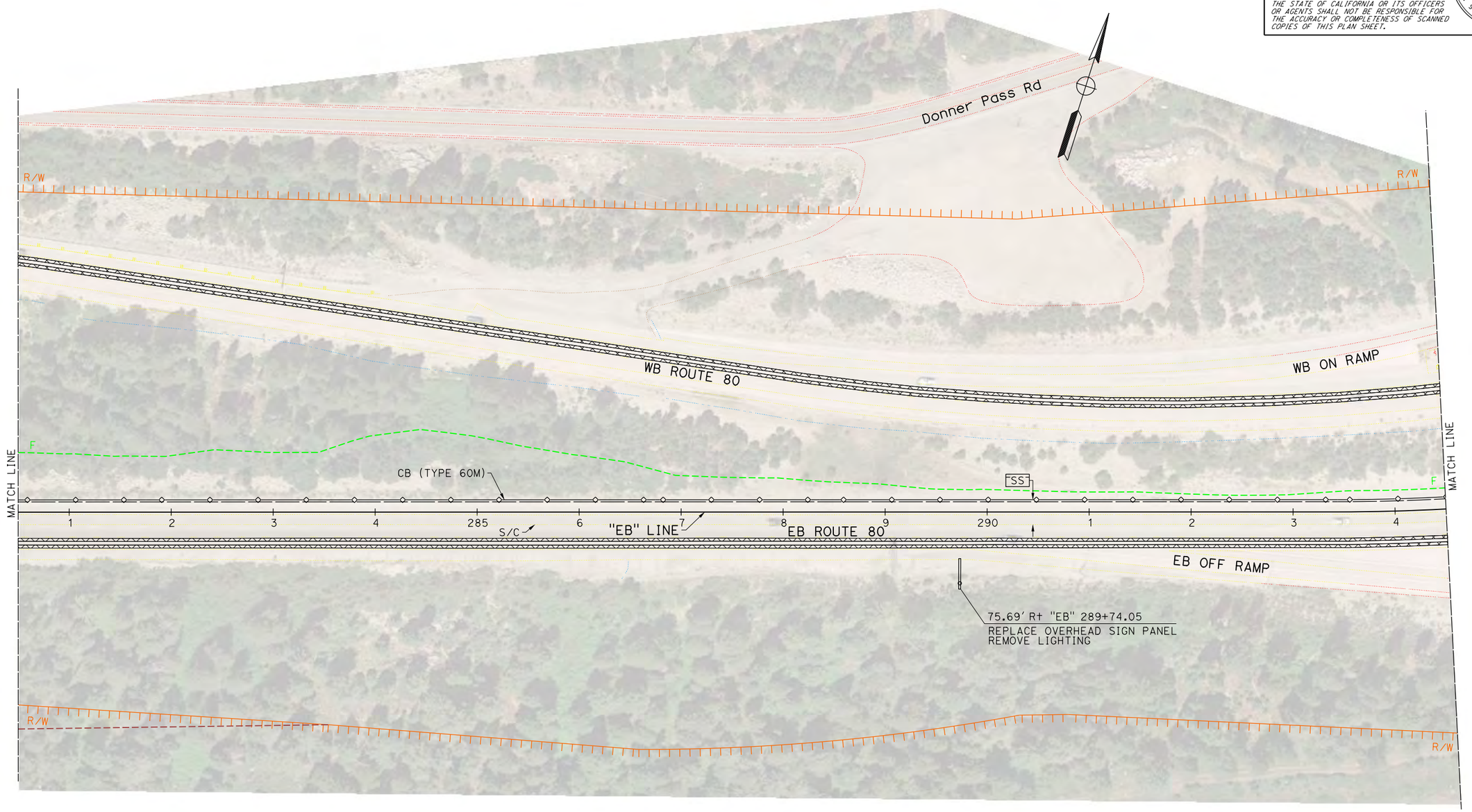

LAYOUT

SCALE: 1" = 50'

L-15

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY
DESIGN	SCOTT FOSTER	EDGAR ZEPEDA
		CHECKED BY
		ALEX HUYNH

REVISED BY	DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 20-OCT-2021
TIME PLOTTED => 14:28

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BORDER LAST REVISED 7/2/2010 | USERNAME => s152999 | DGN FILE => 1H990_PR-15.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0305 | PROJECT NUMBER & PHASE 03170000430

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	PLA NEV	80	68.3/69.7 0.0/R2.7		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. — Exp. — CIVIL — STATE OF CALIFORNIA

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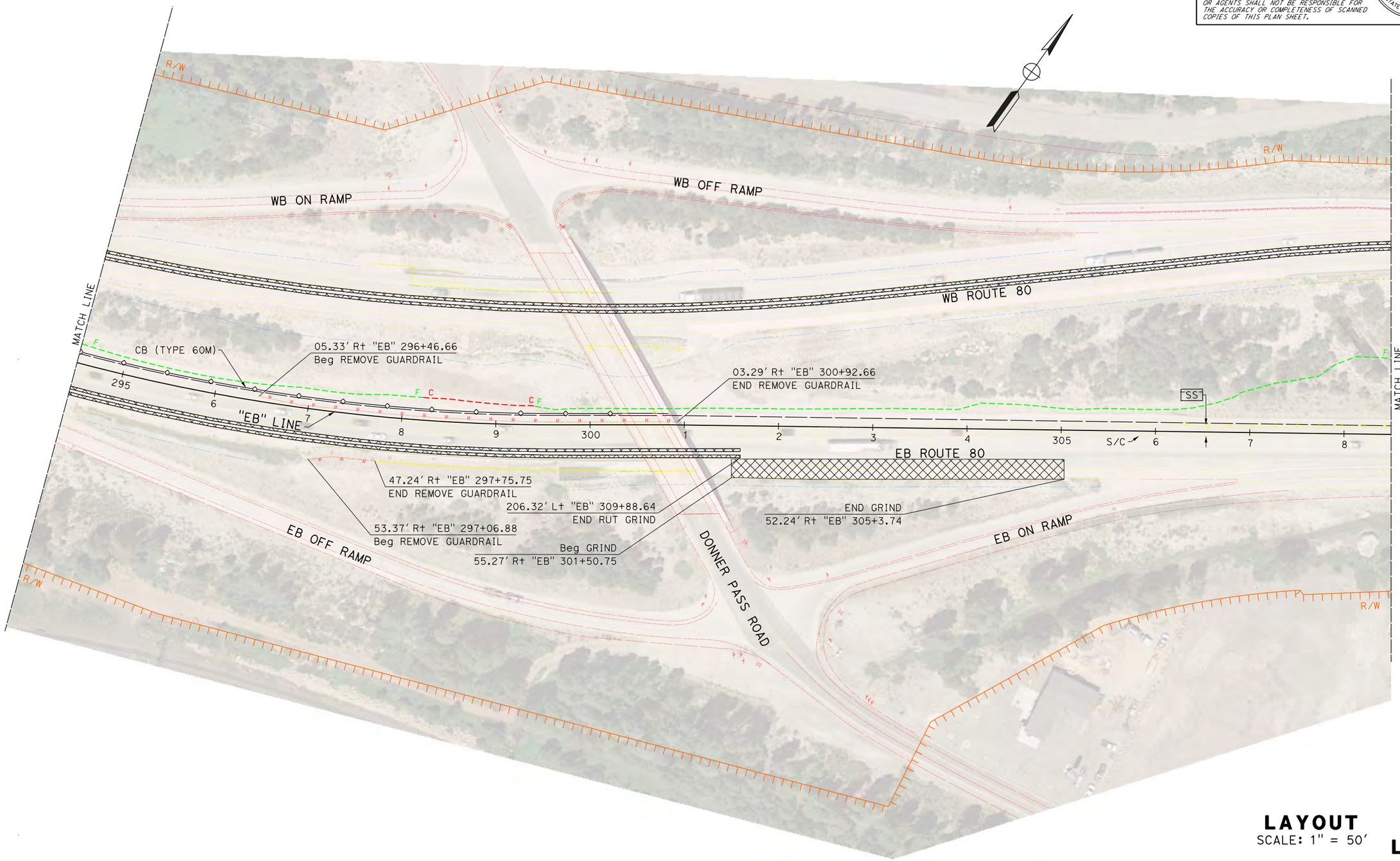

LAYOUT

SCALE: 1" = 50'

L-16

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY: EDGAR ZEPEDA
CHECKED BY: ALEX HUYNH
FUNCTIONAL SUPERVISOR: SCOTT FOSTER

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® DESIGN

FILE PATH => P:\proj5\03\1h990\design\200 Project Approval Process\240 Project Approval\242 Draft Project Report\Attachments\B_Typ-L0\1H990_PR-16.dgn

LAST REVISION 00-00-00
DATE PLOTTED => 20-OCT-2021
TIME PLOTTED => 14:28

BORDER LAST REVISED 7/2/2010

USERNAME => s152999
DGN FILE => 1H990_PR-16.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0305

PROJECT NUMBER & PHASE 03170000430

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	PLA NEV	80	68.3/69.7 0.0/R2.7		

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PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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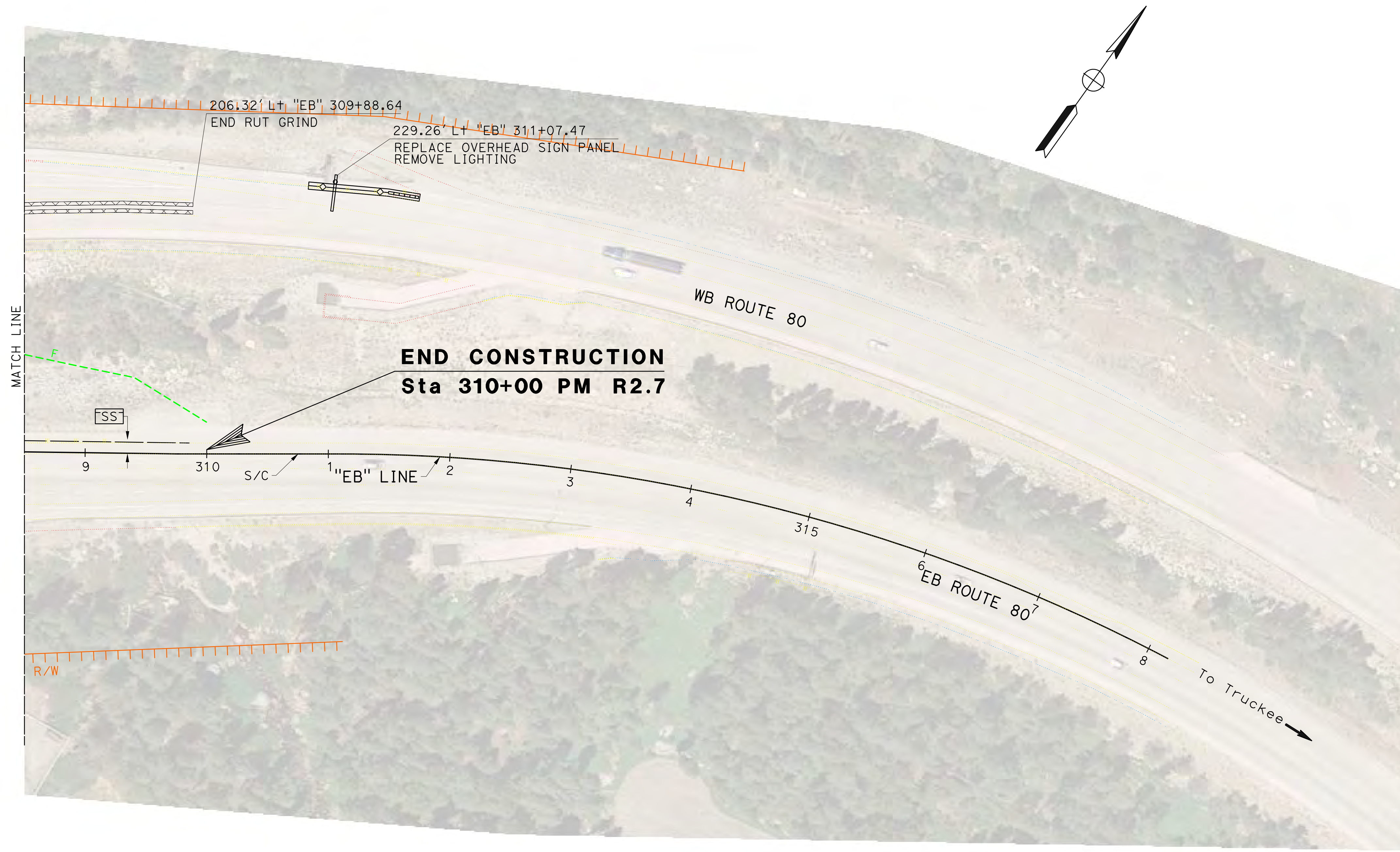


STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

DESIGN

FUNCTIONAL SUPERVISOR: SCOTT FOSTER

CALCULATED-DESIGNED BY: EDGAR ZEPEDA

CHECKED BY: ALEX HUYNH

REVISED BY

DATE REVISED

FILE PATH => P:\proj5\03\1h990\design\200 Project Approval Process\240 Project Approval\242 Draft Project Report\Attachments\B_Typ-LO\1H990_PR-17.dgn

LAYOUT

SCALE: 1" = 50'

L-17

DATE PLOTTED => 20-OCT-2021
TIME PLOTTED => 14:28

LAST REVISION 00-00-00

BORDER LAST REVISED 7/2/2010

USERNAME => s152999
DGN FILE => 1H990_PR-17.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

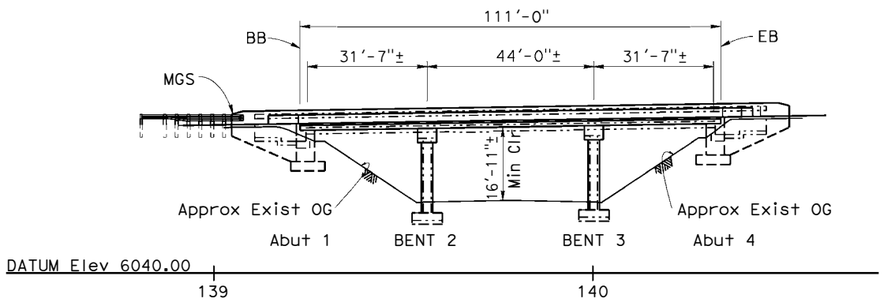
UNIT 0305

PROJECT NUMBER & PHASE 03170000430

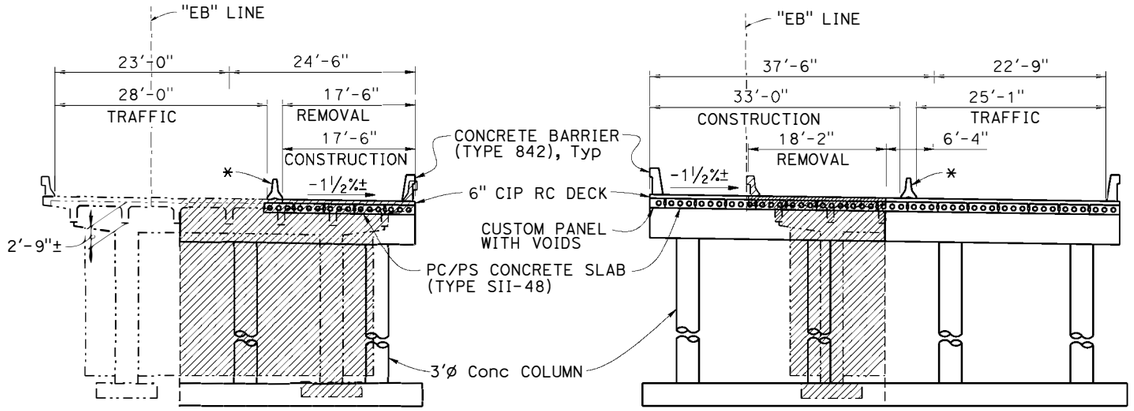
ATTACHMENT C
STRUCTURE
GENERAL PLAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - DIVISION OF ENGINEERING SERVICES

Dist	COUNTY	ROUTE	POST MILE
03	PLA	80	69.23



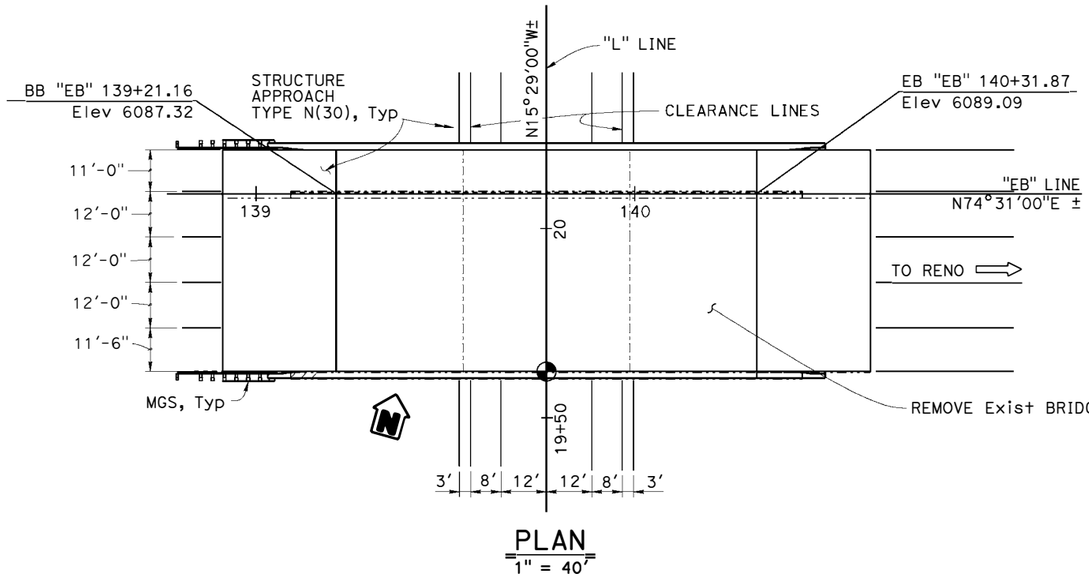
MIRRORED ELEVATION
1" = 40'-0"



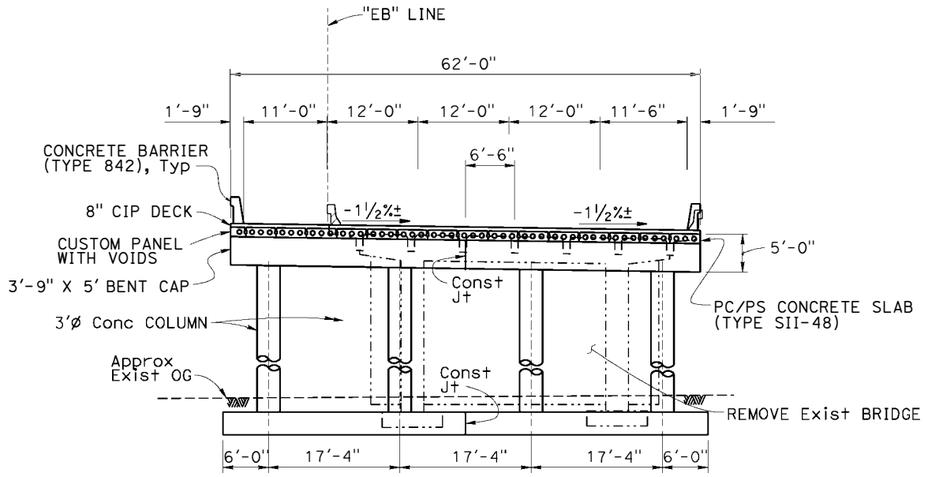
STAGE 1
1" = 20"

* Temp RAILING (TYPE K), Typ
SEE ROADWAY PLANS

STAGE 2
1" = 20"



PLAN
1" = 40'



TYPICAL SECTION
1" = 20'

TRAFFIC NOTES

VEHICULAR TRAFFIC:

1. _-_ New alignment. No traffic at the site.
2. _-_ Traffic will be detoured away from the site.
3. _-_ Traffic will be carried on the structure.
   Stage construction _X_ will _-_ will not be required.
4. _-_ Traffic will pass under the structure on
   Kingvale Road (Name of St or Hwy)
   A. _-_ No falsework allowed over traffic.
   B. _-_ Falsework opening(s) required:

		Temp Vertical Clearance	Width of Traffic Opening
_-_	Bound	-	-
_-_	Bound	-	-
_X_	Two-Way	15'-0"	-

   C. _X_ Temporary traffic lane reduction needed for footing excavation.

LEGEND:

- Existing Structure
- Limits of Bridge Removal (Portion)
- Point of Minimum Vertical Clearance

ASSUMPTIONS:

1. Existing profile and cross slope to be maintained.
2. Closure of freeway may be required during construction.
3. Potential for lateral spreading and liquefaction is assumed to be low. Further evaluation is required.
4. Potential for corrosion is unknown at the time of APS.

DESIGNED BY: M. Ward	DATE: 04-22-21	STRUCTURE DESIGN	PLANNING STUDY
DRAWN BY: Y. Tang	DATE: 04-22-21	DESIGN BRANCH 6	KINGVALE UC (Rt) (REPLACE)
CHECKED BY: X	DATE: X		UNIT: 3585 / BRIDGE No.: 19-0107R
APPROVED: X	DATE: X		PROJECT EA: 03-1H990 / PROJECT No. & PHASE: 0317000043

STRUCTURES DESIGN ADVANCE PLANNING STUDY SHEET (ENGLISH) (REVISION 1/11/2019)
DATE PLOTTED => 30-JUL-2021 TIME PLOTTED => 08:27
FILE => 19-0107r-aps-alt5.dgn USERNAME => s152337

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - DIVISION OF ENGINEERING SERVICES

Dist	COUNTY	ROUTE	POST MILE
03	PLA	80	X

TRAFFIC NOTES

VEHICULAR TRAFFIC:

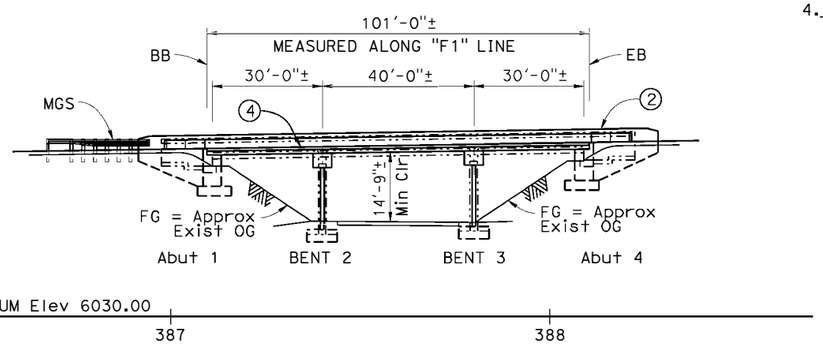
1. _-_ New alignment. No traffic at the site.
2. _-_ Traffic will be detoured away from the site.
3. _-_ Traffic will be carried on the structure.
   Stage construction _X_ will _-_ will not be required.
4. _-_ Traffic will pass under the structure on
   Troy Road (Name of St or Hwy)
   A. _-_ No falsework allowed over traffic.
   B. _-_ Falsework opening(s) required:

		Temp Vertical Clearance	Width of Traffic Opening
_-_	Bound	-	-
_-_	Bound	-	-
_X_	Two-Way	14'-3"	-

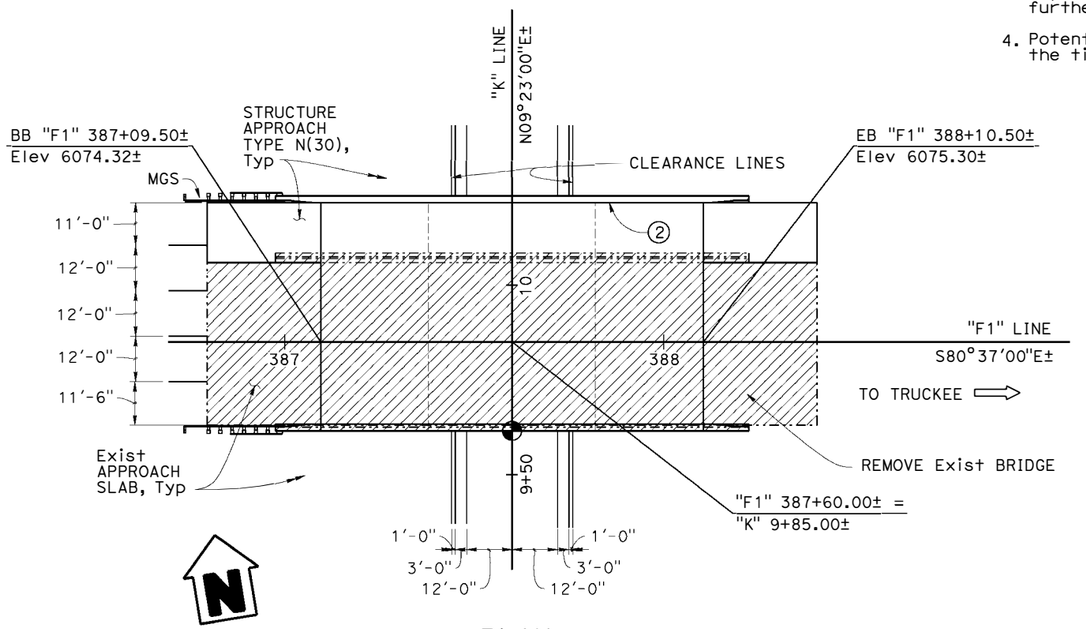
   C. _X_ Temporary traffic lane reduction needed for footing excavation.

ASSUMPTIONS:

1. Existing profile and cross slope to be maintained.
2. Closure of Freeway may be required during construction.
3. Potential for lateral spreading and liquefaction is assumed to be low. further evaluation required.
4. Potential for corrosion is unknown at the time of APS.



MIRRORED ELEVATION
1" = 20'



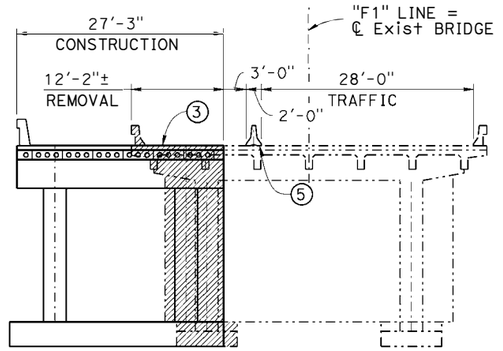
PLAN
1" = 20'

LEGEND:

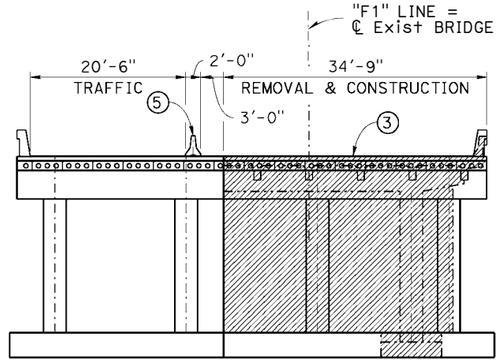
- Existing Structure
- Limits of Bridge Removal (Portion)
- Point of Minimum Vertical Clearance

NOTES:

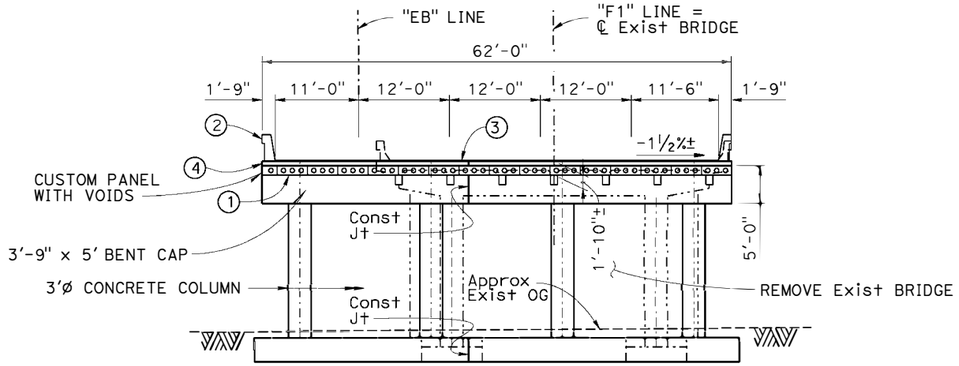
1. PC/PS concrete slab (Type SII-48)
2. New concrete barrier (Type 842)
3. 1" polyester concrete overlay
4. New 7" CIP RC deck
5. Temporary railing (Type K), See ROADWAY PLANS



STAGE 1



STAGE 2



TYPICAL SECTION
1" = 10'-0"

DESIGNED BY HILARIO TUAZON	DATE 10/07/21	BRIDGE DESIGN BRANCH 6	PLANNING STUDY
DRAWN BY SERGII SHAMBRA	DATE 10/12/21		TROY RD UC (RT WIDEN)
CHECKED BY X	DATE X		UNIT: 3589 / BRIDGE No.: 19-0106R
APPROVED DANNY MOSSMAN	DATE X		PROJECT EA: 03-1H990 / PROJECT No. & PHASE: 0317000043O

STRUCTURES DESIGN ADVANCE PLANNING STUDY SHEET (ENGLISH) (REVISION 3/10/2021)
DATE PLOTTED => 28-OCT-2021 TIME PLOTTED => 11:11
FILE => 19-0106r-aps-alt4.dgn USERNAME => s149463

ATTACHMENT D
COST ESTIMATE

PROJECT

PLANNING COST ESTIMATE©

EA: 1H990 PID: 317000043

EA: 1H990

PID: 317000043

District-County-Route: 03-PLA-80/03-NEV-80

PM: 68.3/69.7, 0.0/R2.7

Type of Estimate : Draft Project Report

Program Code : SHOPP

Project Limits : 03-PLA-80–PM 68.3/69.7 & 03-NEV-80-PM 0.0/R2.7

Project Description: In Placer County on I-80 between near Soda Springs from Troy Road Undercrossing to the Nevada County line.

Scope : It is proposed to replace the deteriorated slabs on exsiting lanes and Kingvale ramps; widen the EB Kingvale UC; construct an eastbound truck climbing lane using JPCP; and repair/replace culverts.

Alternative : Alternative # 4

SUMMARY OF PROJECT COST ESTIMATE

	Current Year Cost	Escalated Cost
TOTAL ROADWAY COST	$ 55,110,000	$ 60,571,664
TOTAL STRUCTURES COST	$ 8,796,004	$ 9,667,730
SUBTOTAL CONSTRUCTION COST	$ 63,906,004	$ 70,239,394
TOTAL RIGHT OF WAY COST	$ 1,550,000	$ 1,687,000
TOTAL CAPITAL OUTLAY COSTS	$ 65,457,000	$ 71,927,000
PA/ED SUPPORT	$ -	$ -
PS&E SUPPORT	$ -	$ -
RIGHT OF WAY SUPPORT	$ -	$ -
CONSTRUCTION SUPPORT	$ -	$ -
TOTAL SUPPORT COST	$ -	$ -
TOTAL PROJECT COST	$ 65,500,000	$ 72,000,000 *

Programmed Amount

	Month	/	Year
Date of Estimate (Month/Year)	2	/	2022
Estimated Construction Start (Month/Year)	10	/	2023
Number of Working Days =			240
Estimated Mid-Point of Construction (Month/Year)	3	/	2025
Estimated Construction End (Month/Year)	7	/	2026
Number of Plant Establishment Days			0

Estimated Project Schedule

PID Approval	6/28/2019
PA/ED Approval	2/15/2022
PS&E	3/20/2023
RTL	4/24/2023
Begin Construction	10/2/2023

Reviewed by District O.E. or Cost Estimate Certifier	Ali Salehi	1/31/2022	(530) 821-3956
	Office Engineer / Cost Estimate Certifier	**Date**	**Phone**
Approved by Project Manager	Mohan Bonala	xx/xx/xxxx	(530)788-3259
	Project Manager	**Date**	**Phone**

I. ROADWAY ITEMS SUMMARY

	Section		Cost
1	**Earthwork**	$	3,013,700
2	**Pavement Structural Section**	$	21,029,100
3	**Drainage**	$	1,429,400
4	**Specialty Items**	$	2,765,400
5	**Environmental**	$	2,917,000
6	**Traffic Items**	$	2,347,700
7	**Detours**	$	-
8	**Minor Items**	$	1,675,200
9	**Roadway Mobilization**	$	3,517,800
10	**Supplemental Work**	$	1,152,200
11	**State Furnished**	$	1,931,400
12	**Time-Related Overhead**	$	4,146,100
13	**Total Roadway Contingency**	$	9,185,000
	TOTAL ROADWAY ITEMS	**$**	**55,110,000**

Estimate Prepared By :

Name and Title | Date | Phone

Estimate Reviewed By :

Name and Title | Date | Phone

By signing this estimate you are attesting that you have discussed your project with all functional units and have incorporated all their comments or have discussed with them why they will not be incorporated.

EA: 1H990 PID: 317000043

SECTION 1: EARTHWORK

Item code		Unit	Quantity		Unit Price ($)			Cost
190101	Roadway Excavation	CY	30,000	x	35.00	=	$	1,050,000
152320	Lead Compliance Plan	LS	1	x	3,000.00	=	$	3,000
198010	Imported Borrow	CY	112,000	x	15.00	=	$	1,680,000
194001	Ditch Excavation	CY		x		=	$	-
192037	Structure Excavation (Retaining Wall)	CY		x		=	$	-
193013	Structure Backfill (Retaining Wall)	CY		x		=	$	-
193031	Pervious Backfill Material (Retaining Wall)	CY		x		=	$	-
170103	Clearing & Grubbing	LS	1	x	250,000.00	=	$	250,000
100100	Develop Water Supply	LS	1	x	20,000.00	=	$	20,000
190185	Shoulder Backing	TON	85	x	125.00	=	$	10,625
21012X	Duff	ACRE/SQFT		x		=	$	-
XXXXXX	Some Item	Unit		x		=	$	-

TOTAL EARTHWORK SECTION ITEMS $ 3,013,700

SECTION 2: PAVEMENT STRUCTURAL SECTION

Item code		Unit	Quantity		Unit Price ($)			Cost
401050	Jointed Plain Concrete Pavement	CY	24,000	x	360.00	=	$	8,640,000
400050	Continuously Reinforced Concrete Pavement	CY		x		=	$	-
390132	Hot Mix Asphalt (Type A)	TON	10,000	x	95.00	=	$	950,000
260203	Class 2 Aggregate Base	CY	13,500	x	65.00	=	$	877,500
250401	Class 4 Aggregate Subbase	CY		x		=	$	-
414101	Seal Transverse Joint	LF	38,000	x	4.00	=	$	152,000
404094	Seal Longitudinal Isolation Joint	LF	46,000	x	4.00	=	$	184,000
410096	Drill and Bond (Dowel Bar)	EA	33,000	x	15.00	=	$	495,000
410097	Drill and Bond (Tie Bar)	EA	17,000	x	15.00	=	$	255,000
600043	Place Polyester Concrete Overlay	SQFT	5,100	x	5.00	=	$	25,500
600041	Furnish Polyester Concrete Overlay	CF	5,100	x	65.00	=	$	331,500
290201	Asphalt Treated Permeable Base	CY		x		=	$	-
374002	Asphaltic Emulsion (Fog Seal Coat)	TON		x		=	$	-
397005	Tack Coat	TON		x		=	$	-
377501	Slurry Seal	TON		x		=	$	-
410120	Spall Repair (Polyester Concrete)	LS	1	x	10,000.00	=	$	10,000
370001	Sand Cover (Seal)	TON		x		=	$	-
731530	Minor Concrete (Textured Paving)	CY		x		=	$	-
731502	Minor Concrete (Miscellaneous Construction)	CY		x		=	$	-
39407X	Place Hot Mix Asphalt Dike (Insert Type)	LF		x		=	$	-
398100	Remove Asphalt Concrete Dike	LF		x		=	$	-
420201	Grind Existing Concrete Pavement	SQYD	35,800	x	10.00	=	$	358,000
398300	Remove Base and Surfacing	CY		x		=	$	-
390095	Replace Asphalt Concrete Surfacing	CY		x		=	$	-
418002	Remove Concrete Pavement and Base	CY	17,000	x	70.00	=	$	1,190,000
394090	Place Hot Mix Asphalt (Miscellaneous Area)	SQYD		x		=	$	-
398200	Cold Plane Asphalt Concrete Pavement	SQYD		x		=	$	-
846046	6" Rumble Strip (Asphalt Concrete Pavement)	STA		x		=	$	-
846049	6" Rumble Strip (Concrete Pavement)	STA		x		=	$	-
846051	12" Rumble Strip (Asphalt Concrete Pavement)	STA		x		=	$	-
846052	12" Rumble Strip (Concrete Pavement)	STA		x		=	$	-
420102	Groove Existing Concrete Pavement	SQYD	4,500	x	7.45	=	$	33,525
394095	Roadside Paving (Miscellaneous Areas)	SQYD		x		=	$	-
280200	Replace Base	CY	4,500	x	300.00	=	$	1,350,000
411105	Individual Slab Replacement (PCC) (10%)	CY	10,650	x	580.00	=	$	6,177,000

TOTAL PAVEMENT STRUCTURAL SECTION ITEMS $ 21,029,100

SECTION 3: DRAINAGE

Item code		Unit	Quantity		Unit Price ($)			Cost
71013X	Remove Culvert	EA/LF		x		=	$	-
710240	Modify Inlet	EA		x		=	$	-
710370	Sand Backfill	CY		x		=	$	-
71010X	Abandon Culvert	EA/LF		x		=	$	-
710196	Adjust Inlet	LF		x		=	$	-
710262	Cap Inlet	EA		x		=	$	-
510501	Minor Concrete	CY		x		=	$	-
510502	Minor Concrete (Minor Structure)	CY		x		=	$	-
731627	Minor Concrete (Curb, Sidewalk, and Curb Ramp)	CY		x		=	$	-
710374	10" Cured-In-Place Pipeliner	LF	41	x	225.00	=	$	9,225
710380	18" Cured-In-Place Pipeliner	LF	135	x	200.00	=	$	27,000
710384	24" Cured-In-Place Pipeliner	LF	1,520	x	225.00	=	$	342,000
710388	30" Cured-In-Place Pipeliner	LF	555	x	300.00	=	$	166,500
710390	36" Cured-In-Place Pipeliner	LF	717	x	300.00	=	$	215,100
710396	54" Cured-In-Place Pipeliner	LF	454	x	650.00	=	$	295,100
71039XA	72" Cured-In-Place Pipeliner	LF	240	x	650.00	=	$	156,000
1553XX	84" Cured-In-Place Pipeliner	LF		x		=	$	-
71039XA	90" Cured-In-Place Pipeliner	LF	105	x	600.00	=	$	63,000
72XXXX	Rock Slope Protection (Type and Method)	CY/TON		x		=	$	-
72901X	Rock Slope Protection Fabric (Insert Class)	SQYD		x		=	$	-
721420	Concrete (Ditch Lining)	CY	222	x	700.00	=	$	155,400
721430	Concrete (Channel Lining)	CY		x		=	$	-
750001	Miscellaneous Iron and Steel	LB		x		=	$	-
XXXXXX	Additional Drainage	LS		x		=	$	-

TOTAL DRAINAGE ITEMS $ 1,429,400

SECTION 4: SPECIALTY ITEMS

Item code		Unit	Quantity		Unit Price ($)			Cost
520103	Bar Reinforced Steel (Retaining Wall)	LB		x		=	$	-
5100XX	Structural Concrete	CY		x		=	$	-
510060	Structural Concrete, Retaining Wall	CY		x		=	$	-
5201XX	Bar Reinforcing Steel	LB		x		=	$	-
080050	Progress Schedule (Critical Path Method)	LS	1	x	10,000.00	=	$	10,000
582001	Sound Wall (Masonry Block)	SQFT		x		=	$	-
510530	Minor Concrete (Wall)	CY		x		=	$	-
60005X	Remove Sound Wall	LF/LS/SQFT		x		=	$	-
070030	Lead Compliance Plan	LS		x		=	$	-
141120	Treated Wood Waste	LB	9,900	x	0.40	=	$	3,960
839750	Remove Barrier	LF	600	x	10.00	=	$	6,000
839752	Remove Guardrail	LF	1,000	x	5.00	=	$	5,000
710167	Remove Flared End Section	EA	16	x	350.00	=	$	5,600
8000XX	Chain Link Fence (Insert Type)	LF		x		=	$	-
80XXXX	XX" Chain Link Gate (Type CL-X)	EA		x		=	$	-
8320XX	Midwest Guardrail System (Insert Type)	LF		x		=	$	-
839301	Single Thrie Beam Barrier	LF		x		=	$	-
839310	Double Thrie Beam Barrier	LF		x		=	$	-
839521	Cable Railing	LF		x		=	$	-
839566	Terminal System (Type CAT)	EA		x		=	$	-
839584	Alternative In-line Terminal System	EA	4	x	4,000.00	=	$	16,000
839585	Alternative Flared Terminal System	EA		x		=	$	-
4906XX	XX" Cast-In-Drilled-Hole Concrete Piling	LF		x		=	$	-
8396XX	Crash Cushion (Insert Type)	EA		x		=	$	-
839640	Concrete Barrier (Type 60M)	LF	18,125	x	150.00	=	$	2,718,750
475010	Retaining Wall (Masonry Wall)	SQFT		x		=	$	-
511035	Architectural Treatment	SQFT		x		=	$	-
780460	Anti-Graffiti Coating	SQFT		x		=	$	-
780450	Rock Stain	SQFT		x		=	$	-
4730XX	Reinforced Concrete Crib Wall (Insert Type)	SQFT		x		=	$	-
83954X	Transition Railing (Insert Type)	EA		x		=	$	-
780440	Prepare and Stain Concrete	SQFT		x		=	$	-
839561	Rail Tensioning Assembly	EA		x		=	$	-
83958X	End Anchor Assembly (Insert Type)	EA						

TOTAL SPECIALTY ITEMS $ 2,765,400

Effective immediately, districts must input estimated item quantities in blue text above in the PRSM database for the pay items listed in the Design Memo, dated April 9, 2018, when Project Report is approved (Milestone 200). Link to Desgin Memo.

SECTION 5: ENVIRONMENTAL

5A - ENVIRONMENTAL MITIGATION

Item code		Unit	Quantity		Unit Price ($)			Cost
XXXXXX	Noise Study Report	LS	1	x	80,000.00	=	$	80,000
XXXXXX	Haz Waste: PSI	LS	1	x	50,000.00	=	$	50,000
XXXXXX	Bird and Bat Exclusion	LS	1	x	100,000.00	=	$	100,000
	Biological Mitigation (on-site)	LS		x		=	$	-
80010X	Temporary Fence (Insert Type)	LF		x		=	$	-
130670	Temporary Reinforced Silt Fence	LF		x		=	$	-

Subtotal Environmental Mitigation $ *230,000*

5B - LANDSCAPE AND IRRIGATION

Item code		Unit	Quantity		Unit Price ($)			Cost
20XXXX	Highway Planting	LS		x		=	$	-
20XXXX	Irrigation System	LS		x		=	$	-
204099	Plant Establishment Work	LS		x		=	$	-
20XXXX	Follow-up Landscape Project	LS		x		=	$	-
206405	Remove Irrigation Facility	LS		x		=	$	-
204096	Maintain Existing Planted Areas	LS		x		=	$	-
206400	Check and Test Existing Irrigation Facilities	LS		x		=	$	-
21011X	Imported Topsoil	CY/TON		x		=	$	-
200114	Rock Blanket	SQFT/SQYD		x		=	$	-
200122	Weed Germination	SQYD		x		=	$	-
995100	Water Meter Charges	LS		x		=	$	-
2087XX	XX" Conduit (Use for Irrigation x-overs)	LF		x		=	$	-
20890X	Extend X" Conduit (Use for Extension of Irrigation	LF		x		=	$	-

Subtotal Landscape and Irrigation $ -

5C - EROSION CONTROL

Item code		Unit	Quantity		Unit Price ($)			Cost
210010	Move-In/Move-Out (Erosion Control)	EA	6	x	1,000.00	=	$	6,000
210350	Fiber Rolls	LF	82,000	x	3.50	=	$	287,000
210360	Compost Sock	LF		x		=	$	-
2102XX	Rolled Erosion Control Product (Insert Type)	SQFT	3,000	x	2.75	=	$	8,250
21025X	Bonded Fiber Matrix	SQFT/ACRE		x		=	$	-
210300	Hydromulch	SQFT	37,000	x	0.75	=	$	27,750
210420	Straw	SQFT		x		=	$	-
210430	Hydroseed	SQFT	40,000	x	0.75	=	$	30,000
210610	Compost	CY		x		=	$	-
211111	PECE	LS	1	x	10,000.00	=	$	10,000
210630	Incorporate Materials	SQFT						

Subtotal Erosion Control $ *369,000*

5D - NPDES

Item code		Unit	Quantity		Unit Price ($)			Cost
130300	Prepare SWPPP	LS	1	x	10,000.00	=	$	10,000
130200	Prepare WPCP	LS		x		=	$	-
130100	Job Site Management	LS	1	x	50,000.00	=	$	50,000
130330	Storm Water Annual Report	EA	1	x	2,000.00	=	$	2,000
130310	Rain Event Action Plan	EA	4	x	500.00	=	$	2,000
130320	Storm Water Sampling and Analysis Day	EA		x		=	$	-
130520	Temporary Hydraulic Mulch	SQYD		x		=	$	-
130550	Temporary Hydroseed	SQYD		x		=	$	-
130505	Move-In/Move-Out (Temporary Erosion Control)	EA		x		=	$	-
130640	Temporary Fiber Roll	LF		x		=	$	-
130900	Temporary Concrete Washout	LS		x		=	$	-
130710	Temporary Construction Entrance	EA		x		=	$	-
130610	Temporary Check Dam	LF		x		=	$	-
130620	Temporary Drainage Inlet Protection	EA		x		=	$	-
130730	Street Sweeping	LS	1	x	10,000.00	=	$	10,000
XXXXXX	PTCA, Offsite Treatment	LS	1	x	2,244,000.00	=	$	2,244,000

Subtotal NPDES $ *2,318,000*

TOTAL ENVIRONMENTAL $ **2,917,000**

Supplemental Work for NPDES

066595	Water Pollution Control Maintenance Sharing*	LS	1	x	20,000.00	=	$	20,000
066596	Additional Water Pollution Control**	LS	1	x	20,000.00	=	$	20,000
066597	Storm Water Sampling and Analysis***	LS		x		=	$	-
XXXXXX	Some Item	LS		x		=	$	-

Subtotal Supplemental Work for NDPS $ *40,000*

*Applies to all SWPPPs and those WPCPs with sediment control or soil stabilization BMPs.

**Applies to both SWPPPs and WPCP projects.

*** Applies only to project with SWPPPs.

SECTION 6: TRAFFIC ITEMS

6A - Traffic Electrical

Item code		Unit	Quantity		Unit Price ($)			Cost
870200	Lighting System	LS		x		=	$	-
870300	Sign Illumination System	LS		x		=	$	-
870400	Signal and Lighting System	LS		x		=	$	-
860810	Mainline & Ramp Loop Detectors	LS	1	x	36,000.00	=	$	36,000
87181X	Interconnection Conduit and Cable	LF/LS		x		=	$	-
5602XX	Furnish Sign Structure (Insert Type)	LB		x		=	$	-
5602XX	Install Sign Structure (Insert Type)	LB		x		=	$	-
87011X	Inductive Loop Detector	EA/LS		x		=	$	-
870600	Traffic Monitoring Station System	LS		x		=	$	-
56804X	Remove Sign Structure	EA/LS		x		=	$	-
XXXXX	Traffic Management System	LS		x		=	$	-
860090	Maintain Existing Traffic Management System Ele	LS	1	x	2,000.00	=	$	2,000
872130	Modifying Existing Electrical System	LS	1	x	125,000.00	=	$	125,000
XXXXX	Some Item	Unit		x		=	$	-

Subtotal Traffic Electrical *$* *163,000*

6B - Traffic Signing and Striping

Item code		Unit	Quantity		Unit Price ($)			Cost
568046	Remove Sign Structure	EA	4	x	6,700.00	=	$	26,800
820840	Roadside Sign - One Post	EA		x		=	$	-
820850	Roadside Sign - Two Post	EA	13	x	1,000.00	=	$	13,000
560218	Furnish Sign Structure (Truss)	LB	79,452	x	5.00	=	$	397,260
560219	Furnish Sign Structure (Truss)	LB	79,452	x	2.00	=	$	158,904
846020	Remove Painted Traffic Stripe	LF		x		=	$	-
141102	Remove Yellow Painted Traffic Stripe (Hazardous	LF		x		=	$	-
846025	Remove Painted Pavement Marking	SQFT		x		=	$	-
820530	Reset Roadside Sign	EA		x		=	$	-
820850	Relocate Roadside Sign	EA		x		=	$	-
498052	60" CIDHC Pile (Sign Foundation)	LF	88	x	1,500.00	=	$	132,000
846012	Thermoplastic Crosswalk and Pavement Marking (Enhanced Wet Night Visibility)	SQFT		x		=	$	-
120090	Construction Area Signs	LS	1	x	25,000.00	=	$	25,000
847172	Permanent Pavement Delineation	FT	82,360	x	2.00	=	$	164,720

Subtotal Traffic Signing and Striping *$* *917,684*

6C - Traffic Management Plan

Item code		Unit	Quantity		Unit Price ($)			Cost
12865X	Portable Changeable Message Sign	LS	1	x	$ 120,000	=	$	120,000

Subtotal Traffic Management Plan *$* *120,000*

6C - Stage Construction and Traffic Handling

Item code		Unit	Quantity		Unit Price ($)			Cost
120198	Plastic Traffic Drums	EA	860	x	50.00	=	$	43,000
12016X	Channelizer (Insert Type)	EA		x		=	$	-
120116	Type II Barricade	EA		x		=	$	-
120120	Type III Barricade	EA		x		=	$	-
129100	Temporary Crash Cushion Module	EA		x		=	$	-
120100	Traffic Control System	WD	240	x	1,500.00	=	$	360,000
129110	Temporary Crash Cushion	EA	4	x	3,500.00	=	$	14,000
129000	Temporary Railing (Type K)	LF	21,000	x	30.00	=	$	630,000
120143	Temporary Pavement Delineation	LS	1	x	100,000.00	=	$	100,000
120152	Temporary Pavement Marking (Tape)	SQFT		x		=	$	-
8101XX	Delineator (Insert Class)	EA		x		=	$	-

Subtotal Stage Construction and Traffic Handling *$* *1,147,000*

TOTAL TRAFFIC ITEMS **$** **2,347,700**

SECTION 7: DETOURS

Includes constructing, maintaining, and removal

Item code		Unit	Quantity		Unit Price ($)			Cost
190101	Roadway Excavation	CY		x		=	$	-
19801X	Imported Borrow	CY/TON		x		=	$	-
390132	Hot Mix Asphalt (Type A)	TON		x		=	$	-
26020X	Class 2 Aggregate Base	CY/TON		x		=	$	-
250401	Class 4 Aggregate Subbase	CY		x		=	$	-
130620	Temporary Drainage Inlet Protection	EA		x		=	$	-
129000	Temporary Railing (Type K)	LF		x		=	$	-
128601	Temporary Signal System	LS		x		=	$	-
120149	Temporary Pavement Marking (Paint)	SQFT		x		=	$	-
80010X	Temporary Fence (Insert Type)	LF		x		=	$	-
XXXXXX	Some Item	LS		x		=	$	-

TOTAL DETOURS	$	-

SUBTOTAL SECTIONS 1 through 7	$	33,502,300

SECTION 8: MINOR ITEMS

8A - Americans with Disabilities Act Items

ADA Items		$	-

8B - Bike Path Items

Bike Path Items		$	-

8C - Other Minor Items

Other Minor Items	5.0%	$	1,675,115

Total of Section 1-7	$	33,502,300	x	5.0%	=	$	1,675,115	

TOTAL MINOR ITEMS	$	1,675,200

SECTIONS 9: ROADWAY MOBILIZATION *

Item code								
999990	Total Section 1-8	$	35,177,500	x	10%	=	$	3,517,750

TOTAL ROADWAY MOBILIZATION	$	3,517,800

SECTION 10: SUPPLEMENTAL WORK

Item code		Unit	Quantity		Unit Price ($)			Cost
066670	Payment Adjustments For Price Index Fluctuations	LS	1	x	31,300.00	=	$	31,300
066094	Value Analysis	LS	1	x	10,000.00	=	$	10,000
066070	Maintain Traffic	WD	240	x	1,000.00	=	$	240,000
066919	Dispute Resolution Board	LS	1	x	7,500.00	=	$	7,500
066921	Dispute Resolution Advisor	LS	1	x	5,000.00	=	$	5,000
066015	Federal Trainee Program	LS	1	x	20,800.00	=	$	20,800
066610	Partnering	LS	1	x	50,000.00	=	$	50,000
066204	Remove Rock and Debris	LS	1	x	44,000.00	=	$	44,000
066222	Locate Existing Crossover	LS		x		=	$	-
XXXXXX	Some Item	Unit		x		=	$	-

*Cost of **NPDES** Supplemental Work specified in Section 5D*	=	$	40,000

Total Section 1-8	$	35,177,500		2%	=	$	703,550	

TOTAL SUPPLEMENTAL WORK	$	1,152,200

SECTION 11: STATE FURNISHED MATERIALS AND EXPENSES

Item code		Unit	Quantity		Unit Price ($)		Cost
066105	Resident Engineers Office	LS	1	x	150,000.00	=	$150,000
066063	Traffic Management Plan - Public Information	LS	1	x	15,000.00	=	$15,000
066901	Water Expenses	LS		x		=	$0
8609XX	Traffic Monitoring Station (X)	LS		x		=	$0
066841	Traffic Controller Assembly	LS		x		=	$0
066840	Traffic Signal Controller Assembly	LS		x		=	$0
066062	COZEEP Contract	WD	240	x	2,900.00	=	$696,000
066838	Reflective Numbers and Edge Sealer	LS		x		=	$0
066065	Tow Truck Service Patrol	LS		x		=	$0
066916	Annual Construction General Permit Fee	LS	1	x	15,000.00	=	$15,000
XXXXXX	Some Item	Unit		x		=	$0
	Total Section 1-8	$	35,177,500		3%	= $	1,055,325

TOTAL STATE FURNISHED $1,931,400

SECTION 12: TIME-RELATED OVERHEAD

Total of Roadway and Structures Contract Items excluding Mobilization $41,460,360 (used to calculate total TRO)

Estimated Time-Related Overhead (TRO) Percentage (0% to 10%) = **10%**

Item code		Unit	Quantity		Unit Price ($)		Cost
090100	Time-Related Overhead	WD	240	X	$17,275	=	$4,146,100

TOTAL TIME-RELATED OVERHEAD $4,146,100

SECTION 13: ROADWAY CONTINGENCY*

Risk Amount from Risk Register	(for Known Risks)				0%		
Additional or Residual Contingency	(for Unknown/Undefined Risks)				0%		$0
Total Section 1-12	$	45,925,000	x	**20%**		=	$9,185,000

TOTAL CONTINGENCY* $9,185,000

EA: 1H990 PID: 317000043

II. STRUCTURE ITEMS

	Bridge 1		Bridge 2		
DATE OF ESTIMATE	06/10/21		00/00/00		00/00/00
Bridge Name	Kingvale UC		Troy UC		xxxxxxxxxxxxxxxxxx
Bridge Number	19-0107R		19-106R		57-XXX
Structure Type	Bridge Replacement		Bridge Replacement		xxxxxxxxxxxxxxxxxx
Width (Feet) [out to out]	62 LF		62 LF		0 LF
Total Bridge Length (Feet)	111 LF		101 LF		0 LF
Total Area (Square Feet)	6882 SQFT		6262 SQFT		0 SQFT
Structure Depth (Feet)	5 LF		5 LF		0 LF
Footing Type (pile or spread)	Spread		xxxxxxxxxxxxxxxxxx		xxxxxxxxxxxxxxxxxx
Cost Per Square Foot	$366		$366		$0
COST OF EACH	**$3,141,430**		**$3,141,430**		**$0**

	Building 1				
DATE OF ESTIMATE	00/00/00		00/00/00		00/00/00
Building Name	xxxxxxxxxxxxxxxxxx		xxxxxxxxxxxxxxxxxx		xxxxxxxxxxxxxxxxxx
Bridge Number	57-XXX		57-XXX		57-XXX
Structure Type	xxxxxxxxxxxxxxxxxx		xxxxxxxxxxxxxxxxxx		xxxxxxxxxxxxxxxxxx
Width (Feet) [out to out]	0 LF		0 LF		0 LF
Total Building Length (Feet)	0 LF		0 LF		0 LF
Total Area (Square Feet)	0 SQFT		0 SQFT		0 SQFT
Structure Depth (Feet)	0 LF		0 LF		0 LF
Footing Type (pile or spread)	xxxxxxxxxxxxxxxxxx		xxxxxxxxxxxxxxxxxx		xxxxxxxxxxxxxxxxxx
Cost Per Square Foot	$300		$0		$0
COST OF EACH	**$0**		**$0**		**$0**

TOTAL COST OF BRIDGES		**$6,282,860**
TOTAL COST OF BUILDINGS		**$0**
Time-Related Overhead	10%	**$628,286**
STRUCTURES MOBILIZATION	10%	**$628,286**
STRUCTURES CONTINGENCY*	25%	**$1,884,858**
TOTAL COST OF STRUCTURES		**$8,796,004**

Estimate Prepared By: Danny Mossman — 44543

Bridge Design Branch 6 ------ Division of Structures — Date

8 EA: 1H990 PID: 317000043

III. RIGHT OF WAY

Fill in all of the available information from the Right of Way Data Sheet.

				Current Value Future Use		Escalated Value
A)	A1)	Acquisition, including Excess Land, Fees, Damages, Goodwill	$	0	$	0
	A2)	Acquisition of Offsite Mitigation	$	0	$	0
	A3)	Railroad Acquisition	$	0	$	0
B)	B1)	Utility Relocation (State Share)	$	1,550,000	$	1,687,000
	B2)	Potholing (Design Phase)	$	0	$	0
C)	Utility - Advance Engineering Estimate (Encumber with State Only Funds)		$	0	$	0
D)	RAP and/or Last Resort Housing		$	0	$	0
E)	Clearance & Demolition		$	0	$	0
F)	Relocation Assistance (RAP and/or Last Resort Housing Costs)		$	0	$	0
G)	Title and Escrow		$	0	$	0
H)	Environmental Review		$	0	$	0
I)	Condemnation Settlements	0%	$	0	$	0
J)	Design Appreciation Factor	0%	$	0	$	0
K)	Utility Relocation (Construction Cost)		$	0	$	0

L)	**TOTAL RIGHT OF WAY ESTIMATE**	**$1,550,000**
M)	**TOTAL R/W ESTIMATE: Escalated**	**$1,687,000**
N)	**RIGHT OF WAY SUPPORT**	**$0**

Support Cost Estimate Prepared By _____ Project Coordinator[1] _____ Phone

Utility Estimate Prepared By _____ Utility Coordinator[2] _____ Phone

R/W Acquisition Estimate Prepared By _____ Right of Way Estimator[3] _____ Phone

Note: Items G & H applied to items A + B

[1] When estimate has Support Costs only [2] When estimate has Utility Relocation [3] When R/W Acquisition is required

PROBABILISTIC STRUCTURE COST ESTIMATE

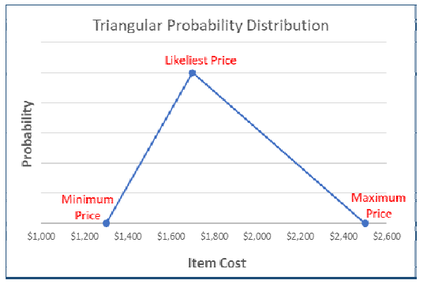
[ ] GENERAL PLAN ESTIMATE [X] ADVANCE PLANNING ESTIMATE

Revised -November 12, 2019

BRIDGE NAME:	KINGVALE UC (ALT 4)
BRIDGE NUMBER:	19-0107R
TYPE:	BRIDGE REPLACEMENT
EA:	03-1H990
PROJECT ID:	0317000043
ACCELERATED BRIDGE PROJECT	NO
DESIGN SECTION:	06
# OF STRUCTURES IN PROJECT :	1
PRICES BY :	Roy Galarpe
PRICES CHECKED BY :	Christa Siegenthaler
QUANTITIES BY:	ANDREW ROSE

IN EST:	5/12/2021
OUT EST:	6/10/2021
DISTRICT:	03
CO:	PLA
RTE:	80
PM:	69.2
DEPTH	3.3
LENGTH	111
WIDTH	62
AREA	6882
EST. NO.	
COST INDEX:	736
DATE:	
DATE:	5/24/2021

INPUT



The Assumption Curves, unless noted otherwise, are modeled with a triangular distribution with the "Minimum, Likeliest and Maximum values."

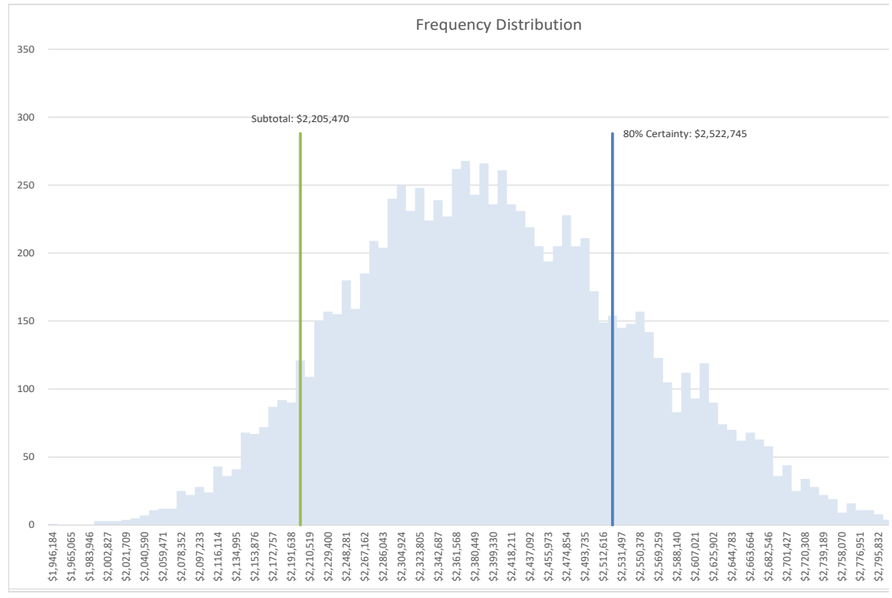
	CONTRACT ITEMS	TYPE	UNIT	QUANTITY	ITEM PRICE RANGE MINIMUM	LIKELIEST	MAXIMUM	AMOUNT
1	STRUCTURE EXCAVATION (BRIDGE)		CY	776	$60.00	$110.00	$200.00	$85,360
2	STRUCTURE BACKFILL (BRIDGE)		CY	382	$90.00	$150.00	$220.00	$57,300
3	STRUCTURAL CONCRETE, BRIDGE FOOTING		CY	184	$460.00	$600.00	$900.00	$110,400
4	STRUCTURAL CONCRETE, BRIDGE		CY	356	$800.00	$1,200.00	$2,400.00	$427,200
5	STRUCTURAL CONCRETE, BRIDGE (POLYMER FIBER		CY	128	$2,500.00	$3,500.00	$4,600.00	$448,000
6	STRUCTURAL CONCRETE, APPROACH SLAB (TYPE N		CY	163	$650.00	$850.00	$1,200.00	$138,550
7	FURNISH PRECAST PRESTRESSED CONCRETE SLAB		SQFT	6882	$65.00	$75.00	$85.00	$516,150
8	ERECT PRECAST PRESTRESSED CONCRETE DECK U		EA	48	$1,800.00	$2,500.00	$4,000.00	$120,000
9	JOINT SEAL (MR 1 1/2")		LF	124	$35.00	$50.00	$70.00	$6,200
10	BAR REINFORCING STEEL (EPOXY COATED) (BRIDGE		LB	109670	$1.25	$1.50	$3.00	$164,505
11								
12	CONCRETE BARRIER (TYPE 842)		LF	222	$125.00	$170.00	$200.00	$37,740
13	CONCRETE BARRIER (TYPE 842A)		LF	72	$125.00	$170.00	$200.00	$12,240
14	TEMPORARY SUPPORT		LS	1	$49,600.00	$73,500.00	$110,200.00	$73,500
15	TEMPORARY RAILING (TYPE K)		LF	111	$50.00	$75.00	$100.00	$8,325
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								
							SUBTOTAL	$2,205,470

	TYPE	UNIT	QUANTITY	MINIMUM	LIKELIEST	MAXIMUM	
BRIDGE REMOVAL	RC T-Girders	SQFT	5495	$34.00	$60.00	$77.00	$329,700

Comments

OUTPUT

This probabilistic estimate forecasts a range of likely final costs and their associated probabilities of occurring, or confidence levels. Item cost uncertainty is captured by estimating a range of prices: minimum, likely and maximum. The estimate model assumes a triangular distribution for each item, independent from the other items. A Monte Carlo simulation with 10,000 trials is used to develop a reasonable range of possible cost combinations.



Time Related Overhead, Mobilization and Contingency NOT INCLUDED

Percentiles: Forecast values	
0%	$2,133,183
10%	$2,456,519
20%	$2,537,488
30%	$2,597,057
40%	$2,652,299
50%	$2,702,698
60%	$2,753,896
70%	$2,811,797
80%	**$2,878,466**
90%	$2,972,595
100%	$3,313,132

BASED ON THE ASSUMPTIONS USED TO CREATE THE MODEL, DES STRUCTURE OFFICE ENGINEER RECOMMENDS THAT THE PROGRAMMING LEVEL BUDGET FOR THIS PROJECT BE DESIGNATED AT THE 80% FORECAST VALUE.

BRIDGE COST PER SQUARE FOOT	$366
BRIDGE REMOVAL	$355,700
ESTIMATED COST Subtotal + Bridge	$2,878,000
TOTAL	$4,398,000

DOES NOT INCLUDE time related overhead (TRO), mobilization and contingency

INCLUDES mobilization: 10%, structure TRO: 10% and contingency 25%

Troy Rd bridge cost is equivalent to Kingvale bridge

PROBABILISTIC STRUCTURE COST ESTIMATE

INPUT

[ ] GENERAL PLAN ESTIMATE [X] ADVANCE PLANNING ESTIMATE

Revised -November 12, 2019

BRIDGE NAME:	TROY UC - ALT 4
BRIDGE NUMBER:	19-0106R
TYPE:	CIP RC T-Girder
EA:	03-1H990
PROJECT ID:	0317000043
ACCELERATED BRIDGE PROJECT	NO
DESIGN SECTION:	06
# OF STRUCTURES IN PROJECT :	1
PRICES BY :	ROY GALARPE
PRICES CHECKED BY :	LIEN VU
QUANTITIES BY:	L. WINKLER-PRINS/H. TUAZON

IN EST:	10/29/2021
OUT EST:	11/30/2021
DISTRICT:	03
CO:	PLA/NEV
RTE:	80
PM:	68.5-69.7/0-2.7
DEPTH	
LENGTH	
WIDTH	
AREA	
EST. NO.	1
COST INDEX:	937
DATE:	11/22/2021
DATE:	10/27/2021

The Assumption Curves, unless noted otherwise, are modeled with a triangular distribution with the "Minimum, Likeliest and Maximum values."

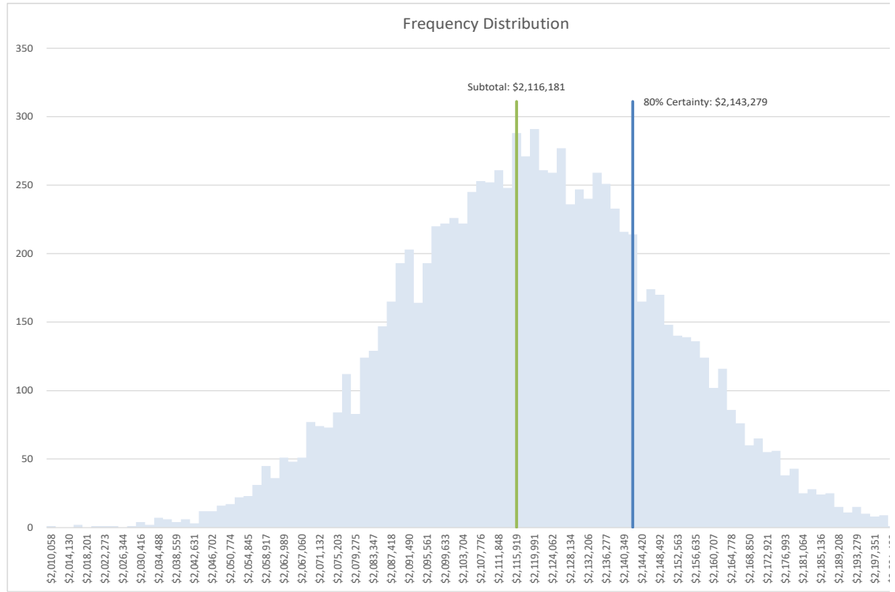
	CONTRACT ITEMS	TYPE	UNIT	QUANTITY	ITEM PRICE RANGE MINIMUM	LIKELIEST	MAXIMUM	AMOUNT
1	STRUCTURE EXCAVATION (BRIDGE)		CY	820	$65.00	$75.00	$85.00	$61,500
2	STRUCTURE BACKFILL (BRIDGE)		CY	445	$140.00	$180.00	$220.00	$80,100
3	STRUCTURAL CONCRETE, BRIDGE FOOTING		CY	231	$400.00	$500.00	$600.00	$115,500
4	STRUCTURAL CONCRETE, BRIDGE		CY	334	$1,200.00	$1,300.00	$1,400.00	$434,200
5	STRUCTURAL CONCRETE, BRIDGE (POLYMER FIBER)		CY	136	$1,600.00	$1,700.00	$1,800.00	$231,200
6	STRUCTURAL CONCRETE, APPROACH SLAB	N	CY	163	$700.00	$850.00	$1,000.00	$138,550
7	FURNISH PRECAST PRESTRESSED CONCRETE SLAB	SII	SQFT	6262	$70.00	$75.00	$80.00	$469,650
8	ERECT PRECAST PRESTRESSED CONCRETE DECK UN		EA	48	$2,200.00	$2,300.00	$2,400.00	$110,400
9	JOINT SEAL (MR 1 1/2")		LF	126	$100.00	$120.00	$140.00	$15,120
10	BAR REINFORCING STEEL (BRIDGE)(EPOXY COATED)		LB	119055	$1.40	$1.50	$1.70	$178,583
11	PREPARE CONCRETE BRIDGE DECK SURFACE		SQFT	5909	$1.70	$2.00	$2.40	$11,818
12	FURNISH POLYESTER CONCRETE OVERLAY		CF	493	$85.00	$90.00	$95.00	$44,370
13	PLACE POLYESTER CONCRETE OVERLAY		SQFT	5909	$5.00	$10.00	$15.00	$59,090
14	CONCRETE BARRIER	842	LF	202	$125.00	$150.00	$175.00	$30,300
15	CONCRETE BARRIER	842A	LF	72	$140.00	$150.00	$160.00	$10,800
16	TEMPORARY SUPPORT		LS	1	$110,000.00	$125,000.00	$135,000.00	$125,000
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								
							SUBTOTAL	$2,116,181

	TYPE	UNIT	QUANTITY	MINIMUM	LIKELIEST	MAXIMUM	
BRIDGE REMOVAL	RC T-GIRDERS	SQFT	4739	$55.00	$60.00	$65.00	$284,340

Comments
TEMPORARY K-RAIL IS A DISTRICT ITEM. DID NOT INCLUDE IN STRUCTURES ESTIMATE. BRIDGE REMOVAL IS COMPLETE REMOVAL OF ENTIRE BRIDGE.

OUTPUT

This probabilistic estimate forecasts a range of likely final costs and their associated probabilities of occurring, or confidence levels. Item cost uncertainty is captured by estimating a range of prices: minimum, likely and maximum. The estimate model assumes a triangular distribution for each item, independent from the other items. A Monte Carlo simulation with 10,000 trials is used to develop a reasonable range of possible cost combinations.



Time Related Overhead, Mobilization and Contingency NOT INCLUDED

Percentiles:	Forecast values
0%	$2,270,937
10%	$2,351,978
20%	$2,368,741
30%	$2,381,518
40%	$2,392,641
50%	$2,402,691
60%	$2,412,526
70%	$2,423,631
80%	**$2,436,260**
90%	$2,454,398
100%	$2,521,348

BASED ON THE ASSUMPTIONS USED TO CREATE THE MODEL, DES STRUCTURE OFFICE ENGINEER RECOMMENDS THAT THE PROGRAMMING LEVEL BUDGET FOR THIS PROJECT BE DESIGNATED AT THE 80% FORECAST VALUE.

BRIDGE COST PER SQUARE FOOT	
BRIDGE REMOVAL	$293,000
ESTIMATED COST Subtotal + Bridge	$2,436,000
TOTAL	$3,722,000

DOES NOT INCLUDE time related overhead (TRO), mobilization and contingency

INCLUDES mobilization: 10%, structure TRO: 10% and contingen(25%

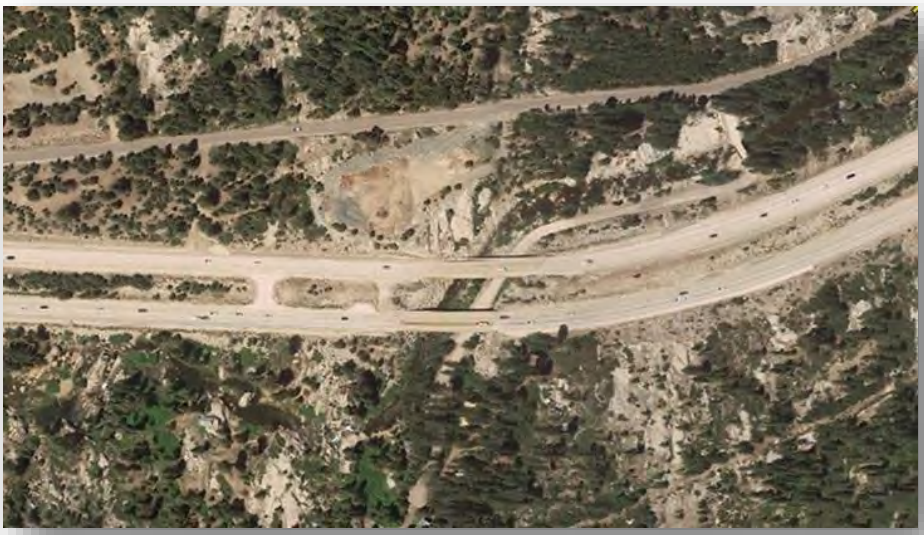
ATTACHMENT E
ENVIRONMENTAL DOCUMENT

SODA SPRINGS PAVEMENT REHABILITATION PROJECT

PLACER AND NEVADA COUNTIES, CALIFORNIA
DISTRICT 3 – NEV/PLA – 80 (Post Miles VARIOUS)
03-1H990 / 0317000043

INITIAL STUDY

WITH PROPOSED MITIGATED NEGATIVE DECLARATION



Prepared by the
State of California, Department of Transportation
Caltrans District 3
703 B Street
Marysville, CA 95901

CALIFORNIA DEPARTMENT OF TRANSPORTATION

October 2021

General Information About This Document

What is in this document?

The California Department of Transportation (Caltrans) has prepared this Initial Study with proposed Mitigated Negative Declaration (IS/MND) which examines the potential environmental effects of a proposed project on State Route 80 in Placer and Nevada Counties, California. Caltrans is the lead agency under the California Environmental Quality Act (CEQA). This document tells you why the project is being proposed, how the existing environment could be affected by the project, the potential impacts of the project, and proposed avoidance, minimization, and/or mitigation measures.

What should you do?

- Please read this document.
- Additional copies of this document are available for review at the Caltrans District Office located at 703 B Street, Marysville, CA 95901; the Truckee Branch Library located at 10031 Levon Avenue, Truckee, CA 96161; the Colfax Public Library located at 10 Church Street, Colfax, CA 95713; the Nevada County Office located at 950 Maidu Avenue, Nevada County City, CA 95959; and the Placer County Office located at 775 N Lake Boulevard, Tahoe City, CA 96145. This document may be downloaded at the following website: https://dot.ca.gov/caltrans-near-me/district-3/d3-programs/d3-environmental/d3-environmental-docs.
- We'd like to hear what you think. If you have any comments about the proposed project, please send them in writing to Caltrans by the deadline.
- Please send comments via U.S. mail to:

  California Department of Transportation
  Attention: Bria Miller
  North Region Environmental - District 3
  703 B Street
  Marysville, CA 95901

- Send comments via e-mail to: Bria.Miller@dot.ca.gov
- Be sure to send comments by the deadline: February 1, 2022

What happens after this?

After comments are received from the public and reviewing agencies, Caltrans may (1) give environmental approval to the proposed project, (2) do additional

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

For individuals with sensory disabilities, this document is available in Braille, in large print, and in a digital format. To obtain a copy in one of these alternate formats, please write to or call Caltrans, Attention: Deanna Shoopman, North Region Environmental-District 3, 703 B Street, Marysville, CA 95501; (530) 632-0080 Voice, or use the California Relay Service TTY number, 711 or 1-800-735-2929.

SODA SPRINGS PAVEMENT REHABILITATION PROJECT

Rehabilitate distressed pavement on the eastbound and westbound lanes and shoulders of Interstate 80

US/State Route 80 in Nevada and Placer Counties,
from Post miles 0.2 West of the Troy Undercrossing to 0.1 East of the Soda Springs Overcrossing

INITIAL STUDY

WITH PROPOSED MITIGATED NEGATIVE DECLARATION

Submitted Pursuant to: Division 13, California Public Resources Code

THE STATE OF CALIFORNIA
Department of Transportation

12/16/2021
Date of Approval

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PROPOSED MITIGATED NEGATIVE DECLARATION

Pursuant to: Division 13, California Public Resources Code

SCH Number: Pending

Project Description

The California Department of Transportation (Caltrans) proposes to rehabilitate a portion of Interstate 80 (I-80), in both Placer and Nevada Counties, from 0.1 miles west of the Troy undercrossing to 0.1 miles east of the Soda Springs overcrossing.

Determination

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

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

The project would have *No Effect* on aesthetics, agriculture and forestry, cultural resources, geology and soils, hazardous materials, land use planning, mineral resources, population and housing, public services, recreation, transportation and traffic, tribal cultural resources, utilities, and wildfire.

The project would have *Less than Significant Impacts* to noise, air quality, biological resources, energy, hydrology, and greenhouse gas emissions.

Mike Bartlett

Mike Bartlett, Office Chief
North Region Environmental - District 3
California Department of Transportation

12/16/2021

Date

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LIST OF ABBREVIATED TERMS

Abbreviation	Description
AB	Assembly Bill
ARB	Air Resources Board
ARZ	Absorber Root Zone
BMPs	Best Management Practices
BO	Biological Opinion
BSA	Biological Study Area
ºC	degrees Celsius
CAA	Clean Air Act
CAFE	Corporate Average Fuel Economy
CALFIRE	California Department of Forestry and Fire Protection
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CCC	California Coastal Commission
CCC	Central California Coast (coho salmon ESU)
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFGC	California Fish and Game Code
CFR	Code of Federal Regulations
CGP	Construction General Permit
CH_4	methane
CIA	Cumulative Impact Analysis
CNPS	California Native Plant Society
CO_2	carbon dioxide
CRPR	California Rare Plant Rank
CSP	Corrugated Steel Pipe
CTP	California Transportation Plan
CWA	Clean Water Act
dB	decibels
Department	Caltrans

Abbreviation	Description
DI	drainage inlet
DOT	Department of Transportation
DPS	Distinct Population Segment
EFH	Essential Fish Habitat
EIR	Environmental Impact Report
EO	Executive Order
EPA	Environmental Protection Agency
ESA	Endangered Species Act
ESA(s)	Environmentally Sensitive Area(s)
ESHA	Environmentally Sensitive Habitat Area
ESL	Environmental Study Limits
ºF	degrees Fahrenheit
FED	Final Environmental Document
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration
G	Global: ranking for Natural Communities of Special Concern
GHG	greenhouse gas
GMP	Galvanized Metal Pipe
GWP	Global Warming Potential
H&SC	Health & Safety Code
HA	Hydrologic Area
HFCs	hydrofluorocarbons
HU	Hydrologic Unit
HVF	High-Visibility Fencing
IPCC	Intergovernmental Panel on Climate Change
IS	Initial Study
IS/MND	Initial Study/Mitigated Negative Declaration
LCFS	low carbon fuel standard
MBTA	Migratory Bird Treaty Act
MMTC0_2e	million metric tons of carbon dioxide equivalent
MND	Mitigated Negative Declaration
MPO	Metropolitan Planning Organization

Abbreviation	Description
MSA	Magnuson-Stevens Fishery Conservation and Management Act
N_2O	nitrous oxide
NAHC	Native American Heritage Commission
NCSC	Natural Communities of Special Concern
ND	Negative Declaration
NEPA	National Environmental Policy Act
NES	Natural Environment Study
NHTSA	National Highway Traffic Safety Administration
NMFS	National Marine Fisheries Service
NRHP	National Register of Historic Places
O_3	ozone
OHWM	ordinary high-water mark
Pb	lead
PDT	Project Development Team
PM(s)	post mile(s)
Porter-Cologne Act	Porter-Cologne Water Quality Control Act
PRC	Public Resources Code
RSP	Rock Slope Protection
RTP	Regional Transportation Plan
RTPA	Regional Transportation Planning Agency
RWQCB	Regional Water Quality Control Board
S	State: ranking for Natural Communities of Special Concern
SB	Senate Bill
SCS	Sustainable Communities Strategy
SF_6	sulfur hexafluoride
SHPO	State Historic Preservation Officer
SHS	State Highway System
SLR	Sea Level Rise
SNC	Sensitive Natural Community
SO_2	sulfur dioxide
SR	State Route
SRZ	Structural Root Zone

Abbreviation	Description
SWMP	Storm Water Management Plan
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TMP	Transportation Management Plan
U.S. or US	United States
U.S. 101	U.S. (United States) Highway 101
USACE	United States Army Corps of Engineers
USC	United States Code
USDOT	U.S. Department of Transportation
U.S. EPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGCRP	U.S. Global Change Research Program
VIA	Visual Impact Assessment
VMT	Vehicle Miles Traveled
WDRs	Waste Discharge Requirements
WQAR	Water Quality Assessment Report
WQOs	Water Quality Objectives

Chapter 1 Proposed Project

1.1 Project History

The Department of Transportation (Caltrans) is the lead agency under the California Environmental Quality Act (CEQA). The project is located in both Placer and Nevada Counties along Interstate 80 (I-80) from 0.2 miles west of the Troy undercrossing to 0.1 miles east of the Soda Springs overcrossing. The existing facility is a four-lane divided freeway, with 2-12 feet long lanes and 10-foot long shoulders. The project is located along a segment of I-80 where the profile of the roadway is primarily a sustained grade, with significant grade difference between the eastbound and westbound lanes are separated by a forested median. In the eastbound direction, there is a chain installation area located 0.3 miles west of the Kingvale undercrossing, where the right shoulder widens to a width of approximately 30 feet. There are two interchanges within the project limits which provide ingress and egress for the surrounding Troy, Kingvale, and Soda Springs areas.

1.2 Project Description

Caltrans proposes to rehabilitate a portion of I-80, in both Placer and Nevada Counties, from 0.1 miles west of the Troy undercrossing to 0.1 miles east of the Soda Springs overcrossing. The proposed project would repair distressed pavement on the existing eastbound (EB) and westbound (WB) lanes and shoulders, construct an EB truck climbing lane, and widen/replace the EB Troy (19-106R) and Kingvale (19- 107R) undercrossing (UC) structures. Existing culverts would be repaired, replaced, or extended as needed. Detector loops on the mainline and Soda Springs ramps, as well as existing overhead sign structures and sign panels, would be replaced. The existing chain installation area between the Troy Road UC and Kingvale UC would be grooved to improve tire traction during snow and icy conditions.

1.1.1 Purpose and Need

Purpose

The proposed project would restore the facility to a state of good repair and provide efficient movement of people and goods through pavement and culvert rehabilitation. The provision of a truck climbing lane would improve both traffic safety and highway operation by facilitating the passing of trucks and slow-moving vehicles whose speeds drop due to the sustained grade. Safety would also be improved by upgrading signs and detector loops, and by replacing all non-standard metal beam guardrails with shoulder concrete barriers.

Need

Due to the heavy vehicle traffic, including chain/studded tire wear during the winter months, the pavement has experienced severe rutting. The existing pavement has cracks in certain areas which indicates it is close to the end of its service life. The rutting and cracking will continue to worsen and lead to an unacceptable ride quality for the public by the construction year.

The trucks and vehicles towing trailers experience reduced speeds because of the sustained grades within the project limits and this impacts the traveling public because the freeway is not operating as efficiently as they would expect.

Existing culverts are deteriorated and need rehabilitation. According to current culvert inspection log, culverts within the project limits having an existing health rating below the threshold of 60 will have to be repaired, replaced, or extend as part of this project.

The existing overhead sign structures at the westbound Kingvale exit and eastbound Soda Springs exit are deteriorated and need to be replaced. Existing sign panels at the eastbound exit to Kingvale and the westbound exit to Soda Springs are deteriorated as well and need to be replaced with sign panels that meet current design standards.

1.1.2 Project Location

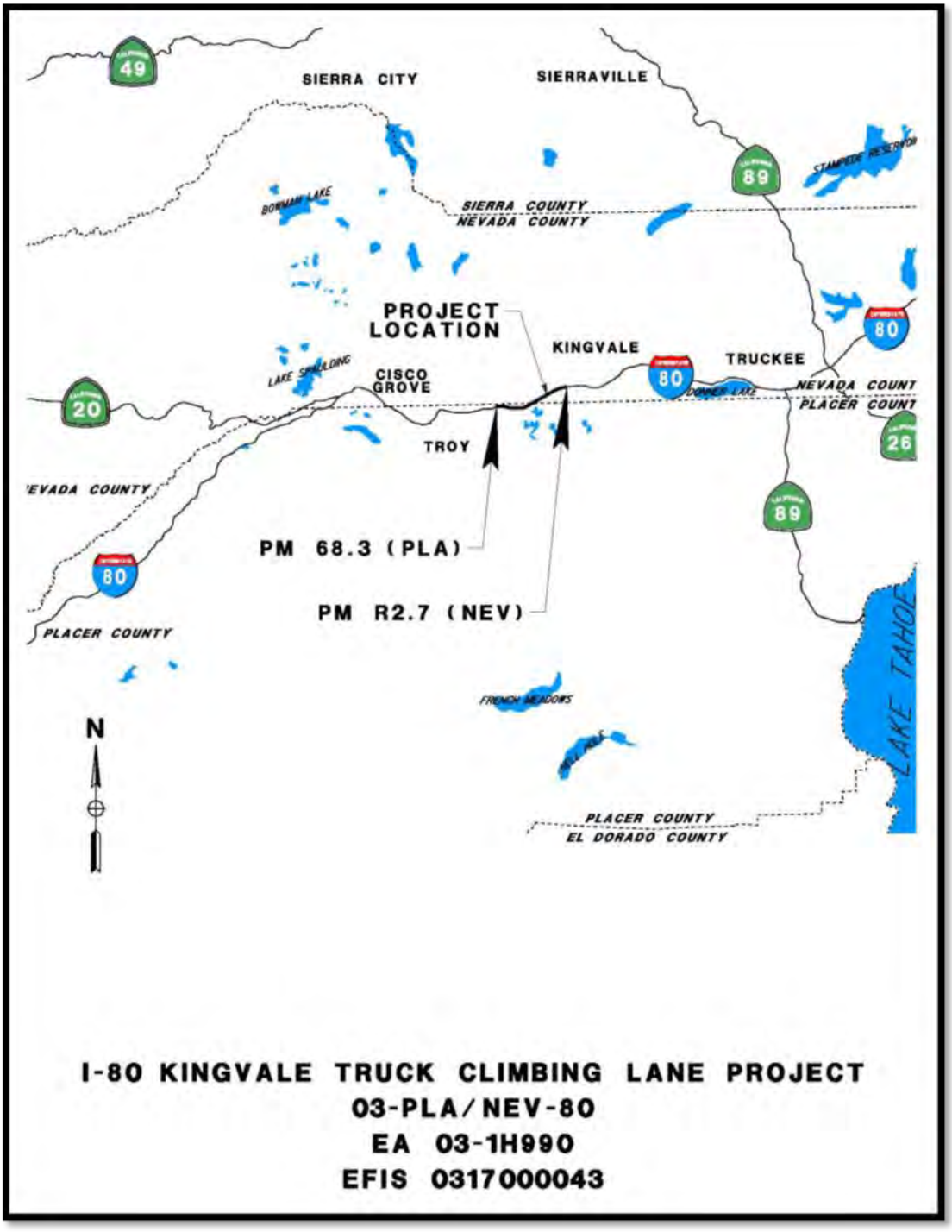

Figure 1. Project Vicinity Map

1.1.3 Preferred Alternative

For the proposed project, the roadway features remain consistent throughout the different alternatives. The difference in alternatives is the proposed improvements for the EB and WB Troy UC and Kingvale UC structures. Both the EB Troy UC and the EB Kingvale UC structures limits would be widened to accommodate the addition of the truck climbing lane.

Alternative 4 proposes to replace both the Troy undercrossing and Kingvale undercrossing structures with new structures.

1.1.4 Alternatives Considered but Removed from Further Consideration

ALTERNATIVE 1

For each structure, this alternative proposes to widen the existing structure to accommodate the EB truck climbing lane. However, the remaining existing bridge deck would remain in its current poor condition.

ALTERNATIVE 2

For each structure, this alternative proposes to widen the existing structure to accommodate the EB truck climbing lane and have a new concrete deck poured over the existing deck. This alternative would extend the life of the deck and improve the existing structure's rating from poor to fair.

ALTERNATIVE 3

For each structure, this alternative proposes to widen the existing structure to accommodate the EB truck climbing lane and have the existing reinforced concrete deck, girders, and beams removed and replaced with new precast T beams. This alternative would improve the existing structure's rating from poor to good.

1.1.5 No-Build Alternative

This alternative would maintain the facility's 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 would be made to the existing conditions, and the proposed improvements would not be implemented.

1.2 Permits and Approvals Needed

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

Table 1. Agency Approvals

Agency	Permit/Approval	Status
United Auburn Indian Community of the Auburn	Approval	
Wilton Rancheria	Approval	

Chapter 2 CEQA Environmental Checklist

Environmental Factors Potentially Affected

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

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

The CEQA Environmental Checklist identifies physical, biological, societal, 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 checklist and this document are related only 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 can include design elements of the project, as well as standard 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]). These features are an integral part of the project and have been considered prior to any significant 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, the baseline for environmental impact analysis normally 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—and/or conditions expected when the project becomes operational—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 action, 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, developing thresholds of significance on a statewide basis has not been pursued by Caltrans as a Lead Agency that encompasses the entire state. 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 located within a park in a city that has only 1.00 acre of total wetland would be impacted 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 ND, along with a document known as an Initial Study, must be circulated for public review. 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 into 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 reasonably be expected, based on substantial evidence in the record, to reduce the significant impact to the specified performance standards (§15126.4(a)(1)(B)).

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

CEQA documents must consider direct and indirect impacts of a project (CAL. PUB. RES. CODE § 21065.3). The documents are to focus on significant impacts (14 CCR § 15126.2(a)). Impacts that are less than significant need only be briefly described (14 CCR § 15128). All potentially significant effects must be addressed.

No-Build Alternative

For each of the following CEQA Environmental Checklist questions, the "No-Build" alternative has been determined to have "No Impact." Under the "No-

Build" alternative, no alterations to the existing conditions would occur and no proposed improvements would be implemented. The "No-Build" alternative will not be discussed further in this document.

2.1 Aesthetics

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

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project, as well as on the Visual Impact Assessment Memo (Caltrans 2021a). The review indicates the project would not adversely affect or result in any noticeable change to the physical characteristics or scenic resources of the existing environment.

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

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project: d) Result in the loss of forest land or conversion of forest land to non-forest use?				✓
Would the project: e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?				✓

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project, as well as on the Nevada County Williamson Act map (Nevada 2017) and the Placer County land use map (Placer 2013). Potential impacts to agriculture and forest resources are not anticipated since no Williamson Act land parcels were identified within the project limits. The proposed project is located in a timberland zone, but the proposed work would not conflict with existing zoning or cause rezoning of forest land, as no tree removal is required. The proposed project would have no impact on agriculture and forest resources.

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	Potentially Significant Impact	Less Than Significant with Mitigation	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?				✓

2.3.1 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 pollutants in the air.

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 CAA also applies.

2.3.2 Environmental Setting

The topography of a region can substantially impact air flow and resulting pollutant concentrations. To better manage air quality throughout the state, California is divided into 15 air basins with similar topography and meteorology. Each air basin has a local air district that is responsible for identifying and implementing air quality strategies to comply with ambient air quality standards.

The Kingvale Truck Climbing Lane project site is located in proximity to the town of Truckee in Nevada County, an area within the Mountain Counties Air Basin (MCAB), which includes Nevada County and the eastern portion of Placer County. Air quality regulation at Placer County and Nevada County in MCAB is administered by Placer County Air Pollution Control District and Northern Sierra Air Quality Management District. Forecasted population for Placer County and Nevada County are 398,329 and 99,755, respectively, as of the 2019 U.S. Census Population Estimates. Placer County's economy was largely driven by services (49.5 percent) and retail trade (10.4 percent) in 2020, and Nevada County's economy was largely driven by health care and social assistance, government and government enterprises, and retail trade in 2016.

2.3.3 Discussion of CEQA Question 2.3—Air Quality

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

An impact would have a significant cumulative impact if emissions from the project exceeded the district's thresholds, or if the project conflicted with the applicable air quality attainment plan. Implementation of applicable air district regulatory measures would reduce emissions, and it is anticipated they would reduce construction emissions to below applicable air district thresholds. According to the construction emissions calculation (Caltrans 2021b) and the operational emissions calculation (Caltrans 2021b) in the air quality report, short-

and long-term daily average emissions (Oxides of nitrogen [NOx], reactive organic gasses [ROG], and Particulate matter [PM]10) from the proposed project during the design year would be below the Placer County Air Pollution Control District Construction/Operational Project and Cumulative-Level Significance Thresholds, as well as the Nevada County Emissions Thresholds of Significance. Build-out of the general plans of Placer and Nevada Counties, the proposed action could not result in a cumulative impact related to operation and construction-related NOx, ROG, and PM10 emissions. Therefore, the project would not result in cumulatively considerable.

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?*

The Clean Air Act requires the U.S. EPA to set National Ambient Air Quality Standards (NAAQS) for six criteria air contaminants: ozone (O_3), PM, carbon monoxide (CO), nitrogen dioxide, lead, and sulfur dioxide. It also permits states to adopt additional or more protective air quality standards if needed. The overall operational emissions of criteria pollutants CO and NOx within the proposed project area under the future build alternatives would not be anticipated to increase in comparison with those under the baseline year. Compared with the PM emissions during the existing year, there would not be a substantial change in the build alternatives during the future years. There are no CO non-attainment areas in California; all areas in California are currently designated attainment/unclassified or maintenance for the state and federal CO standards. The proposed project anticipates temporary short-term air quality impacts resulting from construction activities. To minimize or eliminate dust through application of water or dust palliatives, Caltrans would adhere to the minimization measures stated in Section 2.3.4, and the proposed project would have a less than significant impact.

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

Sensitive receptors include residential areas, schools, hospitals and other health care facilities, child/day-care facilities, parks, and playgrounds. The zone of

greatest concern near roadways is within 500 feet (or 150 meters), sensitive receptors (Donner Trail Elementary School and residential areas) within 500 feet (or 150 meters) have been identified. Figure 2 below shows the location of the receptors relative to the proposed project site.

Figure 2: Sensitive receptors located near the proposed project

This proposed project would include the construction of a truck climbing lane to increase operational efficiency of the EB direction of I-80 and is located in

proximity to sensitive receptors (Figure 2). However, the overall operational emissions of criteria pollutants (CO and NOx) within the proposed project area under the future build alternatives would not increase these pollutants in comparison with those under the baseline year. Compared with the PM emissions during the existing year, the build alternatives would not result in an increase in PM. The estimated overall mobile source air toxic (MSAT) emissions would not result in appreciable changes between no-build and build alternatives or between the baseline and the future build alternatives, therefore, the proposed project would not expose sensitive receptors to substantial pollutant concentrations and would have no impact.

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

The proposed project would not result in other emissions that would adversely affect a substantial number of people and would have not impact.

2.3.4 Minimization Measures

The Caltrans standard specifications include the requirement to minimize or eliminate dust through application of water or dust palliatives. Control measures would be implemented as specified in Caltrans 2018 Standard Specifications Section 10-5 "Dust Control," Section 14-9 "Air Quality," and Section 18 "Dust Palliatives" to further reduce impacts. The proposed project anticipates temporary short-term air quality impacts; however, these impacts would be minimized with incorporation of the following minimization measures:

- The construction contractor must comply with the Caltrans' Standard Specifications in Section 14-9 (2018).
    - Section 14-9-02 specifically requires compliance by the contractor with all applicable laws and regulations related to air quality, including Placer County Air Pollution Control District (PCAPCD) and Northern Sierra Air Quality Management District (NSAQMD) regulations and local ordinances.

- Rule 228 (Fugitive Dust Emissions) in the list of current rules, PCAPCD would be applied within the proposed project area to reduce ambient concentrations and limit fugitive emissions for fine particulate matter from construction activities.
- Rule 226 (Fugitive Dust Emissions) in the list of current rules, NSAQMD would be applied within the proposed project area to reduce ambient concentrations and limit fugitive emissions for fine particulate matter from construction activities.
- Water or a dust palliative would be applied to the site and equipment as often as necessary to control fugitive dust emissions.
- Soil binder would be spread on any unpaved roads used for construction purposes, and on all project construction parking areas.
- Trucks would be washed as they leave the right-of-way as necessary to control fugitive dust emissions.
- Construction equipment and vehicles would be properly tuned and maintained. All construction equipment would use low sulfur fuel as required by CA Code of Regulations Title 17, Section 93114.
- A dust control plan would be developed, documenting sprinkling, temporary paving, speed limits, and timely re-vegetation of disturbed slopes as needed to minimize construction impacts to existing communities.
- Equipment and materials storage sites would be located as far away from residential and park uses as practicable. Construction areas would be kept clean and orderly.
- Track-out reduction measures, such as gravel pads at project access points to minimize dust and mud deposits on roads affected by construction traffic, would be used.

- All transported loads of soils and wet materials would be covered before transport, or adequate freeboard (space from the top of the material to the top of the truck) would be provided to minimize emission of dust during transportation.

- Dust and mud that are deposited on paved public roads due to construction activity and traffic would be promptly and regularly removed to reduce PM emissions.

- To the extent feasible, construction traffic would be scheduled and routed to reduce congestion and related air quality impacts caused by idling vehicles along local roads during peak travel times.

- In addition, both PCAPCD and NSAQMD Guidelines provide reasonably available control measures for dust emissions. Measures to reduce particulate matter (PM) and greenhouse gas emissions (GHG) from construction are recommended to ensure that short-term health impacts to nearby sensitive receptors are avoided. The following techniques shall be implemented to limit the emission and/or airborne transport of fugitive dust from a site when practical, during all phases of construction work:

- Application of water, chemical stabilizers/suppressants, soil stabilizers, or other liquids

- Covering, paving, enclosing, shrouding, compacting, planting, cleaning, or other such measures the Air Pollution Control Officer may approve to accomplish satisfactory results for temporary and/or extended suppression of PM10 emissions

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

2.4 Biological Resources

Question	Potentially Significant Impact	Less Than Significant with Mitigation	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	Potentially Significant Impact	Less Than Significant with Mitigation	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?				✓

2.4.1 Regulatory Setting

Within this section of the document (2.4. Biological Resources), the topics are separated into Natural Communities, Wetlands and Other Waters, Plant Species, Animal Species, Threatened and Endangered Species, and Invasive Species. Plant and animal species listed as "threatened" or "endangered" are covered within the Threatened and Endangered sections. Other special status plant and animal species, including California Department of Fish and Wildlife (CDFW) fully protected species, species of special concern, USFWS and NMFS candidate species, and California Native Plant Society (CNPS) rare and endangered plants, are covered in the Plant and Animal sections.

NATURAL COMMUNITIES

The CDFW maintains records of sensitive natural communities (SNC) in the California Natural Diversity Database (CNDDB). SNC are those natural communities that are of limited distribution statewide or within a county or region and are often vulnerable to environmental effects of projects. These communities may or may not contain special status taxa or their habitat.

WETLANDS AND OTHER WATERS

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

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

PLANT SPECIES

The U.S. Fish and Wildlife Service (USFWS) and CDFW have regulatory responsibility for the protection of special status plant species. The primary laws governing plant species include:

- Federal Endangered Species Act (FESA), United States Code 16 (USC), Section 1531, et seq. See also 50 CFR Part 402
- California Endangered Species Act (CESA), California Fish and Game Code, Section 2050, et seq.
- Native Plant Protection Act, California Fish and Game Code, Sections 1900–1913
- National Environmental Policy Act (NEPA), 40 C.F.R. Section 1500 through Section 1508
- California Environmental Quality Act (CEQA), California Public Resources Code, Sections 21000–2117

ANIMAL SPECIES

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

- NEPA, 40 C.F.R. Section 1500–Section 1508
- CEQA, California Public Resources Code, Sections 21000–21177
- Migratory Bird Treaty Act, 16 U.S.C. Sections 703–712

Fish and Wildlife Coordination Act, 16 U.S. Code Section 661

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

THREATENED AND ENDANGERED SPECIES

The primary laws governing threatened and endangered species include:

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

INVASIVE SPECIES

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

2.4.2 Environmental Setting

The proposed project is located in the Sierra Nevada mountain range is surrounded by steep slopes and is located 6,000–8,600 feet above sea level. The project area is dominated by both evergreen and deciduous trees. The typical soil profile is course, well drained, decomposed granite with granite rock slope protection (RSP) placed at the top of the divided highway.

The South Fork of the Yuba River runs adjacent to parts of the project. However, the river does not enter the project limits. The surrounding habitat is suitable for common species such as the American Black Bear, Long-eared chipmunk, Whitetail deer, and Striped Skunk. No wildlife was observed during field visits.

The proposed project limits contain paved roadways and shoulders (i.e., compacted dirt or gravel surface); however, there is some vegetation present. The project contains a vegetated strip between the offset, divided highways containing evergreen and deciduous trees. This is where tree removal would occur to facilitate the addition of the truck lane.

Species that are present on the slopes include, but are not limited to, willow (Salix ssp.), Ponderosa pine (Pinus ponderosa), and alder (Alnus ssp.).

2.4.3 Discussion of CEQA 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?*

The plant and animal species considered special status that are known to occur or may occur in the proposed project include the following:

- Sierra Nevada mountain beaver
- North American porcupine

- California wolverine
- Sierra marten
- Grey headed pika
- Fisher
- Southern long-toed salamander
- Delta Smelt
- Black swift

The special status species listed above, as well as habitats of concern, have the potential to occur in the general project vicinity. Surveys concluded none of the nine special status species and habitats were present within the project limits, therefore the proposed project would have no impact to the nine special status species.

There is minimal potential impact for species of concern to occur within the project limits or to be impacted by the project activities, which include the Sierra Nevada yellow-legged frog and the starved daisy, which are discussed below.

SIERRA NEVADA YELLOW-LEGGED FROG

Typical habitat includes lakes, ponds, marshes, meadows, and streams at high elevations typically ranging from approximately 4,500 to 12,000 feet but can occur as low as approximately 3,500 feet in the northern portions of their range. Sierra Nevada yellow-legged frogs are highly aquatic, and adults can be found sitting on rocks along the shoreline where there is little or no vegetation. They are rarely found more than 3.3 feet from water.

Reproduction is aquatic. Mature adults come into breeding condition, and the males call to advertise their fitness to competing males and to females. Fertilization is external, with the male grasping the back of the female and releasing sperm as the female lays her eggs.

A cluster of 100 to 350 eggs is laid in shallow water and is left unattached in still waters but may be attached to vegetation in flowing water. Egg-laying sites must be connected to permanent lakes or ponds that do not freeze to the bottom in winter, because the tadpoles must live in the water. The eggs hatch into tadpoles, which feed in the water and eventually grow four legs, lose their tails, and emerge onto land where they disperse into the surrounding territory. The Sierra Nevada yellow-legged frog is a medium-sized amphibian, measuring approximately 1.5 to 3.25 inches on average. Females tend to be slightly larger than males.

Adult frogs have a mix of brown and yellow coloring on their upper (dorsal) body, but can also be grey, red, or greenish-brown, usually with dark spots or splotches called cryptic coloration. These spots can look like lichen or moss and make the frog appear camouflaged. The belly and underside of their back legs, and sometimes the front legs, are yellow or light orange.

The South Fork of the Feather river runs adjacent to the project area. The California Natural Diversity Database Biological Information and Observation System shows occurrences of the Sierra Nevada yellow-legged frog within this section of the South Fork of the Yuba River. The nearest documented occurrences are approximately 0.02 miles from the Troy overcrossing. The westbound lane does have roadside drainages that convey small amounts of water.

Occurrences are outside the project limits. The proposed road widening is uphill from the occurrence areas. The closest occurrence of Sierra Nevada yellow-legged frog to the project activities is 0.02 miles from the Troy Overcrossing. With no suitable habitat and steep slopes, the presence of the Sierra Nevada yellow-legged frog is not anticipated. No in-water work would occur. Impacts to the Sierra Nevada yellow-legged frog or its habitat are not anticipated, therefore the proposed project would have no impact to the Sierra Nevada yellow-legged frog.

STARVED DAISY

The Starved daisy (Erigeron miser) is endemic to California and is only found to grow in the northern High Sierra Nevada Mountain Range. It is a perennial herb producing several decumbent or erect stems up to approximately 25 centimeters long from a woody caudex. The plant is coated densely in long hairs. The small narrow leaves are equal in size and evenly spaced along the stem. The inflorescence bears one or more flower heads on long erect peduncles, each lined with hairy, glandular phyllaries. The flower head contains many yellow disc florets but no ray florets. The fruit is an achene with a pappus of bristles (Caltrans 2021c).

Granite RSP has been placed within the limits of this project. The RSP provides the rock crevices in which the starved daisy grows. However, the starved daisy also thrives in shaded, coniferous forest. This RSP is placed at the top of slope and receives full sun. During field surveys, there were no Starved daisy observed.

This RSP provides marginal habitat for the special status species, Starved daisy (Erigeron miser). The proposed project would have minimal impacts to RSP. Majority of construction activities would occur on pre-disturbed shoulders and pre-existing paved roadway; therefore, the proposed project would have no impact on the Starved daisy.

2.4.4 Discussion of CEQA 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?*

The South Fork of the Feather river runs adjacent to the project area, but no riparian habitats or other sensitive natural communities were identified within the project limits, therefore the proposed project would have no impact.

2.4.5 Discussion of CEQA 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?*

A wetland in the project area is outside the active work area, therefore, there would be no potential waters of the U.S. and State around the active construction, and a wetland delineation is not necessary.

2.4.6 Discussion of Question 2.4d—Biological Resources

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

No migratory fish or wildlife were identified in the project area. During nesting surveys, nests were found on the underside of the bridge deck for both Kingvale and Troy undercrossing. Mud nests were identified but no birds were found. Caltrans would contact the CDFW and the USFWS regarding appropriate action in order to comply with the Migratory Bird Treaty Act and California Endangered Species Act. If a lapse in project-related work of fifteen days or longer occurred, another survey and, if required, consultation with the CDFW would be required before the work could be reinitiated, therefore the proposed project would have less than significant impact on migratory bird nests.

2.4.7 Discussion of CEQA Question 2.4e—Biological Resources

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

The proposed project does not conflict with any local polices or ordinances protecting biological resources.

2.4.8 Discussion of Question 2.4f—Biological Resources

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

The proposed project does not conflict with an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other local/regional habitat conservation plan.

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

2.5 Cultural Resources

Question	Potentially Significant Impact	Less Than Significant with Mitigation	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 Historical Property Survey Report (Caltrans 2021d).

The Area of Potential Effects (APE) was established as the maximum limits of all potential ground-disturbing construction activities associated with the proposed work, including but not limited to, all existing and proposed new right of way, temporary construction easements, utility relocations, access roads, and equipment storage areas. The APE for the proposed project consists of an existing right of way between the project postmile limits, which varies in width from approximately 400 to 1000 feet. The length of the APE is 3.90 miles and totals 198.6 acres. The estimated maximum depth of ground disturbance is four feet. Results indicated that six previous cultural resources studies were conducted within the APE. The resources identified in the project area are not significant resources, therefore no historic properties are impacted.

2.6 Energy

Question	Potentially Significant Impact	Less Than Significant with Mitigation	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?				✓

2.6.1 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.

2.6.2 Environmental Setting

A project-level analysis of energy uses data is used to derive project energy consumption. Energy in a resource context generally pertains to the use or conservation of fossil fuels, which are a finite resource. Transportation energy is generally described in terms of direct and indirect energy.

2.6.3 Discussion of CEQA 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?

Table 2 below contains a summary of all long-term operational energy consumption associated with the proposed project.

Table 2: Long-Term Fuel Consumption

Scenario/ Analysis Year	Daily Vehicles Miles of Travel	Annual Average Daily Traffic		Fuel Consumption (gallons/day)	
		Truck	Non-Truck	Diesel	Gasoline
Baseline Year, 2019					
	19,020	3,004	15,850	969.276	2,255.182
Opening Year, 2026					
No-build Alternative	19,800	3,127	16,500	992.831	1,910.170
Build Alternatives	19,800	3,127	16,500	1,000.577	1,928.543
Design Year, 2046					
No-build Alternative	21,660	3,420	18,050	965.332	1,511.113
Build Alternatives	21,660	3,420	18,050	985.978	1,531.333

The construction of truck climbing lanes at the EB lanes on Interstate 80 would not increase vehicle capacity within the proposed project area. The fuel consumption from the build alternative during the future years would be higher than that from the no-build alternative due to changes in speed. The overall fuel consumption during the future years would increase in comparison with that during the existing condition due to increases in daily vehicles miles traveled and annual average daily traffic. In order to decrease the consumption of diesel fuels, the application of newer and more fuel-efficient truck vehicles would result in an overall lower potential for an increase in energy consumption.

Table 3 below summarizes estimates of average fuel and electricity consumption generated by construction work for the project.

Table 3: Short-Term Fuel and Electricity Consumption

Construction year	Fuel Consumption (gallons)		Electricity (kWh)
	Diesel Equipment	Gasoline Equipment	Electric Equipment
2023	18,685	3,846	32.425
2024	67,836	16,795	1,024.481
2025	27,987	14,904	1,804.568
Total	**114,508**	**35,545**	**2,861.474**

The proposed project construction would primarily consume diesel and gasoline through operation of heavy-duty construction equipment, material deliveries, and debris hauling. As indicated above, energy use associated with proposed project construction is estimated to result in the total short-term consumption of 114,508 gallons from diesel-powered equipment, 35,545 gallons from gasoline-powered equipment, and 2,861 kWh from electric-powered equipment. This demand would cease once construction was complete. Moreover, construction-related energy consumption would be temporary and not a permanent new source of energy demand, and demand for fuel would have no noticeable effect on peak or baseline demands for energy. While construction would result in a short-term increase in energy use, energy-saving measures (see Minimization Measures below) would help conserve energy, therefore the proposed project would have a less than significant impact.

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

The proposed project would not conflict with or obstruct a state or local plan for renewable energy.

2.6.4 Minimization Measures

The proposed project would result in a short-term increase in energy use and the following measures would be implemented when practical:

- Use recycled and energy-efficient building materials, energy-efficient tools and construction equipment, and renewable energy sources in construction and operation of the project.
- Improve operations and maintenance practices by regularly checking and maintaining equipment to ensure its functioning efficiently.
- Optimize start-up time, power-down time, and equipment sequencing.
- Revise janitorial practices to reduce the hours that lights are turned on each day.
- Visually inspect insulation on all piping, ducting, and equipment for damage (tears, compression, stains, etc.).
- Educate employees about how their behaviors affect energy use.
- Ensure that team members are trained in the importance of energy management and basic energy-saving practices. Hold staff meetings on energy use, costs, objectives, and employee responsibilities.

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

2.7 Geology and Soils

Question	Potentially Significant Impact	Less Than Significant with Mitigation	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?				✓

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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?				✓
Would the project: e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?				✓
Would the project: f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?				✓

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project, as well as field reviews conducted. Potential impacts to geology and soils are not anticipated because no faults, unstable geologic units or soil, or expansive soil were identified within the project limits.

2.8 Greenhouse Gas Emissions

Question	Potentially Significant Impact	Less Than Significant with Mitigation	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?			✓	

2.8.1 Climate Change

Climate change refers to long-term changes in temperature, precipitation, wind patterns, and other elements of the earth's climate system. An ever-increasing body of scientific research attributes these climatological changes to greenhouse gas (GHG) emissions, particularly those generated from the production and use of fossil fuels.

While climate change has been a concern for several decades, the establishment of the Intergovernmental Panel on Climate Change (IPCC) by the United Nations and World Meteorological Organization in 1988 led to increased efforts devoted to GHG emissions reduction and climate change research and policy. These efforts are primarily concerned with the emissions of GHGs generated by human activity, including carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), tetrafluoromethane, hexafluoroethane, sulfur hexafluoride (SF_6), and various hydrofluorocarbons (HFCs). CO_2 is the most abundant GHG; while it is a naturally occurring component of Earth's atmosphere, fossil-fuel combustion is the main source of additional human-generated CO_2.

Two terms are typically used when discussing how we address the impacts of climate change: "greenhouse gas mitigation" and "adaptation." Greenhouse gas mitigation covers the activities and policies aimed at reducing GHG emissions to limit or "mitigate" the impacts of climate change. Adaptation, on the other hand, is concerned with planning for and responding to impacts resulting from climate change (such as adjusting transportation design standards to withstand more intense storms and higher sea levels). This analysis will include a discussion of both.

2.8.2 Regulatory Setting

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

FEDERAL

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

The National Environmental Policy Act (NEPA) (42 United States Code [USC] Part 4332) requires federal agencies to assess the environmental effects of their proposed actions prior to making a decision on the action or project.

The Federal Highway Administration (FHWA) recognizes the threats that extreme weather, sea-level change, and other changes in environmental conditions pose to valuable transportation infrastructure and those who depend on it. FHWA, therefore, supports a sustainability approach that assesses vulnerability to climate risks and incorporates resilience into planning, asset management, project development and design, and operations and maintenance practices (FHWA 2019). This approach encourages planning for sustainable highways by addressing climate risks, while balancing environmental, economic, and societal 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.

Various efforts have been promulgated at the federal level to improve fuel economy and energy efficiency to address climate change and its associated effects. The most important of these was the *Energy Policy and Conservation Act of 1975 (42 USC Section 6201*) and *Corporate Average Fuel Economy (CAFE) Standards*. This act establishes fuel economy standards for on-road motor vehicles sold in the United States. Compliance with federal fuel economy standards is determined through the CAFE program based on each manufacturer's average fuel economy for the portion of its vehicles produced for sale in the United States.

Energy Policy Act of 2005, 109th Congress H.R.6 (2005–2006): This act sets forth an energy research and development program covering: (1) energy efficiency; (2) renewable energy; (3) oil and gas; (4) coal; (5) the establishment of the Office of Indian Energy Policy and Programs within the Department of Energy; (6) nuclear matters and security; (7) vehicles and motor fuels, including ethanol; (8) hydrogen; (9) electricity; (10) energy tax incentives; (11) hydropower and geothermal energy; and (12) climate change technology.

The U.S. EPA, in conjunction with the National Highway Traffic Safety Administration (NHTSA), is responsible for setting GHG emission standards for new cars and light-duty vehicles to significantly increase the fuel economy of all new passenger cars and light trucks sold in the United States. Fuel efficiency standards directly influence GHG emissions.

STATE

California has been innovative and proactive in addressing GHG emissions and climate change by passing multiple Senate and Assembly bills and executive orders (EOs) including, but not limited to, the following:

EO S-3-05 (June 1, 2005): The goal of this EO is to reduce California's GHG emissions to: (1) year 2000 levels by 2010, (2) year 1990 levels by 2020, and (3)

80 percent below year 1990 levels by 2050. This goal was further reinforced with the passage of Assembly Bill (AB) 32 in 2006 and Senate Bill (SB) 32 in 2016.

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

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

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

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

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

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

EO B-30-15 (April 2015): Establishes an interim statewide GHG emission reduction target of 40 percent below 1990 levels by 2030 to ensure California meets its target of reducing GHG emissions to 80 percent below 1990 levels by 2050. It further orders all state agencies with jurisdiction over sources of GHG emissions to implement measures, pursuant to statutory authority, to achieve reductions of GHG emissions to meet the 2030 and 2050 GHG emissions reductions targets. It also directs the CARB to update the Climate Change Scoping Plan to express the 2030 target in terms of million metric tons of carbon dioxide equivalent (MMTCO2e).[1] Finally, it requires the Natural Resources Agency to update the state's climate adaptation strategy, *Safeguarding California*, every 3 years, and to ensure that its provisions are fully implemented.

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

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

[1] GHGs differ in how much heat each trap in the atmosphere (global warming potential or GWP). CO_2 is the most important GHG, so amounts of other gases are expressed relative to CO_2, using a metric called "carbon dioxide equivalent" (CO_2e). The global warming potential of CO_2 is assigned a value of 1, and the GWP of other gases is assessed as multiples of CO_2.

expenditures, or grant criteria relating to the protection and management of natural and working lands."

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

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

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

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

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

EO N-79-20 (September 2020): Establishes goals for 100 percent of in-state sales of new passenger cars and trucks to be zero-emissions vehicles by 2035,

that the state transition to 100 percent zero-emission off-road vehicles and equipment by 2035 where feasible, and that 100 percent of medium- and heavy-duty vehicles in the state be zero-emissions by 2045 where feasible.

2.8.3 Environmental Setting

The proposed project is located on EB I-80 at postmile (PM) 0.0 to 2.7 in Nevada County and at PM 68.5 to 69.7 in Placer County, within the Tahoe National Forest. Within the project limits, I-80 is a 4-lane freeway divided by unpaved median. This section of freeway is in the Sierra Mountain region of District 3 and receives heavy recreation and victor travel from both San Francisco Bay area and the Sacramento region. It also experiences heavy truck traffic and chain wear during the winter months.

The Nevada County Transportation Commission and Placer County Transportation Planning Agency guides transportation development in the project area. The Nevada County General Plan circulation and safety elements (NCTC 2012,2020) also address GHGs and climate change in the project arear.

A GHG emissions inventory estimates the amount of GHGs discharged into the atmosphere by specific sources over a period of time, such as a calendar year. Tracking annual GHG emissions allows countries, states, and smaller jurisdictions to understand how emissions are changing and what actions may be needed to attain emission reduction goals. The U.S. EPA is responsible for documenting GHG emissions nationwide, and the CARB does so for the state, as required by H&SC Section 39607.4.

NATIONAL GHG INVENTORY

The U.S. EPA prepares a national GHG inventory every year and submits it to the United Nations in accordance with the Framework Convention on Climate Change (see Figure 3). The inventory provides a comprehensive accounting of all human-produced sources of GHGs in the United States, reporting emissions of CO_2, CH_4, N_2O, HFCs, perfluorocarbons, SF_6, and nitrogen trifluoride. It also accounts for emissions of CO_2 that are removed

from the atmosphere by "sinks," such as forests, vegetation, and soils that uptake and store CO_2 (carbon sequestration). The 1990–2019 inventory found that overall, GHG emissions were 6,558 million metric tons (MMT) in 2019, down 1.7 percent from 2018 but up 1.8 percent from 1990 levels. Of these, 80 percent were CO_2, 10 percent were CH_4, and 7 percent were N_2O; the balance consisted of fluorinated gases. CO_2 emissions in 2019 were 2.2 percent less than in 2018, but 2.8 percent more than in 1990. As shown in Figure 3, the transportation sector accounted for 29 percent of U.S. GHG emissions in 2019 (U.S. EPA 2021a, 2021b).

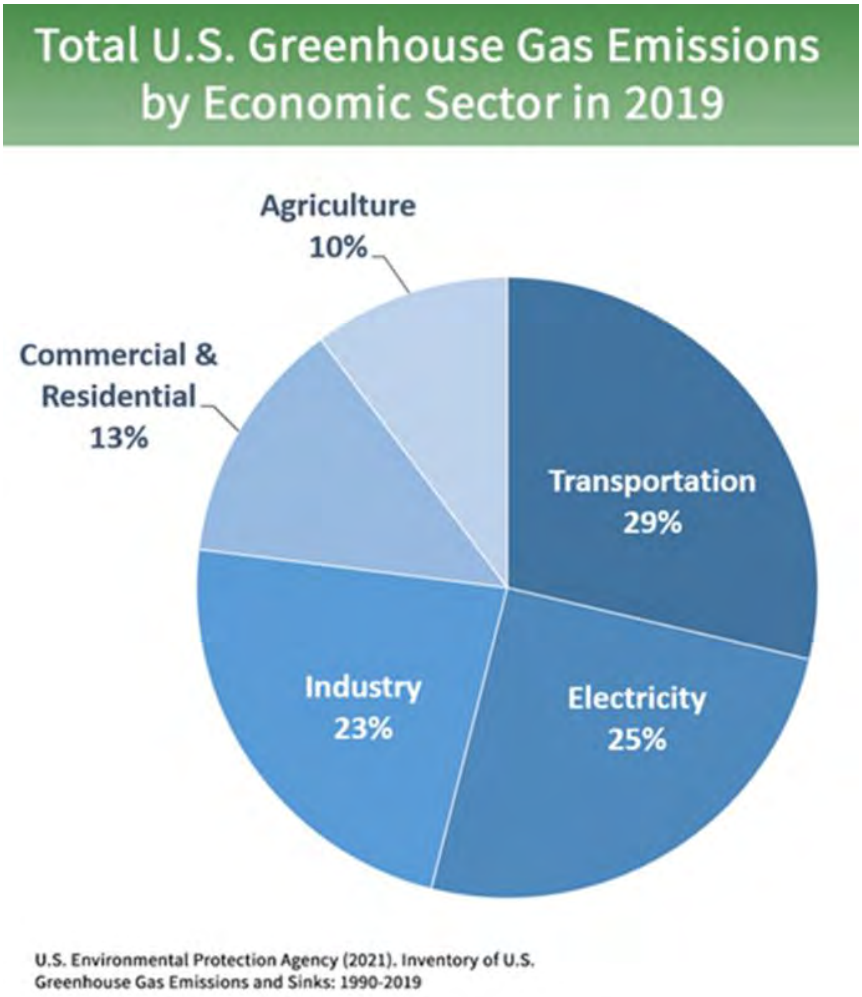

Figure 3. U.S. 2019 Greenhouse Gas Emissions (source: U.S. EPA 2021c)

STATE GHG INVENTORY

The CARB collects GHG emissions data for transportation, electricity, commercial/residential, industrial, agricultural, and waste management sectors each year. It then summarizes and highlights major annual changes and trends to demonstrate the state's progress in meeting its GHG reduction goals. The 2021 edition of the GHG emissions inventory reported emissions trends from 200 to 2019. It found total California emissions were 418.2 $MMTCO_2e$ in 2019, a reduction of 7.2 $MMTCO_2e$ since 2018 and almost 13 $MMTCO_2e$ below the statewide 2020 limit of 431 $MMTCO_2e$. The transportation sector (including interstate aviation and off-road sources) was responsible for about 40 percent of direct GHG emissions, a 3.5 $MMTCO_2e$ decrease from 2018 (Figure 4). Overall statewide GHG emissions declined from 2000 to 2019 despite growth in population and state economic output (Figure 5) (CARB 2021a).

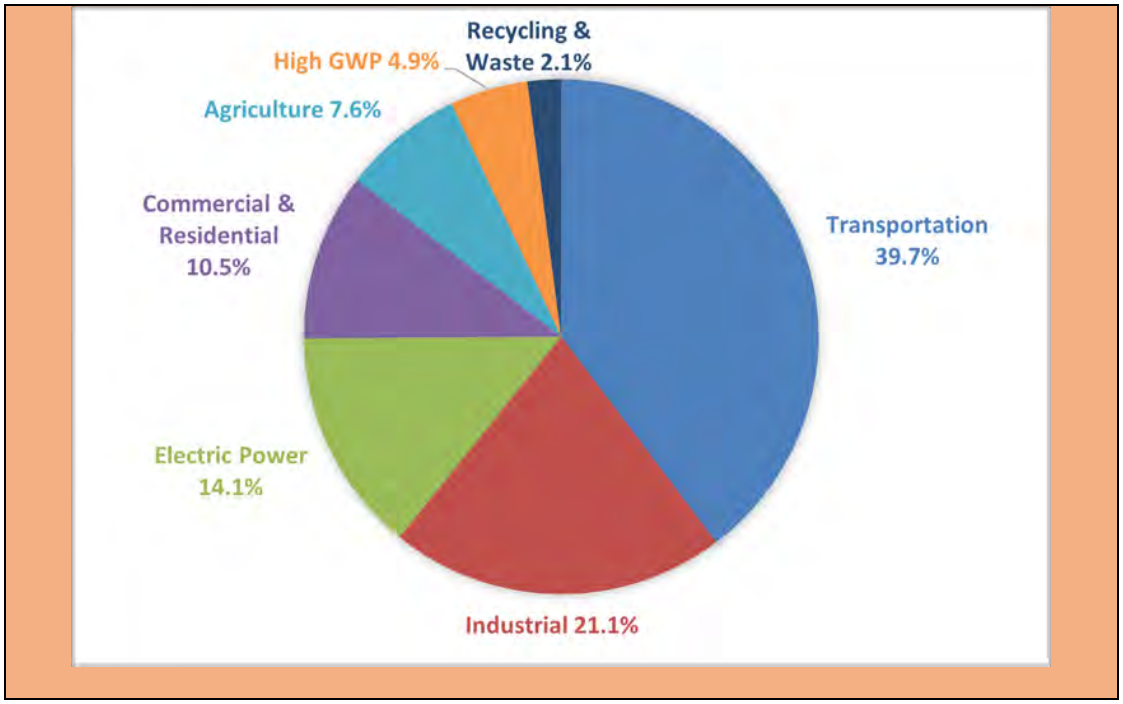

Figure 4. California 2019 Greenhouse Gas Emissions by Economic Sector (Source: ARB 2021a)

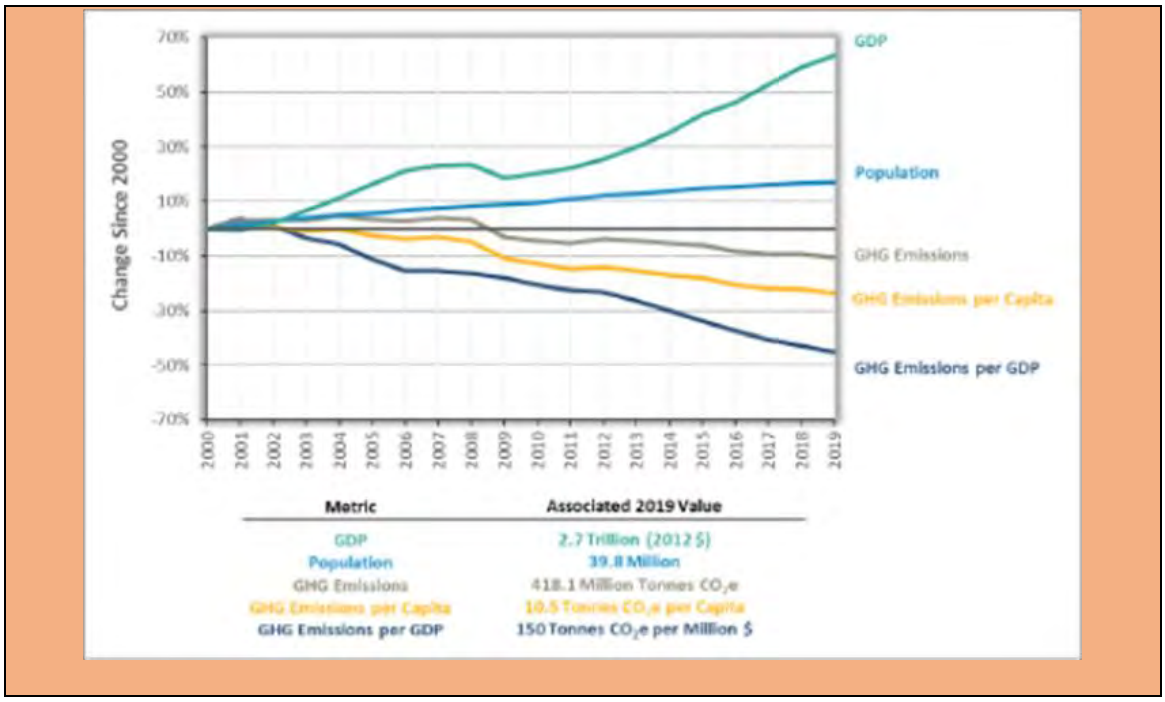

Figure 5. Change in California GDP, Population, and GHG Emissions Since 2000 (Source: CARB 2021a)

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 CARB adopted the first scoping plan in 2008. The second updated plan, *California's 2017 Climate Change Scoping Plan*, adopted on December 14, 2017, reflects the 2030 target established in EOB-30-15 and SB 32. The AB 32 Scoping Plan and the subsequent updates contain the main strategies California will use to reduce GHG emissions.

REGIONAL PLANS

ARB sets regional targets for California's 18 MPOs to use in their Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) to plan future projects that will cumulatively achieve GHG reduction goals. Targets are set at a percent reduction of passenger vehicle GHG emissions per person from 2005 levels. The proposed project spans the jurisdictions of the Placer County Transportation Planning Agency (PCTPA) and the Nevada County Transportation Commission (NCTC) both of which are regional transportation planning agencies that produce their own RTPs but are not required to produce an SCS. The Sacramento Area Council of Governments (SACOG) is the MPO for the six-county region that includes Placer County (but not Nevada County). CARB's GHG reduction targets for SACOG is currently 19 percent by 2035 (CARB 2019). The PCTPA coordinates with SACOG to ensure PCTPA's RTP is consistent with and supports the regional plan.

PCTPA's 2036 RTP supports projects that reduce vehicle trips and GHG and air quality emissions, such as those that accommodate travel by transit, bicycle, and pedestrian modes. The RTP's Air Quality Action Plan short- and long-range goals include the following (PCTPA 2016: 7-19–7-21):

- Prioritize and recommend transportation projects that minimize vehicle emissions while providing cost effective movement of people and goods.
- Ensure transportation planning efforts comply with SB375 and AB32.
- Encourage jurisdictions and Caltrans to develop a green construction policy, the recycling of construction debris to the maximum extent

feasible, and to use the minimum feasible amount of GHG emitting materials in the construction of transportation projects.

- Encourage jurisdictions and Caltrans to use lighter colored pavement with increased reflectivity in pavement rehabilitation projects, to reduce the urban heat island effect.
- Encourage jurisdictions and Caltrans to protect, preserve, and incorporate trees and natural landscaping into transportation projects to provide shade, buffer winds, encourage people to walk, and to sequester CO_2.

The NCTC 2015–2035 RTP includes Goal G6-P3, reduce greenhouse gas emissions and other air pollutants. This goal has a performance target of reducing GHG emissions in the county by 2.5 percent per year (NCTC 2018).

The Nevada County General Plan addresses climate change and GHG emissions in its circulation and safety elements. The Circulation Element contains Goal EP-4.3, *to the extent feasible, encourage the reduction of Greenhouse Gas emissions during the design phase of construction projects*; and Goal EP-4.4, to the extent feasible, encourage the development of energy efficient circulation patterns. The Safety Element contains Goal CC-10.13, Build Climate-Resilient Communities and Protect Neighborhoods, Public Infrastructure, and Natural Resources Through Mitigating Climate Change.

2.8.4 Project Analysis

GHG emissions from transportation projects can be divided into those produced during operation of the State Highway System (SHS) and those produced during construction. The primary GHGs produced by the transportation sector are CO_2, CH_4, N_2O, and HFCs. CO_2 emissions are a product of the combustion of petroleum-based products, such as gasoline, in internal combustion engines. Relatively small amounts of CH_4 and N_2O are emitted during fuel combustion. In addition, a small amount of HFC emissions are included in the transportation sector.

The CEQA Guidelines generally address greenhouse gas emissions as a cumulative impact due to the global nature of climate change (Public Resources Code § 21083(b)(2)). As the California Supreme Court explained, "because of the global scale of climate change, any one project's contribution is unlikely to be significant by itself." (Cleveland National Forest Foundation *v.* San Diego Assn. of Governments (2017) 3 Cal.5th 497, 512.) In assessing cumulative impacts, it must be determined if a project's incremental effect is "cumulatively considerable" (CEQA Guidelines §§ 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 restore the facility to a state of good repair and provide efficient movement of people and goods through pavement and culvert rehabilitation on a 3.9 mile portion of Interstate 80 (I-80) in Placer and Nevada counties. The addition of the truck climbing lanes will not increase the vehicle capacity of the roadway since they are not through lanes and they will improve traffic control and safety. 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-80, therefore, the construction of the proposed project will not increase vehicle miles travelled (VMT). While some short term GHG emissions during construction period would be unavoidable, there will not be an increase in operational GHG emissions.

CONSTRUCTION EMISSIONS

Construction GHG emissions would result from material processing, on-site construction equipment, and traffic delays due to construction. These emissions would be produced at different levels throughout the construction phase. Their frequency and occurrence could be reduced through innovations in plans and

specifications and by implementing better traffic management during construction phases.

In addition, with innovations such as longer pavement lives, improved traffic management plans, and changes in materials, the GHG emissions produced during construction could be offset to some degree by longer intervals between maintenance and rehabilitation activities.

The Caltrans Construction Emission Tool (CAL-CET2018 version 1.3) was used to estimate average carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and hydrofluorocarbons (HFCs) emissions from construction activities. The estimated emissions would be 584 tons of CO_2, 0.014 CH_4, 0.029 N_2O, and 0.03 HFCs over a period of 490 working days (Caltrans 2021f).

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

2.8.5 CEQA Conclusion

While the proposed project will result in GHG emissions during construction, the project will not result in any increase in operational GHG emissions. The proposed project does not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases. While GHG emissions are less than significant, GHG reduction measures will be incorporated into the construction contract of the proposed project.

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

2.8.6 Greenhouse Gas Reduction Strategies

STATEWIDE EFFORTS

Major sectors of the California economy, including transportation, will need to reduce emissions to meet the 2030 and 2050 GHG emissions targets. Former Governor Edmund G. Brown promoted GHG reduction goals (see Figure 5) that involved (1) reducing today's petroleum use in cars and trucks by up to 50 percent; (2) increasing from one-third to fifty percent our electricity derived from renewable sources; (3) doubling the energy efficiency savings achieved at existing buildings and making heating fuels cleaner; (4) reducing the release of methane, black carbon, and other short-lived climate pollutants; (5) managing farms and rangelands, forests, and wetlands so they can store carbon; and (6) periodically updating the state's climate adaptation strategy, *Safeguarding California*.

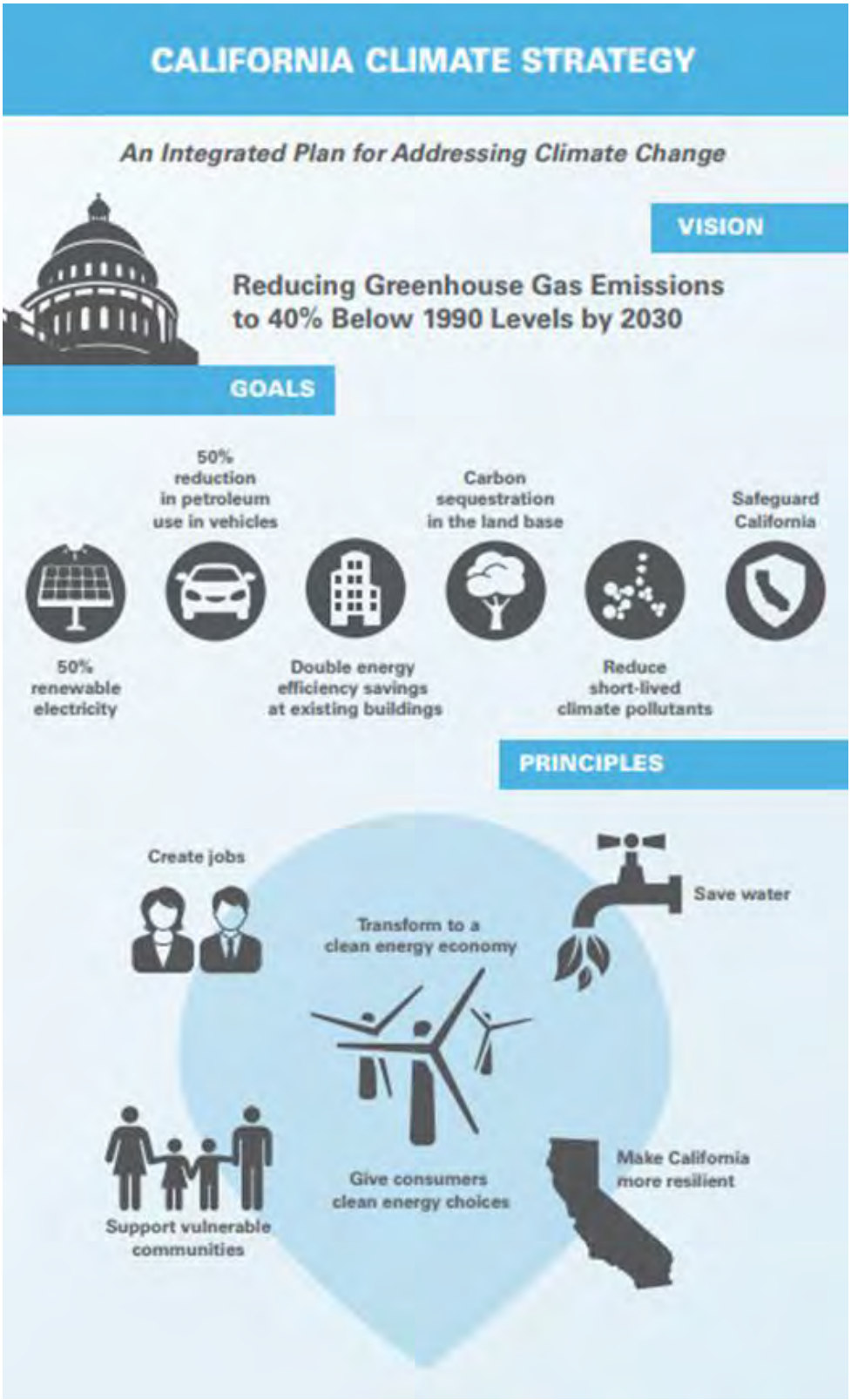

Figure 6. California Climate Strategy

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 result in the reduction of vehicle miles traveled (VMT). A key state goal for reducing GHG emissions is to reduce today's petroleum use in cars and trucks by up to 40 percent by 2030 (California Environmental Protection Agency 2015).

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

Subsequently, Governor Gavin Newsom issued Executive Order N-82-20 to combat the crises in climate change and biodiversity. It instructs state agencies to use existing authorities and resources to identify and implement near- and long-term actions to accelerate natural removal of carbon and build climate resilience in our forests, wetlands, urban greenspaces, agricultural soils, and land conservation activities in ways that serve all communities and, in particular, low-income, disadvantaged, and vulnerable communities. Each agency is to develop a Natural and Working Lands Climate Smart Strategy that serves as a framework to advance the State's carbon neutrality goal and build climate resilience.

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:

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 2021k).

SB 391 (Liu 2009) requires the CTP to meet California's climate change goals under AB 32. Accordingly, the CTP identifies the statewide transportation system needed to achieve maximum feasible GHG emission reductions while meeting the state's transportation needs. While MPOs have primary responsibility for identifying land use patterns to help reduce GHG emissions, the CTP identifies additional strategies.

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 2021l).

Funding and Technical Assistance Programs

In addition to developing plans and performance targets to reduce GHG emissions, Caltrans also administers several sustainable transportation planning grants. These grants encourage local and regional multimodal transportation, housing, and land use planning that furthers the region's RTP/SCS; contribute to the State's GHG reduction targets and advance transportation-related GHG emission reduction project types/strategies; and support other climate adaptation goals (e.g., *Safeguarding California*).

Caltrans Policy Directives and Other Initiatives

Caltrans Director's Policy 30 (DP-30) Climate Change (June 22, 2012) established a Department policy to ensure coordinated efforts to incorporate climate change into Departmental decisions and activities. *Caltrans Activities to Address Climate Change* (April 2013) provides a comprehensive overview of Caltrans' statewide activities to reduce GHG emissions resulting from agency operations.

Project-Level Greenhouse Gas Reduction Strategies

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

- The construction contractor must comply with the 2018 Caltrans' Standard Specifications Section 14-9. Section 14-9.02 specifically requires compliance by the contractor with all applicable laws and regulations related to air quality. Certain common regulations, such as equipment idling restrictions, that reduce construction vehicle emissions also help reduce GHG emissions.

- Caltrans' Standard Specification 7-1.02C "Emissions Reduction" ensures that construction activities adhere to the most recent emissions reduction regulations mandated by the California ARB.
- Compliance with Title 13 of the California Code of Regulations, which includes restricting idling of construction vehicles and equipment to no more than 5 minutes.
- Utilize a traffic management plan to minimize vehicle delays and idling emissions. Anticipated traffic control will have an estimated maximum delay of 10 minutes during reversing control and 20 minutes during intermittent closure. During k-rail placement and tie-in construction operations, public traffic may be stopped in both directions for periods not to exceed 5 minutes. After each closure, all accumulated traffic must be allowed to pass through the work zone before another closure is made.
- Construction traffic would be scheduled and routed to reduce congestion and related air quality impacts caused by idling vehicles along local roads during peak travel times.
- Design features and additional methods to adjust the posted speed limit to the optimum speed for less GHG emissions. GHG reductions may be achieved by enforcing the speed limit on highways.

2.8.7 Adaptation Strategies

Reducing GHG emissions is only one part of an approach to addressing climate change. Caltrans must plan for the effects of climate change on the state's transportation infrastructure and strengthen or protect the facilities from damage. Climate change is expected to produce increased variability in precipitation, rising temperatures, rising sea levels, variability in storm surges and their intensity, and in the frequency and intensity of wildfires. Flooding and erosion can damage or wash out roads; longer periods of intense heat can buckle pavement and railroad tracks; storm surges, combined with a rising sea level, can inundate highways. Wildfire can directly burn facilities and indirectly

cause damage when rain falls on denuded slopes that landslide after a fire. Effects will vary by location and may, in the most extreme cases, require a facility be relocated or redesigned. Accordingly, Caltrans must consider these types of climate stressors in how highways are planned, designed, built, operated, and maintained.

FEDERAL EFFORTS

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

The U.S. Global Change Research Program (USGCRP) delivers a report to Congress and the President every four years, in accordance with the Global Change Research Act of 1990 (15 U.S.C. Ch. 56A § 2921 et seq.). The Fourth National Climate Assessment, published in 2018, presents the foundational science and the "human welfare, societal, and environmental elements of climate change and variability for 10 regions and 18 national topics, with particular attention paid to observed and projected risks, impacts, consideration of risk reduction, and implications under different mitigation pathways." Chapter 12, "Transportation," presents a key discussion of vulnerability assessments. It notes that "asset owners and operators have increasingly conducted more focused studies of particular assets that consider multiple climate hazards and scenarios in the context of asset-specific information, such as design lifetime" (USGCRP 2018).

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

FHWA Order 5520 (*Transportation System Preparedness and Resilience to Climate Change and Extreme Weather Events, December 15, 2014*) established FHWA policy to strive to identify the risks of climate change and extreme

weather events to current and planned transportation systems. FHWA has developed guidance and tools for transportation planning that foster resilience to climate effects and sustainability at the federal, state, and local levels (FHWA 2019).

STATE EFFORTS

Climate change adaptation for transportation infrastructure involves long-term planning and risk management to address vulnerabilities in the transportation system. *California's Fourth Climate Change Assessment* (2018) is the state's effort to "translate the state of climate science into useful information for action" in a variety of sectors at both statewide and local scales. It adopts the following key terms used widely in climate change analysis and policy documents:

- *Adaptation* to climate change refers to adjustments in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities.
- *Adaptive capacity* is the "combination of the strengths, attributes, and resources available to an individual, community, society, or organization that can be used to prepare for and undertake actions to reduce adverse impacts, moderate harm, or exploit beneficial opportunities."
- *Exposure* is the presence of people, infrastructure, natural systems, and economic, cultural, and social resources in areas that are subject to harm.
- *Resilience* is the "capacity of any entity—an individual, a community, an organization, or a natural system—to prepare for disruptions, to recover from shocks and stresses, and to adapt and grow from a disruptive experience". Adaptation actions contribute to increasing resilience, which is a desired outcome or state of being.
- *Sensitivity* is the level to which a species, natural system, or community, government, etc., would be affected by changing climate conditions.
- *Vulnerability* is the "susceptibility to harm from exposure to stresses associated with environmental and social change and from the absence

> of capacity to adapt." Vulnerability can increase because of physical (built and environmental), social, political, and/or economic factors. These factors include, but are not limited to, ethnicity, class, sexual orientation and identification, national origin, and income inequality. Vulnerability is often defined as the combination of sensitivity and adaptive capacity as affected by the level of exposure to changing climate.

Several key state policies have guided climate change adaptation efforts to date. Recent state publications produced in response to these policies draw on these definitions.

EO S-13-08, issued by then-governor Arnold Schwarzenegger in November 2008, focused on sea-level rise, and resulted in the *California Climate Adaptation Strategy* (2009), updated in 2014 as *Safeguarding California: Reducing Climate Risk* (Safeguarding California Plan). The Safeguarding California Plan offers policy principles and recommendations and continues to be revised and augmented with sector-specific adaptation strategies, ongoing actions, and next steps for agencies.

EO S-13-08 also led to the publication of a series of sea-level rise assessment reports and associated guidance and policies. These reports formed the foundation of an interim *State of California Sea-Level Rise Interim Guidance Document* (SLR Guidance) in 2010, with instructions to state agencies on how to incorporate "sea-level rise (SLR) projections into planning and decision-making for projects in California" in a consistent way across agencies. The guidance was revised and augmented in 2013. *Rising Seas in California—An Update on Sea-Level Rise Science* was published in 2017, and its updated projections of sea-level rise and new understanding of processes and potential impacts in California were incorporated into the *State of California Sea-Level Rise Guidance Update* in 2018.

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

Research published *Planning and Investing for a Resilient California: A Guidebook for State Agencies* in 2017 to encourage a uniform and systematic approach. Representatives of Caltrans participated in the multi-agency, multidisciplinary technical advisory group that developed this guidance on how to integrate climate change into planning and investment.

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

CALTRANS ADAPTATION EFFORTS

Caltrans Vulnerability Assessments

Caltrans conducted climate change vulnerability assessments to identify segments of the State Highway System vulnerable to climate change effects including precipitation, temperature, wildfire, storm surge, and sea-level rise. The approach to the vulnerability assessments was tailored to the practices of a transportation agency, and involves the following concepts and actions:

- *Exposure*—Identify Caltrans assets exposed to damage or reduced service life from expected future conditions.
- *Consequence*—Determine what might occur to system assets in terms of loss of use or costs of repair.
- *Prioritization*—Develop a method for making capital programming decisions to address identified risks, including considerations of system use and/or timing of expected exposure.

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 will guide analysis of at-risk assets and development of adaptation plans to reduce the likelihood of damage to the State Highway System, allowing Caltrans to both reduce the costs of storm damage and to provide and maintain transportation that meets the needs of all Californians.

PROJECT ADAPTATION EFFORTS

Sea-Level Rise

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

Floodplains and Precipitation

According to the Federal Emergency Management Agency (FEMA) floodplain maps, the proposed project falls within a flood Zone D, an area where flood hazards are undetermined.

The Caltrans District 3 Climate Change Vulnerability Assessment (Caltrans 2019) anticipates the project area (and the District) will receive less precipitation overall in the future but arriving in heavier individual events. Mapping of future potential precipitation changes under various climate change scenarios shows that the project location could experience an increase in 100-year storm precipitation of between 9 percent and twelve percent through 2085 under a conservative (business-as-usual) GHG emissions scenario. (The 100-year flood design standard is commonly considered in the design of transportation assets.) No bodies of water were identified in the proposed project area. Drainage features typical to this corridor includes stabilized shoulder backing, vegetated and fill and cut slopes, vegetated roadside ditches, cross culverts, curb and gutter, sand vaults, vegetated basins, and RSP infiltration areas.

Wildfire

The proposed project is in a State Responsibility Area that the California Department of Forestry and Fire protect (CalFire) maps as a very high fire hazard severity zone. The Caltrans District 3 Climate Change Vulnerability Assessment maps it as exposed roadway in a zone of high wildfire concern from 2021 through 2085. Project design features would rehabilitate the 10-foot wide shoulders on both directions of the highway that would help prevent the spread of wildfires. During construction, Caltrans would implement Caltrans 2018 revised Standard Specification 7-1.02M (2), which mandates fire prevention procedures during construction, including a fire prevention plan. The proposed scope of work would not introduce new structures or features that would more vulnerable to wildfire than the current infrastructure. The project is not anticipated to exacerbate the impacts of wildfires intensified by climate change.

2.9 Hazards and Hazardous Materials

Question	Potentially Significant Impact	Less Than Significant with Mitigation	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?				✓

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

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project, as well as the Initial Site Assessment Memo (Caltrans 2021f). Potential impacts to hazardous waste are not anticipated due to the fact that no altered ultramafic bedrock, alluvium derived from ultramafic rock, or other rock commonly associated with Naturally Occurring Asbestos are present at the project site. The proposed project is not within or impacting any site on the Cortese List. The proposed project is not within 2 miles of an airport and does not interfere with any emergency plans. To prevent lead, thermoplastic paint, and treated wood waste, Caltrans would adhere to the standard special provisions outlined in the plans, specifications, and estimate package.

2.10 Hydrology and Water Quality

Question	Potentially Significant Impact	Less Than Significant with Mitigation	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	Potentially Significant Impact	Less Than Significant with Mitigation	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?			✓	

2.10.1 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 Sections 1600–1607 of the California Fish and Game Code (CFGC)
- State Porter-Cologne Water Quality Control Act, § 13000 et seq.

2.10.2 Environmental Setting

The majority of the proposed project would take place in the Yuba River Hydrologic Unit. The American River Hydrologic Unit is also within the project area in a limited capacity. Drainage features typical to this corridor include the following: stabilized shoulder backing, vegetated fill and cut slopes, vegetated roadside ditches, cross culverts, curb and gutter, sand vaults, vegetated basins, and rock slope protection infiltration areas. The nearest receiving waters to the project area are the Yuba River (South Fork), Kidd

Lake, and Cascade Lake. The elevation of this project ranges from approximately 6200 to 6800 feet.

2.10.3 Discussion of CEQA 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?

Construction-related activities would result in surface disturbances with the potential to violate water quality standards and waste discharge requirements (WDRs) if sediment or contaminant-laden runoff from work areas enters storm drains or other pathways leading to receiving waters. However, it is anticipated that the project would be regulated under the Construction General Permit (CGP), and appropriate compliance measures would be implemented to avoid discharges and potential water quality threats within the project area. As an example, compliance with the CGP requires a risk level analysis based on the project's potential erosion and transport to receiving waters. The results of this analysis would be utilized to determine standard water quality protection measures (to be implemented) in order to avoid surface and groundwater quality degradation during construction operations. It is anticipated that BMP usage, placement, field implementation, and effectiveness would be monitored, adjusted, and modified (accordingly) for the duration of the project. Compliance with all applicable NPDES Permits, in addition to coordination with the Regional Water Quality Board, is expected to ensure the protection of water resources in the area, therefore the proposed project would have less than significant impact on water quality standards.

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?

The intended use of the facility and potential pollutants that would be encountered in stormwater runoff, after the project is constructed, is not anticipated to change from its current condition. The groundwater elevation within this corridor historically fluctuates but is not anticipated to permanently impact proposed drainage appurtenances, storm water treatment, or other design features. Additionally, due to excavation occurring on a temporary and short-term basis, during the construction period, groundwater resources should not be affected, and it is not anticipated that the project would negatively impact regional sustainable groundwater management (within the project vicinity).

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?

Compliance with the Construction General Permit (GCP) is anticipated to address the implementation of minimization and avoidance measures. It is expected that standard construction erosion control measures would be utilized to avoid erosion and siltation for the duration of project activities. BMP measures and field implementation strategies would be outlined in the Contractor prepared report and Caltrans approved SWPPP. These would likely include temporary soil stabilization measures, linear sediment barriers (i.e., silt fence, gravel bag berms, fiber rolls), and construction site waste management (i.e., concrete washout, construction materials storage, litter/waste management), among other approved controls. The proposed project would have a less than significant impact on erosion and siltation.

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

The proposed project would not increase the surface runoff and would not result in flooding; therefore, the proposed project would have no impact.

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

The proposed project would not create or contribute runoff water and existing drainage systems would be maintained; therefore, the proposed project would have no impact.

(iv) impede or redirect flood flows?

Hydraulics determined the proposed project would not impede or redirect flood flows. therefore, the proposed project would have no impact.

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

The proposed project does not fall within a High-Risk Receiving Watershed area and is not located in a flood hazard risk area; therefore, the proposed project would have no impact.

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

It is expected that temporary impacts that may occur to localized water quality and groundwater would be minimized and/or avoided through the use of Best Management Practices and NPDES permit (i.e., CGP and Caltrans' MS4) compliance practices. The implementation of water quality measures, meant to promote storm water infiltration practices and low impact development, is anticipated. Additionally, due to excavation occurring on a temporary and short-term basis during the construction period, groundwater resources should not be affected to any great extent or degree, therefore the proposed project would have a less than significant impact.

2.10.4 Minimization and Avoidance Measures

Caltrans would adhere to the best management practices (BMPs) that are typically implemented and common for projects having similar scopes of work, and field operations include (but are not limited to) the following: concrete washouts and bins, drainage inlet protection, plastic covering, straw wattles, silt fencing, waste management and disposal bins, stabilized construction vehicle ingress and egress points, vacuum trucks, and pavement sweepers.

In addition to the above, the following are recommendations to avoid water quality impacts and ensure NPDES permit compliance for the duration of the proposed project:

1. Project work and operations within the State's right-of-way are required to follow the conditions of Caltrans' Statewide NPDES Permit, issued by the State Water Resources Control Board (Order No. 2012-0011-DWQ, NPDES Permit No. CAS000003), on September 19, 2012. This statewide permit regulates storm water and non-storm water discharges from Caltrans' properties and facilities, and discharges associated with operation and maintenance of the State highway system. Caltrans facilities include, but are not limited to, maintenance stations/yards, equipment storage areas, storage facilities, fleet vehicle parking and maintenance areas, and warehouses with material storage areas.

2. Projects that disturb one or more acres of land surface or are part of a larger common plan of development or sale that disturbs more than one acre of land surface are regulated under the Statewide NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Order No. 2009-0009-DWQ, NPDES No. CAS000002), also referred to as the Construction General Permit (CGP). The CGP contains a risk-based permitting approach by establishing three levels of risk possible for a construction site. Risk levels are determined during the planning, design, and

construction phases, and are based on project risk of generating sediments and receiving water risk of becoming impaired.

3. Culvert lining involving styrene requires that no water can be present within the work area. Any deviation of this requirement could result in a violation notice, penalties, discharge fees, and work delays imposed by the governing regulatory agencies.

4. Adherence to the following is required in order to prevent receiving water pollution as a result of construction activities and/or operations from this project:

    a. Follow all applicable guidelines and requirements in the 2018 Caltrans Standard Specifications (2018 CSS), Section 13, regarding water pollution control and general specifications for preventing, controlling, and abating water pollution to Department owned Municipal Separate Storm Sewer Systems (MS4s), streams, waterways, and other bodies of water.

    b. The Contractor prepared Storm Water Pollution Prevention Plan (SWPPP) or Water Pollution Control Program (WPCP) shall incorporate appropriate temporary Construction Site BMPs to implement effective handling, storage, use and disposal practices during construction activities.

    c. Focus and attention during construction should be given to 2018 CSS, Section 13-4 (Job Site Management), to control potential sources of water pollution before it encounters any MS4 or watercourse. It requires the Contractor to implement spill prevention and controls; materials, waste, and non-storm management controls; and manage dewatering activities at the construction site.

    d. Existing drainage facilities should be identified and protected by the application of appropriate temporary Construction Site BMPs.

e. If and where applicable, shoulder backing areas should be stabilized by Temporary Construction Site BMPs, or rolled and compacted in place, by the end of each day and prior to the onset of precipitation.

5. The Caltrans' Storm Water Management Plan (SWMP), the Project Planning and Design Guide (PPDG) Section 4, and the Evaluation Documentation Form (EDF) provide detailed guidance in determining if a specific project requires the consideration of permanent Treatment BMPs. Using these tools, general purpose BMPs would be selected by the Design Engineer (per Caltrans' PPDG) and described in the project SWDR.

6. If groundwater dewatering is anticipated, a separate permit may be required. The contractor should coordinate with the District NPDES Coordinator prior to the plan's specifications and estimates (PS&E) phase for direction and guidance.

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

2.11 Land Use and Planning

Question	Potentially Significant Impact	Less Than Significant with Mitigation	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 well as the Nevada County General Plan (Nevada 2017) and the Placer County General Plan (Placer 2013). The proposed project would not divide an established community; conflict with any applicable land use plan, policy, or regulation; or conflict with any habitat conservation plan or natural community conservation plan.

2.12 Mineral Resources

Question:	Potentially Significant Impact	Less Than Significant with Mitigation	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. No mineral resources were identified within the project limits.

2.13 Noise

Question	Potentially Significant Impact	Less Than Significant with Mitigation	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?				✓

2.13.1 Regulatory Setting

The primary laws governing noise are CEQA and NEPA.

2.13.2 Discussion of CEQA 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?*

During construction of the project, noise from construction activities may intermittently dominate the noise environment in the immediate area of construction. Construction equipment is expected to generate noise levels ranging from 70 to 90 decibels (dB) at a distance of 50 feet, and noise produced by construction equipment would be reduced over distance at a rate of approximately 6 dB per doubling of distance. Construction noise would be short-term, and no adverse noise impacts from construction are anticipated since it would be conducted in accordance with Caltrans Standard Specification Section 14-8.02, therefore, the proposed project would have a less than significant impact.

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

The proposed project would not result in excessive groundbourne vibration or noise levels and would have 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?*

The proposed project is not located within the vicinity of an airport or private airstrip and would have not impact.

2.13.3 Avoidance Measures

Caltrans would adhere to the following noise control Standard Specification Section 14-8.02 avoidance measures:

- Do not exceed 86 dBA Lmax at 50 feet from the job site activities from 9 p.m. to 6 a.m.
- Control and monitor noise resulting from work activities.

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

2.14 Population and Housing

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

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project. Potential impacts to population and housing are not anticipated because the proposed project would not increase capacity or access; therefore, the project would not directly or indirectly induce population growth. The proposed project would not add new homes or businesses and would not extend any roads or other infrastructure. There are no residences within the project area, and no replacement housing would be necessary.

2.15 Public Services

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

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project. Potential impacts to service ratios and emergency response times are not anticipated, as no lane closures are anticipated during construction of the proposed project. Two lanes of through traffic and access to on and off ramps would always be maintained during construction.

2.16 Recreation

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

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project. The proposed project would not increase the use of existing neighborhood parks, regional parks, or other recreational facilities or require the construction or expansion of these recreational facilities.

2.17 Transportation and Traffic

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

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project, as well as the traffic Management Plan Data Sheet (Caltrans 2021i), the Airy Quality Report (Caltrans 2021b), and the Traffic Data Report (Caltrans 2021j). The proposed project would not conflict with transit ordinance or policy. The proposed project would not change the existing configuration of the roadway. There would be the addition of the truck climbing lanes, but it would not increase capacity or vehicle miles traveled. The project results would not increase hazards due to design features or negatively affect emergency services.

2.18 Tribal Cultural Resources

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

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

Property Survey Report (Caltrans 2021d). The Native American Heritage Commission (NAHC) was contacted requesting a Sacred Lands file search and list of potential contacts for the proposed project. Letters were sent to interested Tribes, including the United Auburn Indian Community (UAIC), Wilton Rancheria, Colfax-Todd Valley Consolidated Tribe, and the Washoe Tribe of Nevada and California, and no tribal resources were identified in the proposed project.

2.19 Utilities and Service Systems

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

Would the project: e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?				✓

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project. Potential impacts are not anticipated due to the fact that the proposed project would not require the relocation or newly constructed utilities.

2.20 Wildfire

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

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project, as well as the CalFire Hazard Severity Zone map (CALFIRE 2020) and the California Landside Inventory map (CDC 2019). The proposed project is located in a high-risk fire hazard severity zone in a federal responsibility area. The project would not impair an adopted emergency response plan, as the proposed project would maintain two lanes of traffic throughout construction. Traffic would shift to the right, remove the existing shoulder, and construct a 12-foot lane

and 10-foot shoulder. The project is not located in an area of high landslide risk, so no impact is anticipated from fire-related landslides. The project would comply with all regulations and not expose people or structures to fire-related flooding.

2.21 Mandatory Findings of Significance

Does the project:	Potentially Significant Impact	Less Than Significant with Mitigation	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?				✓

2.21.1 Discussion of CEQA 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?

The proposed project construction activities would result in short-term air quality impacts, an increase in short-term energy use, temporary impacts to localized water quality and groundwater, and noise from construction activities may intermittently dominate the noise environment in the immediate area of construction. These impacts would have a less than significant impact to quality of the environment.

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.)*

The proposed project does not have impacts that are cumulatively considerable when viewed with the effects of past and future projects.

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

The proposed project does not have environmental effects which would cause substantial adverse effects to human beings.

2.21.2 Conclusion

The proposed project would have less than significant impact on the environment. While these impacts have been found to be less than significant, Caltrans would implement the avoidance and minimization measures outlined in the air quality, biology, energy, hydrology, noise, and greenhouse gas sections of this document to further reduce impacts.

Chapter 3 List of Preparers

The following individuals performed the environmental work on the project:

California Department of Transportation, District 3

Bria Miller	Environmental Planner
Mike Bartlett	Environmental Branch Chief
Anna Kluge	Associate Environmental Planner (Natural Science)
Koren Tippett	Associate Environmental Planner (Archaeologist)
Mark Melani	Hazardous Waste Specialist
Youngil Cho	Air Specialist
Saeid Zandian	Noise Specialist
Sean Cross	Water Quality Specialist
Julia Riggins	Landscape Architect
Scott Foster	Design Engineer
Mohan Bonala	Project Manager

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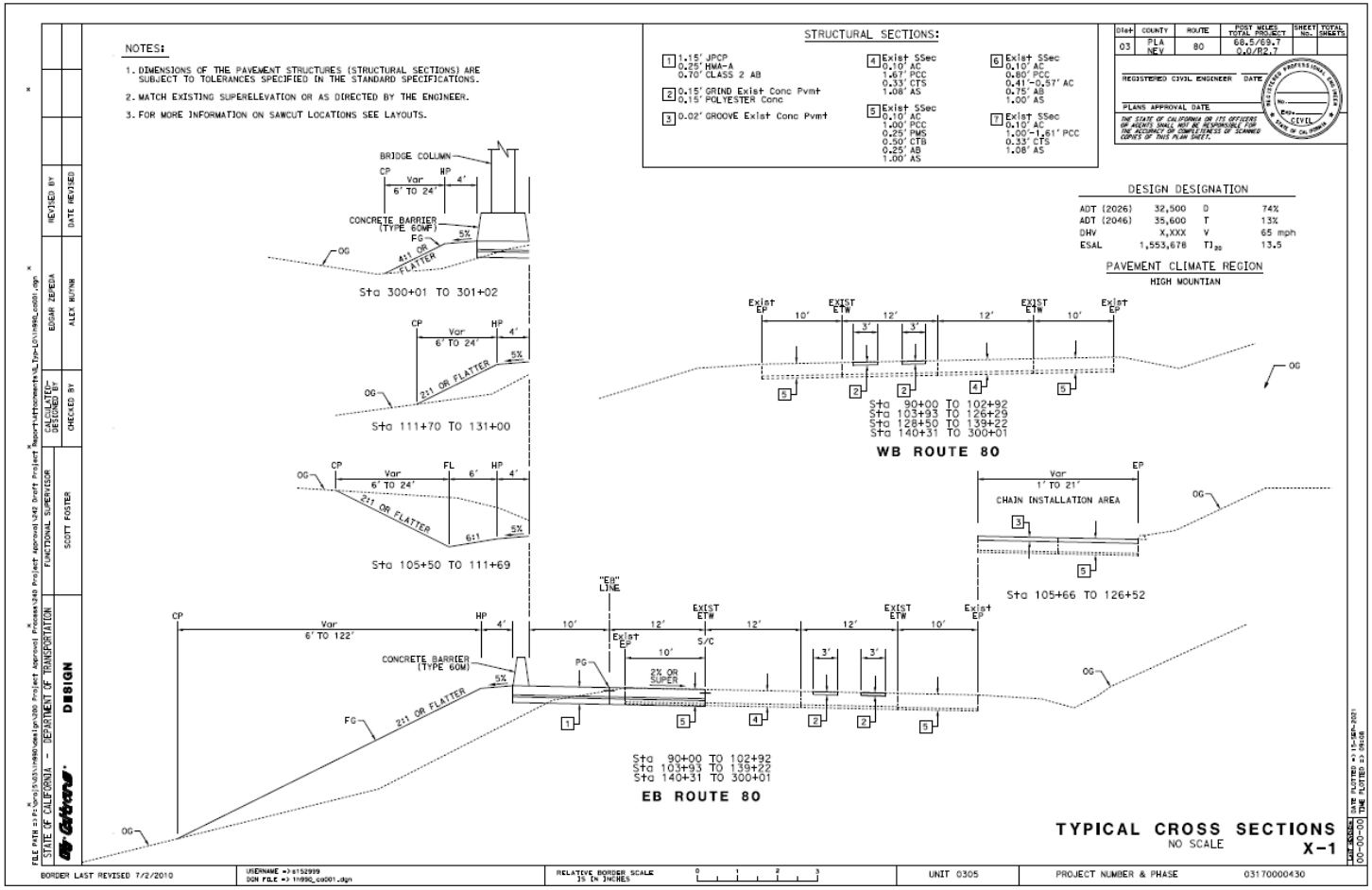
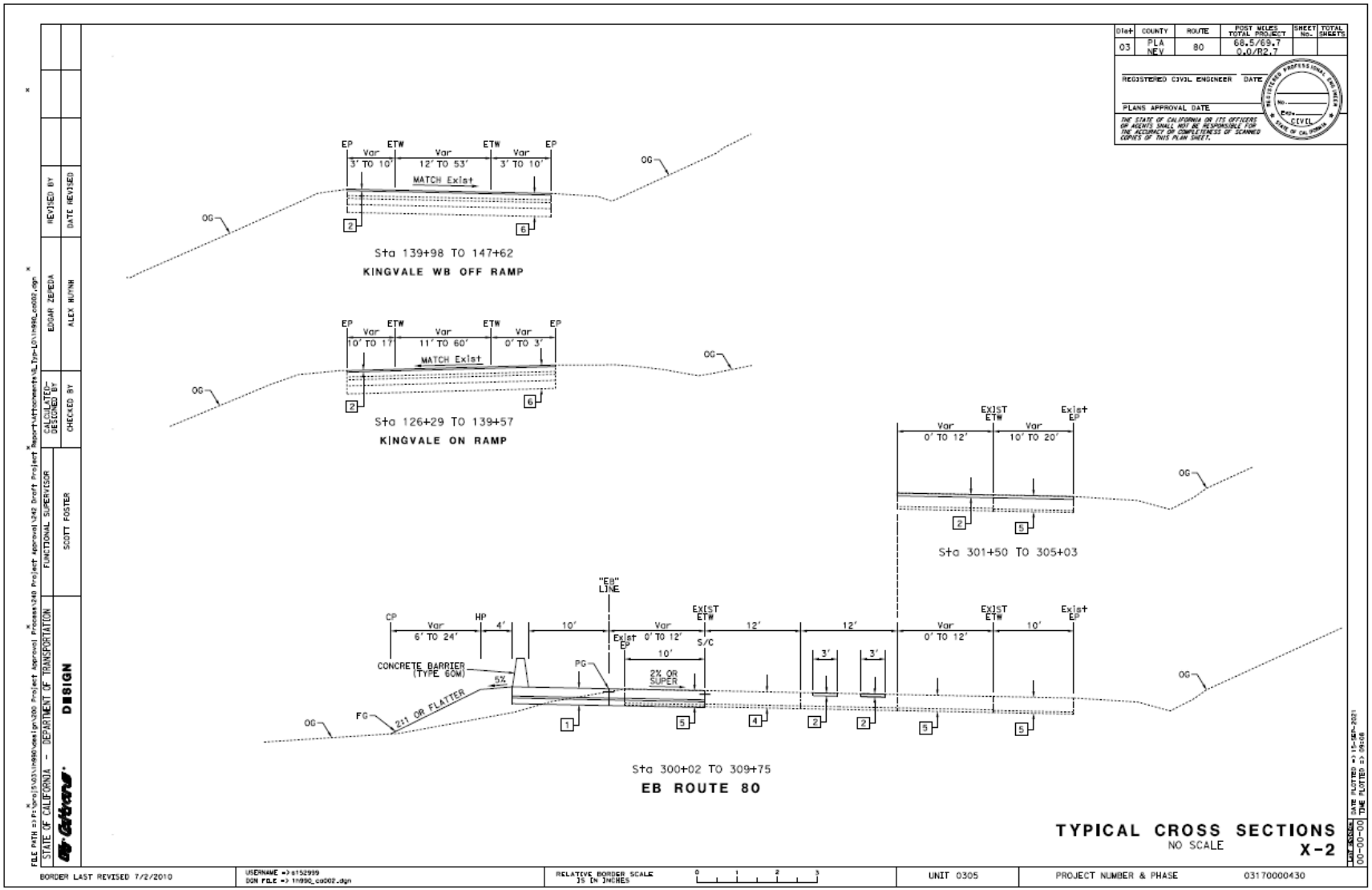
Appendix A Project Layouts




Dist
03
COUNTY
PLA
NEV
ROUTE
80
POST MILES TOTAL PROJECT
68.5/69.7
0.0/R2.7
SHEET No.
TOTAL SHEETS
REGISTERED CIVIL ENGINEER
DATE
PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.
REGISTERED PROFESSIONAL ENGINEER
No.
Exp.
CIVIL
STATE OF CALIFORNIA
REVISED BY
DATE REVISED
CALCULATED/ DESIGNED BY
EDGAR ZEPEDA
CHECKED BY
ALEX HUYNH
FUNCTIONAL SUPERVISOR
SCOTT FOSTER
DESIGN
EP
ETW
Var
3' TO 10'
12' TO 53'
MATCH Exist
OG
Sta 139+98 TO 147+62
KINGVALE WB OFF RAMP
10' TO 17'
11' TO 60'
0' TO 3'
Sta 126+29 TO 139+57
KINGVALE ON RAMP
EXIST ETW
Exist EP
0' TO 12'
10' TO 20'
Sta 301+50 TO 305+03
"EB" LINE
CP
HP
4'
6' TO 24'
10'
12'
3'
S/C
PG
FG
5%
2% OR SUPER
CONCRETE BARRIER (TYPE 60M)
2:1 OR FLATTER
Sta 300+02 TO 309+75
EB ROUTE 80
TYPICAL CROSS SECTIONS
NO SCALE
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TIME PLOTTED => 09:08
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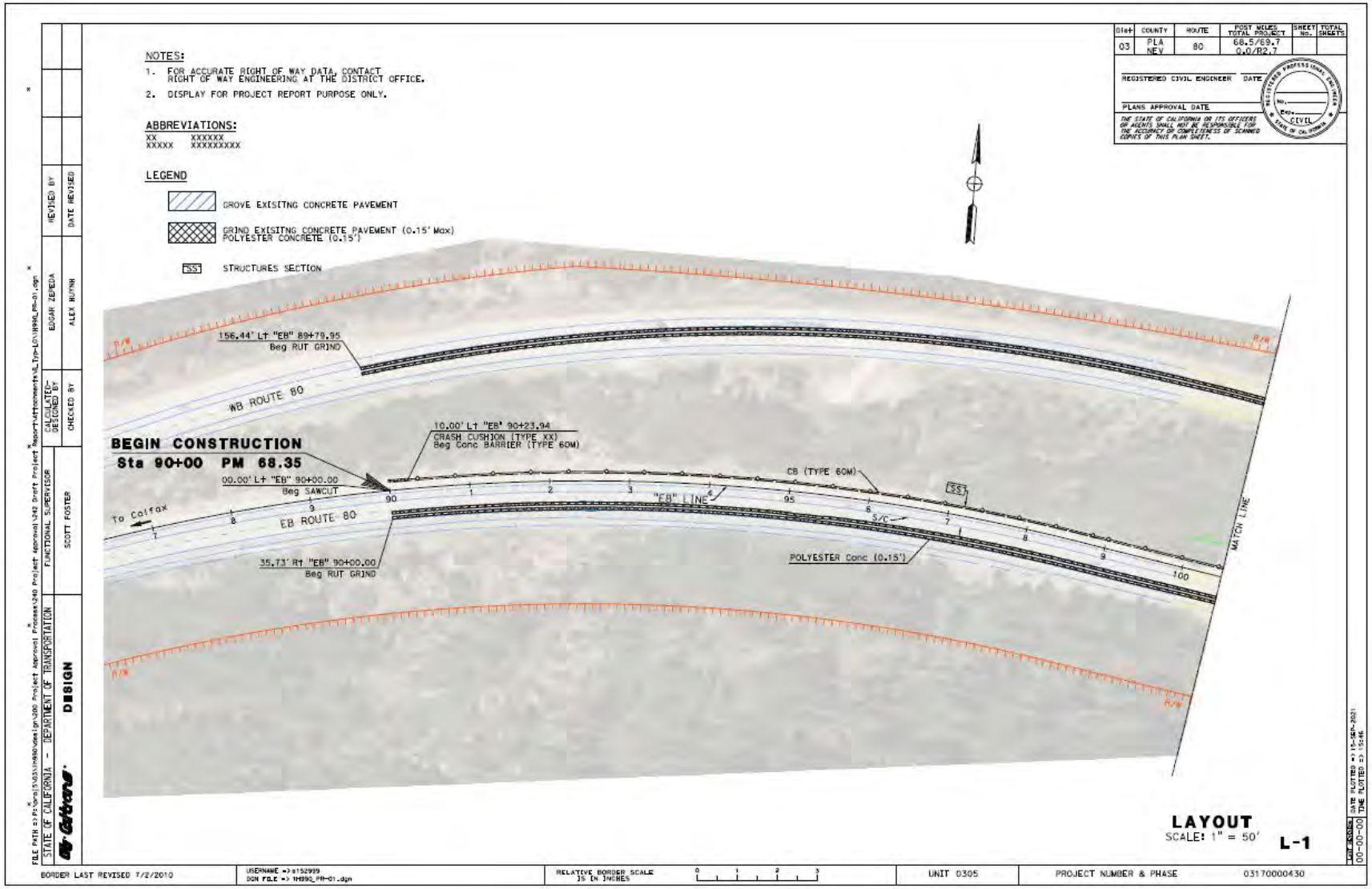
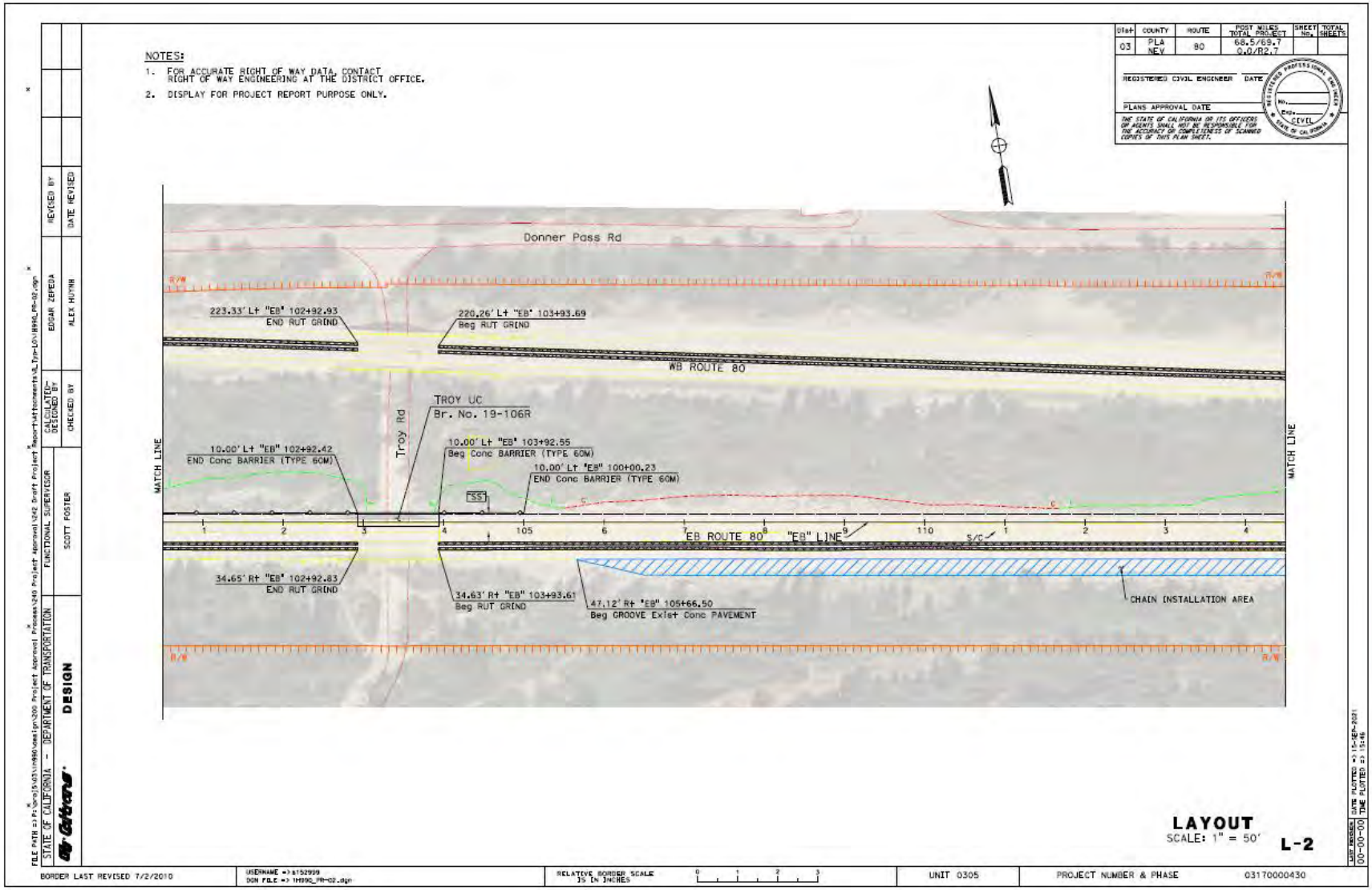
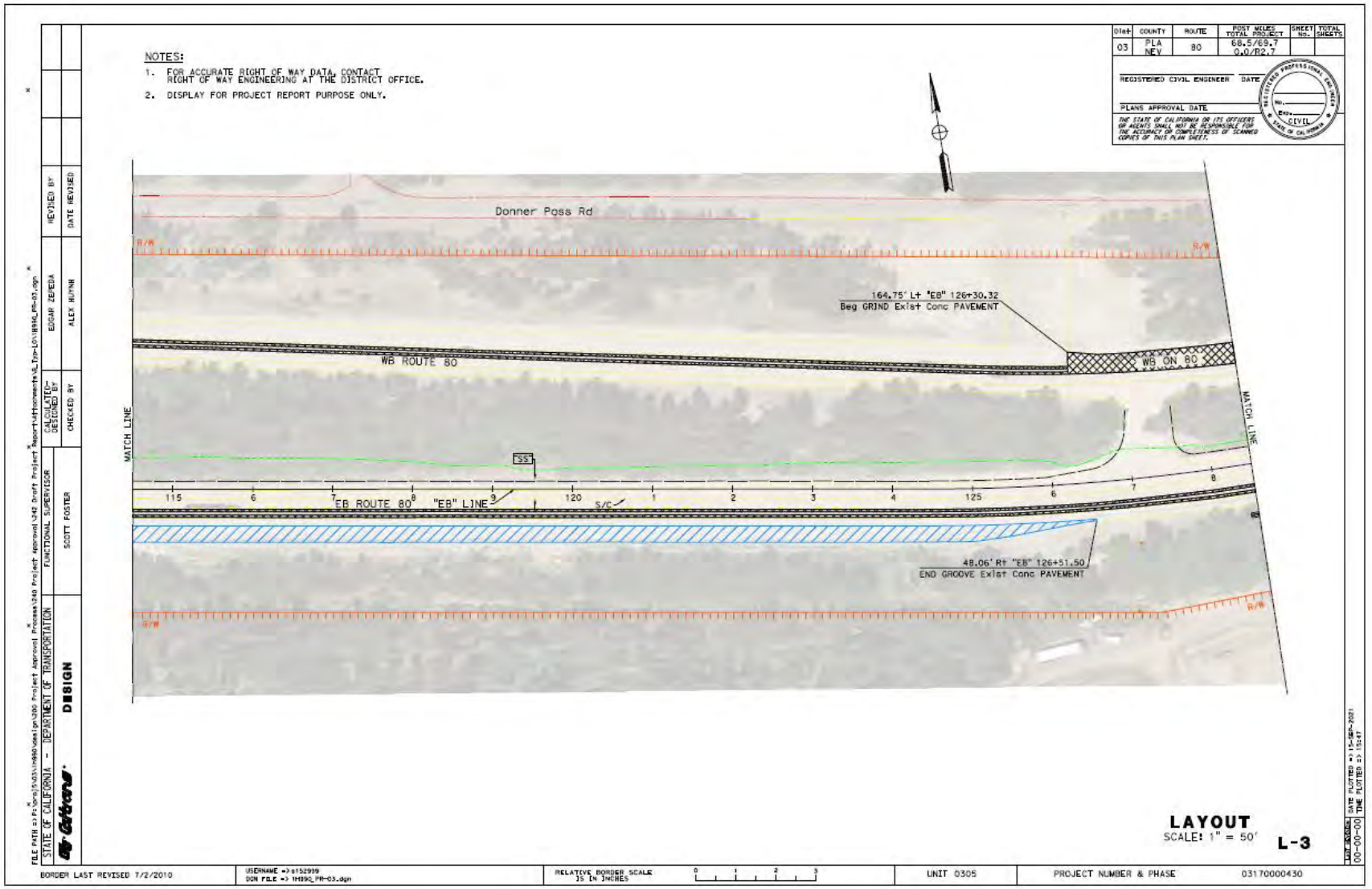
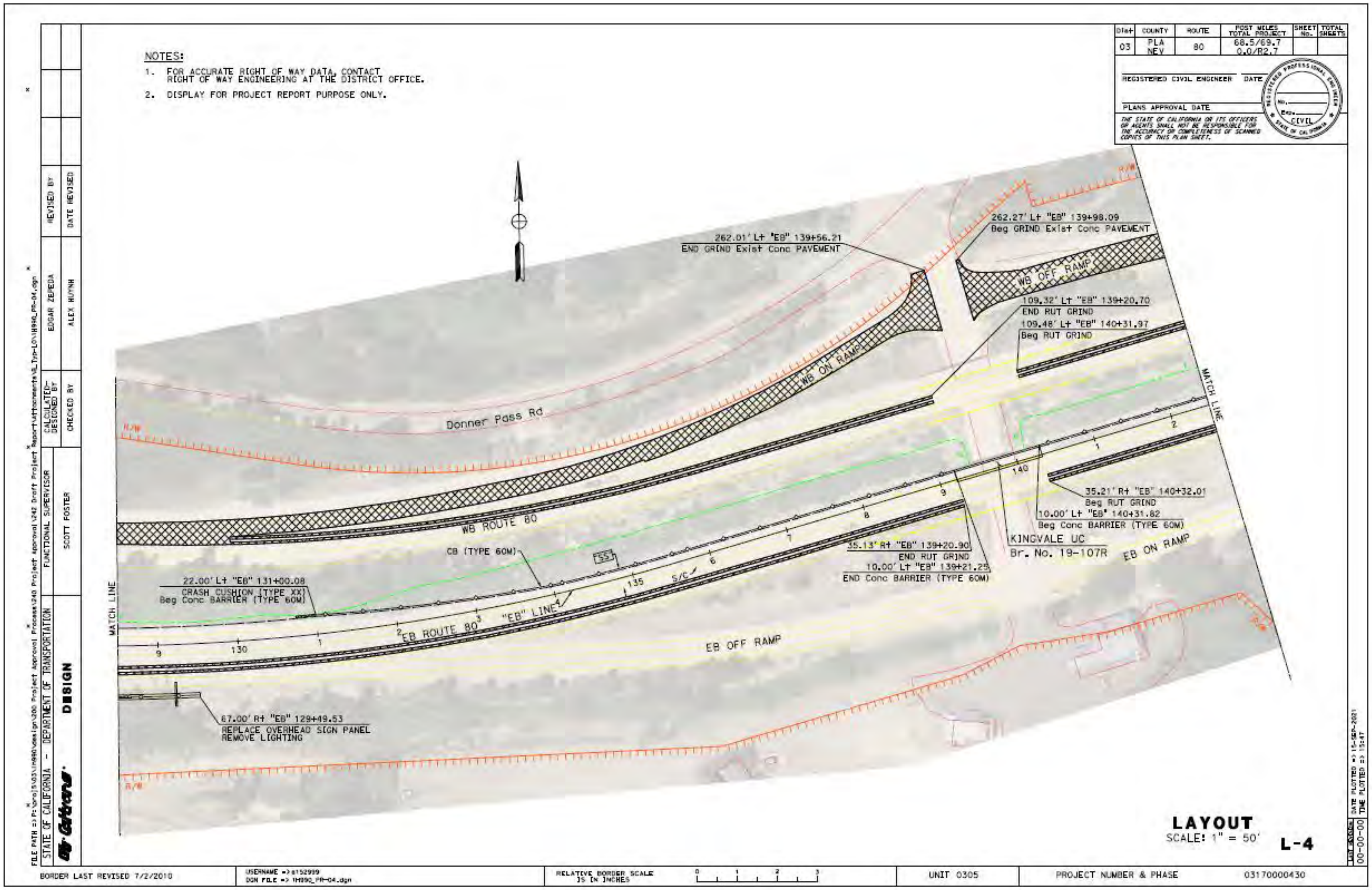
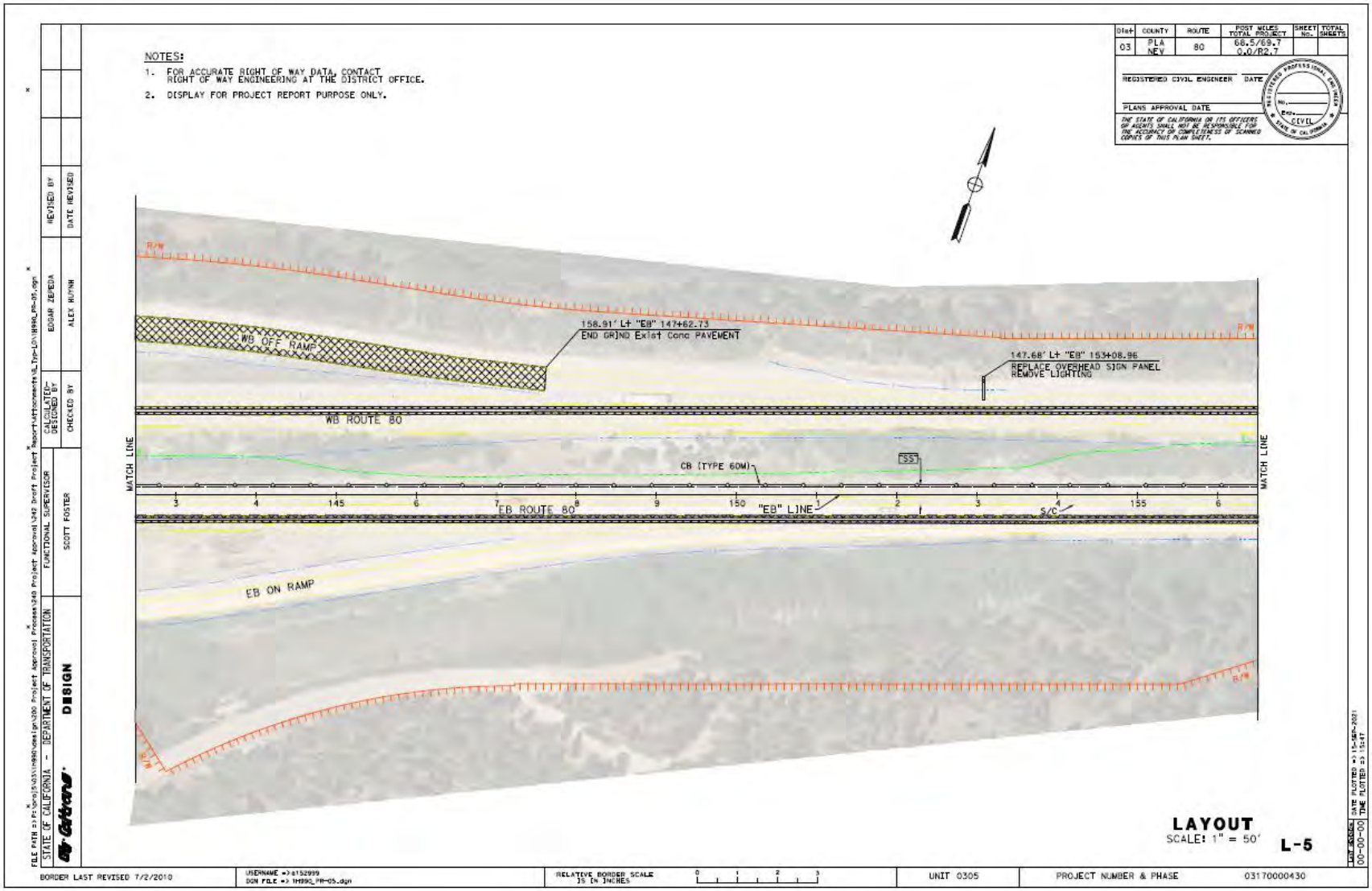
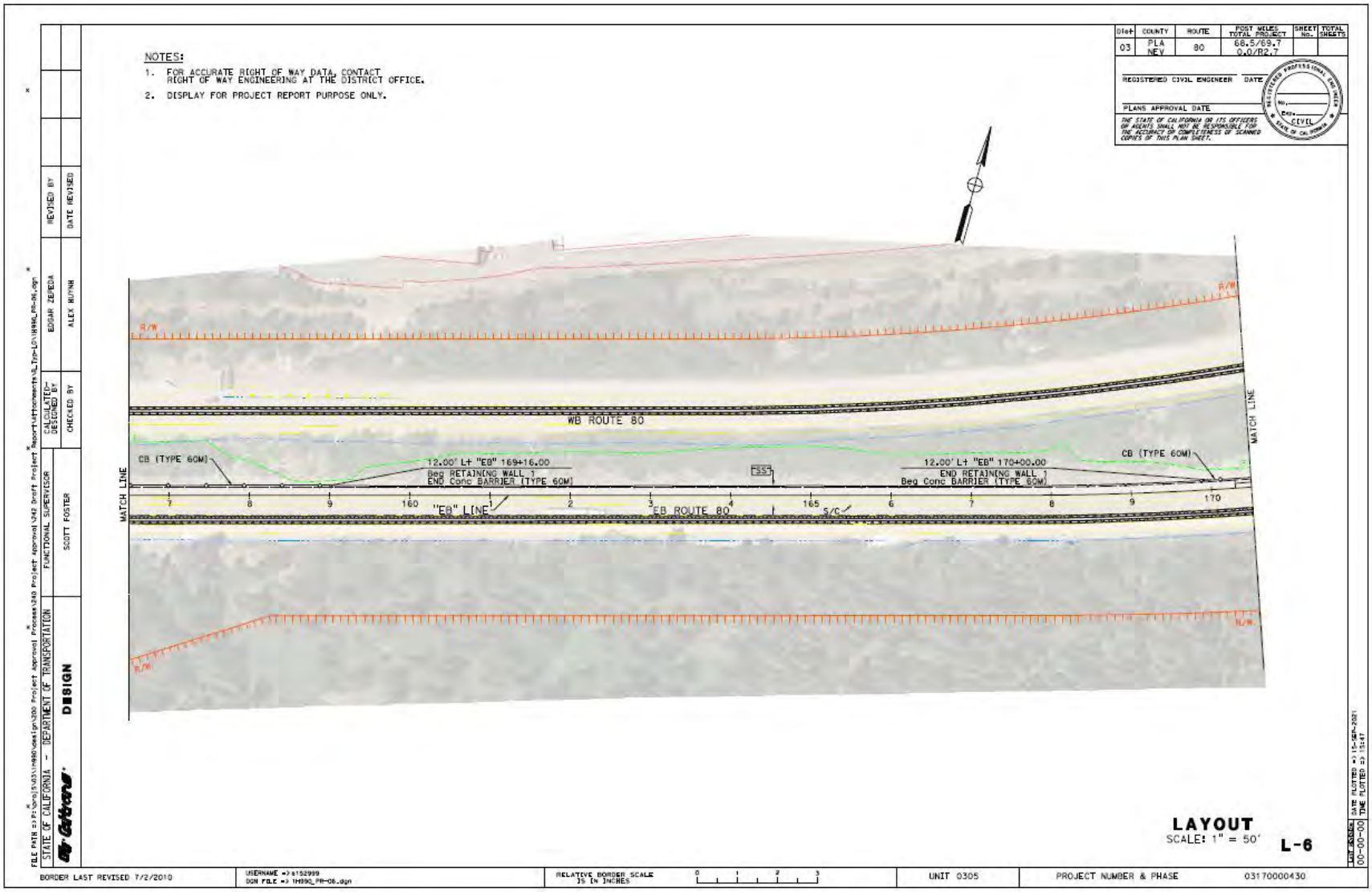

NOTES:
1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. DISPLAY FOR PROJECT REPORT PURPOSE ONLY.
ABBREVIATIONS:
XX XXXXXX
XXXXX XXXXXXXXX
LEGEND
GROVE EXISITNG CONCRETE PAVEMENT
GRIND EXISITNG CONCRETE PAVEMENT (0.15' Max) POLYESTER CONCRETE (0.15')
SSS STRUCTURES SECTION
Dist 03 | COUNTY PLA NEV | ROUTE 80 | POST MILES TOTAL PROJECT 68.5/69.7 0.0/R2.7 | SHEET No. | TOTAL SHEETS
REGISTERED CIVIL ENGINEER DATE
PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.
156.44' Lt "EB" 89+79.95
Beg RUT GRIND
WB ROUTE 80
10.00' Lt "EB" 90+23.94
CRASH CUSHION (TYPE XX)
Beg Conc BARRIER (TYPE 60M)
BEGIN CONSTRUCTION
Sta 90+00 PM 68.35
00.00' Lt "EB" 90+00.00
Beg SAWCUT
To Colfax
EB ROUTE 80
"EB" LINE
CB (TYPE 60M)
SSS
S/C
MATCH LINE
35.73' Rt "EB" 90+00.00
Beg RUT GRIND
POLYESTER Conc (0.15')
R/W
LAYOUT
SCALE: 1" = 50'
L-1
REVISED BY
DATE REVISED
EDGAR ZEPEDA
ALEX RUTHN
CALCULATED-DESIGNED BY
CHECKED BY
FUNCTIONAL SUPERVISOR
SCOTT FOSTER
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
BORDER LAST REVISED 7/2/2010
USERNAME => s152999
DGN FILE => 1H990_PM-01.dgn
RELATIVE BORDER SCALE IS IN INCHES
UNIT 0305
PROJECT NUMBER & PHASE 03170000430

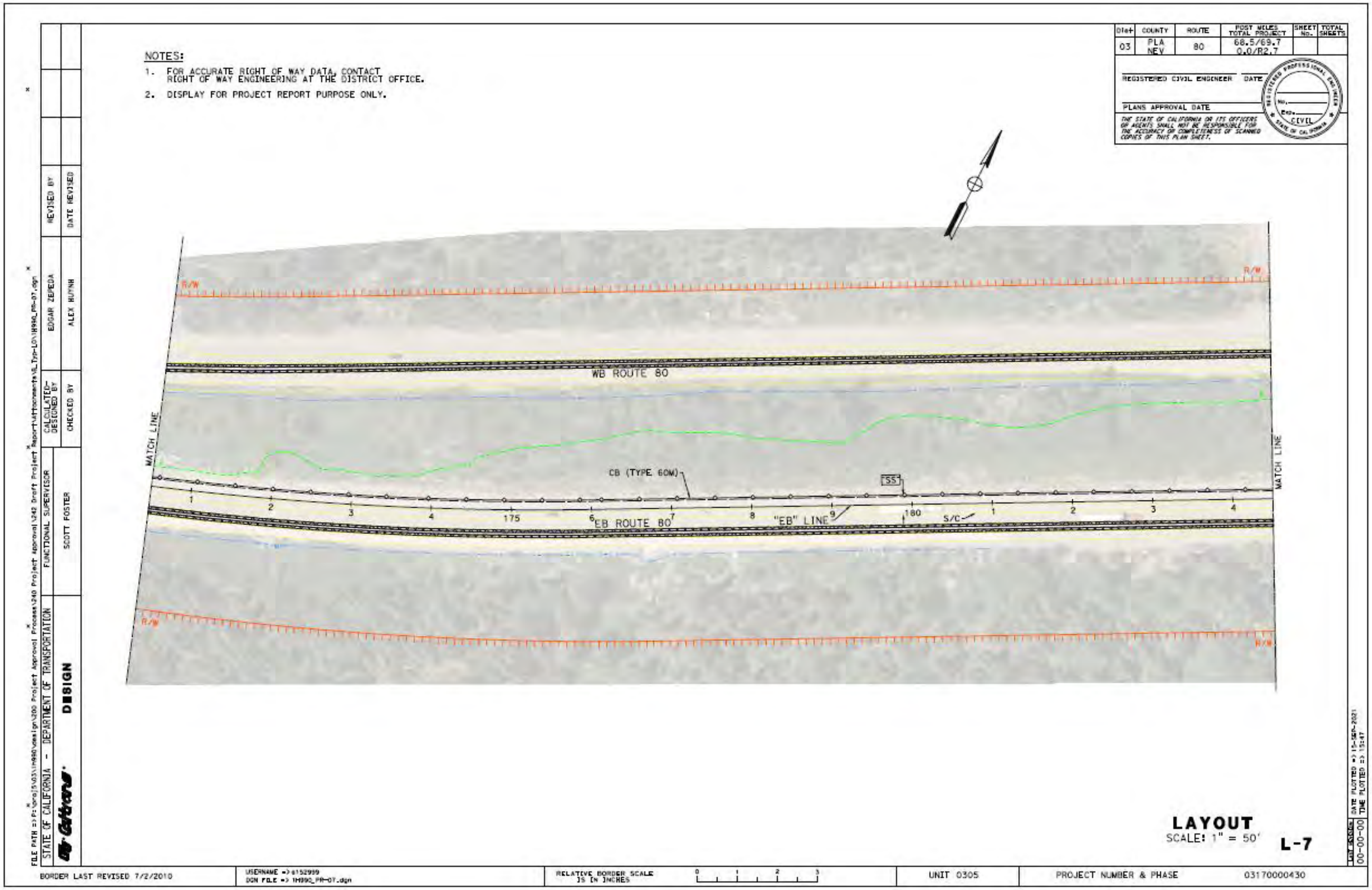

NOTES:
1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. DISPLAY FOR PROJECT REPORT PURPOSE ONLY.
Donner Pass Rd
223.33' Lt "EB" 102+92.93
END RUT GRIND
220.26' Lt "EB" 103+93.69
Beg RUT GRIND
WB ROUTE 80
TROY UC
Br. No. 19-106R
Troy Rd
MATCH LINE
10.00' Lt "EB" 102+92.42
END Conc BARRIER (TYPE 60M)
10.00' Lt "EB" 103+92.55
Beg Conc BARRIER (TYPE 60M)
10.00' Lt "EB" 100+00.23
END Conc BARRIER (TYPE 60M)
EB ROUTE 80
"EB" LINE
34.65' Rt "EB" 102+92.83
END RUT GRIND
34.63' Rt "EB" 103+93.61
Beg RUT GRIND
47.12' Rt "EB" 105+66.50
Beg GROOVE Exist Conc PAVEMENT
CHAIN INSTALLATION AREA
LAYOUT
SCALE: 1" = 50'
L-2
DESIGN
SCOTT FOSTER
EDGAR ZEPEDA
ALEX HUYNH
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
BORDER LAST REVISED 7/2/2010
UNIT 0305
PROJECT NUMBER & PHASE
03170000430

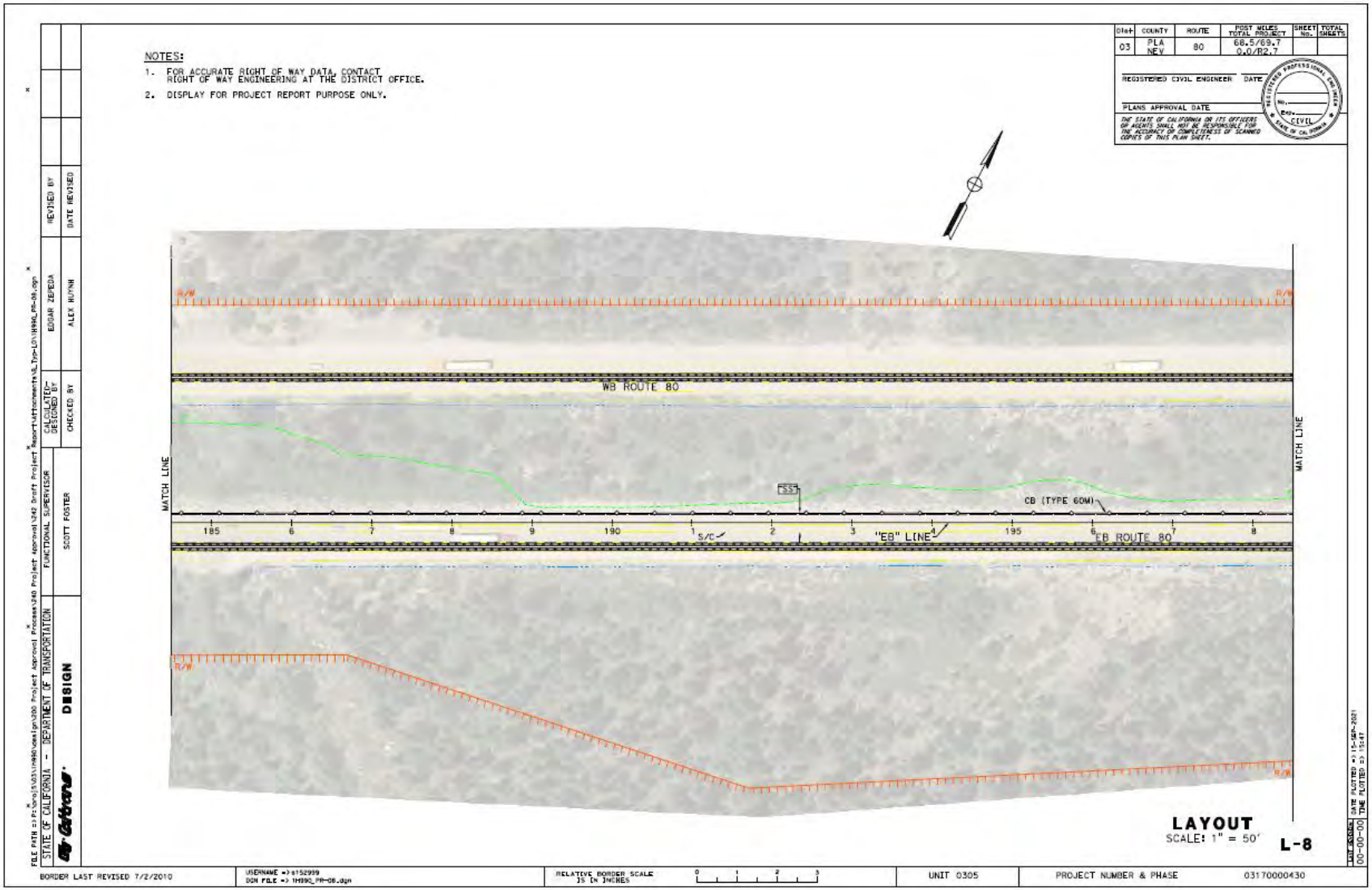

NOTES:
1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. DISPLAY FOR PROJECT REPORT PURPOSE ONLY.
Donner Pass Rd
R/W
164.75' Lt "EB" 126+30.32
Beg GRIND Exist Conc PAVEMENT
WB ROUTE 80
WB ON 80
MATCH LINE
MATCH LINE
SS1
EB ROUTE 80
"EB" LINE
S/C
48.06' Rt "EB" 126+51.50
END GROOVE Exist Conc PAVEMENT
LAYOUT
SCALE: 1" = 50'
L-3
DESIGN
SCOTT FOSTER
FUNCTIONAL SUPERVISOR
CALCULATED-DESIGNED BY
CHECKED BY
EDGAR ZEPEDA
ALEX HUYNH
REVISED BY
DATE REVISED
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
REGISTERED CIVIL ENGINEER
DATE
PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.
Dist 03 | COUNTY PLA NEV | ROUTE 80 | POST MILES TOTAL PROJECT 68.5/69.7 0.0/R2.7 | SHEET NO. | TOTAL SHEETS
BORDER LAST REVISED 7/2/2010
USERNAME => s152939
DGN FILE => 1H890_PR-03.dgn
RELATIVE BORDER SCALE IS IN INCHES
UNIT 0305
PROJECT NUMBER & PHASE 03170000430
DATE PLOTTED => 15-SEP-2021
TIME PLOTTED => 15:47

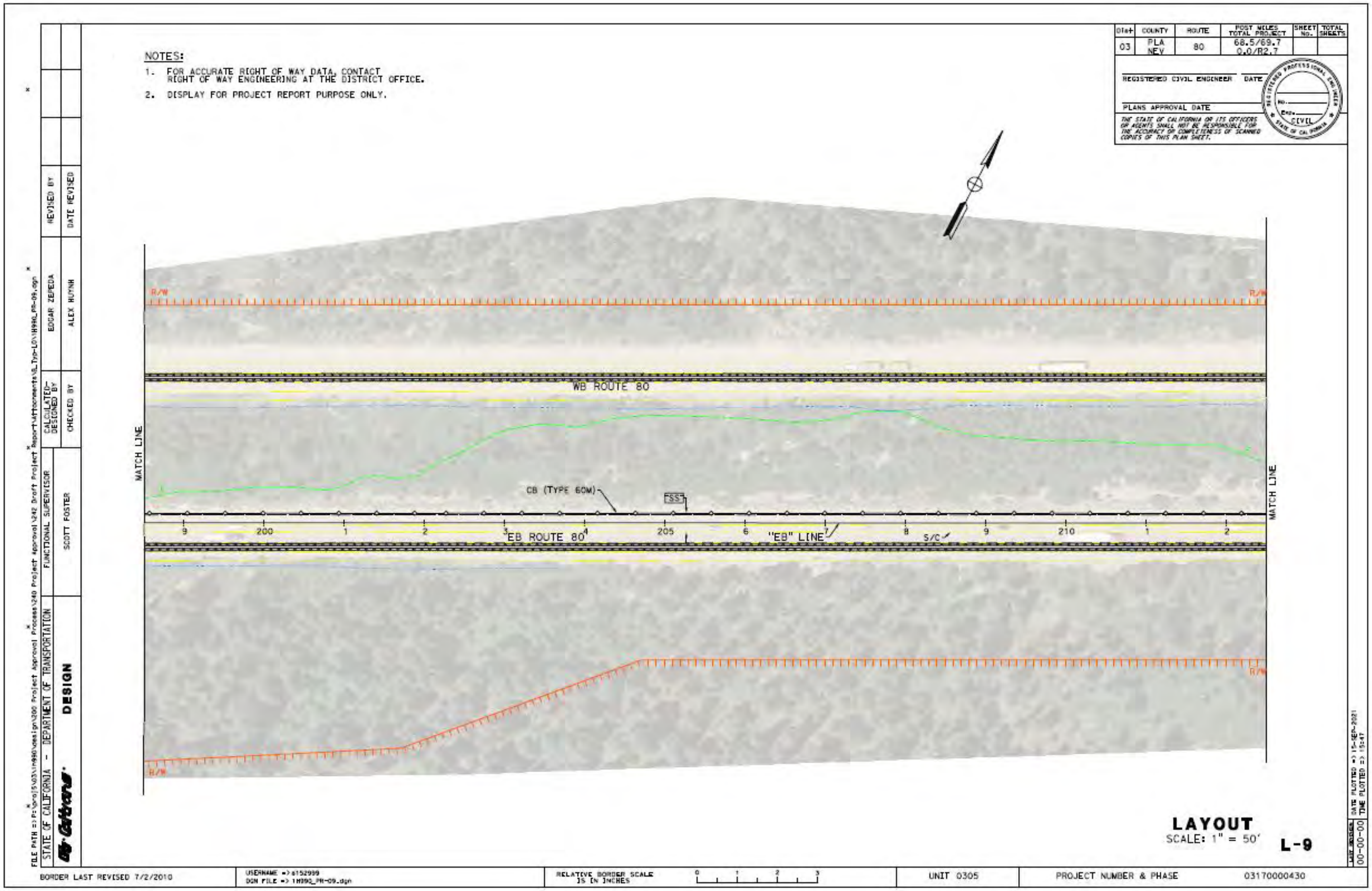

NOTES:
1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. DISPLAY FOR PROJECT REPORT PURPOSE ONLY.
03 PLA NEV 80 68.5/69.7 0.0/R2.7
REGISTERED CIVIL ENGINEER DATE
PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.
262.27' Lt "EB" 139+98.09
Beg GRIND Exist Conc PAVEMENT
262.01' Lt "EB" 139+56.21
END GRIND Exist Conc PAVEMENT
WB OFF RAMP
109.32' Lt "EB" 139+20.70
END RUT GRIND
109.48' Lt "EB" 140+31.97
Beg RUT GRIND
WB ON RAMP
Donner Pass Rd
MATCH LINE
WB ROUTE 80
35.21' Rt "EB" 140+32.01
Beg RUT GRIND
10.00' Lt "EB" 140+31.82
Beg Conc BARRIER (TYPE 60M)
KINGVALE UC
Br. No. 19-107R
EB ON RAMP
CB (TYPE 60M)
35.13' Rt "EB" 139+20.90
END RUT GRIND
10.00' Lt "EB" 139+21.25
END Conc BARRIER (TYPE 60M)
22.00' Lt "EB" 131+00.08
CRASH CUSHION (TYPE XX)
Beg Conc BARRIER (TYPE 60M)
EB ROUTE 80
"EB" LINE
EB OFF RAMP
67.00' Rt "EB" 129+49.53
REPLACE OVERHEAD SIGN PANEL
REMOVE LIGHTING
LAYOUT
SCALE: 1" = 50'
L-4
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR SCOTT FOSTER
CALCULATED-DESIGNED BY EDGAR ZEPEDA
CHECKED BY ALEX HUYNH
REVISED BY
DATE REVISED
BORDER LAST REVISED 7/2/2010
RELATIVE BORDER SCALE IS IN INCHES
UNIT 0305
PROJECT NUMBER & PHASE
0317000043

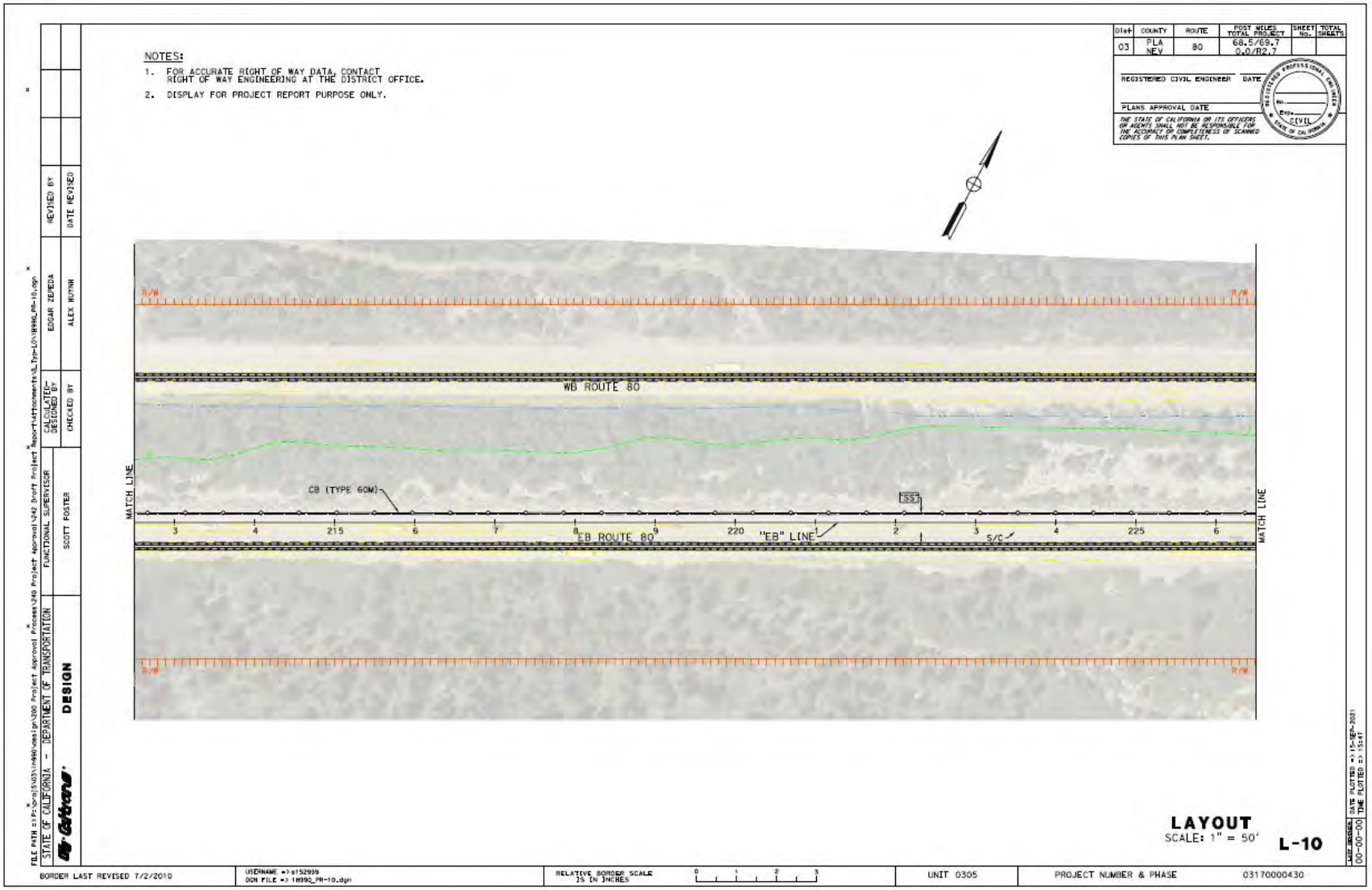

NOTES:
1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. DISPLAY FOR PROJECT REPORT PURPOSE ONLY.
158.91' Lt "EB" 147+62.73
END GRIND Exist Conc PAVEMENT
147.68' Lt "EB" 153+08.96
REPLACE OVERHEAD SIGN PANEL
REMOVE LIGHTING
WB OFF RAMP
WB ROUTE 80
CB (TYPE 60M)
EB ROUTE 80
"EB" LINE
EB ON RAMP
MATCH LINE
MATCH LINE
LAYOUT
SCALE: 1" = 50'
L-5
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
SCOTT FOSTER
CALCULATED-DESIGNED BY
CHECKED BY
EDGAR ZEPEDA
ALEX MUNN
REVISED BY
DATE REVISED
REGISTERED CIVIL ENGINEER
DATE
PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.
BORDER LAST REVISED 7/2/2010
RELATIVE BORDER SCALE IS IN INCHES
UNIT 0305
PROJECT NUMBER & PHASE
03170000430

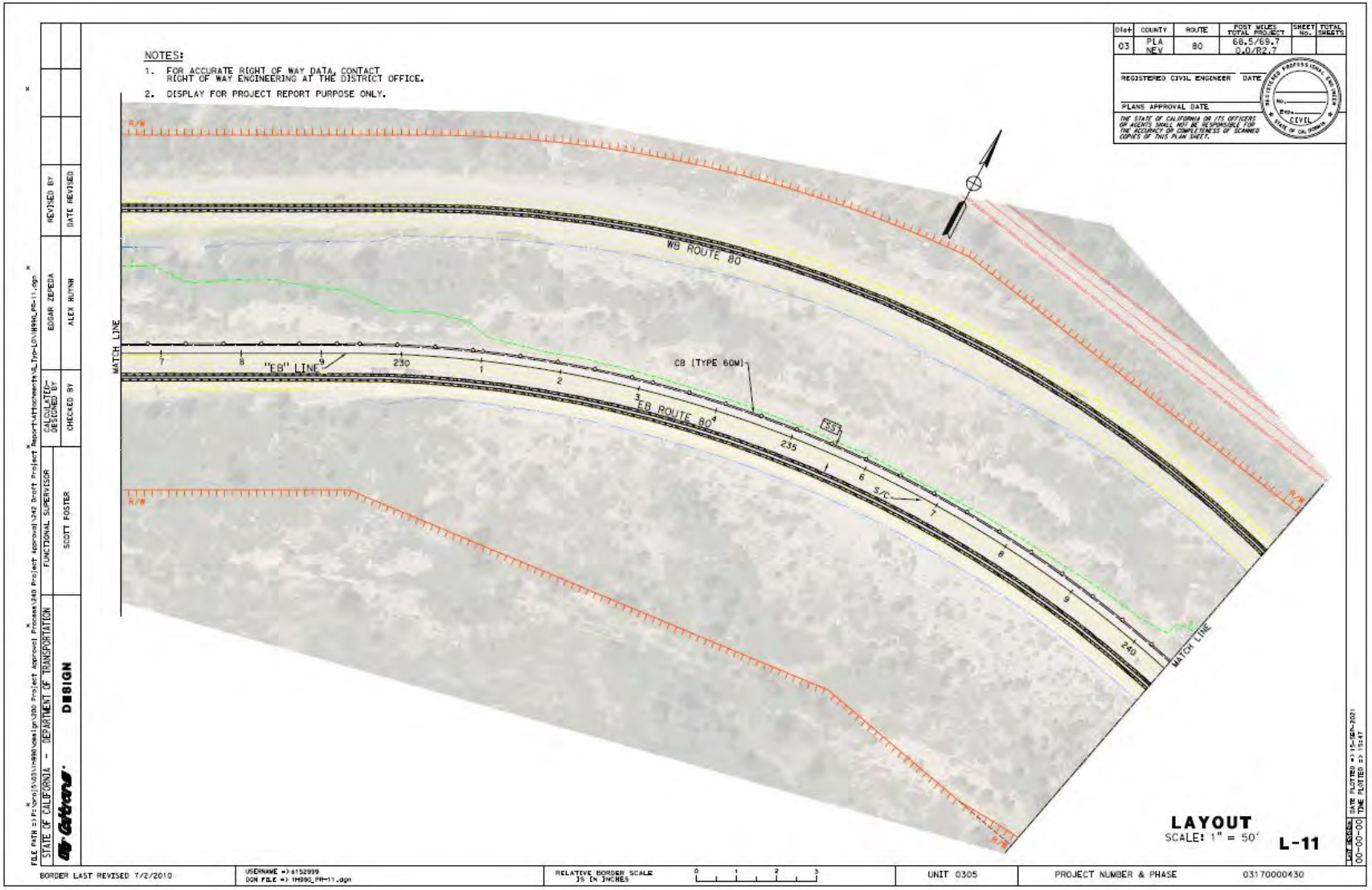

NOTES:
1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. DISPLAY FOR PROJECT REPORT PURPOSE ONLY.
Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS
03 | PLA NEV | 80 | 68.5/69.7 0.0/R2.7
REGISTERED CIVIL ENGINEER DATE
PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.
REGISTERED PROFESSIONAL ENGINEER
No.
EXP.
CIVIL
STATE OF CALIFORNIA
WB ROUTE 80
EB ROUTE 80
MATCH LINE
MATCH LINE
CB (TYPE 60M)
12.00' Lt "EB" 169+16.00
Beg RETAINING WALL 1
END Conc BARRIER (TYPE 60M)
FS57
12.00' Lt "EB" 170+00.00
END RETAINING WALL 1
Beg Conc BARRIER (TYPE 60M)
CB (TYPE 60M)
"EB" LINE
S/C
R/W
LAYOUT
SCALE: 1" = 50'
L-6
DESIGN
SCOTT FOSTER
EDGAR ZEPEDA
ALEX HUYNH
BORDER LAST REVISED 7/2/2010
UNIT 0305
PROJECT NUMBER & PHASE
03170000430


NOTES:
1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. DISPLAY FOR PROJECT REPORT PURPOSE ONLY.
Dist COUNTY ROUTE POST MILES TOTAL PROJECT SHEET No. TOTAL SHEETS
03 PLA NEV 80 68.5/69.7 0.0/R2.7
REGISTERED CIVIL ENGINEER DATE
PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
SCOTT FOSTER
CALCULATED-DESIGNED BY
CHECKED BY
EDGAR ZEPEDA
ALEX HUYNH
REVISED BY
DATE REVISED
R/W
WB ROUTE 80
MATCH LINE
CB (TYPE 60M)
SS
EB ROUTE 80
"EB" LINE
175
180
S/C
LAYOUT
SCALE: 1" = 50'
L-7
BORDER LAST REVISED 7/2/2010
RELATIVE BORDER SCALE IS IN INCHES
UNIT 0305
PROJECT NUMBER & PHASE
03170000430

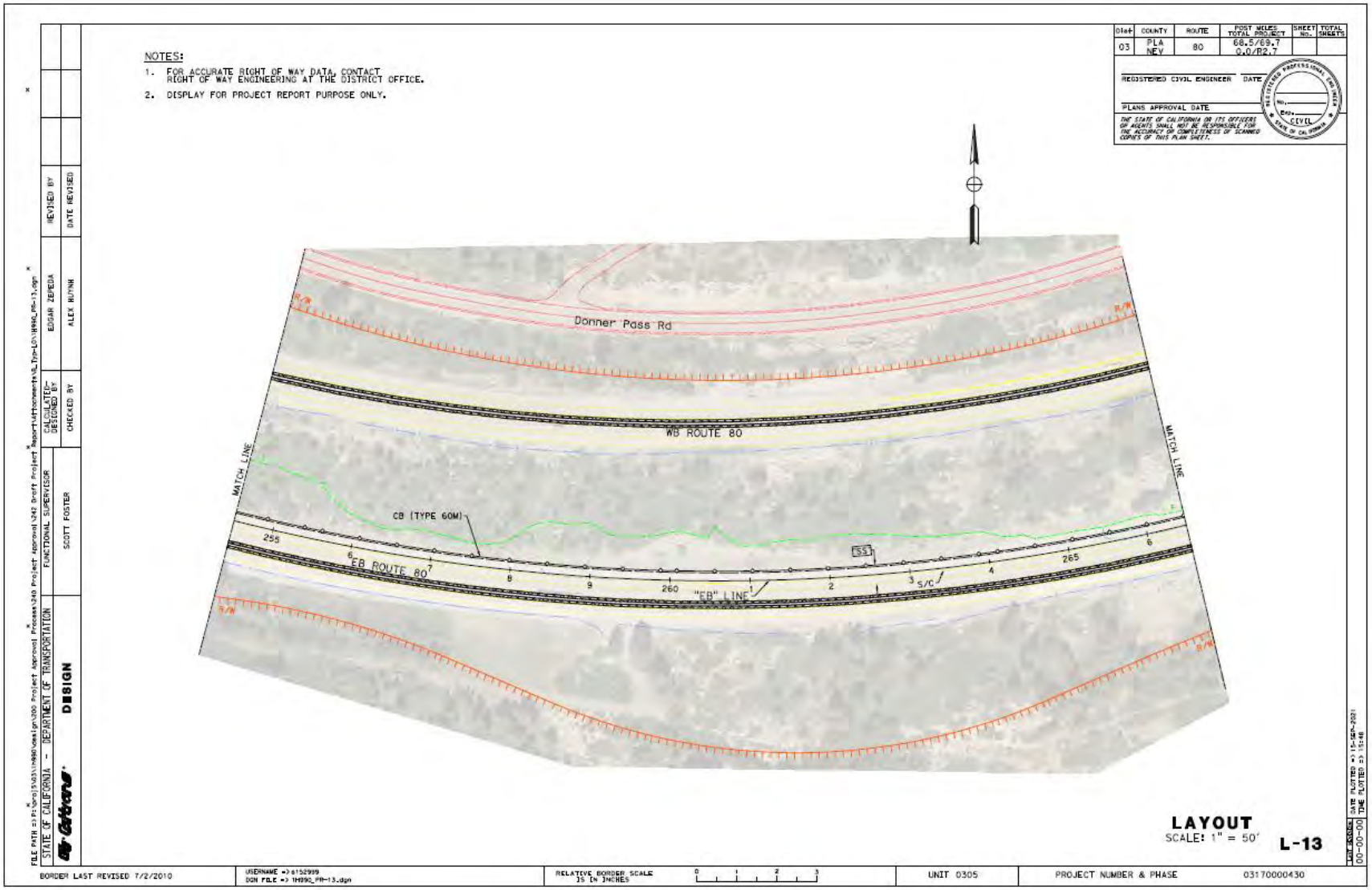

NOTES:
1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. DISPLAY FOR PROJECT REPORT PURPOSE ONLY.
WB ROUTE 80
EB ROUTE 80
"EB" LINE
MATCH LINE
MATCH LINE
CB (TYPE 60M)
S/C
R/W
LAYOUT
SCALE: 1" = 50'
L-8
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
SCOTT FOSTER
CALCULATED-DESIGNED BY
CHECKED BY
EDGAR ZEPEDA
ALEX HUYNH
REVISED BY
DATE REVISED
REGISTERED CIVIL ENGINEER
DATE
PLANS APPROVAL DATE
BORDER LAST REVISED 7/2/2010
UNIT 0305
PROJECT NUMBER & PHASE
03170000430

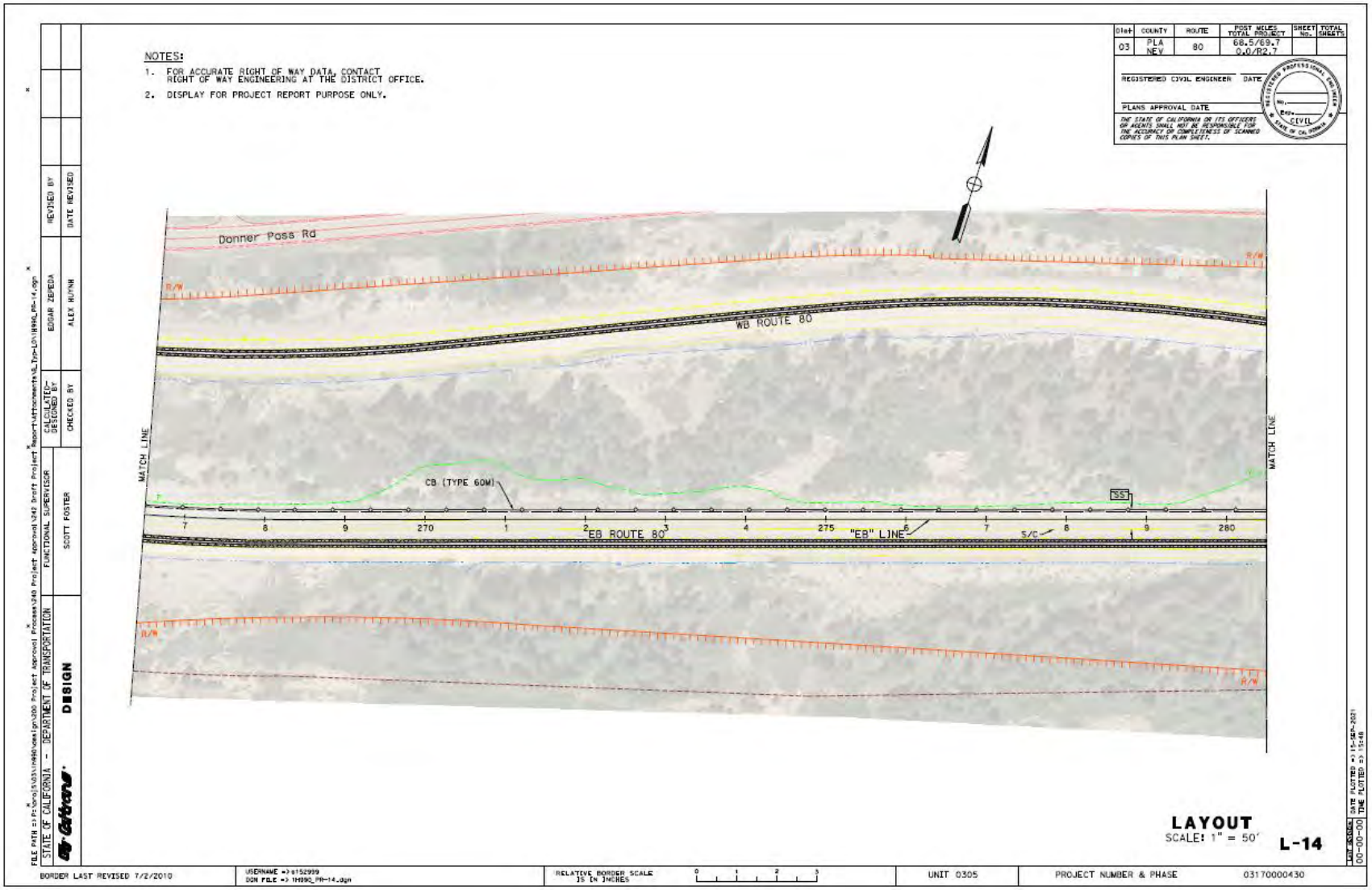

NOTES:
1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. DISPLAY FOR PROJECT REPORT PURPOSE ONLY.
WB ROUTE 80
EB ROUTE 80
"EB" LINE
CB (TYPE 60M)
MATCH LINE
MATCH LINE
R/W
LAYOUT
SCALE: 1" = 50'
L-9
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
SCOTT FOSTER
CALCULATED-DESIGNED BY
EDGAR ZEPEDA
CHECKED BY
ALEX HUYNH
REVISED BY
DATE REVISED
Dist COUNTY ROUTE POST MILES TOTAL PROJECT SHEET No. TOTAL SHEETS
03 PLA NEV 80 68.5/69.7 0.0/R2.7
REGISTERED CIVIL ENGINEER DATE
PLANS APPROVAL DATE
BORDER LAST REVISED 7/2/2010
UNIT 0305
PROJECT NUMBER & PHASE
03170000430

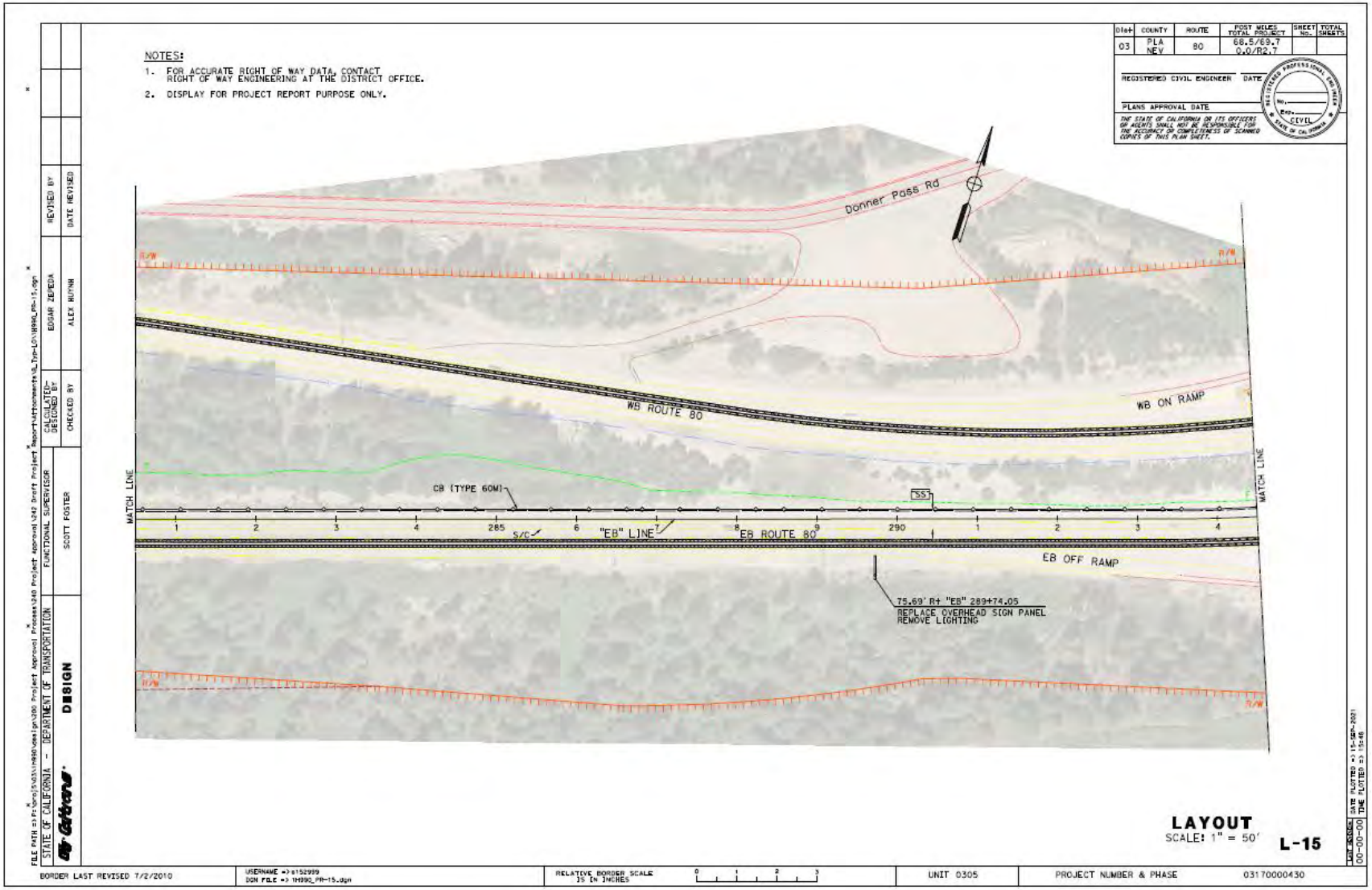

NOTES:
1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. DISPLAY FOR PROJECT REPORT PURPOSE ONLY.
DIst | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS
03 | PLA NEV | 80 | 68.5/69.7 0.0/R2.7
REGISTERED CIVIL ENGINEER DATE
PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.
REGISTERED PROFESSIONAL ENGINEER CIVIL STATE OF CALIFORNIA
R/W
WB ROUTE 80
MATCH LINE
CB (TYPE 60M)
SS5
3 4 215 6 7 8 9 220 2 3 4 225 6
EB ROUTE 80
"EB" LINE
S/C
MATCH LINE
LAYOUT
SCALE: 1" = 50'
L-10
STATE OF CALIFORNIA – DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
SCOTT FOSTER
CALCULATED/DESIGNED BY
EDGAR ZEPEDA
CHECKED BY
ALEX HUYNH
REVISED BY
DATE REVISED
FILE PATH =>
BORDER LAST REVISED 7/2/2010
USERNAME =>
DGN FILE =>
RELATIVE BORDER SCALE IS IN INCHES
UNIT 0305
PROJECT NUMBER & PHASE 03170000430
LAST REVISED
DATE PLOTTED =>
TIME PLOTTED =>

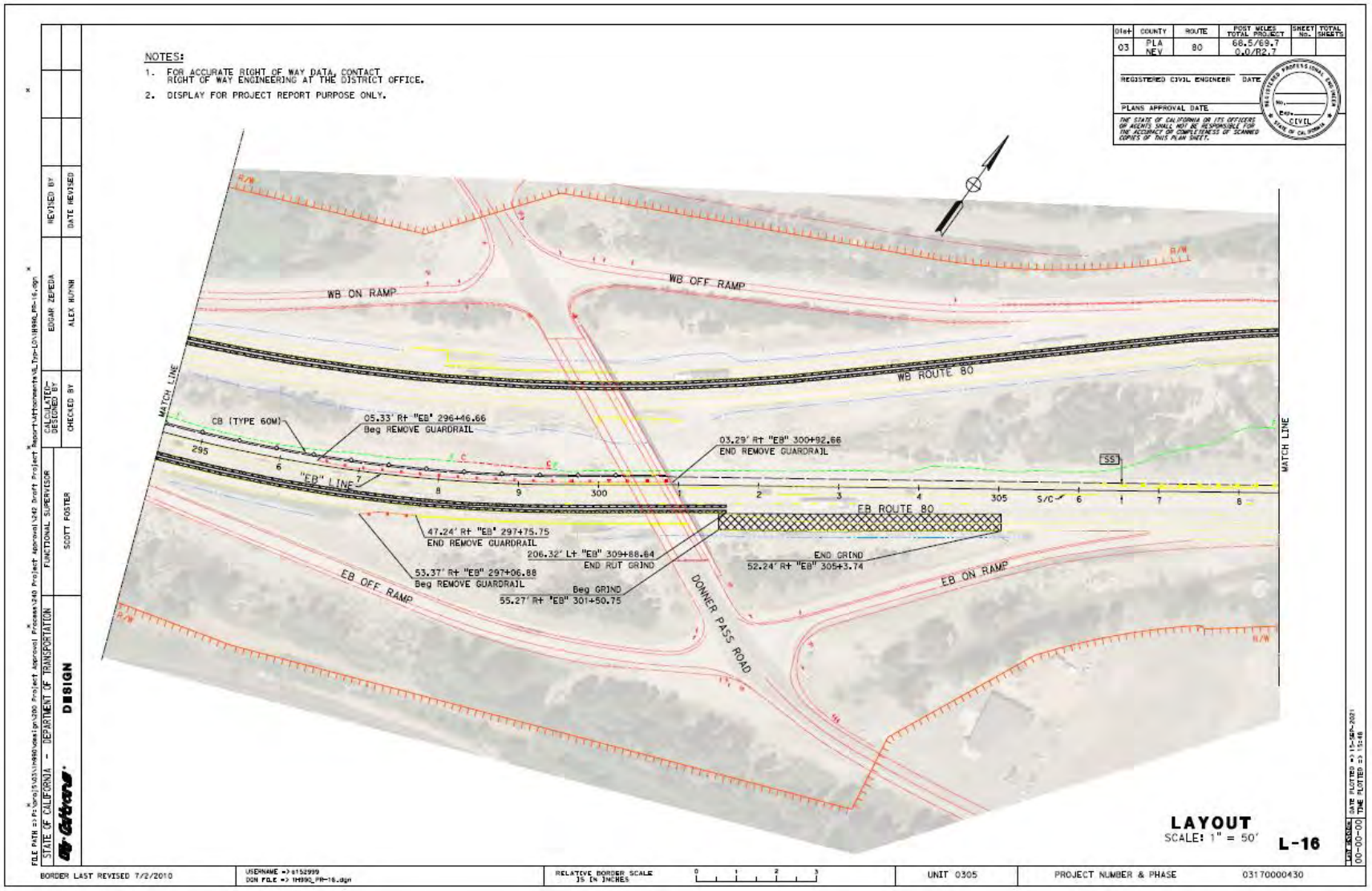

NOTES:
1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. DISPLAY FOR PROJECT REPORT PURPOSE ONLY.
DIST 03 | COUNTY PLA NEV | ROUTE 80 | POST MILES TOTAL PROJECT 68.5/69.7 0.0/R2.7 | SHEET NO. | TOTAL SHEETS
REGISTERED CIVIL ENGINEER DATE
PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.
REGISTERED PROFESSIONAL ENGINEER
No.
Exp.
CIVIL
STATE OF CALIFORNIA
WB ROUTE 80
MATCH LINE
"EB" LINE
CB (TYPE 60M)
EB ROUTE 80
S/C
MATCH LINE
R/W
LAYOUT
SCALE: 1" = 50'
L-11
DESIGN
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
FUNCTIONAL SUPERVISOR
SCOTT FOSTER
CALCULATED/DESIGNED BY
EDGAR ZEPEDA
CHECKED BY
ALEX HUYNH
REVISED BY
DATE REVISED
BORDER LAST REVISED 7/2/2010
USERNAME => b152939
DGN FILE => 1H890_PR-11.dgn
RELATIVE BORDER SCALE IS IN INCHES
UNIT 0305
PROJECT NUMBER & PHASE
03170000430
DATE PLOTTED => 15-SEP-2021
TIME PLOTTED => 15:47

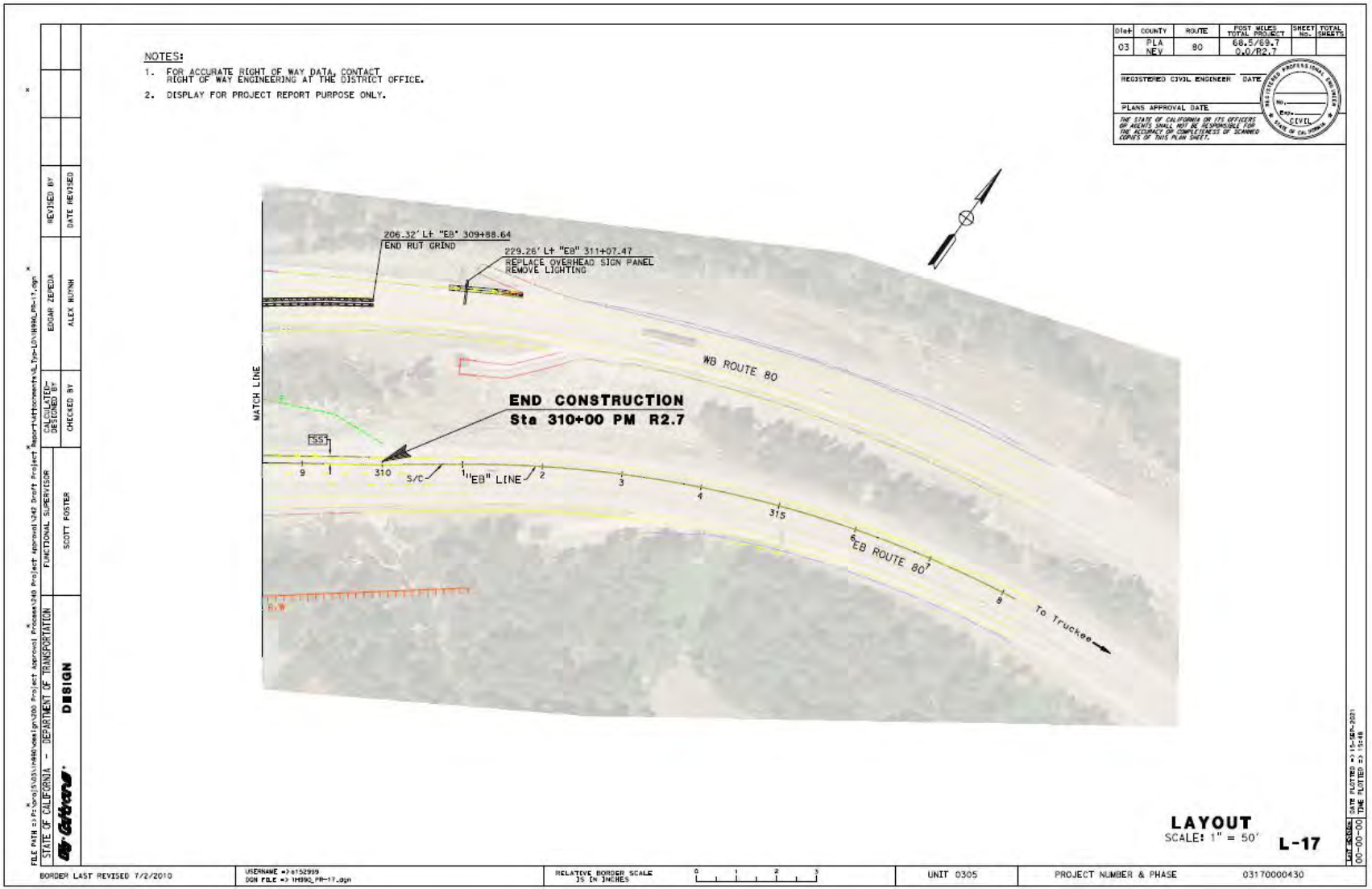

NOTES:
1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. DISPLAY FOR PROJECT REPORT PURPOSE ONLY.
Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS
03 | PLA NEV | 80 | 68.5/69.7 0.0/R2.7
REGISTERED CIVIL ENGINEER DATE
PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.
REGISTERED PROFESSIONAL ENGINEER
CIVIL
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
SCOTT FOSTER
CALCULATED-DESIGNED BY
CHECKED BY
EDGAR ZEPEDA
ALEX HUYNH
REVISED BY
DATE REVISED
WB ROUTE 80
EB ROUTE 80
"EB" LINE
CB (TYPE 60M)
ESS
S/C
MATCH LINE
MATCH LINE
R/W
R/W
R/W
LAYOUT
SCALE: 1" = 50'
L-12
DATE PLOTTED = 15-SEP-2021
TIME PLOTTED = 15:48
BORDER LAST REVISED 7/2/2010
USERNAME = s152999
DGN FILE = 1H990_PR-12.dgn
RELATIVE BORDER SCALE IS IN INCHES
UNIT 0305
PROJECT NUMBER & PHASE
03170000430


NOTES:
1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. DISPLAY FOR PROJECT REPORT PURPOSE ONLY.
Donner Pass Rd
WB ROUTE 80
MATCH LINE
MATCH LINE
CB (TYPE 60M)
EB ROUTE 80
"EB" LINE
S/C
LAYOUT
SCALE: 1" = 50'
L-13
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
SCOTT FOSTER
EDGAR ZEPEDA
ALEX HUYNH
BORDER LAST REVISED 7/2/2010
UNIT 0305
PROJECT NUMBER & PHASE
03170000430


NOTES:
1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. DISPLAY FOR PROJECT REPORT PURPOSE ONLY.
Donner Pass Rd
R/W
WB ROUTE 80
MATCH LINE
CB (TYPE 60M)
EB ROUTE 80
"EB" LINE
S/C
MATCH LINE
LAYOUT
SCALE: 1" = 50'
L-14
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
SCOTT FOSTER
CALCULATED-DESIGNED BY
EDGAR ZEPEDA
CHECKED BY
ALEX HUYNH
REVISED BY
DATE REVISED
REGISTERED CIVIL ENGINEER
DATE
PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.
Dist
COUNTY
ROUTE
POST MILES TOTAL PROJECT
SHEET No.
TOTAL SHEETS
03
PLA NEV
80
68.5/69.7 0.0/R2.7
BORDER LAST REVISED 7/2/2010
USERNAME =>
DGN FILE =>
RELATIVE BORDER SCALE IS IN INCHES
UNIT 0305
PROJECT NUMBER & PHASE
03170000430


NOTES:
1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. DISPLAY FOR PROJECT REPORT PURPOSE ONLY.
Donner Pass Rd
WB ROUTE 80
WB ON RAMP
MATCH LINE
CB (TYPE 60M)
SS1
S/C
"EB" LINE
EB ROUTE 80
EB OFF RAMP
75.69' R+ "EB" 289+74.05
REPLACE OVERHEAD SIGN PANEL
REMOVE LIGHTING
LAYOUT
SCALE: 1" = 50'
L-15
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR
SCOTT FOSTER
CALCULATED-DESIGNED BY
EDGAR ZEPEDA
CHECKED BY
ALEX HUYNH
REVISED BY
DATE REVISED
BORDER LAST REVISED 7/2/2010
UNIT 0305
PROJECT NUMBER & PHASE
03170000430


NOTES:
1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. DISPLAY FOR PROJECT REPORT PURPOSE ONLY.
WB ON RAMP
WB OFF RAMP
WB ROUTE 80
MATCH LINE
CB (TYPE 60M)
05.33' Rt "EB" 296+46.66
Beg REMOVE GUARDRAIL
03.29' Rt "EB" 300+92.66
END REMOVE GUARDRAIL
"EB" LINE
EB ROUTE 80
47.24' Rt "EB" 297+75.75
END REMOVE GUARDRAIL
206.32' Lt "EB" 309+88.64
END RUT GRIND
53.37' Rt "EB" 297+06.88
Beg REMOVE GUARDRAIL
Beg GRIND
55.27' Rt "EB" 301+50.75
END GRIND
52.24' Rt "EB" 305+3.74
EB OFF RAMP
EB ON RAMP
DONNER PASS ROAD
LAYOUT
SCALE: 1" = 50'
L-16
DESIGN
SCOTT FOSTER
EDGAR ZEPEDA
ALEX HUYNH
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
BORDER LAST REVISED 7/2/2010
UNIT 0305
PROJECT NUMBER & PHASE
03170000430


NOTES:
1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. DISPLAY FOR PROJECT REPORT PURPOSE ONLY.
Dist
03
COUNTY
PLA
NEV
ROUTE
80
POST MILES TOTAL PROJECT
68.5/69.7
0.0/R2.7
SHEET No.
TOTAL SHEETS
REGISTERED CIVIL ENGINEER
DATE
PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.
206.32' Lt "EB" 309+88.64
END RUT GRIND
229.26' Lt "EB" 311+07.47
REPLACE OVERHEAD SIGN PANEL
REMOVE LIGHTING
WB ROUTE 80
MATCH LINE
END CONSTRUCTION
Sta 310+00 PM R2.7
SSS
9
310
S/C
"EB" LINE
2
3
4
315
6
EB ROUTE 80
8
To Truckee
R/W
LAYOUT
SCALE: 1" = 50'
L-17
DESIGN
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
FUNCTIONAL SUPERVISOR
SCOTT FOSTER
CALCULATED/DESIGNED BY
CHECKED BY
EDGAR ZEPEDA
ALEX HUYNH
REVISED BY
DATE REVISED
FILE PATH =>
BORDER LAST REVISED 7/2/2010
USERNAME =>
DGN FILE =>
RELATIVE BORDER SCALE IS IN INCHES
UNIT 0305
PROJECT NUMBER & PHASE
03170000430
DATE PLOTTED =>
TIME PLOTTED =>

Appendix B Title VI Policy Statement

STATE OF CALIFORNIA—CALIFORNIA STATE TRANSPORTATION AGENCY EDMUND G. BROWN Jr., Governor

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

Making Conservation a California Way of Life.

April 2018

NON-DISCRIMINATION
POLICY STATEMENT

The California Department of Transportation, under Title VI of the Civil Rights Act of 1964, ensures *"No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance."*

Related federal statutes 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, please visit the following web page: http://www.dot.ca.gov/hq/bep/title_vi/t6_violated.htm.

To obtain this information in an alternate format such as Braille or in a language other than English, please contact the California Department of Transportation, Office of Business and Economic Opportunity, 1823 14th Street, MS-79, Sacramento, CA 95811. Telephone (916) 324-8379, TTY 711, email Title.VI@dot.ca.gov, or visit the website www.dot.ca.gov.

LAURIE BERMAN
Director

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

Appendix C USFWS, CDFW, and Species List

Selected Elements by Common Name
California Department of Fish and Wildlife
California Natural Diversity Database

Query Criteria: Quad IS (Soda Springs (3912034))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
alder buckthorn *Rhamnus alnifolia*	PDRHA0C010	None	None	G5	S3	2B.2
black swift *Cypseloides niger*	ABNUA01010	None	None	G4	S2	SSC
black-backed woodpecker *Picoides arcticus*	ABNYF07090	None	None	G5	S2	
California wolverine *Gulo gulo*	AMAJF03010	Proposed Threatened	Threatened	G4	S1	FP
Fisher *Pekania pennanti*	AMAJF01020	None	None	G5	S2S3	SSC
gray-headed pika *Ochotona princeps schisticeps*	AMAEA0102L	None	None	G5T2T4	S2S4	
North American porcupine *Erethizon dorsatum*	AMAFJ01010	None	None	G5	S3	
Sierra marten *Martes caurina sierrae*	AMAJF01014	None	None	G5T3	S3	
Sierra Nevada mountain beaver *Aplodontia rufa californica*	AMAFA01013	None	None	G5T3T4	S2S3	SSC
Sierra Nevada yellow-legged frog *Rana sierrae*	AAABH01340	Endangered	Threatened	G1	S1	WL
southern long-toed salamander *Ambystoma macrodactylum sigillatum*	AAAAA01085	None	None	G5T4	S3	SSC
starved daisy *Erigeron miser*	PDAST3M2K0	None	None	G3?	S3?	1B.3
Stebbins' phacelia *Phacelia stebbinsii*	PDHYD0C4D0	None	None	G3	S3	1B.2

Record Count: 13

Government Version -- Dated November, 29 2020 -- Biogeographic Data Branch
Report Printed on Thursday, December 03, 2020

Page 1 of 1
Information Expires 5/29/2021

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
Phone: (916) 414-6600 Fax: (916) 414-6713

In Reply Refer To:
Consultation Code: 08ESMF00-2021-SLI-0473
Event Code: 08ESMF00-2021-E-01271
Project Name: Kingvale Truck Lane

December 03, 2020

Subject: List of threatened and endangered species that may occur in your proposed project location, and/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, under the jurisdiction of the U.S. Fish and Wildlife Service (Service) 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 Service under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

Please follow the link below to see if your proposed project has the potential to affect other species or their habitats under the jurisdiction of the National Marine Fisheries Service:

http://www.nwr.noaa.gov/protected_species/species_list/species_lists.html

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

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

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

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

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
(916) 414-6600

Project Summary

Consultation Code: 08ESMF00-2021-SLI-0473

Event Code: 08ESMF00-2021-E-01271

Project Name: Kingvale Truck Lane

Project Type: TRANSPORTATION

Project Description: Roadway Construction

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/39.32021340603965N120.42506580957883W

Counties: Nevada, CA | Placer, CA

Endangered Species Act Species

There is a total of 2 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Amphibians

NAME	STATUS
Sierra Nevada Yellow-legged Frog *Rana sierrae* There is **final** critical habitat for this species. Your location overlaps the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/9529	Endangered

Fishes

NAME	STATUS
Delta Smelt *Hypomesus transpacificus* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/321	Threatened

Critical habitats

There is 1 critical habitat wholly or partially within your project area under this office's jurisdiction.

NAME	STATUS
Sierra Nevada Yellow-legged Frog *Rana sierrae* https://ecos.fws.gov/ecp/species/9529#crithab	Final

Quad Name **Soda Springs**
Quad Number **39120-C4**

ESA Anadromous Fish

SONCC Coho ESU (T) -
CCC Coho ESU (E) -
CC Chinook Salmon ESU (T) -
CVSR Chinook Salmon ESU (T) -
SRWR Chinook Salmon ESU (E) -
NC Steelhead DPS (T) -
CCC Steelhead DPS (T) -
SCCC Steelhead DPS (T) -
SC Steelhead DPS (E) -
CCV Steelhead DPS (T) -
Eulachon (T) -
sDPS Green Sturgeon (T) -

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat -
CCC Coho Critical Habitat -
CC Chinook Salmon Critical Habitat -
CVSR Chinook Salmon Critical Habitat -
SRWR Chinook Salmon Critical Habitat -
NC Steelhead Critical Habitat -
CCC Steelhead Critical Habitat -
SCCC Steelhead Critical Habitat -
SC Steelhead Critical Habitat -
CCV Steelhead Critical Habitat -
Eulachon Critical Habitat -
sDPS Green Sturgeon Critical Habitat -

ESA Marine Invertebrates

Range Black Abalone (E) -
Range White Abalone (E) -

ESA Marine Invertebrates Critical Habitat

Black Abalone Critical Habitat -

ESA Sea Turtles

East Pacific Green Sea Turtle (T) -
Olive Ridley Sea Turtle (T/E) -
Leatherback Sea Turtle (E) -
North Pacific Loggerhead Sea Turtle (E) -

ESA Whales

Blue Whale (E) -
Fin Whale (E) -
Humpback Whale (E) -
Southern Resident Killer Whale (E) -
North Pacific Right Whale (E) -
Sei Whale (E) -
Sperm Whale (E) -

ESA Pinnipeds

Guadalupe Fur Seal (T) -

Essential Fish Habitat

Coho EFH -
Chinook Salmon EFH - X
Groundfish EFH -
Coastal Pelagics EFH -
Highly Migratory Species EFH -

MMPA Species (See list at left)

ESA and MMPA Cetaceans/Pinnipeds
See list at left and consult Monica DeAngelis
monica.deangelis@noaa.gov
562-980-3232

MMPA Cetaceans -
MMPA Pinnipeds -

Scientific N	Common N	Lifeform	CRPR	GRank	SRank	CESA	FESA	Blooming I	Habitat	Micro Hab	Elevation l	Elevation l	CA Endemic
Bruchia bc	Bolander's moss		4.2	G3G4	S3	None	None		Lower moi	damp soil	1700	5575	F
Ceanothus	Fresno cea	perennial s	4.3	G4	S4	None	None	May-Jul	Cismontane woodlan		900	2950	T
Erigeron m	starved da	perennial l	1B.3	G3?	S3?	None	None	Jun-Oct	Upper montane conif		1840	6035	T
Hordeum i	vernal barl	annual her		3.2 G3G4	S3S4	None	None	Mar-Jun	Coastal dunes, Coasta		5	15	F
Lewisia kel	Hutchison'	perennial l		3.2 G3G4T3Q	S3	None	None	(Apr)May-	Upper moi	Openings,	765	2505	T
Lewisia kel	Kellogg's le	perennial l		3.2 G3G4T2T3	S2S3	None	None	(Apr)May-	Upper moi	Openings,	1465	4805	T
Phacelia st	Stebbins' p	annual her	1B.2	G3	S3	None	None	May-Jul	Cismontane woodlan		610	2000	T
Silene occi	Western ca	perennial l	4.3	G4T3	S3	None	None	Jun-Aug	Chaparral, dry, open s		1230	4035	T

Appendix D Response to Comments

ATTACHMENT F

TRAFFIC OPERATIONS ANALYSIS REPORT

State of California
DEPARTMENT OF TRANSPORTATION

California State Transportation Agency

M e m o r a n d u m

Serious drought!
Help Save Water!

To: Mohan Bonala
Project Manager

Date: 06/09/2021
EA: 03-1H990
EFIS: 0317000043
PM: PLA 080, PM 68.3/PM 69.7 NEV 080, PM 0/PM R2.7

From: **Raju Porandla**, Chief
Office of Transportation Analytics, Modeling & Forecasting

Re: Travel Forecast for 03-1H990 VAR-080 Soda Pavement Repair VMT by Speed-Bin

A summary of the travel forecast data for air-quality analysis for 03-1H990 is provided in Table 1 and Table 2 below. The VMT distribution was derived from available empirical traffic data from nearby PeMS locations closely matching the existing and proposed freeway cross-sections. The peak-hour speed and Level of Service data has been provided by the Office of Highway Operations.

Table 1: Travel Forecast Data

Location	Scenario	AADT			Project-Level VMT (mi)
		Total	Truck	Truck %	
Entire segment (PLA 080, PM 68.3/PM 69.7; NEV 080, PM 0/PM R2.7) at EB	No-Build 2019	15,850	3,004	19%	61,815
	Build 2019	15,850	3,004	19%	61,815
	No-Build Opening	16,500	3,127	19%	64,350
	Build Opening	16,500	3,127	19%	64,350
	No-Build Horizon	18,050	3,420	19%	70,395
	Build Horizon	18,050	3,420	19%	70,395

Table 2: Peak Hour Analysis and LOS Forecast Data

Location	Scenario	AM Peak Hour				PM Peak Hour			
		Volume	Truck %	Speed (mph)	LOS	Volume	Truck %	Speed (mph)	LOS
Entire segment (PLA 080, PM 68.3/PM 69.7; NEV 080, PM 0/PM R2.7) at EB	No-Build 2019	1640	7.99%	64.1	B	2079	10.29%	60.9	B
	Build 2019			65.3	A			63.6	A
	No-Build Opening	1689	7.93%	64.0	B	2142	10.27%	60.5	B
	Build Opening			65.3	A			63.5	B
	No-Build Horizon	1853	7.99%	63.4	B	2350	10.30%	59.1	C
	Build Horizon			65.1	A			63.1	B

Table 2: Peak Hour Analysis and LOS Forecast Data (contd.)

Location	Scenario	Off Peak Hour				DVHD
		Volume	Truck %	Speed (mph)	LOS	
Entire segment (PLA 080, PM 68.3/PM 69.7; NEV 080, PM 0/PM R2.7) at EB	No-Build 2019	69	43.48%	51.9	A	10.40
	Build 2019			51.9	A	
	No-Build Opening	71	43.66%	51.9	A	11.85
	Build Opening			51.9	A	
	No-Build Horizon	78	43.59%	52.0	A	16.30
	Build Horizon			52.0	A	

Table 3: VMT distribution by speed bin

Location	VMT Distribution (%)					
	Speed Bin (mph)	Count Year (2019)	Opening Year (2026)		Horizon Year (2046)	
		No Build	No Build	Build	No Build	Build
Entire segment (PLA 080, PM 68.3/PM 69.7; NEV 080, PM 0/PM R2.7) at EB	<40	5	5	0	0	0
	45	10	7	0	2	0
	50	10	6	1	4	1
	55	6	6	6	9	6
	60	5	7	13	9	12
	65	8	11	18	13	18
	70	29	30	22	31	22
	>70	27	28	40	32	41

If you have any questions or need additional information, please contact Harsimran Bains at (530)741-4214.

ATTACHMENT G

LANDSCAPE ARCHITECTURE ASSESSMENT SHEET

NORTH REGION
LANDSCAPE ARCHITECTURE ASSESSMENT SHEET
03-LAND-0002 (Rev. 2020-APRIL-07)

TO: Nick Chatham **FROM:** Julia Riggins **Unit/Senior:** Nicki Johnson **Project Manager:** Mohan Bonala	**DISTRICT:** 03 **DATE:** 9/14/2021 **EA:** 03-1H990 **ID:** 0317000043	**CO:** Pla Nev	**RTE:** 80	**PM:** 68.3/69.7 R0.0-R2.7

CONTRACT SEPARATION:

☒ Roadside work as part of roadway work EA

☐ Roadside work for roadway project to follow under separate

PROJECT: Soda Springs Pavement Rehabilitation

FUNDING SOURCE: SHOPP

PROJECT MILESTONE: ☐ PID ☒ PA&ED ☐ PS&E

PROJECT COST:

DISTRICT: $ 55,100,400 **STRUCTURES:** $8,796,000

PROJECT DESCRIPTION

The purpose of this project is to restore the facility to state of good repair and provide efficient movement of people and goods through pavement and culvert rehabilitation. The provision of a truck climbing lane will improve traffic operation by facilitating the passing of trucks and slow-moving vehicles whose speeds drop due to the sustained grade. Safety will also be improved by upgrading signs and detector loops, and by replacing all non-standard metal beam guardrail with shoulder concrete barrier.

The existing pavement condition indicates surface and is expected to develop an unacceptable ride quality by the construction year. The reduce speed of truck climbing the eastbound grade reduces the operational efficiency of this section of freeway. Existing culverts are deteriorated and need rehabilitation. The detector loops on the mainline and ramps within the project limits need to be replaced due to the proposed work. Existing overhead sign structures at the westbound Kingvale and eastbound Soda Springs exits are deteriorated and need to be replaced according to current standards. Existing sign panels at the eastbound exit to Kingvale and the westbound exit to Soda Springs are deteriorate as well and need to be replaced with standard sign panels.

The project scope includes the following work:

- Repairing locations of concrete slab failure on the existing lanes, shoulders, and the Kingvale UC ramps, including full replacement on the EB #2 lane at PM 69/69.769
- Grinding two channels (3.0’ x 0.1’) in the chain-wear wheel tracks of the outside lane and filling with polyester concrete to grade
- Using Jointed Plain Concrete Pavement (JPCP) to construct an eastbound truck climbing lane
- Grooving existing chain control concrete pavement area
- Constructing shoulder concrete barrier (Type 60SC Modified).
- Replacing the mainline, Kingvale ramps, and Soda Springs ramps detector loops
- Replacing existing overhead sign structures at the WB exit to Kingvale and the EB exit to Soda Springs
- Replacing existing sign panels and removing lighting on existing overhead sign structures at the EB exit to Kingvale and the WB exit to Soda Springs
- Constructing concrete valley gutter, Nev PM 0.45/0.5
- Replacing all non-standard MBGR with shoulder concrete barrier (Type 60SC Modified)
- Repairing 32 existing culverts using cured-in-place-pipelining (CIPP).
- Restriping with recessed methyl methacrylate (MMA) traffic stripes and recessed or surface applied MMA pavement markings
- Widening the Troy Undercrossing eastbound structure (Br# 19-106R, PM 68.55) and Kingvale Undercrossing eastbound structure (Br# 19-107R, PM 69.23)

SCENIC HIGHWAY STATUS ☐ Officially Designated ☐ Eligible ☒ Not Designated

NORTH REGION
LANDSCAPE ARCHITECTURE ASSESSMENT SHEET
03-LAND-0002 (Rev. 2020-APRIL-07)

HIGHWAY PLANTING/IRRIGATION BACKGROUND INFORMATION

LANDSCAPE FREEWAY STATUS	☐ Yes	☒ No	
WARRANTED HIGHWAY PLANTING	☐ Yes	☒ No	
(E) H2O & POWER AVAILABLE	☐ Yes	☒ No	Where: _____
(E) IRRIGATION IMPACTED	☐ Yes	☒ No	Where: _____
COOP. MAINT. AGREEMENTS	☐ Yes	☒ No	
ADJ. TO OUTDOOR ADVERTISING	☐ Yes	☒ No	

AREA (Ft^2/ACRE) FOR HIGHWAY PLANTING:

EROSION CONTROL BACKGROUND INFORMATION

SOIL DISTURBANCE	☒ Yes	☐ No
CONCENTRATED FLOW AREAS	☒ Yes	☐ No
SLOPE LOCATIONS	☒ Yes	☐ No
SLOPES > 2:1	☒ Yes	☐ No

AREA (Ft^2/ACRE) FOR EROSION CONTROL:

- total soil disturbance area is greater than one acre (15.5 Lane Miles)
- There is a potential for hazardous materials (including underground or aboveground tanks, etc.) or hazardous waste (including oil/water separators, waste oil, asbestos-containing materials, lead-based paint, ADL, etc.) within or immediately adjacent to the construction area. The potential exists for aerially deposited lead (ADL), lead based paint (LBP, found in yellow and white traffic stripe), and asbestos containing materials (ACM, found in structures). In addition, the work on the structures might involve electrical modifications, and other work items might involve the removal of treated wood waste (e.g., guardrail posts). Some issues can be addressed using SSPs. If LBP is present, a lead compliance plan is required. An ACM survey should be conducted for all locations that involve structure widening, upgrades, and/or demolition.
- The project has the potential to impact water resources (rivers, streams, bays, inlets, lakes, drainage sloughs) within or immediately adjacent to the project area.
- The project triggers the need for storm water compliance (>1 ac. additional impervious surface).
- Using Jointed Plain Concrete Pavement (JPCP) to construct an eastbound truck climbing lane (PM 68.69 – PM R2.7)
- Constructing shoulder concrete barrier (Type 60SC Modified).
- Constructing concrete valley gutter, Nev PM 0.45/0.5
- Replacing all non-standard MBGR with shoulder concrete barrier (Type 60SC Modified)
- Repairing 32 existing culverts using cured-in-place-pipelining (CIPP).
- Widening the Troy Undercrossing eastbound structure (Br# 19-106R, PM 68.55) and Kingvale Undercrossing eastbound structure (Br# 19-107R, PM 69.229) about 12’ wide (2,660 sf total)
- 20 Culvert over 24” in size:

4 @	24"	CIPP
4 @	30"	CIPP
6 @	36"	CIPP
1 @	42"	CIPP
2 @	54"	CIPP
1 @	72"	Invert paving
1 @	84"	Invert paving
1 @	90"	Invert paving

NORTH REGION
LANDSCAPE ARCHITECTURE ASSESSMENT SHEET
03-LAND-0002 (Rev. 2020-APRIL-07)

MITIGATION BACKGROUND INFORMATION

PROJECT BIOLOGIST/ENV. TEAM Bria Miller & Anna Kluge — Contact Date: 8/25/21

BIOLOGICAL REVEG. REQUIRED ☐ Yes ☒ No — Applicable Permits: Yes

VISUAL IMPACT MIT. REQUIRED ☐ Yes ☒ No

UNIT TASKED w/ BIO. REVEG. ☐ Landscape Architecture ☐ Stewardship

- There is a potential for state or federally listed threatened or endangered species, or their critical habitat or essential fish habitat to occur within or adjacent to the construction area.
- The project has the potential to directly or indirectly affect migratory birds, or their nests or eggs (such as vegetation removal, box culvert replacement/repair, bridge work, etc.), and/or has the potential to interfere with the movement of fish or wildlife, or with established migratory corridors.
- 1602 Streambed Alteration permit

PLANT COUNT FOR MITIGATION PLANTING: To be determined in PS&E phase.

ROADSIDE MAINTENANCE SAFETY NEEDS

- ☐ Paving of Extended Gore Areas
- ☐ Paving of Narrow Areas
- ☐ Maintenance Vehicle Pullouts (MVPs)
- ☐ Other _____

http://www.dot.ca.gov/hq/LandArch/policy/pdf/design_for_safety.pdf

ROADSIDE VEGETATION MANAGEMENT TREATMENT NEEDS

- ☐ Guardrails and Signs
- ☐ Side Slopes/Embankment Slopes

CONTEXT SENSITIVITY

- ☐ It is determined that the project may involve consideration of community and local involvement.
- ☒ No foreseen issues with community and local involvement

http://www.dot.ca.gov/hq/oppd/context/index.htm

CONSIDER ADDITIONAL AESTHETIC TREATMENT FOR:

- ☐ Sound Wall
- ☐ Retaining Wall
- ☐ Bridge Structure
- ☐ Other _____

Calculations:

EROSION CONTROL (HBGM & FRM @ bridge widening (1,330 SQFT + approx. 3' extra around outside) = 2,500 SQFT
EROSION CONTROL (HBGM & FRM @ conc. retaining walls) (3,000 SQFT x 2 x 3') = 18,000 SQFT
EROSION CONTROL (HBGM & FRM @ road widening, includes concrete barriers) (5,280 SQFT x 3') = 15,840 SQFT

EROSION CONTROL (HBGM & blanket @ culverts) (20 x 150 SQFT each) = 3,000 SQFT

FIBER ROLLS (15.5 miles x 5,280 LF) = 81,840 LF

PERMANENT EROSION CONTROL ESTABLISHMENT WORK (PECE) (250 DAYS) = steeper than 2:1, concentrated flow areas, poor soil health

NORTH REGION
LANDSCAPE ARCHITECTURE ASSESSMENT SHEET
03-LAND-0002 (Rev. 2020-APRIL-07)

COST ESTIMATE

	ITEM DESCRIPTION	UNIT	QUANTITY	PRICE	TOTAL
	EROSION CONTROL (FRM)	SQFT	36,340	$0.45	$16,353
	EROSION CONTROL (HBGM)	SQFT	39,340	$0.30	$11,802
	EROSION CONTROL (Blanket)	SQFT	3,000	$2.45	$7,350
	FIBER ROLLS	LF	81,840	$3.50	$286,440
	PERMANENT EROSION CONTROL ESTABLISHMENT WORK (PECE) (250 DAYS)	LS	LUMP SUM	$10,000	$10,000
	MOVE-IN/MOVE-OUT (240 days)	EA	6	$1,000	$6,000
				SUBTOTAL	**$337,945**
Supplemental Work					
	ADDITIONAL PERMANENT EROSION CONTROL ESTABLISHMENT WORK	LS	LUMP SUM	$6,000	$6,000
				SUBTOTAL	6,000
				TOTAL	**$343,945**

PREPARED BY: Julia Riggins DATE: 09.14.2021
Landscape Associate – Julia Riggins

CONCURRED BY: DATE: 09/14/2021
Project Manager - Mohan Bonala

APPROVED BY: Nicki Johnson DATE: 9/14/2021
Senior Landscape Architect – Nicki Johnson

ATTACHMENT H
RIGHT OF WAY DATA SHEET

State of California
DEPARTMENT OF TRANSPORTATION

California State Transportation Agency

MEMORANDUM

To: SCOTT FOSTER
Design Engineer
Department of Transportation

Date: July 27, 2021

File: 03-PLA/NEV-80-68.3/69.7 and 0.0/R2.7

EFIS No.: 03 1700 0043

EA: 1H990

Alternate: 1

Attention: NICK CHATHAM
Project Engineer

From: JANEL D. WILSON
Assistant Chief
North Region Right of Way
Marysville

Subject: CURRENT ESTIMATED RIGHT OF WAY COSTS

Project Description: Near Kingvale from Placer County line to east of Donner Pass Road (PM 0.0/R2.7L/R); also in Placer County from west of Troy Road Undercrossing to Nevada County Line (PM 68.3/69.7).

We have completed an estimate of the right of way costs for the above referenced project based on information received from you on June 9, 2021.

Right of Way Lead Time will require a minimum of 18 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.

Right of Way Certification is at risk. The current project schedule does not provide Right of Way with sufficient lead time.

Attachment:
Right of Way Data Sheet

cc. Mohan Bonala

California State Transportation Agency
RIGHT OF WAY DATASHEET

EA: 1H990
PROJECT NO.: 03 1700 0043
LOCATION: 03-PLA/NEV-80-68.3/69.7 and 0.0/R2.7
DESCRIPTION: Rehabilitate roadway construct truck climbing lane in EB direction widen Troy UC (Br#19-0106R) Kingvale UC (Br#19-0107R), replace sign panels upgrade lighting and TMS elements and rehabilitate drainage systems.
ALTERNATE: 1
DATE: 7/27/2021
DATASHEET TYPE: Revision

1. Right of Way Cost Estimate:

	Current Value Future Use	Escalation Rate	Escalated Value
A. Total Acquisition Cost	$0		$0
B. Appraisal Fees Estimate	$0	N/A	$0
C. Mitigation Acquisition & Credits	$0		$0
D. Project Development Permit Fees	$0		$0
Subtotal	$0		N/A
E. Utility Relocation (State's Share)	$1,550,000	5%	$1,686,635
(Owner's Share: $0)			
F. Relocation Assistance (RAP)	$0		$0
G. Clearance/Demolition	$0		$0
H. Title & Escrow	$0		$0
I. Total Estimated Right of Way Cost	$1,550,000	Rounded	$1,687,000 *
J. Phase 4 estimated expenses			
Railroad	$0		
Construction Contract Work	$0		

2. Current Date of Project Approval (PA&ED): February 5, 2022
Current Date of Right of Way Certification: April 20, 2023

3. Parcel Data:

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

Areas:		Mitigation		Misc. R/W Work	
R/W	N/A	Impacts	0	RAP Displacees	N/A
TCE	N/A	Parcels	0	Clear/Demo	N/A
Excess	N/A	Credits	0	PTE Construct	N/A
Mitigation	N/A	Lump Sum	0	Condemnation	N/A
		Env PTE	0	USA Involvement	No

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

All work will be performed within the existing Right of Way.

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 business/nonprofit N/A

No. of multi-family 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 ____

Names of Utility Companies requiring verification only.

AT&T Transmission, Lumen, Altice, Zayo, Verizon, Placer County Public Works, Donner Summit PUD, Sierra Lakes Water District.

Names of Utility Companies requiring involvements.

PG&E electric, AT&T, Kinder Morgan petroleum.

Additional information concerning Utility Involvement on this project.

Potential involvement with PG&E overhead electric, AT&T underground and Kinder Morgan. Kinder Morgan petroleum line may need protection in place or relocation at Kingvale U.C. due to EB bridge widening. If Kinder Morgan agrees to a Standard POS LOC Agreement, or agrees to sign One Time Only POS LOC Agreements, involvement could be protection in place. Without ability to positively locate Kinder Morgan line, HQ has recommended that Kinder Morgan lines be called in conflict. In this case, Kinder Morgan line would require relocation. Whether protection in place or relocation, Kinder Morgan will require sufficient lead time - at least 12 months.

10. Are railroad facilities or rights of way affected?

Yes X No ____ Phase 4 Capital $0

There are Union Pacific Railroad Co tracks that parallel Route 80 within the project limits that will not be affected by work. A Railroad Clearance Memo with Short Clauses will be sent to OE with the RW Cert Request.

11. Are USA Lands or Rights Affected?

Yes ____ No X Phase 4 Capital $0

Agencies Involved:

US Forest Service ____ BLM ____ Army Corps of Engineers ____

National Parks ____ BIA ____ Veterans Administration ____

US Fish & Wildlife ____ GSA ____ ____

Rights or Permissions to acquire:

Easement ____ Special Use Permit ____ Courtesy Letter ____

Right of Way Grant ____ Cooperative Work Agreement ____ Cost Recovery ____

Mineral Agreement ____ Letter of Concurrence ____ Timber Sale ____

There is no Federal Land on this project.

12. Is an RE Office required for the project?

Yes X No ____

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 sites required?
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?

Mitigation is not anticipated.

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 18 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.)

- ☑ 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.
- ☑ 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.
- ☑ Kinder Morgan petroleum pipeline assumed to be in conflict per discussion with Headquarters.

Evaluation Prepared By:

Right of Way: _____ Date 7/27/2021
PATRICK REGO
Associate Right of Way Agent

Recommended: _____ Date 07/27/2021
ROBERT ODOM
Senior Right of Way Agent
Appraise/Acquire, Estimating, and RAP Branch
Marysville

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.

_____ Date 7/27/21
JANEL D. WILSON
Assistant Chief
North Region Right of Way
Marysville

Reviewed By

RW Planning & Management: _____ Date 7/28/21
ERIC YBARRA

ATTACHMENT I
NOISE STUDY REPORT

Noise Study Report

Interstate 80 Kingvale Truck Climbing Lane Project

On Route 80 in Placer and Nevada Counties Near Kingvale

From 0.1 Mile West of Troy Road Undercrossing

To 0.1 Mile East of the Soda Springs Overcrossing

03- PLA & NEV-80- PM 68.3/69.7 to PM 0.0/R2.7

EA: 03-1H9900 (EFS # 0317000043)

October 2021

Prepared By: Saeid Zandian Date 2/08/2022

Saeid Zandian,
Transportation Engineer,
Caltrans North Region Environmental Engineering Office (South)
703 B Street, Marysville, CA. 95901
(530) 741-4581

Approved By: Doug Coleman Date 2/8/2022

Doug Coleman, Chief
Caltrans North Region Environmental Engineering Office (South)
703 B Street, Marysville, CA. 95901
(530) 741-4539

Executive Summary

This noise study report (NSR) evaluates noise impacts from the proposed project to the adjacent land uses, under the requirements of Title 23, Part 772 of the Code of Federal Regulations (23 CFR 772) "Procedures for Abatement of Highway Traffic Noise." 23 CFR 772 provides procedures for preparing operational and construction noise studies for Federal and Federal-aid highway projects. Noise abatement is also evaluated and considered when deemed feasible and reasonable.

The California Department of Transportation (Caltrans) proposes to rehabilitate a portion of Interstate 80 (I-80), in both Placer and Nevada County, from 0.1 miles west of the Troy undercrossing to 0.1 mile east of the Soda Springs overcrossing.

The project proposes to repair distressed pavement on the existing eastbound (EB) and westbound (WB) lanes and shoulders, construct an EB truck climbing lane and widen/replace the EB Troy (19-106R) and Kingvale (19-107R) undercrossing (UC) structures. This project is considered a Type I project since it proposes to construct truck climbing lane.

The Existing Facility:

Within the project limits, the existing facility is a four-lane divided freeway, with 2-12' lanes and 10' shoulders. The project is located along a segment of I-80 where the profile of the roadway is primarily a sustained grade, with significant grade difference between the eastbound and westbound lanes and separated by a forested median. In the eastbound direction, there is a chain installation area located 0.3 miles west of the Kingvale undercrossing, where the right shoulder widens to a width of approximately 30'. There are two interchanges within the project limits which provide ingress and egress for the surrounding Troy, Kingvale and Soda Springs areas.

I-80 serves interregional travel between the Bay Area, Sacramento, the Sierras, and Nevada and is a vital route for recreation and tourism travel. I-80 serves as a major route for commerce for transportation of goods between Nevada and northern California, over the Donner Pass. In addition, the segment experiences a heavy volume of tourist travel during the Winter and Summer months due to the recreation offered by the Lake Tahoe area.

Field investigations were conducted on March 29, 2021 to identify land uses that could be subject to traffic and construction noise impacts resulting from the proposed project.

Land uses in the project area consist of Donner Trail Elementary School (Activity Category C), Single family residences (Activity Category B), Kingvale Lodge (Activity Category E), Restaurants (Activity Category E), Commercial use (Activity Category F), and undeveloped lands that are not permitted (Activity Category G).

Noise measurements were performed at 4 locations in the project area to determine existing background noise levels (shown on Figure 5-1) and to validate the traffic noise model. The measured noise levels at these locations ranged from 60 to 62 A-weighted decibels hourly equivalent sound level (dBA Leq[h]).

The Predicted Noise Levels: Impact and Noise Abatement Considerations.

Federal Highway Administration (FHWA) Traffic Noise Model (TNM), Version 2.5 was utilized to obtain the loudest-hour noise levels for Existing year, Design year Build and no Build conditions. The project includes 4 measured locations and 14 modeled receptor locations representing Activity Category B, C, D, E, F and G land use.

For Existing year, the loudest-hour Leq(h) noise levels were calculated to range from 59 to 61 dBA for residential land use Activity Category B, 60 to 61 dBA for Activity Category C, 41 dBA for Activity Category D, 61 to 63 dBA for Activity Category E, 62 to 63 dBA for Activity Category F and 64 dBA for Activity Category G.

For Design year (2046) the loudest-hour Leq(h) noise levels were calculated to range from 59 to 62 dBA for residential land use Activity Category B, 60 to 62 dBA for Activity Category C, 42 dBA for Activity Category D, and 61 to 64 dBA for Activity Category E and 62 to 63 dBA for Activity Category F and 64 dBA for Activity Category G.

The predicted increase in noise levels from the proposed project is estimated between 0 to 1 dBA. The results of the predicted noise levels for Existing year, Design year (2046) No Build, and Build conditions are shown in Appendix B, Table B-1.

Traffic noise impacts occur when the predicted noise levels approach or exceeds the noise abatement criteria (NAC). The predicted noise levels under existing and design year will not approach or exceed noise abatement criteria for all the evaluated land uses within the project limit. Therefore, traffic noise impact is not predicted to occur and noise abatement measure is not considered for this project.

In addition, the proposed project is not predicted to result in substantial increase in noise as defined in the Protocol under CEQA.

Construction Noise Impact:

Construction noise would be short-term, no adverse noise impacts from construction activities are anticipated. The construction noise will be monitored and controlled in accordance with Caltrans Standard Specifications Section 14.8-02 “Noise Control".

Table of Contents

List of Figures

List of Abbreviated Terms

CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CNEL	Community Noise Equivalent Level
dB	Decibels
FHWA	Federal Highway Administration
Hz	Hertz
kHz	Kilohertz
L_{dn}	Day-Night Level
L_{eq}	Equivalent Sound Level
$L_{eq(h)}$	Equivalent Sound Level over one hour
L_{max}	Maximum Sound Level
LOS	Level of Service
L_{xx}	Percentile-Exceeded Sound Level
mPa	micro-Pascals
mph	miles per hour
NAC	noise abatement criteria
NADR	Noise Abatement Decision Report
NEPA	National Environmental Policy Act
NSR	Noise Study Report
Protocol	Caltrans Traffic Noise Analysis Protocol for New Highway Construction, Reconstruction, and Retrofit Barrier Projects
SPL	sound pressure level
TeNS	Caltrans' Technical Noise Supplement
TNM 2.5	FHWA Traffic Noise Model Version 2.5

Chapter 1. Introduction

1.1 Purpose of the Noise Study Report

The purpose of this NSR is to evaluate noise impacts and abatement under the requirements of Title 23, Part 772 of the Code of Federal Regulations (23 CFR 772) "Procedures for Abatement of Highway Traffic Noise."23 CFR 772 provides procedures for preparing operational and construction noise studies and evaluating noise abatement considered for Federal and Federal-aid highway projects. According to 23 CFR 772.3, all highway projects that are developed in conformance with this regulation are deemed to be in conformance with Federal Highway Administration (FHWA) noise standards. Compliance with 23CFR772 provides compliance with the noise impact assessment requirements of the National Environmental Policy Act (NEPA).

The Caltrans Traffic Noise Analysis Protocol for New Highway Construction, Reconstruction, and Retrofit Barrier Projects (Protocol) (Caltrans 2011) provides Caltrans policy for implementing 23 CFR 772 in California. The Protocol outlines the requirements for preparing noise study reports (NSR).

1.1. Project Purpose and Need

Purpose:

The purpose of this project is to restore the facility to a state of good repair and provide efficient movement of people and goods through pavement and culvert rehabilitation. The provision of a truck climbing lane will improve traffic safety as well as highway operation by facilitating the passing of trucks and slow-moving vehicles whose speeds provide a truck climbing lane to facilitate the passing of trucks and slow-moving vehicles.

Need:

This section on I-80 is located in the Sierra Mountain region, within the Tahoe National Forest and is subject to heavy snow fall during the winter months. The segment also experiences a high volume of truck traffic, with I-80 serving as a vital route for the transporting freight over the Donner Pass, between the Bay Area/ Sacramento and Nevada. Due to the heavy vehicle traffic and chain/studded tire wear during the winter months, the pavement has experienced severe rutting. The existing pavement condition indicates surface distress and is expected to develop an unacceptable ride quality by the

construction year. The reduced speed of trucks climbing the eastbound grade reduces the operational efficiency of this section of the freeway. Existing culverts are deteriorated and need rehabilitation. According to current culvert inspection log, culverts within the project limits having an existing health rating below 60/100 will be repaired, replaced, and extended as part of this project.

The existing overhead sign structures at the westbound Kingvale exit and eastbound Soda Springs exit are deteriorated and need to be replaced. Existing sign panels at the eastbound exit to Kingvale and the westbound exit to Soda Springs are deteriorated as well and need to be replaced with sign panels that meet current design standards. Reduced speed of trucks and slow-moving vehicles climbing the grade reduces the operational efficiency of this section of the freeway.

Chapter 2. Project Description

The California Department of Transportation (Caltrans) proposes to rehabilitate a portion of Interstate 80 (I-80), in both Placer and Nevada County, from 0.1 miles west of the Troy undercrossing to 0.1 mile east of the Soda Springs overcrossing.

This project proposes to repair distressed pavement on the existing eastbound (EB) and westbound (WB) lanes and shoulders, construct an EB truck climbing lane and widen/replace the EB Troy (19-106R) and Kingvale (19- 107R) undercrossing (UC) structures. Existing culverts will be repaired, replaced, or extended as needed. Detector loops on the mainline and Soda Spring ramps as well as existing overhead sign structures and sign panels will be replaced. The existing chain installation area between the Troy Road UC and Kingvale UC will be grooved to improve tire traction during snow and icy conditions. For the proposed project, the roadway features remain consistent throughout the different alternatives. The difference in alternatives is in the proposed improvements for the EB Troy UC and Kingvale UC structures.

2.1 No-Build Alternative

This "No Build" alternative retains the existing condition of the facility. This alternative does not satisfy the purpose and need of the project and is not recommended.

2.2 Build Alternative:

Roadway Features:

For the proposed project, the preferred alternative's improvements are to repair areas of damaged pavement to preserve and extend the life of the pavement. In addition, the project proposes to construct an eastbound truck climbing lane between the 0.10 mile west of the Troy UC and Soda Springs OC to improve traffic operations for this section of I-80. The project will replace the failed concrete pavement slabs along existing mainline I-80 lanes, shoulders and the westbound Kingvale on and off ramps. The project will grind two channels (3.0' x 0.15' Max) in the wheel paths of the mainline #2 lane and fill with polyester concrete to repair the areas where rutting has occurred.

Between the Troy UC and Soda Springs OC, the existing EB inside shoulder will be removed and a 12' lane with a 10' shoulder constructed using Jointed Plain Concrete Pavement (JCPC). A concrete barrier (Type 60M) will be added on the inside shoulder in lieu of metal beam guard rail. In addition, existing drainage culverts will be repaired,

replaced, or modified as needed with the project. The project will also replace the deteriorated overhead sign structures at the EB Soda Springs off ramp and WB Kingvale off ramp. The sign panels at WB Soda Springs off ramp and EB Kingvale off ramp will be upgraded to meet current design standards. With the increase in panel size the existing sign structures will need to be replaced as well.

Drainage Features:

On eastbound I-80, storm water runoff primarily sheet flows to the outside shoulder and is collected by concrete roadside ditches. The ditches convey runoff to drainage inlets or culvert that convey the flows underneath the roadway before releasing the flows into the existing median. There are multiple culverts that run under the eastbound and westbound lanes. These culverts transfer runoff from the inlets and ditches, into the forested median, under the westbound lanes and directed toward the South Yuba River. In addition, this area is subject to offsite runoff contributed by snow melt from the surrounding Sierra Nevada mountains. Within the project limits, this additional runoff drains off the slopes of the mountain regions and mingles with roadway runoff before draining under the highway through the system of ditches and culverts.

The project will repair existing culverts that have a current rating of below 60/100 by either replacement, Cured-In-Place Pipelining (CIPP), Slip lining, or Invert Paving. The project will also have to extend culverts to account for the widened pavement section. Drainage inlets and storm drain pipe will be added along the inside shoulder because of the new concrete barrier where needed to convey runoff into the median.

Chapter 3. Fundamentals of Traffic Noise

The following is a brief discussion of fundamental traffic noise concepts. For a detailed discussion, please refer to Caltrans' Technical Noise Supplement (TeNS) (Caltrans 2013), a technical supplement to the Protocol that is available on Caltrans Web site (http://www.dot.ca.gov/hq/env/noise/pub/TeNS_Sept_2013B.pdf).

3.1. Sound, Noise, and Acoustics

Sound can be described as the mechanical energy of a vibrating object transmitted by pressure waves through a liquid or gaseous medium (e.g., air) to a hearing organ, such as a human ear. Noise is defined as loud, unexpected, or annoying sound.

In the science of acoustics, the fundamental model consists of a sound (or noise) source, a receptor, and the propagation path between the two. The loudness of the noise source and obstructions or atmospheric factors affecting the propagation path to the receptor determine the sound level and characteristics of the noise perceived by the receptor. The field of acoustics deals primarily with the propagation and control of sound.

3.1. Frequency

Continuous sound can be described by frequency (pitch) and amplitude (loudness). A low-frequency sound is perceived as low in pitch. Frequency is expressed in terms of cycles per second, or Hertz (Hz) (e.g., a frequency of 250 cycles per second is referred to as 250 Hz). High frequencies are sometimes more conveniently expressed in kilohertz (kHz), or thousands of Hertz. The audible frequency range for humans is generally between 20 Hz and 20,000 Hz.

3.2. Sound Pressure Levels and Decibels

The amplitude of pressure waves generated by a sound source determines the loudness of that source. Sound pressure amplitude is measured in micro-Pascals (mPa). One mPa is approximately one hundred billionth (0.00000000001) of normal atmospheric pressure. Sound pressure amplitudes for different kinds of noise environments can range from less than 100 to 100,000,000 mPa. Because of this huge range of values, sound is rarely expressed in terms of mPa. Instead, a logarithmic scale is used to describe sound pressure level (SPL) in terms of decibels (dB). The threshold of hearing for young people is about 0 dB, which corresponds to 20 mPa.

3.3. Addition of Decibels

Because decibels are logarithmic units, SPL cannot be added or subtracted through ordinary arithmetic. Under the decibel scale, a doubling of sound energy corresponds to a 3-dB increase. In other words, when two identical sources are each producing sound of the same loudness, the resulting sound level at a given distance would be 3 dB higher than one source under the same conditions. For example, if one automobile produces an SPL of 70 dB when it passes an observer, two cars passing simultaneously would not produce 140 dB—rather, they would combine to produce 73 dB. Under the decibel scale, three sources of equal loudness together produce a sound level 5 dB louder than one source.

3.4. A-Weighted Decibels

The decibel scale alone does not adequately characterize how humans perceive noise. The dominant frequencies of a sound have a substantial effect on the human response to that sound. Although the intensity (energy per unit area) of the sound is a purely physical quantity, the loudness or human response is determined by the characteristics of the human ear.

Human hearing is limited in the range of audible frequencies as well as in the way it perceives the SPL in that range. In general, people are most sensitive to the frequency range of 1,000–8,000 Hz, and perceive sounds within that range better than sounds of the same amplitude in higher or lower frequencies. To approximate the response of the human ear, sound levels of individual frequency bands are weighted, depending on the human sensitivity to those frequencies. Then, an "A-weighted" sound level (expressed in units of dBA) can be computed based on this information.

The A-weighting network approximates the frequency response of the average young ear when listening to most ordinary sounds. When people make judgments of the relative loudness or annoyance of a sound, their judgments correlate well with the A-scale sound levels of those sounds. Other weighting networks have been devised to address high noise levels or other special problems (e.g., B-, C-, and D-scales), but these scales are rarely used in conjunction with highway-traffic noise. Noise levels for traffic noise reports are typically reported in terms of A-weighted decibels or dBA. Table 3-1 describes typical A-weighted noise levels for various noise sources.

Table 3-1. Typical A-Weighted Noise Levels

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	— 110 —	Rock band
Jet fly-over at 1000 feet		
	— 100 —	
Gas lawn mower at 3 feet		
	— 90 —	
Diesel truck at 50 feet at 50 mph		Food blender at 3 feet
	— 80 —	Garbage disposal at 3 feet
Noisy urban area, daytime		
Gas lawn mower, 100 feet	**— 70 —**	Vacuum cleaner at 10 feet
Commercial area		Normal speech at 3 feet
Heavy traffic at 300 feet	**— 60 —**	
		Large business office
Quiet urban daytime	**— 50 —**	Dishwasher next room
Quiet urban nighttime	**— 40 —**	Theater, large conference room (background)
Quiet suburban nighttime		
	— 30 —	Library
Quiet rural nighttime		Bedroom at night, concert hall (background)
	— 20 —	
		Broadcast/recording studio
	— 10 —	
Lowest threshold of human hearing	**— 0 —**	Lowest threshold of human hearing

Source: Caltrans 2013.

3.5. Human Response to Changes in Noise Levels

As discussed above, doubling sound energy results in a 3-dB increase in sound. However, given a sound level change measured with precise instrumentation, the subjective human perception of a doubling of loudness will usually be different than what is measured.

Under controlled conditions in an acoustical laboratory, the trained, healthy human ear is able to discern 1-dB changes in sound levels, when exposed to steady, single-frequency ("pure-tone") signals in the midfrequency (1,000 Hz–8,000 Hz) range. In typical noisy environments, changes in noise of 1 to 2 dB are generally not perceptible. However, it is widely accepted that people are able to begin to detect sound level increases of 3 dB in typical noisy environments. Further, a 5-dB increase is generally perceived as a distinctly noticeable increase, and a 10-dB increase is generally perceived as a doubling of loudness. Therefore, a doubling of sound energy (e.g., doubling the volume of traffic on a highway) that would result in a 3-dB increase in sound, would generally be perceived as barely detectable.

3.6. Noise Descriptors

Noise in our daily environment fluctuates over time. Some fluctuations are minor, but some are substantial. Some noise levels occur in regular patterns, but others are random. Some noise levels fluctuate rapidly, but others slowly. Some noise levels vary widely, but others are relatively constant. Various noise descriptors have been developed to describe time-varying noise levels. The following are the noise descriptors most commonly used in traffic noise analysis.

- **Equivalent Sound Level (L_{eq}):** L_{eq} represents an average of the sound energy occurring over a specified period. In effect, L_{eq} is the steady-state sound level containing the same acoustical energy as the time-varying sound that actually occurs during the same period. The 1-hour A-weighted equivalent sound level ($L_{eq}[h]$) is the energy average of A-weighted sound levels occurring during a one-hour period, and is the basis for noise abatement criteria (NAC) used by Caltrans and FHWA.

- **Percentile-Exceeded Sound Level (L_{xx}):** L_{xx} represents the sound level exceeded for a given percentage of a specified period (e.g., L_{10} is the sound level exceeded 10% of the time, and L_{90} is the sound level exceeded 90% of the time).

- **Maximum Sound Level (L_{max}):** L_{max} is the highest instantaneous sound level measured during a specified period.

- **Day-Night Level (L_{dn}):** L_{dn} is the energy average of A-weighted sound levels occurring over a 24-hour period, with a 10-dB penalty applied to A-weighted sound levels occurring during nighttime hours between 10 p.m. and 7 a.m.

- **Community Noise Equivalent Level (CNEL):** Similar to L_{dn}, CNEL is the energy average of the A-weighted sound levels occurring over a 24-hour period, with a 10-dB penalty applied to A-weighted sound levels occurring during the nighttime hours between 10 p.m. and 7 a.m., and a 5-dB penalty applied to the A-weighted sound levels occurring during evening hours between 7 p.m. and 10 p.m.

3.7. Sound Propagation

When sound propagates over a distance, it changes in level and frequency content. The manner in which noise reduces with distance depends on the following factors.

3.7.1. Geometric Spreading

Sound from a localized source (i.e., a point source) propagates uniformly outward in a spherical pattern. The sound level attenuates (or decreases) at a rate of 6 decibels for each doubling of distance from a point source. Highways consist of several localized noise sources on a defined path, and hence can be treated as a line source, which approximates the effect of several point sources. Noise from a line source propagates outward in a cylindrical pattern, often referred to as cylindrical spreading. Sound levels attenuate at a rate of 3 decibels for each doubling of distance from a line source.

3.7.2. Ground Absorption

The propagation path of noise from a highway to a receptor is usually very close to the ground. Noise attenuation from ground absorption and reflective-wave canceling adds to the attenuation associated with geometric spreading. Traditionally, the excess attenuation has also been expressed in terms of attenuation per doubling of distance. This approximation is usually sufficiently accurate for distances of less than 200 feet. For acoustically hard sites (i.e., sites with a reflective surface between the source and the receptor, such as a parking lot or body of water,), no excess ground attenuation is assumed. For acoustically absorptive or soft sites (i.e., those sites with an absorptive ground surface between the source and the receptor, such as soft dirt, grass, or scattered bushes and trees), an excess ground-attenuation value of 1.5 decibels per doubling of distance is normally assumed. When added to the cylindrical spreading, the excess ground attenuation results in an overall drop-off rate of 4.5 decibels per doubling of distance.

3.7.3. Atmospheric Effects

Receptors located downwind from a source can be exposed to increased noise levels relative to calm conditions, whereas locations upwind can have lowered noise levels. Sound levels can be increased at large distances (e.g., more than 500 feet) from the highway due to atmospheric temperature inversion (i.e., increasing temperature with elevation). Other factors such as air temperature, humidity, and turbulence can also have significant effects.

3.7.4. Shielding by Natural or Human-Made Features

A large object or barrier in the path between a noise source and a receptor can substantially attenuate noise levels at the receptor. The amount of attenuation provided by shielding depends on the size of the object and the frequency content of the noise source. Natural terrain features (e.g., hills and dense woods) and human-made features (e.g., buildings and walls) can substantially reduce noise levels. Walls are often

constructed between a source and a receptor specifically to reduce noise. A barrier that breaks the line of sight between a source and a receptor will typically result in at least 5 dB of noise reduction. Taller barriers provide increased noise reduction. Vegetation between the highway and receptor is rarely effective in reducing noise because it does not create a solid barrier.

Chapter 4. Federal Regulations and State Policies

This report focuses on the requirements of 23 CFR 772, as discussed below.

4.1. Federal Regulations

4.1.1. 23 CFR 772

23 CFR 772 provides procedures for preparing operational and construction noise studies and evaluating noise abatement considered for federal and Federal-aid highway projects. Under 23 CFR 772.7, projects are categorized as Type I, Type II, or Type III projects.

- FHWA defines a Type I project as a proposed federal or federal-aid highway project for the construction of a highway on a new location or the physical alteration of an existing highway which significantly changes either the horizontal or vertical alignment of the highway. The following projects are also considered to be Type I projects:

- The addition of a through-traffic lane(s). This includes the addition of a through-traffic lane that functions as a high-occupancy vehicle(HOV) lane, high-occupancy toll (HOT) lane, bus lane, or truck climbing lane,

- The addition of an auxiliary lane, except for when the auxiliary lane is a turn lane,

- The addition or relocation of interchange lanes or ramps added to a quadrant to complete an existing partial interchange,

- Restriping existing pavement for the purpose of adding a through traffic lane or an auxiliary lane,

- The addition of a new or substantial alteration of a weigh station, rest stop, ride-share lot, or toll plaza.

If a project is determined to be a Type I project under this definition, the entire project area as defined in the environmental document is a Type I project.

A Type II project is a noise barrier retrofit project that involves no changes to highway capacity or alignment. A Type III project is a project that does not meet the classifications of a Type I or Type II project. Type III projects do not require a noise

analysis. This project is considered a Type I project since it proposes to construct truck climbing lane.

Under 23 CFR 772.11, noise abatement must be considered for Type I projects if the project is predicted to result in a traffic noise impact. In such cases, 23 CFR 772 requires that the project sponsor "consider" noise abatement before adoption of the final NEPA document. This process involves identification of noise abatement measures that are reasonable, feasible, and likely to be incorporated into the project, and of noise impacts for which no apparent solution is available.

Traffic noise impacts, as defined in 23 CFR 772.5, occur when the predicted noise level in the design-year approaches or exceeds the NAC specified in 23 CFR 772, or a predicted noise level substantially exceeds the existing noise level (a "substantial" noise increase). 23 CFR 772 does not specifically define the terms "substantial increase" or "approach"; these criteria are defined in the Protocol, as described below.

Table 4-1 summarizes NAC corresponding to various land use activity categories. Activity categories and related traffic noise impacts are determined based on the actual or permitted land use in a given area.

4.1.2. Traffic Noise Analysis Protocol for New Highway Construction and Reconstruction Projects

The Protocol specifies the policies, procedures, and practices to be used by agencies that sponsor new construction or reconstruction of federal or Federal-aid highway projects. The Protocol defines a noise increase as substantial when the predicted noise levels with project implementation exceed existing noise levels by 12 dBA or more. The Protocol also states that a sound level is considered to approach an NAC level when the sound level is within 1 dB of the NAC identified in 23 CFR 772 (e.g., 66 dBA is considered to approach the NAC of 67 dBA, but 65 dBA is not).

The Technical Noise Supplement to the Protocol provides detailed technical guidance for the evaluation of highway traffic noise. This includes field measurement methods, noise modeling methods, and report preparation guidance.

Table 4-1. Activity Categories and Noise Abatement Criteria (23CFR772)

Activity Category	Activity $L_{eq}[h]$[1]	Evaluation Location	Description of Activities
A	57	Exterior	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B[2]	67	Exterior	Residential.
C[2]	67	Exterior	Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails, and trail crossings.
D	52	Interior	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios.
E	72	Exterior	Hotels, motels, offices, restaurants/bars, and other developed lands, properties, or activities not included in A–D or F.
F			Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical), and warehousing.
G			Undeveloped lands that are not permitted.

[1] The $L_{eq}(h)$ activity criteria values are for impact determination only and are not design standards for noise abatement measures. All values are A-weighted decibels (dBA).

[2] Includes undeveloped lands permitted for this activity category.

4.2. State Regulations and Policies

4.2.1. California Environmental Quality Act (CEQA)

Noise analysis under the California Environmental Quality Act (CEQA) may be required regardless of whether or not the project is a Type I project. Under CEQA, the baseline noise level is compared to the build noise level. The assessment entails looking at the setting of the noise impact and then how large or perceptible any noise increase would be in the given area. Key considerations include: the uniqueness of the setting, the sensitive nature of the noise receptors, the magnitude of the noise increase, the number of residences affected, and the absolute noise levels.

The significance of noise impacts under CEQA are addressed in the environmental document rather than the NSR. Even though the NSR (or noise technical memorandum) does not specifically evaluate the significance of noise impacts under CEQA, it must contain the technical information that is needed to make that determination in the environmental document.

4.2.2. Section 216 of the California Streets and Highways Code

Section 216 of the California Streets and Highways Code relates to the noise effects of a proposed freeway project on public and private elementary and secondary schools. Under this code, a noise impact occurs if, as a result of a proposed freeway project, noise levels exceed 52 dBA-L_{eq}(h) in the interior of public or private elementary or secondary classrooms, libraries, multipurpose rooms, or spaces. This requirement does not replace the "approach or exceed" NAC criterion for FHWA Activity Category E for classroom interiors, but it is a requirement that must be addressed in addition to the requirements of 23CFR772.

If a project results in a noise impact under this code, noise abatement must be provided to reduce classroom noise to a level that is at or below 52 dBA-L_{eq}(h). If the noise levels generated from freeway and roadway sources exceed 52 dBA-L_{eq}(h) prior to the construction of the proposed freeway project, then noise abatement must be provided to reduce the noise to the level that existed prior to construction of the project.

Chapter 5. Study Methods and Procedures

5.1. Methods for Identifying Land Uses and Selecting Noise Measurement and Modeling Receiver Locations

Field investigations were conducted to identify land uses that could be subject to traffic and construction noise impacts from the proposed project. Existing land uses in the project area were categorized by land use type and Activity Category as defined in Table 4-1, and the extent of frequent human use. As stated in the Protocol, noise abatement is only considered where frequent human use occurs and where a lowered noise level would be of benefit. Although all land uses are evaluated in this analysis, the focus is on locations of frequent human use that would benefit from a lowered noise level. Short-term measurement locations were selected to serve as representative modeling locations.

5.2. Field Measurement Procedures

A field noise study was conducted in accordance with recommended procedures in TeNS. The following is a summary of the procedures used to collect short-term sound level data.

5.2.1. Short-Term Measurements

Short-term monitoring was conducted at 4 locations on March 29, 2021 using a Larson Davis Model 831 Precision Type 1 sound level meters. The calibration of the meter was checked before and after the measurement. Measurements were taken over a 15-minute period at each site. At all locations, noise levels were measured at a height of 5 feet above the ground and at least 10 feet from structures. Short-term noise measurements were conducted at Donner Trail Elementary School (Exterior), a Single-family home, Kingvale Lodge, and Caltrans Kingvale Maintenance Station. The short-term measurement locations are identified in Figure 5-1.

During the short-term measurements, field staff attended sound meter, count traffic and record observations concurrent with each measurement. The Leq values calculated by the sound level meter during each measurement period were logged manually on field data sheets for each measurement location. Dominant noise sources observed, and other relevant measurement conditions were identified and logged manually on the field data sheets. Traffic on Interstate 80 was classified and counted during short-term noise measurements. Vehicles were classified as automobiles, medium-duty trucks, or heavy-duty trucks. An automobile was defined as a vehicle with two axles and four tires that are designed primarily to carry passengers. Small vans and light trucks were included in this

category. Medium-duty trucks included all cargo vehicles with two axles and six tires. Heavy-duty trucks included all vehicles with three or more axles.

5.3. Traffic Noise Levels Prediction Methods

Traffic noise levels were predicted using the FHWA Traffic Noise Model Version 2.5 (TNM 2.5). TNM 2.5 is a computer model based on two FHWA reports: FHWA-PD-96-009 and FHWA-PD-96-010 (FHWA 1998a, 1998b). Key inputs to the traffic noise model were the locations of roadways, traffic mix and speed, shielding features (e.g., topography and buildings), noise barriers, ground type, and receptors. Three-dimensional representations of these inputs were developed using CAD drawings, aerials, and topographic contours.

Traffic noise was evaluated under existing conditions, design-year no-project conditions, and design-year conditions with the project build alternatives. Loudest-hour traffic volumes, for existing and design-year conditions were utilized to input into the traffic noise model. TableA-1 in Appendix A summarizes the traffic volumes and assumptions used for modeling existing and design-year conditions with and without the project alternative.

To validate the accuracy of the model calculations, TNM 2.5 was used to compare measured traffic noise levels to modeled noise levels at field measurement locations. For each receptor, traffic volumes counted during the short-term measurement periods were normalized to 1-hour volumes. Modeled and measured sound levels were then compared to determine the accuracy of the model and if additional adjustment of the model was necessary.

5.4. Methods for Identifying Traffic Noise Impacts and Consideration of Abatement

Traffic noise impacts are considered to occur at receptor locations where predicted design-year noise levels are 12 dB or more than existing noise levels, or where predicted design-year noise levels approach or exceed the NAC for the applicable activity category. Where traffic noise impacts are identified, noise abatement must be considered for reasonableness and feasibility as required by 23 CFR 772 and the Protocol.

Chapter 6. Existing Noise Environment

6.1. Existing Land Uses

Field investigations were conducted to identify land uses that could be subject to traffic and construction noise impacts from the proposed project. The following land uses were identified in the project area:

- Single-family residences: Activity Category B
- Elementary School: Exterior, Activity Category C
- Elementary School: Interior, Activity Category D
- Lodge and Restaurant: Activity Category E
- Commercial Retail: Activity Category F
- Undeveloped lands that are not permitted: Activity Category G

Although all developed land uses are evaluated in this analysis, noise abatement is only considered for areas of frequent human use that would benefit from a lowered noise level.

6.2. Noise Measurement Results

6.2.1. Short-Term Monitoring

Table 6-1 summarizes the results of the short-term noise monitoring conducted in the project area.

Table 6-1. Summary of Short-Term Measurements

Receptor	Address	Land Uses	Start Time	Duration (minutes)	Measured (Leq)	Autos	Medium Trucks	Heavy Trucks
ST-1	Donner Trail Elementary School- Outside Classroom	School	11:25 AM	15	60.8	478	11	75
ST-2	Caltrans Kingvale Maintenance Station.	Maintenance facility	1:15 PM	15	62.1	496	5	68
ST-3	Kingvale Loge	Motel	1:44 PM	15	61.3	512	7	82
ST-4	51301 Donner Pass Road	Residential	2:16 PM	15	60.4	492	12	69

TNM 2.5 was used to compare measured traffic noise levels to modeled noise levels at field measurement locations. Table 6-2 compares measured and modeled noise levels at each measurement location (Figure 5-1). The predicted sound levels are within two to three dB of the measured sound levels and are, therefore, considered to be in reasonable agreement with the measured sound levels. Therefore, no further adjustment of the model was necessary.

Table 6-2 Comparison of Measured to Predicted Sound Levels in the TNM Model

Measurement Position	Measured Sound Level (dBA)	Modeled Sound Level (dBA)	Measured Minus Modeled (dB)
ST-1	60.8	59.7	+1.1
ST-2	62.1	60.8	+1.3
ST-3	61.3	58.6	+2.7
ST-4	60.5	58.9	+1.6

Chapter 7. Future Noise Environment, Impacts, and Considered Abatement

Future Noise Environment and Impacts

Table B-1 in Appendix B summarizes the traffic noise modeling results for existing conditions and design-year conditions with and without the project. Predicted design-year traffic noise levels with the project are compared to existing conditions and to design-year no-project conditions. The comparison to existing conditions is included in the analysis to identify traffic noise impacts as defined under 23 CFR 772. The comparison to no-project conditions indicates the direct effect of the project.

As stated in the TeNS, modeling results are rounded to the nearest decibel before comparisons are made. In some cases, this can result in relative changes that may not appear intuitive. An example would be a comparison between calculated sound levels of 64.4 and 64.5 dBA. The difference between these two values is 0.1 dB. However, after rounding, the difference is reported as 1 dB.

For Existing year (2022) the loudest-hour Leq(h) noise level outside of Donner Trail Elementary School (ST-1) was calculated to 61 dBA Leq(h) and for Design year (2046) under build and no-build conditions, predicted noise level calculated at 62 dBA Leq(h).

To estimate noise level for inside of classroom, Table 6 in the FHWA Highway Traffic Noise Analysis and Abatement Guidance document was used. The building noise reduction factor for standard construction with ordinary windows closed is 20 dB. Therefore, interior noise level in the classroom for Existing year is estimated at 41 dBA $L_{eq}(h)$ and 42 dBA $L_{eq}(h)$ for design-year is predicted. Because the predicted noise level does not exceed the interior NAC of 52 dBA Leq(h) and exterior NAC 67 dBA traffic noise impacts are not predicted, and abatement is not considered at this location.

The traffic noise modeling results in Table B-1 indicate that traffic noise levels at the residences (Activity Category B) in the project area are predicted to be in the range of 60 to 62 dBA $L_{eq}(h)$ in the design-year. The predicted noise levels will not approach or exceed NAC 67 dBA; therefore, noise abatement measure is not considered.

The traffic noise modeling results in Table B-1 indicate exterior traffic noise levels at Kingvale Lodge (ST-3) will be 61 dBA $L_{eq}(h)$ in the design-year. Because the predicted

design-year noise level will not approach or exceed the 72 dBA L_{eq}(h) NAC for Motels, traffic noise impact is not predicted to occur at this location.

The traffic noise modeling results in Table B-1 indicate traffic noise levels at commercial uses will range from 60 to 64 dBA L_{eq}(h) in the design-year. There is no noise abatement criterion for Category F uses, traffic noise impacts are not predicted to occur, and noise abatement will not need to be considered. The predicted noise levels for undeveloped lands (M-8) that are not permitted (Activity Category G) is estimated at 64 dBA. There is no noise abatement criterion for Activity Category G land uses, however, for the purpose of reporting future predicted noise level, one receptor is generally placed and modeled within the100 feet from the edge traffic that would best represent the highest expected traffic noise level.

Chapter 8. Construction Noise

During construction of the project, noise from construction activities may intermittently dominate the noise environment in the immediate area of construction. Noise associated with construction is controlled by Caltrans Standard Specification Section 14-8.02, "Noise Control," which states the following:

- Do not exceed 86 dBA L_{max} at 50 feet from the job site activities from 9 p.m. to 6 a.m.
- Control and monitor noise resulting from work activities.

Table 8-1 summarizes noise levels produced by construction equipment that is commonly used on roadway construction projects. Construction equipment is expected to generate noise levels ranging from 70 to 90 dB at a distance of 50 feet, and noise produced by construction equipment would be reduced over distance at a rate of about 6 dB per doubling of distance.

Table 8-1. Construction Equipment Noise

Equipment	Maximum Noise Level (dBA at 50 feet)
Scrapers	89
Bulldozers	85
Heavy Trucks	88
Backhoe	80
Pneumatic Tools	85
Concrete Pump	82

Source: Federal Transit Administration, 2006.See also: http://www.fhwa.dot.gov/environment/noise/construction_noise/handbook/handbook09.cfm

Construction noise would be short-term and no adverse noise impacts from construction are anticipated since it will be conducted in accordance with Caltrans Standard Specifications Section 14.8-02.

Chapter 9. References

Caltrans. 2013. Technical Noise Supplement. September. Sacramento, CA: Environmental Program, Noise, Air Quality, and Hazardous Waste Management Office. Sacramento, CA. Available: (http://www.dot.ca.gov/hq/env/noise/pub/TeNS_Sept_2013B.pdf).

———. 2020. Traffic Noise Analysis Protocol for New Highway Construction, Reconstruction, and Retrofit Barrier Projects. May. Sacramento, CA. Available: (http://www.dot.ca.gov/hq/env/noise/pub/ca_tnap_may2011.pdf).

Caltrans. 2013. Transportation and Construction Vibration Guidance Manual. September. Sacramento, CA: Environmental Program, Noise, Air Quality, and Hazardous Waste Management Office. Sacramento, CA. Available: (http://www.dot.ca.gov/hq/env/noise/pub/TCVGM_Sep13_FINAL.pdf)

Appendix A Traffic Data

1H990		Location	AM Peak Hour				PM Peak Hour				Off Peak Hour			
			Volume	Truck %	Speed (mph)	LOS	Volume	Truck %	Speed (mph)	LOS	Volume	Truck %	Speed (mph)	LOS
Count Year (2020)	No Build		1640	7.99%	64.1	B	2079	10.29%	60.9	B	69	43.48%	51.9	A
	Build				65.3	A			63.6	A			51.9	A
Opening Year (2026)	No Build		1689	7.93%	64.0	B	2142	10.27%	60.5	B	71	43.66%	51.9	A
	Build				65.3	A			63.5	B			51.9	A
Horizon Year (2046)	No Build		1853	7.99%	63.4	B	2350	10.30%	59.1	C	78	43.59%	52.0	A
	Build				65.1	A			63.1	B			52.0	A

Appendix B Predicted Future Noise Levels and Noise Barrier Analysis

Table B-1 Predicted Future Traffic Noise Levels Leq (h), dBA

Receptor	Location	Land Use	Existing Noise Level Leq (h)dBA	Design Year No Build Noise Level Leq (h)dBA	Design Year Build Noise Level Leq (h)dBA	Design Year Build minus No Build Noise Level Leq (h)dBA	Design Year Build minus Existing Leq (h)dBA	Activity Category (NAC)	Traffic Noise Impact*
ST-1	Donner Trail Elementary School (Outside Classroom)	School	61	62	62	0	1	C (67)	None
ST-1	Donner Trail Elementary School (Inside Classroom)	School	41	42	42	0	1	D (52)	None
M-1	52885 Donner Pass Road	Residential	59	60	60	0	1	B (67)	None
M-2	Kingvale Tubes R US	Recreation Area	60	60	60	0	0	C (72)	None
M-3	Sierra Mountain Pizza Eatery	Restaurant	63	64	64	0	1	E (72)	None
M-4	Shell Gas Station	Gas Station	63	63	63	0	0	F	N/A
ST-2	Caltrans Kingvale Maintenance Station	Maintenance Station	62	62	62	0	0	F	N/A
ST-3	Kingvale Lodge	Lodge	61	61	61	0	0	E (72)	None

ST-4	51468 Donner Pass Road	Residential	60	61	61	0	1	B (67)	None
M-5	51301 Donner Pass Road	Residential	61	61	61	0	0	B (67)	None
M-6	51497 Donner Pass Road	Residential	61	62	62	0	1	B (67)	None
M-7	51585 Donner Pass Road	Residential	61	61	61	0	0	B (67)	None
M-8	Interstate 80, Nev. PM 2.0	Undeveloped Land	64	64	64	0	0	G	N/A
M-9	Sierra Lake County Water District	Sierra Lake Water District	62	62	62	0	0	F	N/A
M-10	Donner Summit Gas	Gas Station	63	63	63	0	0	F	N/A

ATTACHMENT J

TRANSPORTATION MANAGEMENT PLAN DATA SHEET

M e m o r a n d u m

To: Jeffrey Rud II
Office of Design
District 03

Date: February 05, 2021
File: 03-1H990
EFIS: 0317000043
03-PLA-80-PM 68.5/69.7
03-NEV-80-PM 0.0/R2.7

From: Sameh Hegazi
TMP Coordinator
TMP and DTM Branch - District 03

Subject: Transportation Management Planning (TMP) Data Sheet

Background

This project is located in both Placer and Nevada County on Interstate 80 (I-80) from Troy undercrossing to 0.2 miles east of Soda Springs overcrossing. The project is located in Placer County between PM 68.5 and PM 29.7 and in Nevada County between PM 0.0 and PM R2.7. Within the project limits Highway 80 is 4 lanes-2 way highway with 2 lanes in each east and west bounds.

This project proposes to repair distressed pavement on existing eastbound and westbound lanes and shoulders, construct an eastbound truck climbing lane, rehabilitate the Kingvale interchange ramps, widen the Kingvale undercrossing eastbound structure (19-107R), and repair existing culverts. Detector loops on the mainline, Kingvale ramps, and Soda Spring ramps are also proposed to be replaced. Existing overhead sign structures and sign panels will be replaced and existing lighting on the signs will be removed. No additional right of way will be required.

This project would restore the facility to a state of good repair and provide efficient movement of people and goods through pavement and culvert rehabilitation. The provision of a truck climbing lane will improve traffic operation by facilitating the passing of trucks and slow-moving vehicles whose speeds drop due to the sustained grade. Safety will also be improved by upgrading signs and detector loops, and by replacing all non-standard metal beam guardrail with shoulder concrete barrier.

Estimated number of working days is 240 days and the estimated number of traffic control days is 240 days

Traffic Volume

For location description, type of roadway, peak hour traffic volume in both east bound and west bound directions and average annual daily traffic refer to Table-1 below

Table-1: Traffic Volumes (2019 Traffic Volumes on California State Highways)			
Location Description	**Roadway Type**	**Peak-Hour (Combined) (vph)**	**AADT (vpd)**
03-PLA-80-PM R66.201 Hampshire Rocks	Freeway Hwy 4-lane, 2-way	4,550	31,400
03-PLA-80-PM 69.229 Kingvale	Freeway Hwy 4-lane, 2-way	4,250	31,000
03-NEV-80-PM 0.000 Placer/ Nevada County Line	Freeway Hwy 4-lane, 2-way	4,250	31,000
03-NEV-80-PM R2.476 Soda Springs	Freeway Hwy 4-lane, 2-way	4,800	32,000

Truck traffic on Highway 80 within the project limits averages 18.95% to 21.50% of the total AADT.

Recommendations

- Lane closures will be performed in accordance with, most recent version of Standard Plan Sheets:
  - T10, T10A "Traffic Control System for Lane Closure on Freeways and Expressways",
  - RSPT13 "Traffic Control System for Lane Closure on Two Lane Conventional Highways",
  - T14 "Traffic Control System for Ramp Closure",
  - RSPT18 "Traffic Control System Construction Work Zone Speed Limit Reduction on Freeways and Expressways", and
  - RSPT21 "Traffic Control System Construction Work Zone Speed Limit Reduction Twenty-Four Hours a Day 7 Days a Week (24/7)".
- Work may be performed without lane closure if it does not impact the travel way.
- When k-rail is used as a separation barrier between the work zone and the traveled way, there is no closure time restriction.
- Shoulder closure will be allowed with lane closure.
- Lane and shoulder closures will be allowed during daytime hours on weekdays but may be restricted during peak commute hours.
- Closing an adjacent lane will be required when working on the shoulders.
- Shoulder closures will be allowed, provided that work is far enough from the open traffic lanes.
- A minimum of one paved traffic lane, not less than 11 ft wide, shall be opened for use by public traffic in each direction.
- The maximum length of any lane closure shall be limited to one mile.
- During erection and removal of falsework for overcrossing and undercrossing structures, public traffic will be detoured with either a local detour or a cross median detour.
- Ramp traffic will be detoured during closure of ramps at work location.

- Only one ramp may be closed at a time within the same interchange.
- Temporary ramp closures will be allowed during off-peak commute hours during lane closures.
- Ramps adjacent to the closed freeway lanes may be closed.
- Ramp closures will be restricted during peak commute hours on weekdays.
- During ramp closures, traffic will be detoured in accordance with detour traffic handling plans.
- Detour routes are to be reviewed to ensure that they meet Highway Design Manual requirements, including truck turning radii and minimum horizontal and vertical clearances.
- Flaggers will be needed to control traffic on local roads.
- No lane closures, shoulder closures, or other traffic restrictions will be allowed on special days, designated holidays and the day preceding designated holidays, and when construction operations are not actively in progress.
- Special days are Hot August Nights of every year. Lane closures, shoulder closures, or other traffic impacts may be restricted during the event/s, the days preceding the event/s, and the days following the event/s.
- Portable Changeable Message Signs (PCMS) and Portable Speed Radar Feedback Sign System (PSRFSS) will be required in the direction of traffic during construction for each lane or shoulder closure and must be placed prior to any closure.
- Coordinating with adjacent projects within, or nearby the project limits will be required to avoid conflicts during construction.
- Coordinating with the nearby cities is required to handle traffic through the work area.
- Work at this location may require the assistance of COZEEP. Full time COZEEP is not anticipated.
- Specifications, detailed lane requirement charts and cost estimate will be developed for the final TMP prior to P&E.

Cost

- For estimating purposes, use $2,900 per working day to estimate the costs that are required for the Transportation Management Plan (TMP) items. These items include: Flaggers, Traffic Control System (TCS), Portable Changeable Message Signs (PCMS), and Portable Speed Radar Feedback Sign System (PRSFSS).
- Public Information campaign will be estimated during P&E.
- Additionally, COZEEP is estimated at $1,150 per working day and $2,300 per working night whenever CHP involvement is needed during construction operations.
- If there is a change in the scope of the project or the order of work (schedule), please advise the TMP unit so that the data sheet may be revised.

P & E Requirement

To complete a TMP for this project, please provide the following to the Office of Traffic Management Planning at least three months prior to P&E: project description, title sheet, typical cross sections, layout sheets, construction cost estimates, number of working days, project schedule, and a contact person.

List of Attachments:

- TMP Checklist

ATTACHMENT K
STORM WATER DATA REPORT

Dist-County-Route: 03-Pla/Nev-80
Post Mile Limits: (68.3/69.7) – (0.0/R2.7)
Type of Work: Roadway Rehabilitation
Project ID (EA): 0317000043 (03-1H9900)
Program Identification: Soda Springs Pavement Rehabilitation

Phase: ☐ PID ☒ PA/ED ☐ PS&E

Regional Water Quality Control Board(s): Central Valley
Total Disturbed Soil Area: 15.5 acres PCTA: 11.2 acres
Alternative Compliance (acres): 0 acres ATA 2 (50% Rule)? Yes ☐ No ☒
Estimated Const. Start Date: 04/15/2024 Estimated Const. Completion Date: 7/20/25
Risk Level: RL 1 ☐ RL 2 ☒ RL 3 ☐ WPCP ☐ Other: _____
Is MWELO applicable? Yes ☐ No ☒
Is the Project within a TMDL watershed? Yes ☐ No ☒
TMDL Compliance Units (acres): N/A
Notification of ADL reuse (if yes, provide date): Yes ☒ Date: 11/20/22 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.

R Scott Foster — 1/21/2022
R. Scott Foster, Registered Project Engineer — Date

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

02/08/2022
Mohan V. Bonala, Project Manager — *Date*

Anthony Thurman — 1/21/2022
Anthony Thurman, Designated Maintenance Representative — *Date*

Daniel Tillson-Rodriguez — 1/21/2022
Daniel Tillson-Rodriguez, Designated Landscape Architect Representative — *Date*

[Stamp Required at PS&E only]	*Preetvir Khaira, District Design SW Coordinator or Designee*	*Date*

STORMWATER DATA INFORMATION

1. Project Description

- The California Department of Transportation (Caltrans) proposes to rehabilitate a portion of Interstate 80 (I-80), in both Placer and Nevada County, from 0.1 miles west of the Troy undercrossing to 0.1 mile east of the Soda Springs overcrossing.

  This project proposes to repair distressed pavement on the existing eastbound (EB) and westbound (WB) lanes and shoulders, construct an EB truck climbing lane. Replace existing Troy (19-106R) and Kingvale (19- 107R) undercrossing (UC) structures with new and wider structures. Existing culverts will be repaired, replaced, or extended as needed. Detector loops on the mainline and Soda Springs ramps as well as existing overhead sign structures and sign panels will be replaced. The existing chain installation area between the Troy Road UC and Kingvale UC will be grooved to improve tire traction during snowy and icy conditions.

- The total project area is estimated at 235.3 acres. The total Disturbed Soil Area (DSA) for the project is 15.5 acres. The proposed design cut/fill lines as well as the existing and proposed sawcut (S/C) lines were used to create polygons that represented the disturbed soil areas as well as existing and proposed impervious areas for the project within Caltrans Right of Way. Staging area was not included in the calculation of the DSA.

Table 1 – Project DSA and New Impervious Surfaces

DSA (AC)	Existing Impervious Area (AC)	Post Impervious Area (AC)	Net New Impervious Area (NNI) (AC)	Replaced Impervious Surface (RIS) (AC)	Excluded Impervious Area (EIA) (AC)	New Impervious Surface (NIS) (AC)	ATA #1 (AC)	ATA #2 (AC)	PCTA (AC)
15.5	53.7	59.8	6.1	5.1	0.0	11.2	0.0	0.0	11.2

Per Section 4.3 Step 7 of the PPDG, July 2017, post-construction treatment area (PCTA) is required for New Impervious Surface (NIS) that equals or exceeds one acre or more or 5,000 sf on non-highway projects.

PCTA = NIS + ATA #1 + ATA #2

NIS = NNI + RIS- EIA

Excluded Impervious Area (EIA)= Sidewalks, Pedestrian Ramps, Separate Bike Lanes, and areas of intersection of bridges over impervious areas

ATA = Additional Treated Area

PCTA= Post Construction Treatment Area

- The NNI is less than 50% of total Post Impervious Area, therefore ATA #2 is zero.
- The project is subject to the treatment threshold requirements of the 2012 Caltrans MS4 Permit.

2. Site Data and Stormwater Quality Design Issues

Water Quality Data

- The Central Valley Water Quality Control Board has jurisdiction with the project limits. The project falls within the Lake Spaulding Hydrologic Sub-Area 517.34 which lies within the South Yuba Hydrologic Area in the Yuba River Hydrologic Unit. The nearest receiving water bodies is the South Fork of the Yuba River, Kidd Lake and Cascade Lake. The South Fork of the Yuba River, to Spaulding Lake is a 303(d) listed water body for Copper and pH. Caltrans is not listed

as a stakeholder for the TMDLS associated with this water body, therefore no pollutant specific treatment BMPs will be required.

- This project is not within the boundary of an Urban MS4 Permit Area.

Geotechnical Data

- Review of the Web Soil Survey indicates that the project is in an area of primarily hydrologic soils groups A, B or unclassified. Tinker-Rock outcrops and Tallac-Cryumbrepts are found within the project limits. These types of soils vary from well to excessively drained and to tend to have moderate to high infiltration rates.

Climate

- The general weather of the project area can be difficult to predict in this portion of the Sierra Nevada due to the heterogeneous topographies and microclimates of this region. Winters are generally cold and wet, while summers are typically warm and dry. Scattered summer thunderstorms occur, but they account for less than 3% of the total annual precipitation. It is mostly dry and warm, not too hot during the summer, and wet during the winter. A summer dry mountain range on the scale of the Sierra Nevada is a little bit unusual — except where there are adjacent Mediterranean climates. The mid-latitude location of the range and its proximity to the moderating influence of the Pacific Ocean give this area an unusually mild mountain climate. Although winter temperatures below 0° F are common in the Tahoe basin, they are rare in this area. The northwest-southeast orientation of the range, athwart the winter-storm tracks of central North America, produces copious precipitation during the wet season (November to April) on the windward (western) slopes, but a sharp rain-shadow effect occurs on the leeward (eastern) face. Precipitation averages from 30 inches in the western foothill zone to 70–80 inches between elevations of 4,500 to 6,500 feet in the northern half of the range. Snowfall increases with elevation and latitude, the northern peaks of the range averaging 33 to 38 feet per year. As much as 5.5 feet has fallen in a single day at Echo Summit, and about 67 feet has been measured at the 7,085-foot Donner Pass. The average rainfall is 35 inches and average snowfall is 191 inches.

Topographic Data

- This project is located within the Yuba River basin near Kingsvale and Soda Springs. The project begins on Interstate 80 approximately 0.2 miles to the west of the Troy Road Undercrossing and ends before the 0.2 miles east of the Soda Springs Overcrossing. The project passes through a rural environment with numerous pleasing views. The topography is mountainous, varying between 0 to 60 percent, and sloping towards the South Fork Yuba River to the north. The profile of I 80 ranges from 6040 feet at the west end and climbs to approximately 6690 feet at the east end. The project is located within the USGS SODA SPRINGS, California 7.5-minute Quadrangle map.
- The project is located in an area designated by FEMA as Zone X and is depicted on FIRM Maps No. 06057C0500E and 06061C0100H. Construction within the area designated as Zone X is unavoidable, thus the project is designed to not change the profile of I-80 in a manner that would change the minimal flood hazard within the limits of the project.

Right of Way Requirements

- Right-of-way certification is required for the project. There is no acquired R/W to accommodate the proposed work. No additional right of way is needed to construct Treatment BMPs (TBMP).
- The project proposes to disturb existing slopes only when necessary and minimizes cut and fill areas to reduce slope lengths. Where possible cut and fill slopes have been designed flat enough to allow re-vegetation and to limit erosion rates.

- The project is on a facility that is over 50 years old so there is soil containing Aerially Deposited Lead (ADL). It is assumed that ADL is present in soils within the Project limits; the Contractor must prepare and implement a project specific Lead Compliance Plan.

Groundwater

- According to the 2021-2022 Stormwater Management Program District 3 Work Plan, there are no known municipal or domestic water supply reservoirs or groundwater recharge facilities within project limits.
- There are no RWQCB or local agencies special requirements/concerns, including TMDLs or effluent limits within the project limits.

Permits

- A 401 Certification is not required.
- According to the December 10, 2021 Caltrans Integrated Maintenance Management System (IMMS) database, there are no existing Treatment BMPs within the project limits. While doing a field trip the following Treatment BMP was found in the field:
    - Pla PM 68.37 Traction Sand Trap

  This Treatment BMP will be protected in place.

3. Construction Site BMPs to be used on Project

- The Contractor is responsible for securing locations for staging and storage that are approved by the Resident Engineer (RE). Temporary Construction Site BMPs will be deployed under Caltrans RE approved Storm Water Pollution Prevention Plan (SWPPP) that will be prepared by the contractor. Temporary fiber rolls, street sweeping, drainage inlet protection, and concrete washout have been identified as bid line items. Additional Temporary Construction BMPs will be deployed as lump sum bid items under Job Site Management, Additional Water Pollution Control, and SWPPP. Additional BMPs might be identified during the design phase.
- Dewatering operations for the project are not anticipated. The project is scheduled to be completed during three non-rainy seasons with construction spanning part of two rainy seasons.
- The project has been identified as Risk Level 2 using the GIS Map Method. The Watershed Erosion Estimate is 124.25 tons/acre, which is a High Sediment Risk. The LS Factor value is 8.17. The Receiving Water Risk is low. The Risk Level will be calculated again during the design phase.
- Construction site BMP cost has been estimated at $2,459,737 and is within the suggested percentage of 3.75% as shown in Appendix F of the PPDG. The total construction cost of the project is $65,593,000. The Construction General Permit Project fees are anticipated to be approximately $15,000 for the current construction schedule."

4. Maintenance BMPs

- The project is not located with an Urban MS4 Permit Area, but pedestrian and bicycle traffic are permitted therefore drainage inlet stenciling is required for this project.
- Mr. Anthony Thurman and Mr. Gary Wallace of Maintenance have reported that there are currently no problem areas within the project limits.

5. Other Water Quality Requirements and Agreements

- There are no negotiated agreements or understanding with Central Valley Regional Water Quality Control Board for this project to date.

6. Permanent BMPs

Rapid Stability Assessment

- The project will add more than 1 acre of NNI; therefore, this project requires Rapid Stability Assessment (RSA) in accordance with the requirements of the 2012 CT MS4 Permit. An RSA request needs to be sent to the District Hydraulics and Stormwater Branch prior to PS&E.

Design Pollution Prevention (DPP) BMP Strategy

- The project increases the impervious area within the project limits which will increase runoff flow. Increases in flow and velocity are mitigated through the use of energy dissipation devises, such as rock slope protection, flared end sections, and headwalls. Increased flow velocity and volumes will be quantified and mitigated during PS&E phase of the project. The project Drainage Report will evaluate the options to reduce runoff to pre-conditions.
- Currently, the majority of runoff is discharged into cross culverts that ultimately feed into the South Fork Yuba River. The overall drainage pattern will not be altered and will perpetuate existing flow patterns.
- Slope disturbance will occur within the project. New slopes will be constructed at 2:1 or flatter where feasible. New slopes and disturbed soil areas will be stabilized and vegetated in accordance with plans approved by the District Landscape Architect. Paved surfaces will be minimized wherever feasible.
- Drainage features such as dikes and culverts will be removed, replaced, extended, or added within the project limits. Energy dissipating devices, such as rock slope protection, flared end sections, and headwalls, will be used on culverts, as outlined in the Project Drainage Report. Existing and proposed ditches will perpetuate the existing drainage patterns within the project limits.
- Existing vegetation will be preserved to the maximum extent practical and in accordance with any environmental permits/agreements.

Treatment BMP Strategy

- The project is required to consider Treatment BMPs in accordance with the attached Evaluation Documentation Form. No Caltrans Targeted Design Constituents (TDC) have been identified. The current treatment BMP strategy is to treat 100% of the WQV/WQF by maximizing site perviousness.
- The project is not within a Caltrans TMDL area and is not eligible for Compliance Unit (CU) Credits. In accordance with the threshold requirements of the 2012 CT MS4 Permit, the Post Construction Treatment Area (PCTA) is 11.2 acres. Treatment of the required area is mandatory and subject to approval by the RQWCB. If the required 11.2 acres of PCTA can't be treated onsite, then it will have to be mitigated offsite, subject to approval by the RWQCB, at a potential cost of $1,904,000, excluding Right of Way if needed, in accordance with the estimating procedures of Appendix F of the 2017 PPDG. ($1,904,000= 11.2 x $170,000)".
- The current requirements for treatment BMPs in order of priority are:

  - Infiltrate, harvest, and reuse
  - Treat using existing BMPs (with an emphasis on low impact green BMPs)
  - Treat excess Runoff using LID based flow through BMPs
  - Offsite mitigation.

- DPP Infiltration Areas will be considered as vegetated or non-vegetated areas, these areas provide infiltration. In addition, Biofiltration Swales/Strips and detention devises may be incorporated into the project. Exact location will be determined during later project time.
- Further options for Treatment BMP strategy will be looked at PS&E phase. Currently, as mentioned above, Right of Way funds will be included in environmental mitigation to cover the cost of mitigating offsite.

Required Attachments

- Vicinity Map
- Evaluation Documentation Form (EDF)
- Construction Site BMP Consideration Form
- Risk Level Determination Documentation

ATTACHMENT L

STRUCTURAL SECTION RECOMMENDATION

State of California
DEPARTMENT OF TRANSPORTATION

California State Transportation Agency

M e m o r a n d u m

Serious drought.
Help Save Water!

To: ALEX HUYNH
DESIGN M2
Northern Region Project Development

Date: November 1, 2021
File: 03-PLA, NEV-80
PM 68.3 – 69.7, 0 – 2.7
03-1H990

From: Addisu Workineh, District 3 Materials Engineer (DME)
Jospeh Farrow**,** Assistant DME
North Region – Materials Laboratory

Subject: **Structural Section Recommendation.**

Per your request sent to Melaku Zeleke on September 9th, 2021, below are several structural section recommendations you may considered for the above referenced project. Thus, the following assumptions have been made:

R-Value = 35 (Historical Data)
TI = Varies (Traffic Data)
Climate Region = High Mountain
Elevation = 6000 feet

Note: We don't recommend any kind of thin overlay in this section of the roadway. Thin overlays over rigid pavement in a high mountain area haven't performed well in past projects. Some of the reasons are, tire chain, snowplows, studded tires, and freeze thaw cycles. Caltrans did a thin overlay project in 2012 from PM 13.5 to 21.2 EA 03-3M8304. In this project we overlaid the existing Eastbound Rigid Pavement with 0.10' Bonded Wearing Course and the Westbound with 0.10' Rubberized HMA. However, the pavement failed prematurely and became a public safety issue. We were forced to do an emergency repair in 2016, EA 0G6404 to correct the failure. In another emergency contract in 2017 from PM R12.5 to 21.2, EA 03-3H0504 we cold planed the existing HMA, because the strategy didn't work.

Note: For new JPCP or CRCP construction in lane replacement or widening projects, the entire adjacent lane width should be ground before widening if IRI ≥ 90 inches/mile to establish a smooth profile for concrete paving equipment. Based on the 2021 Pavement Condition Report the IRI of this project location varies from 39-462.

STRUCTURAL SECTION RECOMMENDATIONS

New Construction – Truck Climbing Lane and shoulder: - **TI_{20} = 13.5**

Saw cut edge of travel way, remove the existing inside shoulder and then build the new inside lane and inside shoulder with one of the following:

Option 1:

1.05’ JPCP
0.35’ LCB
0.70’ AB (Class II)
2.10’ Total Structural Section

Note: Place a Base Bond Breaker (BB) between JPCP and LCB.

Option 2:

1.10’ JPCP
0.25’ HMA-A
0.70’ AB (Class II)
2.05’ Total Structural Section

Note: The above recommendations are for pavement with lateral support. For information regarding lateral or non-lateral support pavement please refer to HDM section 623.1.4 and 626.2.

Option 3:

1.15’ JPCP
0.35’ LCB
0.70’ AB (Class II)
2.20’ Total Structural Section

Note: Place a Base Bond Breaker (BB) between JPCP and LCB.

Option 4:

1.20’ JPCP
0.25’ HMA-A
0.70’ AB (Class II)
2.15’ Total Structural Section

Note: The above recommendations are for pavement without lateral support. For information regarding lateral or non-lateral support pavement please refer to HDM section 623.1.4 and 626.2.

New Construction – Truck Climbing Lane and shoulder: - **TI_{40} = 14.5**

Saw cut edge of travel way, remove the existing inside shoulder and then build the new inside lane and inside shoulder with one of the following:

Option 1:

1.10’ JPCP
0.35’ LCB
0.70’ AB (Class II)
2.15’ Total Structural Section

Note: Place a Base Bond Breaker (BB) between JPCP and LCB.

Option 2:

1.15’ JPCP
0.25’ HMA-A
0.70’ AB (Class II)
2.10’ Total Structural Section

Note: The above recommendations are for pavement with lateral support. For information regarding lateral or non-lateral support pavement please refer to HDM section 623.1.4 and 626.2.

Option 3:

1.20’ JPCP
0.35’ LCB
0.70’ AB (Class II)
2.25’ Total Structural Section

Note: Place a Base Bond Breaker (BB) between JPCP and LCB.

Option 4:

1.25’ JPCP
0.25’ HMA-A
0.70’ AB (Class II)
2.20’ Total Structural Section

Note: The above recommendations are for pavement without lateral support. For information regarding lateral or non-lateral support pavement please refer to HDM section 623.1.4 and 626.2.

Full Depth New construction for lane widening and outside Shoulder: - TI_{20} = 13.5

Saw cut edge of travel way, remove the existing inside shoulder and then build the new inside lane and inside shoulder with one of the following:

Option 1:

1.05’ JPCP
0.35’ LCB
0.70’ AB (Class II)
2.10’ Total Structural Section

Note: Place a Base Bond Breaker (BB) between JPCP and LCB.

Option 2:

1.10’ JPCP
0.25’ HMA-A
0.70’ AB (Class II)
2.05’ Total Structural Section

Note: The above recommendations are for pavement with lateral support. For information regarding lateral or non-lateral support pavement please refer to HDM section 623.1.4 and 626.2.

Option 3:

1.15’ JPCP
0.35’ LCB
0.70’ AB (Class II)
2.20’ Total Structural Section

Note: Place a Base Bond Breaker (BB) between JPCP and LCB.

Option 4:

1.20’ JPCP
0.25’ HMA-A
0.70’ AB (Class II)
2.15’ Total Structural Section

Note: The above recommendations are for pavement without lateral support. For information regarding lateral or non-lateral support pavement please refer to HDM section 623.1.4 and 626.2.

Full Depth New construction for lane widening and inside Shoulder: - TI_{40} = 14.5

Saw cut edge of travel way, remove the existing inside shoulder and then build the new inside lane and inside shoulder with one of the following:

Option 1:

1.10’ JPCP
0.35’ LCB
0.70’ AB (Class II)
2.15’ Total Structural Section

Note: Place a Base Bond Breaker (BB) between JPCP and LCB.

Option 2:

1.15’ JPCP
0.25’ HMA-A
0.70’ AB (Class II)
2.10’ Total Structural Section

Note: The above recommendations are for pavement with lateral support. For information regarding lateral or non-lateral support pavement please refer to HDM section 623.1.4 and 626.2.

Option 3:

1.20’ JPCP
0.35’ LCB
0.70’ AB (Class II)
2.25’ Total Structural Section

Note: Place a Base Bond Breaker (BB) between JPCP and LCB.

Option 4:

1.25’ JPCP
0.25’ HMA-A
0.70’ AB (Class II)
2.20’ Total Structural Section

Note: The above recommendations are for pavement without lateral support. For information regarding lateral or non-lateral support pavement please refer to HDM section 623.1.4 and 626.2.

Rehabilitation for destressed pavement :

Repair any spall and remove any damaged or broken PCC on the existing Pavement. After completed all corrective maintenance, perform profile grinding on the existing pavement.

Rehabilitaiton Full Depth individual slabs replacements:

Remove PCC slabs that show 3rd stage cracking and destress. Check the integrity of the AB, if the AB is failed remove the failed AB down to firm compacted AB. Replace the removed slabs with the following:

Option 1:

1.65' JPCP
0.35' LCB
1.00' AB (Class II)
2.15' Total Structural Section

Note: Place a Base Bond Breaker (BB) between JPCP and LCB.

Recommended slabs to replace:

PLA 80, EB, Lane 1 & 2 P.M 69.54 to 69.64
PLA 80, EB, Lane 1 & 2 P.M 69.25 to 69.35
PLA 80, EB, Lane 1 & 2 P.M 69.34 to 69.44
PLA 80, EB, Lane 2 P.M 69.15 to 69.25
PLA 80, EB, Lane 2 P.M 69.64 to 69.74

NEV 80, EB, Lane 1 & 2 P.M 0.10 to 0.20
NEV 80, EB, Lane 2 P.M 0.40 to 0.50
NEV 80, EB, Lane 1 P.M 0.59 to 0.79
NEV 80, EB, Lane 1 P.M 0.89 to 0.99
NEV 80, EB, Lane 1 P.M 1.09 to 1.19
NEV 80, EB, Lane 1 P.M 1.87 to 1.98
NEV 80, EB, Lane 1 P.M 2.07 to 2.17

MATERIALS SPECIFICATIONS

Hot Mix Asphalt (HMA) Type A – Shall conform to section 39 of the Standard Specifications and the Special Provisions.

Hot Mix Asphalt (HMA) Type O – Shall conform to section 39 of the Standard Specifications and the Special Provisions.

Rubberized Hot Mix Asphalt (RHMA) Type G – Shall conform to section 39 of the Standard Specifications and the Special Provisions.

Rubberized Hot Mix Asphalt (RHMA) Type O – Shall conform to section 39 of the Standard Specifications and the Special Provisions.

Aggregate Base (AB) – Class 2 – shall conform to section 26 of the Standard Specifications and the Special Provisions.

Asphalt Binder – Asphalt binder used for HMA-A shall be grade PG 64-16 or as specified and shall conform to sections 39 and 92 of the Standard Specifications and Special Provisions.

Asphalt Treated Permeable Base (ATPB) – Shall conform to section 29 of the Standard Specifications and the Special Provisions.

Paint Binder – shall conform to sections 39, 92 and 94 of the Standard Specifications and the Special Provisions.

Subgrade Enhancement Geotextile (SEG_T) – shall conform to section 96 of the Standard Specifications and the Special Provisions.

Subgrade Enhancement Geogrid (SEG_G) – shall conform to section 96 of the Standard Specifications and the Special Provisions.

Lean Concrete Base (LCB) – Shall conform to section 28.2 of the Standard Specifications and the Special Provisions.

Jointed Plain Concrete Pavement (JPCP) – Shall conform to section 40 and 90 of the Standard Specification and the Special Provision.

Continuously Reinforced Concrete Pavement (CRCP) - Shall conform to section 40 and 90 of the Standard Specification and the Special Provision.

Base Bond Breaker (BB) – Shall conform to section 36-2 of the Standard Specification and the Special Provision.

If you have any questions or concerns, please contact Joseph Farrow at (530) 682-3707 or myself at (530) 682-5504 .

c: File

ATTACHMENT M
PROGRAMMING SHEET

Programming Sheet with Risk and OE

AMS ID: 0317000043 EA: 03-1H990 COUNTY: ROUTE: 080 POSTMILE: 0/0

Project Manager:	BONALA, MOHAN V	PM Assistant:	CHIU, CATHERINE S	Project Nickname:	Soda Springs Pavement						
Project Description - Long:	Near Kingvale, from Placer County line to east of Donner Pass Road (PM 0.0/R2.7L/R); also in Placer County, from west of Troy										
Work Description - Long:	Rehabilitate roadway, construct truck climbing lane in EB direction, widen Kingvale UC (Br#19-0107R), replace sign panels,										
PPNO:	5111	Program:	shopp	RPT:	No	Funding	No	PROGRAM YR:	2023	Working Days:	240
Open for Time:	Yes	Subprogram:	Roadway Rehabilitation			CT Status:	APL	RMP:		RMP Date:	
10 Yr SHOPP:	Yes			AADD:	No	Dist	SHOPP MAJOR	FED Aid Eligible:	YES		

MS	MS Description	MS Date	
M000	ID NEED	10/03/2018	(A)
M003	BEGIN FUNCT PID	03/28/2019	(A)
M006	DRAFT FOR DIST CIRC	06/03/2019	(A)
M009	FINAL DRAFT FOR	06/07/2019	(A)
M010	APPROVE PID	06/28/2019	(A)
M015	PROG PROJ	05/13/2020	(A)
M020	BEGIN ENVIRO	09/02/2020	(A)
M040	BEGIN PROJ	07/29/2020	(A)
M060	CIRC DPR & DED INT	10/01/2021	(A)
M100	APPROVE DPR	12/16/2021	(A)
M120	CIRC DPR & DED EXT	01/03/2022	(A)
M200	PA&ED	02/15/2022	(T)
M221	RECEIVE COMPLETE	02/04/2022	(T)
M224	R/W REQTS	01/10/2022	(A)
M225	REGULAR R/W	03/01/2022	(T)
M275	GENERAL PLANS	04/05/2022	(T)
M300	CIRC PLANS IN DIST	12/20/2022	(T)
M310	DESIGN SAFETY	01/20/2022	(T)
M311	30% CONST REVIEW	02/28/2022	(T)
M313	60% CONST REVIEW	07/08/2022	(T)
M315	95% CONST REVIEW	04/03/2023	(T)
M377	PS&E TO DOE	03/20/2023	(T)
M378	DRAFT STRUC PS&E	12/20/2022	(T)
M380	PROJ PS&E	04/15/2023	(T)
M410	R/W CERT	04/20/2023	(T)
M460	RTL	04/24/2023	(T)
M470	FUND ALLOCATION	06/22/2023	(T)
M480	HQ ADVERT	06/12/2023	(T)
M490	BIDS OPEN	07/31/2023	(T)
M495	AWARD	08/31/2023	(T)
M500	APPROVE CONTRACT	10/02/2023	(T)
M600	CONTRACT ACCEPT	07/20/2026	(T)
M700	FINAL REPORT	07/20/2027	(T)
M800	END PROJ EXP	09/20/2029	(T)
M900	FINAL PROJ	06/20/2031	(T)

Env CE (NEPA), IS

Capital Cost Estimates ($k)

	Amount $k	EST Date
Roadway	55110	11/04/21
Structures	8796	11/04/21
Const Total	63906	
ROW	1687	07/28/21
Total	65593	

Risk & Operating Expense Budget

	Risk Bud. ($k)	OE ($k)
Phase 0 - PAED	$0	$0
Phase 1 - PS&E	$0	$0
Phase 2 - RW	$0	$0
Phase 3 - Con	$0	$0
Phase 4 - Con Cap	$0	$0
Phase 9 - RW Cap	$0	$0
Total	$0	$0

Note: For Phase 0, 1, 2 and 3, only enter Risk Budget amount if not already entered in PRSM

Funding Info ($k)

Fund Source	PA&ED	PS&E	ROW	CON	ROW CAP	CON CAP
2020201.122	0	0	0	0	990	69100
4050201.170	0	0	0	0	0	0
4050201.122	0	0	0	0	0	0
2010201.122	3000	3000	500	9000	0	0
4050201.151	0	0	0	0	0	0
4050201.121	0	0	0	0	0	0
Total:	**3,000**	**3,000**	**500**	**9,000**	**990**	**69,100**

	Capital Cost Est.($k)
FY Mid M500-M600	2025
CC Escalation %:	3.20%
CC Escalated $:	70,239
ROW CAPITAL:	1,687
TOTAL:	71,926

PROJECT SUPPORT COSTS ($k)

Phase Esc. Rate	PRIOR ACT $	FY21/22 ETC	FY21/22 (0.00%)	FY22/23 (3.00%)	FY23/24 (3.00%)	FY24/25 (3.00%)	FY25/26 (3.00%)	Future (3.00%)	Total	Sup/Cap %
0	**1,837**	**1,336**	**0**	**0**	**0**	**0**	**0**	**0**	**3,173**	**4.41%**
1	**0**	**1,079**	**2,093**	**97**	**0**	**0**	**0**	**0**	**3,269**	**4.55%**
2	**0**	**5**	**11**	**5**	**5**	**5**	**11**	**43**	**0.06%**	
3	**0**	**0**	**0**	**2,107**	**2,901**	**2,988**	**661**	**8,658**	**12.04%**	
							TOTAL SUPPORT COSTS:		15,143	21.06%
							TOTAL PROJECT COSTS:		87,069	

PROJECT SUPPORT PYs

	Division	PRIOR ACT PYS	2022 ETC PYs	2023 ETC PYs	2024 ETC PYs	2025 ETC PYs	2026 ETC PYs	Future ETC PYs	Total ETC PYs
03	ADMN	0.01	0.04	0.01	0.03	0.04	0.04	0.00	0.17
03	CONS	0.05	0.15	0.23	6.82	9.07	9.07	1.44	26.83
03	ENVM	1.86	1.58	0.80	0.15	0.19	0.19	0.47	5.22
03	ESRV	0.40	1.14	0.80	0.03	0.01	0.01	0.02	2.41
03	MTCE	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.03
03	NCOS	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.02
03	PPM	0.23	0.19	0.14	0.13	0.13	0.13	0.41	1.35
03	PRJD	1.98	4.59	3.82	0.21	0.21	0.21	0.05	11.07
03	RWLS	0.22	0.11	0.15	0.01	0.00	0.00	0.01	0.51
03	SURV	2.05	0.42	0.57	0.63	0.84	0.84	0.07	5.42

Programming Sheet with Risk and OE

AMS ID: 0317000043 EA: 03-1H990 COUNTY: ROUTE: 080 POSTMILE: 0/0

	Division	PRIOR ACT PYS	2022 ETC PYs	2023 ETC PYs	2024 ETC PYs	2025 ETC PYs	2026 ETC PYs	Future ETC PYs	Total ETC PYs
03	TPLN	1.12	0.04	0.04	0.00	0.00	0.00	0.01	1.21
03	TROP	0.43	0.57	0.75	0.11	0.12	0.12	0.02	2.12
03	TOTALS :	8.37	8.85	7.32	8.12	10.61	10.61	2.50	56.36
	Division	PRIOR ACT PYS	2022 ETC PYs	2023 ETC PYs	2024 ETC PYs	2025 ETC PYs	2026 ETC PYs	Future ETC PYs	Total ETC PYs
56	MTCE	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.02
56	TOTALS :	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.02
	Division	PRIOR ACT PYS	2022 ETC PYs	2023 ETC PYs	2024 ETC PYs	2025 ETC PYs	2026 ETC PYs	Future ETC PYs	Total ETC PYs
59	BDSN	0.89	1.16	1.47	0.11	0.09	0.09	0.04	3.85
59	GS	0.80	0.46	0.23	0.06	0.08	0.08	0.02	1.72
59	METS	0.00	0.03	0.01	0.16	0.22	0.22	0.02	0.65
59	PPM	0.09	0.02	0.05	0.16	0.00	0.00	0.01	0.33
59	S&ES	0.04	0.08	0.08	0.02	0.02	0.02	0.01	0.28
59	SCON	0.00	0.06	0.07	0.55	0.73	0.73	0.09	2.22
59	TH	0.00	0.28	0.00	0.00	0.00	0.00	0.00	0.28
59	Y21	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.08
59	TOTALS :	1.82	2.17	1.91	1.06	1.14	1.14	0.19	9.41
	Division	PRIOR ACT PYS	2022 ETC PYs	2023 ETC PYs	2024 ETC PYs	2025 ETC PYs	2026 ETC PYs	Future ETC PYs	Total ETC PYs
		0.59	0.00	0.00	0.00	0.00	0.00	0.00	0.59
	TOTALS :	0.59	0.00	0.00	0.00	0.00	0.00	0.00	0.59
PROJECT TOTALS:		10.78	11.04	9.23	9.18	11.75	11.75	2.69	66.38

Comments:

ATTACHMENT N
RISK REGISTER

District: 03 ▼
EA:
EFIS:
Project Nickname: Soda Springs Pavement Rehabilitation
District: 03
EA: 1H990
EFIS: 0317000043
Status: APL
Risk Status: Active ▼

Export to PDF

New Risk

Risk 003
Status: Active
Retire Edit

Utility Conflicts

RBS: Design

Owner: Scott Foster

Updated: 11-04-2021

Description	Facility Map Request have been received. Approximately 15 utility owners operating approximately 84 infrastructures exist within the project limits. The project is placing fill above a Kinder Morgan petroleum line (2 locations) and a AT&T underground line (2 locations). Conflict and positive identification mapping has been developed and submitted to R/W utility coordinator for the project. Positive identification cannot proceed until a contract is secured. Meetings with the owners cannot be initiated until we have positive location completed. At this point it is assumed we will have to relocate these facilities during construction.
Status	Fill will be placed above the existing facilities regardless of the Alternative selected. Until positive locations are done evaluation of impacts cannot be started.
Response Options	Continue close coordination with R/W utilities. As positive locations are completed have meetings with facility owners to evaluate extent of impacts.

Impacts		Cost Impact		Delay Impact		Risk Zone			
	Probability	Cap	Sup	Dev	Con	Cap	Sup	Dev	Con
	Moderate	Moderate	Low	Moderate	Low	M	L	M	L

Assessment Notes	

Risk 009

Status: Active	Shortened lead time	RBS: R/W	Owner: Stacey Sannar	Updated: 11-10-2021

Retire Edit

Changes saved.

Description	The project schedule is less than requested and increases the chance that the project will proceed to construction without physical possession of all property rights. The right of way datasheet requested an 18 month lead time. Current lead time is 13 months (M225 3/1/22-M410 4/20/23).
Status	
Response Options	Accept risk but be prepared for delays in construction.

Impacts

Probability	Cost Impact		Delay Impact		Risk Zone			
	Cap	Sup	Dev	Con	Cap	Sup	Dev	Con
Moderate	Moderate	Moderate	Moderate	Moderate	M	M	M	M

Assessment Notes

Risk 010

Status: Active	Seasonal Surveys	RBS: Environmental	Owner: Bria Miller	Updated: 11-04-2021

Retire Edit

Description	As a result of the need for seasonal Spring surveys for protected plant species, the need for additional study completion time may occur, which could lead to schedule delay.
Status	If special status plants are found during the 2022 growing season surveys, avoidance and minimization measures such as translocation, soil salvage, and/or seed collection will be incorporated into the project.
Response Options	Provide sufficient time to conduct seasonal surveys during PS&E.

Impacts

Probability	Cost Impact		Delay Impact		Risk Zone			
	Cap	Sup	Dev	Con	Cap	Sup	Dev	Con
Low	Low	Low	Low	Low	L	L	L	L

Assessment Notes

Risk 015

Status: Active	Utility Conflicts	RBS: R/W	Owner: Carol Alvarado	Updated: 11-04-2021

Retire Edit

Description	Due to lack of Positive Location Agreement between Caltrans and Kinder Morgan Management, no test holes may be dug for positive locating of high priority petroleum line. Chapter 17 of PDPM requires positive locating via test holes of high priority lines within project limits.
Status	Caltrans HQ has been in on-going talks with Kinder Morgan Management on this issue, but

	outcome remains uncertain. Kinder Morgan is willing to electronically locate and mark approximate lateral position of line, but will not provide approximate depths. Lateral proximity of proposed excavation to petroleum line is the relevant question at Kingvale U.C. widening portion of project. Design does not anticipate physical conflict with line, but Kinder Morgan could require protection in place measures if there is any increased load on pipe due to placement of fill.
Response Options	Contact Kinder Morgan for electronic field locating as soon as Structures plans are ready, and as weather permits, to gauge proximity of structure widening to petroleum line at Kingvale U.C. At time of field locating request, begin communication with Kinder Morgan regarding areas of fill placement. If Caltrans HQ is successful with a Positive Location Agreement prior to M300 (Dec. 2022), then positively locate petroleum line with test holes. If no such Agreement by M300, then Design will submit a DSDD for an exception to the Chapter 17 requirement.

Impacts	Probability	Cost Impact		Delay Impact		Risk Zone			
		Cap	Sup	Dev	Con	Cap	Sup	Dev	Con
	Moderate	Moderate	Moderate	Moderate	Moderate	M	M	M	M

Assessment Notes	

Risk 016
Status: Active

Retire Edit

RBS:	Owner:	Updated:
DES	Ryan Stiltz	09-21-2020

Risk in construction that after deck on deck removal

Description	Risk in construction that after deck on deck removal, the original bridge deck may have large areas of unsound concrete to be removed.
Status	The removal and repair could add significant time and cost in the construction phase.
Response Options	For significant repairs of existing bridge deck, shoring of the existing girders and reduced clearance or closures of Kingvale Road may be necessary.

Impacts	Probability	Cost Impact		Delay Impact		Risk Zone			
		Cap	Sup	Dev	Con	Cap	Sup	Dev	Con
	Low				High				H

Assessment Notes	

Risk 017
Status: Active

Retire Edit

RBS:	Owner:	Updated:
DES	Ryan Stiltz	11-05-2021

Risk for delivery due to limited design time in the 1 phase.

Description	Risk for delivery due to limited design time in the 1 phase.

Description	Risk for delivery due to limited design time in the 1 phase.
Status	Typical project would expect about 18 months or more for bridge widenings or replacement between BSS and draft PSE. Current schedule shows only 10 months between PAED/BSS to draft PSE. BSS should be moved up to the zero phase for adequate delivery time with typical DES deliverables. Current schedule has risk for delivery.
Response Options	

Impacts	Probability	Cost Impact		Delay Impact		Risk Zone			
		Cap	Sup	Dev	Con	Cap	Sup	Dev	Con
	Moderate			Low				L	

Assessment Notes	Probability may be moved to low if BSS is moved up 6 months.

Site managed by North Region Data Management Unit. Contact david.long@dot.ca.gov for support.

ATTACHMENT O
SHOPP PERFORMANCE MEASURES

SHOPP Project - Accomplishment - Performance Measures - Benefits

District: 03 **Tool ID:** 16364 **Project ID:** 0317000043 **EA:** 1H990 **Co-Rte-PM:** All Locations View/Print PIR (Performance) Report

☑ Bridge ☑ Pavement ☑ Drainage ☐ Facilities ☑ Safety, Signs & Lighting ☑ Mobility ☐ Roadside ☑ Complete Streets ☐ Sustainability /Climate Change ☐ Advance Mitigation /Mitigation ☐ Major Damage & Betterments ☑ Green-house Gases ☐ Relinquishment

Performance & Accomplishments (PPC)

	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	A02	Bridge Replacement/New Construction (201.110, .111, .113, .322)	Bridge and Tunnel Health	Square Feet	13161.000			10226.000	2935.000	10226.000							
2	A02		Bridge Scour Mitigation			10226.000				10226.000							
3	A02		Bridge Seismic Restoration			10226.000				10226.000							
4	A02		Bridge Goods Movement Upgrades			4736.000	5490.000			10226.000							
5	A03	Bridge Rail (201.112)	Bridge Rail Replacement and Upgrade	Linear Feet	584.000	584.000				584.000							
6	A06	Bridge Approach Slabs (201.110, .111, .113, .322)	No Performance Objective in the SHSMP	Square Feet	6915.000			5350.000	1565.000	5350.000							
7	A08	Number of Bridges	No Performance Objective in the SHSMP	Each	2.000												
8	A11	Fish Passage Not in the Priority List	No Performance Objective in the SHSMP	Each													
9	A12	Fish Passage in the Priority List	Fish Passage	Each													
10	B21	Concrete Pavement Major Rehab	Pavement Class I	Lane Miles	0.748		0.010	0.738		0.748							
11	B26	Concrete Pavement Minor Rehab (CAPM)	Pavement Class I	Lane Miles	3.444		3.444			3.444							
12	B26	Concrete Pavement Minor Rehab (CAPM)	Pavement Class I	Lane Miles	6.249		6.034	0.215		6.249							
13	C05	Cure in Place Line Culvert (201.151)	No Performance Objective in the SHSMP	Each	16.000			16.000		16.000							
14	C05	Cure in Place Line Culvert (201.151)	No Performance Objective in the SHSMP	Each	16.000	1.000		15.000		16.000							
15	C06	Cure in Place Line Culvert (201.151)	Drainage Restoration	Linear Feet	1927.450			1927.450		1927.450							
16	C06	Cure in Place Line Culvert (201.151)	Drainage Restoration	Linear Feet	2127.680	40.000		2087.680		2127.680							
17	C17	Fish Passage in the Priority List	Fish Passage	Each	0.000			0.000									
18	C17	Fish Passage in the Priority List	Fish Passage	Each	0.000			0.000									
19	C18	Fish Passage Not in the Priority List	No Performance Objective in the SHSMP	Each	0.000												
20	C18	Fish Passage Not in the Priority List	No Performance Objective in the SHSMP	Each	0.000												
21	E25	Overhead Sign Structures Rehabilitation (201.170)	Overhead Sign Structures Rehabilitation	Each	2.000			2.000		2.000							
22	E26	Sign Panel Replacement	Sign Panel Replacement	Each	14.000			14.000		14.000							
23	F09	Truck Climbing Lane (201.310)	No Performance Objective in the SHSMP	Linear Feet	20592.000			20592.000		20592.000							
24	F10	Acceleration/Deceleration Lane (201.310)	No Performance Objective in the SHSMP	Linear Feet	20592.000			20592.000		20592.000							
25	F35	DVHD Reduced (201.310)	Operational Improvements	DVHD	11.850			11.850		11.850							
26	H32	Is any Location Within the Project Limits Ped/Bike Accessible?	No Performance Objective in the SHSMP	Yes/No	No												No
27	H55	Complete Streets Not Applicable (1,2,3)	Bike/Ped Prohib	1,2,3													Parallel route available
28	N04	Defer	No Performance Objective in the SHSMP	-													Not a ce/ce
29	N04	Defer	No Performance Objective in the SHSMP	-													Not a CE/CE

(Last Saved - 02/06/22 @ 7:47 PM by Theodore Vue)

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
201.122	Pavement	Primary	Pavement	10.4	Lane mile(s)	Lane mile(s)	0.0	9.5	1.0	10.4	10.4	0.000	10.4	0.0	0.0	10.4

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 temporally 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. Proactive projects will temporally use the same performance outputs of Safety Collision Reduction projects. When the reporting requirements for CTC changes, the logic in the AM Tool will change.