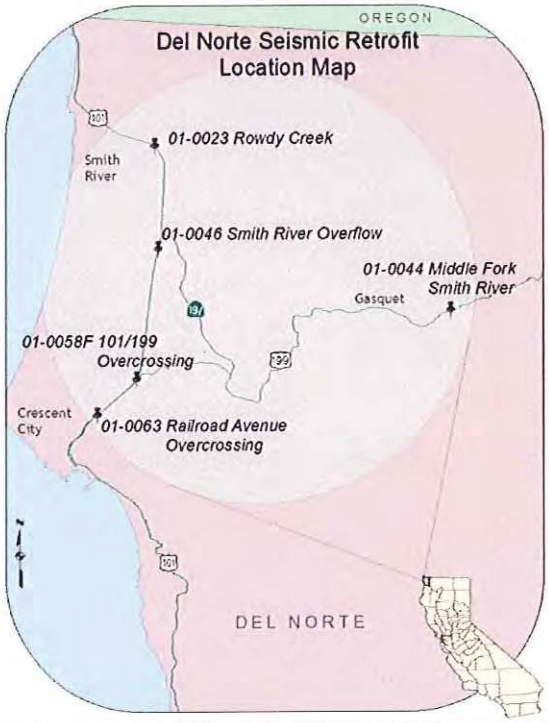
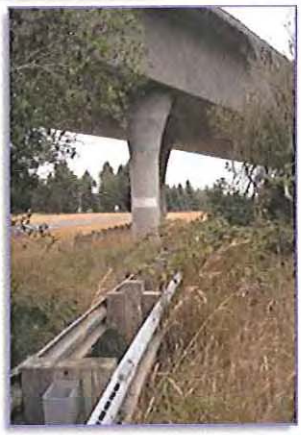
01-DN 101 & 199-PM VARIOUS
01-0A100K
EFIS #: 0112000023
Seismic Retrofit
Program 20.10.201.113
December, 2011

PROJECT SCOPE SUMMARY REPORT (STRUCTURE REHABILITATION) To Request Programming in the 2012 SHOPP and Provide Project Approval





IN DEL NORTE COUNTY AT VARIOUS LOCATIONS ON US 101 & 199

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

KAREN HAWKINS
NORTH REGION DIVISION CHIEF – RIGHT OF WAY

APPROVAL RECOMMENDED:

KEVIN CHURCH
PROJECT MANAGER

APPROVAL RECOMMENDED:

ROYAL MCCARTHY
DISTRICT PROGRAM ADVISOR

APPROVED:

CHARLES C. FIELDER
District Director

Date

This Project Scope Summary Report-Seismic Retrofit 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.

Jeffrey Pimentel, PE
Registered Civil Engineer

12/7/11
DATE

1. INTRODUCTION AND BACKGROUND

Advance Planning has prepared this Project Scope Summary Report (PSSR) for a seismic retrofit project that consists of 5 bridge locations along United States, US 101 and US 199 in Del Norte County. These bridges are the Railroad Avenue Overcrossing #01-0063 (101-PM R28.32), Smith River Overflow Bridge #01-0046 (101-PM 35.77), Rowdy Creek Bridge #01-0023 (101-PM 39.63), SR 199/101 Connector Overcrossing #01-0058F (199-PM T0.51) and the Middle Fork Smith River Bridge #01-0044 (199-PM R17.06).

See Attachment A for the Project Map

Work on each bridge varies from removing column flares, installing column shells, installing anchor piles behind abutments, installing a seat extender, completing infill walls and replacing cross-frames. See Section 6 Alternatives for specific work at each location.

See Attachment J for the Cost estimate and specific work items included in this project.

Project Limits	***01-DN-101***
	01-0063: PM R28.32
	01-0046: PM 35.77
	01-0023:PM 39.63
	01-DN-199
	01-0058F: PM T0.51
	01-0044: PM R17.06
Construction Costs:	$10,726,000 (2011)
Right of way Costs:	$3,318,000 (2011) $4,091,000 (2016)
Funding Source:	SHOPP 201.113
Number of Alternatives:	2 (Includes No Build)
Recommended Alternative (for programming and scheduling):	Build Alternative
Type of Facility	01-0063: Freeway (OC County Rd)
	01-0046:Expressway
	01-0023: Expressway
	01-0058F: Conventional
	01-0044: Conventional
Number of Structures:	5
Anticipated Environmental Determination/Document:	CEQA- IS/Mitigated ND NEPA-CE

2. RECOMMENDATION

It is recommended that the Build Alternative be programmed into the 2012 SHOPP cycle in the 201.113 program. The "no build" alternative does not meet the purpose and need of the project. The total project cost for Build Alternative has been estimated at $14,044,000 (2011).

3. PURPOSE AND NEED STATEMENT

Need:

These bridges were identified in the Structure Replacement and Improvement Needs (STRAIN) Report as bridges with seismic vulnerabilities. This project will repair the seismic deficiencies and improve the structural integrity during a seismic event.

Purpose:

The purpose of this project is to improve the integrity of the structures by performing a seismic retrofit on the five bridges identified in the scope of work.

4. EXISTING FACILITY, DEFICIENCIES AND TRAFFIC DATA

4A. Roadway Geometric Information

Facility (1)	*Minimum*	*Facility Type*	*Through Traffic Lanes (2)*			*Paved Shoulder Width (3)*		*Median (4)*	*Shoulder is a Bicycle Lane (5)*	*Other Bicycle Lane Width (6)*	*Bicycle Route (7)*	*Facilities Adjacent to the Roadbed (8)*
Location	*Curve Radius*		*No. of Lanes*	*Lane Width*	*Type (Flex, Rigid, Composite)*	*Left*	*Right*	*Width*	*(Y/N)*	*Width*	*(Y/N)*	*Code/Width*
Railroad Ave OC PM R28.32 #01-0063	NA	County Rd	2	12'	NA	8'	8'	0'	N	NA	Y	--
			2	12'		8'	8'	0'				
			2	12'		8 '	8'	n/a				
Smith River Overflow PM 35.77 #01-0046	NA	Exp	2	12'	NA	8'	8'	2'	N	NA	Y	--
			2	12'		8'	8'	2'				
			2	12'		8'	8'	n/a				
Rowdy Creek PM 39.63 #01-0023	NA	Exp	2	12'	NA	8'	8'	0'	N	NA	Y	--
			2	12'		8'	8'	0'				
			2	12'		8'	8'	n/a				
199/101 OC PM T0.51 #01-0058F	NA	Conv	2	12'	NA	10'	5'	0'	N	NA	Y	--
			2	12'		10'	5'	0'				
			2	12'		8'	4'	n/a				
Middle Fork Smith River PM R17.06 #01-0044	NA	Conv	4	12'	NA	4'	4'	4.5'	N	NA	Y	--
			4	12'		4'	4'	4.5'				
			4	12'		8'	8'	n/a				

4B. Condition of Existing Facility:

(1) Pedestrian Facility Data
The bridges have no pedestrian facilities.

(2) Bicycle Facility Data
Most of US 101 throughout the District (from Route 1 at Leggett to the California/Oregon State Line) is legislatively designated as the "Pacific Coast Bike Route". The Route Concept Report indicates Caltrans is interested in upgrading shoulders to better accommodate bicycle traffic. Non-motorized needs were considered, however due to the project scope being limited to seismic retrofits, widening shoulders is not included in the project.

The Route Concept Report for US 199 indicates Caltrans is interested in widening shoulders when feasible to better accommodate bicycle traffic and STAA trucks. Non-motorized needs were considered, however due to the project scope being limited to seismic retrofits, widening shoulders is not included in the project.

4C. Structures Information

Railroad Avenue OC
The 199/101 Connector Overcrossing was built in 1971 and is a continuous 2-span CIP/PS concrete box girder, with the abutments founded on driven PC/PS concrete piles and the bent founded on RC spread footings.

Smith River Overflow
The Smith River Overflow Bridge was built in 1955 (widened in 2007) and is a continuous 10-span CIP/RC flat slab founded on driven RC piles.

Rowdy Creek
The Rowdy Creek Bridge was built in 1951 (widened in 1991) and is a simply supported 2-span plate girder, with a CIP/RC deck founded on RC spread footing.

US 199/US101 Connector Overcrossing
The 199/101 Connector Overcrossing was built in 1971 and is a continuous 2-span CIP/PS concrete box girder founded on driven PC/PS concrete piles.

Middle Fork Smith River
The Middle Fork Smith River Bridge was built in 1965 (widened in 1976) and is a continuous 5-span CIP/RC box girder, with an AC overlay, founded on RC spread footings.

Table: Structure Data

Structures	*Facility Type*	*Width Between Curbs (ft)*			*Replace Bridge Railings*	*Vertical Clearance*			*Work Identified in STRAIN*	*Replace Bridge Approach Rail*	*Replace Bridge Approach Slab*	
Name/No.		*Exist*	*3R Std*	*Prop*	*(Y or N)*	*Exist*	*3R Std*	*Prop*	*(Y or N)*	*(Y or N)*	*(Y/N)*	*#*
#01-0063 Railroad Ave OC PM R28.32	County Road-Overcrossing Freeway	40.6	n/a	40.6	N	17.2	16.5	17.2	Y	N	N	n/a
#01-0046 Smith River Overflow PM 35.77	Expressway	47.6	n/a	47.6	N	n/a	n/a	n/a	Y	N	N	n/a
#01-0023 Rowdy Creek PM 39.63	Expressway	40.6	n/a	40.6	N	n/a	n/a	n/a	Y	N	N	n/a
#01-0058F 199/101 OC PM T0.51	Conventional	39.6	n/a	39.6	N	17.7	16.5	17.7	Y	N	N	n/a
#01-0044 Middle Fork Smith River PM R17.06	Conventional	61	n/a	61	N	n/a	n/a	--	Y	N	N	n/a

4D. Vehicle Traffic Data

Table: Traffic Volume Data

PM	Facility Type	Base ADT (2010)	Construction Year ADT (2013)	10-yr ADT (2023)	20-yr ADT (2033)	D %	DH Trucks %	10-yr TI	20-yr TI
#01-0063 Railroad Ave OC PM R28.07/R28.57	County Rd-Overcrossing Freeway	10,900	11,400	13,000	14,700	60	5.0	9.0	10.0
#01-0046 Smith River Overflow PM 35.52/36.02	Expressway	6,900	7,210	8,250	9,280	60	4.0	8.5	9.8
#01-0023 Rowdy Creek PM 39.38/39.88	Expressway	6,900	7,210	8,250	9,280	60	4.0	8.5	9.8
#01-0058F 199/101 OC PM L0.506/L0.684	Conventional	2,300	2,370	2,600	2,830	60	10.0	8.5	9.0
#01-0044 Middle Fork Smith River PM R16.81/R17.31	Conventional	3,100	3,190	3,500	3,810	60	12.0	9.0	9.5

The above Traffic Forecasting Data was provided by the Office of Travel Forecasting and Modeling.

Table: Traffic Collision Data

	Facility Type	Actual (COL/MVM)			Statewide Average (COL/MVM)		
PM		Fatal	F+I	Total	Fatal	F+I	Total
#01-0063 Railroad Ave OC PM R28.07/R28.57	County Rd-Overcrossing Freeway	0	0.2	0.4	0.017	0.18	0.39
#01-0046 Smith River Overflow PM 35.52/36.02	Expressway	0.146	0.29	0.73	0.025	0.27	0.6
#01-0023 Rowdy Creek PM 39.38/39.88	Expressway	0.157	0.79	1.42	0.025	0.27	0.6
#01-0058F 199/101 OC PM L0.506/L0.684	Expressway	0**	0**	0**	0.007**	0.2**	0.55**
#01-0044 Middle Fork Smith River PM R16.81/R17.31	Expressway	0	0	0.36	0.014	0.39	1.1
**Rates are in Collisions per million vehicle (MV)							

The data on the previous page was obtained by performing a 5-year TASAS collision analysis. The information was collected between July 1, 2005 and June 30, 2010. The report analyzed collisions for each bridge segment.

No patterns of collisions were identified by Traffic Safety at any of the bridges.

The following summarizes the rates and types of collisions that were identified at each bridge location:

Railroad Avenue OC

From TASAS Table B, this 0.5 mile highway segment has an actual total collision rate of 0.40, which is 1.03 times greater than the statewide average for similar highway facilities. The actual fatal collision rate is less than the statewide average for similar highway facilities. The actual fatal+injury (F+I) collision rate is 0.20, which is 1.1 times greater than the statewide average for similar highway facilities.

Of the reported 4 collisions, 0 resulted in fatality, 2 resulted in injury, and 2 were "property damage only". Three of these collisions occurred on a "dry" road surface and 1 occurred on a "snowy/icy" road surface. One out of the 4 collisions was a "sideswipe" type collision, 1 was a "broadside", 1 was a "hit object", and 1 was an "overturn" type collision. The primary collision factors for these collisions consisted of the following: 2 "improper turn", 1 "speeding", and 1 "not stated".

Smith River Overflow

From TASAS Table B, this 0.5 mile highway segment has an actual total collision rate of 0.73, which is 1.2 times greater than the statewide average for similar highway facilities. The actual fatal collision rate is 0.146, which is 5.8 times greater than the statewide average for similar highway facilities. The actual fatal+injury (F+I) collision rate is 0.29, which is 1.1 times greater than the statewide average for similar highway facilities.

Of the reported 5 collisions, 1 resulted in fatality, 1 resulted in injury, and 3 were "property damage only". Three of these collisions occurred on a "dry" road surface, 1 occurred on a "wet" road surface, and 1 occurred on a "snowy/icy" road surface. Three of the 5 collisions were "sideswipe" type collisions and 2 collisions were "hit object" type collisions. The primary collision factors for these collisions consisted of the following: 2 "improper turn", 1 "speeding", 1 "unknown", and 1 "other than driver".

Rowdy Creek

From TASAS Table B, this 0.5 mile highway segment has an actual total collision rate of 1.42, which is 2.4 times greater than the statewide average for similar highway facilities. The actual fatal collision rate is 0.157, which is 6.3 times greater than the statewide average for similar highway facilities. The actual fatal+injury (F+I) collision rate is 0.79, which is 2.9 times greater than the statewide average for similar highway facilities.

Of the reported 9 collisions, 1 resulted in fatality, 4 resulted in injury, and 4 were "property damage only". Seven of these collisions occurred on a "dry" road surface, 1 occurred on a "wet" road surface, and 1 occurred on a "snowy/icy" road surface. Three of the 9 collisions were "broadside" type collisions, 3 were "hit object", 2 were "rear end", and 1 was an "overturn" type collision. The primary collision factors for these collisions consisted of the following: 3 "improper turn", 2 "speeding", 2 "failure to yield", 1 "influence of alcohol", and 1 "other than driver".

To address the high collision rates in this segment the Office of Traffic Safety has initiated/completed the following projects:

-Designated as a Daylight Headlight Section (work order issued, sign to be installed in 2011).
-Increased roadway shoulder width and installed rumble strips, PM 39.6/43.7
(01-491404, Completed 8/2/11).
-Signs in vicinity have been replaced with retro-reflective panels.

US 199/US 101 Connector Overcrossing

From TASAS Table B, this 0.18 mile highway segment has an actual total collision rate which is less than the statewide average for similar highway facilities. The actual fatal collision rate is less than the statewide average for similar highway facilities. The actual fatal+injury (F+I) collision rate is less than the statewide average for similar highway facilities.

Middle Fork Smith River

From TASAS Table B, this 0.5 mile highway segment has an actual total collision rate of 0.36, which is less than the statewide average for similar highway facilities. The actual fatal collision rate is less than the statewide average for similar highway facilities. The actual fatal+injury (F+I) collision rate is less than the statewide average for similar highway facilities.

The reported 1collision was "property damage only". This collision occurred on a snowy/icy surface. This was a "hit object" type collision. The primary collision factor was "speeding".

5. CORRIDOR AND SYSTEM COORDINATION

5A. US 101 (Bridge #01-0023, 01-0046, 01-0063)

The Route Concept Report (RCR) (2002) indicates the concept for US 101 from the Washington Boulevard Interchange (PM 27.6) to the Oregon Border is 4-lane freeway/expressway. Designation currently varies from freeway, expressway and conventional within this segment. Bringing Segment PM 31.3/46.5 up to a 4-lane freeway/expressway is not within the scope of a Seismic Retrofit project.

The concept for rehabilitation for ADT over 6,000 for two lane cross sections is to provide 40-foot wide roadway when feasible. However, rehabilitation standards allow the roadway cross-section to be a minimum of 32-feet. All bridges within this segment meet the concept width.

The RCR states that shoulder widening to accommodate non-motorized traffic is desirable. Non-motorized needs were considered, however due to the project scope being limited to seismic retrofits, widening shoulders is not included in the project.

5B. US 199 (Bridge #01-0058F, 01-0044):

The Route Concept Report (RCR) (1999) indicates the concept for US 199 from the Junction with US 101 to the Oregon Border is a two-lane conventional highway with intermittent passing lanes. The 199/101 Connector Overcrossing is located within RCR Segment 1, which is a 2-lane conventional section. Middle Fork Smith River Bridge is located within RCR Segment 2, which is a 4-lane conventional section.

The concept for rehabilitation for ADT ranging from 3,000- 6,000 is to provide a 40-foot wide roadway when feasible, to safely accommodate STAA trucks. However, rehabilitation standards allow the roadway cross-section to be a minimum of 28-feet. The Middle Fork Smith River exceeds both the concept and minimum widths. The 101/199 Connector Overcrossing meets the minimum width.

The RCR states that shoulder widening to accommodate STAA trucks and bicycles is desirable. Non-motorized & STAA needs were considered, however due to the project scope being limited to seismic retrofits, widening shoulders is not included in the project.

6. ALTERNATIVES

6A. Retrofit Strategy:

Alternative 1 – Build Alternative
The retrofit strategy is as follows at each bridge:

Railroad Avenue OC
Install 4-foot diameter cast-in-drilled-hole (CIDH) anchor piles behind the abutments (two at each abutment). The pile heads will be tied to the end diaphragm through steel pipes and high strength rods.

From underneath the overcrossing the existing column flares will be removed and the column flare reinforcements cut. Excavation around column to the footing will occur in order to install full length column casing. A non-structural column flare around casing for aesthetic purpose will be installed to match existing columns, leaving a 4" gap between the soffit of the bridge and the new column.

Smith River Overflow
A seat extender will be placed at the hinge in span 5 with four shallow steel members bolted through the deck to the short span.

Rowdy Creek
The existing cross-frames at the support locations will be removed and replaced. Rivets and stiffeners will be removed using a cutting torch and small areas of the existing bridge will need to be blast cleaned and painted.

US 199/SR 101 Connector Overcrossing
Install 4-foot diameter cast-in-drilled-hole (CIDH) anchor piles behind the abutments (two at each abutment). The pile heads will be tied to the end diaphragm through steel pipes and high strength rods.

From underneath the overcrossing the existing column flares will be removed and the column flare reinforcements cut. Excavation around column to the footing will occur in order to install full length column casing. A column flare around casing for aesthetic purpose will be installed to match existing columns, leaving a 4" gap between the soffit of the bridge and the new column.

Middle Fork Smith River
Install 4-foot diameter cast-in-drilled-hole (CIDH) anchor piles behind the abutments (two at each abutment). The pile heads with be tied to the end diaphragm through steel pipes and high strength rods.

Add concrete to the outside of the left bridge piers to match the right bridge pier thickness. Complete concrete infill walls in between the left and right bridge. Permanently install steel plates for confinement of the infill walls and columns.

See Attachment B for the Project Layouts for Alternative 1.
See Attachment D for the Structures Advance Planning Study & STRAIN Report.

Alternative 2 - No Build
The no build alternative does not meet the purpose and need for the project. By not performing the retrofit, the structural integrity of the bridges would not be improved.

6B. Design Exceptions:

Since all work at this location is being completed to the substructure, Heidi Sykes and Jim Deluca both agreed (discussed on 10/28/11) that addressing nonstandard geometric features is beyond the scope of this project Therefore, a design exception fact sheet was not prepared to address the non-standard shoulder width at the Middle Fork Smith River Bridge.

6C. Environmental Compliance:

A Preliminary Environmental Assessment Report (PEAR) has been prepared for this project. The PEAR indicates that an Initial Study with a Mitigated Negative Declaration for CEQA and a Categorical Exclusion for NEPA will be needed, which will take 24-30 months to complete.

The following biological permits are anticipated:
Clean Water Act 404 Permit
Clean Water Act 401 Permit
1600 Streambed Alteration Agreement

In addition to the permits above, a Coastal Development Permit will be required as four of the five bridges are located within the Coastal Zone. The Middle Fork Smith River Bridge is not located within the Coastal Zone.

Mitigation will be required for impacts to wetlands, riparian vegetation, water quality, fisheries, and other habitat. The Right of Way Data Sheet and cost estimates include the purchase of 12 acres for the purpose of riparian mitigation (3 acres of disturbed riparian at a mitigation ratio of 4:1).

See Attachment I for the Preliminary Environmental Assessment Report.

6D. Sea Level Rise

State guidance on Sea level rise is still in development. However, according to Pacific Institute mapping, the bridges in this project are not located where sea level rise will occur.

6E. Hazardous Waste

The Initial Site Assessment recommends a consultant perform surveys of the bridge sites for issues related to asbestos and lead paint in bridge components, and Aerially Deposited Lead (ADL) in soil that will be disturbed during work.

An Air Quality National Emission Standards for Hazardous Air Pollutants (NESHAP) permit will be required for each bridge.

Note that Rowdy Creek will require blast cleaning.

The complete ISA is located in Attachment E.

6F. Hazardous waste disposal site required? If yes, where are sites?

Surveys of hazardous waste discussed in Section 6E will be initiated when the project has entered the 0 Phase to determine if a hazardous waste disposal site will be necessary.

6G. Other Agencies Involved (Permits/Approvals)

County of Del Norte: An encroachment permit will be required for the southeast portion of the overcrossing on Railroad Avenue.

6H. Materials and or disposal site needs and availability?

No significant amount of soil will need to be disposed of off-site and excavated soil will become property of the contractor.

6I. Highway planting and irrigation:

Highway planting is warranted for this project.

See Attachment H for a copy of the Landscape Architecture Assessment Sheet.

6J. Storm Water Compliance:

The Storm Water Data Report form states that the project will cause minimal soil disturbance incidental to accessing the column footing, temporary access road, anchor piles and staging areas. The amount of disturbed soil is expected to be less than 1 acre. No impaired water bodies exist within the project limits.

See Attachment G for a copy of the Storm Water Data Report.

Construction site BMP's involve a contractor prepared and implemented Water Pollution Control Plan (WPCP) that will include temporary construction BMP's as a means of controlling storm water runoff during construction.

6K. Right of way Issues:

See Attachment C for a copy of the Right of Way Data Sheet.

6L. Railroad Involvement:

None. No railroads exist within the project area.

6M. Utility Involvement:

No utility relocation or removal is anticipated; however utility verifications will be required.

6N. Prolonged temporary ramp closures:

The project does not involve ramp closures.

6O. Local and Regional Input:

Due to the scope of the project being limited to seismic retrofits only, local and regional input was not solicited.

6P. What are the consequences of not doing this entire project?

By not completing the project, the bridges will not be seismically retrofitted and the structural integrity of the bridges would not be improved as identified by the Structures Maintenance & Investigations (SM&I) list of outstanding work.

6Q. Concurrent Projects:

Dr Fine Bridge, located approximately 0.4 miles from the Smith River Overflow bridge, is programmed for replacement (EA #01-43640) and is scheduled to be complete in 2020.

Patrick Creek Bridge, located approximately 3 miles from the Middle Fork Smith River Bridge, is programmed for realignment and widening/replacement (EA#01-47940) and is scheduled to be complete in 2018.

Widening of the Patrick Creek Narrows (PM 22.7/23.0), approximately 5 miles from the Middle Fork Smith River Bridge, is programmed (EA# 01-45000) and is scheduled to be complete in 2015.

Middle Fork Wall (PM 24.6), approximately 7 miles from the Middle Fork Smith River Bridge, is scheduled to be constructed and completed by 2017 (EA# 01-0B320).

7. TRANSPORTATION MANAGEMENT

7A. Transportation Management Plan:

The Transportation Management Plan (TMP) provided on October 28, 2011 states that no significant traffic impacts are anticipated provided the recommendations within the TMP are incorporated.

All Bridges

- One closure, on each route, is permitted within the project limits.
- The W11-1 vehicular traffic sign (bicycle symbol) and the W16-1 supplemental plaque (SHARE THE ROAD) shall be placed, in each direction of travel, prior to the construction zone.
- A minimum of one PCMS in advance of both ends of the construction site shall be required to notify the public of the closures related to this project. One of the displayed messages shall read, “WATCH FOR BIKES”

See Attachment F for a copy of the TMP and details for each bridge.

7B. Vehicle Detection Systems

No vehicle detection system will be incorporated.

8. ENVIRONMENTAL DETERMINATION/DOCUMENT

A Preliminary Environmental Assessment Report was prepared for this project.

The expected environmental document is an Initial Study with a Mitigated Negative Declaration for CEQA and a Categorical Exclusion for NEPA.

Expected permits include Clean Water Act 404 Permit, Clean Water Act 401 Permit, 1600 Streambed Alteration Agreement, and a Coastal Development Permit.

See Attachment I for the Preliminary Environmental Assessment Report.

9. FUNDING/SCHEDULING

9A. Cost Estimate:

The preferred alternative is Alternative 1 at a cost of $14,044,000 million (in the 2012 SHOPP 201.113 program). This includes $10,017,000 (2011) for construction costs and $3,318,000 (2011) for Right of Way costs. This estimate includes $1,371,000 for Railroad Avenue OC, $972,000 for Smith River Overflow, $1,480,000 for Rowdy Creek, $1,513,000 for the SR 199/SR 101 Connector Overcrossing and $8,601,000 for Middle Fork Smith River. Costs associated with environmental, right of way, landscape architecture, and storm water pollution prevention were distributed equally among the bridges for this PSSR cost estimate. Further evaluation will be needed in the next stage of the project to determine appropriate distribution of costs to each bridge.

See Attachment J for the complete cost estimate.

9B. Project Support:

See Attachment L: Programming Sheet

9C. Project Schedule:

Milestones	Delivery Date (Month, Day, Year)
Begin Environmental	6/1/2012
Begin Project Report	5/1/2012
Circulate ED	10/1/2013
PA & ED	7/1/2014
Bridge Site Data to Structures	1/1/2013
Right of Way Maps	2/1/2014
Draft PS&E	8/1/2015
Project PS&E	12/1/2015
Right of way Certification	3/1/2016
Ready to List	3/15/2016
HQ Advertise	7/15/2016
Approve Contract	12/15/2016
Contract Acceptance	8/1/2018

10. FEDERAL COORDINATION

No FHWA action required for this project.

11. SCOPING TEAM FIELD REVIEW ATTENDANCE ROSTER:

A field review was completed on September 7, 2011 by Jeffrey Pimentel and Katie Beach.

12. REVIEWS

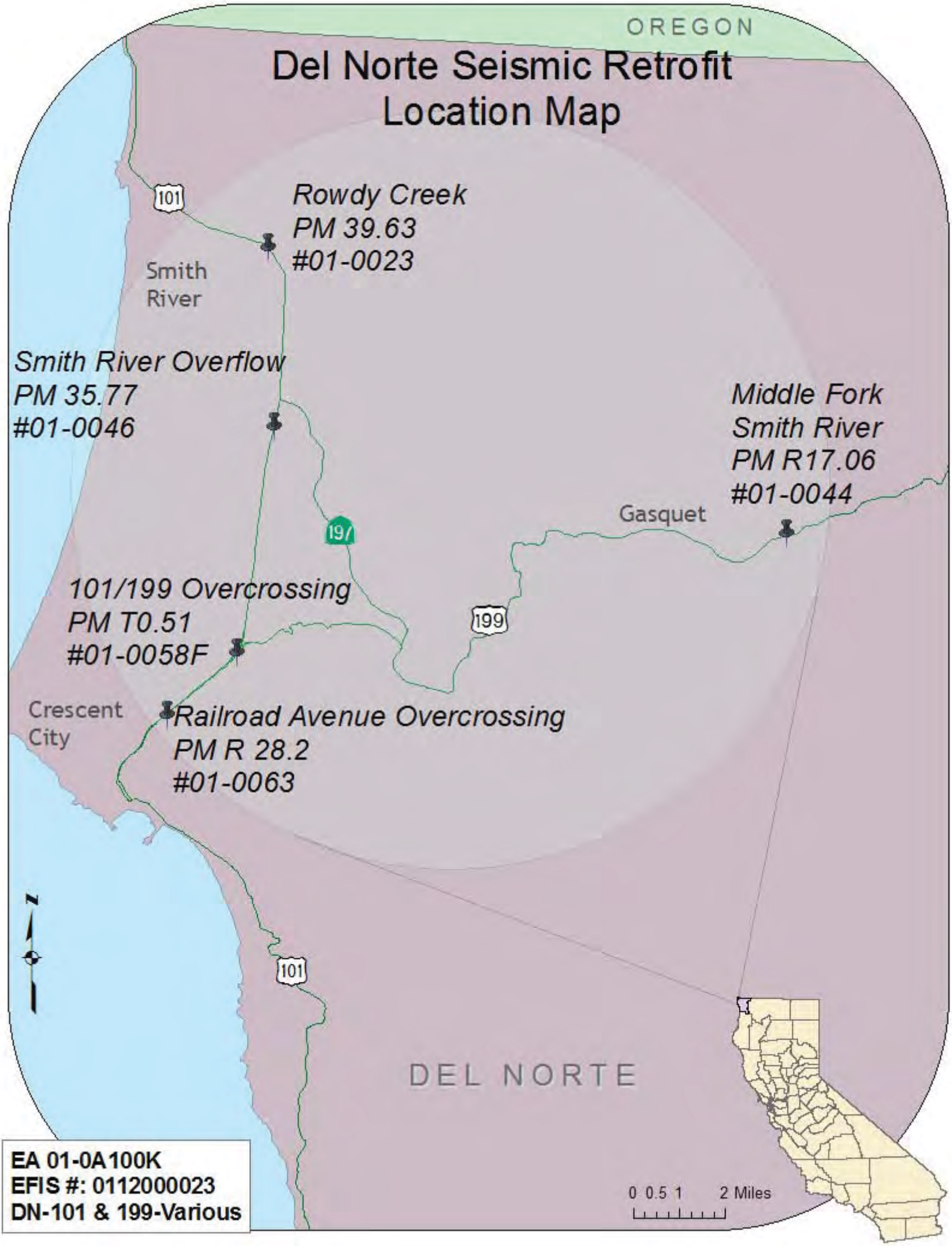
Project Reviewed by:

District Maintenance	Royal McCarthy	Date 11/18/11
District Safety	Steve Hughes	Date 11/18/11
HQ Division of Design	Heidi Sykes & Jim Deluca	Date 11/18/11
HQ Program Advisor	Michael Johnson	Date 11/18/11
District Advanced Planning	Ilene Poindexter	Date 11/17/11

13. LIST OF ATTACHMENTS

A. Project Map
B. Layouts
C. R/W Data Sheet
D. Structures Advance Planning Study
E. Initial Site Assessment (ISA)
F. Transportation Management Plan (TMP)
G. Storm Water Data Report
H. Landscape Architecture Assessment Form
I. Environmental Document (PEAR)
J. Cost Estimate
K. Programming Sheet

ATTACHMENT A
Project Map


OREGON
Del Norte Seismic Retrofit
Location Map
101
Rowdy Creek
PM 39.63
#01-0023
Smith
River
Smith River Overflow
PM 35.77
#01-0046
Middle Fork
Smith River
PM R17.06
#01-0044
Gasquet
199
101/199 Overcrossing
PM T0.51
#01-0058F
199
Crescent
City
Railroad Avenue Overcrossing
PM R 28.2
#01-0063
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101
DEL NORTE
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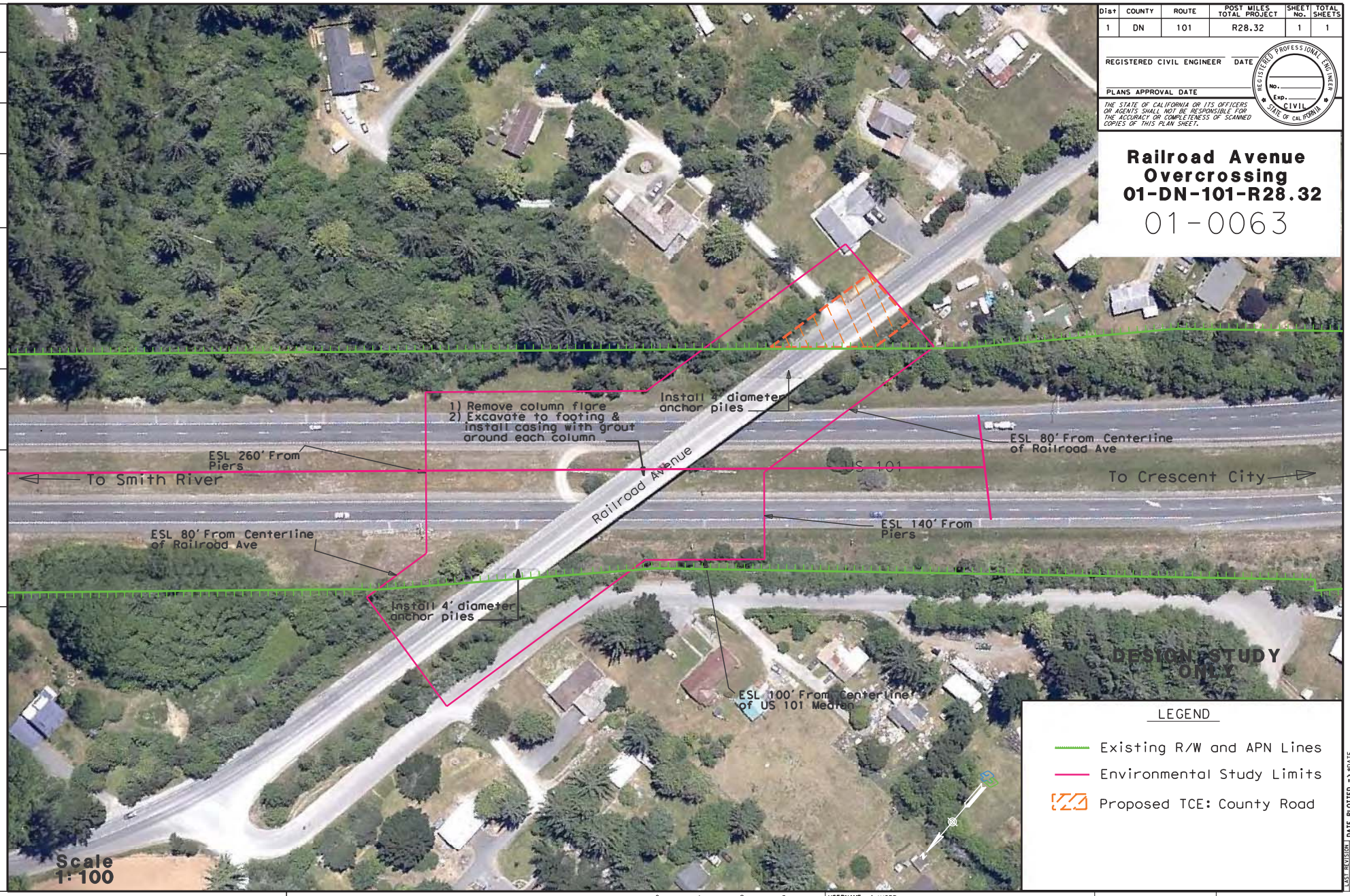
EFIS #: 0112000023
DN-101 & 199-Various

ATTACHMENT B
Layouts



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
1	DN	101	R28.32	1	1

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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

Railroad Avenue Overcrossing 01-DN-101-R28.32

01-0063

LEGEND

- Existing R/W and APN Lines
- Environmental Study Limits
- Proposed TCE: County Road

REVISED BY | DATE REVISED

CALCULATED-DESIGNED BY | CHECKED BY

FUNCTIONAL SUPERVISOR

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

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

BORDER LAST REVISED 4/11/2008

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

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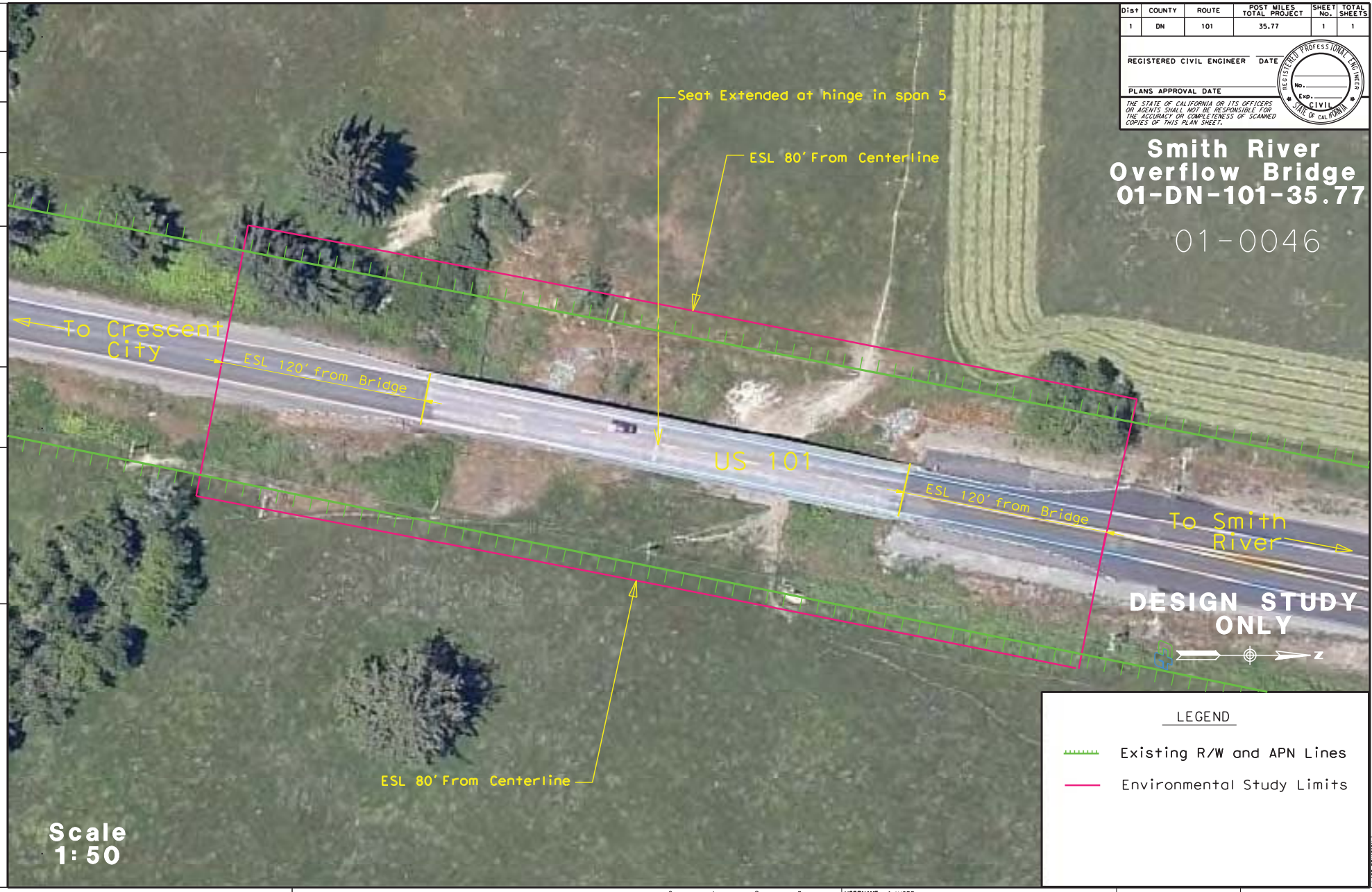
EA 000000



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
1	DN	101	35.77	1	1

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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Smith River Overflow Bridge 01-DN-101-35.77

01-0046

REVISED BY | DATE REVISED

CALCULATED-DESIGNED BY | CHECKED BY

FUNCTIONAL SUPERVISOR

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

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TIME PLOTTED => $TIME

BORDER LAST REVISED 4/11/2008

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

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DGN FILE => $REQUEST

CU 00000

EA 000000

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
1	DN	101	39.63	1	1

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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Rowdy Creek Bridge
01-DN-101-39.63

01-0023

REVISED BY | DATE REVISED

CALCULATED-DESIGNED BY | CHECKED BY

FUNCTIONAL SUPERVISOR

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

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

BORDER LAST REVISED 4/11/2008

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

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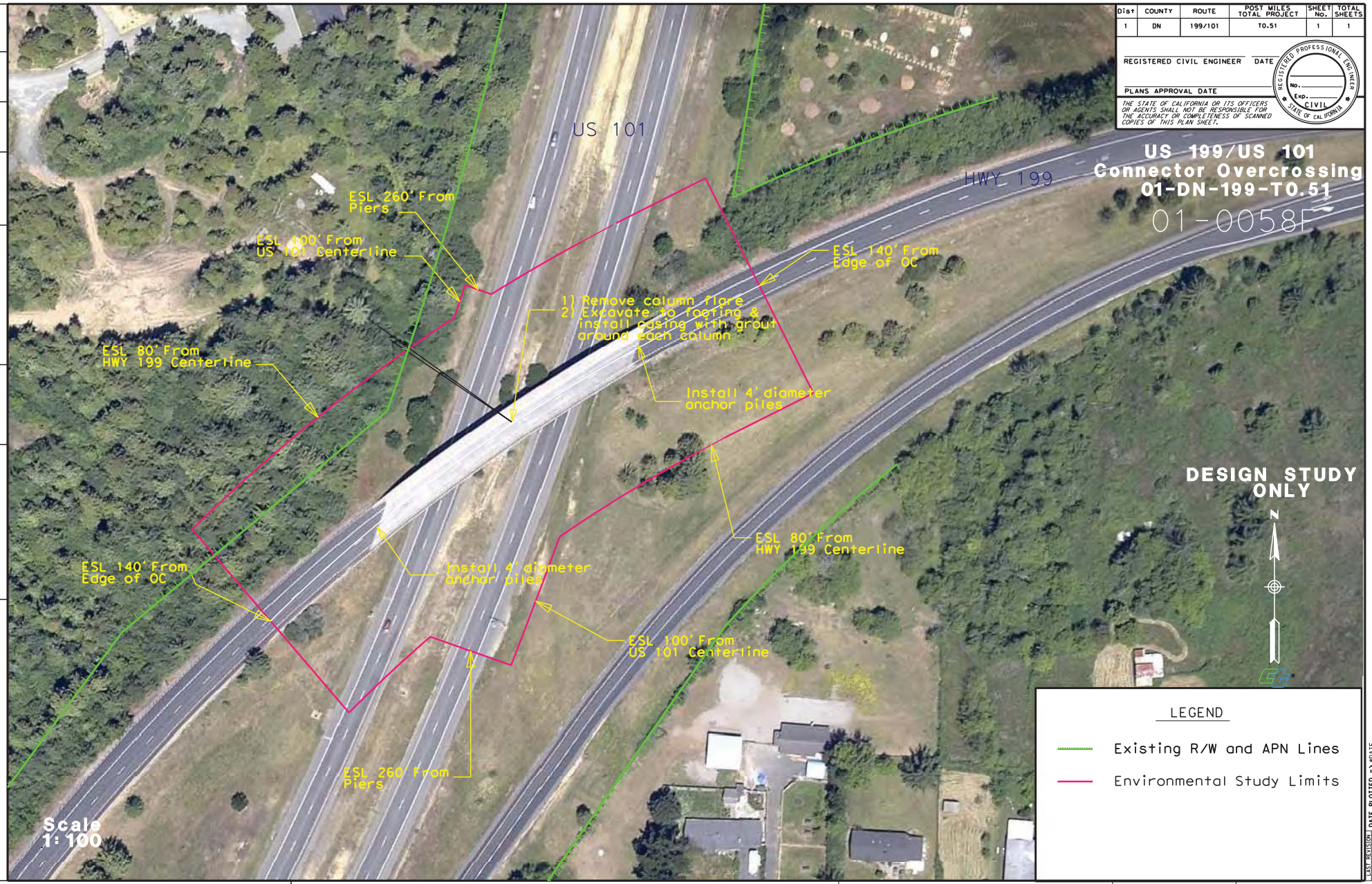

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
1	DN	199/101	T0.51	1	1

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

US 199/US 101 Connector Overcrossing
01-DN-199-T0.51
01-0058F

REVISED BY | DATE REVISED

CALCULATED-DESIGNED BY | CHECKED BY

FUNCTIONAL SUPERVISOR

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

BORDER LAST REVISED 4/11/2008

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

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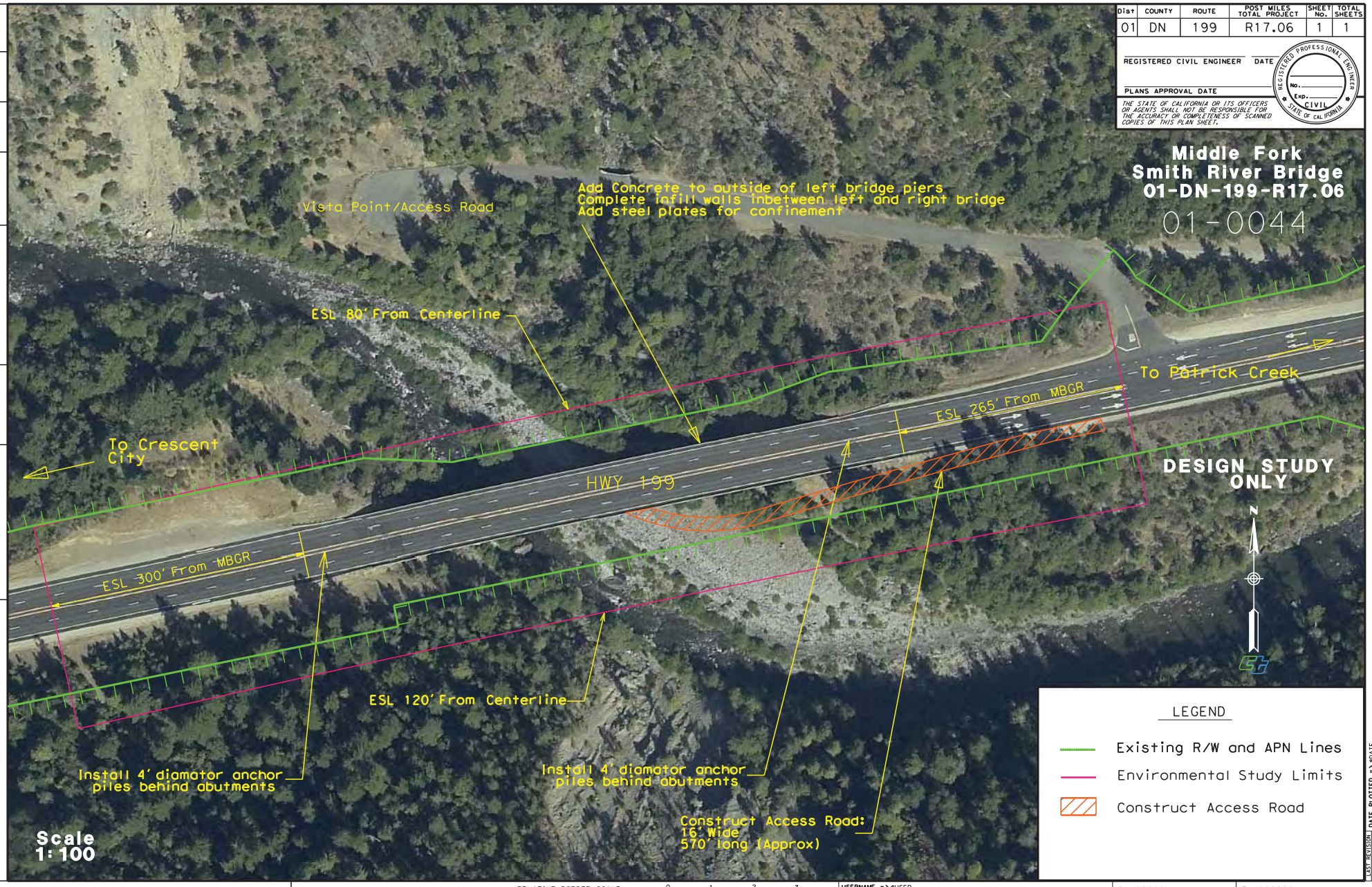
CU 00000 EA 000000

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



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	DN	199	R17.06	1	1

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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

Middle Fork Smith River Bridge
01-DN-199-R17.06
01-0044

Scale 1:100

REVISED BY | DATE REVISED

CALCULATED-DESIGNED BY | CHECKED BY

FUNCTIONAL SUPERVISOR

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

BORDER LAST REVISED 4/11/2008

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

USERNAME => $USER
DGN FILE => $REQUEST

CU 00000 | EA 000000

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

ATTACHMENT C
R/W Data Sheet

State of California
Department of Transportation

Business, Transportation and Housing Agency

Memorandum

Flex your power!
Be energy efficient!

To: MS. ILENE POINDEXTER
D1 Advanced Planning Senior
Department of Transportation, District 1

Attention KATIE BEACH
Project Engineer

From: KAREN E. HAWKINS,
Assistant Chief
North Region Right of Way
Eureka/Redding

Date: November 30, 2011

File: 01-DN-C0999
E.A. 0A100K
Alternate No. 1 of 1 - Bridge Seismic Retrofit

Seismic Retrofit of Five Bridges in Del Norte County on Routes 101 & 199

Subject: Current Estimated Right of Way Costs

We have completed an estimate of the right of way costs for the above referenced project based on information received from you on October 19, 2011 . The attached estimate is based on the following assumptions and limiting conditions:

Acquisition: No work will be performed outside the State's right of way.

Permits: Four permits will be required. These include a 1602, CDP, 404 and 401.

Mitigation: Up to 12 acres of off-site mitigation will be required for impacts to riparian areas.

Right of Way Lead Time will require a minimum of **20** months after we receive project first appraisal maps, utility conflict maps, and the necessary environmental clearance and freeway agreements have been approved and obtained. Additionally a minimum of **3** months will be required after receiving the last appraisal map to Right of Way for certification. Shorter lead times will require either more right of way resources or an increased number of condemnation suits to be filed. Either of these actions may reflect adversely on the District's other programs or our public image generally.

Karen E. Hawkins

KAREN E. HAWKINS,
Assistant Chief
North Region Right of Way
Eureka/Redding

Attachments:
Right of Way Data Sheet

cc. KEVIN CHURCH

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

RIGHT OF WAY DATA SHEET

Date: November 16, 2011

01-DN-101 & 199-C0999
E.A. 0A100K
BH Bridge - Rehabilitation bridge seismic retrofit

1. Right of Way Cost Estimate: **Alternate No. 1-1 - Bridge Seismic Retrofit**

	Current Value Future Use	Escalation Rate		Escalated Value
A. Total Acquisition Cost	$0			$0
B. Mitigation acquisition & credits	$3,240,000	5%		$3,994,973
C. Project Development Permit Fees	$78,000	5%		$96,175
Subtotal	$3,318,000			$4,091,148
D. Utility Relocation (State Share) (Owner's share: $0)	$0			$0
E. Relocation Assistance (RAP)	$0			$0
F. Clearance/Demolition	$0			$0
H. Title & Escrow	$0			$0
I. Total Estimated Right of Way Cost	$3,318,000		**Rounded**	**$4,091,000**
J. Construction Contract Work	$0			

2. Current Date of Right of Way Certification March 1, 2016

3. Parcel Data:

Type		Dual/Appr
X	0	
A	0	
B	1	
C	0	0
D	0	0
Total	1	

Utilities	
U4 - 1	0
- 2	0
- 3	0
- 4	0
U5 - 7	9
- 8	0
- 9	0

RR Involvements	
None	X
C&M Agrmt	
Svc Contract	
Easements	
Rights of Entry	
Clauses	

Areas:

R/W:	N/A
Excess:	N/A
Mitigation:	N/A

No. Excess Pcls: 0

Misc. R/W Work	
RAP Displ	N/A
Clear/Demo	N/A
Const Permits	N/A
Condemnation	0
USA Involvement	No

4. Are there any major items of construction contract work?
Yes _____ No X

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

No right of way required.

6. Are any properties acquired for this project expected to be rented, leased, or sold?
Yes _____ No X

7. Is there an effect on assessed valuation? Yes _____ Not Significant _____
No X

8. Are utility facilities or rights of way affected? Yes X No _____

Utility relocations are not anticipated; however, utility verifications will be required.

Name of Utility Companies Requiring Verification Only:
City of Crescent City - Water
City of Crescent City - Electric
City of Crescent City - Sewer
Frontier Communications - Telephone
Charter Communications - CATV
Pacific Power & Light - Electric
Blue Star - Gas
Smith River Community Services District - Water
County of Del Norte - Public Works

9. Are railroad facilities or rights of way affected? Yes _____ No X

10. Were any previously unidentified sites with hazardous waste and/or material found?
Yes _____ None Evident X

11. Are RAP displacements required? Yes _____ No X

No. of single family _____ No. of business/nonprofit _____
No. of multi-family _____ No. of farms _____

Based on Draft/Final Relocation Impact Statement/Study dated N/A
it is anticipated that sufficient replacement housing (will/will not) be available without Last Resort Housing.

12. Are there material borrow and/or disposal sites required?
Yes _____ No X

13. Are there potential relinquishments and/or abandonments?
Yes _____ No X

14. Are there any existing and/or potential airspace sites?
Yes _____ No X

15. What type of mitigation is required for the project?
12 acres of riparian mitigation will be required.

16. Indicate the anticipated Right of Way schedule and lead time requirements. (Discuss if district proposes less than PMCS lead time and/or if significant pressures for project advancement are anticipated.)

Right of Way Lead Time will require a minimum of 20 months after we receive first appraisal maps, utility conflict maps, and the necessary environmental clearance and freeway agreements have been approved and obtained. Additionally a minimum of 3 months will be required after receiving the last appraisal map to Right of way for certification.

17. Is it anticipated that Caltrans will perform all Right of Way work?
Yes X No _____

Evaluation Prepared By:

Right of Way: _____ Date 12-1-11
JEREMIAH JOYNER

Reviewed By:

RW Project Coordinator: _____ Date 12-1-11
ROBERT CLOSE

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.

RECOMMENDED FOR APPROVAL

_____
DAVE McCANLESS,
Senior Right of Way Agent
Project Delivery Branch
EUREKA

12/2/11
Date

APPROVED:

_____
KAREN E. HAWKINS,
Assistant Chief
North Region Right of Way
Eureka/Redding

12/2/11
Date

ATTACHMENT D
Structure Replacement And Improvement Needs Report (STRAIN)
&
Structures Advance Planning Study

District : 01

Bridge Number : **01 0023** Total Length: 63.4 Permit Rating: PPPPP Suff Rating : 95.40
Feat Intersected: ROWDY CREEK Total Width : 13.3 Rail Rating : 1100 Approach Width: 12.2
Stucture Name : ROWDY CREEK Location : 01-DN-101-39.63

Item	Recom. Date	Project Type	Urgency Factor	Cost	Status	Tech. rank
1	07/01/2001	70 - Seismic-Retrofit	2 years	$420,500	1-Initiated	0.17

Project Details :

1 Tall steel girder may require x-bracing. Priority 4. Final Score 0.165.

Bridge Number : **01 0025** Total Length: 41.8 Permit Rating: PPPPP Suff Rating : 70.00
Feat Intersected: PANTHER CREEK Total Width : 9.9 Rail Rating : 0000 Approach Width: 12.2
Stucture Name : PANTHER CREEK Location : 01-DN-101-8.34

Item	Recom. Date	Project Type	Urgency Factor	Cost	Status	Tech. rank
1	02/10/1984	62 - Railing-Upgrade	2 years	$177,120	2-Programmed	1.29
2	09/06/2011	70 - Seismic-Retrofit	4 years	$207,500	0-Proposed	

Project Details :

1 F1-03 / F2-0 / F3-5 / Rail Type-MBGR. Replace the bridge rail.

2 High skew, liquefiable soil, Raymond Step Tapered Piles. Final score 1.4

Bridge Number : **01 0028** Total Length: 621.2 Permit Rating: PPPPP Suff Rating : 50.00
Feat Intersected: KLAMATH RIVER Total Width : 10.4 Rail Rating : 0110 Approach Width: 12.2
Stucture Name : KLAMATH RIVER Location : 01-DN-101-R4.04

Item	Recom. Date	Project Type	Urgency Factor	Cost	Status	Tech. rank
1	07/10/2001	11 - Super-Rehab	6 years	$3,750,000	2-Programmed	44.27

Project Details :

1 Remove and reconstruct the hinge in Span 8. The concrete of the seat and diaphragm at this location has been cracking and failing for the past 20 years leaving the rebar in the hinge and the pipe seat extenders to support the span. The hinge in Spans 2 and 11 is in the early stages of deterioration and failure. Both of these should be removed and reconstructed.

District : 01

Bridge Number : **01 0044** Total Length: 170.7 Permit Rating: PPPGG Suff Rating : 67.00
Feat Intersected: MIDDLE FORK SMITH RIVER Total Width : 18.9 Rail Rating : 0011 Approach Width: 18.3
Stucture Name : MIDDLE FORK SMITH RIVER Location : 01-DN-199-R17.06

Item	Recom. Date	Project Type	Urgency Factor	Cost	Status	Tech. rank
1	07/01/2002	70 - Seismic-Retrofit	2 years	$1,560,500	1-Initiated	0.22

Project Details :

1 Large gap behind abutments. Priority 4. Final Score 0.22.

Bridge Number : **01 0046** Total Length: 86.3 Permit Rating: PPPPP Suff Rating : 89.60
Feat Intersected: SMITH RIVER OVERFLOW Total Width : 15.2 Rail Rating : 1111 Approach Width: 15.5
Stucture Name : SMITH RIVER OVERFLOW Location : 01-DN-101-35.77

Item	Recom. Date	Project Type	Urgency Factor	Cost	Status	Tech. rank
1	01/16/2007	70 - Seismic-Retrofit	2 years	$653,500	1-Initiated	10.07

Project Details :

1 Slab bridge with in-span hinge. Short seat hinge, thin pier wall supporting shallow superstructure. Prioity 2 & 4. Final Score 10.065.

I revised the cost to $653,500. Previous cost was $427,000 which did not provide the proper estimate of $500/sq meter of deck area. tf

---

Bridge Number : **01 0058F** Total Length: 111.6 Permit Rating: PPPPP Suff Rating : 98.20
Feat Intersected: U.S. 101 (@ PM R30.81) Total Width : 12.8 Rail Rating : 0011 Approach Width: 11.9
Stucture Name : S199-S101 CONNECTOR OC Location : 01-DN-199-T.51

Item	Recom. Date	Project Type	Urgency Factor	Cost	Status	Tech. rank
1	07/01/2002	70 - Seismic-Retrofit	2 years	$692,000	1-Initiated	0.40

Project Details :

1 Columns flare steel into superstructure, non-ductile columns. Priority 4. Final Score 0.396.

District : 01

Bridge Number : **01 0063** Total Length: 115.8 Permit Rating: PPPPP Suff Rating : 99.70
Feat Intersected: U.S. HIGHWAY 101 Total Width : 12.7 Rail Rating : 0111 Approach Width: 12.2
Stucture Name : RAILROAD AVENUE OC Location : 01-DN-101-R28.32

Item	Recom. Date	Project Type	Urgency Factor	Cost	Status	Tech. rank
1	07/01/2000	70 - Seismic-Retrofit	2 years	$736,000	1-Initiated	0.40

Project Details :

1 Columns flare steel into superstructure, non-ductile columns. Priority 4. Final Score 0.396.

Bridge Number : **04 0007** Total Length: 48.8 Permit Rating: PPPPP Suff Rating : 77.30
Feat Intersected: OHMAN CREEK Total Width : 9.4 Rail Rating : 0010 Approach Width: 7.3
Stucture Name : OHMAN CREEK Location : 01-HUM-254-.88

Item	Recom. Date	Project Type	Urgency Factor	Cost	Status	Tech. rank
1	02/10/1984	62 - Railing-Upgrade	2 years	$200,080	2-Programmed	9.79

Project Details :

1 F1-10 / F2-0 / F3-2 / Rail Type-WOOD

Bridge Number : **04 0008** Total Length: 36.6 Permit Rating: PPPGG Suff Rating : 74.60
Feat Intersected: ELK CREEK Total Width : 9.3 Rail Rating : 0000 Approach Width: 7.3
Stucture Name : ELK CREEK Location : 01-HUM-254-10.43

Item	Recom. Date	Project Type	Urgency Factor	Cost	Status	Tech. rank
1	02/10/1984	62 - Railing-Upgrade	2 years	$159,080	2-Programmed	0.81

Project Details :

1 F1-03 / F2-0 / F3-5 / Rail Type-C.WIN

Bridge Number : **04 0009** Total Length: 48.8 Permit Rating: PPPPP Suff Rating : 75.00
Feat Intersected: BRIDGE CREEK Total Width : 9.6 Rail Rating : 0011 Approach Width: 7.3
Stucture Name : BRIDGE CREEK Location : 01-HUM-254-10.8 FUNCTIONALLY OBSOLETE

Item	Recom. Date	Project Type	Urgency Factor	Cost	Status	Tech. rank
1	02/10/1984	62 - Railing-Upgrade	2 years	$200,080	2-Programmed	8.14

Project Details :

1 F1-10 / F2-0 / F3-1 / Rail Type-WOOD

Memorandum

To: ILENE POINDEXTER, Chief
Advance Planning Branch
District 01

Attn: Jeffrey Pimentel

Date: September 9, 2011

File: 01-DN-101/199
Various
EA 01-0A100K

From: GUDMUND SETBERG, Chief
Bridge Design Branch 2
Office of Structure Design North
Division of Engineering Services, MS 9-4/8I

Subject: PID Level Planning Study

This memo has been prepared in response to the request for planning study information sent to Moe Amine during the month of August 2011. This memo and the attached drawings/details summarize the findings of our review of the structures included in project EA 01-0A100K.

Due to the limited time allowed for these studies, the Office of Structure Design (OSD) was not able to perform in-depth review of the As-Builts, determine soil and seismic properties, or perform the seismic analysis needed to provide optimal retrofit strategies. To date OSD efforts include brief reviews of: As-Builts records, Structure Maintenance Bridge Records, draft seismic design spectrums and draft foundation information. Based on our findings, the following work is recommended:

Smith River Overflow (01-0046):

- Place seat extenders at the hinge in span 5. The seat extender retrofit will most likely consist of 4 relatively shallow steel members bolted through the deck to the short span side (north side) of the hinge. Drilling and bolting through the deck will require intermittent traffic control. It is estimated that 3 days of traffic control will be needed in each direction for a total of 6 days.
- Cost estimate for hinge Retrofit: $105,000

Rowdy Creek Bridge (01-0023):

- Remove existing cross-frames and place new cross-frames at support locations (Total four locations). This work requires access to the top of Pier 2 and may require a scaffold to be built at the top of the pier for work access. Additionally, rivets and stiffeners will need to be removed using a cutting torch and small areas of the existing will need to be blast cleaned and painted. Traffic control is expected to be very minor.

- Cost estimate for cross-frame strengthening: $490,000

Railroad Ave OC (01-0063) and S199-S101 Connector (01-0058F):

- Remove column flares and cut column flare reinforcement. Excavate around each column down to the top of the footing. Install full length column casings around each column and grout. The new column casings shall match the existing column flare with a 4" gap under the bridge soffit.
- Install 4 ft diameter anchor piles behind the abutments (total 2 for each abutment). The pile heads will be tied to the end diaphragm through steel pipes and high strength rods. One lane traffic control is required and is expected to last 2 – 3 months.
- Cost estimate for both bridges: $780,000

Middle Fork Smith River (01-0044):

- Review of this bridge indicates that it may perform fairly well in a seismic event and may not need any retrofit work. However, this difficult to determine without more refined analysis. The Office of Structure Design (OSD) recommends that additional analysis be performed to determine if this bridge can be removed from the seismic retrofit list. The timeframe for this type of analysis is 4 months from the time a request to proceed with the analysis is received from the District. In the interim the following work is recommended: Install 4 ft diameter anchor piles behind the abutments (total 2 for each abutment). The pile heads will be tied to the end diaphragm through steel pipes and high strength rods. One lane traffic control is required and is expected to last approximately 2 months.
- Cost estimate for Anchor Pile Retrofit: $400,000

The cost estimates shown above include 10% for TRO, 10% for mobilization and 40% for contingencies, but do not include traffic control or any District items. The project scope and cost estimates are built on a number of assumptions and should be considered preliminary.

If you have any questions or if you need additional information regarding these studies, please contact Gudmund Setberg at (916) 227-8282.

Attachment

c: TOstrom – Office of Bridge Design North
MAmini – Technical Liaison Engineer
ETaddese – Project Coordination Engineer
TFujioka – Office of Structure Maintenance and Investigation
JBabcock – Office of Structure Construction

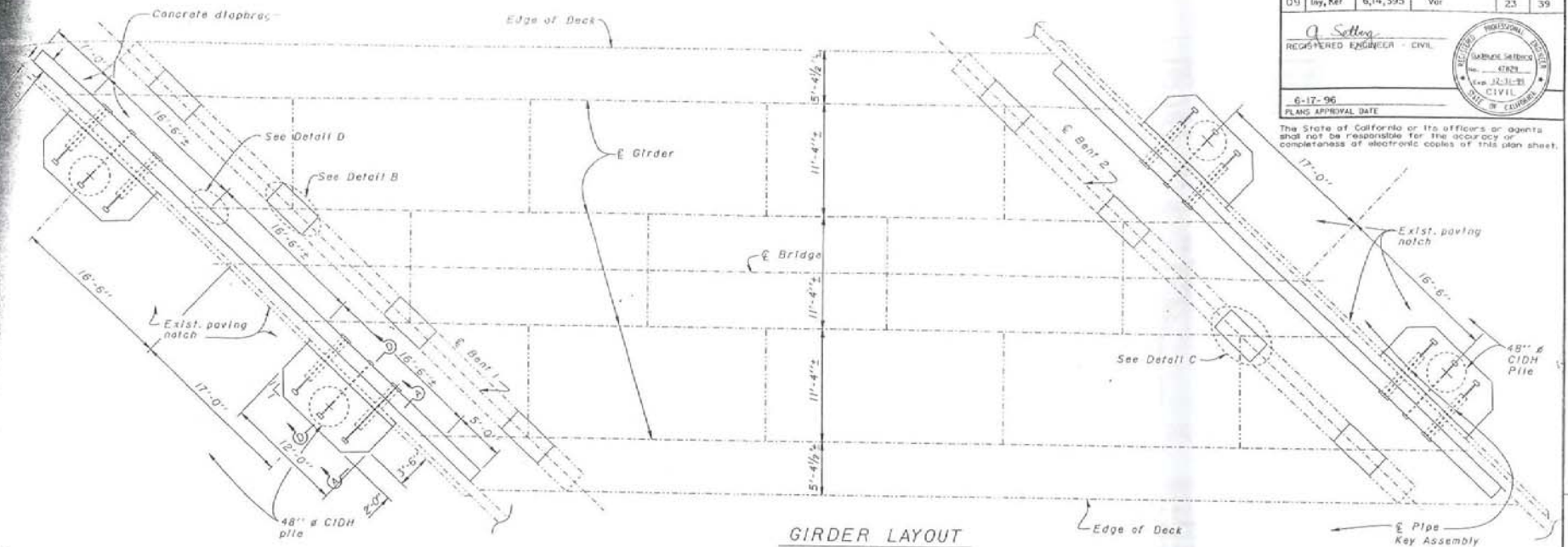
Anchor Pile Details for Railroad Ave, 199/100 OC, & Middle Fork Smith River

DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
09	Iny, Mer	6,14,395	Var	23	39

G. Setterg
REGISTERED ENGINEER - CIVIL
No. 47829 Exp. 12-31-97 CIVIL STATE OF CALIFORNIA

6-17-96
PLANS APPROVAL DATE

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.



Note:

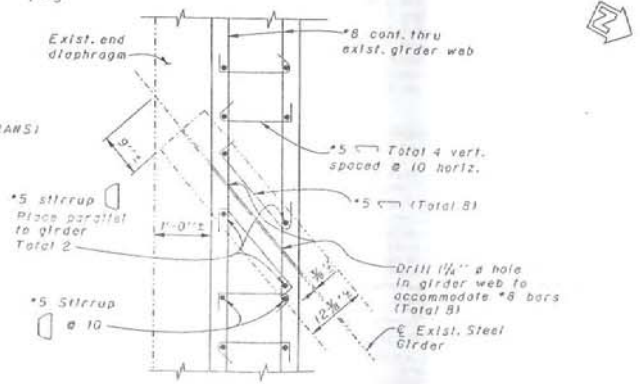
1. For Section A-A, see "Abutment Details No. 1" sheet
2. For Section D-D, see "Abutment Details No. 2" sheet.
3. For Detail B see "Bent 1 Details" sheet.
4. For Detail C see "Bent 2 Details" sheet.

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

GENERAL NOTES
LOAD FACTOR DESIGN

DESIGN:	BRIDGE DESIGN SPECIFICATIONS (1983 AASHTO with interims and Revisions by CALTRANS)
SEISMIC LOADING:	Peak Rock Acceleration = 0.7 g Depth of Alluvium = 3150 ft.
REINFORCED CONCRETE:	Existing (Assumed for Retrofit) f_y = 44,000 psi f'_c = 5,000 psi New Construction f_y = 60,000 psi f'_c = 3,250 psi
STRUCTURAL STEEL:	(ASTM A36) f_y = 36,000 psi

GIRDER LAYOUT
1"=5'



DETAIL D
1"=1'-0"

DESIGN	BY Gudmund Saxberg 12-95	CHECKED R. J. Martin	1-96	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF STRUCTURES STRUCTURE DESIGN 5
DETAILS	BY MT/S 12-95	CHECKED R. J. Martin	2-96		
QUANTITIES	BY N. Kwiatkowski 3-96	CHECKED R. J. Martin	3-96		

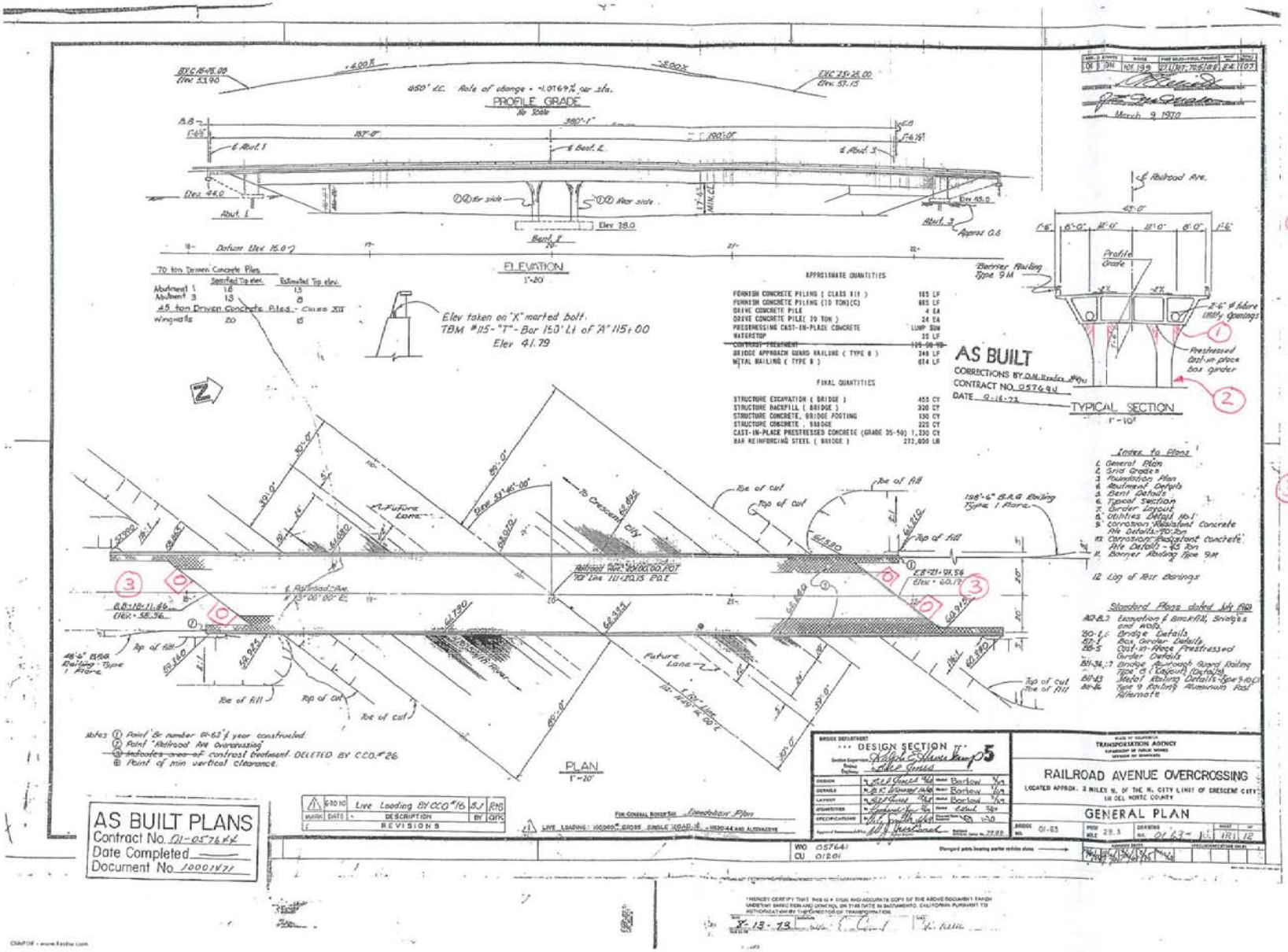
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

CU 09
EA 27210

BRIDGE NO. 49-14
POST MILE 65.6

EARTHQUAKE RETROFIT PROJECT NO. SR 397
LOS ANGELES AQUEDUCT
ABUTMENT LAYOUT

USERNAME = BASER



1. Remove column flare and cut flare reinforcement

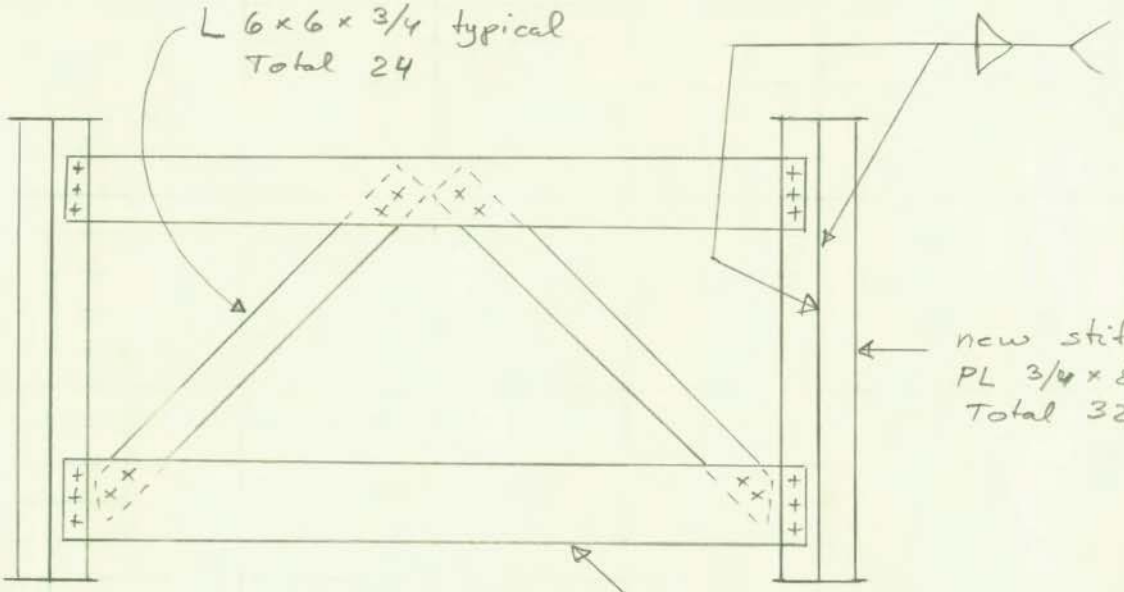
2. Install full length column casing. Column casing shall be flared to match existing column with 4" gap under the soffit of the bridge

3. Install anchor piles (see attached detail) pile ø = 4'

Rowdy Creek Bridge 01-0023

PID Level APS Quantities

No calculations were performed, but it is anticipated that x-bracing at supports needs to be beefed up. that is 4 rows of braces x 3 braces each



Total 20 - 7/8 HS bolts per brace

Total of 240 bolts

sqft blast, clean and paint existing structure

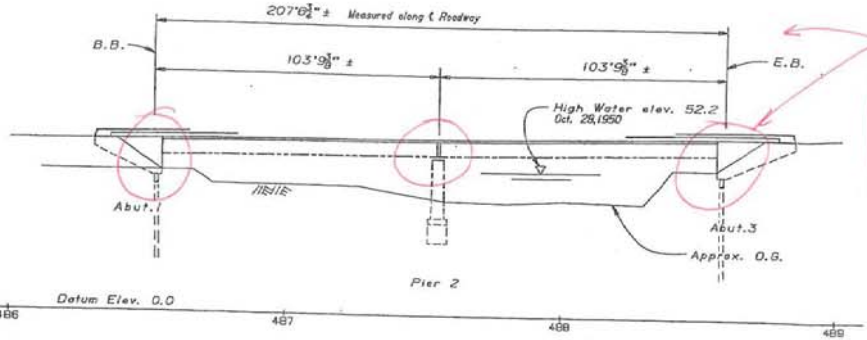
= 10 SF per location x 32 locations = 320 SF

DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
01	DN	101	36.3/40.7	23	31

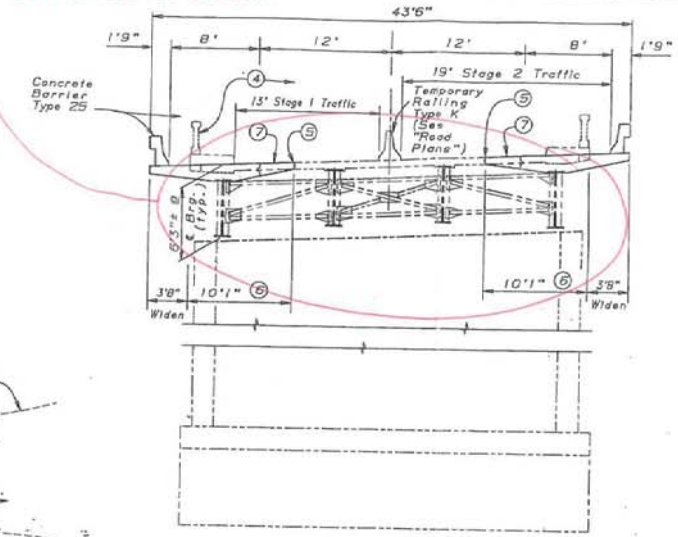
Jack L. Harris
REGISTERED ENGINEER - CIVIL

J. Abcarius
No. 40459
Exp. 3-31-91
CIVIL
STATE OF CALIFORNIA

6-18-90
PLANS APPROVAL DATE



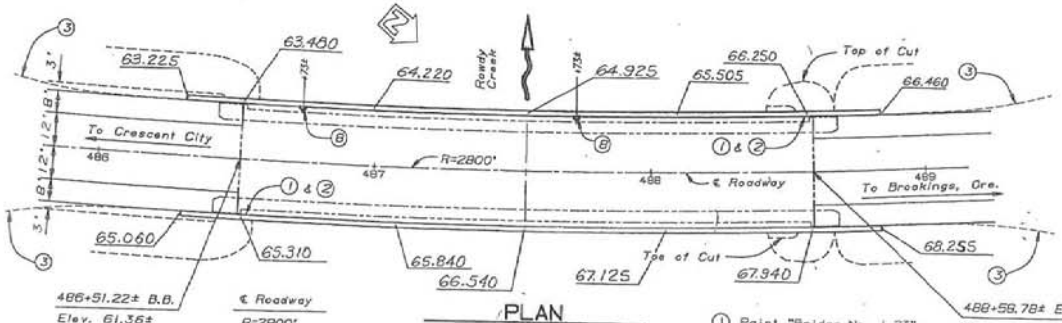
Remove existing cross-frames and place new cross-frames and stiffeners at support locations See attached detail



PILE DATA
16" ø C.I.O.H. PILES

LOCATION	DESIGN LOADING (SERVICE LOAD)	SPECIFIED TIP ELEVATION
ABUT. 1	100 TONS	14
ABUT. 3	100 TONS	14

ELEVATION
1"=20'



PLAN
1"=20'

TYPICAL SECTION
1"=5'

AS BUILT (M.J.) 10-21-91
CORRECTIONS B. M. Bruder
CONTRACT NO. 01-197144
DATE 9-26-91

AS BUILT
CORRECTIONS BY
CONTRACT NO.
DATE

APPROXIMATE QUANTITIES

	LUMP SUM
BRIDGE REMOVAL (PORTION)	LUMP SUM
RECONSTRUCT STRUCTURAL STEEL GIRDERS	LUMP SUM
16" CAST-IN-DRILLED-HOLE CONCRETE PILING	152 LF
DRILL AND BOND DOWEL	84 LF
WATERSTOP	26 LF
JOINT SEAL (NR 1/2")	25 LF

FINAL PAY QUANTITIES

STRUCTURE EXCAVATION (TYPE D)	56 CY
STRUCTURE BACKFILL (BRIDGE)	36 CY
STRUCTURAL CONCRETE, BRIDGE	247 CY
BAR REINFORCING STEEL (BRIDGE)	56,900 LB
MISCELLANEOUS METAL (BRIDGE)	1,200 LB
CONCRETE BARRIER (TYPE 25)	484 LF

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

For Construction Sequence see "Girder Details" sheet.
For General Notes see "Typical Section" sheet.

① Paint "Bridge No. 1-23"
② Paint "Rowdy Creek Br."
③ M.B.G.R. see Road Plans
④ Remove exist. curb, railing and deck overhang
⑤ Match exist. grade and cross slope.
⑥ Limit of exist. deck removal
⑦ 3'0" Closure Pour
⑧ Deck Drain (B7-5 / 7-3) Type B

Standard Plan Sheet No.
Detail No.

INDEX TO PLANS

SHEET NO.	TITLE
1	GENERAL PLAN
2	FOUNDATION PLAN
3	ABUTMENTS
4	ABUTMENT JOINT DETAILS
5	TYPICAL SECTION
6	BERDER DETAILS
7	BEARING DETAILS
8	LOG OF TEST BORINGS
9	LOG OF TEST BORINGS (AS BUILT)

STANDARD PLANS DATED JANUARY 1988

A62-C	EXCAVATION AND BACKFILL - BRIDGE
B0-1	BRIDGE DETAILS
B0-3	BRIDGE DETAILS
B0-5	BRIDGE DETAILS
B2-3	16" CAST-IN-DRILLED-HOLE CONCRETE PILE
B6-21	JOINT SEALS (MAX. MR = 2")
B7-5	DECK DRAINS
B11-30	TEMPORARY RAILING TYPE K
B11-53	CONCRETE BARRIER TYPE 25

DESIGN	M. Ketal 5/89	D.Valls 7/89	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD		STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF STRUCTURES STRUCTURE DESIGN 5
DETAILS	Bill Svoboda 5-89	D.Valls 7/89	LAYOUT	M. Ketal 5/89	D.Valls 7/89		
QUANTITIES	12-89	12-89	SPECIFICATIONS		CLAIMS AND SPECIAL PROVISIONS		

DESIGN ENGINEER 11/89

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS: 0 1 2 3

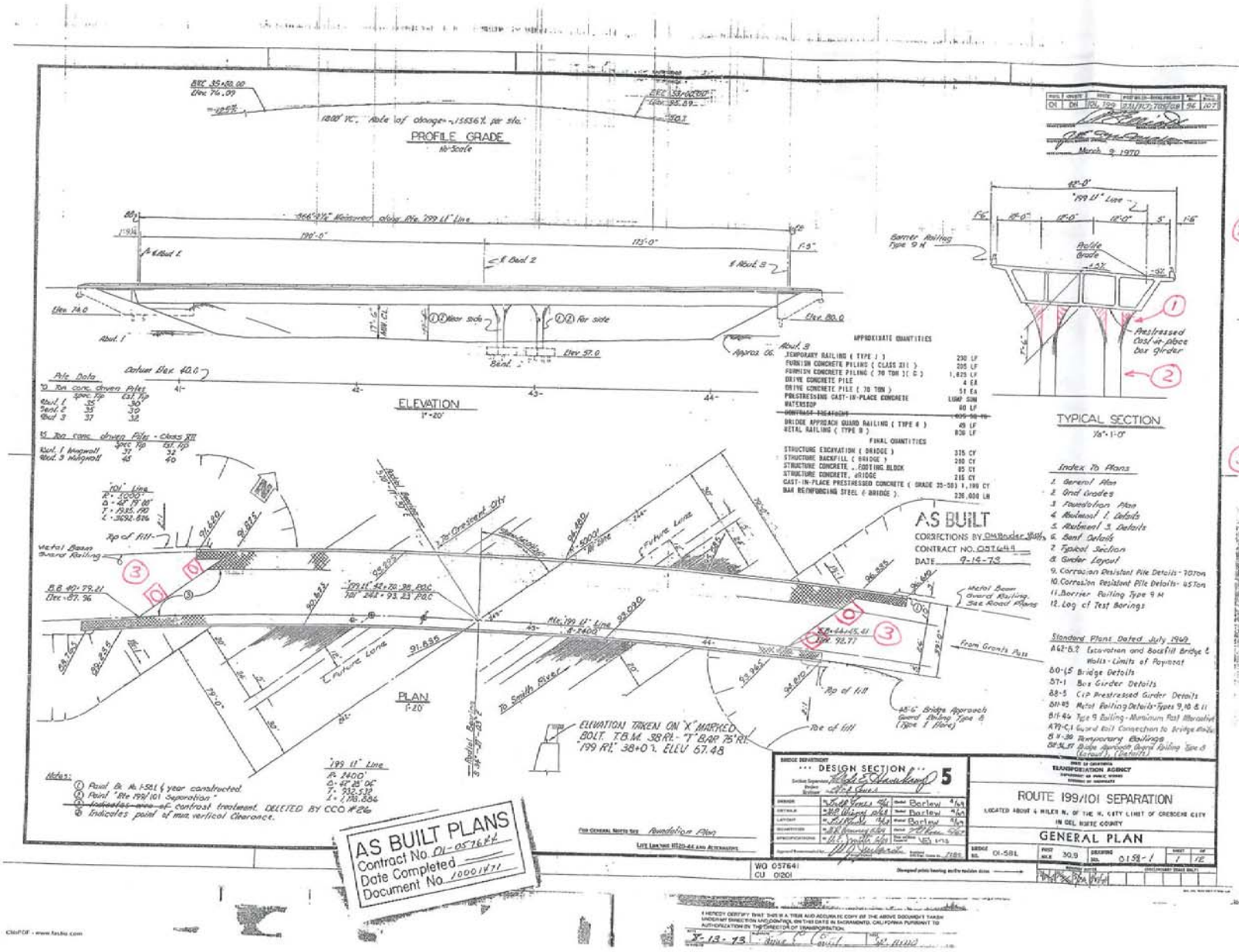
CU 01
EA 197141

BRIDGE NO.	1-23
POST MILE	39.63

ROWDY CREEK BRIDGE (WIDEN)
GENERAL PLAN

STANDARD PRINTS BEARING EARLIEST REVISION DATES → 5-86 5-87 7-88 5-89 0-90 0-90 5-90 0-90 0-90 7/91

SHEET	OF
1	9



(1) Remove column flare and cut flare reinforcement.

(2) Install full length column casing. Column casing shall be flared to match existing column with 4" gap under the soffit.

(3) Install anchor piles (see attached detail) pile ϕ = 4'

STATE OF CALIFORNIA – DEPARTMENT OF TRANSPORTATION

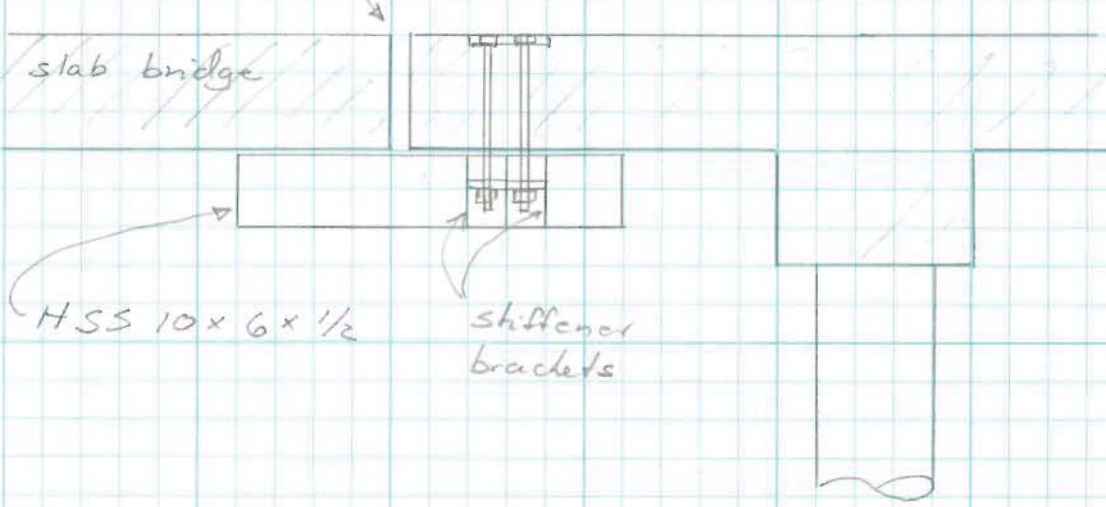
QUANTITY CALCULATIONS

DC-CEM-4801 (OLD HC-52 REV. 11/92) 7541-3520-0 SHEET OF

JOB STAMP

01-0A100K
Smith River overflow
01-0046

ITEM: Hinge seat extension
LOCATION: Detail
CALC. BY: G. SETBERG
CHK. BY:
FILE NO:
SEGREGATION: YES NO
DATE: 9/5/11
DATE:



Note: chip deck to provide room for nuts and washers
Provide ¼ x 4" washer, nut and lock nut at the bottom. Weld ½" x 4" x 4" plate to top of bolt.

POSTED BY DATE POSTED TO

NO AS BUILT CORRECTIONS

CORRECTIONS TRANSFERRED BY: EM
FIELD CORRECTIONS BY: C. WOODARD

TRANSFER DATE: 12-18-2008
FIELD CORRECTION DATE: 05-25-2007

CONTRACT No. 01-293314

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	DN	101	57.6,72.9	61	84

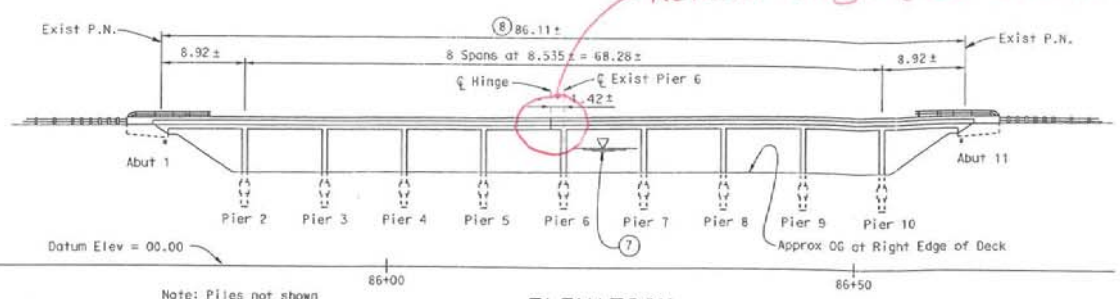
M. AKKari 11-18-02
REGISTERED CIVIL ENGINEER

2-22-05
PLANS APPROVAL DATE

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

Caltrans now has a web site! To get to the web site go to: http://www.dot.ca.gov

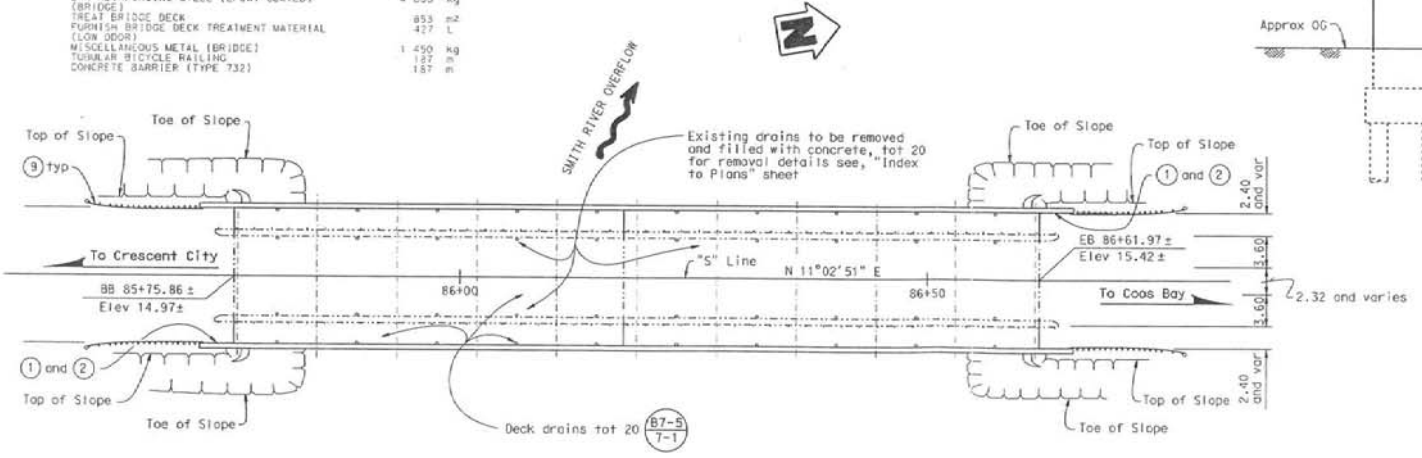
Retrofit Hinge (see attached detail)



Note: Piles not shown

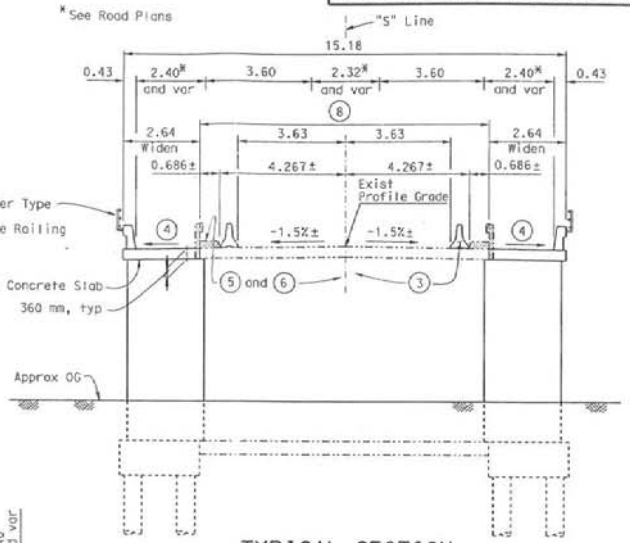
ELEVATION
1:250

SMITH RIVER OVERFLOW (WIDEN) QUANTITIES	BR NO 01-0046	
CLEAN BRIDGE DECK	853	m2
BRIDGE REMOVAL (PORTION), LOCATION 1	LUMP SUM	
STRUCTURE EXCAVATION (BRIDGE)	272	m3
STRUCTURE BACKFILL (BRIDGE)	60	m3
FURNISH STEEL PIPE PILING (610 MM)	246	m
DRIVE STEEL PIPE PILE (610 MM)	36	EA
FURNISH PILING (CLASS 400)	87	m
DRIVE PILE (CLASS 400)	8	EA
STRUCTURAL CONCRETE, BRIDGE FOOTING	60	m3
STRUCTURAL CONCRETE, BRIDGE	279	m3
DRILL AND BOND DOWEL	392	m
REFINISH BRIDGE DECK	155	m2
BAR REINFORCING STEEL (BRIDGE)	51 100	Kg
BAR REINFORCING STEEL (EPOXY COATED) (BRIDGE)	4 000	Kg
TREAT BRIDGE DECK	853	m2
FURNISH BRIDGE DECK TREATMENT MATERIAL (LOW ODOR)	427	L
MISCELLANEOUS METAL (BRIDGE)	1 450	Kg
TUBULAR BICYCLE RAILING	187	m
CONCRETE BARRIER (TYPE 732)	187	m



PLAN
1:250

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.



TYPICAL SECTION
1:80

NOTES:

1. Paint "Smith River Overflow Bridge".
2. Paint "Br. No. 01-0046".
3. Temporary Railing (Type K), see "Road Plans"
4. Match existing cross slope.
5. Remove existing Curb and Guard Railing.
6. Refinish Bridge Deck.
7. For Hydrologic Summary, see "Foundation Plan" sheet.
8. Limit of methacrylate treatment.
9. Metal Beam Guard Rail, see "Road Plans".

LEGEND:

Indicates limits of Bridge Removal (Portion)

Indicates Existing Structure

For General Notes and Index to Plans, see "Index to Plans" sheet.

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

GUDMUND SETBERG
DESIGN ENGINEER

DESIGN	BY M. Saberi	CHECKED M. Friedheim	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD	
DETAILS	BY E. Montevirgen	CHECKED M. Friedheim / N. Nguyen	LAYOUT	BY M. Saberi	CHECKED M. Friedheim
QUANTITIES	BY S. Kapicka	CHECKED N. Nguyen	SPECIFICATIONS	BY J. Strootman	PLANS AND SPECS COMPARED J. Strootman

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF STRUCTURES
STRUCTURE DESIGN 2

BRIDGE NO. 01-0046
KILOMETER POST 57.61

SMITH RIVER OVERFLOW BRIDGE (WIDEN)
GENERAL PLAN

CU 01
EA 293131

DISREGARD PRINTS BEARING EARLIER REVISION DATES

SHEET	OF
1	11

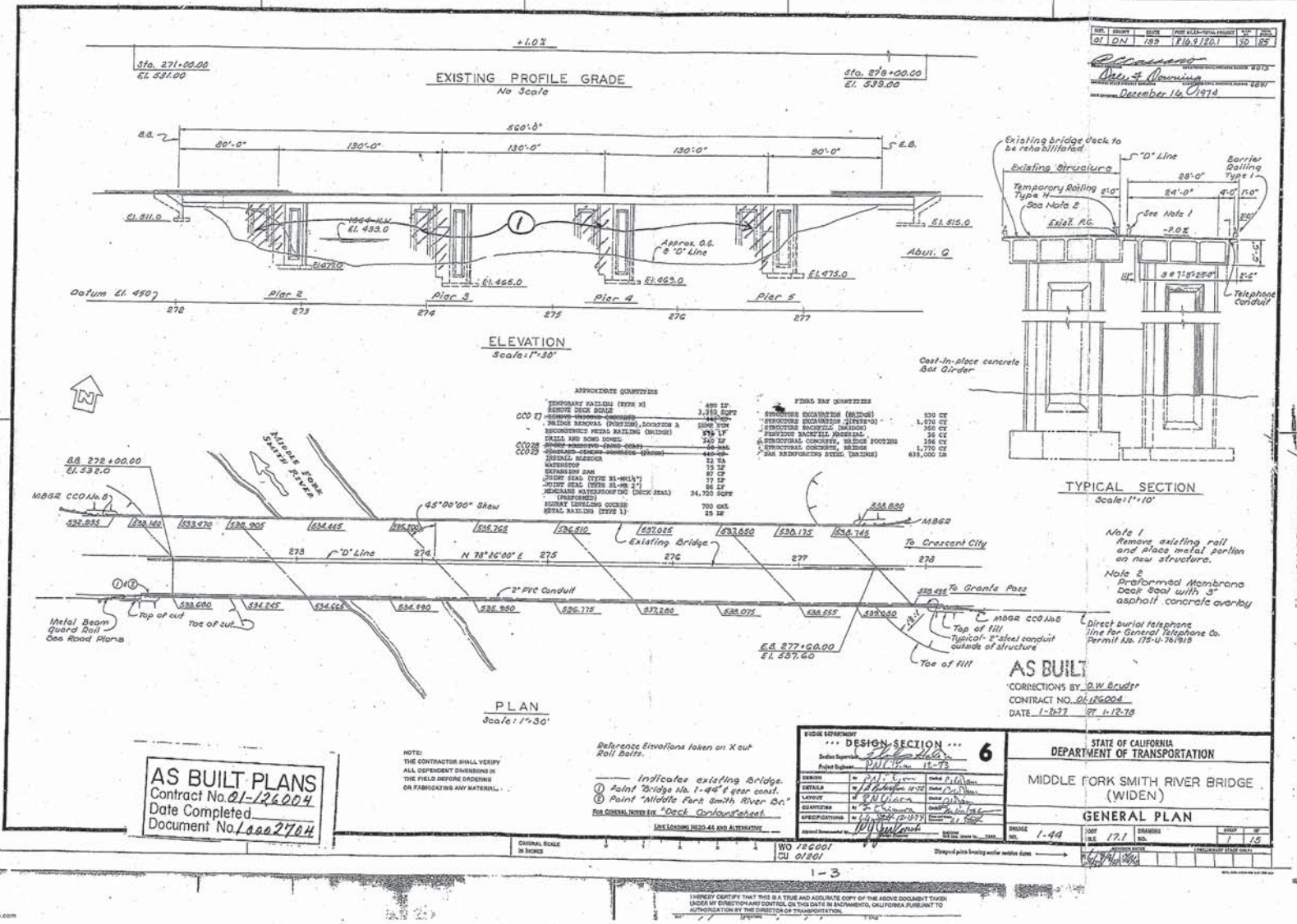
STRUCTURES DESIGN (GENERAL PLAN SHEET (METRIC) (REV.4/20/00))

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS

FILE => bridge.dgn

USERNAME = eboerger DATE PLOTTED => 24-OCT-2008 TIME PLOTTED => 10:51

CitiPDF - www.taxlos.com



① Add concrete to thinner portion of left bridge and complete infill wall between left and right bridge
Add steel plates for confinement (see attached details)

Additional Structures Work at Middle Fork Smith River (Not included in original APS)

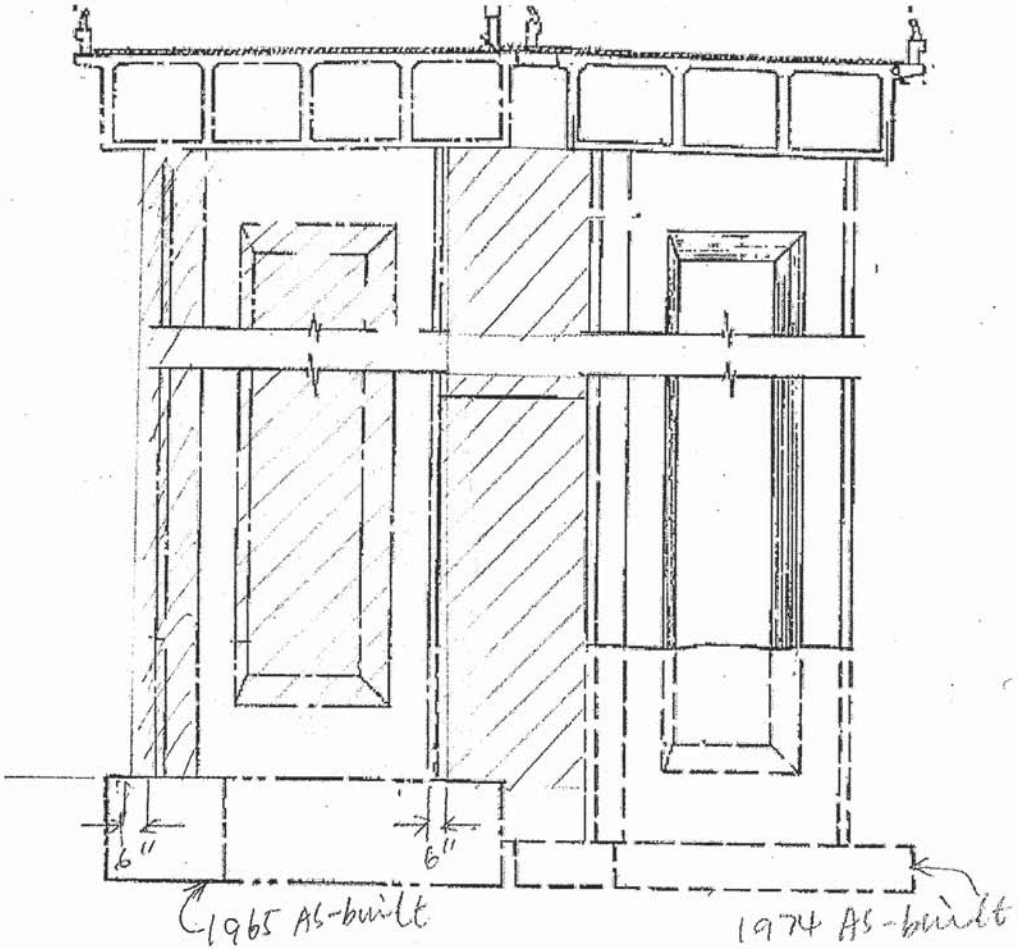
NOTE:

▨ Limit of concrete.

□ Limit of steel plate.

EA 01-0A100

Br. No. 01-0044



TYPICAL SECTION

Scale: 1" = 10'

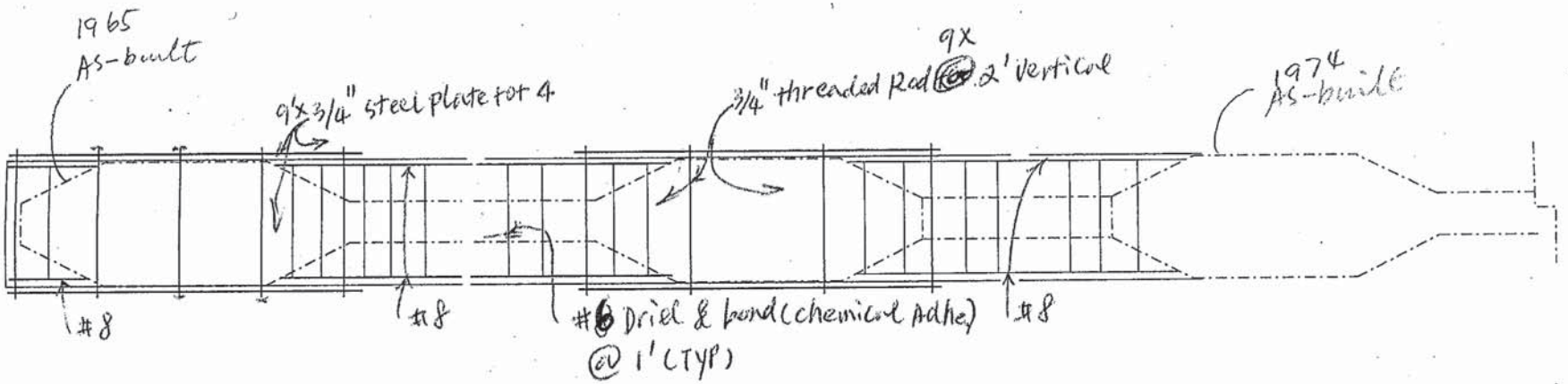
Middle Fork Smith River

Additional Structures Work at Middle Fork Smith River (Not included in original APS)

Additional Structures Work at Middle Fork Smith River (Not included in original APS)

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - DIVISION OF STRUCTURES

DIST	COUNTY	ROUTE	POST
01	DN	199	R17



PIER RETROFIT(Typ)
NO SCALE

Note
All Hardware to be galvanized
steel plates to be painted or galvanized

01-0044

DESIGNED BY	DATE	STRUCTURE DESIGN BRANCH 2	PLANNING STUDY
DRAWN BY	DATE 10-7-11		MIDDLE FORK SMITH RIVER
CHECKED BY X	DATE X		BRIDGE NO. RET / UNIT: 3577
APPROVED X	DATE X		SCALE: AS SHOWN / PROJECT NUMBER & PHASE: 0112000023

FILE => Plans.dgn
CONTRACT NO.1 X

USERNAME => s1111194 DATE PLOTTED => 07-OCT-2011 TIME PLOTTED => 13:57

STRUCTURES DESIGN ADVANCE PLANNING STUDY SHEET (ENGLISH) (REV. 08-09-10)

Additional Structures Work at Middle Fork Smith River (Not included in original APS)

X PID ESTIMATE

Revised - August 30, 2011

RCVD BY: RWP

IN EST: 10/12/2011
OUT EST: 10/18/2011

BRIDGE: Mid Fork Smith River Bridge
BR. No.: 01-0044
DISTRICT: 01
TYPE: CIP/PS Box girder
RTE: 199
CU: 01-0A100K
CO: DN
EA: 01-0A100K
PM: R17.06

LENGTH: **WIDTH:** **AREA (SF)=**

DESIGN SECTION:
 # OF STRUCTURES IN PROJECT : 1 **EST. NO.** 1
PRICES BY : TNC **COST INDEX:** 297
PRICES CHECKED BY : **DATE:**
QUANTITIES BY: Jiffay Lee **DATE:** 10/7/2011

	CONTRACT ITEMS	TYPE	UNIT	QUANTITY	PRICE	AMOUNT
	CORE CONCRETE, 1 1/4" DIA		LF	2,076	$45.00	$93,420.00
	STRUCTURAL CONCRETE (Bridge)		CY	92	$1,500.00	$138,416.67
	~~DRILL AND BOND DOWEL #6(Chemial Adhesive)~~	-	~~LF~~	~~8,308~~		$0.00
	BAR REINFORCING STEEL (Bridge)		LB	55,948	$2.10	$117,491.22
	~~FURNISH STRUCTURAL STEEL~~		~~LB~~	~~217,038~~		$0.00
	~~ERECT STRUCTURAL STEEL (INCL PAINT)~~		~~LB~~	~~217,038~~		$0.00
	MISCELLANEOUS METAL (BRIDGE)		LB	217,038	$12.00	$2,604,457.80
	DRILL AND BOND DOWEL (CHEMICAL ADHESIVE)		EA	6,576	$35.00	$230,160.00
						$0.00
						$0.00

SUBTOTAL	$3,183,946
TIME RELATED OVERHEAD	$318,395
MOBILIZATION (@ 10 %)	$389,149
SUBTOTAL BRIDGE ITEMS	$3,891,489
CONTINGENCIES @ 40%	$1,556,596
BRIDGE TOTAL COST	$5,448,085
COST PER SQ. FOOT	$0.00
BRIDGE REMOVAL (CONTINGENCIES INCL.)	$0
WORK BY RAILROAD OR UTILITY FORCES	$0
GRAND TOTAL	$5,448,085
BUDGET ESTIMATE AS OF 10/18/11	**$5,448,000**

ROUTING

1. DES SECTION
2. OFFICE OF BRIDGE DESIGN - NORTH
3. OFFICE OF BRIDGE DESIGN - CENTRAL
4. OFFICE OF BRIDGE DESIGN - SOUTH
5. OFFICE OF BRIDGE DESIGN - WEST
6. OFFICE OF BRIDGE DESIGN SOUTHERN CALIFORNIA

COMMENTS: Revise unit for Drill and Bond (Chemical Adhesive)
Misc Metal replaces Structural Steel
Revised quantity for Misc Metal (Bridge) per the Designer

ATTACHMENT E
Initial Site Assessment (ISA)

State of California
Department of Transportation

Business, Transportation and Housing Agency

Memorandum

To: Katie Beach, Transportation Engineer
District 1 Advance Planning

Date: November 2, 2011

File No.: 1-DN-101/199-VAR
01-0A100K
01 1200 0023
DN Seismic Retrofits

From: Steve Werner
North Region Office of Environmental Engineering—North

Subject: Initial Site Assessment

An Initial Site Assessment (ISA) for the seismic retrofits project referenced above was conducted after receiving your October 11, 2011, request. The ISA was based on the information provided in your request memorandum and a revised scope of work for the Middle Fork Smith River Bridge (Br. No. 01-044) received by e-mail.

Based on the information provided, the ISA found that the project has possible hazardous waste issues related to asbestos and lead paint in bridge components, and Aerially Deposited Lead (ADL) in soil that will be disturbed during the proposed work.

It will be necessary to have a consultant perform surveys of the bridge sites for issues related to the hazardous waste issues noted above. When preliminary bridge plans are available and the project has entered the zero phase, it is recommended that the Project Engineer contact this office so that we can arrange to have the surveys completed.

Due to the nature of the work outlined in your ISA request, it appears that an air quality NESHAP permit will be required for each bridge. For the purposes of determining the appropriate environmental documents required for the project, the work site(s) should not be considered to be on the *Hazardous Waste and Substances Site List (Cortese List)*.

If there are any changes to the scope of the project, please send an e-mail or letter describing the changes so that they may be evaluated for possible hazardous waste issues that could affect your project. Communications may also be directed to me at (707) 445-6658.

cc: 1-SWerner 2-File

E-mail copies to: Steve Werner
Environmental

SSW/ks

ATTACHMENT F
Transportation Management Plan (TMP)

TRANSPORTATION MANAGEMENT PLAN

To: KATIE BEACH
Design Engineer
District 1 Advance Planning

Date: October 28, 2011
File: DN-101, 199 PM VAR
EA: 01-0A100K
EFIS: 0112000023
Seismic Retrofit-5 Bridges

From: TROY ARSENEAU, Chief
District 1 Office of Traffic Operations

Project Information

Location:	In Del Norte County, along Routes 101 and 199, at 5 locations.	
Type of Work:	Seismic retrofits.	
Anticipated Traffic Control:	One-way reversible traffic control Lane reduction Intermittent closure Shoulder closure	
Estimated Maximum Delay:	5 minutes during reversing traffic control. Minimal during lane reduction traffic control. 20 minutes during any intermittent closures.	
Peak Hour Traffic Volumes:	810 vph	
Lane Requirement Charts :	Included	
Work During Night Hours:	Possible, but improbable.	
Number of Working Days:	TBD	
PSR Date:	December/2011	
RTL Date:	TBD	
District Traffic Manager/ TMP Manager:	Troy Arseneau	(707) 445-6377
TMP Coordinator:	Marie Brady	(707) 445-6689

Anticipated Traffic Impacts

Significant traffic impacts are not anticipated provided that the following recommendations and requirements are incorporated into the project. In conformance with Deputy Directive-60, District Lane Closure Review Committee approval is not required for projects with anticipated traffic delay less than 30 minutes.

Recommendation

A request for an updated Transportation Management Plan shall be made during the design phase.

Hours of Work

- See Chart Nos. 1 through 4 for work hour restrictions.
- The full width of the traveled way shall be open for use by public traffic for the following Special Days:

Event	Event Date	Special Days
Sea Cruise	Second Weekend in October	Friday through Monday

The contractor shall verify the actual dates for this Special Event. See Chart No. 5 "Lane Closure Restrictions for Designated Legal Holidays and Special Days" for work day restrictions.

Public Notice

- Upon receipt of notice that the roadway width, including paved shoulder, for a direction of travel will be narrowed to less than 16 ft, the Resident Engineer shall promptly notify the HQ Construction Liaison Jay Horton at (916) 322-4957.
- The District Public Information Office, (707) 445-6444, shall be contacted two weeks in advance of the start of construction.
- Any emergency service agency whose ability to respond to incidents will be affected by any lane closure must be notified prior to that closure.
- Impacts to tribal land during the construction phase shall be coordinated with the affected local tribal government and other entities during the design phase. Contact Kathleen Sartorius, District 1 Native American Liaison, (707) 441-5815.
- Closures on the Railroad Ave. OC (#01-0063) shall be coordinated with Del Norte County's Road Division at (707) 464-7238.
- Work shall be coordinated with the local busing system (including school buses and public systems) to minimize impact on their bus schedules.

- The Resident Engineer shall provide information to residents and businesses before and during project work that may represent a negative impact on commerce and travel surrounding the zone of construction.

Traffic Control

- One closure, on each route, is permitted within the project limits.

- The W11-1 vehicular traffic sign (bicycle symbol) and the W16-1 supplemental plaque (SHARE THE ROAD) shall be placed, in each direction of travel, prior to the construction zone.

- At the Railroad Ave. OC (#01-0063), consider using stop signs to control traffic (for guidance see Typical Application 11 in the January 21, 2011 CA MUTCD Chapter 6H).

- One-way traffic control shall be in conformance with the Caltrans Standard Plan T-13, "TRAFFIC CONTROL SYSTEM FOR LANE CLOSURE ON TWO LANE CONVENTIONAL HIGHWAYS."

  - A minimum of 14 ft of paved roadway shall be open for use by public traffic.

  - Supplemental funds shall be provided in the event the Resident Engineer decides to utilize advance flaggers. All flaggers shall have continuous radio contact with personnel in the work area.

- Work that requires a lane closure shall be in conformance with the Caltrans Standard Plan T-10, "TRAFFIC CONTROL SYSTEM FOR LANE CLOSURE ON FREEWAYS AND EXPRESSWAYS."

  - A minimum of 14 ft of paved roadway, in each direction of travel, shall be open for use by public traffic.

- Work that occurs within 15 ft of the traveled way shall require a shoulder closure in conformance with the Caltrans Standard Plan T-10, "TRAFFIC CONTROL SYSTEM FOR LANE CLOSURE ON FREEWAYS AND EXPRESSWAYS."

- During bridge deck drilling and/or bolting at the Smith River Overflow Bridge (#01-0046), when one-way control is in effect, the road may be closed and public traffic stopped for periods not to exceed 10 min. After each closure, all accumulated traffic shall be allowed to pass through the work before another closure is made.

- A minimum of one PCMS in advance of both ends of the construction site shall be required to notify the public of the closures related to this project. One of the displayed messages shall read, "WATCH FOR BIKES".

- Access to side roads and residences shall be maintained at all times. When work or traffic queues extend through an intersection, additional traffic control will be required at the intersection.

- Bicyclists shall be accommodated through the work zone. During reversing traffic control, bicyclists shall be instructed to join the vehicle queue. During lane reduction traffic control, bicyclists shall be provided space adjacent to the open traffic lane to traverse through the work zone.

- If persons with disabilities (e.g. hearing, visual, or mobility) are found to use this facility, the temporary traffic control measures mentioned in the January 21, 2011 CA MUTCD Chapter 6D shall be incorporated to accommodate disabled pedestrians through the work zone.

- COZEEP is recommended for this project based on risk factors associated with this project and the COZEEP Guidelines (CA DOT Construction Manual Section 2-215A). The associated risk factors include: workers exposed to traffic, night construction activities, speed management, and significant truck volumes.

- The following projects are anticipated to have closures within this project's work limits and shall be included in SSP 07-850: 01-0A3904 (Bridge Rehab) and 01-436404 (Dr. Fine Bridge Replacement).

Contingency Plan

The contractor shall prepare a contingency plan for reopening closures to public traffic. The Contractor shall submit the contingency plan for a given operation to the Engineer within one working day of the Engineer's request. Contingencies for unanticipated delays, emergencies, etc. shall be coordinated between the RE and the Contractor.

Approval

Approved by: _____
Transportation Management Plan Coordinator

Approved by: _____
District Traffic/ TMP Manager

TAA/jnl

CC: 1)TAArseneau, 2)JCandalot
1)RMMartinelli, 2) NBraafladt 3)File
IPoindexter
JPimentel
KChurch
JMcGee
AJones

Chart No. 1
Multilane Conventional Highway Lane Requirements

County: Del Norte	Route/Direction: 199 NB/SB	PM: 17.1

Closure Limits: The Middle Fork Smith River (#01-0044).

FROM HOUR TO HOUR	24	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Mondays through Thursdays	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Fridays	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1										
Saturdays																									
Sundays																				1	1	1	1	1	

Legend:

1	Provide at least one 14 ft through highway lane open in direction of travel. The maximum length of a traffic control closure is 700 ft.
	No lane and/or shoulder closures allowed.

REMARKS:
1. The full width of the traveled way shall be open for use by public traffic when construction operations are not actively in progress.
2. Maintain access to the vista point at PM 17.3.

Chart No. 2
Connector Lane Requirements

County: Del Norte	Route/Direction: 199 SB	PM: T0.5

Closure Limits: SB 101/199 Connector

FROM HOUR TO HOUR	24	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Mondays through Thursdays	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Fridays	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1										
Saturdays																									
Sundays																				1	1	1	1	1	

Legend:

1	Provide at least one 14 ft connector lane open in direction of travel. The maximum length of a traffic control closure is 500 ft.
	No lane and/or shoulder closures allowed.

REMARKS: The full width of the traveled way shall be open for use by public traffic when construction operations are not actively in progress.

Chart No. 3
Expressway Lane Requirements

County: Del Norte	Route/Direction: 101 NB/SB	PM: 35.8 and 39.6

Closure Limits: The Smith River Overflow Bridge (#01-0046) and the Rowdy Creek Bridge (#01-0023).

FROM HOUR TO HOUR	24	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Mondays through Thursdays	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	
Fridays	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R										
Saturdays																									
Sundays																				R	R	R	R	R	

Legend:

R	Provide at least one 14 ft through traffic lane for use by both directions of travel (Reversing Control). The maximum length of a reversing control closure is 400 ft.
	No lane/shoulder closures allowed.

REMARKS:

1. The full width of the traveled way shall be open for use by public traffic when construction operations are not actively in progress.
2. Regarding the Smith River Overflow Bridge (#01-0046), maintain access to the Tolowa Dunes State Park at PM 36.0.
3. Regarding the Rowdy Creek Bridge (#01-0023), maintain access to Rowdy Creek Rd. at PM 39.7 and the Smith River Tribal Office at PM 39.6.

Chart No. 4
Local Road Lane Requirements

County: Del Norte	Route/Direction: 101 NB/SB	PM: R28.3

Closure Limits: Railroad Ave. OC (#01-0063).

FROM HOUR TO HOUR	24	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Mondays through Thursdays	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
Fridays	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R										
Saturdays																									
Sundays																				R	R	R	R	R	R

Legend:

R	Provide at least one 14 ft through traffic lane for use by both directions of travel (Reversing Control). The maximum length of a reversing control closure is 500 ft.
	No lane/shoulder closures allowed.

REMARKS:

1. The full width of the traveled way shall be open for use by public traffic when construction operations are not actively in progress.
2. Maintain access to Connor Way and Pine Grove Rd.

Chart No. 5: Lane Closure Restrictions for Designated Legal Holidays and Special Days

Thu	Fri	Sat	Sun	Mon	Tues	Wed	Thu	Fri	Sat	Sun
xx	**H** xx									
	SD xx									
	xx	**H** xx								
		SD xx								
	xx		**H** xx	xx						
			SD xx							
	xx			**H** xx						
				SD xx						
				xx	**H** xx					
					xx	**H** xx				
						xx	**H** xx	xx		

Legends:

	Refer to lane closure charts
xx	The full width of the traveled way shall be open for use by public traffic.
H	Designated Legal Holiday
SD	Special Day

ATTACHMENT G
Storm Water Data Report

Dist-County-Route: 01-DN-VARIOUS
Post Mile Limits: VARIOUS (See Project Description)
Project Type: Seismic Retrofit
Project ID (or EA): 0A100K
Program Identification: 201.113
Phase: ☒ PID
☐ PA/ED
☐ PS&E

Regional Water Quality Control Board(s): North Coast RWQCB

1.	Is the project required to consider incorporating Treatment BMPs?	Yes ☐	No ☒
2.	Does the project disturb 5 or more acres of soil?	Yes ☐	No ☒
3.	Does the project disturb more than 1 acre of soil and not qualify for the Rainfall Erosivity Waiver?	Yes ☐	No ☒
4.	Does the project potentially create permanent water quality impacts?	Yes ☐	No ☒
5.	Does the project require a notification of ADL reuse	Yes ☐	No ☒

If the answer to any of the preceding questions is "Yes", prepare a Long Form – Storm Water Data Report.

Estimate Construction Start Date: 2013 Construction Completion Date: 2014

Separate Dewatering Permit (if yes, permit number) Yes ☐ Permit #_____ No ☒

Erosivity Waiver Yes ☐ Date: _____ No ☒

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

Jeffrey Pimentel, Registered Project Engineer 11/17/11 Date

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

Sheila Enright 11/18/11

Sheila Enright, District/Regional SW Coordinator or Designee Date

[Stamp Required for PS&E only)

1. Project Description

- This seismic retrofit project consists of 5 locations along Hwy 101 & Hwy 199. Work on each bridge varies from removing column flares, installing column shells, installing anchor piles behind abutments, installing a seat extender, and replacing cross-frames. The structures included in the project are Railroad Avenue Overcrossing #01-0063 (101-PM R28.32), Smith River Overflow Bridge #01-0046 (101-PM 35.77), Rowdy Creek Bridge #01-0023 (101-PM 39.63), SR 199/101 Connector Overcrossing #01-0058F (199-PM T0.51) and the Middle Fork Smith River Bridge #01-0044 (199-PM 17.06).

- The project will cause minimal soil disturbance incidental to accessing the column footing, anchor pile CIDH, temporary access road and staging areas. Disturbed soil area is anticipated to be less than 1 acre.

- No TMDLs or 303(d) water bodies are within the project limits.

2. Construction Site BMPs

- Due to the minimal soil disturbance (<1 acres), a contractor prepared and implemented Water Pollution Control Plan (WPCP) will be required during the construction phase. The WPCP will include temporary construction BMPs as a means of controlling storm water runoff that may occur during construction activities.
- The project will likely be constructed during the non-rainy season. Temporary construction site BMPs will be deployed under a contractor prepared WPCP. Anticipated temporary water pollution control bid items are: Prepare WPCP, Construction Site Management, Temporary Fiber Roll, Temporary Concrete Washout and Additional Water Pollution Control funds included in Supplemental Work. Temporary construction site BMP costs have been estimated at $299,600 using Method 1, Percentage of Total Construction Cost as shown in Appendix F of the PPDG and calculated as 2.5% of total construction cost. Additional temporary construction BMP's may be included in the design phase.
- The attached Construction Site BMP Consideration form documents construction concurrence in accordance with North Region directives.

3. Required Attachments[1]

- Vicinity Map
- Evaluation Documentation Form
- Construction Site BMP Consideration Form

[1] Additional attachments may be required as applicable or directed by the District/Regional Design Storm Water Coordinator (e.g. BMP line item estimate, DPP, CS checklists, etc).

DATE: 11/07/11

Project ID (or EA): 01-0A100K

Project Evaluation Process for the Consideration of Construction Site BMPs

NO.	CRITERIA	YES ✓	NO ✓	SUPPLEMENTAL INFORMATION
1.	Will construction of the project result in areas of disturbed soil as defined by the Project Planning and Design Guide (PPDG)?	✓		If Yes, Construction Site BMPs for Soil Stabilization (SS) will be required. Complete CS-1, Part 1. Continue to 2. If No, Continue to 3.
2.	Is there a potential for disturbed soil areas within the project to discharge to storm drain inlets, drainage ditches, areas outside the right-of-way, etc?	✓		If Yes, Construction Site BMPs for Sediment Control (SC) will be required. Complete CS-1, Part 2. Continue to 3.
3.	Is there a potential for sediment or construction related materials and wastes to be tracked offsite and deposited on private or public paved roads by construction vehicles and equipment?	✓		If Yes, Construction Site BMPs for Tracking Control (TC) will be required. Complete CS-1, Part 3. Continue to 4.
4.	Is there a potential for wind to transport soil and dust offsite during the period of construction?	✓		If Yes, Construction Site BMPs for Wind Erosion Control (WE) will be required. Complete CS-1, Part 4. Continue to 5.
5.	Is dewatering anticipated or will construction activities occur within or adjacent to a live channel or stream?	✓		If Yes, Construction Site BMPs for Non-Storm Water Management (NS) will be required. Complete CS-1, Part 5. Continue to 6.
6.	Will construction include saw-cutting, grinding, drilling, concrete or mortar mixing, hydro-demolition, blasting, sandblasting, painting, paving, or other activities that produce residues?	✓		If Yes, Construction Site BMPs for Non-Storm Water Management (NS) will be required. Complete CS-1, Parts 5 & 6. Continue to 7.
7.	Are stockpiles of soil, construction related materials, and/or wastes anticipated?	✓		If Yes, Construction Site BMPs for Waste Management and Materials Pollution Control (WM) will be required. Complete CS-1, Part 6. Continue to 8.
8.	Is there a potential for construction related materials and wastes to have direct contact with precipitation; stormwater run-on, or stormwater runoff; be dispersed by wind; be dumped and/or spilled into storm drain systems?	✓		If Yes, Construction Site BMPs for Waste Management and Materials Pollution Control (WM) will be required. Complete CS-1, Part 6. Continue to 9.
9.	End of checklist.	✓	Document for Project Files by completing this form, and attaching it to the SWDR.	

PE to initialize after concurrence with Construction (PS&E only) *Date*

DATE: 11/04/11

Project ID (or EA): 0A100K

NO.	CRITERIA	YES ✓	NO ✓	SUPPLEMENTAL INFORMATION FOR EVALUATION
1.	Begin Project Evaluation regarding requirement for consideration of Treatment BMPs	✓		See Figure 4-1, Project Evaluation Process for Consideration of Permanent Treatment BMPs. Go to 2
2.	Is this an emergency project?		✓	If Yes, go to 10. If No, continue to 3.
3.	Have TMDLs or other Pollution Control Requirements been established for surface waters within the project limits? Information provided in the water quality assessment or equivalent document.		✓	If Yes, contact the District/Regional NPDES Coordinator to discuss the Department's obligations under the TMDL (if Applicable) or Pollution Control Requirements, go to 9 or 4. SEE *(Dist./Reg. SW Coordinator initials)* If No, continue to 4.
4.	Is the project located within an area of a local MS4 Permittee?		✓	If **Yes**. *(write the MS4 Area here)*, go to 5. If **No**, document in SWDR go to 5.
5.	Is the project directly or indirectly discharging to surface waters?	✓		If Yes, continue to 6. If No, go to 10.
6.	Is it a new facility or major reconstruction?		✓	If Yes, continue to 8. If No, go to 7.
7.	Will there be a change in line/grade or hydraulic capacity?		✓	If Yes, continue to 8. If No, go to 10.
8.	Does the project result in a net increase of one acre or more of new impervious surface?			If Yes, continue to 9. If No, go to 10. *(Net Increase New Impervious Surface)*
9.	Project is required to consider approved Treatment BMPs.			See Sections 2.4 and either Section 5.5or 6.5 for BMP Evaluation and Selection Process. Complete Checklist T-1 in this Appendix E.
10.	Project is not required to consider Treatment BMPs. SEE *(Dist./Reg. Design SW Coord. Initials)* SP *(Project Engineer Initials)* 11/17/11 *(Date)*	✓		Document for Project Files by completing this form, and attaching it to the SWDR.

1 *See Figure 4-1, Project Evaluation Process for Consideration of Permanent Treatment BMPs*

ATTACHMENT H
Landscape Architecture Assessment Sheet

NORTH REGION
LANDSCAPE ARCHITECTURE ASSESSMENT SHEET
03-LAND-0002 (Rev. 3/03)

TO: Katie Beach **FROM:** Ron Flory **Unit/Senior TE Name:** 03-382/Ron Flory **Project Manager:** Kevin Church	**CO:** DN **DISTRICT:** 01 **DATE: 11-9-11** **EA:01-0A100**	**RTE:** 101 & 199 various	**KP:**	**PM:** variousx
PROJECT SEPARATION: X Landscape as part of roadway work EA ☐ Landscape under separate EA (Follow-up)	**PROJECT:** Seismic Retrofit 5 Bridges **TYPE:** SHOPP **PROJECT MILESTONE:** PID			

PROJECT DESCRIPTION:

The project proposes to seismically retrofit five bridges inDel Norte County. The following bridges will have the following work completed: 1. Smith River Overflow - Seed Extended on Hinge, 2. Rowdy Creek - X-Bracing at Support Locations, 3. Railroad Avenue OC - Remove Column Flare, 4. Middle Fork Smith River - Install Anchor Piles at Abutments, 5. SR 199/SR 101 Connector OC - Install Anchor Piles at Abutments & Remove column Flare.

AREA (M2) FOR HIGHWAY PLANTING: N/A
AREA (M2) FOR EROSION CONTROL: 10,000sf
PLANT COUNT FOR MITIGATION PLANTING: 300

LANDSCAPE FREEWAY STATUS:	☐ Yes	☒ No		
HIGHWAY PLANTING IS:	☒ Warranted	☐ Not Warranted		
SCENIC HIGHWAY STATUS:	☐ Officially Designated	☒ Eligible	☐ Not Designated	
REVEGETATION REQUIRED?	☐ Permit Required	☐ Offset of Visual Impact	☒ Other (Forest Service, BLM, etc.)	

BIOLOGIST CONTACT: None
DATE OF CONTACT: yet.

ADJACENCY TO BILLBOARDS:
☐ Project area is adjacent to outdoor advertising. ☒ Project area is not adjacent to outdoor advertising.

WATER AND POWER AVAILABILITY: N/A

DESIGN FOR MAINTENANCE SAFETY: N/A

CONTEXT SENSITIVITY:
☐ It is determined that the project will involve consideration of highway aesthetics and will require further evaluations pertaining to specific roadside enhancements.

☒ No foreseen issues with highway aesthetics ☐ Other

COOPERATIVE MAINTENANCE AGREEMENTS:

Project may Involve additional tasks indicated

☐ Visual Simulation	☒ Erosion Control	☒ SWPPP/NPDES	
☐ Highway Planting	☒ Field Visit	☒ Context Sensitive Solutions/Aesthetics	
☐ Contour Grading	☐ Cost Estimate	☐ Landscape Evaluation	

NORTH REGION
LANDSCAPE ARCHITECTURE ASSESSMENT SHEET
03-LAND-0002 (Rev. 3/03)

COST INFORMATION:	
☒ Highway Planting, Irrigation, and/or Mitigation	**$ 15,000**
☒ 2-year Reveg Establishment	**$5,000**
☒ Erosion Control	**$10,000**
☐ Slope Protection	**$**
☐ Aesthetic Treatment	**$** **/ft²**
	TOTAL $ 30,000

OTHER RELATED INFORMATION:
☒ Landscape Architecture Resource Estimate: See attached.

PREPARED BY: _____ DATE: 11/9/11 CONCURRED BY: _____ DATE: _____
(Project Manager)

APPROVED BY: Laura Lazzarotto DATE: 11.9.11
(Landscape Architecture or Engineering Services Branch Chief)

ATTACHMENT I
Environmental Document (PEAR)

Mini-Preliminary Environmental Analysis Report

Project Information

District 01 County DN Route 101/199 Post Mile Various EA 01-0A100
Project ID#: 0100020010
Project Title: Del Norte Bridges Seismic Retrofit

Project Manager:	Kevin Church	Phone #:	707.445.6440
Design Manager:	Ilene Poindexter	Phone #:	707.441.3969
Design Engineer:	Katie Beach	Phone #:	707.441.2044
Environmental Manager:	Gary Berrigan	Phone #:	707.441.5730

Project Description

The California Department of Transportation (Caltrans) proposes to seismically retrofit five bridges in Del Norte County, three bridges on U.S. Route 101 and two bridges on U.S. Route 199.

Project Purpose and Need: As a result of the Area Bridge Maintenance Engineer's biennial bridge inspections, these five bridges were identified as being in need of retrofitting, and placed on the Structures Maintenance & Investigations (SM&I) list. The project would complete outstanding seismic retrofit work on the five bridges, and meet existing California seismic standards.

Description of Work

Below is a table of the bridges which are included in the project. All work and staging for this project is expected to be within the proposed ESL shown on the attached project layouts.

Location	Bridge #	Bridge Name	Seismic Work to be Completed
DN-101-PM 35.77	01-0046	Smith River Overflow	Seat Extended at Hinge
DN-101-PM 39.63	01-0023	Rowdy Creek	X-Bracing at Support Locations
DN-101-PM R28.32	01-0063	Railroad Avenue OC	Remove Column Flare Install Column Casings Install Anchor Piles at Abutments
DN-199-PM 17.06	01-0044	Middle Fork Smith River	Install Anchor Piles at Abutments
DN-199-PM T0.51	01-0058F	SR 199/SR 101 Connector OC	Install Anchor Piles at Abutments Install Colum Casings Remove Column Flare

Funding

☒ State ☒ Federal

Anticipated Environmental Approval

CEQA	NEPA
☒ Mitigated Negative Declaration/Mitigated	☒Categorical Exclusion

Summary Statement

In order to identify environmental issues, constraints, costs and resource needs, a mini-PEAR was prepared for the project. It is important to note that all technical studies will be deferred to the Capital phases of the project. There is a possibility of significant impacts to biological, cultural and other environmental resources. To move the proposed project to the next programming phase, potential environmental concerns were noted and resource estimates were provided to meet the aggressive schedule and limited resources available.

It is anticipated that an Initial Study with a Mitigated Negative Declaration and Categorical Exclusion would apply to this project. Based on existing workload and available resources, it is anticipated to take 24 to 30 months to meet PA&ED after a complete Environmental Study Request (ESR) is submitted and the project is assigned. An assignment should be made on later than February of a given year in order to complete spring botanical surveys.

Special Considerations

Biology: Known and potential resources within and adjacent to the proposed project that may be affected include: U.S. and State jurisdictional waters and wetlands, special-status plants and special-status animals. Due to the variety of listed and sensitive species (plants, birds, mammals, and amphibians), multiple seasonally appropriate studies, plus further research and coordination with resource agencies would be needed in order to determine presence or absence within the project area. Depending on the outcome of the surveys, a Section 7 consultation under the Federal Endangered Species Act may be necessary with the US Fish and Wildlife Service (USFWS). The bridge work over waterways may require a Section 7 consultation with the National Oceanic and Atmospheric Administration (NOAA), including hydroacoustic analysis. It's likely that a wetland delineation also will be needed. In addition to the federal consultation, the California Department of Fish and Game may need to administer authority if there is any "take" according to the California Endangered Species Act.

Under the current scope of the project, the following other biological permits are anticipated:

- A Clean Water Act 404 Permit issued by the U.S. Army Corps of Engineers (USACE)
- A Clean Water Act 401 Certification issued by the Regional Water Quality Control Board(RWQCB)
- A California Department of Fish and Game 1600 Streambed Alteration Agreement

Archaeology: Prehistoric, and possibly historic, archaeological surveys would be required. Native American consultation would be required. Additionally, an extended Phase I archaeological investigation may be required if resources are identified that cannot be avoided. A geoarchaeological investigation may be required dependent on the nature and extent of project excavation, the results of archaeological surveys and Native American

consultation. In addition, the unique location of elements of the project has a moderate potential for cultural resources.

Noise: A noise analysis would be necessary to evaluate potential environmental impacts of construction noise on sensitive receptors, including residents close to the project locations.

Water Quality: A water quality assessment would need to be prepared for this project. Temporary and permanent BMPs would be included in the contract.

Hazardous Waste: An ISA will be required for each location that is part of this project.

Coastal Zone: Four of the bridges are in the coastal zone, and a coastal development permit would be required.

Wild and Scenic River: Potential impacts to the wild and Scenic Smith River will need to be addressed.

Mitigation

Mitigation will be required for impacts to wetlands, riparian vegetation, water quality, fisheries and other habitat. There is the potential to impact up to one acre of riparian habitat at each of three bridge locations that could require a mitigation ratio of 4:1.

Disclaimer

This report is not an environmental document. Preliminary analysis, determinations, and estimates of mitigation costs are based on the project description provided in this report. The estimates and conclusions provided are very approximate and are based on brief and cursory analysis. This report is to provide a very preliminary level of environmental discussion to supplement the Project Initiation Document. Future action will require details regarding the project scope, potential alternatives, a full project description, construction scenario, purpose and need statement, plans and complete ESR.

Review and Approval

I confirm that environmental cost, scope, and schedule have been satisfactorily completed and that the PEAR meets all Caltrans requirements. Also, if the project is scoped as a routine EA, complex EA, or EIS, I verify that the HQ DEA Coordinator has concurred in the Class of Action.

Approved by:

Environmental Manager Date: 12.05.11

Project Manager Date: 12-5/11

Attachment D: PEAR Environmental Commitments Cost Estimate

Standard PSR Only

(Prepare a separate form for each viable alternative described in the Project Study Report)

PART 1 PROJECT INFORMATION *rev. 11/08*

District-County-Route-Post Mile 01-DN-101/199-Var	EA: 01-0A100K
Project Description: Seismic Retrofit of five bridges in Del Norte County	
Form completed by (Name/District Office): Gary Berrigan, North Region Environmental	
Project Manager: Kevin Church	Phone Number: 445.6440
Date: November 15, 2011	

PART 2 PERMITS AND AGREEMENTS

	Permits and Agreements **($$)**
☒ Fish and Game 1602 Agreement	25000
☒ Coastal Development Permit	3000
☐ State Lands Agreement	
☒ Section 401 Water Quality Certification	50000
☒ Section 404 Permit – Nationwide (U.S. Army Corps)	0
☐ Section 404 Permit – Individual (U.S. Army Corps)	
☐ Section 10 Navigable Waters Permit (U.S. Army Corps)	
☐ Section 9 Permit (U.S. Coast Guard)	
☐ Other:	
Total (enter zeros if no cost)	78000

PART 3. ENVIRONMENTAL COMMITMENTS FOR PERMANENT IMPACTS

To complete the following information:

- Report costs in $1,000s.
- Include all costs to complete the commitment:
  - Capital outlay and staff support. Refer to Estimated Resources by WBS Code. For example, if you estimated 80 hours for biological monitoring (WBS 235.35 Long Term Mitigation Monitoring), convert those hours to a dollar amount for this entry. For current conversion rates from PY to dollars, see the Project Manager.
  - Cost of right of way or easements.
  - If compensatory mitigation is anticipated (for wetlands, for example), insert a range for purchasing credits in a mitigation bank.
  - Long-term monitoring and reporting
  - Any follow-up maintenance
  - Use current costs; the Project Manager will add an appropriate escalation factor.
  - This is an estimating tool, so a range is not only acceptable, but advisable.

Environmental Commitments Alternative		
	Estimated Cost in $1,000's	Notes
Noise abatement or mitigation	75	Hydroacoustic
Special landscaping	30	
Archaeological resources	30	Rancheria
Biological resources	75	Fisheries
Historical resources		
Scenic resources	20	Scenic By Way
Wetland/riparian resources	30	
Res./bus. relocations		
Other:		
Total (enter zeros if no cost)	260	

ATTACHMENT J
Cost Estimate

Del Norte Seismic Retrofit

Project Study Report-Cost Estimate

01-DN-101 & 199

PM Various

EA 01-0A100K

Program Code 201.113

PROJECT DESCRIPTION:

LIMITS: In Del Norte County at various bridge location on US 101 & US 199

PROPOSED IMPROVEMENT (SCOPE): This is Seismic retrofit project that proposes various improvements at each bridge.

Seismic Retrofit

TOTAL ROADWAY ITEMS	$3,501,000
TOTAL STRUCTURE ITEMS	$7,223,000
SUBTOTAL CONSTRUCTION COSTS	$10,724,000
TOTAL RIGHT OF WAY ITEMS (2011)	$3,318,000
TOTAL PROJECT CAPITAL OUTLAY COSTS	$14,042,000
CALL	**$14,044,000**
Project Total (2011)	**$14,044,000**

Summary By Bridge

Railroad Avenue Overcrossing	
TOTAL ROADWAY ITEMS	$424,000
TOTAL STRUCTURE ITEMS	$390,000
SUBTOTAL CONSTRUCTION COSTS	$814,000
TOTAL RIGHT OF WAY ITEMS	$663,600
TOTAL PROJECT CAPITAL OUTLAY COSTS	$1,477,600
CALL	**$1,478,000**

Smith River Overflow	
TOTAL ROADWAY ITEMS	$203,000
TOTAL STRUCTURE ITEMS	$105,000
SUBTOTAL CONSTRUCTION COSTS	$308,000
TOTAL RIGHT OF WAY ITEMS	$663,600
TOTAL PROJECT CAPITAL OUTLAY COSTS	$971,600
CALL	**$972,000**

Rowdy Creek	
TOTAL ROADWAY ITEMS	$326,000
TOTAL STRUCTURE ITEMS	$490,000
SUBTOTAL CONSTRUCTION COSTS	$816,000
TOTAL RIGHT OF WAY ITEMS	$663,600
TOTAL PROJECT CAPITAL OUTLAY COSTS	$1,479,600
CALL	**$1,480,000**

199/101 Connector OC	
TOTAL ROADWAY ITEMS	$459,000
TOTAL STRUCTURE ITEMS	$390,000
SUBTOTAL CONSTRUCTION COSTS	$849,000
TOTAL RIGHT OF WAY ITEMS	$663,600
TOTAL PROJECT CAPITAL OUTLAY COSTS	$1,512,600
CALL	**$1,513,000**

Middle Fork Smith River	
TOTAL ROADWAY ITEMS	$2,089,000
TOTAL STRUCTURE ITEMS	$5,848,000
SUBTOTAL CONSTRUCTION COSTS	$7,937,000
TOTAL RIGHT OF WAY ITEMS	$663,600
TOTAL PROJECT CAPITAL OUTLAY COSTS	$8,600,600
CALL	**$8,601,000**

Railroad Avenue Overcrossing #01-0063

Project Study Report-Cost Estimate

01-DN-101

PM 28.07/25.57

EA 01-0A100K

Program Code 201.113

PROJECT DESCRIPTION:

LIMITS: In Del Norte County on US 101 at Railroad Avenue Overcrossing (#01-0063)

PROPOSED IMPROVEMENT (SCOPE): This is Seismic retrofit project that proposes to install 4-foot diameter cast-in-drilled-hole (CIDH) anchor piles behind the abutments (two at each abutment) from the bridge deck. The pile heads will be tied to the end diaphragm through steel pipes and high strength rods. From underneath the overcrossing the column flares will be removed and the column flare reinforcements cut. Excavation around column to the footing will occur in order to install full length column casing. The column casing will be flared to match existing column with 4" gap under the sofit of the bridge.

Seismic Retrofit

SUMMARY OF ESTIMATED 2011 COST

TOTAL ROADWAY ITEMS	$424,000
TOTAL STRUCTURE ITEMS	$390,000
SUBTOTAL CONSTRUCTION COSTS	$814,000
TOTAL RIGHT OF WAY ITEMS (2011)	$663,600
TOTAL PROJECT CAPITAL OUTLAY COSTS	$1,477,600
CALL	**$1,478,000**

Reviewed by District Program Manager _____ Date 7 Dec 2011

Approved by Project Manager _____ Date 12/7/11

for Kevin Church

I. ROADWAY ITEMS

Section 1 Earthwork	Quantity	Unit	Unit Price	Item Cost
			Subtotal Earthwork	**$0**

Section 2 Pavement Structural Section	Quantity	Unit	Unit Price**	Item Cost
Replace Concrete Pavement	1.60	TON	$2,000	$3,200
			Subtotal Pavement Structural Section	**$3,200**

Section 3 Drainage	Quantity	Unit	Unit Price	Item Cost
			Subtotal Drainage	**$0**

Section 4 Specialty Items	Quantity	Unit	Unit Price	Item Cost
Construction Site BMP's	1	LS	$35,500	$35,500
Erosion Control	1	LS	$2,000	$2,000
Highway Planting	1	LS	$3,000	$3,000
2-Year Reveg Establishment	1	LS	$1,000	$1,000
Environmental Commitments (Noise, Landscape, archeological,et	1	LS	$52,000	$52,000
Prepare Storm Water Pollution Prevention Plan	1	LS	$240	$240
Remove Metal Beam Guard Rail	300	LF	$15	$4,500
Metal Beam Guard Rail	300	LF	$80	$24,000
Temporary Crash Cushion	2	LS	$10,000	$20,000
Temporary Rail (Type K)	300	LF	$60	$18,000
			Subtotal Specialty Items	**$160,240**

Section 5 Traffic Items	Quantity	Unit	Unit Price	Item Cost
Portable Changeable Message Sign (PCMS)	4	EA	$7,000	$28,000
Construction Area Signs	1	LS	$10,000	$10,000
			Subtotal Traffic Items	**$38,000**
			SUBTOTAL Items 1-5	**$201,440**

Traffic Additions (Added in "TOTAL SECTIONS 1 thru 5)				
Traffic Control System	1	LS	(6% of Roadway & Structures Subtotal)	$35,500
Maintain Traffic	1	LS	(7% of Roadway & Structures Subtotal)	$41,500

Time Related Overhead (Added in "TOTAL SECTIONS 1 thru 5)				
TRO	1	LS	(10% of Roadway Subtotal)	$20,200

TOTAL SECTIONS 1 thru 5	**$278,440**

Section 6 Minor Items				
			$278,440 x (5%) =	$13,922
			(Subtotal Sections 1 thru 5)	
			TOTAL MINOR ITEMS	**$13,922**
			Subtotal Sections 1 thru 6	$292,362

Section 7 Roadway Mobilization				
			$292,362 x (15%) =	$43,854
			(Subtotal Sections 1 thru 6)	
			TOTAL ROADWAY MOBILIZATION	**$43,854**

Section 8 Roadway Additions	Quantity	Unit	Unit Price	Item Cost
	Supplemental Work			
			$292,362 x (5%) =	$14,618
			(Subtotal Sections 1 thru 6)	
	Contingencies			
			$292,362 x (25%) =	$73,091
			(Subtotal Sections 1 thru 6)	
			TOTAL ROADWAY ADDITIONS	**$87,709**
			Subtotal Section 7 & 8	$131,563

TOTAL ROADWAY ITEMS	**$424,000**

II. STRUCTURES ITEMS

Bridge Name	Railroad Avenue Overcrossing #01-0063
Structure Type	CIP/PS Slab
Total Structure Cost =	**$390,000**

(10% for TRO, 10% for mobilization, and 40% for contingency included in structures estimate)

SUBTOTAL STRUCTURES ITEMS (Sum of Total Cost for Structures)	**$390,000**

Railroad Related Costs:	$0
SUBTOTAL RAILROAD ITEMS	**$0**

TOTAL STRUCTURES ITEMS	**$390,000**

III. RIGHT OF WAY ITEMS (2011 Costs)

A. Acquisition, including excess lands,	$0
B. Mitigation acquisition & credits	$648,000
C. Project Development Permit Fees	$15,600
D. Utility Relocation (State share)	$0
E. Relocation Assistance (RAP)	$0
F. Clearance/Demolition	$0
G. Title and Escrow Fees	$0

TOTAL RIGHT OF WAY ITEMS	**$663,600**

Anticipated Date of Right of Way Certification	March 1, 2016
Escalated Right of Way Costs	$818,200

F. Construction Contract Work

Estimate Prepared By: Katie Beach Phone # 707-441-2044

Estimate Checked By: Jeffrey Pimentel Phone # 707-445-6358

Smith River Overflow #01-0046

Project Study Report-Cost Estimate

01-DN-101

PM 35.52/36.02

EA 01-0A100K

Program Code 201.113

PROJECT DESCRIPTION:

LIMITS: In Del Norte County on US 101 at Smith River Overflow Bridge (#01-0046)

PROPOSED IMPROVEMENT (SCOPE): This is Seismic retrofit project that proposes to place a seat extender at the hinge in span 5 with four shallow steel members bolted through the deck to the short span

Seismic Retrofit

SUMMARY OF ESTIMATED 2011 COST

TOTAL ROADWAY ITEMS	$203,000
TOTAL STRUCTURE ITEMS	$105,000
SUBTOTAL CONSTRUCTION COSTS	$308,000
TOTAL RIGHT OF WAY ITEMS (2011)	$663,600
TOTAL PROJECT CAPITAL OUTLAY COSTS	$971,600
CALL	**$972,000**

Reviewed by District Program Manager _____ Date 7 Dec 2011

Approved by Project Manager _____ Date 12/07/11

for Kevin Church

I. ROADWAY ITEMS

Section 1 Earthwork	Quantity	Unit	Unit Price	Item Cost
			Subtotal Earthwork	**$0**

Section 2 Pavement Structural Section	Quantity	Unit	Unit Price**	Item Cost
			Subtotal Pavement Structural Section	**$0**

Section 3 Drainage	Quantity	Unit	Unit Price	Item Cost
			Subtotal Drainage	**$0**

Section 4 Specialty Items	Quantity	Unit	Unit Price	Item Cost
Erosion Control	1	LS	$2,000	$2,000
Highway Planting	1	LS	$3,000	$3,000
2-Year Reveg Establishment	1	LS	$1,000	$1,000
Construction Site BMP's	1	LS	$23,300	$23,300
Environmental Commitments (Noise, Landscape, archeological,et	1	LS	$52,000	$52,000
Prepare Storm Water Pollution Prevention Plan	1	LS	$240	$240
			Subtotal Specialty Items	**$81,540**

Section 5 Traffic Items	Quantity	Unit	Unit Price	Item Cost
Thermoplastic Striping (4")	10	FT	$2.00	$20
Pavement Marker (Retroreflective)	6	EA	$6.00	$36
Portable Changeable Message Sign (PCMS)	2	EA	$7,000	$14,000
Construction Area Signs	1	LS	$5,000	$5,000
			Subtotal Traffic Items	**$19,056**
			SUBTOTAL Items 1-5	**$100,596**

Traffic Additions (Added in "TOTAL SECTIONS 1 thru 5)				
Traffic Control System	1	LS	(6% of Roadway & Structures Subtotal)	$12,400
Maintain Traffic	1	LS	(7% of Roadway & Structures Subtotal)	$14,400

Time Related Overhead (Added in "TOTAL SECTIONS 1 thru 5)				
TRO	1	LS	(10% of Roadway Subtotal)	$10,100

TOTAL SECTIONS 1 thru 5	**$137,496**

Section 6 Minor Items				
			$137,496 x (5%) =	$6,875
			(Subtotal Sections 1 thru 5)	
			TOTAL MINOR ITEMS	**$6,875**
			Subtotal Sections 1 thru 6	$144,371

Section 7 Roadway Mobilization				
			$144,371 x (10%) =	$14,437
			(Subtotal Sections 1 thru 6)	
			TOTAL ROADWAY MOBILIZATION	**$14,437**

Section 8 Roadway Additions	Quantity	Unit	Unit Price	Item Cost
	Supplemental Work			
			$144,371 x (5%) =	$7,219
			(Subtotal Sections 1 thru 6)	
	Contingencies			
			$144,371 x (25%) =	$36,093
			(Subtotal Sections 1 thru 6)	
			TOTAL ROADWAY ADDITIONS	**$43,311**
			Subtotal Section 7 & 8	$57,748

TOTAL ROADWAY ITEMS	**$203,000**

II. STRUCTURES ITEMS

Bridge Name	Smith River Overflow #01-0046
Structure Type	CIP/RC Slab
Total Structure Cost =	**$105,000**

(10% for TRO, 10% for mobilization, and 40% for contingency included in structures estimate)

SUBTOTAL STRUCTURES ITEMS (Sum of Total Cost for Structures)	**$105,000**

Railroad Related Costs:	$0
SUBTOTAL RAILROAD ITEMS	**$0**

TOTAL STRUCTURES ITEMS	**$105,000**

III. RIGHT OF WAY ITEMS (2011 Costs)

A. Acquisition, including excess lands,	$0
B. Mitigation acquisition & credits	$648,000
C. Project Development Permit Fees	$15,600
D. Utility Relocation (State share)	$0
E. Relocation Assistance (RAP)	$0
F. Clearance/Demolition	$0
G. Title and Escrow Fees	$0

TOTAL RIGHT OF WAY ITEMS	**$663,600**

Anticipated Date of Right of Way Certification	March 1, 2016
Escalated Right of Way Costs	$818,200

F. Construction Contract Work

Estimate Prepared By: Katie Beach Phone # 707-441-2044

Estimate Checked By: Jeffrey Pimentel Phone # 707-445-6358

Rowdy Creek Bridge #01-0023

Project Study Report-Cost Estimate

Caltrans

01-DN-101

PM 39.38/39.88

EA 01-0A100K

Program Code 201.113

PROJECT DESCRIPTION:

LIMITS: In Del Norte County on US 101 at Rowdy Creek Bridge (#01-0023)

PROPOSED IMPROVEMENT (SCOPE): The existing cross-frames at the support locations will be removed and replaced. Rivets and stiffeners will be removed using a cutting torch and small areas of the existing will need to be blast cleaned and painted.

Seismic Retrofit

SUMMARY OF ESTIMATED 2011 COST

TOTAL ROADWAY ITEMS	$326,000
TOTAL STRUCTURE ITEMS	$490,000
SUBTOTAL CONSTRUCTION COSTS	$816,000
TOTAL RIGHT OF WAY ITEMS (2011)	$663,600
TOTAL PROJECT CAPITAL OUTLAY COSTS	$1,479,600
CALL	**$1,480,000**

Reviewed by District Program Manager _____ Date 7 Dec 2011

Approved by Project Manager _____ Date 12/7/11

for Kevin Church

I. ROADWAY ITEMS

Section 1 Earthwork	Quantity	Unit	Unit Price	Item Cost
Clearing & Grubbing	1	LS	$15,000	$15,000
			Subtotal Earthwork	**$15,000**

Section 2 Pavement Structural Section	Quantity	Unit	Unit Price**	Item Cost
			Subtotal Pavement Structural Section	**$0**

Section 3 Drainage	Quantity	Unit	Unit Price	Item Cost
			Subtotal Drainage	**$0**

Section 4 Specialty Items	Quantity	Unit	Unit Price	Item Cost
Construction Site BMP's	1	LS	$35,800	$35,800
Erosion Control	1	LS	$2,000	$2,000
Highway Planting	1	LS	$3,000	$3,000
2-Year Reveg Establishment	1	LS	$1,000	$1,000
Environmental Commitments (Noise, Landscape, archeological,et	1	LS	$52,000	$52,000
Prepare Storm Water Pollution Prevention Plan	1	LS	$240	$240
			Subtotal Specialty Items	**$94,040**

Section 5 Traffic Items	Quantity	Unit	Unit Price	Item Cost
Portable Changeable Message Sign (PCMS)	2	EA	$7,000	$14,000
Construction Area Signs	1	LS	$5,000	$5,000
			Subtotal Traffic Items	**$19,000**
			SUBTOTAL Items 1-5	**$128,040**

Traffic Additions (Added in "TOTAL SECTIONS 1 thru 5)				
Traffic Control System	1	LS	(6% of Roadway & Structures Subtotal)	$37,100
Maintain Traffic	1	LS	(7% of Roadway & Structures Subtotal)	$43,300

Time Related Overhead (Added in "TOTAL SECTIONS 1 thru 5)				
TRO	1	LS	(10% of Roadway Subtotal)	$12,900

TOTAL SECTIONS 1 thru 5	**$221,340**

Section 6 Minor Items				
			$221,340 x (5%) =	$11,067
			(Subtotal Sections 1 thru 5)	
			TOTAL MINOR ITEMS	**$11,067**
			Subtotal Sections 1 thru 6	$232,407

Section 7 Roadway Mobilization				
			$232,407 x (10%) =	$23,241
			(Subtotal Sections 1 thru 6)	
			TOTAL ROADWAY MOBILIZATION	**$23,241**

Section 8 Roadway Additions	Quantity	Unit	Unit Price	Item Cost
	Supplemental Work			
			$232,407 x (5%) =	$11,620
			(Subtotal Sections 1 thru 6)	
	Contingencies			
			$232,407 x (25%) =	$58,102
			(Subtotal Sections 1 thru 6)	
			TOTAL ROADWAY ADDITIONS	**$69,722**
			Subtotal Section 7 & 8	$92,963

TOTAL ROADWAY ITEMS	**$326,000**

II. STRUCTURES ITEMS

Bridge Name	Rowdy Creek #01-0023
Structure Type	CIP/RC Slab
Total Structure Cost =	**$490,000**

(10% for TRO, 10% for mobilization, and 40% for contingency included in structures estimate)

SUBTOTAL STRUCTURES ITEMS (Sum of Total Cost for Structures)	**$490,000**

Railroad Related Costs:	$0
SUBTOTAL RAILROAD ITEMS	**$0**

TOTAL STRUCTURES ITEMS	**$490,000**

III. RIGHT OF WAY ITEMS (2011 Costs)

A. Acquisition, including excess lands,	$0
B. Mitigation acquisition & credits	$648,000
C. Project Development Permit Fees	$15,600
D. Utility Relocation (State share)	$0
E. Relocation Assistance (RAP)	$0
F. Clearance/Demolition	$0
G. Title and Escrow Fees	$0

TOTAL RIGHT OF WAY ITEMS	**$663,600**

Anticipated Date of Right of Way Certification	March 1, 2016
Escalated Right of Way Costs	$818,200

F. Construction Contract Work

Estimate Prepared By: Katie Beach Phone # 707-441-2044

Estimate Checked By: Jeffrey Pimentel Phone # 707-445-6358

101/199 Connector Overcrossing #01-0058F

Project Study Report-Cost Estimate

01-DN-199

PM L0.506/L0.684

EA 01-0A100K

Program Code 201.113

PROJECT DESCRIPTION:

LIMITS: In Del Norte County at the US 101/US 199 Connector OC (#01-0058F)

PROPOSED IMPROVEMENT (SCOPE): This is Seismic retrofit project that proposes to install 4-foot diameter cast-in-drilled-hole (CIDH) anchor piles behind the abutments (two at each abutment) from the bridge deck. The pile heads will be tied to the end diaphragm through steel pipes and high strength rods. From underneath the overcrossing the column flares will be removed and the column flare reinforcements cut. Excavation around column to the footing will occur in order to install full length column casing. The column casing will be flared to match existing column with 4" gap under the sofit of the bridge.

Seismic Retrofit

SUMMARY OF ESTIMATED 2011 COST

TOTAL ROADWAY ITEMS	$459,000
TOTAL STRUCTURE ITEMS	$390,000
SUBTOTAL CONSTRUCTION COSTS	$849,000
TOTAL RIGHT OF WAY ITEMS (2011)	$663,600
TOTAL PROJECT CAPITAL OUTLAY COSTS	$1,512,600
CALL	**$1,513,000**

Reviewed by District Program Manager _____ Date 7 Dec 2011

Approved by Project Manager _____ Date 12/7/11

for Kevin Church

I. ROADWAY ITEMS

Section 1 Earthwork	Quantity	Unit	Unit Price	Item Cost
			Subtotal Earthwork	**$0**

Section 2 Pavement Structural Section	Quantity	Unit	Unit Price**	Item Cost
Replace Concrete Pavement	1.60	TON	$2,000	$3,200
			Subtotal Pavement Structural Section	**$3,200**

Section 3 Drainage	Quantity	Unit	Unit Price	Item Cost
			Subtotal Drainage	**$0**

Section 4 Specialty Items	Quantity	Unit	Unit Price	Item Cost
Construction Site BMP's	1	LS	$36,200	$36,200
Erosion Control	1	LS	$2,000	$2,000
Highway Planting	1	LS	$3,000	$3,000
2-Year Reveg Establishment	1	LS	$1,000	$1,000
Environmental Commitments (Noise, Landscape, archeological,et	1	LS	$52,000	$52,000
Prepare Storm Water Pollution Prevention Plan	1	LS	$240	$240
Remove Metal Beam Guard Rail	300	LF	$15	$4,500
Metal Beam Guard Rail	300	LF	$80	$24,000
Temporary Crash Cushion	2	LS	$10,000	$20,000
Temporary Rail (Type K)	300	LF	$60	$18,000
			Subtotal Specialty Items	**$160,940**

Section 5 Traffic Items	Quantity	Unit	Unit Price	Item Cost
Portable Changeable Message Sign (PCMS)	3	EA	$7,000	$21,000
Construction Area Signs	1	LS	$7,500	$7,500
			Subtotal Traffic Items	**$28,500**
			SUBTOTAL Items 1-5	$192,640

Traffic Additions (Added in "TOTAL SECTIONS 1 thru 5)				
Traffic Control System	1	LS	(6% of Roadway & Structures Subtotal)	$35,000
Maintain Traffic	1	LS	(7% of Roadway & Structures Subtotal)	$40,800

Time Related Overhead (Added in "TOTAL SECTIONS 1 thru 5)				
TRO	1	LS	(10% of Roadway Subtotal)	$19,300

TOTAL SECTIONS 1 thru 5	**$287,740**

Section 6 Minor Items				
		$287,740 x (5%) =		$14,387
		(Subtotal Sections 1 thru 5)		
			TOTAL MINOR ITEMS	**$14,387**
			Subtotal Sections 1 thru 6	$302,127

Section 7 Roadway Mobilization				
		$302,127 x (15%) =		$45,319
		(Subtotal Sections 1 thru 6)		
			TOTAL ROADWAY MOBILIZATION	**$45,319**

Section 8 Roadway Additions	Quantity	Unit	Unit Price	Item Cost
	Supplemental Work			
		$302,127 x (5%) =		$15,106
		(Subtotal Sections 1 thru 6)		
	Contingencies			
		$302,127 x (25%) =		$75,532
		(Subtotal Sections 1 thru 6)		

	$ Per Hour	Hours Per Day	Work Days	
COZEEP setups @ $100 per Hour Working 10 Hour Days	$100	9	16.5	$14,850
COZEEP setups @ $200 per Hour Working 10 Hour Nights	$200	9	3.3	$5,940
			TOTAL ROADWAY ADDITIONS	**$111,428**
			Subtotal Section 7 & 8	$156,747

TOTAL ROADWAY ITEMS	**$459,000**

II. STRUCTURES ITEMS

Bridge Name	US 199/101 Overcrossing #01-0058F
Structure Type	CIP/PS Slab
Total Structure Cost =	**$390,000**

(10% for TRO, 10% for mobilization, and 40% for contingency included in structures estimate)

SUBTOTAL STRUCTURES ITEMS (Sum of Total Cost for Structures)	**$390,000**

Railroad Related Costs:	$0
SUBTOTAL RAILROAD ITEMS	**$0**

TOTAL STRUCTURES ITEMS	**$390,000**

III. RIGHT OF WAY ITEMS (2011 Costs)

A. Acquisition, including excess lands,	$0
B. Mitigation acquisition & credits	$648,000
C. Project Development Permit Fees	$15,600
D. Utility Relocation (State share)	$0
E. Relocation Assistance (RAP)	$0
F. Clearance/Demolition	$0
G. Title and Escrow Fees	$0

TOTAL RIGHT OF WAY ITEMS	**$663,600**

Anticipated Date of Right of Way Certification	March 1, 2016
Escalated Right of Way Costs	$818,200

Estimate Prepared By: Katie Beach Phone # 707-441-2044

Estimate Checked By: Jeffrey Pimentel Phone # 707-445-6358

Middle Fork Smith River Bride #01-0044

Project Study Report-Cost Estimate

01-DN-199

PM R16.8/R17.31

EA 01-0A100K

Program Code 201.113

PROJECT DESCRIPTION:

LIMITS: In Del Norte County on US 101 at Middle Fork Smith River Bridge (#01-0044)

PROPOSED IMPROVEMENT (SCOPE): This is Seismic retrofit project that proposes to install 4-foot diameter cast-in-drilled-hole (CIDH) anchor piles behind the abutments (two at each abutment) from the bridge deck. The pile heads will be tied to the end diaphragm through steel pipes and high strength rods. Beneath the bridge add concrete to thinner portions of left bridge and complete concrete infill walls in between the left and right bridge. Install steel plates for confinement

Seismic Retrofit

SUMMARY OF ESTIMATED 2011 COST

TOTAL ROADWAY ITEMS	$2,089,000
TOTAL STRUCTURE ITEMS	$5,848,000
SUBTOTAL CONSTRUCTION COSTS	$7,937,000
TOTAL RIGHT OF WAY ITEMS (2011)	$663,600
TOTAL PROJECT CAPITAL OUTLAY COSTS	$8,600,600
CALL	**$8,601,000**

Reviewed by District Program Manager _____ Date 7 Dec 2011

Approved by Project Manager _____ Date 12/7/11

for Kevin Church

I. ROADWAY ITEMS

Section 1 Earthwork	Quantity	Unit	Unit Price	Item Cost
Clearing & Grubbing	1	LS	$100,000	$100,000
Roadway Excavation	907	CY	$22	$19,954
			Subtotal Earthwork	**$119,954**

Section 2 Pavement Structural Section	Quantity	Unit	Unit Price**	Item Cost
Replace Asphalt Concrete Pavement	1.60	TON	$600	$960
Class 2 Aggregate Base-Acess Road	1,000	CY	$75.00	$75,000
Rock Slope proctection fabric (Class 8) (Acces Entrance)	102	SQYD	$5.00	$511
Rock Slope proctection fabric (Class 10) (Access Rd)	1,140	SQYD	$5.00	$5,700
			Subtotal Pavement Structural Section	**$82,171**

Section 3 Drainage	Quantity	Unit	Unit Price	Item Cost
			Subtotal Drainage	**$0**

Section 4 Specialty Items	Quantity	Unit	Unit Price	Item Cost
Erosion Control	1	LS	$2,000	$2,000
Highway Planting	1	LS	$3,000	$3,000
2-Year Reveg Establishment	1	LS	$1,000	$1,000
Construction Site BMP's	1	LS	$205,500	$205,500
Environmental Commitments (Noise, Landscape, archeological,et	1	LS	$52,000	$52,000
Prepare Storm Water Pollution Prevention Plan	1	LS	$240	$240
			Subtotal Specialty Items	**$263,740**

Section 5 Traffic Items	Quantity	Unit	Unit Price	Item Cost
Portable Changeable Message Sign (PCMS)	2	EA	$7,000	$14,000
Construction Area Signs	1	LS	$5,000	$5,000
			Subtotal Traffic Items	**$19,000**
			SUBTOTAL Items 1-5	**$484,865**

Traffic Additions (Added in "TOTAL SECTIONS 1 thru 5)				
Traffic Control System	1	LS	(6% Item Subtotal)	$380,000
Maintain Traffic	1	LS	(7% Item Subtotal)	$443,400

Time Related Overhead (Added in "TOTAL SECTIONS 1 thru 5)				
TRO	1	LS	(10% of Roadway Subtotal)	$48,500

TOTAL SECTIONS 1 thru 5	**$1,356,765**

Section 6 Minor Items				
		$1,356,765 x (5%) =		$67,838
		(Subtotal Sections 1 thru 5)		
			TOTAL MINOR ITEMS	**$67,838**
			Subtotal Sections 1 thru 6	$1,424,603

Section 7 Roadway Mobilization				
		$1,424,603 x (15%) =		$213,691
		(Subtotal Sections 1 thru 6)		

Section 8 Roadway Additions	Quantity	Unit	Unit Price	Item Cost
	Supplemental Work			
		$1,424,603 x (5%) =		$71,230
		(Subtotal Sections 1 thru 6)		
	Contingencies			
		$1,424,603 x (25%) =		$356,151
		(Subtotal Sections 1 thru 6)		

	$ Per Hour	Hours Per Day	Work Days	
COZEEP setups @ $100 per Hour Working 10 Hour Days	$100	10	16.5	$16,500
COZEEP setups @ $200 per Hour Working 10 Hour Nights	$200	10	3.3	$6,600
			TOTAL ROADWAY Additions	**$450,481**
			Subtotal Section 7 & 8	$664,172

TOTAL ROADWAY ITEMS	**$2,089,000**

II. STRUCTURES ITEMS

Bridge Name	Middle Fork Smith River #01-0044
Structure Type	CIP/RC Box Girder
Total Structure Cost =	**$5,848,000**

(10% for TRO, 10% for mobilization, and 40% for contingency included in structures estimate)

SUBTOTAL STRUCTURES ITEMS (Sum of Total Cost for Structures)	**$5,848,000**

Railroad Related Costs:	$0
SUBTOTAL RAILROAD ITEMS	**$0**

TOTAL STRUCTURES ITEMS	**$5,848,000**

III. RIGHT OF WAY ITEMS (2011 Costs)

A. Acquisition, including excess lands,	$0
B. Mitigation acquisition & credits	$648,000
C. Project Development Permit Fees	$15,600
D. Utility Relocation (State share)	$0
E. Relocation Assistance (RAP)	$0
F. Clearance/Demolition	$0
G. Title and Escrow Fees	$0

TOTAL RIGHT OF WAY ITEMS	**$663,600**

F. Construction Contract Work

Anticipated Date of Right of Way Certification	March 1, 2016
Escalated Right of Way Costs	$818,200

Estimate Prepared By: Katie Beach Phone # 707-441-2044

Estimate Checked By: Jeffrey Pimentel Phone # 707-445-6358

ATTACHMENT K
Programming Sheet

PROGRAMMING SHEET

Project Manager: Kevin Church

Date: 07-Dec-11

01-DN-101/199-VAR
EA 01-0A100
2010201113 Bridge Seismic Retrofit

PROJECT SCHEDULE

MILESTONE	DATE
Begin Environmental Document (M020)	6/1/2012
Begin Project Report (M040) (Begin Design of Project)	5/1/2012
Circulate Environmental Document (M120)	10/1/2013
Project Approval & Environmental Document (M200)	7/1/2014
District Submits Bridge Site Data to Structures (M221)	1/1/2013
Right of Way Maps (M224)	2/1/2014
Draft Structures Plans, Specifications & Estimate (M378)	8/1/2015
Project Plans, Specifications & Estimate (M380)	12/1/2015
Right of Way Certification (M410)	3/1/2016
Ready to List (M460)	3/15/2016
HQ Advertise (M480)	7/15/2016
Approve Construction Contract (M500)	12/15/2016
Contract Acceptance (M600)	8/1/2018

Escalation Factors Used: Capital: 3.5%
Support:1.5%

2011 COSTS
Const: $ 10,724
R/W: $3,318

PROJECT COSTS BY SB45 CATEGORY

Costs are in thousands of dollars

CAPITAL COSTS	11/12	12/13	13/14	14/15	15/16	16/17	FUTURE	TOTAL
Right of Way	$ -	$ -	$ -	$ -	$ 5,532	$ -	$ -	$ 4,091
Construction	$ -	$ -	$ -	$ -	$ 12,225	$ -	$ -	$ 12,225
						CAPITAL TOTAL		$ 16,316
SUPPORT COSTS								
Environmental	$ 108	$ 633	$ 332	$ 85	$ 61	$ -	$ -	$ 1,219
Design	$ -	$ -	$ 395	$ 745	$ 467	$ 99	$ -	$ 1,706
Right of Way	$ -	$ -	$ 31	$ 11	$ 10	$ 8	$ 23	$ 84
Construction	$ -	$ -	$ -	$ -	$ -	$ 604	$ 1,534	$ 2,139
						SUPPORT COSTS		$ 5,147
					TOTAL PROJECT COSTS			$ 21,464
					SUPPORT TO CAPITAL RATIO/%			32%
	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -

SUPPORT PY'S by DIVISION
Number of Hours in a PY: 1758

PROJECT SUPPORT IN PYS

	11/12	12/13	13/14	14/15	15/16	16/17	FUTURE	TOTAL
Transportation Planning	0.21	2.20	1.41	0.99	0.63	0.09	0.59	6.1
District Design	0.35	1.28	1.96	2.25	1.73	0.42	0.79	8.8
Right of Way	0.01	0.02	0.11	0.43	0.19	0.01	0.02	0.8
District Construction	0.02	0.12	0.19	0.09	0.17	1.19	2.85	4.6
DES Design	0.15	0.80	1.44	1.64	0.63	0.58	0.67	5.9
DES Construction	0.00	0.02	0.03	0.03	0.01	1.84	3.86	5.8
TOTAL	0.74	4.45	5.15	5.43	3.36	4.13	8.78	32.0

Comments: