

05-SCr-129, PM 9.5/10.0
Safety Improvement Program 20.XX.201.010
EA 05-0T540K
May 2011

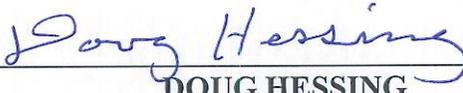
PROJECT STUDY REPORT

To

Request for Programming in the 2010 SHOPP

On Route 129
Between 0.4-mile west of Old Chittenden Road
And 0.1-mile east of Chittenden Underpass

APPROVAL RECOMMENDED:



DOUG HESSING

Project Manager



DEB L. LARSON

Traffic Safety Coordinator

APPROVED:

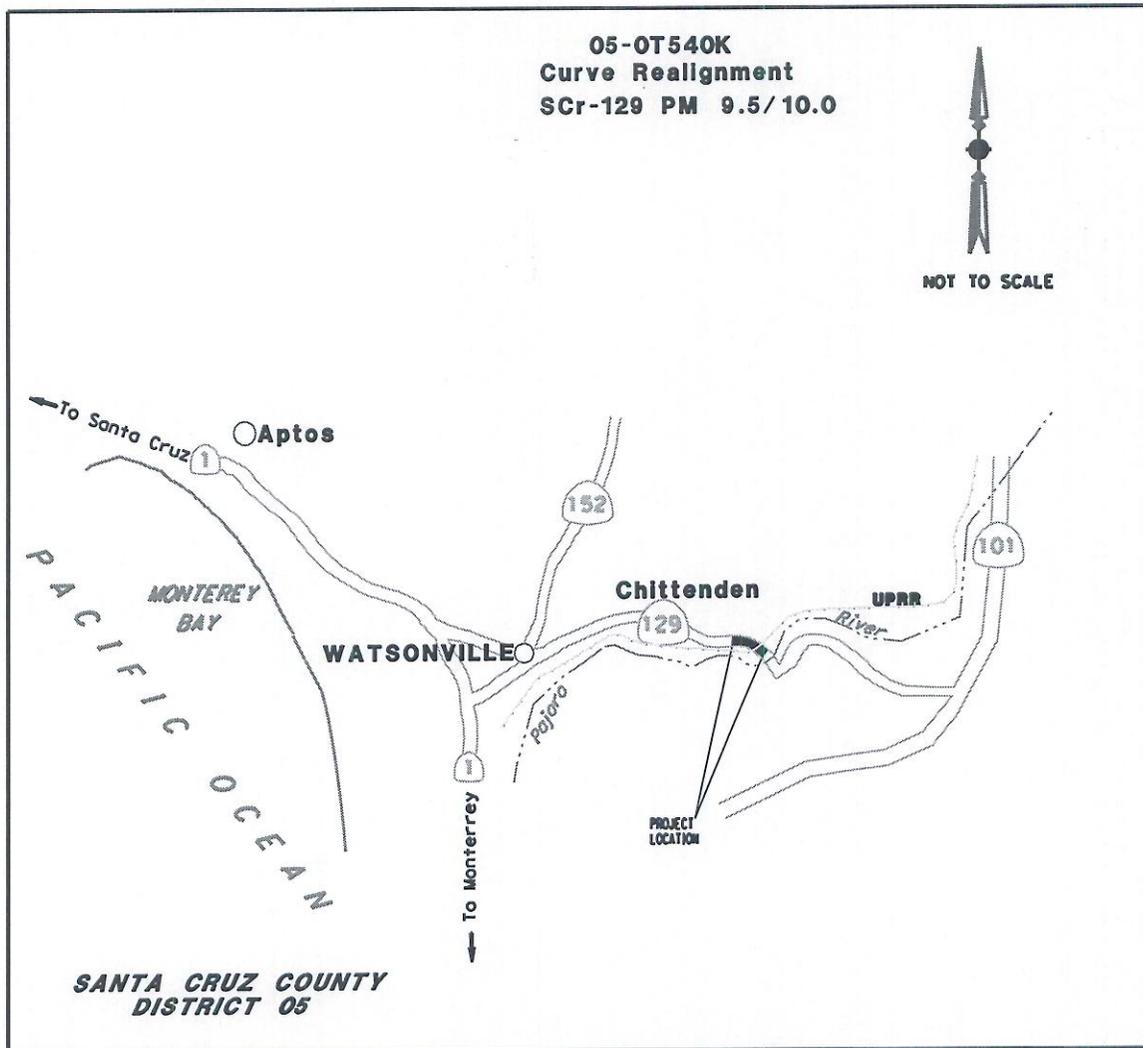


RICHARD KRUMHOLZ

District 5 Director

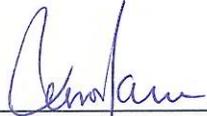
6/13/2011

Date



On Route 129
Between 0.4-mile west of Old Chittenden Road
And 0.1-mile east of Chittenden Underpass

This Project Study Report has been prepared under the direction of the following Registered Engineer. The registered civil engineer attests to the technical information contained herein and the engineering data upon which recommendations, conclusions, and decisions are based.



PETROS DEMOZ
REGISTERED CIVIL ENGINEER

06/01/11
DATE



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1. INTRODUCTION

Brief Project Description:

This Project Study Report (PSR) proposes to improve the safety of State Route 129 from 0.4-mile west of Old Chittenden Road to 0.1-mile east of Chittenden Underpass (UP) in Santa Cruz County by realigning the highway to the north approximately 60 feet, in order to improve the curve radius, and sight distance. The range of construction cost estimates for the two "Build" alternatives vary from \$7,962,000 to \$11,464,000 (March 2011). The range of right of way cost estimates vary from \$101,000 to \$126,000 (escalated to 2014). This project falls into Project Development Category 4B and would be funded from the 20.XX.201.010 Safety Improvements Program of the 2010 SHOPP. The scope and cost of both alternatives generate a fundable Safety Index.

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

Project Limits	05-SCr-129-PM 9.5/10.0
Number of Alternatives:	3
Alternative Recommended for Programming:	Alternative 2
Programmed or Proposed Capital Construction Costs	\$12,527,000
Programmed or Proposed Capital Right of Way Costs:	\$101,000
Funding Source:	SHOPP
Type of Facility	Conventional
Number of Structures:	1
Anticipated Environmental Determination/Document	CEQA: Negative Declaration/Mitigated ND NEPA: Finding of No Significant Impact
Legal Description	Curve Realignment
Project Category	Safety Improvements

A project report will serve as approval of the "selected" alternative.

2. BACKGROUND

District 5 Traffic Safety staff recommendation and concurrence was received from the Division of Traffic Operation, Office of Traffic Safety Program to initiate a project that improves safety at this location after the District 5 Multifunctional Safety Improvement Team reviewed and concurred with the proposed improvements. The Conceptual Report was approved on January 7, 2010.

In the kick-off meeting for the project held on March 2, 2010, the Project Development Team (PDT) reached a consensus to proceed with a PSR due to the

risk of being unable to determine the scope and impacts of the project fully. The District Safety Coordinator, a member of the PDT, has therefore granted an exception to the combined PSR-PR requirement to ensure that there are adequate resources to identify and resolve issues for project approval.

State Route 129, within the project limits, is a 2-lane conventional highway (minor arterial) with 12-foot lanes and 3-foot shoulders. There are two horizontal curves of 1000 feet and 700 feet radii which reverse direction. The total width between edge of outside shoulders is 30 feet. There is a sag at Chittenden UP where downgrades greater than 3.5% from both directions meet at the structure location. The Pajaro River Bridge (Br. No. 43-13) is located east of the UP within a tangent. The asphalt concrete pavement lays over an intermittent Portland Cement Concrete (PCC) base.

Chittenden UP (Bridge No. 36-35) carries Union Pacific Railroad (UPRR) tracks over the highway and no structure deficiencies have been found in the Structure Replacement and Improvement Needs Report (STRAIN). The clearance diagram of the UP structure generated from Bridge Inspection Records of May 16, 1979 shows 2.8-foot westbound shoulder and 2.3-foot eastbound shoulder. Also it reveals vertical clearances of 14 feet 2 inches on the westbound shoulder, 14 feet 9 inches on the traveled way, and 15 feet 6 inches on the eastbound shoulder. The total clear width of the structure is 29.1 feet which is less than the approach roadbed width of 30 feet. The abutments are on arcs that are concentric to the 700-foot radius centerline. The footing of the east abutment is 2 feet higher than the footing of the west abutment. The as-builts show a superelevation rate of 0.08 on the 700-foot radius curve, which is consistent with the difference in footing elevations.

The receiving water body for this project is Pajaro River. There is an 18-inch corrugated metal pipe cross culvert located 600 feet west of Chittenden UP. At the northwest end of the UP structure is an 18-inch downdrain pipe that drains into an inlet. This inlet is connected to another inlet on the other side of the highway that drains into Pajaro River via a 24-inch corrugated metal pipe. Pajaro River, which is an impacted stream for water quality, is located 520 feet east of the UP structure.

Old Chittenden Road intersects with SR-129 between the Pajaro River Bridge and Chittenden UP. It is a County road that leads to the Chittenden community and becomes a dead end. On Old Chittenden Road, there is a daily traffic of 40 trucks coming in and out of Happy Boy Farms which is located 400 feet from the junction with SR-129.

A design speed of 55 mph is adopted for this project because the highway survey inventory for design speed designates the segment at 55 mph. Safety improvement strategies, such as centerline rumble strips and curve warning signs

Collision Analysis:

The summary of the selective collision data from the Traffic Accident Surveillance and Analysis System (TASAS), Table “B”, for the 3-year period from January 1, 2006 to December 31, 2008 in Table 2 below reveals that the actual rate of fatalities and injuries in the segment under consideration is significantly higher than the average for similar roadways throughout the State.

TABLE 2 – COLLISION RATE PER MILLION VEHICLE MILES

Location	Actual			Average		
	Fatal	F+I	Total	Fatal	F+I	Total
Route 129	0.344	1.550	2.230	0.031	0.590	1.280

Over the 3-year period, there were a total of 13 reported accidents, which include 2 fatality and 7 injury collisions. Eleven out of 13 reported accidents were run-off-the-road and/or cross-centerline collisions.

5. CORRIDOR AND SYSTEM COORDINATION

State Route 129 within the study section is classified as a 2-lane conventional highway. The study portion of the route is not included in the Freeway Express System (F&E), the National Highway System (NHS), or the Strategic Highway Network (STRAHNET). It is a terminal access route on the National Network of the Surface Transportation Assistance Act (STAA). The design vehicle is a STAA truck. Likewise, the study area is not classified as a High Emphasis Route or Focus Route. It is located for the most part on a rolling terrain.

According to the 1985 State Route 129 Route Concept Report, the route concept for the study area portion is Peak Level of Service (LOS) D or better and a future concept of constructing a 2-lane facility with passing lanes where required. The proposed improvement is compatible with the future concept and does not in anyway preclude any plans to improve or hinder the operation of the facility. There are no alternative routes within the project vicinity.

State Route 129 is a commercial and recreational route, also used as an access route to the Santa Cruz County and Monterey County beaches. A high percentage of truck traffic related to the area's agricultural industry utilize this route as a means to get to Route 101 from the Watsonville area. It is also a popular bike route as it is the most accessible corridor between Santa Clara County and the Watsonville/Santa Cruz area. The Santa Cruz County Bike Plan calls for bicycle lanes along this route.

6. ALTERNATIVES

Alternative 1 – Cut & Fill

This alternative proposes to improve the safety of the segment by realigning the

curves into the north hillside on the left with 2:1 slope and acquiring new right of way. Outside the UP structure limits, 8-foot shoulders with a 3-foot side gutter on the hillside will be provided. Existing culverts, downdrains, and inlets will be replaced or modified as required.

Thickness of hot mix asphalt (HMA) and aggregate base (AB) adopted for this alternative is 1.0' and 1.85' respectively. It is also proposed to improve the vertical clearance at Chittenden UP to meet the standard of 14 feet 6 inches on the shoulders and 15 feet on the traveled way by lowering the pavement finished grade. Depending on the thickness of the existing PCC base and asphalt concrete, a mill/overlay or remove/replace operation will be pursued. It is assumed that a profile correction to meet the standard vertical clearance will have a negligible effect on the bearing capacity of the foundation of the UP structure. If agreement is reached with UPRR to remove the unused span on the bridge, the deficiency in vertical clearance will be minimized.

Existing metal beam guard railing (MBGR) at four corners of the UP structure will be removed and replaced with Type WB Transition Railing connected to Alternate Flared End Treatment at one end and Anchor Blocks at the UP structure end as appropriate.

Construction and right of way costs are estimated at \$7,962,000 (March 2011) and \$126,000 (escalated to 2014) respectively.

Alternative 2 – Retaining Wall

This alternative proposes to improve the safety of the segment by realigning the curves into the north hillside on the left and constructing a retaining wall in order to minimize acquiring new right of way and environmental impacts. The type of wall will be either a soil nail wall or a soldier pile wall with gutter and inlets on the top of the wall and underdrain pipe/weep holes at the bottom of the wall. Outside the UP structure limits, 8-foot shoulder on the eastbound and 10-foot shoulder with a 3-foot side gutter on the westbound will be provided.

Existing culverts, downdrains, and inlets will be replaced or modified as required. Structural section thicknesses, improvements on railing and vertical clearance improvement at Chittenden UP will be adopted as in Alternative 1.

Construction and right of way costs are estimated at \$11,464,000 (March 2011) and \$101,000 (escalated to 2014) respectively.

Alternative 3 – No-build

This alternative does not address the safety problem nor does it prevent run-off-the-road and cross-centerline collisions from occurring at this location. It will not meet the project need and purpose.

Analysis of Proposals

In both Alternatives 1 and 2, the old roadbed will be removed and revegetated. Replacement planting, with a temporary irrigation system and one year of plant establishment, will be required for both alternatives. The scope and cost of both build alternatives produce a fundable Safety Index.

Fact Sheet Exceptions to Mandatory Design Standards for sight distance, shoulder width and horizontal clearance at the Chittenden UP was approved for both alternatives on December 1, 2010.

Alternative 2 is recommended for programming. After survey data is received, Alternatives 1 & 2 will be reanalyzed.

7. COMMUNITY INVOLVEMENT

A presentation will be made at a regularly scheduled meeting of the Santa Cruz County Regional Transportation Commission (SCCRTC) to provide information on the purpose and need, schedule, and construction impacts of the project.

8. ENVIRONMENTAL DETERMINATION/DOCUMENTATION

The anticipated environmental document for the proposed project is a Mitigated Negative Declaration/Categorical Exclusion. The California Department of Transportation would act as the lead agency in the preparation of a joint CEQA/NEPA (California Environmental Quality Act/National Environmental Policy Act) environmental document. The final environmental determination is projected to occur within 23 months from the start of environmental studies. Assuming a start date of June 2011, the environmental document is anticipated to be completed by May 2013.

A. Cultural Resources

It is anticipated that cultural studies will be required to produce an Archaeological Survey Report (ASR), a Historic Resource Evaluation Report (HRER) and a Historic Property Survey Report (HPSR). There are no 4(f) properties within the project limits. State Historic Preservation Officer (SHPO) concurrence, a Native American coordination, and a Finding of Effect document are also required.

B. Visual Resources

A Visual Impact Assessment (VIA) is warranted in order to assess and disclose any potential adverse effects of the project on the existing visual quality of the area. In the event that Alternative 2 is implemented, it is expected that some type of aesthetic treatment will be required for the retaining wall.

C. Biological Resources

It is anticipated that surveys for Federal and State endangered species, and species

of concern will be required. Consultation with the California Department of Fish and Game and possibly 2 separate biological assessments will be required. It is currently estimated that biology will be the critical path for the delivery of the environmental document.

D. Air Quality, Noise, and Paleontology

The total area of potential disturbance would be well within the Monterey Bay Unified Air Pollution Control District (MBUAPCD) daily grading threshold of 8 acres. Appropriate minimization measures for air quality will be implemented.

The project will not add capacity, or change speeds on the highway and it will have no significant long-term effects on local noise. Adverse noise impacts from construction are not anticipated either. However, noise abatement may be required for short-term construction-related impacts. If nighttime construction is necessary, the noisiest construction activity should be done nearest the residences as early in the evening as possible.

There is a possibility of encountering paleontological resources that need to be evaluated by a professional paleontologist prior to the start of construction, with continuous monitoring at certain locations during construction.

E. Water Quality and Storm Water Runoff

A Water Quality Assessment (WQA) will be required for all alternatives to address any potential physical, chemical, or biological impacts to water quality within the project area. This project is exempt from incorporating permanent treatment BMPs because it creates less than one acre of new impervious surface. The WQA will address any critical temporary BMPs that must be incorporated into the SWPPP to eliminate any potential non-storm water discharges during construction.

F. Hazardous Waste/Materials

There are hazardous waste concerns in the project. Categories of concern are lead based paint, yellow thermoplastic paint striping, asbestos containing materials and treated wood waste. It is anticipated that an Initial Site Assessment (ISA) and a Preliminary Site Investigation (PSI) will be required to identify and assess any hazardous containing material within the limits of the project.

For new construction such as this realignment, rubberized hot mix asphalt (RHMA) is not normally recommended for the entire HMA thickness, due to lack of documented evidence of pavement performance of new construction designs. In addition, RHMA is not recommended for thicknesses more than 0.2'.

G. Permits and Approvals

The project is not within the County's Coastal Zone jurisdiction. Based on the Preliminary Environmental Analysis Report, the Department of Fish and Game may need to review the environmental document.

H. Right of Way

Right of way acquisition, utility involvement and potholing are anticipated. Right of Way lead time will require a minimum of 24 months after approved General Plans with detailed drawings showing what work will be done in the railroad right of way are provided, 18 months lead time after Utility Conflict Plans are provided, and 12 months after Certified Appraisal Maps are received. Overhead electrical pole may need to be relocated. Fiber optics cables cross the highway on the bridge, 2 feet below the railroad tracks and are carried in two 5-inch Galvanized Steel Pipes.

UPRR has been notified about the project and its purpose. California Public Utilities Commission (CPUC) was also contacted and notified about the project. A diagnostic meeting with CPUC, UPRR and the County of Santa Cruz should be scheduled 6 months before construction. Subsequently, a General Order 88-B permit shall be submitted to CPUC which will require 45 days for review and upon approval will grant Caltrans 3 years to construct.

I. Transportation Management Plan (TMP)

A TMP is required for the construction of this project. A public information campaign will be utilized to inform the public about the construction project so commuters may avoid congestion, particularly during peak periods. In addition, the design engineer, resident engineer and the District 5 Traffic Management Center (TMC) will be responsible for the implementation of portable changeable message signs (PCMS) and construction area signs.

Primarily a reversible control lane closure will be utilized to manage traffic. A 5-day full closure will be required in order to improve the vertical clearance at the UP structure, whereby traffic will be detoured along State Route 101, San Juan Rd, Carpenteria Rd thru the City of Aromas and connecting to SR-129. It is assumed that the detour lane will be open or alternatively work can be scheduled to occur when it is open. Lane/road closure charts will be required to minimize traffic impacts.

9. FUNDING

This project is proposed for amendment to the 2010 SHOPP with funding from the 20.XX.201.010 Safety Improvements Program in the 2013/2014 fiscal year. The safety index for this project is over 200. Improving horizontal alignment at this location yields a Safety Index Performance Measure of 24 collisions reduced over the 20-year life of the improvement.

The escalated Construction, Right of Way, and Support Costs are summarized in the table below, followed by the proposed project schedule.

Capital and Support Cost Summary

PROJECT COST COMPONENT	Fiscal Years				Total
	2011/12	2012/13	2013/14	2014/15	
R/W Capital		\$101			\$101
Constr. Capital			\$12,527		\$12,527
PA&ED	\$641				\$641
PS&E		\$1,497			\$1,497
R/W Capital Support		\$155			\$155
Construction Support			\$1,717		\$1,717
Total	\$641	\$1,753	\$14,244		\$16,638

- Note: (1) All costs X\$1,000. Construction Capital Costs are escalated at 3.0% per year and Support Costs are escalated at 3.1% per year. Right of Way Capital costs are escalated at 5.0% (as applicable from R/W Data Sheet) per year.
 (2) Support categories are the same as those identified by SB 45.
 (3) Construction support is shown in the RTL year and is escalated to the 2014/15 when it will be needed.
 (4) The support to capital ratio is 32%.

10. SCHEDULING

HQ Milestones	Delivery Date (Month/Day/Year)
Begin Environmental	07/01/2011
Circulate DED	12/01/2012
PA & ED	06/01/2013
Reg Right of Way	06/01/2013
Project PS&E	01/15/2014
Right of Way Certification	06/01/2014
Ready to List	06/01/2014
Approve Contract	11/03/2014
Construction Acceptance	10/01/2016
End Project	10/01/2017

11. RISK MANAGEMENT PLAN

A Risk Management Plan (RMP) has been prepared for this project. The RMP identifies several high, moderate and low risks that could possibly delay the completion of this project. All identified risks are given specific risk response

plans and assigned to appropriate risk managers who will monitor and control the risks.

A 2-yr environmental process and a 2-yr right of way process running in series outside the 4-yr SHOPP cycle is a risk identified with a very high probability occurring and a high impact on the schedule. The risk of not being able to complete appraisal and acquisition work in one year due to lack of qualified personnel is identified with moderate probability occurring and a high impact on the schedule. The UP structure requiring modifications due to a fatal flaw in the assumptions made hitherto is identified with low probability occurring but a very high impact on the schedule, cost and scope.

12. FHWA COORDINATION

This project is delegated under our stewardship Agreement with FHWA.

13. DISTRICT CONTACTS

The following individuals may be contacted for information pertaining to this Project Study Report:

- Doug Hessing** (805) 549-3386
Project Manager
- Matt C Fowler**(805) 542-4603
Environmental
- James Espinosa**.....(559) 243-3537
Design Manager
- Petros Demoz**.....(559) 243-3538
Project Engineer

14. PROJECT REVIEWS

	Date
Field Review	Jim Espinosa/Petros Demoz <hr/> 02/16/2010
District Maintenance	<hr/>
District Safety Review	<hr/>
Constructability Review	<hr/> 01/27/11
HQ Design Coordinator	Michael Janzen 11/17/10
Project Manager District Safety Review	<hr/>

District SHOPP Program Advisor	<u>Deb Larson</u>	<u>12/01/10</u>
HQ SHOPP Program Advisor	<u>Janice Benton</u>	
HQ Traffic Operations Liaison	<u>Thomas Schriber</u>	<u>11/15/10</u>

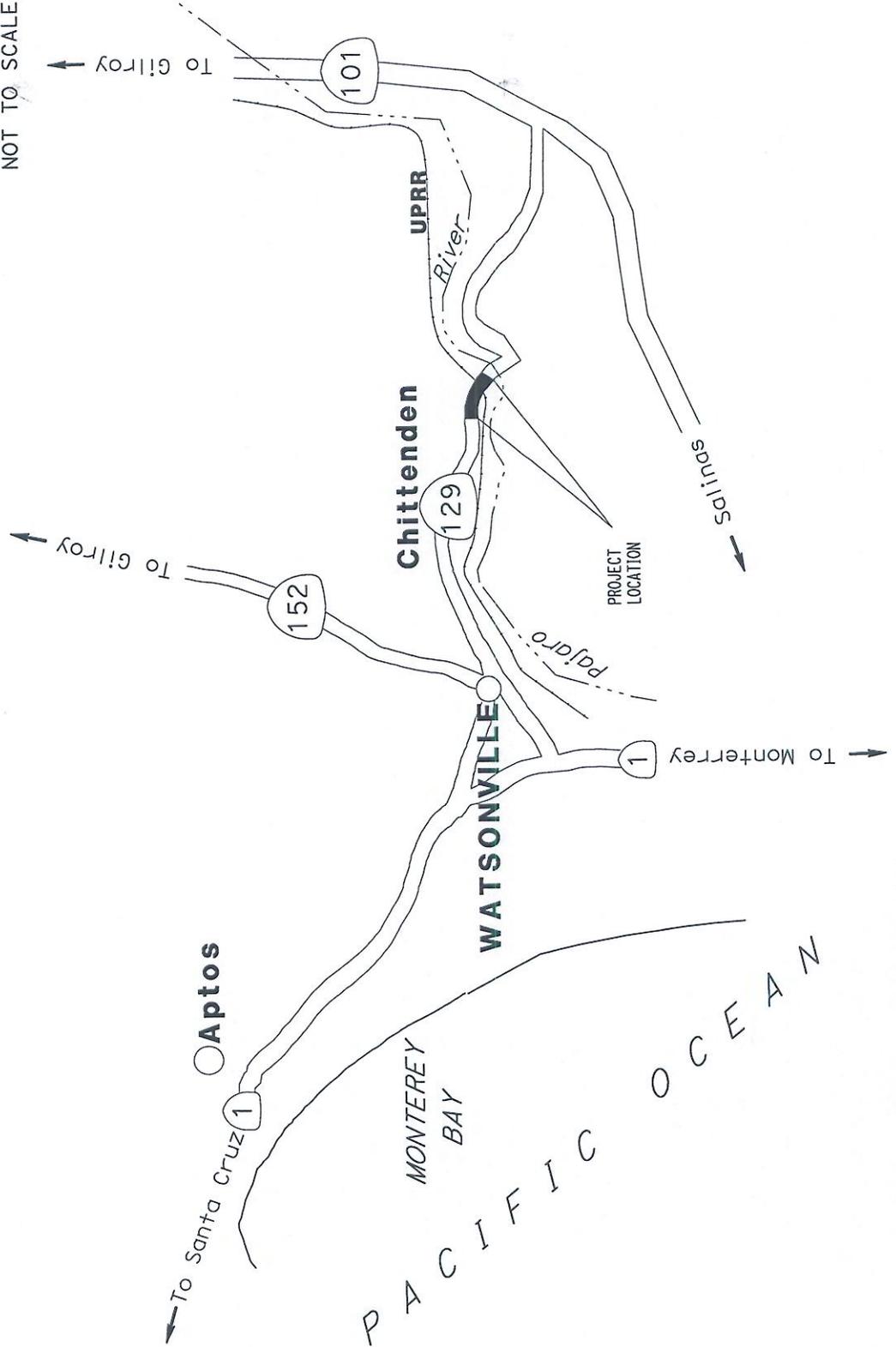
15. ATTACHMENTS

- A. Vicinity Map
- B. Typical Cross Sections
- C. Layout Plans
- D. Superelevation Diagram
- E. Construction Detail
- F. Preliminary Cost Estimates
- G. Preliminary Environmental Analysis Report
- H. Constructability Review Attendance Roster
- I. R/W Data Sheet
- J. Storm Water Data Report
- K. Traffic Management Plan Checklist
- L. Risk Management Plan

05-OT540K
Curve Realignment
SCR-129 PM 9.5/10.0



NOT TO SCALE



SANTA CRUZ COUNTY
DISTRICT 05

ATTACHMENT A

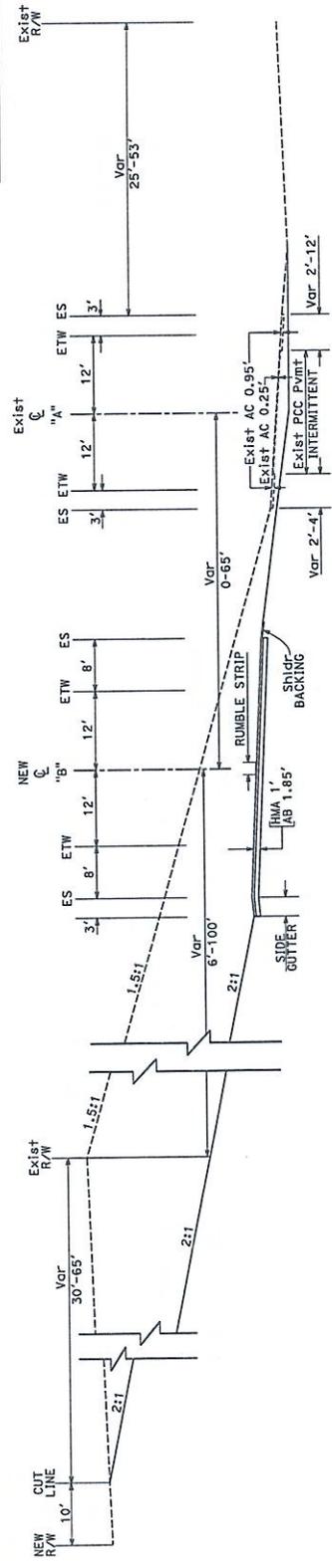
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PLANS APPROVAL DATE	

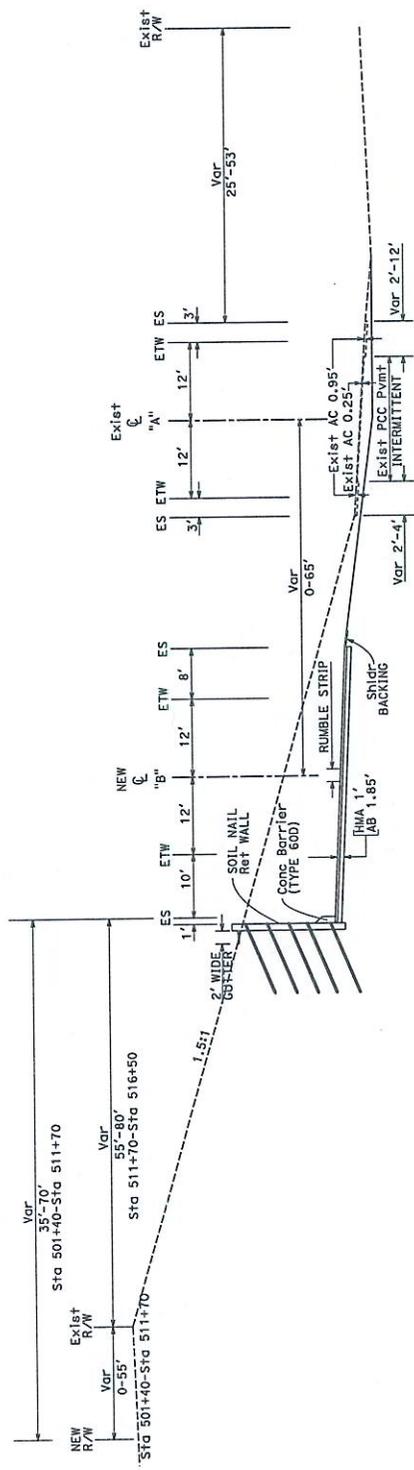
REGISTERED PROFESSIONAL ENGINEER
 CIVIL
 STATE OF CALIFORNIA

DESIGN DESIGNATION

ADT 2012	13,274	DIV 2012	1,188	D	60%
ADT 2020	4,600	DIV 2020	1,375	T	28%
ADT 2028	14,806	DIV 2028	1,561	V	55 mph



ALTERNATIVE 1 - CUT & FILL



ALTERNATIVE 2 - RETAINING WALL

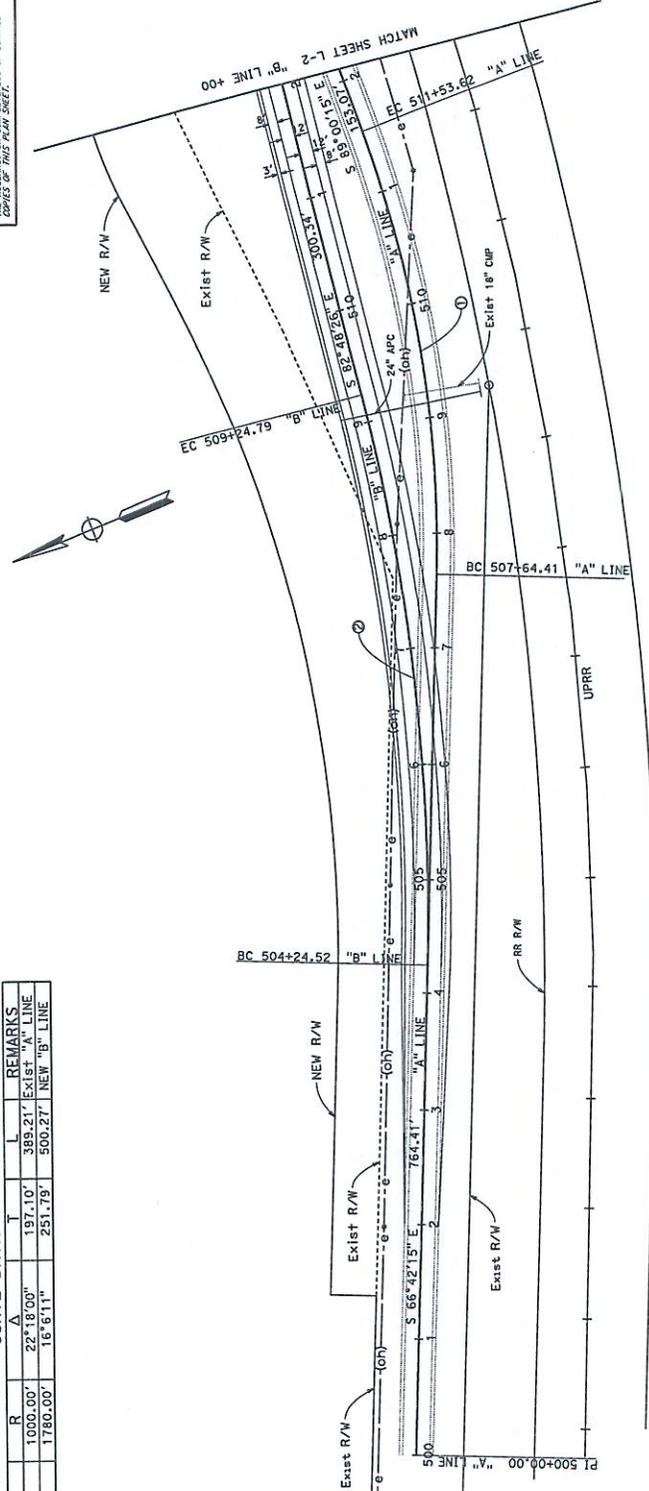
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 TIME PLOTTED => 09:27
 LAST MODIFIED

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PLANS APPROVAL DATE		NO. CIVIL	
THE BOARD OF CALIFORNIA REGISTERED PROFESSIONAL ENGINEERS HAS REVIEWED THESE PLANS AND FOUND THEM TO BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE ENGINEERING PROFESSIONAL ACT AND THE REGULATIONS OF THE BOARD OF CALIFORNIA REGISTERED PROFESSIONAL ENGINEERS THE ACCURACY OF THE INFORMATION CONTAINED HEREON IS SOLELY THE RESPONSIBILITY OF THE ENGINEER			

CURVE DATA

No.	R	Δ	T	L	REMARKS
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②	1780.00'	16°5'11"	251.79'	500.27'	NEW "B" LINE



LAYOUT
 (ALTERNATIVE 1)
 SCALE: 1"=50'

PROJECT NUMBER & PHASE: UNIT 1465 PROJECT NUMBER & PHASE: 0500000857K

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN	JIM ESPINOSA	CHECKED BY	JIM ESPINOSA
FUNCTIONAL SUPERVISOR	DESIGNED BY	PETROS DEMOZ	REVISOR	
	DATE REVISOR		DATE REVISOR	

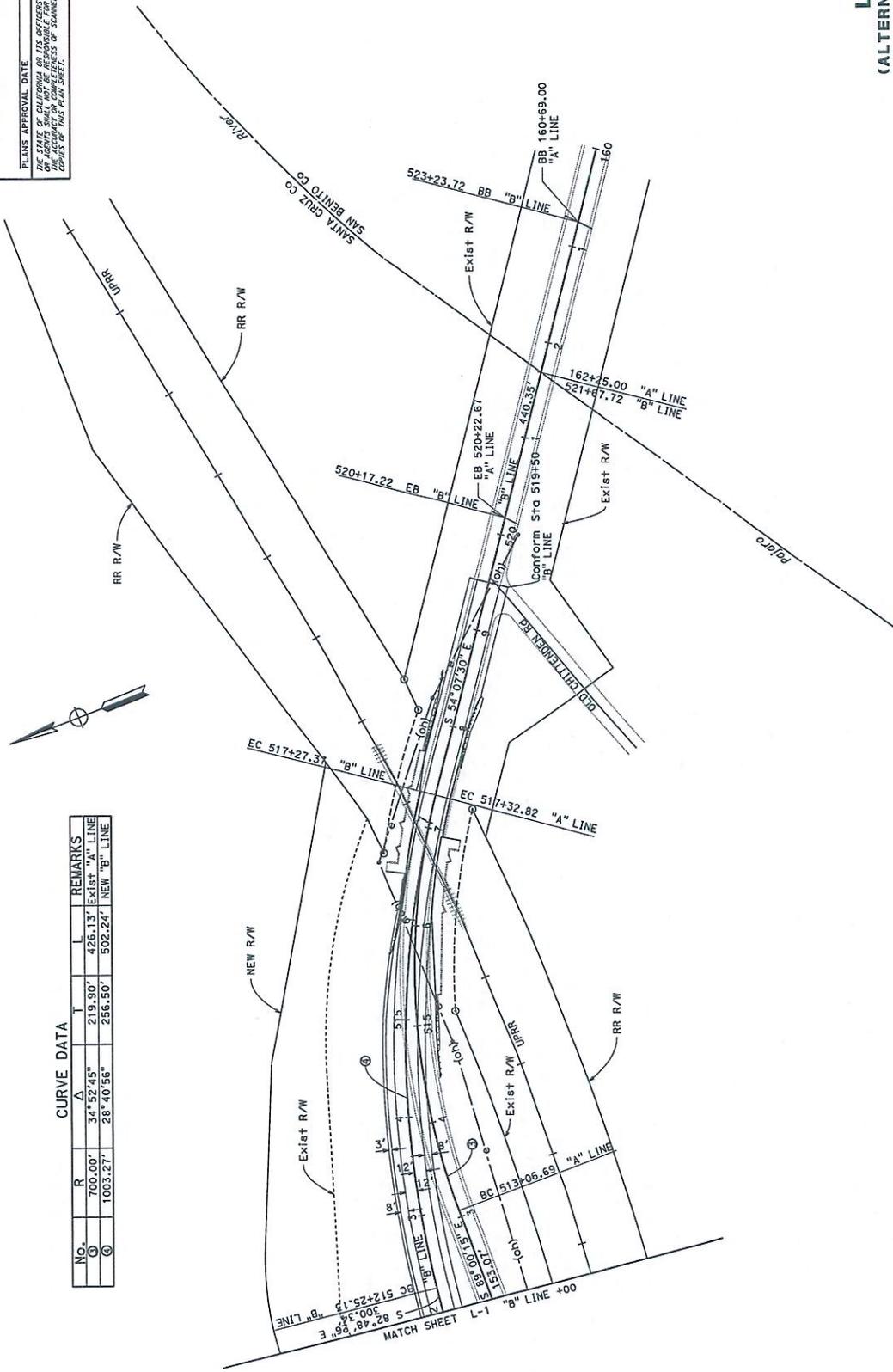
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 PLANS APPROVAL DATE
 THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION
 THE ACCURACY OR COMPLETENESS OF SCANNED
 COPIES OF THIS PLAN SHEET.



CURVE DATA

No.	R	T	Δ	L	REMARKS
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②	1003.27'	28° 40' 55"	255.50'	502.24'	NEW "B" LINE



LAYOUT
(ALTERNATIVE 1)
L-2
 SCALE: 1"=50'

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN	JIM ESPINOSA	CHECKED BY	JIM ESPINOSA	DATE REVISION	REVISION
FUNCTIONAL SUPERVISOR	DESIGNED BY	PETROS DEMOZ	DESIGNED BY	JIM ESPINOSA	DATE REVISION	REVISION

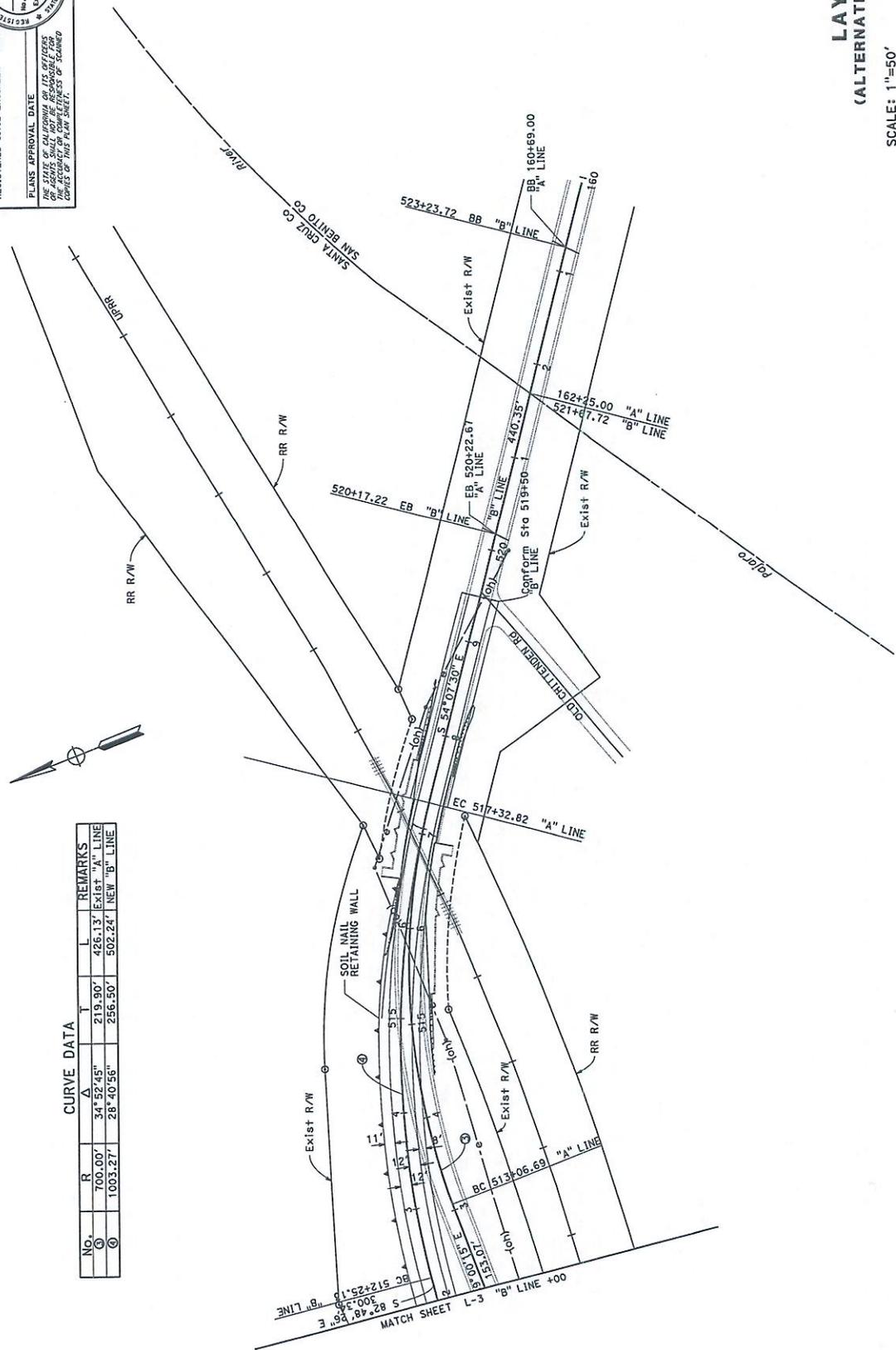
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 0500000857K

POST MILES: 05 129 9.5/10.0
 COUNTY: SCV
 ROUTE: 129

REGISTERED CIVIL ENGINEER: [Signature]
 DATE: [Blank]
 PROFESSIONAL ENGINEER: [Signature]
 CIVIL ENGINEER: [Signature]
 STATE OF CALIFORNIA
 THE STATE OF CALIFORNIA ON ITS OFFICERS
 OR AGENTS SHALL NOT BE RESPONSIBLE FOR
 COPIES OF THIS PLAN SHEET.

CURVE DATA

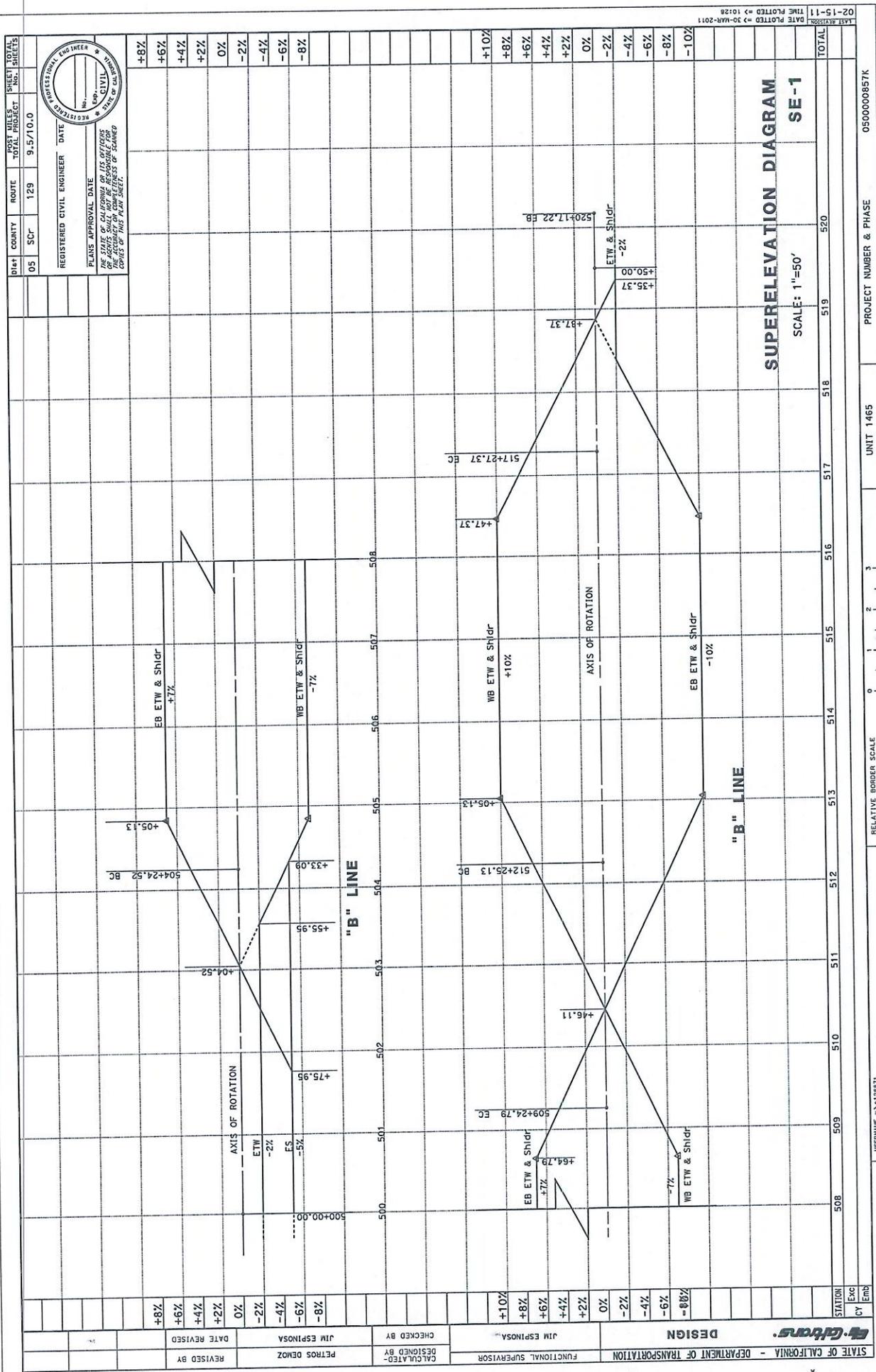
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LAYOUT
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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	JIM ESPINOSA	CHECKED BY	JIM ESPINOSA	DATE REVISED	
DESIGN	DESIGNED BY	PETROS DEMOZ	REVISOR			



COUNTY: 05 | COUNTY: SCF | ROUTE: 129 | POST MILES: 9+5/10.0 | SHEET NO.: 101 | TOTAL SHEETS: 102
 REGISTERED CIVIL ENGINEER: _____ DATE: _____
 PROFESSIONAL ENGINEER: _____
 CIVIL
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR COPIES OF THIS PLAN SHEET.

STATION	508	509	510	511	512	513	514	515	516	517	518	519	520	TOTAL
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DATE PLOTTED	02-15-11													
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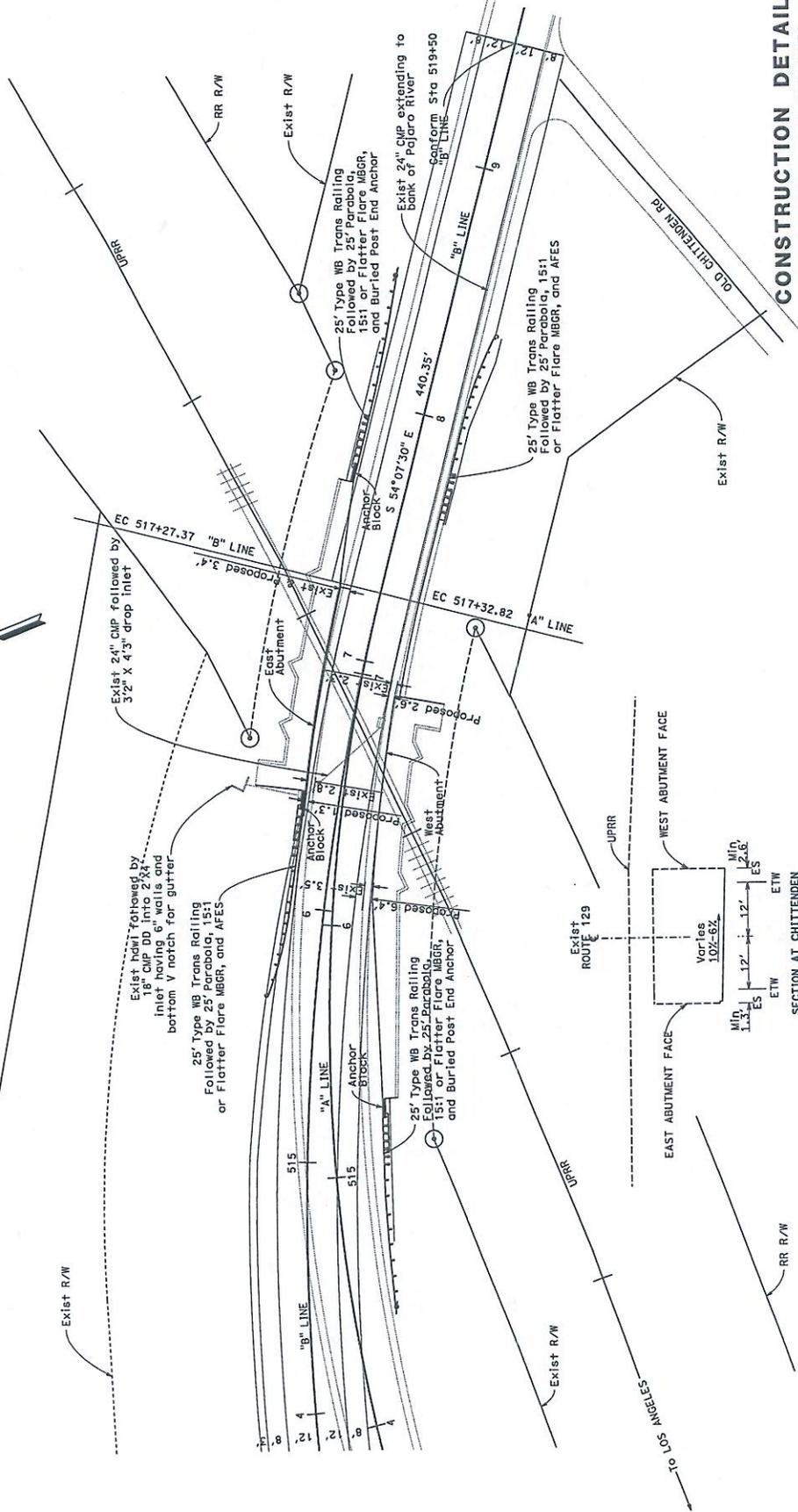
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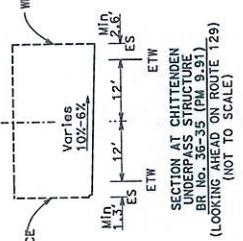
REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE CONSEQUENCES OF THIS PLAN SHEET.



CONSTRUCTION DETAIL
(CHITTENDEN UNDERPASS)
 SCALE: 1"=20' C-1



PROJECT NUMBER & PHASE: UNIT 1465
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 USER: JIM ESPINOSA
 DATE: 11/28/07
 FILE: 0500000857Ksp001.dgn
 BORDER LAST REVISED 7/2/2010

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN	JIM ESPINOSA	CHECKED BY	JIM ESPINOSA	REVISIONS
FUNCTIONAL SUPERVISOR			DESIGNED BY	PETROS DEMOZ	
			DATE REVISED		

PROJECT STUDY REPORT COST ESTIMATE



Dist-Co-Rte: 05-SCr-129
 PM: 9.5/10.0
 EA: 05-0T540K
 Program Code: 20.10.201.010

PROJECT DESCRIPTION:

Limits:	On SR-129, 0.4 MILE WEST OF OLD CHITTENDEN ROAD TO 0.1 MILE EAST OF CHITTENDEN UP IN SANTA CRUZ COUNTY
Proposed Improvement: (Scope of Work)	This project proposes to improve the horizontal alignment to minimize the run-off-the-road and cross-centerline type of collisions. Alternative 1 realigns the curves to the hill side at 2:1 slope and acquires new right of way. It widens the existing shoulders west of the railroad underpass from 3' to 8'.

Alternative: BUILD Alternative 1

SUMMARY OF PROJECT COST ESTIMATE

I. ROADWAY ITEMS	Sections 1 - 5	\$	4,793,580
II. ROADSIDE ITEMS	Sections 6 - 7	\$	198,400
III. ROADWAY ADDITIONS	Sections 8 - 10	\$	2,970,228
TOTAL ROADWAY	Total of Sections 1 - 10 shown above	\$	<u>7,962,000</u>
TOTAL STRUCTURES		\$	<u>0</u>
	SUBTOTAL CONSTRUCTION COSTS	\$	<u>7,962,000</u>
	TOTAL RIGHT OF WAY ITEMS (Escalated)	\$	<u>126,000</u>
	TOTAL PROJECT CAPITAL OUTLAY COSTS	\$	<u>8,088,000</u>

Reviewed by
 District Program Manager:

 (Signature)

5/2/2011

 (Date)

Approved by Project Manager:

 (Signature)

5/5/2011

 (Date)

Phone Number: 505 549 3386

ATTACHMENT F

I. ROADWAY ITEMS

<u>Section 1 - Earthwork</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Item Cost</u>	<u>Section Cost</u>
Roadway Excavation	185,000	CY	\$15	\$2,775,000	
Imported Borrow	0	CY	\$0	\$0	
Clearing & Grubbing	1	LS	\$20,000	\$20,000	
Develop Water Supply	0	LS	\$0	\$0	
Remove Concrete Pavement	1,300	CY	\$90	\$117,000	
Rounding (Contour Grading)				\$0	
				Subtotal Earthwork:	\$2,912,000
<u>Section 2 - Pavement Structural Section*</u>					
PCC Pvmt	Depth 0	CY	\$0	\$0	
PCC Pvmt	Depth 0	CY	\$0	\$0	
Hot Mix Asphalt	6,000	Tons	\$90	\$540,000	
Lean Concrete Base	0	CY	\$0	\$0	
Cement-Treated Base	0	CY	\$0	\$0	
Aggregate Base	5,200	CY	\$70	\$364,000	
Treated Permeable Base	0	CY	\$0	\$0	
Aggregate Subbase	0	CY	\$0	\$0	
Pavement Reinforcing Fabric	0	FT ²	\$0	\$0	
AC Dike	2,200	LF	\$10	\$22,000	
Shoulder Backing	55	Tons	\$90	\$4,950	
				Subtotal Structural Section:	\$930,950
<u>Section 3 - Drainage</u>					
Large Drainage Facilities	0	LS	\$0	\$0	
Drainage Inlets	6	EA	\$4,000	\$24,000	
Project Drainage (X-Drains, overside, etc.)	1	LS	\$50,000	\$50,000	
APC	600	LF	\$120	\$72,000	
				Subtotal Drainage:	\$146,000

* Reference sketch showing typical pavement structural section elements of the roadway. Include (if available) T.I., R-Value and date when tests were performed.

<u>Section 4 - Specialty Items</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Item Cost</u>	<u>Section Cost</u>
Retaining Walls	0		\$0	\$0	
Noise Barriers	0		\$0	\$0	
Concrete Median Barrier	0	LF	\$0	\$0	
Equipment/Animal Passes	0		\$0	\$0	
Water Pollution Control	1	LS	\$160,000	\$160,000	
Haz. Waste Investigation and/or Mitigation Work	1	LS	\$20,000	\$20,000	
Environmental Compliance	1	LS	\$155,000	\$155,000	
Resident Engineer Office	1	LS	\$20,000	\$20,000	
Barriers and Guardrails	100	LF	\$40	\$4,000	
Trans. Railing (Type WB)	4	EA	\$4,000	\$16,000	
Term. System (Type SRT)	2	EA	\$4,000	\$8,000	
				\$0	
			Subtotal Specialty Items:		\$383,000

Section 5 - Traffic Items

Thermoplastic Traffic Stripe (Sprayable)	6,100	LF	\$1	\$6,100	
Remove Painted Traffic Stripe	1,500	LF	\$1	\$1,500	
Pavement Marker (Retroreflective)	170	EA	\$4	\$680	
Temp Traffic Stripe Paint	1,500	LF	\$1	\$1,500	
Traffic Control Systems	1	LS	\$180,000	\$180,000	
Traffic Management Plan	1	LS	\$15,000	\$15,000	
Construction Area Signs	1	LS	\$4,000	\$4,000	
Traffic Handling (CMS)	1	LS	\$144,000	\$144,000	
Maintain Traffic	1	LS	\$63,000	\$63,000	
Roadside Sign One Post	9	EA	\$600	\$5,400	
Object Marker	6	EA	\$75	\$450	
			Subtotal Traffic Items:		\$421,630

TOTAL ROADWAY ITEMS Sections 1 thru 5 \$4,793,580

II. ROADSIDE ITEMS

<u>Section 6 Planting and Irrigation</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Item Cost</u>	<u>Section Cost</u>
Highway Planting	0		\$0	\$0	
Replacement Planting	1		\$180,000	\$180,000	
Irrigation Modification	0		\$0	\$0	
Relocate Existing Irrigation Facilities	0		\$0	\$0	
Irrigation Crossovers	0		\$0	\$0	
	0		\$0	\$0	
	0	LS	\$0	\$0	
	0		\$0	\$0	
	0	LS	\$0	\$0	
				\$0	
Subtotal Planting and Irrigation Section:					\$180,000

Section 7: Roadside Management and Safety Section

Vegetation Control Treatment	0	LF	\$0	\$0	
Gore Area Pavement	0	LS	\$0	\$0	
Pavement beyond the gore area	0	LS	\$0	\$0	
Miscellaneous Paving	0	LS	\$0	\$0	
Erosion Control	1	ACRE	\$8,000	\$8,000	
Slope Protection	1	LS	\$5,000	\$5,000	
Side Slopes/Embankment Slopes	0	LS	\$0	\$0	
Maintenance Vehicle Pullouts	0	LS	\$0	\$0	
Off-freeway Access (gates, stairways, etc.)	0	LS	\$0	\$0	
COZEEP	0	LS	\$0	\$0	
Points, Transit, Park & Ride)					
Ground-In Rumble Strip	18	STA	\$300	\$5,400	
	0	LS	\$0	\$0	
	0	LS	\$0	\$0	
	0	LS	\$0	\$0	
Subtotal Roadside Management and Safety Section:					\$18,400
TOTAL ROADSIDE ITEMS Sections 6 thru 7					\$198,400

III. ROADWAY ADDITIONS

Section 8 - Minor Items

Item Cost

Section Cost

$$\begin{array}{r} \underline{\$4,991,980} \\ \text{(Subtotal Sections 1 thru 7)} \end{array} \times \begin{array}{r} \underline{0.10} \\ \text{(5 to 10\%)} \end{array} = \underline{\$499,198}$$

Minor Items: \$499,198

Section 9 - Roadway Mobilization

$$\begin{array}{r} \underline{\$5,491,178} \\ \text{(Subtotal Sections 1 thru 8)} \end{array} \times \begin{array}{r} \underline{0.10} \\ \text{(10\%)} \end{array} = \underline{\$549,118}$$

Roadway Mobilization: \$549,118

Section 10 - Supplemental Work & Contingencies

Supplemental Work

$$\begin{array}{r} \underline{\$5,491,178} \\ \text{(Subtotal Sections 1 thru 8)} \end{array} \times \begin{array}{r} \underline{0.10} \\ \text{(5 to 10\%)} \end{array} = \underline{\$549,118}$$

Contingencies

$$\begin{array}{r} \underline{\$5,491,178} \\ \text{(Subtotal Sections 1 thru 8)} \end{array} \times \begin{array}{r} \underline{0.25} \\ \text{(**\%)} \end{array} = \underline{\$1,372,795}$$

Supplemental Work & Contingencies: \$1,921,912

TOTAL ROADWAY ADDITIONS Sections 8 thru 10: \$2,970,228

TOTAL ROADWAY: \$7,962,208
(Subtotal Sections 1 thru 10)

Estimate
Prepared by:

Petros Demoz
(Print or Type Name)

Phone: 559-243-3538

03/14/11
(Date)

Estimate
Checked by:

James Espinosa
(Print or Type Name)

Phone: 559-243-3537

03/14/11
(Date)

****Use appropriate percentage per PDPM, Part 3 Chapter 20.**

<http://www.dot.ca.gov/hq/oppd/pdpm/pdpm.htm> - pdpm

II. STRUCTURE ITEMS

	STRUCTURE		
	No. 1	No. 2	No. 3
Bridge Name	_____	_____	_____
Structure Type	_____	_____	_____
Width (out to out) - (ft)	<u>0</u>	<u>0</u>	<u>0</u>
Span Length - (ft)	<u>0</u>	<u>0</u>	<u>0</u>
Total Area - ft ²	<u>0</u>	<u>0</u>	<u>0</u>
Footing Type (pile/spread)	_____	_____	_____
Cost Per ft ² (incl. 10% mobilization & 25% contingencies)	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>
Total Cost for Structure	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>
Other	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>

* Add additional structures as necessary

SUBTOTAL STRUCTURES ITEMS _____ \$0

Railroad Related Costs (Not incl. in R/W Est) _____ \$0

TOTAL STRUCTURES ITEMS _____ \$0

COMMENTS:

Estimate
 Prepared by: Petros Demoz Phone: 559-243-3538 03/14/11
(Print or Type Name) (Date)

(If appropriate, attach additional pages as backup)

III. RIGHT OF WAY ITEMS

	Current Year 2010	Escalation <u>Rates</u>	Escalated Year 2014*
Acquisition, including excess lands and damages to remainder(s) and Goodwill	<u>\$40,000</u>	5.0% -	<u>\$46,305</u>
Utility Relocation (State share)	<u>\$33,750</u>	5.0% -	<u>\$39,070</u>
Clearance/Demolition	<u>\$0</u>	5.0% -	<u>\$0</u>
RAP	<u>\$0</u>	5.0% -	<u>\$0</u>
Title and Escrow Fees	<u>\$2,119</u>	5.0% -	<u>\$2,453</u>
Mitigation	<u>\$32,750</u>	5.0% -	<u>\$37,912</u>
	<u>\$108,619</u>		
TOTAL RIGHT OF WAY**			<u>\$125,740</u>

* Escalated to assumed year of advertising

** Current total value for use on Sheet 1

Estimate

Prepared by:

Petros Demoz

(Print or Type Name)

Phone: 559-243-3538

03/14/11

(Date)

(If appropriate, attach additional pages and backup including Right of Way Data Sheet and Environmental Mitigation and Compliance Cost Estimate Sheet).

PROJECT STUDY REPORT COST ESTIMATE



Dist-Co-Rte: 05-SCr-129
PM: 9.5/10.0
EA: 05-0T540K
Program Code: 20.10.201.010

PROJECT DESCRIPTION:

Limits: On SR-129, 0.4 MILE WEST OF OLD CHITTENDEN ROAD TO 0.1 MILE EAST OF CHITTENDEN UP IN SANTA CRUZ COUNTY

Proposed Improvement: (Scope of Work) This project proposes to improve the horizontal alignment to minimize the run-off-the-road and cross-centerline type of collisions. Alternative 2 realigns the curves to the hill side but installs a soil nail wall to minimize acquisition of new right of way. It widens the existing shoulders west of the railroad underpass from 3' to 8' on the EB side and 10' on the WB side where it is adjoined to a retaining wall.

Alternative: BUILD Alternative 2

SUMMARY OF PROJECT COST ESTIMATE

Table with 3 columns: Item, Description, and Amount. Rows include: I. ROADWAY ITEMS (Sections 1-5, \$2,754,580), II. ROADSIDE ITEMS (Sections 6-7, \$122,400), III. ROADWAY ADDITIONS (Sections 8-10, \$1,711,803), TOTAL ROADWAY (Total of Sections 1-10 shown above, \$4,589,000), TOTAL STRUCTURES (\$6,875,000), SUBTOTAL CONSTRUCTION COSTS (\$11,464,000), TOTAL RIGHT OF WAY ITEMS (Escalated) (\$101,000), and TOTAL PROJECT CAPITAL OUTLAY COSTS (\$11,565,000).

Reviewed by District Program Manager: [Signature] (Signature) 5/2/2011 (Date)

Approved by Project Manager: [Signature] (Signature) 5/5/2011 (Date)

Phone Number: 805 549 3386

I. ROADWAY ITEMS

<u>Section 1 - Earthwork</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Item Cost</u>	<u>Section Cost</u>
Roadway Excavation	25,000	CY	\$25	\$625,000	
Imported Borrow	0	CY	\$0	\$0	
Clearing & Grubbing	1	LS	\$20,000	\$20,000	
Remove concrete pavement	1,300	CY	\$90	\$117,000	
Structural Excav (Ret Wall)	500	CY	\$75	\$37,500	
Structural Backfill (Ret Wall)	250	CY	\$125	\$31,250	
				Subtotal Earthwork:	\$830,750
<u>Section 2 - Pavement Structural Section*</u>					
PCC Pvmnt	Depth 0	CY	\$0	\$0	
PCC Pvmnt	Depth 0	CY	\$0	\$0	
Hot Mix Asphalt	5,850	Tons	\$90	\$526,500	
Lean Concrete Base	0	CY	\$250	\$0	
Cement-Treated Base	0	CY	\$0	\$0	
Aggregate Base	5,050	CY	\$70	\$353,500	
Treated Permeable Base	0	CY	\$0	\$0	
Aggregate Subbase	0	CY	\$0	\$0	
AC Dike	800	LF	\$10	\$8,000	
Shoulder Backing	55	Ton	\$90	\$4,950	
				Subtotal Structural Section:	\$892,950
<u>Section 3 - Drainage</u>					
Large Drainage Facilities	0	LS	\$0	\$0	
Drainage Inlets	8	EA	\$2,500	\$20,000	
Gutter	1,450	LF	\$25	\$36,250	
Project Drainage (X-Drains, overside, etc.)	1	LS	\$50,000	\$50,000	
APC	600	LF	\$120	\$72,000	
				Subtotal Drainage:	\$178,250

* Reference sketch showing typical pavement structural section elements of the roadway. Include (if available) T.I., R-Value and date when tests were performed.

<u>Section 4 - Specialty Items</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Item Cost</u>	<u>Section Cost</u>
Retaining Walls	0		\$0	\$0	
Noise Barriers	0		\$0	\$0	
Concrete Median Barrier	0	LF	\$0	\$0	
Equipment/Animal Passes	0		\$0	\$0	
Water Pollution Control	1	LS	\$115,000	\$115,000	
Hazardous Waste Investigati and/or Mitigation Work	1	LS	\$20,000	\$20,000	
Environmental Compliance	1	LS	\$155,000	\$155,000	
Resident Engineer Office	1	LS	\$20,000	\$20,000	
Guardrails	100	LF	\$40	\$4,000	
Trans. Railing (Type WB)	4	EA	\$4,000	\$16,000	
Term. System (Type SRT)	2	EA	\$4,000	\$8,000	
Type 60D Safety Barrier	1,000	LF	\$50	\$50,000	
Subtotal Specialty Items:					\$388,000
<u>Section 5 - Traffic Items</u>					
Thermoplastic Traffic Stripe (Sprayable)	6,100	LF	\$1	\$6,100	
Remove Painted Traffic Strip	1,500	LF	\$1	\$1,500	
Pavement Marker (Retroreflective)	170	EA	\$4	\$680	
Temp Traffic Stripe Paint	1,500	LF	\$1	\$1,500	
Traffic Control Systems	1	LS	\$200,000	\$200,000	
Traffic Management Plan	1	LS	\$15,000	\$15,000	
Construction Area Signs	1	LS	\$4,000	\$4,000	
Traffic Handling (CMS)	1	LS	\$160,000	\$160,000	
Maintain Traffic	1	LS	\$70,000	\$70,000	
Roadside Sign One Post	9	EA	\$600	\$5,400	
Object Marker	6	EA	\$75	\$450	
Subtotal Traffic Items:					\$464,630
TOTAL ROADWAY ITEMS Sections 1 thru 5					\$2,754,580

II. ROADSIDE ITEMS

<u>Section 6 Planting and Irrigat</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Item Cost</u>	<u>Section Cost</u>
Highway Planting	0		\$0	\$0	
Replacement Planting	1		\$100,000	\$100,000	
Irrigation Modification	0		\$0	\$0	
Relocate Existing Irrigation	0		\$0	\$0	
Facilities	0		\$0	\$0	
Irrigation Crossovers	0		\$0	\$0	
	0		\$0	\$0	
	0	LS	\$0	\$0	
	0		\$0	\$0	
	0	LS	\$0	\$0	
				\$0	
Subtotal Planting and Irrigation Section:					\$100,000

Section 7: Roadside Management and Safety Section

Vegetation Control Treatmen	0	LF	\$3	\$0	
Gore Area Pavement	0	LS	\$0	\$0	
Pavement beyond the gore a	0	LS	\$0	\$0	
Miscellaneous Paving	0	LS	\$0	\$0	
Erosion Control	1	LS	\$12,000	\$12,000	
Slope Protection	1	LS	\$5,000	\$5,000	
Side Slopes/Embankment Sk	0	LS	\$0	\$0	
Maintenance Vehicle Pullouts	0	LS	\$0	\$0	
Off-freeway Access	0	LS	\$0	\$0	
(gates, stairways, etc.)					
COZEEP	0	LS	\$0	\$0	
Points, Transit, Park & Ride)					
Ground-In Rumble Strip	18	STA	\$300	\$5,400	
	0	LS	\$0	\$0	
	0	LS	\$0	\$0	
	0	LS	\$0	\$0	
Subtotal Roadside Management and Safety Section:					\$22,400

TOTAL ROADSIDE ITEMS Sections 6 thru 7 \$122,400

III. ROADWAY ADDITIONS

Section 8 - Minor Items

Item Cost

Section Cost

$$\frac{\$2,876,980}{\text{(Subtotal Sections 1 thru 7)}} \times \frac{0.10}{\text{(5 to 10\%)}} = \underline{\$287,698}$$

Minor Items: \$287,698

Section 9 - Roadway Mobilization

$$\frac{\$3,164,678}{\text{(Subtotal Sections 1 thru 8)}} \times \frac{0.10}{\text{(10\%)}} = \underline{\$316,468}$$

Roadway Mobilization: \$316,468

Section 10 - Supplemental Work & Contingencies

Supplemental Work

$$\frac{\$3,164,678}{\text{(Subtotal Sections 1 thru 8)}} \times \frac{0.10}{\text{(5 to 10\%)}} = \underline{\$316,468}$$

Contingencies

$$\frac{\$3,164,678}{\text{(Subtotal Sections 1 thru 8)}} \times \frac{0.25}{\text{(**\%)}} = \underline{\$791,170}$$

Supplemental Work & Contingencies: \$1,107,637

TOTAL ROADWAY ADDITIONS Sections 8 thru 10: \$1,711,803

TOTAL ROADWAY: \$4,588,783
(Subtotal Sections 1 thru 10)

Estimate Prepared by: Petros Demoz Phone: 559-243-3 03/14/11
(Print or Type Name) (Date)

Estimate Checked by: James Espinosa Phone: 559-243-3 03/14/11
(Print or Type Name) (Date)

****Use appropriate percentage per PDPM, Part 3 Chapter 20.**

<http://www.dot.ca.gov/hq/oppd/pdpm/pdpm.htm> - pdpm

II. STRUCTURE ITEMS

	STRUCTURE		
	No. 1	No. 2	No. 3
Bridge Name	_____	_____	_____
Structure Type	<u>Soil Nail Wall</u>	_____	_____
Width (out to out) - (ft)	_____	<u>0</u>	<u>0</u>
Span Length - (800 ft)	_____	<u>0</u>	<u>0</u>
Total Area - ft ²	<u>27,500</u>	<u>0</u>	<u>0</u>
Footing Type (pile/spread)	_____	_____	_____
Cost Per ft ² (incl. 10% mobilization & 25% contingencies)	<u>\$250</u>	<u>\$0</u>	<u>\$0</u>
Total Cost for Structure	<u>\$6,875,000</u>	<u>\$0</u>	<u>\$0</u>
Other	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>

* Add additional structures as necessary

SUBTOTAL STRUCTURES ITEMS

\$6,875,000

Railroad Related Costs (Not incl. in R/W Est)

\$0

TOTAL STRUCTURES ITEMS

\$6,875,000

COMMENTS:

Estimate

Prepared by: Petros Demoz
(Print or Type Name)

Phone: 559-243-3

03/14/11
(Date)

(If appropriate, attach additional pages as backup)

III. RIGHT OF WAY ITEMS

	Current Year 2010	<u>Escalation Rates</u>	Escalated Year 2014*
Acquisition, including excess lands and damages to remainder(s) and Goodwill	\$19,250	5.0%	\$22,284
Utility Relocation (State share)	\$33,750	5.0%	\$39,070
Clearance/Demolition	\$0	5.0%	\$0
RAP	\$0	5.0%	\$0
Title and Escrow Fees	\$1,911	5.0%	\$2,212
Mitigation	\$32,750	5.0%	\$37,912
	<u>\$87,661</u>		
TOTAL RIGHT OF WAY**			<u>\$101,479</u>

* Escalated to assumed year of advertising

** Current total value for use on Sheet 1

Estimate

Prepared by: Petros Demoz Phone: 559-243-3 03/14/11
 (Print or Type Name) (Date)

(If appropriate, attach additional pages and backup including Right of Way Data Sheet and Environmental Mitigation and Compliance Cost Estimate Sheet).



Preliminary Environmental Analysis Report

Project Information

District	<u>05</u>	County	<u>SCR</u>	Route	<u>129</u>	Post Mile	<u>9.5/10.0</u>	EA	<u>0T540K</u>
Project Title:	<u>129 Curve Realignment</u>								
Project Manager:	<u>Doug Hessing</u>					Phone #:	<u>805-549-3386</u>		
Design Manager:	<u>Jim Espinosa</u>					Phone #:	<u>559-243-3537</u>		
Design Engineer:	<u>Petros Demoz</u>					Phone #:	<u>559-243-3538</u>		
Environmental Manager:	<u>Matt Fowler</u>					Phone #:	<u>805-542-4603</u>		
Environmental Planner:	<u>Julie McGuigan</u>					Phone #:	<u>805-549-3118</u>		

PSR Summary Statement

The anticipated environmental document for the proposed project is a Mitigated Negative Declaration/Categorical Exclusion. This document level has been selected based on the ability to avoid and/or minimize any impacts to potential Tiger salamander (and designated Critical Habitat, Burrowing owl habitat and steelhead designated Critical Habitat). Any visual impacts are anticipated to be mitigated below the threshold of significance as defined by CEQA. The California Department of Transportation would act as the lead agency in the preparation of a joint NEPA/CEQA (National Environmental Policy Act/California Environmental Quality Act) environmental document. Caltrans will serve as the NEPA lead agency under its assumption of responsibility pursuant to 23 U.S. Code 327. The estimated time to obtain environmental approval is 23 months from the start of environmental studies. Assuming a start date of June 2011, environmental studies would begin July 2011 after project preliminary maps and permits to enter are completed. Final environmental document would be anticipated by May 2013.

It is anticipated multiple environmental studies and reports will be required for this project including (but not limited to): archaeology survey report, historic resource evaluation report, historic property survey report, endangered species consultation with California Department of Fish and Game and a Biological Assessment, and Section 7 consultations with a Biological Opinion issued by the US Fish and Wildlife Service (USFWS). It is currently estimated that biology will be the critical path for the delivery of the environmental document.

ATTACHMENT G

Project Description

The California Department of Transportation is proposing to improve the safety of State Route 129 (SR-129) from 0.4 mile west of Old Chittenden Road to 0.1 mile east of Chittenden Underpass in Santa Cruz County by realigning the highway to the north approximately 60 feet in order to improve the curve radius, and sight distance. The range of construction cost estimates for the two "Build" alternatives vary from \$7,962,000 to \$11,464,000 (March 2011). The range of right-of-way cost estimates vary from \$101,000 to \$126,000 (escalated to 2014). This project falls into Project Development Category 4B and will be funded from the 20.10.201.010 Safety Improvements Program of the 2010 SHOPP.

Purpose and Need

Need:

The proposed project location is experiencing run-off-the-road and cross-centerline collisions.

Purpose:

The objective of this project is to improve safety by providing an alignment that better meets driver's expectations.

Description of Work

The project proposes to improve safety within the project limits by realigning two non-standard curves and widening the shoulders.

Alternatives

Alternative 1 – Cut & Fill

This alternative proposes to improve the safety of the segment by realigning the curves to the north hill side at a 2:1 slope and acquire new right of way. Shoulders will be widened to 8' outside the underpass structure limits. Construction and right of way costs are estimated at \$7,962,000 (March 2011) and \$126,000 (escalated to 2014) respectively.

Alternative 2 – Retaining Wall

This alternative proposes to improve the safety of the segment by realigning the curves to the north hill side and constructing a retaining wall in order to minimize acquiring new right of way and environmental impacts. The type of wall will be either a soil nail wall or a soldier pile wall. Shoulders will be widened to 8' on the eastbound and to 10' on the westbound outside the underpass structure limits. Construction and right-of-way costs are estimated at \$11,464,000 (March 2011) and \$101,000 (escalated to 2014) respectively.

Alternative 3 – No-build

This alternative does not address the safety problem nor does it prevent run-off-the-road and cross-centerline collisions from occurring at this location. It will not meet the project need and purpose.

Funding

State Federal

This project is proposed for amendment to the 2010 SHOPP with funding from the 20.xx.201.010

Anticipated Environmental Approval

CEQA

NEPA

- | | |
|---|--|
| <input type="checkbox"/> Categorical Exemption/Statutory Exemption | <input checked="" type="checkbox"/> Categorical Exclusion (<input checked="" type="checkbox"/> 6004/ <input type="checkbox"/> 6005) |
| <input checked="" type="checkbox"/> Negative Declaration/Mitigated ND(<input type="checkbox"/> Appendix G) | <input type="checkbox"/> Finding of No Significant Impact |
| <input type="checkbox"/> Environmental Impact Report | <input type="checkbox"/> Environmental Impact Statement |

Anticipated Environmental Schedule

Total Time for Environmental Approval	23months
Start Date	6/1/2011
Begin Environmental	7/1/2011
Draft Environmental Document	12/1/2012
Final Environmental Document	5/1/2013
PA&ED*	6/1/2013

**PA&ED is generally 1 month following the FED date*

Assumptions and Risks

Assumptions:

- Schedule assumes that no archaeological work will occur beyond Phase I.
- It is assumed that no wetlands or “other waters of the US” will be impacted.
- Schedule assumes that a Hydraulic Study will be initiated at the beginning of PA&ED.
- It is assumed that under the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA) a Mitigated Negative Declaration/ Categorical Exclusion is the appropriate level of documentation.
- No Paleontological resources will be discovered

Risks:

- There is a medium probability (3) that California Tiger Salamander (CTS) and California Red legged Frog (CRLF) or their habitat will be found resulting in a high impact to cost and schedule by extending it 12 –24 months.

Risk Probability Ranking	
Ranking	Probability of Risk Event
5	60-99%
4	40-59%
3	20-39%
2	10-19%
1	1-9%

Evaluating Impact of a Threat on Project Objectives

Impact		Very Low	Low	Moderate	High	Very High
Objectives	Time	Insignificant Schedule Slippage	Delivery Plan Milestone Delay within quarter	Delivery Plan milestone delay of one quarter	Delivery Plan milestone delay of more than 1 quarter	Delivery Plan milestone delay outside fiscal year
	Cost	Insignificant Cost Increase	<5% Cost Increase	5-10% Cost Increase	10-20% Cost Increase	>20% Cost Increase
	Scope	Scope decrease is barely noticeable	Changes in project limits or features with <5% Cost Increase	Changes in project limits or features with 5-10% Cost Increase	Sponsor does not agree that Scope meets the purpose and need	Scope does not meet purpose and need

Mitigation

Right of Way Capital (050)

- Fish and Game Document Review Fee \$2,200
- If a cultural resource is found to be eligible for the National Register, and if the proposed project has the potential to affect the resource in ways that would impair that eligibility, mitigation may be stipulated in a Memorandum of Agreement.

Potential (to be determined)

- 401 Permit Fee \$20,000
- 1600 Permit Fee \$4,000

Potential Construction Capital (042)

- Paleontology Monitoring \$25,000
- Biological Monitoring for California Red Legged Frog \$48,000
- Biological Monitoring for California Tiger Salamander \$52,000
- Preliminary Site Investigation \$15,000

Disclaimer

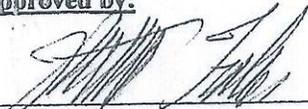
This report is not an environmental document. Preliminary analysis, determinations, and estimates of mitigation costs are based on the project description provided in this report. The estimates and

March 18, 2011

Disclaimer

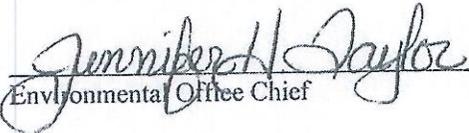
This report is not an environmental document. Preliminary analysis, determinations, and estimates of mitigation costs are based on the project description provided in this report. The estimates and conclusions provided are approximate and are based on cursory analysis of probable effects. This report is to provide a preliminary level of environmental analysis to supplement the Project Initiation Document. Changes in project scope, alternatives, or environmental laws will require a reevaluation of this report.

Approved by:



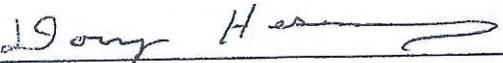
Environmental Manager

Date: 05/23/11



Environmental Office Chief

Date: 5/23/11



Project Manager

Date: 5/24/11

Environmental Technical Reports or Studies Required

Required – requires analysis including field surveys, database searches, report, or memo to file and brief explanation in the environmental document.

Not Required – Issue is not applicable to the proposed project.

Possible Critical Path – Major issue that has the potential to drive the schedule and determine the length of time to reach PA&ED (can be more than one major issue).

	Required	Clearance Memo Received	Not Required	Possible Critical Path
Biology		<input type="checkbox"/>		<input checked="" type="checkbox"/>
Endangered Species (Federal)	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
Endangered Species (State)	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
Species of Concern (CNPS, USFS, BLM, S, F)	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
Wetland Delineation	<input type="checkbox"/>		<input checked="" type="checkbox"/>	
Natural Environment Study	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
Biological Assessment (USFWS, NMFS, State)	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
Add others as necessary	<input type="checkbox"/>		<input type="checkbox"/>	
Cultural Resources				<input type="checkbox"/>
ASR	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
HRER	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
HPSR/HRCR	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
Screening Memo	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
SHPO Concurrence	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
Native American Coordination	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
Finding of Effect Document	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
Treatment Plan & MOA	<input type="checkbox"/>		<input type="checkbox"/>	
Add others as necessary	<input type="checkbox"/>		<input type="checkbox"/>	
Hazardous Waste		<input type="checkbox"/>		<input type="checkbox"/>
ISA	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
PSI	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
ADL	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
Add others as necessary	<input type="checkbox"/>		<input type="checkbox"/>	
Air Quality Analysis		<input checked="" type="checkbox"/>		<input type="checkbox"/>
Hot Spot Analysis	<input type="checkbox"/>		<input checked="" type="checkbox"/>	
MSAT	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Noise Study		<input checked="" type="checkbox"/>		<input type="checkbox"/>
Water Quality	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Community Impact Assessment				<input type="checkbox"/>
Environmental Justice	<input type="checkbox"/>		<input checked="" type="checkbox"/>	
Growth Related Impacts	<input type="checkbox"/>		<input checked="" type="checkbox"/>	
Cumulative Impacts	<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>
Farmland	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
Visual Resources		<input type="checkbox"/>		<input type="checkbox"/>
Scenic Resource Evaluation	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
Visual Impact Assessment	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
Floodplain Evaluation	<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>
Paleontology	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
Section 4(f) Evaluation	<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>
Wild and Scenic River Consistency	<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>
Greenhouse Emissions	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>

Permits Anticipated for Construction

	<u>Required</u>	<u>Not Required</u>
401 Permit Coordination (discharge into navigable waters)	? <input type="checkbox"/>	<input type="checkbox"/>
404 Permit Coordination (discharge into waters of the US including Wetlands)	? <input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/> - Nationwide		
<input type="checkbox"/> - Individual		
1600 Permit (Streambed Alteration)	? <input type="checkbox"/>	<input type="checkbox"/>
City/County Coastal Permit Coordination	<input type="checkbox"/>	<input checked="" type="checkbox"/>
State Coastal Permit Coordination	<input type="checkbox"/>	<input checked="" type="checkbox"/>
NPDES Coordination	<input type="checkbox"/>	<input checked="" type="checkbox"/>
US Coast Guard (Section 10)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
State 2081 Permit (State only incidental take of threatened or endangered species)	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion of Technical Review

Biology

The project may affect special status species found in the region such as California Red-legged Frog, California Tiger Salamander, California Burrowing owl, Western pond turtle, Saline clover and Tri-colored blackbird. The California Natural Diversity Data Base (CNDDDB) indicates that these species have been sited within 1-5 miles of project area. In addition, the Pajaro River is located adjacent to the proposed northern end of the project area and, if any design changes occur in this area, aquatic habitat and Steelhead habitat may also be impacted. (Pajaro River in this location is rated as "good" – for migratory habitat, also listed as Steelhead Critical Habitat area). A Natural Environment Study will be developed for this project. Results of the biological surveys will determine the need for a Biological Assessment and appropriate coordination with resource agencies.

Although the California Natural Diversity Data Base (CNDDDB) indicates sensitive biological resources are present within the region, the location for proposed construction lies within historically disturbed areas. Land disturbance activities are related to agriculture and the original construction methods used to build the road and bridge over 40 years ago. Further field studies, in most cases will be required to establish presence/absence of special status species.

Wild and Scenic River

There are no Wild and Scenic Rivers within the project limits.

Cultural Resources

A field survey (Phase I) of the proposed Area of Potential Effects (APE) is required. Project mapping that depicts the total project limits, construction easements, and specific construction activities (e.g., excavations, borrow sources, and equipment storage areas) are required prior to the initiation of Phase I archaeological study. This includes all proposed right of way acquisition, staging areas; borrow sources, utilities relocation, and temporary easements. Based on field inventories and additional archival research, an Archaeological Survey Report (ASR) will be prepared. Approximately two months will be needed to complete the necessary archaeological field studies and cultural resources report. Modifications in project plans may result in additional studies.

It is possible that an archaeological site will be identified during Phase I surveys which would require boundary definition if it is within the project APE. If an archaeological site is discovered within the project APE and cannot be avoided by the alternatives, Phase II excavations will be required to determine the site's eligibility to the National Register of Historic Places. If a site is determined to be eligible to the NRHP and it cannot be avoided through design, then an MOA would be prepared which would stipulate the mitigation requirements such as data recovery.

Native American Coordination

Native American Consultation with local members of the Ohlone community will be initiated, as project plans are refined.

Hazardous Waste

There are hazardous waste concerns for this project depending on the planned scope of work. Categories of concern are lead based paint, yellow thermoplastic paint stripping, asbestos containing materials, soils containing aerial deposited lead and Treated wood waste. Any bridgework would require a Preliminary Site Investigation (PSI) to assess for any asbestos containing material.

Air Quality Analysis

The total area of potential disturbance would be well within the Monterey Bay Unified Air Pollution Control District daily grading threshold of eight acres. Appropriate minimization measures will be implemented.

Water Quality

A Water Quality Assessment (WQA) will be required for Alternatives 1 and 2 to address any potential physical, chemical, or biological impacts to water quality within the project area.

Community Impact Assessment

There are no communities within the project area that would be negatively impacted by this project.

Cumulative Impacts

Cumulative impacts to resources in the project area may result from highway, residential, commercial and industrial development. A discussion of cumulative impacts will be included in the environmental document.

Farmland

If agricultural property will be acquired for this project a Farmland Impact Rating Form will be completed in coordination with the Natural Resource Conservation Service. The finding will be addressed in the environmental document

Noise

A noise report was received. There are a few residences near the highway in the vicinity of the project limits and short-term (construction) noise impacts could be of minor concern.

Visual Resources

A Visual Impact Assessment is warranted in order to assess and disclose the potential affects from the project.

Floodplain Evaluation

The project is not in the 100-year floodplain and has no regulatory status.

Paleontology

Based on the information provided, there appears to be a probability of encountering paleontological resources through the project. In the event that paleontological resources are encountered, the sites will be evaluated by a professional paleontologist prior to the start of construction. The determination may be made that construction monitoring by a professional paleontologist is required at certain locations during construction. Furthermore, if any vertebrate fossil remains are found at any location during construction operations, it is required that construction be halted in the immediate vicinity of the discovery, until the District Archaeologist or District Paleontology Coordinator have the opportunity to review the site.

Section 4(f) Evaluation

There are no known 4(f) properties within the project limits.

Greenhouse Emissions

Greenhouse emissions will be addressed in the environmental document.

List of Preparers

Air Quality Technical report by Karl Mikel	4/15/2010
Noise Technical Report by Karl Mikel	4/15/2010
Biological Scoping Report by Lisa Schicker	6/15/2010
Cultural Resource Scoping Report by Krista Kiaha	5/3/2010
Water Quality by Isaac Leyva	6/24/2010
Hazardous Waste Scoping Report by Isaac Leyva	6/24/2010
Paleontology Scoping Report by Isaac Leyva	6/23/2010
Visual Scoping Report by Bryan Parker	8/10/2010
Preliminary Environmental Analysis Report by Julie McGuigan	2/4/2011

Central Region Environmental Division Mitigation Cost Compliance Estimate Form (MCCE)

This MCCE is for: PEAR

Dist - Co - Rte - PM: <u>05-SCR-129-9.5 / 9.9</u>	EA: <u>05-0T540_</u>
Project Name: <u>Hwy 129 Curve Realignment</u>	Alternative #: _____ (If applicable)
Project Description: <u>CURVE REALIGNMENT</u>	
Environmental Manager: <u>Matt Fowler</u>	Phone Number: <u>805-542-4603</u>
Design Manager: <u>Jim Espinosa</u>	Phone Number: <u>(559) 243-3537</u>
Design Engineer: <u>James Espinosa</u>	Phone Number: <u>(559) 243-3537</u>
Project Manager: <u>Doug Hessing</u>	Phone Number: <u>(805) 549-3386</u>
Date: <u>5/11/2010</u>	
MCCE Prepared By: <u>Julie McGuigan</u>	Phone Number: <u>(805)549-3118</u>

	Right of Way Capital (Prior to Construction 050-\$'s)	Construction Capital (During & Post Construction 042-\$'s)
Archaeological		\$50,000
Historical		\$50,000
Paleontology		\$5,000
Hazardous Waste		\$20,000
Air Emissions		
Biological		
Mitigation parcels (# of acres only)		
Mitigation/Bank Credits (\$-only)		
Monitoring		
Permit Fees		
401 Permit Fee	\$20,000	
404 Permit Fee	\$0	
1600 Permit Fee	\$4,000	
Coastal Development Permit Fee		
DFG Fee	\$2,200	
Bat/Swallow Exclusion		\$50,000
Other: _____		
Other: _____		
TOTAL	\$26,200	\$175,000

Approved By:  Date: 05/12/10
 Environmental Branch Chief

This form is completed as part of the PEAR for all candidate projects, at completion of the Draft Environmental Document, at completion of the Final Environmental Document, and during preparation of the PS&E

This form is to be completed for all SHOPP, STIP, and Minor A & B projects (even those without mitigation).

Include all costs necessary to complete the commitment including: capital outlay (non-staffing support costs); cost of right-of-way or easements; long-term monitoring and reporting by consultants during the construction phase; and any follow-up maintenance post construction.

Timing of Enhancement/Endowment funds will depend on which agency is requiring the mitigation. Funds may need to be available as 050 or as 042.

Memorandum

To: DOUG HESSING

Date: 3/16/2011

Attn PETROS DEMOZ

File: CD 05 EA 0T540K Alt 1REV5

Co SCR RTE 129

JIM ESPINOSA

DESCRIPTION:
CURVE REALIGNMENT

From: Department of Transportation
Division of Right of Way Central Region

Subject: RIGHT OF WAY DATA SHEET

We have completed an estimate of the right of way costs for the above-referenced project based on the Right of Way Data Sheet Request Form dated 2/7/2011

The following assumptions and limiting conditions were identified:

Appraisal

ONE RURAL GRAZING PARCEL WITH EXTENSIVE FENCING.

LEADTIMES: RIGHT OF WAY ACTIVITIES WILL REQUIRE A MINIMUM OF 24 MONTHS LEAD TIME AFTER RECEIPT OF APPROVED GENERAL PLANS TO DELIVER TO UNION PACIFIC RAILROAD, 18 MONTHS LEAD TIME AFTER RECEIPT OF UTILITY CONFLICT PLANS, AND 12 MONTHS LEAD TIME AFTER RECEIPT OF CERTIFIED APPRAISAL MAPS AND NECESSARY ENVIRONMENTAL CLEARANCE AND APPLICABLE FREEWAY AGREEMENTS HAVE BEEN APPROVED.

Utility

THE PERMIT RECORD AND AVAILABLE PLANS PROVIDE INADEQUATE INFORMATION PERTAINING TO UTILITY FACILITIES DELINEATIONS IN THE PROJECT AREA. BASED ON MAPS PROVIDED ASSUME RELOCATE 3 WOOD ELECTRICAL POLES. POLES MAY BE IN BY ENCROACHMENT PERMIT OR MAY NOT. THIS ESTIMATE INCLUDES CAUTIONARY PARTIAL COSTS FOR POLE RELOCATION. D5 PERMIT SEARCH SHOWS FIBER OPTIC LINES AND POSSIBLE WATER LINES IN PROJECT AREA, THOUGH FO LINES APPEAR TO BE IN RAILROAD ALIGNMENT. COMPLETE VERIFICATION MAPS SHOULD BE PROVIDED TO DETERMINE LOCATIONS OF UTILITIES IN PROJECT AREA. COMPLY WITH USA ALERT REQUIREMENTS AT ALL PROJECT LOCATIONS, INCLUDING AT CONSTRUCTION SIGN LOCATIONS.

Right of Way Lead Time will require a minimum of ~~X~~ months after we receive Certified Appraisal Maps and/or Utility Conflict Plans, obtained necessary environmental clearance and applicable freeway agreements have ~~been~~ approved.

Connie Shellooe
CONNIE SHELLOOE, Sr. Right of Way Agent
San Luis Obispo Field Office
(805) 549-3471

EA: 05-0T540K
ALT: 1REV5

CO/RTE/PM-PM (Rte 1 and Rte 2) : SCR/129/9.5-10 & //-

Request Date: 2/7/2011
Revised Date:

Right Of Way Cost Estimate

	Current Year 2011	Contingency Rate	Right of Way Escalation Rate	Escalated Year 2014
Acquisition:	\$40,000	25%	5%	\$46,305
Mitigation:	\$32,750	25%	5%	\$37,912
State Share of Utilities:	\$33,750	25%	5%	\$39,070
Expert Witness:	\$0	25%	5%	\$0
Relocation Assistance:	\$0	25%	5%	\$0
Demolition and Clearance:	\$0	25%	5%	\$0
Title and Escrow:	\$2,119	25%	5%	\$2,453
Ad Signs:	\$0	25%	5%	\$0
Total Current Value:	\$108,619			\$125,740

If RW Cost Est fields are blank, Costs = \$0

Estimated Construction Contract Work (CCW):

0 R/W LEAD TIME/Mo.

Pot Hole	
Mitigation	
Land	0
Bank	0
Permit Fee	26,200

Parcel Data

# of Parcel Type X:	0		
# of Parcel Type A: less than \$10,000 non-complex	1		
# of Parcel Type B: more than \$10,000 non-complex	0		
# of Parcel Type C: complex, special valuation	0		
# of Parcel Type D: most complex and time consuming	0	# of Duals Needed:	0
Totals:	1	Totals:	0

of Excess Parcels: 0

Misc R/W Work

# of RAP Displacements:	0
# of Clearance/Demos:	0
# of Const Permits:	0
# of Condemnations:	0

RR Involvement

Railroad Facilities or Right of Way Affected?	YES
Const/Maint Agreement:	NO
Service Contract:	YES
Right of Entry:	YES
Clauses:	YES
Estimated Lead-time	24 MON

Utilities

U4-1: Owner Expense	1
U4-2: State Expense, Conventional no Fed Aid	1
U4-3: State Expense, Freeway no Fed Aid	0
U4-4: State Expense, both with Fed Aid	0
U5-7: Utility verification, no relocation/potholing	2
U5-8: Utility verification, w/ some relocation/potholing	0
U5-9: Utility verifications, relocation/potholing required	1

EA: 05-0T540K ALT: 1REV5

Parcel Area	
Total R/W Required:	2.2
Total Excess Area:	0

General Description of R/W and Excess Lands Required (zoning, use, major improvements, critical or sensitive parcels, etc.):
 ONE RURAL GRAZING PARCEL WITH EXTENSIVE FENCING.

General Description of Utility Involvement:

ROUTE 129 IS DESIGNATED CONVENTIONAL HIGHWAY IN PROJECT AREA. D5 PERMIT RECORD AND INFORMATION PROVIDED DOES NOT ALLOW AN ACCURATE PREDICTION OF POSSIBLE UTILITY CONFLICTS. ENCROACHMENT PERMITS PRIOR TO 1997 LOCATED IN D4 PERMITS OFFICE. AN ACCURATE COST ESTIMATE IS NOT CURRENTLY POSSIBLE. FIELD REVIEWED ON 11/10/10. FIBER OPTIC LINE APPEARS TO BE IN RAILROAD RIGHT OF WAY-CONFIRMED PER EMAIL BY PROJECT ENGINEER IN 2/2011. PROJECT ENGINEER STATES NO POTHOLES NECESSARY.

Is there a significant effect on assessed valuation:

Were any previously unidentified sites with hazardous waste or material found:

Are RAP displacements required:

of single family: # of multi-family: # of business/nonprofit: # of farms:

Sufficient replacement housing will be available without last resort housing:

Are material borrow or disposal sites required:

Are there potential relinquishments or abandonments:

Are there any existing or potential airspace sites:

Are environmental mitigation parcels required: CAS

Data for evaluation provided by:

Estimator:	JIM GENTRY	3/2/2011
Railroad Liaison Agent:	SAH	2/28/2011
Utility Relocation Coordinator:	MARSHALL GARCIA	3/1/2011

I have personally reviewed this Right of Way Sheet and all supporting information. I find this Data Sheet complete and current, subject to the limiting conditions set forth.

Connie Shelloe

Date
 ENTERED PMCS 3/10/2011
 BY: R TABAREZ

CONNIE SHELLOOE
 Sr. Right of Way Agent, Right of Way

Memorandum

To: DOUG HESSING

Date: 3/16/2011

Attn PETROS DEMOZ

File: CD 05 EA 0T540K Alt 2REV5

Co SCR RTE 129

JIM ESPINOSA

DESCRIPTION:
CURVE REALIGNMENT

From: Department of Transportation
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Subject: RIGHT OF WAY DATA SHEET

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The following assumptions and limiting conditions were identified:

Appraisal

ONE RURAL GRAZING PARCEL WITH EXTENSIVE FENCING.

LEADTIMES: RIGHT OF WAY ACTIVITIES WILL REQUIRE A MINIMUM OF 24 MONTHS LEAD TIME AFTER RECEIPT OF APPROVED GENERAL PLANS TO DELIVER TO UNION PACIFIC RAILROAD, 18 MONTHS LEAD TIME AFTER RECEIPT OF UTILITY CONFLICT PLANS, AND 12 MONTHS LEAD TIME AFTER RECEIPT OF CERTIFIED APPRAISAL MAPS AND NECESSARY ENVIRONMENTAL CLEARANCE AND APPLICABLE FREEWAY AGREEMENTS HAVE BEEN APPROVED.

Utility

The permit record and available plans provide inadequate information pertaining to utility facilities delineations in the project area. Based on maps provided assume relocate 3 wood electrical poles outside of retaining wall. Poles may be in by encroachment permit or may not. This estimate includes cautionary partial costs for pole relocation. D5 Permit search shows fiber optic lines and possible water lines in project area, though FO lines appear to be in railroad alignment. Complete verification maps should be provided to determine locations of utilities in project area. Comply with USA alert requirements at all project locations, including at construction sign locations.

Right of Way Lead Time will require a minimum of ~~X~~ months after we receive Certified Appraisal Maps and/or Utility Conflict Plans, ~~obtained~~ necessary environmental clearance and applicable freeway agreements have been approved.

Connie Shellooe

CONNIE SHELLOOE, Sr. Right of Way Agent
San Luis Obispo Field Office
(805) 549-3471

EA: 05-0T540K
ALT: 2REV5

CO/RTE/PM-PM (Rte 1 and Rte 2) : SCR/129/9.5-10 & //-

Request Date: 2/7/2011
Revised Date:

Right Of Way Cost Estimate

	Current Year 2011	Contingency Rate	Right of Way Escalation Rate	Escalated Year 2014
Acquisition:	\$19,250	25%	5%	\$22,284
Mitigation:	\$32,750	25%	5%	\$37,912
State Share of Utilities:	\$33,750	25%	5%	\$39,070
Expert Witness:	\$0	25%	5%	\$0
Relocation Assistance:	\$0	25%	5%	\$0
Demolition and Clearance:	\$0	25%	5%	\$0
Title and Escrow:	\$1,911	25%	5%	\$2,213
Ad Signs:	\$0	25%	5%	\$0
Total Current Value:	\$87,661			\$101,479

If RW Cost Est fields are blank, Costs = \$0

Estimated Construction Contract Work (CCW):

0 R/W LEAD TIME/Mo.

Cost Break Down	
Pot Hole	
Mitigation	
Land	0
Bank	0
Permit Fee	26,200

RR Involvement

Railroad Facilities or Right of Way Affected?	YES
Const/Maint Agreement:	NO
Service Contract:	YES
Right of Entry:	YES
Clauses:	YES
Estimated Lead-time	24 MON

Parcel Data

# of Parcel Type X:	0		
# of Parcel Type A: less than \$10,000 non-complex	1		
# of Parcel Type B: more than \$10,000 non-complex	0		
# of Parcel Type C: complex, special valuation	0		
# of Parcel Type D: most complex and time consuming	0	# of Duals Needed:	0
Totals:	1	Totals:	0

of Excess Parcels: 0

Misc R/W Work

# of RAP Displacements:	0
# of Clearance/Demos:	0
# of Const Permits:	0
# of Condemnations:	0

Utilities

U4-1: Owner Expense	1
U4-2: State Expense, Conventional no Fed Aid	1
U4-3: State Expense, Freeway no Fed Aid	0
U4-4: State Expense, both with Fed Aid	0
U5-7: Utility verification, no relocation/potholing	2
U5-8: Utility verification, w/ some relocation/potholing	0
U5-9: Utility verifications, relocation/potholing required	1

EA: 05-0T540K ALT: 2REV5

Parcel Area	
Total R/W Required:	0.54
Total Excess Area:	0

General Description of R/W and Excess Lands Required (zoning, use, major improvements, critical or sensitive parcels, etc.):
 One rural grazing parcel with extensive fencing.

General Description of Utility Involvement:

Route 129 is designated conventional highway in project area. Alt 2Rev5 proposes a retaining wall. D5 Permit record and information provided does not allow an accurate prediction of possible utility conflicts. Encroachment permits prior to 1997 located in D4 permits office. An accurate cost estimate is not currently possible. Field reviewed on 11/10/10. Fiber optic line appears to be in railroad right of way -- Confirmed per email by project engineer in 2/2011. No potholing necessary at this time per design engineer.

Is there a significant effect on assessed valuation:

Were any previously unidentified sites with hazardous waste or material found:

Are RAP displacements required:

of single family: # of multi-family: # of business/nonprofit: # of farms:

Sufficient replacement housing will be available without last resort housing:

Are material borrow or disposal sites required:

Are there potential relinquishments or abandonments:

Are there any existing or potential airspace sites:

Are environmental mitigation parcels required:

Data for evaluation provided by:

Estimator:	Jim Gentry	3/2/2011
Railroad Liaison Agent:	SAH	2/28/2011
Utility Relocation Coordinator:	Marshall Garcia	3/1/2011

I have personally reviewed this Right of Way Sheet and all supporting information. I find this Data Sheet complete and current, subject to the limiting conditions set forth.

Connie Shelloe

Date
 ENTERED PMCS 3/10/2011
 BY: R Tabarez

CONNIE SHELLOOE
 Sr. Right of Way Agent, Right of Way

Long Form - Storm Water Data Report



Dist-County-Route: 05-SCr-129
 Post Mile Limits: 9.5/10.0
 Project Type: Curve Realignment
 Project ID (or EA): 05-0000-0857-K (05-0T540K)
 Program Identification: 20.10.201.010
 Phase: PID
 PA/ED
 PS&E

Regional Water Quality Control Board(s): Central Coast, Region 3

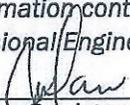
Is the Project required to consider Treatment BMPs? Yes No
 If yes, can Treatment BMPs be incorporated into the project? Yes No

If No, a Technical Data Report must be submitted to the RWQCB at least 30 days prior to the projects RTL date. List RTL Date: 02/28/2014

Total Disturbed Soil Area: 5.5 Acres Risk Level: 3
 Estimated: Construction Start Date: 09/2014 Construction Completion Date: 08/2015
 Notification of Construction (NOC) Date to be submitted: 08/2014

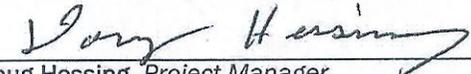
Erosivity Waiver Yes Date: _____ No
 Notification of ADL reuse (if Yes, provide date) Yes Date: _____ No
 Separate Dewatering Permit (if yes, permit number) Yes Permit # _____ No

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

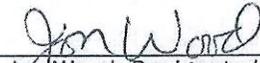


 Petros I Demoz, Registered Project Engineer Date: 03/08/11

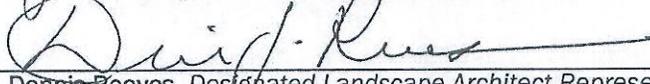
I have reviewed the stormwater quality design issues and find this report to be complete, current and accurate:



 Doug Hessing, Project Manager Date: 3/19/11



 Jon Wood, Designated Maintenance Representative Date: 3/23/11



 Dennis Reeves, Designated Landscape Architect Representative Date: 3/17/2011



 Marissa Nishikawa, Regional Design SW Coordinator Date: 3/28/2011

[Stamp Required for PS&E only]

FOR

DISTRICT 5 TRANSPORTATION MANAGEMENT PLAN CHECK LIST

District / EA: 05-0T540K
 Project Engineer: Jim Espinosa
 Date Prepared: 3/3/2011

Co.-Rte-PM: SCR-129-9.5/10.0
 Description: Curve Realignment
 Working Days: Alternative 1 - 180 days

Check each box and reference your attachments to the item(s) number(s) shown on the list.

Required	Not required	Not Applicable	COMMENTS
----------	--------------	----------------	----------

1.0 Public Information

- 1.1 Public Awareness Campaign
- 1.2 Other Strategies

x			Include \$15,000 in 066063 (TMP - Public Info.)
	x		

2.0 Motorist Information Strategies

- 2.1 Changeable Message Signs
- 2.2 Construction Area Signs
- 2.3 Highway Advisory Radio (fixed and mobile)
- 2.4 Planned Lane Closure Web Site
- 2.5 Caltrans Highway Information Network (CHIN)

x			Provide one per direction @\$200/unit
x			(Add'l CMS at Jcts 1 & 101 to advise
	x		of delays and/or detours)
x			Construction to provide information to TMC
	x		Construction to provide information to TMC

3.0 Incident Management

- 3.1 COZEEP
- 3.2 Freeway Service Patrol

		x	
	x		

4.0 Traffic Management Strategies

- 4.1 Lane/Ramp Closures Charts
- 4.2 Total Facility Closure
- 4.3 Coordination with adjacent construction
- 4.4 Contingency Plan
 - 4.4.1 Material/Equipment Standby
 - 4.4.2 Emergency Detour Plan
 - 4.4.3 Emergency Notification Plan
- 4.5 SSP 12-220 and Others
- 4.6 Other Strategies:
 - *Detour must be approved by local agency
 - *Include \$350/day in Supplemental Items 066070
 - *Monitor delays and queue length. If queue length exceeds 1.5 miles or delay exceeds 15 minutes, modify operations.
 - *Special Days: Watsonville Air Show & Santa Cruz Co. Fair
 - *Use CMS to notify of lane closures 5 working days prior to construction.

x			Provided during PS&E
x			
X			
x			Pick up lane closure if queue exceeds 1.5 mi.
x			Construction/Contractor to provide - as needed
x			Construction/Contractor to provide - as needed
x			Construction/Contractor to provide - as needed
x			Standard
x			
x			This is in addition to any other Maintain Traffic funds.
x			SSP 12-128
x			

5.0 Anticipate Delays

- 5.1 Lane Closure Review Committee (for anticipated delays over 30 minutes)
- 5.2 Planned highway closures

		x	
x			5 days full closure with detour

- 5.3 Minimal delay anticipated - no further action required provided above strategies are implemented

yes no If no, explain additional measures on attached sheet.

Shayne Sandeman
 District TMP Coordinator

DISTRICT 5 TRANSPORTATION MANAGEMENT PLAN CHECK LIST

District / EA: 05-0T540K
 Project Engineer: Jim Espinosa
 Date Prepared: 3/3/2011

Co.-Rte-PM: SCr-129-9.5/10.0
 Description: Curve Realignment
 Working Days: Alternative 2 - 200 days

Check each box and reference your attachments to the item(s) number(s) shown on the list.

1.0 Public Information

- 1.1 Public Awareness Campaign
- 1.2 Other Strategies

Required	Not required	Not Applicable	COMMENTS
----------	--------------	----------------	----------

x			Include \$15,000 in 066063 (TMP - Public Info.)
	x		

2.0 Motorist Information Strategies

- 2.1 Changeable Message Signs
- 2.2 Construction Area Signs
- 2.3 Highway Advisory Radio (fixed and mobile)
- 2.4 Planned Lane Closure Web Site
- 2.5 Caltrans Highway Information Network (CHIN)

x			Provide one per direction @\$200/unit
x			(Add'l CMS at Jcts 1 & 101 to advise
	x		of delays and/or detours)
x			Construction to provide information to TMC
	x		Construction to provide information to TMC

3.0 Incident Management

- 3.1 COZEEP
- 3.2 Freeway Service Patrol

		x	
	x		

4.0 Traffic Management Strategies

- 4.1 Lane/Ramp Closures Charts
- 4.2 Total Facility Closure
- 4.3 Coordination with adjacent construction
- 4.4 Contingency Plan
 - 4.4.1 Material/Equipment Standby
 - 4.4.2 Emergency Detour Plan
 - 4.4.3 Emergency Notification Plan
- 4.5 SSP 12-220 and Others
- 4.6 Other Strategies:
 - *Detour must be approved by local agency
 - *Include \$350/day in Supplemental Items 066070
 - *Monitor delays and queue length. If queue length exceeds 1.5 miles or delay exceeds 15 minutes, modify operations.
 - *Special Days: Watsonville Air Show & Santa Cruz Co. Fair
 - *Use CMS to notify of lane closures 5 working days prior to construction.

x			Provided during PS&E
x			
X			
x			Pick up lane closure if queue exceeds 1.5 mi.
x			Construction/Contractor to provide - as needed
x			Construction/Contractor to provide - as needed
x			Construction/Contractor to provide - as needed
x			Standard
x			
x			This is in addition to any other Maintain Traffic funds.
x			SSP 12-128
x			

5.0 Anticipate Delays

- 5.1 Lane Closure Review Committee (for anticipated delays over 30 minutes)
- 5.2 Planned highway closures

		x	
x			5 days full closure with detour

- 5.3 Minimal delay anticipated - no further action required provided above strategies are implemented

yes no If no, explain additional measures on attached sheet.

Shayne Sandeman
 District TMP Coordinator

DIR - EA 05-07540K Project Name Hwy 123 Realignment
 Co-RW-PID SC-129-9.510.0 Telephone Number 805-549-3386
 Date 4/4/2011
 Project Mgr Doug Heising

PROJECT RISK MANAGEMENT PLAN													
Priority	ID	Status	Identification			Qualitative Analysis			Response Strategy			Monitoring and Control	
			Task/Opportunity Event	Risk Trigger	Type	Probability	Impact	Risk Matrix	Probability (SI)	Effect (days)	Strategy	Response Actions including alternatives and consequences	Responsibility (Task Manager)
Active	1	PID	The schedule for the critical path is longer than 1 year to achieve Ready to Let. A two year environmental process and a two year RW process running in parallel is a two year cycle. We will have the bid 4 years of the 2010 SHOPP Cycle because it will not be programmed at the beginning of the cycle (7/23/10-2/11).	Schedules received in the PID phase.	Schedule	Very High	High	High	90%	Avoidance	Meet with Environmental and RW representatives and see if we can plan a schedule that is a shorter timeline. We will be willing to take risk.	Doug Heising	Last date changes made to risk and comments
Active	2	RW	Right of Way has agreed to start the two year time period for dealing with the RW as soon as they receive details of the design. Design will be performed at the RW structure.	The schedule is based on the two year time period for dealing with the RW as soon as they receive details of the design. Design is unable to provide these details.	Schedule	High	Moderate	High	50%	Acceptance	We are making a very aggressive schedule in an effort to deliver this safety project as soon as possible.	Sally Hooper/Jim Espinosa	07/22/2010. RR cooperation is a risk that Caltrans has limited control over. They may agree with us that we are not touching the structure and therefore they have no involvement. They may require construction easements.
Active	3	RW	Risk of not being able to complete appraisal and acquisition work in the one year scheduled due to lack of qualified personnel in the RW Department.	Notification by RW that they will not be able to make the schedule.	Schedule	Moderate	High	High	40%	Acceptance	The highly aggressive project schedule is being evaluated. Any delays may require the schedule to be pushed out.	Jim Gerny/Nancy Johnson	7/22/2010.
Active	4	RW	Private property owners don't support the project and are not willing to sell needed property.	Need for condemnation.	Schedule	Low	Moderate	Moderate	30%	Acceptance	If condemnation is necessary we will need to reevaluate the schedule.	Nancy Johnson	7/22/2010
Active	5	Surveys	Unable to get surveys done as soon as the project is programmed.	Design will only have six weeks to get surveys done as soon as the project is programmed.	Schedule	Moderate	Moderate	Moderate	50%	Acceptance	The PTP project will probably be a construction when the 0 phase on this project is opened. We may be able to get crew from the central region to help out.	Bob Fredericks	Bob Fredericks was on vacation today but Nick Talarian said Surveys will find a way to get it done. He also said that sending in the surveys request before the 0 phase is opened would not help save any time.
Active	6	Design	Proposed layout have flat law that may require modifications to make acceptable.	Survey reveal that the proposed curve layout will not work with the actual conditions. Structure wing was or other as ball conditions expose conflicts.	Schedule	Low	Very High	High	70%	Avoidance	We will try to address in the K phase. PM to talk to Design about this. It is not a significant risk. If it is we may take another look at what surveys might be needed in the phase to address this risk.	Jim Espinosa	
Active	7	Design/RW	Plotting does not happen in a timely manner.	RW cannot schedule contractor for plotting work	Schedule	Moderate	High	Moderate	40%	Avoidance	Design to send Verification of Design to RW as soon as they are to the offices. The utilities returns them, Design to send Conflict map to RW. RW needs to schedule this.	Jim Espinosa/John Magrison	
Active	8	RW	Utilities need to be moved and are not scheduled to start.	Utility category delays utility relocation, which delays contract work	Schedule	Low	High	Moderate	20%	Avoidance	Design to work closely with Utility Co. to expedite approval of relocation plans	John Magrison	
Active	9	RW	Delay in receiving Permit to Enter	PTE is not received in timely manner	Schedule	Low	High	High	20%	Avoidance	Work closely with RW & Env. to expedite process	Jamie Lupo	This risk will impact Environmental studies and survey work. PTE request has been delivered to RW.
Active	10	Traffic	Traffic Management Plan for detours may be impacted by other projects	Ramps closed due to other projects during detour periods	Schedule	Low	Moderate	Moderate	20%	Avoidance	Monitor construction schedules to determine best time for detour	Bruce Pastorek	EA 05-015801. San Juan Road Interchange on SR-101 is on PS&E phase and construction is anticipated to occur between 10/09/2012 to 12/12/2014. PE bid me that the exit ramp which the detour will be using is at all times open. But the risk is still there.

Dist - EA 05-01540K Project Name Hwy 129 Realignment
 Corridor PM SC-129A.5100
 Date 1/12/2011
 Project Mgr Doug Hensing Telephone Number 805-540-3386

PROJECT RISK MANAGEMENT PLAN															
Status #	ID	Date Identified / Project Phase	Functional Achievement	Identification			Qualitative Analysis			Quantitative Analysis			Response Strategy	Responsibility (Task Assigned) (ID)	Mentorship and Control
				Threat/Opportunity Event	Risk Trigger (ID)	Type	Probability (ID)	Impact (ID)	Risk Matrix	Probability (ID)	Impact (ID)	Effect (ID)			
Active 1		PID	PM	The schedule for the critical path activities dictate a schedule that is longer than 4 years to achieve Ready to Start (RTS) for the 4 year SHOPP and 2 year RW process starting in 2014. In addition the project will not be programmed at the beginning of the cycle (7/2010-6/2014).	Schedule received in the PID Phase.	Schedule	Very High	High	Very High	80%	Avoidance	Meet with Environmental and RW representatives and see if there is a shared timeline. We will need to be willing to take risks.	Doug Hensing	Last date changes made to risk and Comments: 1/13	
Active 2		7/22/2010 PID	RW	Right of Way has agreed to start the RR engineering review starting one year prior to the RR as soon as they receive details of the work that will be performed at the RR structure.	The schedule is based on the RR engineering review starting one year prior to the RR as soon as they receive details of the work that will be performed at the RR structure.	Schedule	High	Moderate	High	50%	Acceptance	We are making a very aggressive schedule in an attempt to get the RR projects as soon as possible.	Sally Hopkins/Jim Ephrossa	07-22-2010, RR cooperation is a risk that Caltrans has lined covered over. They may agree with us that we are not touching the structure and therefore they have no involvement. They may require construction treatment.	
Active 3		7/22/2010 PID	RW	Risk of not being able to complete appraisal and acquisition work in the time frame of the RR Department.	Notification by RW that they are unable to make the schedule.	Schedule	Moderate	High	High	40%	Acceptance	The high aggressive schedule will need to be monitored and constantly evaluated. Any delays may be pushed out.	Jim Gentry/Hancy Johnson	7-22-2010.	
Active 4		7/22/2010 PID	RW	Private property owners don't support the project and are not willing to call needed property.	Need for condemnation.	Schedule	Low	Moderate	Moderate	30%	Acceptance	If condemnation is necessary we will need to reevaluate the schedule.	Nancy Johnson	7/22/2010	
Active 5		7/22/2010 PID	Surveys	Unable to get surveys done as soon as the project is programmed.	Design will only have six months to get design details on what we will be doing. They will need surveys and as-built right away.	Schedule	Moderate	Moderate	Moderate	50%	Acceptance	The PIP project will probably be in construction when the 0 phase on this project is to get crane from the central region to help out.	Bob Friedrichs	Bob Friedrichs was on vacation today but Nick Tullman said Surveys will need a way to get it done. He also said that sending in the survey request before the 0 phase is opened would not help any time.	
Active 6		7/22/2010 PID	Design	Proposed layout have fatal flaw that requires RR structure modifications to make acceptable.	Surveys reveal that the proposed curve layout will not work under the conditions. Structure wing wall or other as built conditions expose conflicts.	Schedule Cost Scope	Low	Very High	Very High	70%	Avoidance	We will try to address in the design phase. Design about their confidence that this is not a significant risk. If it is we will need to do what surveys might be needed in the K phase to alleviate this risk.	Jim Ephrossa		
Active 7		7/22/2010 PID	Design/RW	Permitting does not happen in a timely matter.	RW cannot schedule RW contractor for pathing work.	Schedule	Moderate	High	High	40%	Avoidance	Design to send verification maps to RW. RW sends them to the utilities. The Design to send Conflict maps to RW. RW sends them to the utilities.	Jim Ephrossa/John Magorian		
Active 8		7/22/2010 PID	RW	Utilities need to be moved and are not moved by the time construction is scheduled to start.	Utility company delays utility relocation, which delays contract work.	Schedule Cost	Low	High	High	20%	Avoidance	Design to work closely with RW & Env. To expedite process approval of relocation plans.	John Magorian		
Active 9		12/24/2010	RW	Delay in receiving Permit to Enter	PTE is not received in timely manner	Schedule	Low	High	High	20%	Avoidance	Work closely with RW & Env. To expedite process.	James Lupo	This risk will impact Environmental studies and survey work. PTE request has been delivered to RW.	
Active 10		12/24/2010	Traffic	Traffic Management Plan for detours may be impacted by other projects	Ramps closed due to other projects during detour periods	Schedule Cost	Low	Moderate	Moderate	20%	Avoidance	Monitor construction schedules to determine best time for detour	Bruce Pastorek	EA 05-315601, San Juan Road interchange on SR-101 is on PS&E phase and construction is anticipated to occur between 10/09/2012 to 12/12/2014. PE told me that the exit ramp which the detour will be using is at times open. But the risk is still here.	