



Project Study Report

Circle Point Curve Improvement

01-HUM-299 PM 25.0/25.7

20.10.201.010

PPNO 2308

01-0A490K

01 0002 0308

August 2011



PROJECT LOCATION

In Humboldt County about 13 miles west of Willow Creek from 0.4 mile east to 1.1 miles east of Chezum Road



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

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



Chris Gaido
CHRIS GAIDO, P.E.
 Design R1

B. 26.11

Karen Hawkins 8/26/11
KAREN HAWKINS Date
 North Region Right of Way Manager

APPROVAL
 RECOMMENDED:

Richard Mullen 9/1/11
RICHARD MULLEN Date
 Project Manager, District 1
 Humboldt County Project Manager

Mark Suchanek 9/1/11
MARK SUCHANEK Date
 Deputy District Director
 Maintenance and Operations, District 1
 SHOPP Program Manager

APPROVED BY:

Charles C. Fielder 9/1/2011
CHARLES C. FIELDER Date
 District Director, District 1

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1. INTRODUCTION

The Circle Point Curve Project proposes to reduce collisions and improve safety along State Route (SR) 299 in Humboldt County. The project is located about 13-miles west of Willow Creek. A Location Map is included as Attachment A.

Please see the project cost estimate, included as Attachment C, for specific items of work included in this project.

Project Limits: (Dist-Co-Rte, PM):	01-HUM-299, PM 25.0/25.7
Number of Alternatives:	2
Alternative Recommended for Programming:	Build Alternative
Programmed or Proposed Capital Construction Cost:	\$3,800,000 (2011 dollars)
Programmed or Proposed Capital Right of Way Cost:	\$63,000 (2011 dollars)
Funding Source:	SHOPP
Type of Facility (conventional, expressway, freeway):	Conventional
Number of Structures:	None
Anticipated Environmental Determination/Document:	CE
Legal Description:	In Humboldt County about 13 miles west of Willow Creek from 0.4 miles east to 1.1 miles east of Chezem Road
Project Category:	5

It is proposed that the build alternative be funded from the 201.010 Safety Improvement program amended into the 2010 State Highway Operation and Protection Program (SHOPP).

2. BACKGROUND

Project History

This project was initiated by the District 1 Office of Traffic Safety to reduce collisions within the project limits. The project includes widening to 8-ft shoulders and a 4-ft median, improving superelevation, improving subsurface drainage, modify surface drainage, and installing centerline and shoulder rumble strips.

Existing Facility

Designated as a scenic byway, SR 299 is a two-lane conventional highway located in rural, mountainous terrain. SR 299 is a principle arterial and a significant west-east route in northern California between the north coast, Route 101, and the valley, Interstate 5.

The existing highway, within the project limits, consists of two 12-ft traffic lanes in the eastbound direction and one 12-ft traffic lane in the westbound direction. Typical paved shoulders are 2 to 4-ft wide. The existing horizontal alignment consists of a single 650' radius curve with a delta of 225°. On the west end of the project there is a 440' tangent prior to an 800' radius curve. On the east end of the project there is a 2510' tangent prior to a 2700' radius curve. The vertical alignment is uphill in the eastbound direction and consists of a 4.5% slope with minor fluctuations.

There are no structures or railroads within the project limits.

Generally, within the project limits there are steep cut slopes on the right side and steep embankment slopes on the left. There is one short section of through-cut within the project limits.

The design speed within the project limits is 45 mph. The posted speed is 55 mph. There are advisory curve warning speed signs on both ends of the project limits. The east and westbound curve approaches have 40-mph advisory curve signage.

State Route 299 to the east and west of the project limits is a two-lane rural conventional highway through mountainous terrain. The roadway adjacent to the project limits consists of horizontal curves separated by short tangent sections. The vertical alignment continues uphill to east until Berry Summit (PM 28.4) thereafter predominately downhill to the east at grades between 6 and 7% until the East Fork Willow Creek Bridge at PM 33.21. The posted speed is 55 mph; design speed is 45 mph. There are various truck climbing lanes throughout the corridor. The typical shoulder width varies from 2 to 10 feet.

3. PURPOSE AND NEED STATEMENT

Need: The project is needed to reduce the number of collisions that have occurred within the project limits. The actual collision rate for fatal plus injury collisions was about 7.2 times greater than the statewide average for similar highways. The actual total collision rate was about 5.8 times greater than the statewide average for similar highways.

Purpose: The purpose of this project is to enhance safety by reducing the number and severity of collisions within the project limits.

4. DEFICIENCIES

This safety project was proposed due to the concentration of collisions occurring within the project limits. Providing 8-ft shoulders, 4-ft median, and improving the superelevation rate and superelevation transitions within the project limits is expected to reduce the occurrence and severity of collisions.

Vehicle Traffic Data:

The current and forecasted traffic data is shown in the table below. The data was provided by the North Region Office of Travel Forecasting and Modeling.

Base year AADT (2008)	3,700
Construction Year AADT (2015)	3,960
10-year AADT (2025)	4,330
20-year AADT (2035)	4,700
Design Hourly Volume (2008)	520
Design Hourly Volume (2015)	560
Design Hourly Volume (2025)	610
Design Hourly Volume (2035)	660
Directional Split %	60
Truck %	11.0
10-year TI	9.0
20-year TI	9.5

Collision Data:

The District 1 Traffic Safety Office reviewed the collision history for the 5-year period from 4/1/2004 to 3/31/2009. During this period within the project limits there were 22 collisions and no fatalities. Twelve of the 22 collisions involved injuries and the other ten involved property damage only. The majority of collisions involved single vehicles in Run-Off-Road (ROR) collisions. The collision data is summarized in the following table.

Collision Data Summary (4/1/2004 to 3/31/2009)

Total	Fatal	Injury	PDO ⁽¹⁾
22	0	12	10

(1) Property Damage Only

Collision rates within the project limits were calculated and compared to the statewide average utilizing collision data from the Traffic Accident Surveillance and Analysis System (TASAS). The collision rates from TASAS Table B are shown below.

Collision Rates⁽¹⁾ (4/1/2004 to 3/31/2009)

Actual			State Average		
Fatal	F+I ⁽²⁾	Total	Fatal	F+I	Total
0	3.02	5.53	0.027	0.42	0.95

(1) Rates expressed as number of collisions per million vehicle miles traveled

(2) Fatal plus injury collisions

5. CORRIDOR AND SYSTEM COORDINATION

Future projects planned for the general area of the proposed project are listed in the table below.

Project Location	EA (EFIS)	Project Description	Fiscal Year of Construction
HUM-299 PM R5.7/38.6 Rumble to Willow Creek	01-49830 0100000693	Centerline and Shoulder Rumble Strips	14/15
HUM-299, PM 19.3/19.9 Acorn Curve	01-0A360 0100020289	Curve Improvement, Widen Shoulders, Rumble Strip	14/15
HUM-299, PM 21.1/21.4 Lupton Cr Curve	01-0A520 0100020425	Curve Improvement, Widen Shoulders, Rumble Strip	14/15
HUM-299, PM 23.6/25.9 Sabertooth Curve	01-0A370 0100020290	Curve Improvement, Widen Shoulders, Rumble Strip	14/15
HUM-299, PM 30.2/30.6 Cedar Gap Curve	01-0A320 0100020307	Curve Improvement, Widen Shoulders, Rumble Strip	14/15
HUM-299, PM R8.3 Blue Lake Sink	01-47440 0100000326	Repair slide and upgrade drainage	10/11
HUM-299, PM 20.2/20.5 Green Point Sink	01-42370 0100000172	Reconstruct roadway	11/12
HUM-299, PM 30.7 Low Gap Buttress	01-43740 0100000194	Buttress slope and reconstruct roadway	11/12

6. ALTERNATIVES

One build alternative and the no-build alternative were evaluated for this project.

Build Alternative

The Build Alternative proposes to widen on one side and shift the existing roadway to provide 8-ft shoulders and a 4-ft median. Widening on one side only and shifting alignment eliminates

impacts to the steep cut slopes. The existing traveled way will be overlaid with variable-depth HMA to improve the superelevation. Centerline and shoulder rumble strips will be installed. Preliminary Layouts and Typical Section sheets have been prepared and are included as Attachment B. The existing super elevation of approximately 6-7% will be increased to a maximum superelevation rate of 8%.

The existing pavement within the project limits is in fair to good condition, based on a visual survey. A Preliminary Materials Recommendation was prepared and included as attachment. The roadway was originally constructed in 1968 with various overlays, digouts and seal coats considered standard maintenance operations since initial construction. An existing open graded bonded wearing course (placed in 2008) found over all pavement surfaces, will be removed (via cold plane ac) within the project limits, prior to placing the overlay.

There is minor alligator and block cracking evident. This recommendation was based on previous studies in the area; no sampling or testing was done. A soil R-value of 30 was assumed based on historical data. Areas of existing pavement with localized structural section failure will be repaired by replacing a portion of the HMA (digouts). All cracks greater than ¼" will be sealed. A geosynthetic pavement interlayer will be placed along the widening section to prevent reflective cracking from the underlying joint. For cost estimating purposes a structural section consisting of HMA and class 2 AB was used. Other sections to consider are an aggregate subbase as well as a full-depth HMA section. An open graded friction course has been included. A life cycle cost analysis of the various structural sections will be done during the preliminary engineering phase.

The improvements proposed for the project limits will correct the nonstandard features. An Exception to Advisory Design Standards may be required for the proposed superelevation transition. Dependent on the results of the forthcoming geotechnical recommendations, the tangent length may require compromise and therefore not allow enough length for standard super transition, (maximum allowable rate of 6% per 100-ft). Given the existing terrain in an environmentally sensitive corridor, a 4:1 embankment is not practical. These issues were discussed with the HQ Design Reviewer, who concurred. An exception will be prepared and approved during the preliminary engineering phase.

There are no utilities evident within the project limits. Utility verification will be done during the preliminary engineering phase.

The project proposes 1:1 cut slopes with the height of cut not greater than 50-ft, and 1.5:1 embankment slopes with a fill height of about 20-ft. Temporary best management practices (BMPs) will be incorporated into the project to reduce to the potential for sediment release during construction. Storm water issues are discussed further in Section 9 below. Highway planting and erosion control elements will be included with the project to re-establish vegetation on the newly constructed slopes.

A six-page estimate for capital costs associated with the Build Alternative has been prepared. The cost estimate, in current dollars, is included as Attachment C. The estimated construction

costs supports a Safety Index of 230. A preliminary digital terrain model developed from existing LIDAR data was used to estimate excavation and embankment quantities.

Construction is proposed to be completed in stages. There are two flat areas, adjacent to the roadway, within the project limits that are suitable for staging the contractor's equipment and material. All of the widening, excavation and backfill will be done on one side only, simplifying traffic handling during construction. A preliminary review of the slope material indicated that it is rippable and no blasting is needed. Excess material will be disposed of off-site. Traffic through the work zone will be limited to one lane in each direction during active construction operations. During non-working periods, the roadway will be open with one lane in each direction with 2-4-ft shoulders. Traffic management during construction is discussed further in Section 9 below.

No-build Alternative

The No-build Alternative proposed no improvements to this section of SR 299 other than routine maintenance. This alternative would not meet the need and purpose for the project as it does not address the high number of collisions occurring within the project limits.

7. COMMUNITY INVOLVEMENT

There is one local road, Chezem Road, ½ mile west of the project limits, that connects with SR 299, (PM 24.5). This local connection will remain open during construction.

Bicyclists are present along this section of SR 299. The proposed eight-foot shoulders will accommodate bicyclists.

8. ENVIRONMENTAL DETERMINATION/DOCUMENT

A preliminary Environmental Analysis Report (PEAR) has been requested for this project. The PEAR indicates that there is the potential for affects to special status plants and animals. Surveys will be required to confirm the presence or absence of these special status species. There is a low potential for impacts to cultural resources; consultation with local Native American groups will be required. The PEAR is included as Attachment D.

An environmental study will be completed during the next phase of the project. As noted in Section 5 above, there are several safety and collision reduction projects planned for the HUM 299 corridor in the coming years. To avoid segmentation concerns and to address potential cumulative impacts, Environmental recommends that a Negative Declaration (ND) pursuant to the California Environmental Quality Act (CEQA) be prepared for the first capital project in the corridor to advance to the environmental phase. Preparation of an ND will also enable consideration of context sensitive planning as well as a notice to the public of the proposed projects, allowing the opportunity for public participation. It is anticipated that a Categorical

Exemption pursuant to the National Environmental Policy Act (NEPA) will suffice. At this time it is uncertain which project will advance first. If this project does not advance first, it is anticipated that a Categorical Exclusion pursuant to CEQA will be prepared.

9. CONSIDERATIONS REQUIRING DISCUSSIONS

Geotechnical

Given the significantly reduced resources currently available for development of PIDs, a Preliminary Geotechnical Report (PGR) was not prepared. Instead, a reconnaissance level field review was done by the office of geotechnical design north. The project is located in an area of active landslides. A preliminary recommendation includes 1:1 cut slopes on the left (north) side of the roadway at the west end of the project and a 1.5:1 cut slope on the east end of the project. These slopes approximate the existing slopes.

Subsurface Drainage

There is evidence of an active slide at the western limit of the project area. Existing subsurface drainage and other embankment stabilization methods are in place. Special design considerations are expected, pending further geotechnical investigation.

Drainage

Existing culverts appear to be adequate for design discharge and conveyance. There is no history of overtopping or downstream scour. Current culvert condition was not assessed at this time. A thorough field investigation will be conducted during the design phase of this project.

Hazardous Waste

An Initial Site Assessment (ISA) was prepared to identify potential issues. The ISA noted that the removal of the thermoplastic traffic stripes as well as potential aerially deposited lead (ADL) in the soil adjacent to the pavement. These hazardous wastes are considered minor; the contract documents will address handling these wastes using standard special provisions.

Transportation Management Plan

A Transportation Management Plan (TMP) Data Sheet has been prepared to identify the significant TMP elements and ensure all anticipated costs are included in this report. The TMP Data Sheet is included as Attachment E.

Given other projects along the SR 299 corridor in the vicinity of the subject project, the TMP prepared for the project will identify maximum corridor delays and require the contractor to coordinate closures and delay times with other projects in the area.

Storm Water Management Plan

Storm water issues have been considered, and discussed with the Design Storm Water Coordinator and the National Pollutant Discharge Elimination System (NPDES) coordinator. Temporary construction and permanent BMPs will be included in the contract, and the costs are included in the estimate. The specific types and locations for treatment BMPs will be determined during the design phase of this project.

Runoff from roadway drainage discharges into small unnamed seasonal streams that flow approximately 3000-ft before discharging into Redwood Creek. Redwood Creek flows north and northwest and empties directly into the Pacific Ocean. The area in and around the project limits typically gets about 60 inches of yearly precipitation. During the winter season, traction sand is typically applied anytime temperatures dip below 34° F.

The project will result in approximately 3.5 acres of disturbed soil area. There will be less than 1-acre of new imperious area. The project is anticipated to be risk level 2.

Right of Way

All work will be done within the existing R/W. A Right of Way Data Sheet has been prepared and is included as Attachment F.

Risk Management

A Risk Management Plan (RMP) has been prepared for the PID phase of the project. The RMP is included as Attachment G.

10. FUNDING

This project is proposed to be funded through the 20.10.201.010 Safety Improvement Program and is eligible for federal funding. A Programming Sheet has been prepared to identify proposed capital and support costs, as well as the PYs needed for support, broken down by functional unit and fiscal year. The Programming Sheet is included as Attachment H.

11. SCHEDULE

The proposed project schedule is shown in the table below.

Milestone	Date
Begin PA&ED	November 1, 2011
PA&ED	February 1, 2013
PS&E	October 1, 2013
Right of Way Certification	September 15, 2013
Ready to List	November 15, 2013
Approve Contract	March 15, 2014
Construction Contract Acceptance	July 1, 2015

12. FHWA COORDINATION

This project is eligible for federal-aid funding and is considered to be state authorized under the current FHWA-Caltrans Stewardship Agreement. No Federal Highway Administration (FHWA) action is required for this project.

13. PROJECT PERSONNEL

Name	Title	Telephone
Richard Mullen	Project Manager	(707) 441-5877
John Martin	Chief, Design R1	(530) 225-3476
Chris Gaido	Project Engineer	(530) 225-3473
Ralph Martinelli	Chief, Traffic Safety	(707) 445-6376
Gary Berrigan	Chief, Environmental	(707) 441-5730
Linda Evans	Environmental Coordinator	(707) 441-5840

14. ATTACHMENTS

Attachment A	Vicinity Map
Attachment B	Preliminary Project Plans
Attachment C	Cost Estimate
Attachment D	PEAR
Attachment E	Traffic Management Plan Data Sheet
Attachment F	Right of Way Data Sheet
Attachment G	Risk Management Plan
Attachment H	Programming Sheet

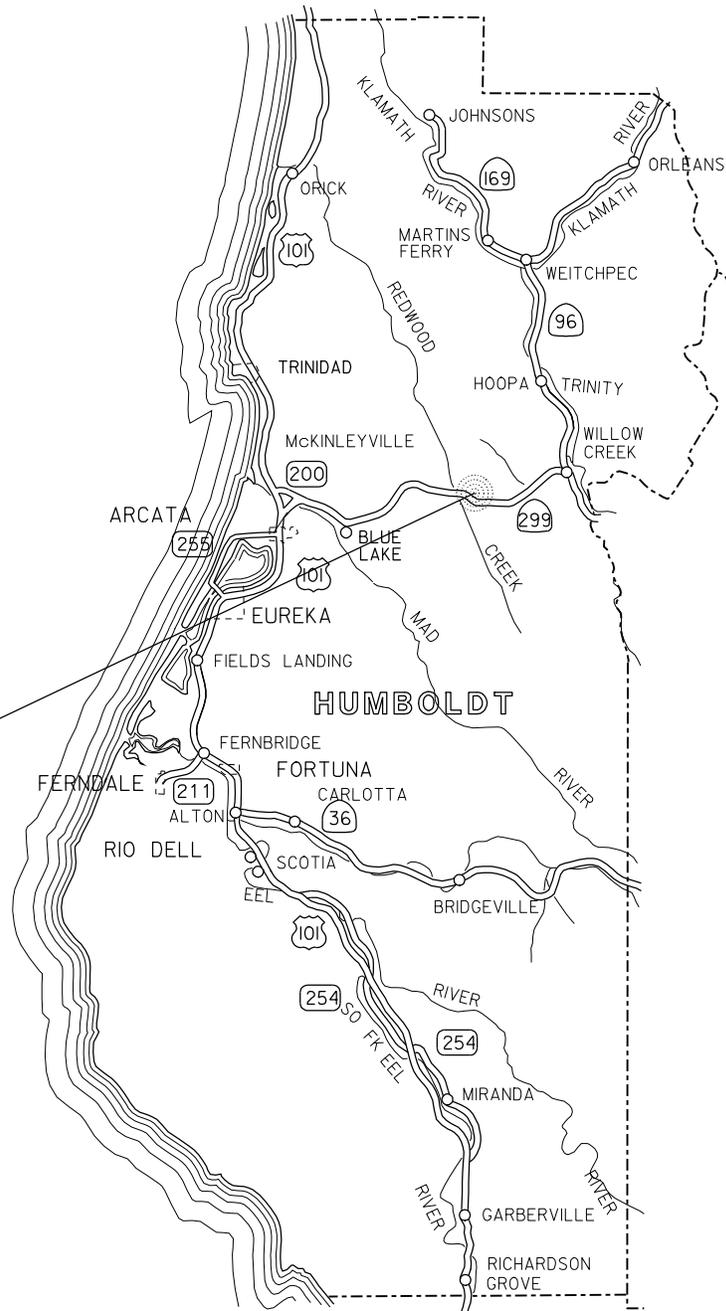
**Attachment A
Location Map**

VICINITY MAP

No Scale



**PROJECT
LOCATION**



**CIRCLE POINT
CURVE IMPROVEMENT
01-HUM-299 PM 25.0/ 25.7
EA: 01-0A490K
EFIS: 0100020308**

Attachment B
Preliminary Project Plans

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	CHRIS S. GAIDO	REVISED BY	
Caltrans DESIGN	JOHN L. MARTIN	CHECKED BY	TRAVIS A. GURNEY	DATE REVISED	

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Hum	299	25.0/25.7		

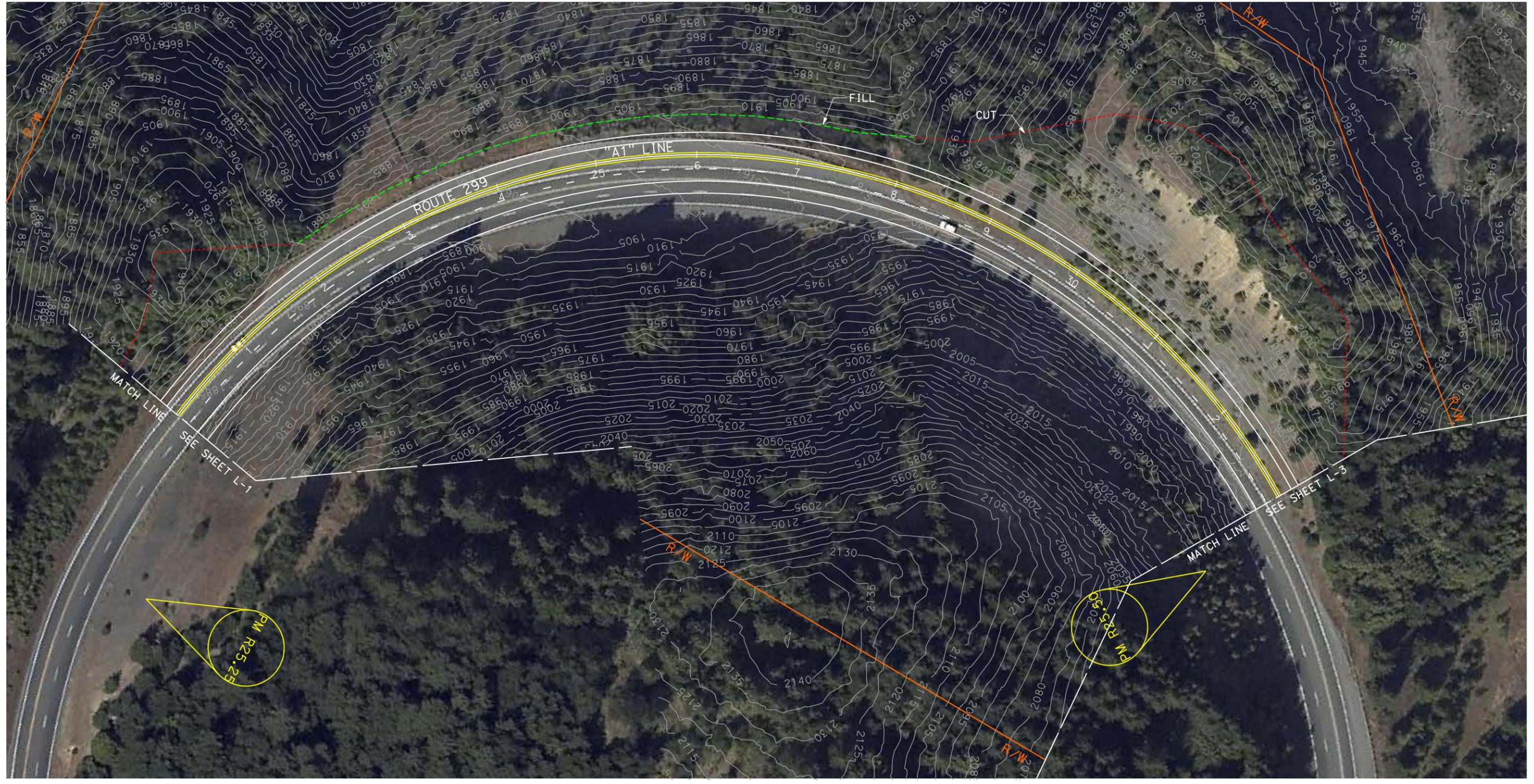
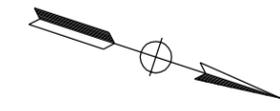
PRELIMINARY

REGISTERED CIVIL ENGINEER DATE -

PLANS APPROVAL DATE -

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

REGISTERED PROFESSIONAL ENGINEER
CHRIS S. GAIDO
No. C62535
Exp. 12-31-11
CIVIL
STATE OF CALIFORNIA



LAYOUT
SCALE: 1" = 50'
L-2

LAST REVISION: 05-16-11 DATE PLOTTED => 14-JUL-2011 TIME PLOTTED => 12:38

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	CHRIS S. GAIDO	REVISOR	
Caltrans	JOHN L. MARTIN	CHECKED BY	TRAVIS A. GURNEY	DATE REVISION	
DESIGN					

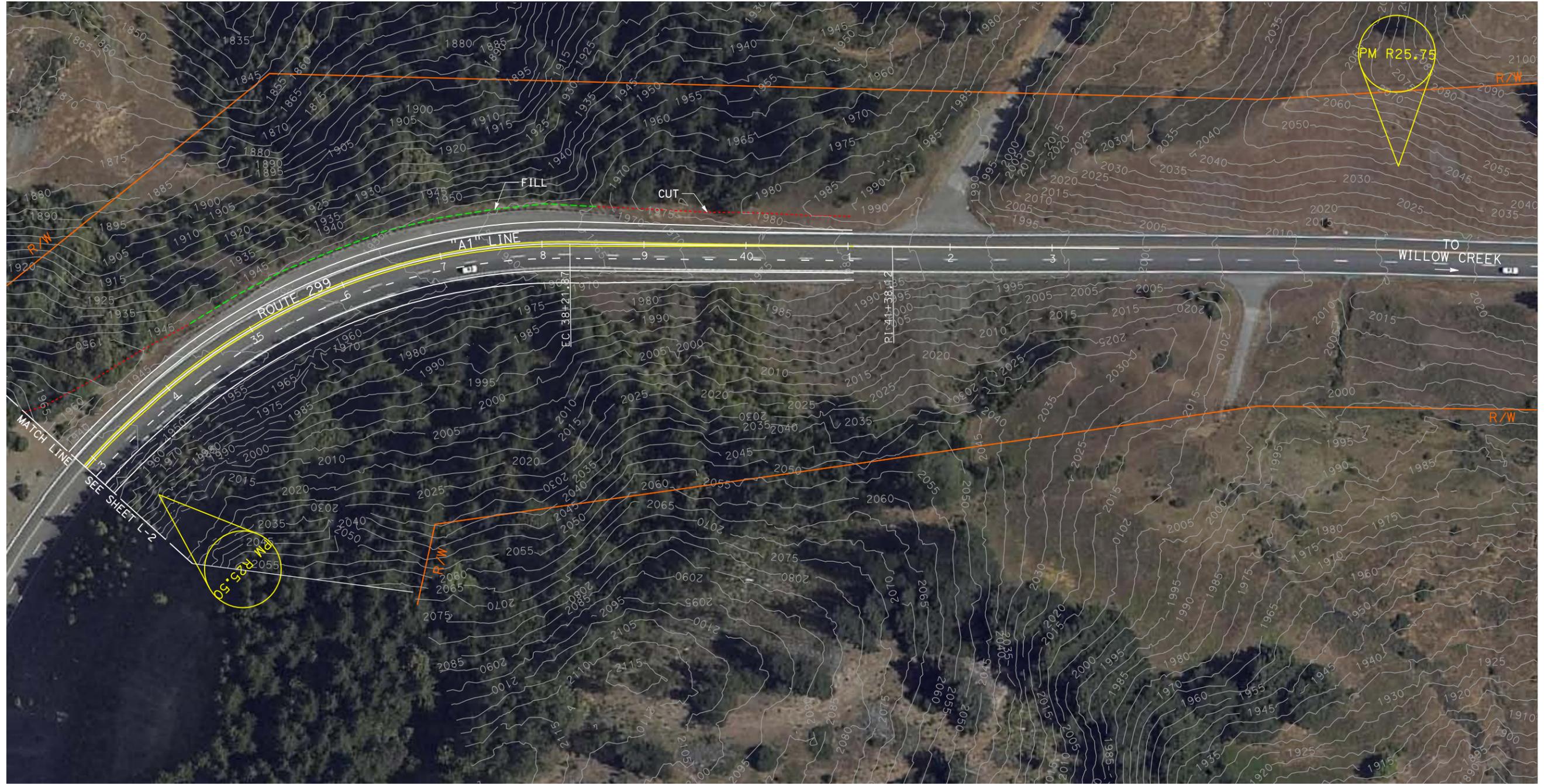
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Hum	299	25.0/25.7		

PRELIMINARY

REGISTERED CIVIL ENGINEER DATE -

PLANS APPROVAL DATE -

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



LAYOUT
SCALE: 1" = 50'
L-3

LAST REVISION: DATE PLOTTED => 14-JUL-2011 TIME PLOTTED => 12:38

Attachment C
Cost Estimate

PROJECT STUDY REPORT COST ESTIMATE SUMMARY

DIST-CO-RTE: 01-HUM-299
PM: 25.0/25.7
EA: 01-0A490K
EFIS: 100020308
Program Code: 010 - Safety

PROJECT DESCRIPTION:

Limits: In Humboldt County about 13 miles west of Willow Creek from 0.4 miles east to 1.1 miles east of Chezum Road

Proposed Improvement (Scope): Widen on one side and shift the existing roadway to provide 8-foot shoulders and 4-foot median, correct superelevation and superelevation transitions.

Alternative: Build

TOTAL ROADWAY ITEMS:	\$3,800,000
TOTAL STRUCTURE ITEMS:	\$0
SUBTOTAL CONSTRUCTION COSTS:	\$3,800,000
TOTAL RIGHT-OF-WAY ITEMS:	\$0
TOTAL PROJECT CAPITAL OUTLAY COSTS:	\$3,800,000

Reviewed by District Program Manager: _____

Approved by Project Manager: _____
Richard Mullen, P.E. Phone Date

I. ROADWAY ITEMS**Section 1 Earthwork**

	Quantity	Unit	Unit Price	Cost
Clearing & Grubbing	4.2	ACRE	\$10,000.00	\$42,000
Roadway Excavation	120000	CY	\$12.00	\$1,440,000
Develop Water Supply	1	LS	\$5,000.00	\$5,000
Subtotal Earthwork:				\$1,487,000

Section 2 Structural Section

	Quantity	Unit	Unit Price	Cost
Cold Plane HMA	8000	SQYD	\$15.00	\$120,000
Class 2 Aggregate Base	2200	CY	\$45.00	\$99,000
HMA (Type A)	2000	TON	\$115.00	\$230,000
HMA (Open Graded)	700	TON	\$135.00	\$94,500
SubGrade Enhancement Fabric	1200	SQYD	\$25.00	\$30,000
Tack Coat	10	TON	\$800.00	\$8,000
Place HMA Dike	1500	LF	\$3.00	\$4,500
Import Material, Shld Back	220	TON	\$35.00	\$7,700
Subtotal Structural Section:				\$593,700

Section 3 Drainage

	Quantity	Unit	Unit Price	Cost
Culvert and End Treatments	1	LS	\$20,000.00	\$20,000
Edge Drains & Outlets	1	LS	\$15,000.00	\$15,000
Modify Inlets	2	LS	\$5,500.00	\$11,000
Underdrains	1200	LF	\$60.00	\$72,000
Rock Slope Protection	1	LS	\$10,000.00	\$10,000
Subtotal Drainage:				\$128,000

Section 4 Specialty Items

	Quantity	Unit	Unit Price	Cost
Remove MBGR	200	LF	\$6.00	\$1,200
MBGR	1000	LF	\$25.00	\$25,000
Alt In-line Terminal System	4	EA	\$2,500.00	\$10,000
End Anchor Assembly (SFT)	2	EA	\$700.00	\$1,400
Delineators and Markers	40	EA	\$50.00	\$2,000
Shld & CL Rumble Strip	60	STA	\$100.00	\$6,000
Lead Compliance Plan	1	LS	\$2,000.00	\$2,000
SWPPP	1	LS	\$5,000.00	\$5,000
Stormwater Reporting	1	LS	\$50,000.00	\$50,000
Temporary BMPs	1	LS	\$5,000.00	\$5,000
Permanent BMPs	1	LS	\$3,000.00	\$3,000
Environmental Mitigation	1	LS	\$5,000.00	\$5,000
RE Office Space	1	LS	\$4,000.00	\$4,000

Subtotal Specialty Items: \$119,600

Section 5 Traffic Items

	Quantity	Unit	Unit Price	Cost
Construction Area Signs	1	LS	\$10,000.00	\$10,000
Traffic Control System	1	LS	\$40,000.00	\$40,000
Temporary Flashing Beacon	1	LS	\$8,000.00	\$8,000
Portable CMS	2	LS	\$10,000.00	\$20,000
Channelizers (Surface Mounted	1500	EA	\$30.00	\$45,000
Remove Traffic Stripes	12000	LF	\$0.25	\$3,000
Temporary Stripe (Paint)	10000	LF	\$1.00	\$10,000
Pavement Markers (Recessed)	2000	EA	\$12.00	\$24,000
Remove Roadside Sign	4	EA	\$100.00	\$400
Relocate Roadside Sign	2	EA	\$250.00	\$500
Roadside Sign - One Post	2	EA	\$300.00	\$600
Maintain Traffic	1	LS	\$60,000.00	\$60,000

Subtotal Traffic Items: \$221,500

Section 6 Planting and Irrigation

	Quantity	Unit	Unit Price	Cost
Highway Planting	1	LS	\$12,000.00	\$12,000
Plant Establishment	1	LS	\$25,000.00	<u>\$25,000</u>
Subtotal planting and Irrigation:				\$37,000

Section 7 Roadside Management and Safety

Vegetation Control Treatment	650	SQYD	\$35.00	\$22,750
Erosion Control (Hydro seed)	4	ACRE	\$5,000.00	\$20,000
Erosion Control Establishment	1	LS	\$1,000.00	<u>\$1,000</u>
Subtotal Roadside Management and Safety:				<u>\$43,750</u>

CONSTRUCTION SUBTOTAL (SECT. 1-7): \$2,630,550

Section 8 Minor Items:

Subtotal Sections 1 thru 7	\$2,630,550	x	2.0%	\$52,874
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Total Minor Items: \$52,874

Section 9 Roadway Mobilization:

Subtotal Sections 1 thru 8	\$2,683,424	x	10%	\$268,342
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Total Roadway Mobilization: \$268,342

Section 10 Roadway Additions:

Supplemental Work

Subtotal Sections 1 thru 9	\$2,951,766	x	3%	\$73,794
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Contingencies

Subtotal Sections 1 thru 9	\$2,951,766	x	25%	\$737,942
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Total Roadway Additions: \$811,736

TOTAL ROADWAY ITEMS: \$3,763,502
(Subtotal Sections 1 thru 10)

Estimate Prepared by:

Chris S. Gaido

Phone

Date

Estimate Checked by:

John L. Martin, P.E.

Phone

Date

II. STRUCTURES ITEMS

Subtotal Structure Items:	\$0
Railroad Related Costs:	<u>\$0</u>
TOTAL STRUCTURE ITEMS:	\$0

Estimate Prepared by: _____ Phone _____ Date _____

III. RIGHT-OF-WAY

Acquisition (includes excess lands and damages)	\$0
Project Development Permit Fees	\$0
Utility Relocation (State share)	\$0
Clearance/Demolition	\$0
RAP	\$0
Title and Escrow Fees	\$0

Subtotal Right of Way Items: \$0

Construction Contract Work: \$0

TOTAL RIGHT OF WAY ITEMS: \$0

Estimate Prepared by: _____

Phone

Date

Attachment D
Preliminary Environmental Analysis Report
(PEAR)

Mini-Preliminary Environmental Analysis Report

Project Information

District 01- County HUM Route 299 Post Mile 25.0/25.7 EA 01-0A490K

Project Title: Circle Point Curve Improvement

Project Manager Richard Mullen Phone # 707-441-5877

Project Engineer John Martin Phone # 530-225-3476

Environmental Branch Chief Gary L. Berrigan Phone # 707-441-5730

PEAR Preparer Linda Evans Phone # 707-441-5840

Project Description

Purpose and Need:

The project is needed because of the number of collisions that have occurred within the project limits. The actual collision rate for fatal plus injury collisions was about 17.7 times greater than the statewide average for similar highways. The actual total collision rate was about 7.3 times greater than the statewide average for similar highways. The purpose of this project is to enhance safety by reducing the number and severity of collisions within the project limits.

Description of work: The Department of Transportation (Department) is proposing to widen one side and shift the existing roadway to accommodate 8-foot wide shoulders and a 4-foot soft median. Ground in shoulder rumble strips plus metal beam guard rail are additional safety features proposed for this project.

The existing alignment consists of two single radius reversing curves with a short tangent for the superelevation transition. The existing shoulder widths (varying from 3-4'), tangent lengths and associated super-transitions do not meet current Highway Design manual standards. The proposed project would realign the existing curve, widen shoulders and improve superelevation transitions between PM R25.0 and R25.7.

The existing superelevation of approx. 6-7% will be increased to a superelevation rate of 8%. The existing pavement would be overlaid at a variable depth to correct the cross slope. At spot locations, digouts to repair/replace localized structural section failure are proposed. Any cracks greater than 1/4" would be sealed. Providing 8-foot shoulders, 4-foot soft median and improving the superelevation and transitions within the project limits are expected to reduce by up to 50% the occurrence and severity of collisions.

Existing storm drains and culverts would be lengthened and adjusted as needed to match the proposed roadway section.

Project elements include:

- Improve superelevation transitions, horizontal curves and tangent lengths
- Construct 12' – 14' lanes, 4' soft median, and 8' paved shoulders
- Install Metal Beam Guard Rail (MBGR); existing MBGR would be reset and the terminal sections would be replaced
- Placement of a three-foot wide strip of shoulder backing on both sides of the highway

- All turnouts on both sides of the highway within the project limits are proposed for equipment staging areas
- Improve clear recovery zone
- Roadway excavation of 120,000 cubic yards with approx. 100,000 cubic yards of excess materials – a disposal site would not be identified for the project
- Replace existing storm drains and culverts
- Install Construction Area signs outside of the identified project limits. Flashing beacons would be installed; this work would require a solar power source
- The roadway would be repaved with asphalt concrete (AC), with median/centerline and shoulder rumble strips ground in, and striping and pavement markers installed
- Clearing and grubbing, including removal of trees and other vegetation
- No right-of-way would be needed for this project
- No utility relocations are needed, although a temporary utility line may be needed for the temporary signal system and flashing beacon
- Access to all work areas would need to be identified early in the project development process

Anticipated Environmental Approval

CEQA

Initial Study with Mitigated Negative Declaration

NEPA

Categorical Exclusion

Summary Statement

In order to identify environmental issues, constraints, costs and resource needs, a mini-PEAR (Preliminary Environmental Analysis Report) was prepared for the project. It is important to note that all technical studies will be deferred to the Capital phases of the project. The cultural and biological studies were limited to database searches. There is a possibility of cumulative impacts to visual and water quality resources.

It is anticipated an Initial Study with a Mitigated Negative Declaration and Categorical Exclusion will apply to this project. Based on existing workload and available resources, it is anticipated to take 30 months to complete the environmental process. If possible, Environmental Planning would like to receive the ESR no later than February of a given year in order to complete spring surveys.

Multiple safety projects are proposed to be developed on Route 299 between postmiles 5.45 and 38.6 (Blue Lake to Willow Creek), including:

<u>Project Nickname</u>	<u>Postmiles</u>
1. Rumble Strip PEAR/project	(PM 5.45/38.6)
2. Acorn Curve PEAR	(PM 19.35/19.65)
3. Lupton Creek Curve PEAR	(PM 21.1/21.4)
4. Sabertooth Curve PEAR	(PM 23.6/24.0)
5. Chezem Curve PEAR	(PM 24.4/24.6)
6. Circle Point Curve PEAR	(PM 25.05/25.65)
7. Cedar Gap Curve PEAR	(PM 30.25/30.65)
8. Sink Point Curves PEAR	(PM 31.1/31.4)

All of these projects are safety projects in the PEAR phase. It is not known which of these projects would be the first to move forward into the 0 phase for preparation of an environmental document. Because of the number of projects and locations with a similar purpose and potential impacts, it is recommended that a Negative Declaration for CEQA be prepared, at least for the first project that moves forward after the PEAR phase.

The purpose and need of the PEARS are similar to the subject Circle Point Improvement project. A Negative Declaration would enable consideration of potential cumulative impacts and context sensitive planning combined with notice to the public of the proposed projects, affording an opportunity for public participation prior to final decision-making and commencement of construction.

While the project is not anticipated to result in significant environmental impacts, there would be less than significant impacts that could influence design decisions or alternatives considered. Furthermore, there is the potential for cumulative impacts to resources due to the number of projects proposed on the Route 299 corridor and the number of projects within the Redwood Creek watershed. For NEPA purposes, a Categorical Exclusion would suffice.

Access to all of the construction and staging areas would need to be identified early in project development.

Circle Point Curve is located on an area mapped as geologically active. Geotechnical recommendations to minimize potential for landslides and to anticipate the effectiveness of proposed landform modifications and the feasibility of revegetation post-construction need to be included. There are risks to the successful revegetation of steep slopes and risks in destabilizing a known landslide prone area potentially triggered by excavation and earth movement. A multi-functional evaluation through the Project Development Team is recommended to determine the best approach and project alternative that fulfills the most needs for fiscal responsibility and geological stability in compliance with regulatory requirements and environmental commitments.

Special Considerations

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

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

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

Archaeology: Prehistoric, and possibly historic, archaeological surveys would be required. Native American consultation would be required. Additionally, an extended Phase I archaeological investigation may be required if resources are identified that cannot be avoided. A geoarchaeological investigation may be required dependent on the nature and extent of project excavation, the results of archaeological surveys and Native American consultation, and the geotechnical description of the earth flow at the project location. In addition, the unique location of the project has a moderately high potential for cultural resources.

Hazardous Waste: An ISA was completed for this project. A Site Investigation will be necessary since there will be disturbed soils. The removal of thermoplastic traffic stripes and potential aerially deposited lead (ADL) in the soil adjacent to the pavement would be addressed in the construction contract through standard special provisions.

Water Quality: Construction of this project would disturb several acres of soil area. A water quality assessment will need to be prepared for this project. Temporary and permanent BMPs would be included in the contract. Permanent BMPs may include traction sand traps, if cold temperature traction sand is applied or biofiltration strips and swales. It may be difficult to obtain a 401 permit from the RWQCB if the revegetation on steep cut or embankment slopes is deemed impractical or unachievable to implement. Slopes at angles less steep than 1.5:1 would be easier to replant and have greater potential for successful results.

Noise: A noise report will be necessary to evaluate potential impacts of rumble strips.

Visual Resources: A Visual Impact Assessment (VIA) would be needed to evaluate landform modification on the Trinity Scenic Byway for this project. Temporary and permanent erosion control will be required, including revegetation. Landform modifications such as cutting into slopes or adding fill for embankment alter the visual landscape. Vegetation would be removed as part of the excavation. Revegetation would be planned, where feasible, but the steepness of the cut bank, and exposed rocky or clay based soils are determinant factors in the relative success of revegetation.

Cumulative Impacts:

There are several resources to be considered for potential cumulative impacts and context sensitive planning and design while still fulfilling the project's purpose and need: landform modification that could result in an increase in exposed soils and excavation that may cumulatively contribute sediments to a TMDL sediment and temperature impaired watershed; disposal site needs from multiple projects; visual impacts to the highway landscape from vegetation removal, landform modification and steep slope construction along a scenic byway; cumulative construction impacts including traffic delays; bioacoustic noise impacts during construction; noise impacts to wildlife and residences from placing rumble strips on the highway landscape where vegetation has been removed that might otherwise ameliorate the noise.

Disclaimer

This report is not an environmental document. Due to resource constraints, only minimal information was obtained from specialists. The above recommendations are based on the project description provided in this report. The discussion and conclusions provided by this mini-PEAR are approximate and are based

on an in-house review of records to estimate the potential for probable effects. Changes in project scope, alternatives, or environmental laws will require a re-evaluation of this report.

Prepared by:

_____ Date: _____
Gary Berrigan, Environmental Branch Chief

Reviewed by:

_____ Date: _____
Richard Mullen, Project Manager

Attachment E
Traffic Management Plan

TRANSPORTATION MANAGEMENT PLAN

To: CHRIS GAIDO
Project Engineer
NR Design Services - R1

Date: May 23, 2011
File: HUM-299 PM R25.0/R25.7
EA: 01-0A490K
Circle Point Curve

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

Project Information

Location: In Humboldt County, about 13 miles west of Willow Creek, from 0.4 miles east to 1.1 miles east of Chezum Road.

Type of Work: Works includes widening and realignment.

Anticipated Traffic Control: Lane reduction.
Moving lane closure.
Shoulder closure.

Estimated Maximum Delay: Minimal.

Peak Hour Traffic Volumes: 600 vph.

Lane Requirement Charts Included: Yes.

Work During Night Hours: Possible, but improbable.

Number of Working Days: 120 days.

PA&ED Date: November 14, 2012

RTL Date: August 15, 2013

District Traffic Manager/ TMP Manager: Troy Arseneau (707) 445-6377

TMP Coordinator: Marie Brady (707) 445-6689

Anticipated Traffic Impacts

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

Recommendation

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

Hours of Work

- See Chart No. 1 “Expressway Lane Requirements” for work hour restrictions.
- See Chart No. 2 “Lane Closure Restrictions for Designated Legal Holidays” for work day restrictions.

Public Notice

- Upon receipt of notice that the roadway width, including paved shoulder, for a direction of travel will be narrowed to less than 16 ft, the Resident Engineer shall promptly notify the HQ Construction Liaison Jay Horton at (916) 322-4957.
- The District Public Information Office, (707) 445-6444, shall be contacted two weeks in advance of the start of construction.
- Any emergency service agency whose ability to respond to incidents will be affected by any lane closure must be notified prior to that closure.
- Work shall be coordinated with the local busing system (including school buses and public systems) to minimize impact on their bus schedules.
- Notify the Resident Engineer at least 5 days in advance of excavation work in the vicinity of possible Caltrans electrical facilities. The Resident Engineer shall contact the Maintenance-Electrical Supervisor at (707) 825-0590 to locate existing Caltrans underground electrical facilities.

Traffic Control

- One closure is permitted within the project limits.
- The W11-1 vehicular traffic sign (bicycle symbol) and the W16-1 supplemental plaque (SHARE THE ROAD) shall be placed, in each direction of travel, prior to the construction zone.
- Work that requires a lane closure shall be in conformance with the Caltrans Standard Plan T-10, “TRAFFIC CONTROL SYSTEM FOR LANE CLOSURE ON FREEWAYS AND EXPRESSWAYS.”

- A minimum of 14 ft of paved roadway in each direction of travel shall be open for use by public traffic.
- The maximum length of a traffic control closure is 1,500 ft.
- Work that occurs within 15 ft of the traveled way shall require a shoulder closure in conformance with the Caltrans Standard Plan T-10, “TRAFFIC CONTROL SYSTEM FOR LANE CLOSURE ON FREEWAYS AND EXPRESSWAYS.”
- Work that requires a moving lane closure shall be in conformance with the Caltrans Standard Plan T-15, “TRAFFIC CONTROL SYSTEM FOR MOVING LANE CLOSURES ON MULTILANE HIGHWAYS.”
- A minimum of one PCMS in advance of both ends of the construction site shall be required to notify the public of the closures related to this project. One of the PCMS messages shall read, “WATCH FOR BIKES”.
- Access to side roads and residences shall be maintained at all times. When work or traffic queues extend through an intersection, additional traffic control will be required at the intersection.
- Bicyclists shall be accommodated through the work zone. During lane reduction traffic control, bicyclists shall be provided 2 ft of space adjacent to the open traffic lane to traverse through the work zone.
- COZEEP is recommended for this project based on risk factors associated with this project and the COZEEP Guidelines (CA DOT Construction Manual Section 2-215A). The associated risk factors include: workers exposed to traffic, speed management, and significant truck volumes.

Contingency Plan

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

Approval

Approved by:

As Signed By TAA

Approved by:

District Traffic/ TMP Manager

TAA/jnl

- CC: 1)TAArseneau, 2)JCandalot
 1)RMMartinelli, 2) NBraafladt, 3)File
 JMartin
 RMullen
 JMcGee
 AJones

Chart No. 1 Expressway Lane Requirements																									
County: Humboldt	Route/Direction: 299 EB/WB												PM: R25.0/R25.7												
Closure Limits:																									
FROM HOUR TO HOUR	24	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Mondays through Thursdays	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Fridays	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1										
Saturdays																									
Sundays																					1	1	1	1	1
Legend:																									
1	Provide at least one 14 ft through expressway lane open in direction of travel. The maximum length of a traffic control closure is 1,500 ft.																								
	No lane and/or shoulder closures allowed.																								
REMARKS:																									
1. The full width of the traveled way shall be open for use by public traffic when construction operations are not actively in progress. 2. Maintain access to the driveway/road located at PM R25.7.																									

Chart No. 2: Lane Closure Restrictions for Designated Legal Holidays										
Thu	Fri	Sat	Sun	Mon	Tues	Wed	Thu	Fri	Sat	Sun
xx	H xx									
	xx	H xx								
	xx		H xx	xx						
	xx			H xx						
				xx	H xx					
					xx	H xx				
						xx	H xx	xx		
Legends:										
	Refer to lane closure charts									
xx	The full width of the traveled way shall be open for use by public traffic.									
H	Designated Legal Holiday									

Attachment F
Right of Way Data Sheet

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
RIGHT OF WAY DATA SHEET

4. Are there any major items of construction contract work?
Yes _____ No X
5. Provide a general description of the right of way and excess lands required (zoning, use, major improvements, critical or sensitive parcels, etc.).

No right of way required.
6. Are any properties acquired for this project expected to be rented, leased, or sold?
Yes _____ No X
7. Is there an effect on assessed valuation? Yes _____ Not Significant _____
No X
8. Are utility facilities or rights of way affected? Yes X No _____
Utility relocations are not anticipated; however, utility verifications will be required.
9. Are railroad facilities or rights of way affected? Yes _____ No X
None.
10. Were any previously unidentified sites with hazardous waste and/or material found?
Yes _____ None Evident X
11. Are RAP displacements required? Yes _____ No X
No. of single family No. of business/nonprofit
No. of multi-family No. of farms

Based on Draft/Final Relocation Impact Statement/Study dated N/A
it is anticipated that sufficient replacement housing (will/will not) be available without
Last Resort Housing.
12. Are there material borrow and/or disposal sites required?
Yes X No _____ Optional site to be provided to contractor.
13. Are there potential relinquishments and/or abandonments?
Yes _____ No X
14. Are there any existing and/or potential airspace sites?
Yes _____ No X
15. What type of mitigation is required for the project?

Due to lack of response from Environmental, mitigation requirements are unknown.
16. Indicate the anticipated Right of Way schedule and lead time requirements. (Discuss if district proposes less than PMCS lead time and/or if significant pressures for project advancement are anticipated.)

Right of Way Lead Time will require a minimum of 3 months after we receive first appraisal maps, utility conflict maps, and the necessary environmental clearance and freeway agreements have been approved and obtained. Additionally a minimum of 3 months will be required after receiving the last appraisal map to Right of way for certification.
17. Is it anticipated that Caltrans will perform all Right of Way work?
Yes X No _____

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
RIGHT OF WAY DATA SHEET

Evaluation Prepared By:

Right of Way:


LEONARD KARROUM

Date

6/27/2011

Reviewed By:

RW Project Coordinator:


KEVIN WAXMAN

Date

6/27/2011

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


DAVID M. McCANLESS,
Senior Right of Way Agent
Project Delivery Branch
Eureka

6/28/11
Date

Attachment G
Risk Management Plan

Attachment H
Programming Sheet

PROGRAMMING SHEET - 2011/2012

EA: 01-0a490
 Proj Name: Circle Point Curve

Project Manager: Richard Mullen
 Co-Rte-PM: HUM-299- 025.0/ 025.7

Date: 09/01/2011
 Type: SHOPP

PROJECT SCHEDULE

MILESTONE		DATE (STATUS)
Begin Environmental Document	M020	10/01/2011 (T)
Begin Project Report	M040	08/01/2011 (T)
Circulate Environmental Document (DED)	M120	
Project Approval & Environmental Document (PA&ED)	M200	02/01/2013 (T)
District Submits Bridge Site Data to Structures	M221	
Right of Way Maps	M224	03/01/2013 (T)
Regular Right of Way	M225	05/01/2013 (T)
District Plans, Specifications & Estimates to DOE	M377	08/01/2013 (T)
Draft Structures Plans, Specifications & Estimates	M378	
District Plans, Specifications & Estimates (PS&E)	M380	10/01/2013 (T)
Right of Way Certification	M410	09/15/2013 (T)
Ready to List (RTL)	M460	11/15/2013 (T)
Headquarters Advertise (HQ AD)	M480	01/01/2014 (T)
Approve Construction Contract	M500	03/15/2014 (T)
Contract Acceptance (CCA)	M600	07/01/2015 (T)
End Project	M800	07/01/2016 (T)

ESTIMATE	DATE	AMOUNT
ROADWAY	07/14/11	\$ 3800
BRIDGE		\$ 0
Subtotal Const		\$ 3800
RIGHT OF WAY		\$ 63
MITIGATION		\$ 0
Subtotal RW		\$ 0
GRAND TOTAL		\$ 3863

EXISTING PROGRAMMING	
PAED	\$
PS&E	\$
RW - Sup	\$
RW - Cap	\$
Const - Sup	\$
Const - Cap	\$

*Does not apply to RW Capital + Not Escalated ++ Only Escalated to 1 year into Future

PROJECT COSTS BY SB45 CATEGORY

CAPITAL COST ESTIMATE (Escalation Factor)	Prior Yrs+	11/12+	12/13 (3.5%)	13/14 (3.5%)	14/15 (3.5%)	15/16 (3.5%)	Future++ (3.5%)	Total	
Right of Way								\$ 63	
Construction				4071				\$ 4,071	
CAPITAL COSTS TOTAL								\$ 4,134	
SUPPORT COSTS (Escalation Factor)			(1.5%)	(1.5%)	(1.5%)	(1.5%)	(1.5%)		Sup/Cap
PAED		227	171					\$ 398	10%
PS&E			366	261	12	12		\$ 652	16%
Right of Way			34	7	6	6		\$ 52	1%
Construction				77	262	28	1	\$ 368	9%
SUPPORT COSTS TOTAL								\$ 1,470	36%
TOTAL PROJECT COSTS								\$ 5,604	

PROJECT SUPPORT IN PYS

	Prior Yrs	11/12	12/13	13/14	14/15	15/16	Future	Total	PY %
Environmental	0.00	0.72	1.02	0.22	0.15	0.09	0.00	2.20	19.00%
Design	0.00	0.37	1.23	0.46	0.04	0.00	0.00	2.10	18.13%
Engineering Services	0.00	0.13	0.36	0.38	0.28	0.08	0.00	1.23	10.62%
Surveys	0.00	0.04	0.45	0.15	0.26	0.03	0.00	0.93	8.03%
Right of Way	0.00	0.01	0.02	0.02	0.01	0.01	0.00	0.07	0.60%
Traffic	0.00	0.08	0.30	0.16	0.12	0.00	0.00	0.66	5.70%
Construction	0.00	0.01	0.04	0.31	0.80	0.03	0.00	1.19	10.28%
Project Management	0.00	0.14	0.16	0.13	0.04	0.04	0.00	0.51	4.40%
District Units*	0.00	0.80	1.08	0.25	0.16	0.06	0.00	2.35	20.29%
Subtotal Dist/Region Resources	0.00	2.30	4.66	2.08	1.86	0.34	0.00	11.24	97.06%
59-DES Project Development	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.05	0.43%
59-DES Structures Foundation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00%
59-Office Engineer	0.00	0.00	0.00	0.29	0.00	0.00	0.00	0.29	2.50%
59-DES Project Management	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00%
59-DES Construction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00%
59-DES Other Units**	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00%
Subtotal DES Resources	0.00	0.00	0.00	0.34	0.00	0.00	0.00	0.34	2.94%
TOTAL PYS	0.00	2.30	4.66	2.42	1.86	0.34	0.00	11.58	

*Admin, Plng, Maintenance

**DES Admin, DES Plng, DES Maintenance

HRS/PYS = 1758

Comments: