



02-SIS-96 PM 12.0/56.0
 20.XX.201.151
 02-4C150K
 September 2007

PROJECT STUDY REPORT (Drainage Restoration Project)

*In Siskiyou County
 from Ti Creek Bridge to
 1.0 mi west of Portuguese Creek*



APPROVAL
 RECOMMENDED:

Carl Anderson
 CARL ANDERSON, P.E.
 Project Manager, District 2
 Date: 08/06/07

Ed Lamkin
 ED LAMKIN, P.E.
 Deputy District Director,
 Maintenance and Operations, District 2
 SHOPP Program Manager
 Date: 9-6-07

APPROVED BY:

Brian Crane
 BRIAN CRANE, P.E.
 District Director, District 2
 Date: 9/6/07

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This Project Scope Summary Report for Drainage Restoration has been prepared under the direction of the following registered civil engineer. The registered civil engineer attests to the best of his knowledge the technical information contained herein and the engineering data upon which recommendations, conclusions, and decisions are based.

G R MacRae
REGISTERED CIVIL ENGINEER

9/5/07
DATE



Project Study Report

Jefferson Drainage Restoration Project

1. Introduction

This Project Study Report (PSR) is for revising the original Drainage Restoration Project Scope Summary Report (PSSR) located on Route 96 in Siskiyou County, approved on September 27, 2005.

This drainage system restoration project proposes replacing or rehabilitating approximately forty-six drainage systems. Three culverts and four culvert end treatments are in critical condition. New culvert end treatments will be placed to enhance maintenance of the drainage systems, hydraulic capacity, and traffic safety.

Capital Costs:	\$1.5 million
Escalated Costs (2012):	\$1.9 million
Right of Way Costs: (Escalated)	\$80,000
Funding Source:	2008 SHOPP
Number of Alternatives :	3
Preferred Alternative: (for programming and scheduling)	Alternative 1
Project Program:	20.XX.201.151
Safety Index:	NA
Type of Facility:	Two lane conventional highway
Anticipated Environmental Clearance Document:	Categorical Exemption / Categorical Exclusion
Construction Year:	2012
PM Limits:	02-Sis-964-12.0/23.3
Legal Description:	In Siskiyou County from Ti Creek Bridge to Swillup Creek.
Performance Measure	Rehabilitate 46 drainage systems
Working Days	50 Working Days



Siskiyou 96 is 2-lane curvilinear highway. The primary emphasis on this roadway has been maintenance of the pavement.



The culverts have deteriorated with three culverts in critical condition and four culvert end treatments are in critical condition.

2. BACKGROUND:

This project is located in Siskiyou County, between Somes Bar and Seiad Valley. A PSSR was approved for a project on September 27, 2005 for drainage restoration on Route 96 between Post Mile (PM) and 70.0. The funding for the Drainage System Restoration Program was cut which reduce the limits of the project to PM 0.0 to PM 12.0. This PSR includes three alternatives. The preferred alternative for this PSR, is was based solely on available funding, includes work within PM 12.0 to PM 23.2. The project limits of Alternative 2 are from PM 12.0 to PM 56.0. The project limits can be expanded if additional funding becomes available. The Project Development Procedures Manuel currently requires a PSR for Drainage System Restoration Projects.

3. NEED AND PURPOSE:

This drainage system restoration project proposes replacing or rehabilitating approximately forty-six drainage systems. Twenty-one culverts will be replaced or rehabilitated with a culvert liner or invert paving. Three of these culverts are in critical condition. Twenty-nine end treatments will be placed or upgraded. Four of the end treatments are in critical condition. New culvert end treatments will be placed to enhance maintenance of the drainage systems, hydraulic capacity, and traffic safety.

The goal of the drainage system restoration program is to prevent disruption to traffic and maximize the service life to the maximum extent possible. Geometric and design criteria on the roadway between the drainage systems will not be addressed. The primary scope of the project includes the following elements.

- Replace culverts
- Concrete line inverts of culverts
- Place end treatments: Flared end section, sloped headwall, retaining walls, drainage inlet, riser pipes, and downdrains
- Place rock slope protection for erosion control & storm water mitigation
- Place erosion control on disturbed areas
- Place AC dike and pave gutters
- Place culvert marker
- Environmental mitigation



Drainage inlets will be upgraded to current standards to reduce maintenance of the drainage systems.

4. EXISTING FACILITIES, DEFICIENCIES, AND TRAFFIC DATA:

ROADWAY, STRUCTURES, PAVEMENT CONDITION, DEFLECTION STUDY are not a factor in this project since this PSR only includes rehabilitation of culverts.

OTHER CONDITIONS:

Hazardous waste disposal site requirements: All work to be completed within the existing drainage footprint. The culvert replacement at PM 21.75 is within limits of Natural Occurring Asbestos (NOA). Testing of this location should be complete prior to P&E to confirm whether NOA special provisions need to be included. Hazardous waste disposal sites may be required.

Materials and or disposal site needs and availability: Excess material from excavation of culverts will be used as embankment at sites which need local borrow. Asphalt concrete will be the property of the contractor. The amount of asphalt concrete will be minor and may be disposed of at the dump or buried within District disposal sites.

Consistency with other planning: The District HA-22 coordinator indicated there is no scheduled pavement work in the next four years.

TRAFFIC DATA:

The latest year for collecting traffic data is 2006.

2006: AADT

Location	AADT	Peak Month	Peak Hour
PM 12.0/23.2	220-300	280-380	40-70
PM 23.2/38.8	220-280	240-320	40
PM 38.8/41.0	540-1,150	610-1,300	70-220
PM 41.0/41.7	1,150-1,600	1,300-2,600	220-240
PM 41.7/56.0	630-660	720-800	90-270

Truck Traffic comprises of 6% to 14% of the traffic volumes from 2005 census.

SAFETY IMPROVEMENTS:

SAFETY IMPROVEMENT SUMMARY: A safety review was requested from the District 2 Traffic Operations Office. The following safety components will be incorporated into the project scope:

- Drainage inlets located adjacent to, or within, the paved outside shoulders should be flush with the finished grade and have bicycle proof grates.
- Exposed ends of drainage culverts greater than 36-inches should be located outside the Clear Recovery Zone (CRZ). Culvert inlets/outlets within the clear recovery area should be made traversable with flared end sections or by using bar grates or pipes to reduce the clear opening width for culverts larger than 36-inches.

- If culvert headwalls are to be placed within the CRZ, they should be made traversable by sloping them to match the surrounding embankment.
- The inlet and outlet for the box culvert should be constructed outside the 20-foot Clear Recovery Zone (CRZ) for a 2-lane highway. If extending the box culvert inlet and outlet outside the CRZ is not feasible, guardrail may be necessary to shield the openings.
- Overside drains should be reconstructed to eliminate deep depressions along the roadside. The taper of the AC dike, on the departure side of the drain, should be extended to avoid the placement of dike at steep angles to approaching traffic.

5. ALTERNATIVES:

This project has three alternatives. The design concepts for this project are consistent throughout the length of the project, therefore the alternatives are based on location and cost. The highest priority for location is between PM 12.0 and PM 23.3. The second alternative includes the entire length of the project study limits from PM 12.0 to 56.0. The basis of these project limits are the funding requested in the ten year plan and the initial funding target when this report was initiated. The third alternative is the do nothing option.

ALTERNATIVE 1

Perform drainage restoration on Route 96 between PM 12.0 and PM 23.3. Within these Post Mile limits, there are 46 drainage systems identified that are in poor or critical condition. Three of the culverts are in critical condition and four end treatments are in critical condition.

Restoration work includes replacing and lining culverts, replacing end treatments of culverts, placing rock slope protection and erosion control, placing AC dikes and paved gutters, and performing storm water and environmental mitigation. Right of Way involvement includes purchasing R/W for drainage easements where practical and providing construction easements. The estimated construction cost for this work is \$1,500,000. The estimated right of way cost is \$80,000 for utility relocation or pot holing.

ALTERNATIVE 2

Perform drainage restoration on Route 96 between PM 12.0 and PM 56.0. The limits of this section of the project were derived from the perceived funds available for this program based on the ten-year plan. This drainage system restoration project proposes replacing or rehabilitating approximately two hundred and ten drainage systems. Fifty-six culverts will be replaced or rehabilitated with a culvert liner or invert paving. Eighteen of these culverts are in critical condition. One hundred and two end treatments will be placed or upgraded. Twenty of the end treatments are in critical condition. Restoration work includes replacing and lining culverts, replacing end treatments of culverts, placing rock slope protection and erosion control, placing AC dikes and paved gutters, and performing storm water and environmental mitigation. Right of Way involvement includes construction easements and establishing right of way where existing right is prescriptive R/W. The estimated construction cost for this work is \$4,200,000 and \$100,000 for right of way cost.

ALTERNATIVE 3

The "Do Nothing" Alternative would place Route 3 in jeopardy of being closed due to catastrophic failure any one of twenty-one culverts in critical condition. The goal of the drainage system restoration program to prevent disruption to traffic and maximize the service life to the maximum extent possible would be compromised.

6. TRANSPORTATION MANAGEMENT PLAN, SYSTEM PLANNING AND COMMUNITY INVOLVEMENT:

Transportation Management Plan

Preliminary traffic impacts and mitigation for this project will be outlined in the Transportation Management Plan Data Sheet (TMP Data Sheet) (See Attachment B). Costs associated with traffic impact mitigation measures listed in the TMP Data Sheet have been included in this document. A TMP for this project is required and should be requested when the design is complete enough to determine specific traffic impacts and early enough to make design changes/additions required for traffic mitigation. The following are Traffic Impact Mitigation to be included in the project.

- Lane closures are anticipated to include flaggers and pilot car with one-way traffic control. May need advance flaggers. Provide "Wait for Pilot Car" signs.
- Maximum number of lane closures will be limited to a maximum of 16 minutes total delay.
- Changeable Message Signs will be required with possible advance Changeable Message Signs.
- Public Information should be used to notify local media of construction details and consider using a temporary HAR unit.
- Develop Work Safety Media Campaign

SYSTEMS PLANNING

If the 2006 SHOPP funded 151 drainage project, 02-3C9501, on Siskiyou 96 overruns it's budget, additional drainage work between PM 11.0 and PM 12.0 will need to be added to this project. All the work at this location will be designed and cleared for right of way and environmental through project 02-3C9501.

Route 96 near Somes Bar is a very rural highway and is not on route to any major destinations. There are no corridor or system coordination issues.

COMMUNITY INVOLVEMENT

Preliminary notification of the project with scope of work, time frames, and delays should be provided to the media prior to the beginning of work. Public Information will be used to notify local media of construction details and consider using a temporary HAR unit.

7. STORM WATER REQUIREMENTS:

A Storm Water Data Report has been written for this project. The report is on file and available upon request. Construction storm water issues include the potential for sediment and construction activity pollutants from culvert replacement activities in and adjacent to drainage channels. These issues will be address by the project Storm Water Pollution Prevention Plan and placement of temporary construction BMPs. Design Pollution Prevention BMPs anticipated for this project include preservation of existing vegetation, overside drains, paved gutter and AC dikes, flared end sections, energy dissipaters and vegetated surfaces. Opportunities to install Permanent Treatment BMPs will considered but are limited due to the mountainous terrain.

8. ENVIRONMENTAL COMPLIANCE:

A PEAR was completed in July of 2007. The environmental process is anticipated to be cleared with a Negative Declaration/Categorical Exclusion (ND/CE), which would be the product of an Initial Study/Categorical Exclusion (IS/CE) and would satisfy CEQA and NEPA requirements.

9. FUNDING, SCHEDULING, PROJECT SUPPORT AND STAGING:

FUNDING:

This project is a Candidate for the 201.151 Drainage System Restoration Program in the 2008 State Highway Operations and Protection Program. This project is 2nd highest priority in the 5-year plan for the 2008 SHOPP. Construction is anticipated to be in 2012.

SCHEDULING:

The following table shows the programming schedule. The Project Manager shall approve any changes in the schedule.

PROJECT SCHEDULE					
M000	ID Need	7/1/06	M377	P & E to R.O.E.	6/1/11
M010	Approve PID	9/6/07	M380	H.Q. P.S.&E.	10/1/11
M015	Program Project	3/1/08	M410	Right of Way Cert.	1/15/12
M020	Begin Envir. Doc.	1/2/09	M460	Ready To List	1/15/12
M040	Begin Project	7/1/08	M480	Advertise	2/15/12
M200	PA & ED	1/1/11	M500	Approve Contract	5/1/12
M224	Right of Way Maps	9/1/10	M600	Accept Contract	1/1/13
M225	Reg. Right of Way	3/1/11	M700	Final Report	1/1/14

PROJECT SUPPORT:

The following table outlines the Capital Cost Estimate for the Alternative Identified for Programming in the 2008 SHOPP. These PY's and support costs are based on the programming schedule.

CAPITAL AND SUPPORT COSTS											
CAPITAL COST (\$1,000'S)											
				08/09	09/10	10/11	11/12	12/13	13/14	FUTURE	TOTAL
R/W Escalation Rate	=>	5.0%		5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	
Right of Way	ESTIMATE 4/20/2007	\$ 65				\$ 65					\$ 80
Mitigation Escalation Rate	=>	5.5%		5.5%	5.5%	5.5%	5.5%	5.5%	5.5%	5.5%	
Environmental Mitigation	ESTIMATE 6/7/2007	\$ 150			\$ 182						\$ 182
SUBTOTAL RW CAPITAL		\$ 180		\$ -	\$ 182	\$ 38	\$ -	\$ -	\$ -	\$ -	\$ 219
Structure Escalation Rate	=>	5.5%		8.5%	8.5%	10.0%	8.5%	8.5%	8.5%	8.5%	
Structure Construction	ESTIMATE 8/30/2007	\$ -				\$ -					\$ -
Roadway Escalation Rate	=>	5.5%		5.5%	5.5%	5.5%	5.5%	5.5%	5.5%	5.5%	
Roadway Construction	ESTIMATE 8/30/2007	\$ 1,500				\$ 1,896					\$ 1,896
SUBTOTAL CONST. CAPITAL		\$ 1,500		\$ -	\$ -	\$ -	\$ 1,896	\$ -	\$ -	\$ -	\$ 1,896
SUPPORT COST (\$1,000's)											
Support Cost	=>	\$165,000	Per P.Y.	=>	\$93.33	Per Hour					
PHASE	%	HOURS	\$(1000's)	08/09	09/10	10/11	11/12	12/13	13/14	FUTURE	TOTAL
Support Escalation Rate	=>	0.0%		8.0%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	
PA&ED (M020-M200)	34.4%	6,390	\$ 596	\$ 153	\$ 330	\$ 169	\$ -	\$ -	\$ -	\$ -	\$ 652
Design (M040-M380)	13.2%	2,400	\$ 224	\$ 62	\$ 65	\$ 68	\$ 55	\$ -	\$ -	\$ -	\$ 250
Right of Way (M224-M410)	4.5%	800	\$ 75	\$ -	\$ -	\$ 52	\$ 34	\$ -	\$ -	\$ -	\$ 86
Construction (M500-M600)	13.2%	2,240	\$ 209	\$ -	\$ -	\$ -	\$ 72	\$ 178	\$ -	\$ -	\$ 250
SUBTOTAL SUPPORT	65.3%	11,830	\$ 1,104	\$ 215	\$ 395	\$ 289	\$ 161	\$ 178	\$ -	\$ -	\$ 1,238
TOTAL CAPITAL AND SUPPORT COSTS			\$ 2,610	\$ 395	\$ 395	\$ 471	\$ 2,095	\$ 178	\$ -	\$ -	\$ 3,353

10. CONTACTS:

Rob MacRae, Design Engineer District Program Advisor	530-225-2482
Carl Anderson, Project Manager	530-225-2154
Wes Wilson, HQ Program Advisor	916-654-6070

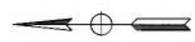
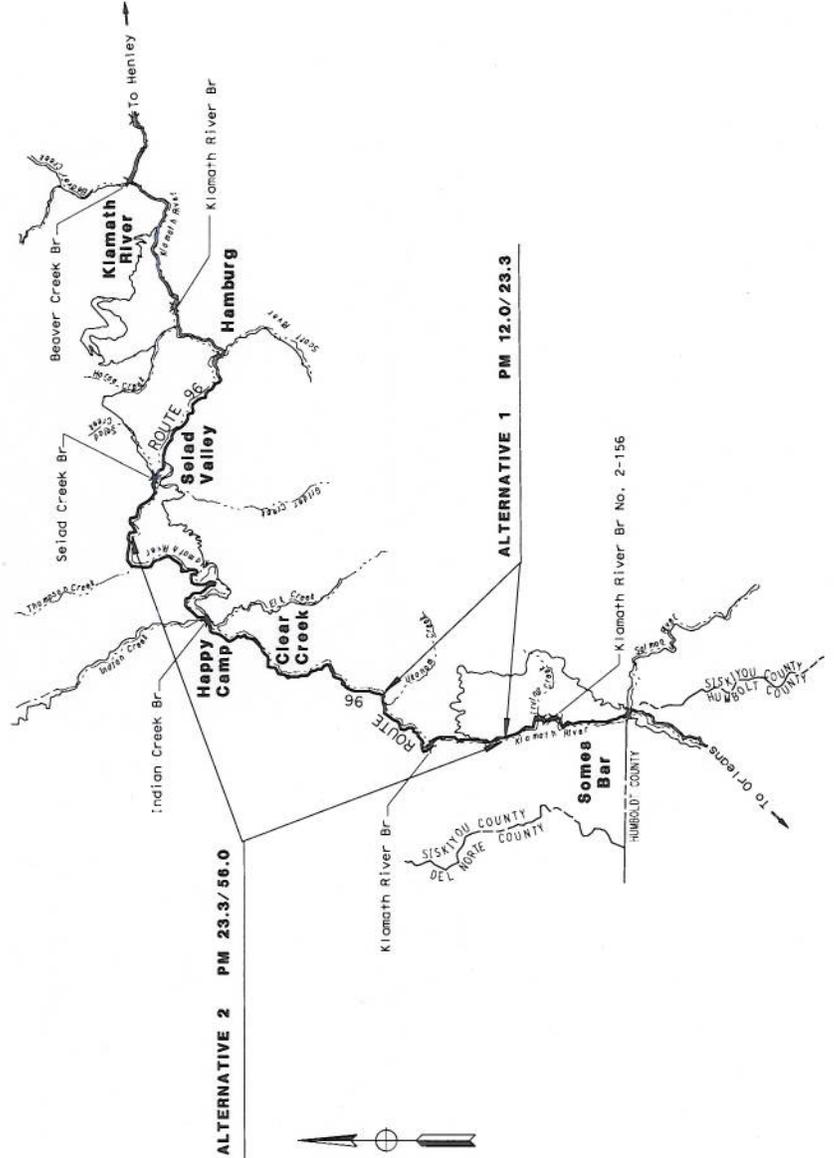
11. LIST OF ATTACHMENTS:

- A. Vicinity Map
- B. Traffic Management Plan
- C. Right of Way Data Sheet
- D. Preliminary Environmental Analysis Report
- E. Cost Estimate

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
 PROJECT PLANS FOR CONSTRUCTION ON
 STATE HIGHWAY

IN SISKIYOU COUNTY FROM TI CREEK
 BRIDGE NO 2-27 TO 4 MILES EAST OF
 THOMPSON CREEK BRIDGE NO 2-68

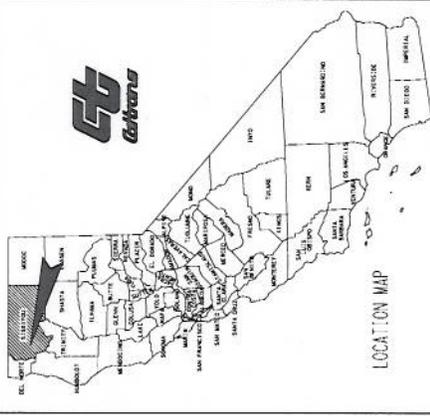
To be supplemented by Standard Plans dated July, 2012



NO SCALE

FOR INQUIRY IN THIS PROJECT
 ORIGINAL SCALE IS IN MILLIMETERS
 USERNAME = J MUSER
 DGN FILE = J REQUEST

DIST	COUNTY	ROUTE	KILOMETER PROJECT NO.	SHEET NO.	TOTAL SHEETS
02	SIS	96	RO-0/112.7	1	1



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



Project Engineer
 Steve Galt
 Registered Civil Engineer
 July 07, 2005
 Plans Approved: JMG

Contract No. EA 20950

CU 02605

USENAME = J MUSER
 DGN FILE = J REQUEST

NO SCALE

FOR INQUIRY IN THIS PROJECT
 ORIGINAL SCALE IS IN MILLIMETERS
 USERNAME = J MUSER
 DGN FILE = J REQUEST

TRANSPORTATION MANAGEMENT PLAN DATA SHEET

To: Rob Macrae, PE
District 2 - Redding
Roadside Maintenance - MS 17

Date: August 1, 2007

File: EA: 02-4C150K
SIS-96-PM 12.0/56.0

From: Department of Transportation
District 2 - Office Of Transportation Management

Work: Drainage Restoration

1. POLICY

The Caltrans Deputy Directive titled "Transportation Management Plans" (DD-60) establishes the current policy for mitigating traffic impacts resulting from construction, maintenance, encroachment permit, planned emergency restoration, locally or specially funded, or other activities. The directive states that Transportation Management Plans (TMPs) and contingency plans shall be completed for all work activities on the State highway system. The purpose of this TMP Data Sheet is to insure all anticipated TMP costs are included in the Project Initiation Document.

2. SCOPE OF WORK

This SHOPP candidate project proposes to rehabilitate or replace approximately 207 drainage systems along SR 96 in Siskiyou County. The project is separated into two locations. Pending funding, either or both locations will be constructed.

LOC	LIMITS	GEO DESCRIPTION	# OF SYSTEMS
1	PM 12.0 to PM 23.3*	Ti Creek Bridge to Swillup Creek Bridge	46
2	PM 23.3 to PM 56.0	Swillup Creek Bridge to Fort Goff Creek	161

*This location is within the District 1 Maintenance territory

Construction operations may include the following: excavation or trenching, removal of headwalls, culverts, and inlets, placement of rock slope protection, installation of new culverts, debris racks, end sections and headwalls, AC dikes, minor concrete, frames and grates, and culvert markers. Construction will occur during the summer of 2012. It is estimated that the project will take 75 working days to complete both project locations, with traffic control for the same number of days.

3. FACILITY

HIGHWAY: SR 96 is a two-way conventional highway that follows the Klamath River through mountainous terrain. One 12 ft wide paved lane is provided for each direction. For most locations, there are no paved shoulders. Because of the narrow roadway and curvilinear alignment, sight distance is limited. The posted speed limit is mostly 55mph, with lower posted speed limits through the communities of Happy Camp, Seiad Valley and Hamburg (all within Location 2).

TRAFFIC VOLUMES: As shown in the table below, traffic volumes vary throughout the project limits.

Location	AAADT (2005)	Truck Vol	Peak Vol	Data Source
1 Begin Project to Swillup Creek Bridge (PM 12.0 to 23.3)	220	11%	13-WD 17-WE	Pro Sta # 121, PM 23.268, May 2002
2 Swillup Creek Bridge to Benjamin Creek Rd (PM 23.3 to 38.8) Benjamin Creek Rd to Happy Camp (PM 38.8 to 41.0) Happy Camp (PM 41.0 to 41.67) Happy Camp to End Project (PM 41.67 to 56.0)	280	8%	17-WD 20-WE	Pro Sta # 122, PM 38.758, May 2002
	540	4%		
	2,100	3%	127-WD 87-WE	TMS #135, PM 41.101, Aug 2005
	610	7%	41-WD 35-WE	Pro Sta # 123, PM 41.670, May 2002

WD=Weekday (M-F); WE=Weekend (SA-SU)

3. FACILITY (Cont.)

CENSUS LOOPS: The following table shows census loops located within each project location. Further information regarding this equipment can be obtained from Bill Belcher, Traffic Census, at 530-225-3313.

LOC	ID	LOCATION	TYPE	DESCRIPTION
1	P121	PM 23.268	Profile	Swilup Creek Bridge
2	P122	PM 28.92	Profile	900 ft west of Benjamin Creek Rd
	135	PM 41.34	Control	567 ft east of Main St. Happy Camp
	P123	PM 41.670	Profile	Davis Rd

ITS FIELD ELEMENTS: There are no existing ITS elements (RWIS, CCTV, CMS or HAR) within the project limits.

4. TRAFFIC IMPACTS

TRAFFIC CONTROL: Std Plan T-13 lane closures (reversing one-way traffic control) will be required for most operations. It is anticipated that all operations can be carried out within typical 10-12 hour workshifts and that no 24-hour traffic control will be required. Thus, when operations are not in progress the full width of the roadway will be provided (i.e., night-times and weekends). Due to multiple drainage systems subject to construction, it is likely that several locations may be contained within a single lane closure. Due to the low traffic volumes on SR 96, no significant impacts to motorists are anticipated.

CORRIDOR: For purposes of this TMP Data Sheet, the SR 96 travel corridor is considered to be from the Humboldt County line to the SR 96/I-5 Jct for which the D2 DTM has established a maximum corridor delay of 30 minutes. There are no other projects scheduled for construction on SR 96 in 2012; thus no corridor impacts noted at this time.

TRUCKS: SR 96 is part of the California Legal Truck Network; however between PM 0.0 and PM 23.268 (Project Loc 1) there is a KPRA-advisory of 30 ft. Occasionally extra legal annual permit trucks between 8.5' and 12' in width and even more rare single trip permit trucks over 12' in width can be expected. K-rail is not required for project operations; thus no truck impacts are anticipated.

BICYCLISTS & PEDESTRIANS: Pedestrians and bicyclists are allowed on this section of SR 96, but are not commonly present (except within the small communities) due to the rural setting. When present however, bicyclists will be subject to 1-way traffic control and delay, and be required to travel through the closure with the vehicle queue. Pedestrians, if present, may traverse the closure using the shoulder on either side of the roadway. No significant impacts to these users are anticipated.

5. TRAFFIC IMPACT MITIGATION

LANE CLOSURES: Generally, lane closures on 2 lane conventional highways are not allowed during times when the traffic volumes are high enough to create queues too large to clear in a standard traffic control cycle and/or excessive delay is expected. Due to the low traffic volumes, lane closures will be allowed at anytime except designated holidays. Based on the number of culvert locations and overall length of the project, one or two lane closures will be allowed. Two +/- 1.0 mi long lane closures may be allowed an individual traffic delay of up to 8 minutes for a total cumulative project delay of up to 16 minutes. As an alternative, one 2-mile long closure with a 16 minute delay may be allowed.

TRUCKS: To accommodate trucks during closures, a minimum of one lane, 12 ft wide and adjacent paved or unpaved shoulder, shall be open to traffic at all times (the same as existing conditions). During times when no construction operations are not in progress, a minimum of two such lanes shall be open to traffic. If K-rail becomes included in the scope and a minimum horizontal clearance of 14 ft shall be maintained and notification of HQ Transportation Permits will be required.

5. TRAFFIC IMPACT MITIGATION (Cont.)

CORRIDOR: The D2 DTM generally prohibits lane closures within 5 mi of each other to allow traffic to return to a normal flow pattern between closures and to prevent queues of traffic from reaching the next closure. At the current time, there are no other projects scheduled for construction on the corridor in 2012. As the 2012 construction season nears, the corridor will be re-evaluated to identify planned construction projects. The D2 DTM and the PM shall continue coordination through PDT's to ensure that cumulative delays are minimized through lane closure restrictions (i.e., night time or weekend work), coordination of closures between projects, or changing project construction start dates.

PILOT CAR: If the lane closure includes several culvert locations where flaggers cannot see each other due to curvilinear alignment, a pilot car should be used.

CHANGEABLE MESSAGE SIGNS (PCMSs): Due to the curvilinear alignment and limited approach sight distance in many work locations, PCMSs are recommended for the approach to one-way traffic control.

ADVANCE FLAGGERS: At locations where use of a PCMS is not practical (where a wide shoulder is not available for PCMS placement), an advance flagger is recommended.

TRAFFIC MONITORING STATIONS (TMS): Even though it is likely the planned culvert work will not impact the existing TMS's, the specific design is not completed enough to know for sure at this time. Once the design is further along, the PE should contact Bill Belcher, Traffic Census, 530-225-3313 to confirm locations and configurations to insure the work will not impact these TMS's.

WORKER SAFETY MEDIA CAMPAIGNS - Worker safety media campaigns have been shown to reduce work zone vehicle collisions. Reducing work zone collisions will increase public and worker safety and reduce incident related congestion. With safety and reliability being the Departments number 1 and 2 goals respectively, it is appropriate for construction funding be set aside for worker safety media advertisements.

COSTS: In addition to costs for typical traffic control measures associated with Standard Plan T-13 lane closures, the following shall be incorporated into the project estimate:

- **WORKER SAFETY MEDIA CAMPAIGNS:** Include \$250 in item #066063-Transportation Management Plan Public Information for worker safety media campaigns.
- **PCMS or Advance Flaggers** (use one or the other depending on if adequate location for PCMS is available)
- **CENSUS LOOPS:** Replacement (if needed) of existing TMS's.

TMP: A TMP for this project is required and should be requested at a time when the design is complete enough to determine specific traffic impacts but is early enough to make design changes/additions required for traffic mitigation. The TMP for this project will summarize the traditional traffic handling practices and other traffic mitigation strategies that will be implemented during construction that will include, but is not limited to: 2 week pre-notification of closures (Lane Closure Schedule), DTM evaluation of cumulative traffic corridor delays for multiple projects, California Highway Information Network (CHIN), Road Work Information Bulletin (RIB), Local Agency contacts, Permanent Changeable Message Sign (CMS) locations, permanent and portable Highway Advisory Radio (HAR) locations, CHP Commander contacts, incident response (accident, natural event) contacts, contingency plans, and maintenance contacts.

This TMP Data Sheet was prepared by Jan Meyer, ATP. I certify that the assumptions are reasonable and proper subject to the limiting conditions set forth and I find the Data Sheet complete and current.



Steve Rogers
Chief, Office of Traffic Management

8-2-07

Date

Note: The following should only be contained in the Project Estimate File. They are for internal RW Analysis Purposes only.

Do not distribute:

Basic Input (worksheet), Worksheet (worksheet), Worksheet 2 (worksheet), Mitigation Parcels (worksheet), Resource Template (worksheet), or Datastream (worksheet), Leadtime Estimator (worksheet)

Datasheet Distribution List

Dist-EA: 02-4C150

Location: 02-Sis-96- PM 12.0/56.0

Documents included

	Narrative Analysis (if applicable)	Requested RW XPM Resource hours	Mitigation Information Sheet Only
(1) "Current Estimate Right of Way Costs" (1 Page Cover Memorandum)			
(2) 3-Page Right of Way Datasheet			
(3) Utility Information Sheet (if applicable)			
(4) Real Property Services Information Sheet (if applicable)			
(5) Railroad Information Sheet (if applicable)			
(6) Mitigation Information Sheet (if applicable)			

To:

Send Original to:

Rob MacRae X
 Maintenance Engineering
 Attention: Rob MacRae

Send Copies to:

1. Carl Anderson, Project Manager, 2. Assist Project Manager	X		X
WALTER E. BIRD, North Region Right of Way Manager, Redding RW Office	X	X	X
Kerry Sapinsky, Redding RW Office, RW Project Coordinator	X	X	X
Ted Goldsmith, Right of Way Engineering - Redding	X		
MIKE FREITAS, RW Project Delivery Team Leader, Redding Office	X	X	X
Kerry Sapinsky - File copy	X	X	X
Karen Hawkins, Sr RW Agent, Redding RW Office	X		

Order of documents:

1. Datasheet Distribution list
2. Requested RW XPM Resource hours Memorandum
3. Narrative Analysis (if applicable)
4. "Current Estimate Right of Way Costs" one page Cover Memorandum
5. Three-page Right of Way Datasheet
6. Utility Information Sheet (if applicable)
7. Real Property Services Information Sheet (if applicable)
8. Railroad Information Sheet (if applicable)
9. Mitigation Information Sheet (if applicable)

ATTACHMENT C
 RW DATA SHEET
 PAGE 1 / 9

Note: The following should only be contained in the Project Estimate File. They are for internal RW Analysis Purposes only.

Do not distribute:

Basic Input (worksheet), Worksheet (worksheet), Worksheet 2 (worksheet), Mitigation Parcels (worksheet), Resource Template (worksheet), or Datastream (worksheet), Leadtime Estimator (worksheet)

Datasheet Distribution List

Dist-EA: 02-4C150

Location: 02-Sis-96-PM 12.0/23.0

Documents included

	Narrative Analysis (if applicable)	Requested RW XPM Resource hours	Mitigation Information Sheet Only
(1) "Current Estimate Right of Way Costs" (1 Page Cover Memorandum)			
(2) 3-Page Right of Way Datasheet			
(3) Utility Information Sheet (if applicable)			
(4) Real Property Services Information Sheet (if applicable)			
(5) Railroad Information Sheet (if applicable)			
(6) Mitigation Information Sheet (if applicable)			

To:

Send Original to:

Rob MacRae
Maintenance Engineering
Attention: Rob MacRae

X

Send Copies to:

1. Carl Anderson, Project Manager, 2. Assist Project Manager

X

X

WALTER E. BIRD, North Region Right of Way Manager, Redding RW Office

X

X

X

Kerry Sapinsky, Redding RW Office, RW Project Coordinator

X

X

X

Ted Goldsmith, Right of Way Engineering - Redding

X

KAREN HAWKINS, RW Project Delivery Team Leader, Redding Office

X

X

X

Kerry Sapinsky - File copy

X

X

X

Mike Freitas
Keren Hawkins, Sr RW Agent, Redding RW Office Utilities

X

Jane Tarczy - Mitigation

Order of documents:

1. Datasheet Distribution list
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8. Railroad Information Sheet (if applicable)
9. Mitigation Information Sheet (if applicable)

USA LANDS

Memorandum

*Flex your power!
 Be energy efficient!*

To: Carl Anderson
 Project Manager

Date: July 2, 2007

Attention: Assistant Project Manager

File: 02-Sis-96-PM 12.0/23.0
 E.A 4C150K
 In Siskiyou County from Ti Creek Bridge to
 1.0 mile West of Portuguese Creek

From: WALTER E. BIRD
 Senior Right of Way Agent
 Project Delivery Branch
 Redding

Subject: XPM Resource hours for RW

Please adjust the hours in XPM for this project as follows and remove all other resource line items except those previously charged to.

Task	Resource ID	Task Description	Hrs
100	03.400	Perform Project Management	20
150	03.400	Develop Project Initiation Document (PID) - PSR Stage	20
160	03.400	Perform Preliminary Engineering Studies & Prepare Draft Project Report	0
165	03.400	Perform Environmental Studies & Prepare Draft Environmental Document (DED) PR Stage	40
175	03.400	Circulate DED & Select Preferred Project Alternative	0
180	03.400	Prepare & Approve Project Report & Final Environmental Document (FED)	0
185	03.400	Prepare Base Maps & Plan Sheets, Utility verification and potholing	280
195	03.400	Right of Way Property Management & Excess Lands	0
200	03.400	Coordinate Utilities	432
205	03.400	Obtain Permits, Agreements & Route Adoptions	0
220	03.400	Perform Right of Way Engineering	0
225	03.400	Obtain RW Interests for Project RW Certification	20
235	03.400	Mitigate Environmental Impacts and Clean Up Hazardous Waste	0
245	03.400	Post Right of Way Certification Work	0
255	03.400	Circulate, Review, and Prepare Final District PS&E Package	0
270	03.400	Perform Construction Engineering and General Contract Administration	0
285	03.400	Prepare & Administer Contract Change Orders	0
Total for this project			812

"Caltrans improves mobility across California"

Memorandum

*Flex your power!
Be energy efficient!*

To: Rob MacRae
Maintenance Engineering
Department of Transportation, District 3

Attention Rob MacRae
Project Engineer

Date: July 2, 2007

File: 02-Sis-96-PM 12.0/23.0
E.A. 4C150K
Alternate No. N/A

From: KAREN HAWKINS,
Senior Right of Way Agent
Project Delivery
Redding

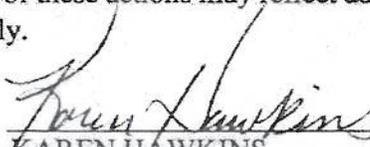
In Siskiyou County from Ti
Creek Bridge to 1.0 mile
West of Portuguese Creek

Subject: Current Estimated Right of Way Costs

We have completed an estimate of the right of way costs for the above referenced project based on information received from you June 25, 2007

An estimate of the Environmental Mitigation costs have not been provided by the Environmental Division. Therefore, this estimate will most likely need to be increased when costs are determined.

Right of Way Lead Time will require a minimum of 12 months after we receive project first appraisal maps, utility conflict maps, and the necessary environmental clearance and freeway agreements have been approved and obtained. Additionally a minimum of 12 months will be required after receiving the last appraisal map to Right of Way for certification. Shorter lead times will require either more right of way resources or an increased number of condemnation suits to be filed. Either of these actions may reflect adversely on the District's other programs or our public image generally.


KAREN HAWKINS,

Senior Right of Way Agent
Project Delivery

Attachments:

Right of Way Data Sheet
Utility Information Sheet
USA Land Information Sheet
Mitigation Information Sheet

cc. Carl Anderson

REVISED



Date: July 2, 2007

02-Sis-96-PM 12.0/23.0
 E.A. 4C150K
 In Siskiyou County from Ti Creek Bridge to 1.0
 mile West of Portuguese Creek

1. Right of Way Cost Estimate:

	Current Value Future Use	Escalation Rate	Escalated Value
A. Total Acquisition Cost	\$0		\$0
B. Mitigation acquisition & credits	\$0		\$0
C. Project Development Permit Fees	\$4,890	5%	\$6,067
Subtotal	\$4,890		\$6,067
D. Utility Relocation (State Share) (Owner's share: \$100,000)	\$60,000	5%	\$74,437
E. Relocation Assistance (RAP)	\$0		\$0
F. Clearance/Demolition	\$0		\$0
H. Title & Escrow	\$0		\$0
I. Total Estimated Right of Way Cost	\$64,890	Rounded	\$80,500
J. Construction Contract Work	\$0		

2. Current Date of Right of Way Certification

December 1, 2011

3. Parcel Data:

Type	Dual/Appr	Utilities	RR Involvements
X 0		U4 - 1 2	None X
A 0		- 2 0	C&M Agrmt
B 0		- 3 0	Svc Contract
C 0	0	- 4 0	Easements
D 0	0	U5 - 7 4	Rights of Entry
		- 8 0	Clauses
Total 0		- 9 2	
Areas:			Misc. RW Work
RW: N/A		No. Excess Pcls: 0	RAP Displ N/A
Excess: N/A			Clear/Demo N/A
Mitigation: N/A			Const Permits N/A
			Condemnation N/A
			USA Involvement Yes

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 private Right of Way will be required. Post Mile 12.0 to 16.0 is administered by Six Rivers National Forest and will be handled by District 1. Post Mile 16.0 to 23.0 is administered by Klamath National Forest and will be handled by District 2. R/W from the forests will be acquired by DOT easement.

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 _____

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

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

11. Are RAP displacements required? Yes _____ No X

No. of single family	<u> </u>	No. of business/nonprofit	<u> </u>
No. of multi-family	<u> </u>	No. of farms	<u> </u>

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 _____ Explain: Optional disposal site may be required per Project Engineer

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. 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 12 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 12 months will be required after receiving the last appraisal map to Right of way for certification.

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

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

Evaluation Prepared By:

Right of Way:

Kerry Sapinsky
Kerry Sapinsky

Date

9/04/07

Reviewed By:

RW Project Coordinator:

Lisa Haney
Cindy Vincelli

Date

9-4-07

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.

Karen Hawkins
KAREN HAWKINS,
Senior Right of Way Agent
Project Delivery Branch
Redding

9/4/07
Date

1. Name of Utility Companies Requiring Verification Only:

AT & T (SBC) - Telephone
Pacific Power - Electrical
Happy Camp Services District - Water
Happy Camp Services District - Sewer

2. Name of Utility Companies Requiring Relocations:

Siskiyou Telephone
AT & T

Number of JUA's or CUA's required for this project:

3. Additional information concerning utility involvements on this project:

Relocations possible for AT & T and Siskiyou Telephone. Positive location of underground fiber optic and telephone facilities will be required at State expense.

4. PMCS Input Information

Total estimated cost of State's obligation for utility relocation on this project:

Potholing: \$ 60,000
Relocation \$ _____
Total: \$ 60,000 Escalation Rate 5 %.

(Owner's Share: \$ 100,000)

Utility Involvements

U4-1	<u>2</u>	U5-7	<u>4</u>
-2	_____	-8	_____
-3	_____	-9	<u>2</u>
-4	_____		

Prepared By


CHRIS SCHALLER
Right of Way Utility Estimator

Date

7/9/07

1. Is mitigation required for the project?

Yes, per Cabe Cornelius at 3405.

2. What type of mitigation is needed for the project?

Riparian Habitat Restoration, Wetlands Restoration, Fish Passage, Sensitive Species, ESA fencing and Monitoring Mitigation. The specialists are still working up the mitigation figures. The PEAR is due for completion 8/1/07.

3. List any Resource Agency that will be involved with mitigation.

The only agency costs will be for the Fish and Game permit and the Water Quality Board Certification permit for a total of about \$5,000 in fees.

4. What is the method of Mitigation?

Number of fee acquisition parcels, Conservation Easements, and/or Option agmts required: _____

Mitigation Bank: (yes/no) _____

In-lieu payment: (yes/no) _____

Other: (describe) Unknown at this time

5. PMCS Input Information

Number of Acres/Credits Unknown at this time

Estimated Cost \$0

Prepared By:

Kenny G Sapinsky
Right of Way Mitigation Estimator

1 Is Right of Way within USA land boundaries? If yes, what agency?

Yes. Klamath National Forest and Six Rivers National Forest. Post Mile 12.0 to 16.0 is administered by Six Rivers National Forest and will be handled by District 1. Post Mile 16.0 to 56.0 is administered by Klamath National Forest and will be handled by District 2.

2 Is Right of Way by fee, easement or special use permit?

All Right of Way needed from Klamath National Forest for this project will fall within pending DOT Easement expected to be final by December, 2008.

3 Will this be a permanent use or temporary use?

Permanent.

4 Is project work outside the existing state Right of Way?

Yes, outside existing Right of Way but within pending DOT Easement expected to be final by December, 2008.

5 Are there any trees to be removed?

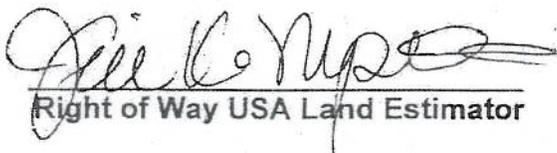
Inside State Right of Way?

No, per Rob Macrae.

Outside State Right of Way?

No, per Rob Macrae.

Prepared By:


Right of Way USA Land Estimator

7-9-07
Date

Preliminary Environmental Analysis Report

Project Information

District 02 County SIS Route 96 Post Mile 12.0/56.0 EA 4C150K

Project Title: Sis 96 – Drainage System Restoration Project

Project Manager: Carl Anderson Phone # (530) 225-2154

Project Engineer: Rob McCrae Phone # (530) 225-2482

Environmental Planning Office Chief: Ed Espinoza Phone # (530) 225-3308

Environmental Planner Generalist: Cabe Cornelius Phone # (530) 225-3514

Project Description

Project Purpose and Need: This Drainage System Restoration Project involves replacing or rehabilitating approximately two hundred and ten (210) drainage culverts along State Route 96 (SR 96) in Siskiyou County. The 210 drainage systems have lost serviceability due to age, wear and general degradation. The goal of this project is to maximize the service life of the drainage elements by rehabilitating and upgrading the existing drainage facilities while simultaneously preventing traffic disruption. The proposed project includes a wide variety of culvert rehabilitation work to enhance maintenance of the drainage systems and their hydraulic capacity, including replacing culverts, lining culvert inverts with concrete, and placement of multiple end treatments. The majority of the proposed work will occur within the footprint of the existing drainage.

Project Location: The proposed culvert rehabilitation project is located along SR 96 in Siskiyou County, Post Mile (PM) 12.0 and extending 44 miles northeast through PM 56.0. SR 96 is located within the Klamath River watershed, which is designated as a Wild and Scenic River. The highway is located within close proximity to the Klamath River throughout the majority of the project limits and crosses many small and large tributaries to the Klamath River. The typical roadway within the project limits is a two-lane highway with no paved shoulders.

Description of Work: The following combination of construction activities and techniques may be employed at the various culvert rehabilitation locations throughout the project area:

- Replacing entire culverts
- Lining inverts of culverts
- Placing new end treatments on culverts, including flared end sections, sloped headwalls, retaining walls, drainage inlets, riser pipes, and downdrains
- Placing rock slope protection for erosion control and storm water mitigation, as well as placing erosion control Best Management Practices on all disturbed areas
- Placing AC dikes and paving gutters
- Placing culvert markers

The proposed project restricts the work to culvert rehabilitation work only. There are no proposed improvements to the roadbed beyond the culvert areas. In the locations where the entire length of the culvert will be replaced, the existing pavement will be cut and replaced to the original width. There are 7 structures within the project limits; however, no work is planned on these existing structures. Work associated with this project may include the removal of trees and other vegetation, ground disturbance and possibly disturbance within certain stream channels.

Alternatives: Alternatives include “build” and “no-build” alternatives. Depending on impacts to environmental resources, work at some culvert locations may be scaled back or eliminated from the project altogether.

Anticipated Environmental Approval

- | | |
|---|---|
| <p><u>CEQA</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Categorical/Statutory Exemption <input checked="" type="checkbox"/> Negative Declaration / focused ND <input type="checkbox"/> Environmental Impact Report | <p><u>NEPA</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Categorical Exclusion <input checked="" type="checkbox"/> Finding of No Significant Impact <input type="checkbox"/> Environmental Impact Statement |
|---|---|

Based on a preliminary review of project information, resource records, database searches and a limited windshield survey of the project site, it is recommended that an Initial Study (IS) and Environmental Assessment (EA) be prepared to comply with the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA) respectively. The IS/EA will assist in identifying and analyzing the environmental issues and potential impacts of the proposed project. If project impacts can be minimized through project design or reduced to a level of “less than significant with mitigation,” the project would qualify for a Negative Declaration (ND) and Finding of No Significant Impact (FONSI) pursuant to CEQA and NEPA. If the project will result in a significant effect upon the environment that cannot be mitigated to a level of “less than significant,” or there is substantial controversy on environmental grounds, an Environmental Impact Report/Environmental Impact Statement (EIR/EIS) shall be prepared. Project alternatives or design modifications, which avoid, minimize and reduce environmental impacts, should be identified early to facilitate the project development process.

The estimated timeframe to complete the environmental compliance process to reach PA&ED is **36 months** from the date a complete Environmental Study Request (ESR) is received. The ESR should delineate all areas needed for construction including construction access requirements, staging areas, temporary and permanent easements, borrow and disposal areas, new right of way, utility relocations, traffic detours, and areas need for construction signing. A work breakdown structure (WBS) estimate for the proposed project is attached (Attachment A).

PSR Summary Statement

It is anticipated that an Environmental Impact Report (EIR)/Environmental Assessment (EA) will be prepared to assist in identifying and measuring potential environmental impacts relative to California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA). The Project Approval and Environmental Document (PA&ED) process is estimated to require **36 months** to complete from the date a complete Environmental Study Request (ESR) package is received. The

ESR should include an Environmental Study Limit (ESL) map that delineates the proposed right of way and area necessary for construction, including contractor storage and staging areas, access points, disposal sites, utility relocation areas, temporary construction easements and permanent easements. Project alternatives that avoid, minimize or reduce impacts to wetlands and other resources will need to be evaluated during the environmental compliance process.

The Project Engineer should coordinate with the Environmental Planning Branch regarding due dates for technical studies that are prepared outside the Environmental Branch, such as the Floodplain Evaluation Report Summary, Visual Impact Assessment and Initial Site Assessment for hazardous waste. It is recommended that the Project Engineer coordinate with the Stormwater Unit and the Office of Landscape Architecture regarding soil stabilization, aesthetic treatments, and preparation of the Stormwater Pollution Prevention Plan (SWPPP). The project design should include design features that minimize environmental impacts to the extent feasible, including longitudinal floodplain encroachments, cuts and fills, and vegetation removal.

Project alternatives or design modifications that will avoid, minimize and reduce environmental impacts should be identified early to facilitate environmental compliance and project development process. Early public scoping meetings should include affected property owners, businesses and tribal representatives. Close coordination with the Karuk Tribe of California will be required based on the Memo Of Understanding (MOU) dated April 4, 2000 that applies to all “activities, projects and issues along SR 96” from PM 26.3 in Humboldt County to PM 61.1 in Siskiyou County.

Anticipated Project Mitigation

Compensatory mitigation may be required for impacts to streams, wetlands, sensitive plants, riparian habitat, fish and wildlife, recreational resources, and eligible historical resources. It is anticipated that many impacts can be avoided through design modifications, the implementation of standard Best Management Practices (BMPs), and the designation of environmentally sensitive areas (ESAs) on the plan sheets. Generally, reasonable mitigation costs are considered to be up to 10% of the project cost. The Project Engineer must ensure that the recommended mitigation funds are specifically allocated to capital construction funds under the “8” phase.

Without the benefit of evaluating each of the 210 individual culvert locations in detail, it is extremely difficult to accurately estimate the total project mitigation costs. Therefore, the accuracy of the project mitigation costs outlined herein will need to be refined during the detailed environmental documentation stage.

The following biological mitigation costs are a “best estimate” at this time:

- Riparian Habitat - \$100,000
The California Department of Fish and Game (CDFG) and the National Marine Fisheries Service (NMFS) will require compensatory mitigation for riparian vegetation removal. Re-vegetation efforts for the proposed project should include plantings for any disturbed riparian areas. Riparian trees removed will likely require a 3:1 replacement ratio. Mitigation costs are estimated to be approximately \$100,000.

- Wetlands - \$100,000
If wetlands are impacted, wetlands will be required to be replaced at an U.S. Army Corps of Engineers (USACE) approved location and replacement ratio.
- Fish Passage - \$200,000
Fish passage will be required to be maintained or improved on any existing culvert where drainage work is proposed within a fish-bearing stream. Also, as mitigation to potential impacts to coho salmon, CDFG or NMFS may require fish passage to be improved on other drainages within the project limits.
- Swallows - \$25,000
Mitigation measures may include monitoring and the installation of exclusionary devices to prevent swallows from nesting within larger culverts.
- Sensitive Species - \$75,000
The U.S. Fish and Wildlife Service (USFWS), U.S. Forest Service (USFS), California Native Plant Society (CNPS) or the CDFG may require other mitigation measures to minimize or avoid impacts to sensitive species, which may include habitat replacement or restoration.

The following archaeological mitigation costs are a “best estimate” at this time:

- ESA Mitigation Fencing and Monitoring - \$15,000
For ESA Mitigation Fencing and Monitoring for National Register of Historic Properties (NRHP) in the Right Of Way (ROW) (applicable locations to be determined).

Total estimated mitigation costs: \$515,000.

Anticipated Permits

The following is a list of potential agencies and permit requirements and their associated estimated costs:

- Streambed Alteration Agreement (1602) from the CDFG – \$2,000;
- Section 404 permit from the U.S. Army Corps of Engineers (ACOE) – no cost;
- Section 401 water quality certificates, pursuant to Section 401 of the Clean Water Act from the Central Valley Regional Water Quality Control Board (CVRWQCB) – \$3,000.

Preliminary design information, including drawings, material types and quantities, will be needed at least one year prior to PS&E for the permit application process. In addition, the contractor may need to obtain a National Pollutant Discharge Elimination System (NPDES) permit for dewatering from the CVRWQB.

Total estimated costs for permits: \$5,000.

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

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 Study Report. Changes in project scope, alternatives, or environmental laws will require a re-evaluation of this report.

Reviewed by:

Environmental Office Chief

Date: _____

Project Manager

Date: _____

Environmental Technical Reports or Studies Required

	Study	Document	N/A
Community Impact Study	<input type="checkbox"/>	<input type="checkbox"/>	✓
Farmland	<input type="checkbox"/>	<input type="checkbox"/>	✓
Section 4(f) Evaluation	<input type="checkbox"/>	<input type="checkbox"/>	✓
Visual Resources	✓	<input type="checkbox"/>	<input type="checkbox"/>
Water Quality	✓	<input type="checkbox"/>	<input type="checkbox"/>
Floodplain Evaluation	✓	<input type="checkbox"/>	<input type="checkbox"/>
Noise Study	✓	<input type="checkbox"/>	<input type="checkbox"/>
Air Quality Study	<input type="checkbox"/>	<input type="checkbox"/>	✓
Paleontology	✓	<input type="checkbox"/>	<input type="checkbox"/>
Wild and Scenic River Consistency	<input type="checkbox"/>	<input type="checkbox"/>	✓
Cumulative Impacts	<input type="checkbox"/>	<input type="checkbox"/>	✓
Cultural			
ASR	<input type="checkbox"/>	✓	<input type="checkbox"/>
HSR	<input type="checkbox"/>	<input type="checkbox"/>	✓
HASR	<input type="checkbox"/>	<input type="checkbox"/>	✓
HPSR	<input type="checkbox"/>	✓	<input type="checkbox"/>
Section 106 / SHPO	✓	<input type="checkbox"/>	<input type="checkbox"/>
Native American Coordination	✓	<input type="checkbox"/>	<input type="checkbox"/>
Other			
Finding of Effect _____	<input type="checkbox"/>	✓	<input type="checkbox"/>
Data Recovery Plan _____	<input type="checkbox"/>	<input type="checkbox"/>	✓
Hazardous Waste			
ISA (Additional)	<input type="checkbox"/>	✓	<input type="checkbox"/>
PSI	<input type="checkbox"/>	<input type="checkbox"/>	✓
Other			
_____	<input type="checkbox"/>	<input type="checkbox"/>	✓
Biological			
Endangered Species (Federal)	✓	<input type="checkbox"/>	<input type="checkbox"/>
Endangered Species (State)	✓	<input type="checkbox"/>	<input type="checkbox"/>
Species of Concern (CNPS, USFS, BLM)	✓	<input type="checkbox"/>	<input type="checkbox"/>
Biological Evaluation (USFWS, NMFS)	<input type="checkbox"/>	✓	<input type="checkbox"/>
Biological Assessment (USFWS, NMFS)	<input type="checkbox"/>	✓	<input type="checkbox"/>
Wetlands	<input type="checkbox"/>	✓	<input type="checkbox"/>
Invasive Species	✓	<input type="checkbox"/>	<input type="checkbox"/>
Natural Environment Study	<input type="checkbox"/>	✓	<input type="checkbox"/>
NEPA 404 Coordination	<input type="checkbox"/>	<input type="checkbox"/>	✓
Other			
_____	<input type="checkbox"/>	<input type="checkbox"/>	✓
Permits			
401 Permit Coordination	<input type="checkbox"/>	✓	<input type="checkbox"/>
404 Permit Coordination	<input type="checkbox"/>	✓	<input type="checkbox"/>
1602 Permit Coordination	<input type="checkbox"/>	✓	<input type="checkbox"/>
City/County Coastal Permit Coordination	<input type="checkbox"/>	<input type="checkbox"/>	✓
State Coastal Permit Coordination	<input type="checkbox"/>	<input type="checkbox"/>	✓
NPDES Coordination	<input type="checkbox"/>	✓	<input type="checkbox"/>
US Coast Guard (Section 10)	<input type="checkbox"/>	<input type="checkbox"/>	✓

Discussion of Technical Review

Cultural Resources:

A review of the available Caltrans archaeological files in the Environmental Branch office indicate that, with the exception of specific spot locations associated with previous projects, the proposed project area has not been surveyed for cultural resources. A literature review and file search was conducted at the Northeast Information Center (NEIC) of the California Historical Resources Information System (CHRIS), California State University, Chico (CSUC) on September 7 and 8, 2005.

The results of our file search revealed that there are a total of 45 previously recorded archaeological properties within the boundaries of the existing Caltrans ROW between the proposed project limits (25 prehistoric/ethnographic, 16 historic period, and four with dual components). These sites represent the full range of site types known for the region and include Karuk ethnographic villages, prehistoric village sites, prehistoric lithic scatters, Karuk sacred/ceremonial sites, Karuk cemeteries, historic residences, historic water conveyance systems, historic mines/mining remains, historic roads and trails, historic townsites, historic cemeteries, and historic structures. None of the 45 known sites has been formally evaluated for their National Register eligibility status.

In addition to the resources listed above, there are an additional 48 known archaeological sites and one National Register-eligible site within $\frac{1}{4}$ to $\frac{1}{2}$ mile of the project area. Since the location of the majority of these resources has not been field verified, it is quite likely that upon completion of a field review, a number of these resources will be found to be located either entirely within or extend into the Caltrans ROW.

It should also be noted that at the present time, none of the 210 culvert locations associated with this project have been examined in regards to their proximity to the 93 known cultural resource locations. A field inspection of each site and culvert location will be necessary in order to determine whether any cultural resources may be affected by the proposed project. In addition, since formal evaluation has not been completed for the Karuk ceremonial sites, it is quite possible that all or most of the identified Karuk sacred/ceremonial sites, which are still in use by the Karuk peoples today, would also qualify for inclusion in the National Register as Traditional Cultural Properties (TCPs).

Section 106:

If none of the identified properties within the project area are found to be eligible for listing in the National Register and/or they can be excluded from the project's Area of Potential Effects (APE), it is expected that Section 106 compliance for the undertaking could be completed within six to nine months, provided that appropriate mapping is provided for the project and any rights of entry are obtained promptly. However, if it were found that any identified architectural or archaeological resources are eligible for the National Register, and/or the undertaking cannot be redesigned to avoid these resources, this time frame would become invalid. Such findings could extend the schedule for completing Section 106 studies beyond nine months in order to allow for

the formal evaluation of significance for any identified resources as well as possible mitigation of impacts to the historic properties.

Native American Coordination:

It will be necessary to notify local Native American representatives and agencies, and request input relative to resources that may be affected by the project.

Biological Resources:

A literature search was conducted to investigate the potential presence of species and habitats of concern within the project vicinity. Sources included the CDFG, the California Natural Diversity Database (CNDDDB), Orleans, Orleans Mt., Somes Bar, Bark Shanty, Dillon Mt., Ukonom Mt., Bear Peak, Clear Creek, Huckleberry Mt., Happy Camp, Slater Butte, Fugurehead Mt., Seiad Valley, Kangaroo Mt., Hamburg, and Horse Creek, 7.5 minute USGS quadrangles, and Caltrans Photolog. The USFWS and the USFS were contacted regarding the potential presence of sensitive species. A field review was conducted on August 9, 2005.

Sensitive Species:

- Rare Plants
Several special status plants have been identified within or near the proposed project area. Literature research, coordination with the resource agencies and rare plant surveys will be necessary to determine if any of the special status plant species are present within the project limits. If plants are found, consultation and/or coordination will be necessary with the CNPS and the CDFG to discuss mitigation and avoidance measures during construction. Rare plant surveys will need to be scheduled to take place from March through September.
- Listed Salmonids
Coho salmon (federal threatened / state threatened) exist within the Klamath River and many of its tributaries. Juvenile coho salmon have been identified at Fort Goff Creek (PM 55.98). Surveys and coordination with the NMFS and the CDFG will be necessary to determine their presence at each location. A Biological Assessment, pursuant to Section 7 of the Endangered Species Act will be necessary to identify potential impacts and appropriate mitigation measures. If studies determine that the project may affect coho salmon and requires formal consultation, a determination of consistency of the Federal "Incidental Take Statement" will be required from the CDFG under Section 2080.1 of the Fish and Game Code. Potential impacts to Essential Fish Habitat and designated coho salmon critical habitat will also be evaluated in the Biological Assessment.
- Northern Spotted Owl and Bald Eagle
The project lies within the range of the Northern spotted owl (federal threatened) and bald eagle (federal threatened); therefore each location will need to be assessed for suitable habitat. If the project is determined to have a potential affect to either species, a

Biological Assessment will be submitted to the USFWS. If the project does not result in a loss of habitat (nesting, roosting, foraging), the project may proceed as a noise only disturbance, which would require work windows.

- Special Status Amphibians

Surveys for the Del Norte salamander (state species of special concern), Siskiyou mountains salamander (state threatened), and tailed frog (state species of special concern) will be necessary. The Del Norte salamander has been identified along the western portion of the project limits, while the Siskiyou mountain salamander has been identified along eastern portion of the project limits. The tailed frog has been identified throughout the project limits. If any of the above listed species are determined to be present, mitigation measures or avoidance of impacts may be necessary.

- Other Special Status Species

Surveys to determine if suitable habitat is available for Pacific fishers, and Northern goshawks (state species of special concern), will be necessary. Several osprey (state species of special concern) nests have been observed along the Klamath River throughout the project limits. Further studies will be necessary to determine potential impacts, which may require work windows.

Fish Passage:

Pursuant to Senate Bill (SB) 857, each culvert will need to be surveyed for fish passage. Some culverts may require additional surveys, requiring more extensive surveys from the Hydraulics branch. Fish passage will be maintained and/or improved on any existing culvert, where drainage work is proposed within a fish-bearing stream. Fish passage is enforced by CDFG, under Fish and Game Code 5901 and SB 857. Also, as mitigation to potential impacts to coho salmon, the CDFG or the NMFS may require fish passage to be improved on other drainages within the project limits. This may include culvert replacement, installation of boulder weirs downstream of culvert outlets and/or the installation of baffles within existing culverts. As previously mentioned coho salmon have been observed at Fort Goff Creek (PM 55.98).

Swallows:

Large culverts are capable of providing nesting habitat for cliff swallows. These larger culverts will be surveyed for their presence. Nesting swallows are protected under the Migratory Bird Treaty Act. Mitigation measures will be implemented to avoid potential impacts, which may include restricting work between March 15 - July 31, or excluding swallows from nesting in the culvert prior to March 15.

Riparian:

Due to the high stream temperatures in the Klamath River during the summer months, riparian habitat is very valuable in providing cooler stream temperatures in its tributaries. These tributaries are used by juvenile salmonids during the summer months to escape the high stream temperatures in the Klamath River. Every effort should be made to minimize impacts to riparian

vegetation. The amount of riparian vegetation removal will be required to be quantified during the design phase. The CDFG and the NMFS will require compensatory mitigation for riparian vegetation removed. All disturbed riparian areas should be replanted during the fall/winter following construction.

Wetlands:

Wetlands were identified during a cursory field review at some of the culvert locations along SR 96. Wetland surveys will be required during the environmental study phase to verify and delineate wetlands. If wetlands will be affected, alternatives must be evaluated to avoid and/or minimize wetland impacts to the extent possible pursuant to Executive Order 11900. Impacts to wetlands will require mitigation to restore or replace affected habitat.

Potential Work Windows:

Construction activities proposed within stream channels will likely be limited to take place between June 1 and October 15. Work proposed within ¼ mile of nesting raptors or northern spotted owl habitat may be restricted between February 1 and July 31. To avoid impacts to migratory birds, tree removal should take place prior to March 15 and after July 31. Construction activities proposed on or near structures where nesting swallows are present may be restricted between March 15 and July 31. Other work windows may be necessary for other sensitive species.

Seasonal Constraints for Project Surveys:

It is anticipated that biological studies will take between 18 to 36 months to complete. Field surveys should be scheduled to occur between March and November. Field surveys will be necessary to determine the presence/absence of the sensitive species and resources. Rare plant surveys will need to occur during their flowing period (March through September). Wetland delineations should occur during the spring months.

Water Quality and Erosion:

The proposed project will result in soil disturbance and encroachment within stream channels. Construction of temporary stream diversions or dewatering may be necessary. Any materials placed within a stream channel must be clean and appropriate for the application.

Floodplain:

Executive Order 11988 requires federal agencies to avoid the long- and short-term impacts associated with the modification of flood plans, and to avoid direct and indirect support of floodplain development. In accomplishing this objective, "each agency shall provide leadership and shall take action to reduce the risk of flood loss, to minimize the impact of floods on human safety, health, and welfare, and to restore and preserve the natural and beneficial values served by flood plains in carrying out its responsibilities." Hydraulic studies will be required to determine the project's potential effects upon floodplain elevations and beneficial floodplain

values. Location hydraulic studies must support a Floodplain Evaluation Report Summary, which will be submitted to the Federal Highway Association (FHWA) for review and approval.

Wild and Scenic River:

The project location falls within a designated Wild and Scenic River corridor and will need United States Fish and Wild Life concurrence accordingly.

Scenic Byway:

SR 96 is a designated National Scenic Byway, under the administration of the USFS, for a portion of the project area. Consultation with USFS relative to Scenic Byways will be necessary. Informal consultation with the additional permitting agencies listed below may also be required (see the Anticipated Permits section below).

Visual Effects:

A Visual Impact Assessment (VIA) will be prepared in the future by the Engineering Services Branch Landscape Architect. The VIA will identify significant visual resources, identify and quantify potential impacts, and recommend potential mitigation measures.

Farmlands:

N/A.

Section 4(f) Impacts:

N/A

List of Preparers

This PEAR was prepared with input from the following staff:

Brian Humphrey - Biology

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Cabe Cornelius - Environmental Planner (prepared document)

