

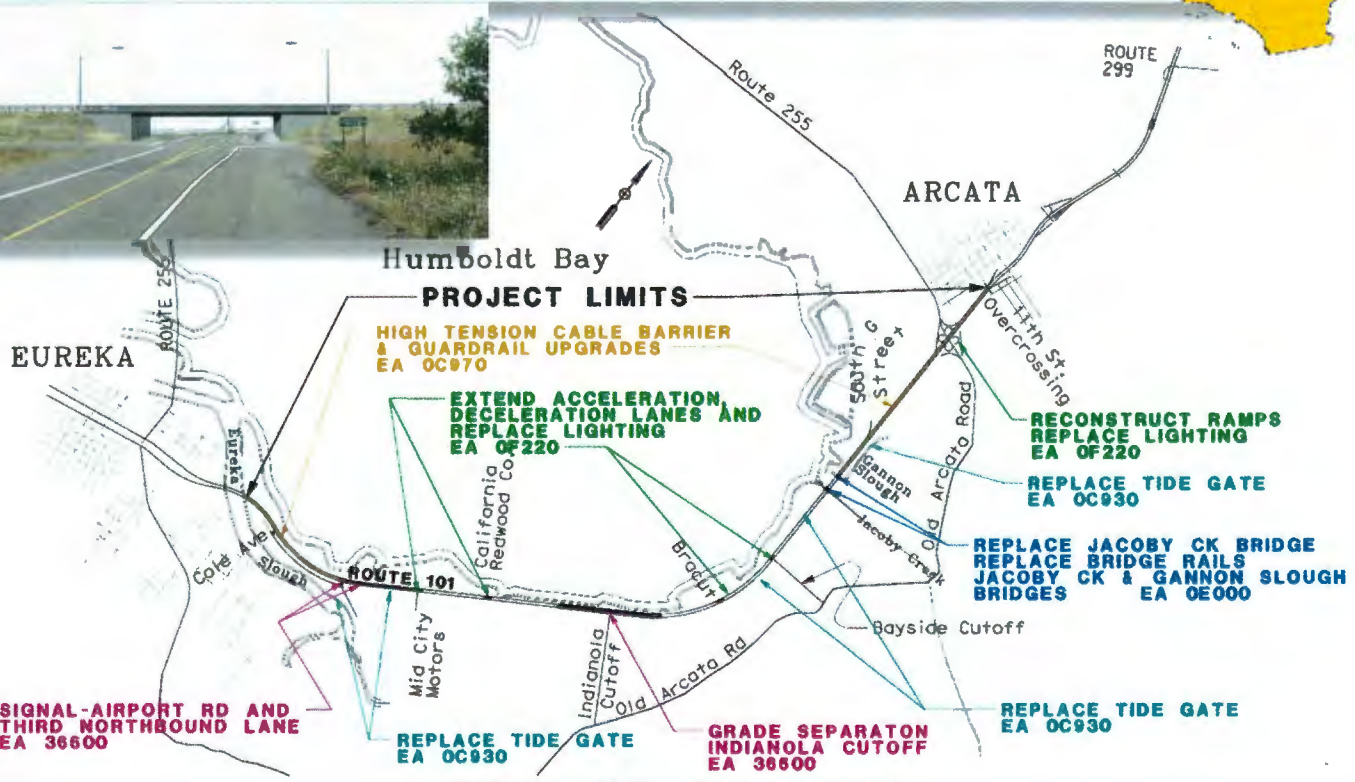
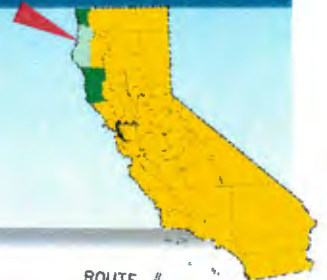
# PROJECT REPORT

HUM 101 PM 79.9/86.3

January 2017

## Eureka-Arcata Route 101 Corridor Improvement Project

Program	Description	EA	(EFIS)
20.10.075.600	Grade Separation, Half Signal Close Crossings	36600	(01 0000 0127)
20.10.201.151	Replace Tide Gates	0C930	(01 1300 0078)
20.10.201.015	Guardrail Safety Improvement	0C970	(01 1300 0094)
20.10.201.112	Jacoby Creek Bridge, Bridge Rails	0E000	(01 1300 0091)
20.10.201.310	Accel./Decel. Lanes, Ramps, Lighting	0F220	(01 1500 0092)

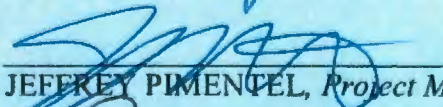



### PROJECT LOCATION

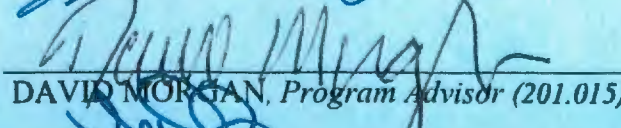
I have reviewed the right of way information contained in this Project Report, and the R/W Data Sheet attached hereto, and find the data to be complete, current, and accurate:

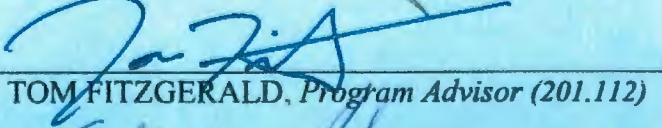
  
 KAREN HAWKINS, Assistant Chief North Region Right of Way

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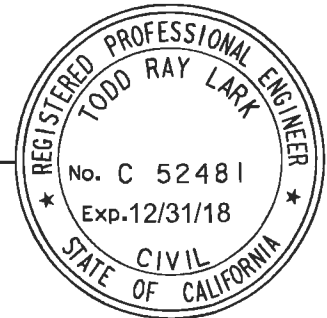
1/10/17  
 Date

**PROJECT REPORT**

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

  
\_\_\_\_\_  
REGISTERED CIVIL ENGINEER  
(Signature)

1/9/17  
\_\_\_\_\_  
DATE



Reviewed by:

  
\_\_\_\_\_  
LENA R. ASHLEY, Branch Chief, Design E3

1/9/17  
\_\_\_\_\_  
DATE

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## 1. INTRODUCTION

Route 101 is one of the three routes comprising the corridor between Eureka and Arcata. The other two routes are Old Arcata Road and Route 255. This project considers improvements to Route 101 from Eureka to the 11<sup>th</sup> Street Overcrossing in Arcata, and for this report, it is referred to as the “Eureka-Arcata corridor”. The Eureka-Arcata corridor is an access-controlled expressway and freeway between Eureka and Arcata adjacent to the North Coast Railroad Authority (NCRA) Railway and Humboldt Bay. The expressway extends from V Street in Eureka to the Jacoby Creek bridges in Arcata; to the north of the Jacoby Creek bridges is freeway.

This project proposes to reduce operational conflicts along the Route 101 corridor, improve safety, and reduce delay at intersections on Route 101 by closing median crossings, and constructing an interchange and signaling an intersection on Route 101. A State Transportation Improvement Program (STIP) project was initiated and programmed by the Humboldt County Association of Governments (HCAOG) for the study of a project on the order of magnitude (cost and scope) of Alternative Y-4 (subsequently re-named Alternative 2) as identified in the Supplemental PSR (PDS) dated September 2000. This project was combined with a State Highway Operational and Protection Program (SHOPP) Roadway Rehabilitation Project within the same project limits. The rehabilitation project has subsequently been broken into smaller projects which include a CAPM paving overlay (completed 2014), extending acceleration lanes, median barrier upgrades, bridge replacement, bridge rail replacements, upgraded lighting, and tide gate replacements.

After the initial circulation of the Draft EIR/EIS, further refinements were made to reduce wetland impacts and reduce access impacts at Airport Rd, by providing a half signal. The preferred project is described as follows:

### **Modified Alternative 3A:**

- Close median crossings (Mid City Motors, California Redwood Co., Bracut, and Bayside Cutoff);
- Construct Compact Diamond grade separation with 22 foot median and 1 ½:1 side slopes at Indianola Cutoff (to minimize wetland impacts);
- Re-align Jacobs Ave. (with retaining wall) at Airport Rd. and signalize intersection at Airport Road/Route 101;
- Construct a third Route 101 northbound (NB) lane from Airport Road to Mid City Motors;
- Lengthen right side acceleration and deceleration lanes as needed at each of the access locations;
- Remove gutters and overlay ramps at South G Street and the Route 255 Interchange;
- Install median barrier, Eureka Slough bridge to Airport Road;
- Replace southbound (SB) Jacoby Creek bridge;
- Replace bridge rails on NB Jacoby Creek and Gannon Slough bridges;
- Replace thrie-beam median barrier with High Tension Cable median barrier and paving from South G Street to 11<sup>th</sup> Street Overcrossing;
- Place guardrail at 3 billboards, as appropriate;
- Remove trees from the clear recovery zone;
- Upgrade lighting;
- Remove safety corridor signs;
- Replace tide gates.

The improvements described in Modified Alternative 3A are programmed in five separate projects and funding for the five projects and their Expenditure Authorizations (EA) are listed in Table 1 as follows:

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<b>TABLE 1</b>					
<b>Project Description</b>					
<b>Project</b>				<b>EA</b>	
<b>GRADE SEPARATION, HALF SIGNAL</b>					<b>36600</b>
<b>GUARDRAIL SAFETY IMPROVEMENT</b>				<b>0C970</b>	
<b>JACOBY CREEK BRIDGE, BRIDGE RAILS</b>			<b>0E000</b>		
<b>ACCEL./DECEL LANES, RAMPS, LIGHTING</b>		<b>0F220</b>			
<b>REPLACE TIDE GATES</b>		<b>0C930</b>			
<b>Project Location:</b>	01-HUM-101	01-HUM-101	01-HUM-101	01-HUM-101	01-HUM-101
<b>Beg PM/End PM</b>	80.8/85.0	80.2/85.8	84.4/84.8	79.9/86.3	80.6/84.0
<b>Current Cost Estimate:</b> in \$ millions					
Capital Outlay Support	\$ 0.241	\$ 1.786	\$ 3.957	\$ 1.325	\$ 6.669
Capital Outlay Construction	\$ 1.155	\$ 8.298	\$ 7.528	\$ 6.649	\$ 28.937
Capital Outlay Right-of-Way	\$ 0.023	\$ 0.614	\$ 0.261	\$ 1.034	\$ 0.720
<b>Funding Source</b>	.201.151 SHOPP	.201.310 SHOPP	.201.112 SHOPP	.201.015 SHOPP	075.600 STIP (RIP) .025.700 STIP (IIP) .010.680 DEMO/TEA21
<b>Funding Year</b>	18/19	18/19	18/19	18/19	20/21
<b>Type of Facility-No. Lanes</b>	expressway 4	expressway/ freeway-4	expressway 4	expressway 4	expressway 4
<b>Number of Structures</b>	0	0	3	0	1
<b>SHOPP Project Output</b>	8 culverts	36,000 veh•Hr/year	638 LF	39	NA
<b>Environmental Determination or Document</b>	EIR/EIS	EIR/EIS	EIR/EIS	EIR/EIS	EIR/EIS
<b>Project Development Category</b>	4B	4B	4B	4B	3
<b>Legal Description</b>	5	4	3	2	1
1	<i>In Humboldt County near Eureka at various locations from Airport road to indianola Cutoff</i>				
2	<i>In Humboldt County near Eureka from Eureka Slough Bridge to 11<sup>th</sup> Street in Arcata</i>				
3	<i>In Humboldt County near Arcata at Jacoby Creek Bridges and Gannon Slough Bridge</i>				
4	<i>In Humboldt County near Eureka at various locations from Cole Ave. to Route 255 in Arcata</i>				
5	<i>In Humboldt County between Eureka and Arcata</i>				

**2. RECOMMENDATION**

Proposed safety improvements on Route 101 from Eureka to Arcata (36600) have been identified in the Regional Transportation Plan (RTP) since 1998-2000 RTP adopted by HCAOG. HCAOG requested State Transportation Improvement Project (STIP)/Regional Improvement Program (RIP) funds and Caltrans has requested Interregional Transportation Improvement Program (ITIP) funds to construct an Interchange at Indianola Cutoff and half signal at Airport Rd. Rehabilitation elements

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of the work described herein were identified in the 1999 Project Scope Summary Report (Pavement Rehabilitation), and are now programmed as 4 separate State Highway Operation and Protection Program (SHOPP) projects. Over the course of the project development, HCAOG, the County of Humboldt, the Cities of Eureka and Arcata have been consulted with respect to the recommended plan and their views have been considered in developing the proposed project. These agencies are in general accord with the plan as presented.

Caltrans has prepared an Environmental Impact Report / Environmental Impact Statement (EIR/EIS) for the proposed project. It has been determined that, with mitigation, the proposed project is the least environmentally damaging practicable alternative.

It is recommended that Program/Project Management and Caltrans Headquarters continue pursuing increased funding to meet the financial needs of the project as described in this Project Report. (See Section 8)

It is recommended that the project be approved for the preferred Modified Alternative 3A, and the project proceed to the design phase and project delivery be completed.

### **3. BACKGROUND**

#### **3.1 Project History**

##### ***3.1.1 Corridor Improvement Project (STIP)***

A Project Study Report (Project Development Support) (PSR (PDS)) was approved on May 1, 2000 for programming the staff support costs for the Project Approval and Environmental Document (PA&ED) phase of the project in the 2000 STIP as a Regional Improvement Program (RIP) project. Four preliminary alternatives ranging in cost from \$18 million to \$305 million were identified for assessing staff support costs needed to program the project through PA&ED. Due to the anticipated high cost and high wetland impacts of some of the proposed project alternatives, it was recommended to reduce the range of alternatives to be studied to the Construction and Right of Way capital costs comparable to Alternative Y4 described in the PSR (PDS). The Y4 alternative included the following:

- 1) Construct Interchange at Indianola Cutoff,
- 2) Improve the right-on/right-off acceleration and deceleration lanes,
- 3) Close the median openings, and
- 4) Increase shoulder widths.

A Supplemental PSR-PDS was then prepared to reflect the revised project scope, and was approved on September 14, 2000. As approved by HCAOG, support costs for the PA&ED component of the project was estimated at \$2.6 million and did not include design. The PA&ED process started July 2001.

Per the Capital Project Charter with HCAOG, the Project Development Team (PDT) is comprised of representatives from Caltrans, the City of Eureka, the City of Arcata, the County of Humboldt, Federal Highway Administration (FHWA), the California Highway Patrol (CHP), the California Department of Fish and Wildlife (DFW), the US Army Corps of Engineers (USACE), the California Coastal Commission, and US Fish and Wildlife Service (USFWS).

##### ***3.1.2 Roadway Rehabilitation Project (SHOPP)***

This project was initiated as a Resurfacing, Restoration, and Rehabilitation (RRR) project in 1999 with an estimated cost of \$21 million. In the interest of accelerating the pavement preservation portion of the RRR project, a project change request was approved in June of 2011, to proceed with

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solely a Capital Preventative Maintenance (CAPM) project. The \$12 million CAPM project extended the life of the paving by 10 to 15 years. The CAPM project was constructed in the summers of 2013 and 2014 and between PM 79.9 and PM 87.8 (from the Eureka Slough bridges in Eureka to the Arcata Overhead bridges in Arcata). The CAPM project was constructed to avoid impacts to wetlands and make the needed roadway preservation improvements in a timely manner. Work included cold-planing 0.10 feet of Open Graded AC in some areas and adding 0.20 feet of Hot Mix Asphalt (Type A) and 0.10 feet of Open Graded Surfacing, replacing rumble strips, re-striping Route 101 and ramps, and reconstructing some guardrails.

Deputy Directive DD-64-R1 & R2 (Complete Streets) discusses Caltrans' commitment to integrating multimodal elements to also meet the needs of bicyclists and pedestrians. The CAPM project included reconfiguring the geometric cross section within the corridor to widen the right side shoulders to a standard 10' width. The shoulder also included rumble strip for errant vehicle warning, colored shoulder pavement treatment, as well as a wider (6") edge line striping. These added elements provide traffic calming visual cues defining the shoulder as well as providing more shoulder space for non-motorized traffic.

The CAPM work was covered by a CE/CE environmental determination, as the EIR/EIS for the RRR project and the Eureka to Arcata Route 101 Improvement Project were not yet completed.

With the project change request to fund the pavement improvements through the CAPM, the remaining elements of the project were programmed into each of the separate Expenditure Authorization (EA) projects described in Table 3 in Section 5 of this Project Report.

### ***3.1.3 Community Interaction***

Prior to completion of the PSR (PDS) and Supplemental PSR (PDS), a public informational meeting was held on March 7, 2000. Approximately 150 people attended. Comments from the meeting, and those received by March 24, 2000, included concerns about wetland impacts, growth-inducing impacts, impacts to other streets or roads, bicycle accommodation, and interest in assessing the use of rail and busses to relieve congestion.

After beginning environmental studies, a public scoping meeting was held on September 20, 2001. Approximately 50 people attended the open house meeting. This meeting was for scoping, and was used to collect comments and suggestions from the public to refine the alternatives to be considered for the PA&ED process. Comments generally supported the safety features of the project, and also expressed concern for impacts to businesses within the corridor due to added out of direction travel, as well as impacts to wetlands. A separate meeting was held earlier on the same day, with resource agencies including the California Coastal Commission, California Department of Fish and Wildlife (DFW), U. S. Fish and Wildlife Service (FWS), NOAA Fisheries Service, U. S. Army Corps of Engineers (USACE), and Humboldt Bay Harbor Recreation and Conservation District. Comments received were similar to those in the public meeting, and there was a greater emphasis on impacts to wetlands, endangered species, and mitigation prospects.

Because the cost of the project, and due to the environmental resources within the project, a Value Analysis (VA) was performed for the project in early 2002. The VA team was comprised of members from Caltrans, as well as from DFW, FWS, City of Eureka, and one private citizen from the City of Arcata. See section 6B for the discussion of the results of the Value Analysis.

After the September 2001 public meeting, a Citizens Advisory Committee (CAC) was formed to offer feedback to the PDT as the project was developed. The first project specific CAC meeting was held in March 2002. At the first meeting the alternatives and environmental process were described.

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Concern was expressed from members of the CAC over access to businesses, and impacts to customers and residents due to added out of direction travel that the project would create.

The District 1 Traffic Safety Office developed interim measures to reduce collisions within the corridor to address immediate safety concerns until long-term project improvements could be implemented. The interim corridor safety measures were approved April 23, 2002, and included:

- speed limit reduction from 60mph to 50mph,
- driver speed display signs with radar detection at key locations,
- flashing beacons above the STOP signs at public intersections,
- mandatory daylight headlight use,
- public safety awareness information and advertising,
- increased law enforcement,
- double fine zones, and
- regular monitoring of the effectiveness of the corridor safety measures.

With the exception of the double fine zones, these measures were implemented by Memorial Day weekend of 2002. The passage of SB 1349 by the State Legislature created the “Highways Safety Enhancement-Double Fine Zone” starting January 1, 2003 and ending January 1, 2004. This Bill was extended to January 1, 2006.

A public informational meeting was held May 15, 2003, to present refined project alternatives, and preliminary study findings. Comments received were consistent with previous comments on the project. Some additional concerns were brought up regarding the increased traffic on Route 255, which had seen a traffic increase of approximately 30% after the implementation of the Safety Corridor. Residents have expressed strong interest in developing a project that would reduce speeds on Route 255.

After the 2003 public meeting, considerable interest developed among the businesses, residents, city of Eureka, and county representatives to construct an interchange at Indianola Cutoff and maintain access to Route 101 at Airport Road as project elements. A group of individuals representing businesses within the Route 101 corridor designated themselves as the "101 Corridor Access Project Group" (101CAP) reviewed and provided their input to HCAOG. This input resulted in a request by HCAOG to evaluate new alternatives that would also include signalization of Airport Road.

### **3.2 Existing Facility**

The corridor consists of a four-lane expressway from PM 79.8 to 84.7 and four-lane freeway from PM 84.7 to PM 86.3 continuing north of the Corridor. South of the corridor Route 101 consists as urban streets of Eureka. The posted speed limit on Route 101 is 50 mph per the adopted District 1 Traffic Safety Office interim corridor safety measures. Headlight use is required at all times in the corridor. The existing highway has a typical cross-section of:

- Two lanes in each direction (one 11-foot wide and one 12-foot wide),
- 2-foot to 4-foot median shoulders and 10-foot outside shoulders,
- 46 to 78-foot median;



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Locations of at-grade crossings along Route 101 are as follows:

<b>Access</b>	<b>Post Mile</b>
Cole Ave. *	80.3
Airport Road	80.8
Mid City Motor World	81.3
California Redwood Co.	81.8
Indianola Cutoff	82.7
Bracut (west)	83.4
Bracut (east) (KOA)	83.4
Bayside Cutoff	83.9

\* Median crossing removed 2003

Jacobs Ave. is an existing frontage road in Eureka from, PM 80.3 to 80.8. Jacobs Ave. intersects Airport Road, both of which are accessible only from Route 101 at Cole Ave. and Airport Rd. Jacobs Ave. is a two-lane facility (one lane in each direction), with 12-foot lanes and 8-foot NB shoulder and no SB shoulder.

The corridor is located on fill along the Arcata Bay to the east of the fill prism of the North Coast Railroad Authority railroad alignment. Accessible only from Route 101 are Cole Ave., Airport Rd., Mid City Motor World, California Redwood Co., the Caltrans Maintenance facilities and businesses east and west of Route 101 at Bracut. The city limits of Eureka extend north within the project limits to Indianola Cutoff at PM 82.7.

Much of the lands from Airport Road to Indianola Cutoff to the east and west of Route 101 are Wildlife Refuges under California Department of Fish and Wildlife (DFW) jurisdiction. To the north of Indianola Cutoff, most of the Arcata Bay waterfront is also identified as Wildlife Refuge. North and east of Bayside Cutoff is owned by the City of Arcata with both pastureland and conservation easements to maintain open space and stream and wetland enhancement. Route 101 is in an urban setting in Arcata from PM 85.0 (South G Street) to PM 86.3 (the 11<sup>th</sup> Street Overcrossing). The remainder of the land adjacent to the Route 101 Corridor is commercial, grazing pasturelands, and a regional general aviation airport.

#### **4. NEED AND PURPOSE**

##### **Need:**

This project is needed to reduce collisions, operational conflicts, and delay at intersections within the expressway segment of the project from PM 79.9 to PM 84.4.

##### **Purpose:**

The purpose of the project is as follows:

1. Improve safety at intersections;
2. Reduce operational conflicts along the Route 101 corridor;
3. Reduce delay at intersections; and
4. Extend the life of Route 101.

#### **4.1 Problem, Deficiencies, Justification**

The primary purpose is to improve safety by improving how traffic enters and exits Route 101 and by reducing the number of conflict points at intersections along the Eureka-Arcata Route 101 Corridor. Corridor at-grade intersections have been the site of numerous collisions resulting in

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property damage and serious injuries or death. There is a need to reduce the number of injury and fatal collisions at these corridor intersections.

The secondary reason is to reduce operational conflicts. Operational conflicts can lead to driver confusion increasing the potential for collisions.

The third reason is to reduce delay at intersections by improving the level of service (LOS) at intersections and to minimize out of direction travel. There is no significant delay or capacity concerns along mainline highway within the Eureka-Arcata corridor, however unacceptable delays are associated with left turn traffic crossing Route 101. The criteria set for the minimum operational levels of service (LOS) are as follows:

<u>Facility Element</u>	<u>LOS</u>
Urban Mainline:	D
Unsignalized Intersections:	D
Signalized Intersections:	C

This project is not intended to increase capacity on Route 101. The intent of the project is to provide improvements to the corridor that decrease the number of conflicting traffic movements, reduce waiting time for turn movements and maintain a LOS D or better along mainline and for non-signalized intersection turning moves and LOS C for signalized intersections through the year 2041.

## 4.2 Regional and System Planning

### System Identification

Characteristics for this portion of Route 101 are as follows:

<u>Route 101 Characteristics</u>	
Functional Classification	Principal Arterial
Eligible for Federal Funding	Yes
Freeway and Expressway System	Yes
Eligible for Scenic Highway Designation	No
Subsystem of Highways for Extra Legal Loads (SHELL)	Yes
STAA trucks allowed	Yes
Strategic Highway Network	Yes
National Highway System	Yes
Interregional Road System	Yes High Emphasis Route

### Regional Planning

The 2015 Interregional Transportation Strategic Plan (ITSP) identifies the Route 101 corridor as a Priority Interregional Facility.

### State Planning

The current Route 101 Route Concept Report (RCR), dated October 2002, includes the Eureka-Arcata Corridor Improvements in a prioritized listing of improvement projects needed to achieve the Route Concept. The Route Concept identifies that the Eureka Freeway Bypass & Eureka-Arcata Corridor freeway/expressway concept would only be initiated by HCAOG. This project does not propose changing the designation from expressway to freeway. (Historically, the previous 1994 Route Concept Report identified Route 101 from Eureka to Arcata as an expressway conversion to freeway.)

### Local Planning

The Eureka-Arcata corridor accommodates a number of different transportation modes. The Northwestern Pacific Railroad, owned by the NCRA, parallels the Corridor. This segment of the rail line has not been in use in recent years, since much of the line has been inoperative due to infrastructure damage in the Eel River canyon. While historically this has been primarily a freight rail line, there has been recent interest in developing an excursion route between the community of Samoa and the City of Eureka.

Murray Field, a county operated general aviation public airport is adjacent to the Corridor at approximately postmile 80.5, and is accessed from Airport Road.

This project lies within both the California Coastal Zone and the limits of the Local Coastal Programs (LCP) of the cities of Eureka and Arcata, and the county of Humboldt. The development policies identified within the LCPs are to provide “maximum access and recreational opportunities for all of the people consistent with public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse.” This project does not conflict with the goals of the LCPs.

The Route 101 corridor is a Class III Bikeway (shoulder bicycle lane). Bicycle use in the corridor is moderate, with approximately 1,000 bicyclists per month traveling Route 101 between Eureka and Arcata. The Humboldt Bay Bicycle Use Study (1999) concluded that most bicycle travel between Eureka and Arcata occurs on Route 101, primarily as a commuting route. Route 101 is also designated as the Pacific Coast Bike Route and is ridden by local commuters as well as those riding through the area. A separate multi-use trail between Eureka and Arcata will be constructed in phases, generally within the Northcoast Railroad Authority right of way. The City of Arcata has planned the Bracut to Arcata segment for construction starting in 2017. Humboldt County is currently developing plans to construct the remaining segment to Eureka starting in 2019.

### Transit Operator Planning

Currently there are no stops on Route 101 or Old Arcata Road between Eureka and Arcata. Every year, HCAOG goes through an unmet transit needs process. If a group of residents or business owners, school officials, etc., want to establish service to a new area, it could be brought forth and the transit services would consider adding service.

## **4.3 Traffic**

### ***Operational Conflicts***

Left Turns Across Route 101 to Access or Exit Private Businesses and Public Roads: Left turns crossing Route 101 increase collision potential since crossing Route 101 is difficult due to high speeds and high traffic volumes. In addition, operations along the Route 101 mainline are impacted when drivers cross and attempt to cross mainline traffic from left-turn pockets. As gaps in mainline decrease during peak flow periods, increased driver frustration for crossing traffic can lead to accepting smaller (riskier) gaps in mainline traffic because the wait to turn is perceived to be too long. This additional crossing activity also decreases operational performance of mainline.

Left Merge Movements: A left merge movement is one where an acceleration lane merges into, or a deceleration lane merges out of, the main flow of traffic from the left-hand side of the road. This can be an unexpected move to motorists since typical highway merge movements are from the right hand side of the highway. Studies have shown that left ramps have higher collision rates than that of right ramp exits and entrances and are contrary to what drivers expect.

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Left merge on and off movements currently occur at all median crossings within the corridor. In order to have a positive effect on safety and reduce driver mistakes, elimination of left turn and left merge movements is a priority.

***Current and Forecasted Traffic***

This segment of Route 101 has the highest Annual Average Daily Traffic of any highway in Caltrans District 1. Operational conflicts are expected to increase in future years as business, commuter and interregional traffic volumes increase. The growth rate is estimated to be linear with a 20 year growth factor of 1.25. Estimates of traffic volumes for differing time years are projected using this linear scale, from an initial estimate based on 2014 data as follows:

**Table 2 Existing and Projected Traffic Volumes**

	Year			
	2016	2021	2031	2041
<b>AADT*</b>	39,000	41,500	46,400	51,300
Peak Hour	4,250	4,520	5,060	5,590
20 Year Directional %	60%			
20 Year Truck %	4.0			
10 Year TI	10.5			
20 Year TI	11.5			

\*Annual Average Daily Traffic

***Collision Rates***

In the 1999 PSR (PDS), five-year collision data from June 1, 1994 to May 31, 1999 (PM 79.9 to PM 84.7), was used to evaluate this highway segment and the seven major access locations. During this period, the speed limit was 60mph. At-grade intersection conflicts constituted the majority of the collisions along the 5-mile corridor. Collisions at the seven major intersections during this five-year period included 2 fatal collisions. The fatal plus injury collision rate exceeded the statewide average at all four public access intersections (Cole, Airport, Indianola and Bayside) and at one of the three private access locations (Mid City).

On May 19, 2002, the Eureka-Arcata Route 101 Safety Corridor was implemented as recommended in the report titled "Interim Solutions for the Eureka-Arcata Corridor" signed by the District Director April 23, 2002. The Safety Corridor was implemented as a temporary measure to attempt to reduce the high intersection collision rate within the expressway portion of the project limits between the Eureka Slough Bridges and the Jacoby Creek Bridges until the proposed project improvements could be constructed.

At-Grade intersection collisions for the seven major intersections during the 5 years immediately preceding the implementation of the Safety Corridor (May 19, 1997 to May 18, 2002) included 5 fatal collisions, 44 injury collisions and 85 total collisions. The median crossing at Cole Ave. was closed in 2003 as part of a separate safety project. The five-year total collision rate exceeded the statewide average at each of the four public access intersections (Cole, Airport, Indianola and Bayside) and at one of three private access locations (Mid City).

Route 101 mainline highway segment-collisions within the project limits (inclusive of intersection and ramp collisions) during the five-year period immediately preceding the implementation of the Safety Corridor included 6 fatal collisions, 98 injury collisions and 232 total collisions. The five-year Route 101 mainline collision rate (excluding intersections) was just below the statewide average of similar facilities for fatal collisions, and well below the statewide average injury and total

collisions. However, a review of collision concentrations identifies the at-grade intersections as the locations of concern.

Although cross traffic volumes at access locations (intersections) are less than 5% of corridor traffic volumes, 46% of total collisions, 54% of injury collisions and 83% of fatal collisions occurred at intersections and ramps. Intersections represent a serious safety concern.

### ***Safety Corridor Collision Rates***

The Safety Corridor consisted of speed reduction (reducing speed limit from 60mph to 50mph), radar activated signs indicating motorist speeds mounted with fixed speed limit signs, day-time headlight requirements, retrofitting existing stop signs with flashing red lights to further warn motorists on side street approaches of the high speed cross traffic, additional funding for educating the public by print, radio, television, and community events on the need for compliance with the elements of the Safety Corridor, and additional funding for enforcement of speed and headlight use within the Safety Corridor. A double fine zone for the corridor was established by legislative act as well to further reinforce the elements of the Safety Corridor.

The additional funding for education and enforcement ended after the first year of the Safety Corridor implementation of the Safety Corridor. In 2006, the legislative act that established the double fine zone was not renewed, and therefore that signage has been removed. The loss of elements supporting the Safety Corridor (funding for education and enforcement, and double fine zone) is likely to cause its effectiveness to diminish. As traffic volumes and speeds increase, traffic collisions are expected to increase.

As requested by the District Director, the District Traffic Safety office prepared periodic reports providing regular updates of collision data within the Safety Corridor. The last of the reports was titled "Eureka-Arcata Safety Corridor Hum-101-PM 79.9/84.7 Ninth/Tenth Year Report May 19, 2002 through May 18, 2012" was approved September 21, 2012 (See Attachment C).

The "Eureka-Arcata Safety Corridor Ninth/Tenth Year Report" noted that the collision rates were at or above statewide averages for 5 out of 9 years of operation at Mid City Motors, and above statewide averages for 7 out of 9 years at Indianola Cutoff. The elevated collision rates at these intersections and the ongoing potential of collisions with conflicting movements demonstrates the ongoing need to make the safety improvements proposed within the corridor.

## **5. ALTERNATIVES**

### **5.1 Preferred Alternative**

In 2002, Caltrans initiated the NEPA/404 process (please review appendix E of the EIR/EIS for detailed discussion of the NEPA/404 integration process) in which the Purpose and Need Statement, Selection Criteria, and Range of Alternatives were presented and discussed. Caltrans, again met with the agencies in March 2006 and again in June 2009; in which, the Modified Alternative 3A was selected to be the proposed Least Environmentally Damaging Alternative (LEDPA) and Preferred Alternative. In 2010, USFWS, EPA, and USACE formally concurred with the LEDPA. Modified Alternative 3A was created to further reduce impacts to wetlands, by reducing the median width from 80 feet to 22 feet along with utilizing steeper slopes. This alternative also includes a signal at Airport Rd. to minimize out of direction travel impacts to the environmental justice community and businesses along Jacobs Ave., as well as avoiding impacts to the county airport. Modified Alternative 3A extends from north of the Eureka Slough Bridges (No. 04-0022 L & R) to the 11<sup>th</sup> Street Overcrossing (No. 04-242) in Arcata, and includes elements as follows:

**Modified Alternative 3A**

- Close median crossings (Mid City Motors, California Redwood Co., Bracut, and Bayside Cutoff);
- Construct Compact Diamond grade separation with 22 foot median and 1 ½:1 side slopes at Indianola Cutoff (to minimize wetland impacts);
- Re-align Jacobs Ave. (with retaining wall) at Airport Rd. and signalize intersection at Airport Road/Route 101;
- Construct a third Route 101 northbound (NB) lane from Airport Road to Mid City Motors;
- Lengthen right side acceleration and deceleration lanes as needed at each of the access locations;
- Remove gutters and overlay ramps at South G Street and the Route 255 Interchange;
- Install median barrier, Eureka Slough bridge to Airport Road;
- Replace southbound (SB) Jacoby Creek bridge;
- Replace bridge rails on NB Jacoby Creek and Gannon Slough bridges;
- Replace thrie-beam median barrier with High Tension Cable median barrier and paving from South G Street to 11<sup>th</sup> Street Overcrossing;
- Place guardrail at 3 billboards as appropriate;
- Remove trees from the clear recovery zone;
- Upgrade lighting;
- Remove safety corridor signs;
- Replace tide gates.

As a result of the program change in June of 2011, the proposed Modified Alternative 3A improvements will be phased from multiple programmed projects. Five projects are programmed to construct the improvements listed as Modified Alternative 3A and are further described in the following table.

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**Table 3**  
**Route 101 Eureka-Arcata Projects**

**EA 36600 Eureka-Arcata Improvement Project**

• Route 101 Airport Rd. to Mid City Motors. PM 80.7/81.3	Construct a signal to stop NB traffic only to allow for left turn movements to and from Airport Rd. Realign Jacobs Ave. at Airport Rd, to accommodate truck turning movements. Widen NB Route 101 toward the median to accommodate a third NB lane from Airport Road to Mid-City Motors.
• Indianola Cutoff PM 82.7	Construct compact diamond grade separation/undercrossing of Indianola Cutoff on Route 101.

**EA 0F220 Eureka-Arcata Access Improvements (Accel./Decel. Lanes)**

• Cole Ave. PM 80.2	Extend deceleration lane to 600 feet; upgrade lighting. (Median crossing was closed summer 2003)
• Mid-City PM 81.3	Lengthen NB acceleration lane to 1,600 feet; remove median crossing.
• California Redwood Co. PM 81.8	Realign SB 101 toward median for 2,400 feet to avoid impacts to row of eucalyptus trees and accommodate accel./decel. lanes; remove median crossing.
• Bracut PM 83.4	Lengthen both NB and SB right-side accel./decel. lanes to 1,600 feet and 600 feet respectively; remove median crossing.
• Bayside Cutoff PM 83.9	Lengthen the NB deceleration lane to 600 feet; construct an acceleration lane 1,600 feet; remove median crossing; upgrade lighting.
• South G. St PM 85.0	Remove existing curbs adjacent to right side edge of traveled way and re-pave the shoulders with uniform superelevations; upgrade lighting.
• Route 101/255 Interchange PM 85.8	Remove existing curbs adjacent to right side edge of traveled way and re-pave the shoulders with uniform superelevations; upgrade lighting.

**EA 0E000 Jacoby Creek Bridge Replacement**

• Jacoby Creek Bridge (Lt) PM 84.5	Replace SB bridge with single span cast-in-place or precast structure; The new bridge would have 10 foot wide shoulder, 2-12-foot wide SB lanes, and 5 foot median shoulder and steel bridge rails. It would be approximately 2 feet higher than the existing bridge, to maintain similar clearances, and to keep the deck elevation above projected sea levels of 2100.
• Jacoby Creek Bridge (Rt) PM 84.5	Replace bridge rails with steel bridge rail with bicycle railing. Rail replacement would require approximately 8 inches of widening on each side of the bridge to maintain the existing available space for traffic. (4' left shoulder, 11' lane, 12' lane, and 10' right shoulder)
• Gannon Slough Bridge (Rt) PM 84.7	

**EA 0C970 Guardrail Upgrades**

• Median Barrier South PM 79.9/80.7	Construct high tension cable median barrier with 5 ft wide weed barrier between the Eureka Slough bridges and Airport Road.
• Median Barrier North PM 84.7/86.3	Pave median PM 84.9/86.3. (South G St. to 11 <sup>th</sup> Street Overcrossing) and replace thrie-beam with high tension cable median barrier.
• Trees in CRZ	Remove some existing trees within the corridor that are within the 30 ft clear recovery zone (CRZ), and shield some of the existing trees within the CRZ.

**EA 0C930 Tide Gate Replacement**

Tide Gates	Tide gates would be replaced at the following locations: Jacobs Ave., at the double box culvert, at the box culvert south of Mid City Motors, at the 24 inch culvert at Brainard Slough, at the box culvert at Old Jacoby Creek, and at the the triple box culvert at Gannon Slough. Fish passage tide gates would be installed at Jacobs Ave., Old Jacoby Creek, and at Gannon Slough.
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## 5.2 Alternatives Considered and Rejected

After the initial PSR (PDS) the range of alternatives to be considered for further evaluation were reduced to alternatives with costs and environmental (wetland) impacts less than or similar to the Y4 alternative. A Supplemental PSR (PDS) was prepared to reflect this change. A number of alternatives were originally considered in the PSR (PDS) as well as the Value Analysis (VA) for the project. Early suggested Alternatives considered and rejected in the Draft Project Report are listed in Table 4. Alternatives studied for the Draft EIR/EIS that were considered but rejected due to cost, environmental impacts, impacts to the traveling public, or due to not meeting the need and purpose for the project are as follows:

### Alternative 1:

- Close median crossings (Airport Rd, Mid City Motors, California Redwood Co., Indianola Cutoff, Bracut, and Bayside Cutoff);
- Lengthen right side acceleration and deceleration lanes at each of the existing access locations (except at Airport Rd.);
- Modify and overlay ramps;
- Replace SB Jacoby Creek bridge;
- Widen and replace bridge rails on NB Jacoby Creek and Gannon Slough bridges;
- Install median barrier, Eureka Slough bridge to Airport Road;
- Replace thrie-beam median barrier and pave median from South G Street to 11<sup>th</sup> Street Overcrossing.
- Place guardrail at 3 billboards as appropriate;
- Remove trees from the clear recovery zone;
- Upgrade lighting;
- Remove safety corridor signs;
- Replace tide gates.

### Alternative 1A: (Developed based on comments on initial Draft EIR/EIS Circulation)

- Construct 3-Turnarounds:
  1. NB to SB between California Redwood Co. and Indianola Cutoff;
  2. SB to NB between California Redwood Co. and Indianola Cutoff;
  3. NB to SB between Indianola Cutoff and Bracut Industrial Park.
- Construct half signal at Airport Rd. allowing SB Left only signal at Airport Rd.
- All other improvements listed in Alternative 1.

### Alternative 2:

- Construct Compact Diamond Interchange at Indianola Cutoff;
- Close median crossings (Airport Rd, Mid City Motors, California Redwood Co., Bracut, and Bayside Cutoff);
- All other improvements listed in Alternative 1.

### Alternative 3:

- Construct Compact Diamond Interchange at Indianola Cutoff;
- Close median crossings (Mid City Motors, California Redwood Co., Bracut, and Bayside Cutoff);
- Re-align and signalize intersection at Airport Road/Route 101,
- Re-align the intersection of Jacobs Road with Airport Road,
- Construct a third NB lane from Cole Ave. to Mid City Motors, eliminating acceleration and deceleration lanes between Airport Rd. and Mid City Motors.
- All other improvements listed in Alternative 1.

**No Build Alternative:** No change to the operational movements within the corridor.



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**Table 4**  
**Eureka-Arcata Corridor - Alternatives Considered and Rejected\*\***

ALTERNATIVE		REJECTED DUE TO		
		Cost (\$ million)	Purpose & Need	Environmental Impacts
PSR-X1	Close all median crossings, widen shoulders, interchange at Indianola, Eureka Slough bridge at 6 <sup>th</sup> St, east frontage road 6 <sup>th</sup> St to Bayside Cutoff, and west frontage road California Redwood Co. Sawmill to Bracut	<b>X</b> (132)		<b>X</b> (Wetlands)
PSR-X2	Close all median crossings, widen shoulders, interchange at Indianola, Eureka Slough bridge at 6 <sup>th</sup> St, east frontage road 6 <sup>th</sup> St to Bracut, and west frontage road California Redwood Co. Sawmill to Bracut	<b>X</b> (not analyzed) ( >100)		<b>X</b> (Wetlands)
PSR-X3	Close all median crossings, widen shoulders, interchange at Indianola, Overcrossing Structure at Cole Ave, reduce median width, and construct east frontage road 6 <sup>th</sup> St to Bracut, and west frontage road California Redwood Co. Sawmill to Bracut (no Eureka Slough bridge)	<b>X</b> (not analyzed) ( >100)		<b>X</b> (Wetlands)
PSR-X4	Close all median crossings, widen shoulders, Eureka Slough bridge at 6 <sup>th</sup> St, interchange at Indianola, California Redwood Co. Sawmill Overcrossing Structure, east frontage road 6 <sup>th</sup> St to Bracut, purchase Bracut Industrial for borrow site/wetland mitigation, and eliminate need for access	<b>X</b> (not analyzed) ( >100)		<b>X</b> (Wetlands)
PSR-X5	Close all median crossings, widen shoulders, elevated structure from Mid City to Bracut, Eureka Slough bridge at 6 <sup>th</sup> St, Interchange at Indianola, east frontage road 6 <sup>th</sup> St to Mid City, frontage road under elevated highway from Mid City to Bracut	<b>X</b> (305)		<b>X</b> (Wetlands & Visual)
PSR-Y1	Close all median crossings, widen shoulders, interchange at Indianola, Eureka Slough bridge at 6 <sup>th</sup> St, lengthen acceleration and deceleration lanes at existing access locations	<b>X</b> (not analyzed) ( >100)		<b>X</b> (Wetlands)
PSR-Y2	Close all median crossings, signal at Indianola with U-turns allowed, Eureka Slough bridge at 6 <sup>th</sup> St, lengthen acceleration and deceleration lanes at existing access locations, no frontage roads	<b>X</b> (not analyzed) ( >50)	<b>X</b>	
PSR-Y3*	Close all median crossings, widen shoulders, lengthen acceleration and deceleration lanes at existing access locations (no interchange at Indianola)	(18)		(Modified and changed to Alternative 1)
PSR-Y4*	Close all median crossings, widen shoulders, interchange at Indianola, lengthen acceleration and deceleration lanes at existing access locations	(31)		(Modified and changed to Alternative 2)
VA-2.1	Construct Eureka to Arcata Frontage Road with a 6 <sup>th</sup> Street Bridge over the Eureka Slough	<b>X</b> (79)		<b>X</b> (Wetlands)
VA-2.2	Construct Eureka to Indianola Cutoff with a 6 <sup>th</sup> Street Bridge over the Eureka Slough (Remove Highway access at Cole, Airport, & Mid City, remainder of median crossings closed, no other work on mainline)	<b>X</b> (36)		<b>X</b> (Wetlands)
VA-3.0	Implement Mass Transit to Maintain Existing Average Daily Traffic	<b>X</b> (121)	<b>X</b>	
VA-4.0	Use Pace Cars to Create Traffic Gaps	(11)	<b>X</b>	
VA-6.1	PSR Alternative Y4 with a Flyover Interchange and roundabout on Indianola Cutoff	<b>X</b> (50)		(Wetlands & Visual)
VA-7.0	PSR Alternative Y4 with a SB Jacobs Ave. Hook Ramp	<b>X</b> (36)		<b>X</b> (Wetlands)
DEIR/S 2b	Alternative 2 with a single point style interchange at Indianola	( >36)		<b>X</b> (Wetlands, traffic)
DEIR/S 2c	Alternative 2 with an interchange with a roundabout at Indianola	( >36)		<b>X</b> (Wetlands, traffic)
DEIR/S 4	Alternative 2 but leave Airport Road intersection as is.	(30)	<b>X</b>	
DEIR/S 5***	Safety Corridor as a long term solution	NA	<b>X</b>	
DEIR/S 6	Safety Corridor as a long term solution with signal at Airport Rd.	(3)	<b>X</b>	

\* Eliminated shoulder widening to reduce impacts to wetlands

\*\* Value Analysis team members considered over 70 ideas. Refer to the Value Analysis Report for further details.

\*\*\*For evaluation and reasons that the Safety Corridor was rejected as a long term solutions, refer to the EIR/EIS

*Note: See DEIR/DEIS for further discussion of rejected alternatives.*

## **6. CONSIDERATIONS**

### **6.1 Hazardous Waste**

An “Environmental Site Assessment” (ESA) was prepared by URS Corporation, dated September 2003. The ESA identified hazardous materials likely to be encountered are; aerially deposited lead (ADL) and herbicides from past agricultural land uses within the surface materials adjacent to the highway. The ESA recommended testing the soils within the construction limits for ADL. It also identified that a number of businesses along Jacobs Ave. have used petroleum hydrocarbons (fuels and lubricants) and in some cases, heavy metals. Based on the further development of the project, it was determined that work would not occur near these business areas of potential contamination. Likewise, it was determined that herbicides from past agricultural land uses would not impact the project as currently proposed.

Subsequent to the ESA, Caltrans funded a more detailed study, “Aerially Deposited Lead and Lead/Chromium-Based Paint Site Investigation” dated December of 2005. This study was conducted by Geocon Consultants, Inc. Numerous samples were taken throughout the project area limits. The samples indicate that throughout most of the project, shallow soils adjacent to the traveled way, both in the median and shoulder areas are impacted by lead. Those contaminated shallow soils that are excavated, may need to be handled as a hazardous waste, which may involve transporting them to a permitted hazardous waste facility, or reused on site under controls established by 2016 Department of Toxic Substances Control (DTSC) Agreement. The closest hazardous waste disposal facility is in Kettleman City, California. A lead compliance plan will be necessary for the construction work.

A review of the Jacoby Creek Bridge and Gannon Slough bridge as-builts revealed that the SB Jacoby Creek Bridge (left) was constructed with some asbestos sheet packing material. The development of the final plans, specifications and estimate will direct the Contractor’s attention to the presence of asbestos, and will require an appropriate compliance and abatement plan for its removal. A National Emission Standards for Hazardous Air Pollutants (NESHAP) permit will be required from the North Coast Unified Air Quality Management District for the demolition of this bridge.

### **6.2 Value Analysis**

As previously noted in Section 3 (Background) due to the cost and controversial nature of the project, a Value Analysis (VA) was performed in 2002 for the project. The VA team developed evaluation criteria, and numerous topics and alternatives to evaluate. The result of the VA was a recommendation to maintain 8-foot shoulders within the expressway section to minimize the wetland impacts of highway widening. The VA study also conditionally recommended two variations on the interchange type pending further studies. A Single Point (or Urban) Interchange and a compact diamond interchange with ramps terminating in a roundabout on Indianola Cutoff were selected as variations. Alternatives that were considered but rejected due to costs and or environmental impacts ranged from variations on constructing frontage roads from Eureka to Indianola Cutoff and further to Arcata, to improving a mass transit system with additional busses and park and ride lots.

Prior to combining the Improvement project (STIP) with the Rehabilitation project (SHOPP), a VA study was performed for rehabilitation work in July of 2005. Through this VA process, eighteen VA alternatives were identified that could improve project performance and/or reduce construction costs. Of these alternatives, four were combined and accepted by the VA team. The VA alternatives included minor cost adjustments for eliminating some reset median barrier work, weed barrier under barriers and guard rails, and strengthening of guard rails to reduce the number of Eucalyptus trees

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that would otherwise need to be removed. A significant cost savings improvement suggested realigning the NB Route 101 lanes toward the median to accommodate acceleration and deceleration lanes at Cole Ave. This alleviated the need to place fill and construct retaining walls along Jacobs Ave., and reduced wetland and drainage impacts. This partial realignment has been incorporated into the overall project description for Alternatives 1 through 3. Another VA alternative was accepted to add guardrail around two or three existing SB billboards located within the clear recovery zone. In lieu of the higher expense of purchasing the ongoing leases from the advertising owners and the North Coast Railroad Authority advertising income, shielding these billboards was included, however the status of these billboards should be confirmed in the design phase.

### 6.3 Resource Conservation

An Energy report was prepared for this project by URS Corporation dated March 2003. The study area for this project included Route 101 from the Eureka Slough Bridges to the Jacoby Creek Bridges; Old Arcata Road from Samoa Blvd. in Arcata to Myrtle town (Eureka); and Indianola Cutoff (between Route 101 and Old Arcata Road). Noted in the report is that project Alternative 1 would result in increased energy consumption due to added out of direction travel.

*A note about the traffic study:*

Energy consumption calculations were based on the Evaluation of Traffic Impacts of Alternatives on the Route 101 Corridor between Eureka and Arcata, dated November 2005 (“Traffic Evaluation”). The intent of the Traffic Evaluation was to identify significant changes in traffic volumes on the three potential routes between Eureka and Arcata, Route 101, Route 255, and Old Arcata Road. The Traffic Evaluation detailed approximate changes in traffic based on a “no-build” alternative that was developed prior to the implementation of the Safety Corridor, when the speed limit was 60 mph (and the measured free flow speed was 65 mph). In general, traffic studies expect discrepancies of 10% to 15% between actual and predicted results. This discrepancy can be observed in the Traffic Evaluation based on the analysis of The Safety Corridor Alternative, where predicted traffic volume increases on Route 255 were approximately 12% versus the observed increase of approximately 30% after the Safety Corridor was implemented. Although specific numbers are indicated in the Traffic Study, the results should be reviewed for significant trends when comparing alternatives. What can be readily observed from the Traffic Study is that there would be a traffic increase of approximately 50% on Old Arcata Road for Alternative 1 compared to the Traffic Study’s “no-build” Alternative. Alternatives 2 and 3 showed negligible changes in traffic volumes on each of the three routes, where Modified Alternative 3A is a refinement of Alternative 3.

The increase in fuel consumption associated with Alternative 2 over the “no build” alternative is modest with an increase in consumption falling within the range of negligible to 6% based on the Traffic Evaluation. Alternative 3 (Modified Alternative 3A) results in a negligible change in fuel consumed when compared to the “no-build” alternative. The out of direction travel associated with Alternative 1 would add 660,000 to 1.2 million gallons of fuel consumed per year when compared to Alternatives 2, 3, and the “no build” alternative.

The project is located in a low tidally influenced area adjacent to Humboldt Bay. As the existing highway is currently built on fill, any widening or paving, requires importing material to maintain or increase the clearances from flood or high tidal elevations. Because there are wetlands adjacent to the highway throughout the corridor, design includes 2:1 slopes for fills placed for acceleration and deceleration lanes. Steeper slopes minimize impact to wetlands, and minimize imported borrow quantities for the project. The imported fill material for Alternative 1 is estimated at approximately 40,000 yd<sup>3</sup> and for Alternative 2 (Interchange at Indianola Cutoff) approximately 430,000 yd<sup>3</sup>,

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where the fill for Modified Alternative 3A is estimated at approximately 320,000 yd<sup>3</sup>. Fill material would be obtained from outside the project limits. Grindings from existing asphalt, or any asphalt removed as part of the project can be recycled.

Other energy saving elements for the project would be the use of LED lighting to reduce power consumption, use of rubberized asphalt to increase life of pavement and reduce potential landfill disposal of discarded automotive tires.

**6.4 Right of Way Issues**

The existing Right of Way within the project limits varies in width. At the southern limit, the Right of Way is bounded by the City of Eureka's Jacobs Ave. to the east, and the NCRA railroad Right of Way and a private property owner at Bracut to the west. From the Eureka Slough Bridges to Airport Rd, the Right of Way width varies, averaging at approximately 167 feet, with a minimum median width of 48 feet. Fill slopes for the NB acceleration and deceleration lanes would be within the existing Right of Way.

From Airport Road to Bracut, the Right of Way width is approximately 252 feet and is bounded to the west by the railroad Right of Way and extends to the east beyond an existing drainage channel adjacent to the highway. The paved highway improvement lies within existing Right of Way, however a temporary construction easement would be required from the private property owner for the acceleration/deceleration lane improvements at the Bracut Industrial Park, and from private property at Jacobs Ave for realigning Jacobs Ave. at Airport Rd.

For Modified Alternative 3A, the compact diamond grade separation for the Indianola Cutoff undercrossing would be constructed within existing Right of Way, and the existing drainage channel would not require relocation. However, the interchange will permanently impact approximately 10.3 acres of California Coastal Commission jurisdictional wetlands, of which there is approximately 8.2 acres of Army Corps of Engineers jurisdictional wetlands. Mitigation for the wetlands impacted will be required, and is being developed under EA 36601. The planned mitigation sites are adjacent to Route 255 (Samoa Blvd) and on the Mad River Slough, adjacent to the Lanphere Dunes, within the Humboldt Bay National Wildlife Refuge.

**6.5 Environmental Issues**

The Final Environmental Impact Report/Environmental Impact Statement (EIR/EIS) has been prepared in accordance with Caltrans' environmental procedures, as well as State and federal environmental regulations and is hereby incorporated by reference. The Eureka-Arcata Route 101 Corridor Improvement Project Final Environmental Impact Report/Statement (FEIR/S) was signed in December 2016 by the Caltrans District Director and the FHWA's division administrator. The FEIR/S Certification, including Findings and Statement of Over-riding Considerations, is adopted into this Project Report.

All development in the Coastal Zone requires either a Coastal Development Permit or an exemption from Coastal Permit requirements. In order to obtain a permit, the development proposal must comply with the policies of the certified Local Coastal Program (LCP) and the State Coastal Zone Management Program (CZMP). The California Coastal Commission (CCC) reviews federal assistance activities within or affecting the Coastal Zone to make a determination regarding its consistency with the CZMP. Caltrans obtained Federal Coastal Consistency Certification on November 14, 2013, with 4 conditions as follows:

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1. Coastal Trail Planning: Construction of the Route 101 Corridor Improvements will not commence until adequate commitments are in place to assure that a separate Class 1 bike and pedestrian trail, parallel to Route 101 from Arcata to the northern end of downtown Eureka, will be constructed and operational by the time the major project components are completed. Such commitments will include, but may not be limited to, assurances that adequate funding for construction of the trail exists, as well as a demonstration that the necessary assurances are in place to secure ownership interests or permissions to enable the trail construction to proceed in a timely manner, prior to or concurrent with construction of the corridor improvements.
2. Visual Impact Mitigation: Prior to or concurrent with its submittal to the Commission of a coastal development permit application for the project at issue, Caltrans will develop and submit a plan to the satisfaction of the Executive Director to provide mitigation for the visual impacts of the project by removing, to the maximum extent feasible, all billboards along the corridor, as well as other overhead infrastructure (such as power poles and power lines), and by steepening the inside slopes proposed for the Indianola interchange to maximize the view towards the bay from Indianola Cutoff. Caltrans will implement the approved plan.
3. Wetland Mitigation: Prior to or concurrent with its submittal to the Commission of a coastal development permit application for the project at issue, Caltrans will: (1) expand the Samoa restoration concept to include true tidal restoration; (2) provide a biological analysis showing that the acreages are adequate and/or habitat mixes would, in fact, fully mitigate the project's impacts; (3) submit and receive Commission approval of coastal development permits for the restoration activities at the two sites; and (4) follow up on Caltrans' commitment to further substantiate the unavailability and infeasibility of nonagricultural sites in the Humboldt Bay area.
4. Sea Level Rise Planning: Prior to or concurrent with its submittal to the Commission of a coastal development permit application for the project Caltrans will complete its "Climate Change Adaptation Pilot Strategy for Critically Vulnerable Assets in Northwest California," and the project described in the permit application to be submitted to the Commission will reflect the findings and implications contained in that study, including any necessary redesign to incorporate appropriate sea level rise-related adaptation strategies.

## 6.6 Air Quality Conformity

The proposed project is located in the North Coast Unified Air Quality Management District (NCUAQMD). The proposed project is in attainment for all pollutants under National Ambient Air Quality Standards (NAAQS), and all but PM10 under the California Air Resources Board. An analysis was conducted for PM2.5 and PM10, and the proposed project meets the conformity hot spot requirements in 40 CFR 93.116 and 93.126. Operational emissions are addressed and accounted for in the regional analysis performed for the proposed project's inclusion in the Regional Transportation Plan (RTP) for Humboldt County. This RTP was found to conform to the State Implementation Plan for achieving the goals of the Clean Air Act.

## 6.7 Noise Considerations

Traffic noise modeling for future year conditions, light-duty vehicles and trucks were modeled at a baseline speed of 50 mph. The noise study was performed for a potential speed increase from 50 mph up to 65 mph. Residence locations at the first- and second-row (in relation to Route 101) of the Lazy J Trailer Ranch would approach or exceed the FHWA Noise Abatement Criteria (66 dBA for residential). To address noise levels at the Lazy J Trailer Ranch, a sound wall located along the NB side of the Route 101 could reduce noise levels by 5 dBA and block the line of sight to heavy-duty truck stacks in the near (NB) travel lane. This sound wall would benefit approximately 12 to 18

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residences in the mobile home park. In this case, the property owner of the Lazy J Trailer Ranch, in a personal communication on October 4, 2006, was not in favor of the sound wall. Consequently, the sound wall has been dropped from further consideration.

**6.8 Title VI Considerations**

See the EIR/EIS for impacts to businesses and Environmental Justice Communities for the preferred alternative.

Alternate modes of transportation are currently accommodated within the Eureka-Arcata corridor. Humboldt Transit Authority (HTA) provides regional bus service linking the two communities and continuing service to points north at Trinidad and south to Rio Dell/Scotia. The Eureka Transit Service (ETS) and the Arcata and Mad River Transit System (A&MRTS) serve the cities of Eureka and Arcata respectively. Presently, there are no bus stops within the corridor. Based on community needs, HTA, ETS or A&MRTS could consider adding a bus stop on Indianola Cutoff under Modified Alternative 3A.

This project lies within a 4-lane expressway/freeway. Bicycle and pedestrian access is allowed along the existing 10-foot wide paved shoulders, pedestrians are allowed on the expressway only. No further provisions will be made for low mobility groups; however, access across the expressway would be provided at Indianola Cutoff.

A Feasibility Analysis Humboldt County Bicycle Facilities Planning Project by Natural Resources Services, a Division of Redwood Community Action Agency, dated November 1997 recommends constructing a parallel, but separate facility for bicycle use within the corridor. As previously discussed, the City of Arcata is constructing a parallel trail from Arcata to Bracut starting in 2017, and Humboldt County is developing plans to continue the trail to Eureka. A rail line is located within the corridor parallel to the existing highway. The rail line has historically been used for freight service and occasional local passenger excursions. Due to storm damage throughout the railroad system, long range rail service was last used in 1998.

**6.9 Complete Streets:**

In the vicinity of the project, Route 101 serves a variety of traffic including local traffic, commuters, interregional freight and seasonal tourism. Bicycles are allowed on all State Highways within District 1, including Route 101. There are approximately 1,000 riders per month utilizing this section of Route 101 as a Class III bikeway. Also noted is the development of a Eureka to Arcata trail (Class 1 bikeway), with an access accommodated at Indianola Cutoff where bicycle commuters will have a safe crossing of Route 101. The project funding, planning, design, maintenance, and operations are in alignment with the goals of the Caltrans Complete Streets policy. All modes of transportation have been included in the proposed design to the extent feasible.

**6.10 Climate Change**

The California Ocean Protection Council established the Sea Level Rise Task Force of the Coastal and Ocean Working Group, which released the Sea-Level Rise for Coasts of California, Oregon and Washington (National Research Council, 2012), and an update in 2013 (National Research Council, 2013). The California Coastal Commission Sea Level Rise Policy Guidance (Draft 2013 and Final 2015) reiterated the above studies and recommended adjusting for local variance based on geologic uplift or subsidence. Estimated sea level rise from 2000 to 2100 ranges from 1.6 to 4.9 feet (see EIR/EIS). This project is located within an area subject to inundation due to Sea Level Rise. All new structures (grade separation, new/replaced bridges) would be designed at higher elevations to accommodate the potential increase in tidal elevations projected for the year 2100.

### Jacoby Creek Bridge

The existing Southbound Jacoby Creek Bridge (constructed in 1920 and widened in 1954) is a 3 span T-Beam and slab deck. To remove supports from the existing creek channel, the proposed bridge would be a single span bridge, approximately 73 feet in length. The elevation of the deck would be increased to an elevation of approximately 13.5 (NAVD 88), which is about 2 feet higher than the existing bridge and roadway elevations. This deck surface elevation would be at the estimated upper limit of sea-level rise for the year 2100, and the bridge would be designed for inundation by high tides. Because the bridge would also be constructed using jack and slide methodology, it could also be readily raised to adapt to future highway improvements including elevation changes.

### Indianola Interchange

The elevation of Route 101 at Indianola Cutoff is approximately 10.0. To minimize fill for wetlands, while meeting the need to construct the grade separation to accommodate sea level rise, the bridge would be a voided slab with a depth of 2 feet for a span of 69 feet. The finish elevation of Indianola Cutoff at the grade separation would be approximately elevation 13.5. Once complete, the bridge structure would have a clearance of 15 feet. The single span structure could also be readily raised to adapt to future highway improvements including elevation changes.

### Route 101

Maintenance and repairs to the Route 101 roadway includes paving to continue to cost effectively extend the life of the highway. Paving overlays are typically expected to last 10 to 20 years. Long term sea level rise is not accommodated on some segments of Route 101 because of the relatively short periods associated with maintenance projects. Segments of Route 101 that would be impacted by long term sea level rise are PM 80/82.4, PM 83/83.2, and PM 83.6/85.8. Improvements to address long term sea level rise throughout the project limits are well beyond the scope of this project. Identifying future projects and funding to address sea level rise for the low lying segments of Route 101 would include participation by Caltrans, the county of Humboldt, cities of Eureka and Arcata and the community.

## **6.11 Greenhouse Gas Reduction**

This project balances the elimination of a number of conflicts of at grade intersections and minimizes out of direction travel with the placement of a grade separated interchange approximately mid-way between Eureka and Arcata, and a traffic signal at Airport Road. Eliminating conflict points on Route 101 increases the safety of the Class III bikeway, and the construction of the separately planned Eureka to Arcata trail will increase bicycle commuter use thus improving the efficiency of the regional transportation system and contributing to reductions in the generation of greenhouse gasses.

## **7. OTHER CONSIDERATIONS AS APPROPRIATE**

### **7.1 Public Hearing Process**

- Two public open houses were held in October 2001 to solicit feedback from business owners in the corridor and the public regarding these potential interim strategies. Caltrans, in cooperation with HCAOG and state and local law enforcement agencies, selected the Safety Corridor as an interim solution consisting of what were referred to as the three E's: Engineering components, Education, and Enforcement.
- Caltrans held a project Open House in Eureka on May 15, 2003 which was attended by many area residents, as well as representatives of some of the business and property owners in the Route 101 corridor. Businesses and customers expressed concern with out of direction travel

associated with closing median crossings. There was also acknowledgement by many, that there was a need for improved safety.

- On August 7, 2007, Caltrans, HCAOG, and FHWA held a public hearing at the Adorni Center in Eureka to provide the public an opportunity to review project information, including the results from the Draft EIR/S, and submit to comments. Many comments were submitted stressing the importance of access for businesses, customers, and residents.
- In response to comments, Caltrans staff modified two of the existing alternatives to avoid adverse effects: Alternative 1A and Modified Alternative 3A. These two alternatives were presented to the public at a December 3, 2008 open house at the Wharfinger Building in Eureka.

## **7.2 Exceptions to Mandatory Design Standards**

Each of the build alternatives generally conforms to the design requirements of the Highway Design Manual. However, within the project limits there is a horizontal curve beginning at the end of the approximately 950 foot long Eureka Slough Bridges which were designed for and within a lower speed zone of 50mph. An Exceptions to Mandatory Design Standards (Design Exceptions) document was approved in 1999 for this curve radii for the rehabilitation work, as well as non-standard shoulder widths. A subsequent Design Exception was approved in June of 2009, to conform with the Value Analysis recommendation to eliminate widening and impacts to wetlands by reconfiguring the striping within the expressway portion of Route 101 to accommodate a 10 foot right side shoulder and reducing the median shoulder width to 4 feet and the number 1 lane width to 11 feet.

An Advisory Exception will be required for fill slopes exceeding 4:1 as proposed in this project. The reason for requesting an Advisory Exception for slopes exceeding 4:1 is due to the relatively low slope heights and significantly higher wetland impacts (approximately 10 to 20 additional acres) with their associated high costs.

An additional Exception to Mandatory Design Standards will also be needed for shoulder widths within the loop ramps at the Route 101/255 interchange. The shoulder widths at these loop ramps will be reduced to 5 feet to accommodate 16 foot wide lanes for truck off-tracking for the curve radius of approximately 145 feet. The necessary work required to bring the interchange up to current design standards would require evaluation of the entire interchange, which is outside the scope of rehabilitation requirements.

## **7.3 Route Matters**

The existing freeway agreement will need to be revised to reflect changes in access to Route 101 based on the alternative selected for this project. The freeway agreement shows locations of frontage roads; and how streets will be relocated, extended or otherwise modified to maintain traffic circulation in relation to the freeway. Locations of railroad and pedestrian structures, as well as those for other non-motorized facilities, will also be shown. The new freeway agreement must be approved by the county of Humboldt and cities of Eureka and Arcata.

## **7.4 Permits**

Coastal Development Permits (CDP) will be required from the State Coastal Commission, the County of Humboldt, and the City of Arcata. Permits required from the US Army Corps of Engineers will include a Section 404 individual project permit for filling wetlands, and a Section 10 permit for work within waterways, including tide-gates and the work at the Jacoby Creek and Gannon Slough bridges. A 1602 lake and streambed alteration permit will be required from California Department of Fish and Wildlife (DFW) for the work on the Jacoby Creek and Gannon Slough bridges and tide gates. A Report of Waste Discharge Requirements will be required for



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filling wetlands from the North Coast Regional Water Quality Control Board and for the bridge work, and a permit will be required from the Humboldt Bay Harbor Conservation & Recreation District. A Wetland Mitigation Plan will be required to satisfy the CDP, 401, and 404 permits for any of the build alternatives.

A National Emission Standards for Hazardous Air Pollutants permit would be required from the North Coast Unified Air Quality Management District for the demolition of the Jacoby Creek Bridge due to potential presence of asbestos containing bearing pads.

**7.5 Involvement with a Navigable Waterway**

The U.S. Coast Guard (USCG) reviewed the initial request for concurrence determination. The response from the USCG, noted that Gannon Slough and Jacoby Creek are considered navigable by USCG standards. However, at the project site, the waterways are not navigated by anything larger than small motorboats and the USACE has not indicated plans to make navigational improvements that would result in larger watercraft passing through the proposed bridges. Provided there is no development of significant controversy concerning navigational or environmental issues, and there is no significant impact, no individual Coast Guard bridge permit will be required.

**7.6 Transportation Management Plan**

Transportation Management Plans (TMPs) will need to be developed for each of the individual projects at the design phase. Traffic handling has been discussed with Traffic Operations throughout the project development process. Due to the high traffic volumes on this segment of Route 101, weekday daytime lane closures will not likely be allowed, and construction activities requiring lane closures will generally be at night. To maintain 2 SB through lanes during construction, the SB bridge will be replaced by constructing a new bridge in a temporary alignment in the median, temporarily detouring traffic onto the new bridge, removing the existing bridge, then with an overnight SB closure, jack and slide the new bridge into the original alignment. Ramp reconstruction at the Route 101/255 interchange will also require ramp closures. No two consecutive on or off ramps shall be closed at one time. Concurrent on and off ramp closures may be allowed at one interchange provided that at least one on-ramp and one off-ramp in the same direction of travel is open to traffic.

A penalty clause will be included in the Specifications for this project for late lane closure pickups.

**7.7 Stage Construction**

Stage construction will be required on all build alternatives for the Jacoby Creek bridge replacement as previously noted. The interchange at Indianola Cutoff will also require staged construction.

**7.8 Accommodation of Oversize Loads**

This project would conform to the policy that State freeways be designed to provide passage for vehicles of unrestricted length while moving in and out of an area; to or from airports, harbors, and testing sites; and to or from ultimate destination for use or assembly.

**7.9 Geotechnical**

A January of 2000 Preliminary Geotechnical Report was prepared for the project describes issues, including consolidation (settlement) of underlying materials, and potential for liquefaction from seismic activity. Underlying materials (north and south of Bracut) consist of generally soft silty clay to depths of 40 to 50 feet underlain by layers of compact sand, gravel and clay. The report noted that settlement of fills will be lower over existing embankments since those areas will have settled and strengthened after their original placement. Final design will include Foundation Reports for the

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bridge structure for the Jacoby Creek bridge replacement, the Indianola Cutoff undercrossing bridge structure and retaining walls, and Jacobs Avenue retaining wall. A final geotechnical design report will also be prepared for grading and fill placement for the acceleration lane and grade separation fills.

**7.10 Drainage**

As this project extends from the Eureka Slough Bridge to 11th Street in Arcata, much of the surrounding area lies within a flood zone to the east, and railroad prism and Humboldt Bay to the west. From Airport Rd to Bracut (PM 80.8/83.3), drainage from the highway is conveyed to the drainage channel east of Route 101, through culverts from the median, and from the channel west of the highway through a box culvert at PM 81.15. Drainage patterns will not change, and aging tide gates will be replaced.

A Preliminary Floodplain Analysis, dated February, 2003, was prepared for the project and was updated by Memorandum July 28, 2010 to include the description of Modified Alternative 3A. The improvements described in Modified Alternative 3A are expected to have a negligible 0.12% encroachment into the existing floodplain east of Route 101, from fill from constructing the grade separation, and acceleration and deceleration lanes at Bracut, and Bayside Cutoff.

**8. FUNDING, PROGRAMMING AND ESTIMATE****8.1 Funding**

It has been determined that this project is eligible for Federal-aid funding.

**8.2 Programming**

The project is currently programmed with five EAs: 01-36600, 01-0C970, 01-0E000, 01-0F220, and 01-0C930.

Two projects were initially programmed within this segment of Route 101, a Resurfacing, Restoration, and Rehabilitation (RRR) SHOPP project was programmed in 1999, and State Transportation Improvement Program (STIP) was initially approved on May 1, 2000, and updated September 14, 2000, to construct an interchange at Indianola Cutoff. Subsequently, with the project change request to fund and construct the pavement improvements through the CAPM, the remaining elements of the project were programmed into each of the separate Expenditure Authorization (EA) projects described in Table 3 in Section 5 of this Project Report.

See Section 1 for Capital Outlay Construction and Right of Way, and Support costs for each of the projects. The funding program for each of the projects that comprise the Eureka-Arcata Route 101 Corridor Improvement Project are as follows:

EA	FY	PROGRAM		Programmed Amount (\$ millions)	Current Estimate (\$ millions)
		CODE	NAME		
01-36600	20/21	.XX.075.600	Regional Improvement Program (RIP)	\$ 20.468	\$ 40.440
		.XX.025.700	Interregional Improvement Program (IIP)	\$ 15.700	
		.30.010.680	Demonstration TEA21 funds	\$ 0.610	
				\$ 36.778	
01-0C970	18/19	.XX.201.015	Collision Severity Reduction (SHOPP)	\$ 1.763	\$ 9.532
01-0F220	18/19	.XX.201.310	Operational Improvements (SHOPP)	\$ 4.249	\$ 12.301
01-0E000	18/19	.XX.201.112	Bridge Rail Replacement (SHOPP)	\$ 6.807	\$ 11.345
01-0C930	18/19	.XX.201.151	Drainage System Restoration (SHOPP)	\$ 0.150	\$ 1.503

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Funding programmed in EA 01-36600 is provided from the Regional Improvement Program (RIP) 20.XX.075.600, the Interregional Improvement Program (IIP) 20.XX.025.700, and Demonstration Funds from the Transportation Equity Act-21, as shown on the 01-36600 Programming Sheet.

**9. DELIVERY SCHEDULE**

Project Milestones						
Milestone	EA	Milestone Date (Month/Day/Year)				
		36600	0C970	0E000	0F220	0C930
ID NEED	M000	1/1/97	3/12/13	5/6/13	3/30/15	
APPROVE PID	M010	9/14/00	6/26/13	6/26/13	6/1/15	
PROGRAM PROJECT	M015	7/1/01	4/1/14	3/26/14	3/16/16	5/27/16
BEGIN ENVIRONMENTAL	M020	7/1/01	7/2/14	8/1/14	8/1/16	11/1/16
NOTICE OF PREPARATION (NOP)	M030	09/07/01 & 05/26/06	05/26/06	05/26/06	05/26/06	05/26/06
NOTICE OF INTENT (NOI)	M035	08/31/01 & 05/26/06	05/26/06	05/26/06	05/26/06	05/26/06
CIRCULATE DED EXTERNALLY	M120	07/06/07	07/06/07	07/06/07	07/06/07	07/06/07
PA&ED	M200	1/15/17	1/15/17	1/15/17	1/15/17	1/15/17
BRIDGE SITE DATA RECEIVED	M221	3/15/17		3/15/17		
R/W REQTS	M224	2/15/17	2/15/17		5/1/17	6/15/17
REGULAR R/W	M225	5/15/17	5/15/17		8/1/17	9/15/17
GENERAL PLANS	M275	9/1/17		9/1/17		
PS&E TO DOE	M377	6/1/18	6/15/18	8/11/18	11/9/18	7/26/18
DRAFT STRUCT PS&E	M378	4/1/18		6/16/18		
PROJECT PS&E	M380	9/1/18	9/1/18	10/20/18	1/18/19	10/4/18
R/W CERT	M410	9/15/18	10/1/18	11/15/18	2/1/19	10/15/18
RTL	M460	8/1/20	10/15/18	12/1/18	2/15/19	11/1/18
HQ ADVERT	M480	1/20/21	4/11/19	4/11/19	7/25/19	4/11/19
AWARD	M495	3/17/21	6/6/19	6/6/19	9/19/19	6/6/19
APPROVE CONTRACT	M500	4/7/21	6/20/19	6/20/19	10/3/19	6/20/19
CONTRACT ACCEPT	M600	12/1/23	12/1/20	12/1/21	12/1/20	12/1/20
FINAL REPORT	M700	12/1/24	12/1/21	12/1/22	12/1/21	12/1/21
END PROJ	M800	12/1/25	12/1/22	12/1/23	12/1/22	12/1/22

**10. RISKS**

Several risks have been identified for each of the projects, and are attached (Attachment G). Active risks with a higher Risk Assessments include:

- Site conditions from managing foundation settlement under fills, and pile placement during construction could add costs and delays during construction.
- It is believed that Caltrans owned properties will mitigate for each of the projects described in this PR, however, regulatory requirements could create the need for additional mitigation sites.
- The Federal Coastal Consistency Certification requirements of Coastal Trail planning, visual impact mitigation, wetland mitigation, and sea level rise planning, may require additional resources and time to satisfy these requirement.
- Public opposition to the project; a significant number of comments following signature of the environmental document may occur, could lead to increased support costs and delay project milestones.

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- As a result of unexpected environmental constraints that impact construction, an increase in the number of working days may occur which would lead to an increase in construction support costs, increased capital costs and delay construction contract acceptance.
- As a result of the Coastal Commission requiring permitting of the project wetland mitigation prior to the improvements, any delay in permitting the mitigation would lead to increased support costs and schedule delays.

**11. EXTERNAL AGENCY COORIDINATION****Federal Highway Administration (FHWA)**

This project is eligible for federal-aid, and is subject to the terms of the latest Stewardship and Oversight Agreement on Project Assumption and Program Oversight agreements between the Federal Highway Administration, California Division and Caltrans (May 28, 2015). Under this agreement, Caltrans may assume the responsibilities of the Secretary of the U.S. Department of Transportation for design, plans, specifications, estimates, contract awards, and inspections. To date, the project has not been identified as either a “Project of Division Interest” or a “Project of Corporate Interest.” to the FHWA and therefore, Caltrans will assume all responsibilities as permitted in the agreement.

**Responsible Agencies under CEQA:**

- California Department of Fish and Wildlife (CDFW)
- California Transportation Commission (CTC)
- California State Office of Historic Preservation
- North Coast Regional Water Quality Control Board (NCRWQCB)

**Trustee Agencies under CEQA:**

- California Department of Fish and Wildlife

**Cooperating Agencies (federal):**

- U.S. Army Corps of Engineers (USACE)
- U.S. Fish and Wildlife Service (USFWS)
- California Coastal Commission (CCC)
- National Marine Fisheries Service (NMFS) (NOAA Fisheries)

**External Partners/Stakeholders**

- CDFW
- USFWS
- USEPA
- USACE
- North Coast Unified Air Quality Management District
- California Department of Toxic Substances Control
- Humboldt County Association of Governments (HCAOG)
- County of Humboldt
- City of Eureka
- City of Arcata
- Corridor Access Project Group

**12. PROJECT REVIEWS**

Over the years of project development, District staff has held frequent informal meetings with Headquarters Division of Design staff, with the Division of Engineering Services Structures Liaison, and with the Headquarters Traffic Operations District Liaison. This project has been developed with

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input from District 1 and North Region departments and their Headquarters program managers, including Traffic Safety, Traffic Operations, Environmental, Maintenance, Stormwater, Hydraulics, Construction, Materials, Planning, Right of Way, Programming, and Project Management.

**13. PROJECT PERSONNEL****DISTRICT CONTACTS**

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**LIST OF ATTACHMENTS**

- A. Figures
  - 1. Project Limits Map
  - 2. Typical Sections
  - 3. Layout Sheets 1 through 26
- B. Cost Estimates
- C. Eureka-Arcata Safety Corridor Hum-101-PM 79.9/84.7 Ninth/Tenth-Year Report May 19,2002 through May 18,2012
- D. Right of Way Data Sheets
- E. Advance Planning Study
- F. Storm Water Data Report
- G. Risk Registers
- H. Programming Sheets
- I. ENVIRONMENTAL IMPACT REPORT/ENVIRONMENTAL IMPACT STATEMENT

Note: The Final Environmental Document has been approved separately. The purpose of circulation and review of this Project Report is to obtain Project Approval.