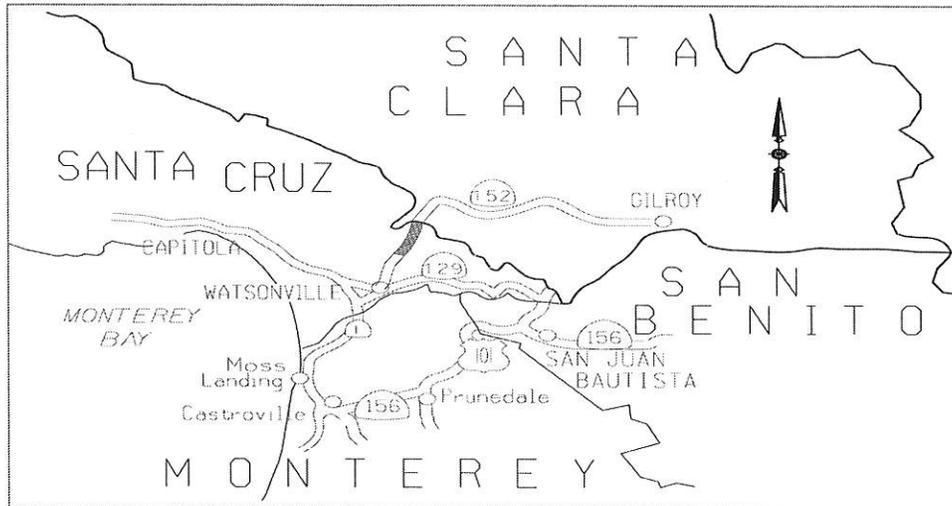


Project Study Report-Project Report To Request Programming in the 2014 SHOPP and Project Approval



On State Route 152 Between Casserly/Carlton Rd Intersection PM 3.7
And Santa Cruz/Santa Clara County Line PM 8.3

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

JAMIE LUPO, (Acting) DISTRICT DIVISION CHIEF, RIGHT OF WAY

APPROVAL RECOMMENDED:

DOUG HESSING, PROJECT MANAGER

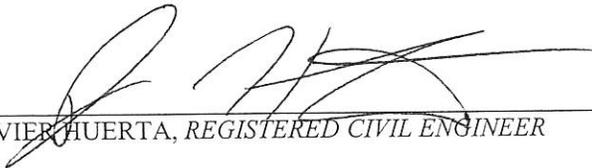
DEB L. LARSON, TRAFFIC SAFETY COORDINATOR

APPROVED:

TIMOTHY M. GUBBINS, DISTRICT DIRECTOR

6/11/15
DATE

This project study report-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.


JAVIER HUERTA, REGISTERED CIVIL ENGINEER

3-24-2015
DATE



Table of Contents

1.	Introduction	1
2.	Recommendation	1
3.	Background	1
4.	Purpose and Need	2
5.	Deficiencies	2
6.	Corridor and System Coordination	3
7.	Alternatives	3
8.	Considerations Requiring Discussions	4
9.	Other Considerations as Appropriate	5
10.	Community Involvement	5
11.	Environmental Determination	5
12.	Funding and Programming	5
13.	Schedule	6
14.	Risks	6
15.	FHWA Coordination	6
16.	Project Reviews	6
17.	Project Personnel	7
18.	Attachments	7
19.	Distribution List	8

1. INTRODUCTION

Project Description:

The project proposes to construct a centerline rumble strip in Santa Cruz County along State Route 152. It will be constructed from the intersection of Carlton/Cassery Rd to the Santa Clara County line. The scope of work includes remove the existing centerline striping, construct the centerline rumble strip using the ground-in method and new delineation.

Project Limits	05 – SCr -152- 3.7/8.3
Number of Alternatives	2
Alternative Recommended for Programming	1
Current Capital Outlay Support Estimate	\$640,000
Current Capital Outlay Construction Estimate	\$420,000
Current Capital Outlay Right-of-Way Estimate	\$0
Funding Source	SHOPP 20.XX.201.010
Funding Year	2016/2017
Type of Facility	2-lane conventional highway
Number of Structures	N/A
SHOPP Project Output	13 collisions reduced over the 10 year project life cycle
Environmental Determination or Document	Categorical Exclusion/Categorical Exemption
Legal Description	Near Watsonville from the intersection Carlton/Cassery Rd to the Santa Cruz/Santa Clara County line
Project Development Category	Category 5

2. RECOMMENDATION

It is recommended that this project be approved with the Build Alternative and that the project proceed to the design phase.

3. BACKGROUND

State Route 152 is a multi-use roadway. It is a divided urban roadway with a raised median in the City of Watsonville. It later becomes a rural 2-lane undivided highway through farmland at the west end of the project and a mountainous 2-lane undivided highway at the eastern project limits. From PM 3.7 to PM 4.5, the shoulder width varies from 0' to 2' and lane width is 12'. From PM 4.5 to PM 8.3, the lane width varies from 11'-12' and paved shoulder width varies 0' - 2' with several useable

shoulder pullouts. The entire project limits are striped for no passing zone. Lane widths were measured in several locations throughout the project limits. The posted speed limit within the project limits is 40 mph. There are several curve advisory speeds signs through the project limits.

A Caltrans Project Initiation Form (PIF) was signed on 07/28/2014 for this safety project along State Route 152, Expenditure Authorization ([EA] 05-1G400K), to construct a ground-in centerline rumble strip from the Casserly/Carlton Road intersection to the Santa Clara County line. The Program Manager for the Two and Three-Lane Cross Centerline Collision Monitoring Program has established that a project is needed in this location and that it meets the qualifications for the Program.

This Project Study Report-Project Report provides approval of the proposal and recommends to program the project into the current State Highway Operation and Protection Program.

4. PURPOSE AND NEED

Purpose:

The purpose of this project is to reduce the number and severity of cross centerline collisions on the State highway. The segment is located in Santa Cruz County from the Casserly/Carlton Road intersection PM 3.7, to the Santa Clara County line PM 8.3.

Need:

This segment was identified as having a high concentration of crossover and side-swipe collisions. It was identified in the 2012 Two and Three-Lane Cross Centerline Collision Monitoring Program. A Transportation System Network-Traffic Accident Surveillance and Analysis System (TSN-TASAS) Selective Accident Retrieval report also known as a TSAR was run for this segment of roadway. The TSAR "All" report identified several head-on and opposing direction side swipe collisions resulting in both injury and property damage.

5. DEFICIENCIES

This segment of roadway was identified as having several head-on collisions and opposing direction side swipe collisions. These accidents resulted in both injuries and property damage. The 2012 Two and Three-Lane Cross Centerline Collision Monitoring Program Report was performed for this location. This report is an analysis tool that is used to identify and investigate locations that may benefit from low cost improvements, such as centerline rumble strips.

The existing lane width is substandard in some locations. There are no programmed projects that would widen the lane or shoulder widths.

Collision Analysis:

The table below summarizes the selective collision data from the Traffic Accident Surveillance and Analysis System (TASAS) Table "B" (Attachment J). The table below shows the actual collision rates (# collisions/million vehicles) for the mainline and the state wide average collision rates for similar type facility.

	Collision Rates (Accidents / Million Vehicle Mile) Date Range: 1/1/2007 thru 3/31/2012.		
	Fatal	Fatal + Injury	Total
SCR-152-3.7/8.29	0.018	0.81	1.90
State Average of Similar Facilities	0.022	0.79	1.87

6. CORRIDOR AND SYSTEM COORDINATION

State Route 152, known locally as Hecker Pass Road within Santa Cruz County, starts at State Route 1 in Watsonville and continues east until it reaches the Santa Clara/Santa Cruz County line. It continues through Santa Clara, Merced and Madera Counties until it ends at the State Route 152/99 junction. State Route 152 through the majority of the project limits is primarily a commuter route that also provides access to several outdoor recreational parks. A small percentage of delivery trucks utilize this route to get to US Route 101 from the Watsonville area. While it is the shortest and most direct link to Gilroy, there are truck length advisories and restrictions for trucks. The State Route 152 Transportation Concept Report (TCR) divides State Route 152 into segments; segment A (PM 0.0/4.75) and segment B (PM 4.75/8.29) in Santa Cruz County. Within the project limits State Route 152 is a 2-lane conventional highway. The deliverables from the project are compatible with the ultimate facility as outlined in the Transportation Planning Fact Sheet of State Route 152 in Santa Cruz County.

7. ALTERNATIVES**7A. Build Alternative**

The viable alternative is to place centerline rumble strips along State Route 152 from PM 3.7 to PM 8.3. The current estimated construction cost is \$420,000 (2015 dollars).

Paul Gennaro, Project Delivery Coordinator, confirmed on April 2, 2015 that this project would not be expected to correct or document existing nonstandard features.

7B. No Build Alternative

This alternative does not reduce the number and severity of cross centerline and sideswipe collisions. It will not meet the project purpose and need.

8. CONSIDERATIONS REQUIRING DISCUSSION

A. Hazardous Waste

There are no hazardous waste sites or businesses commonly associated with hazardous waste generation nearby that would have a potential for impacting this project. Following is a discussion regarding typical hazardous waste issues that could affect this project.

Yellow thermoplastic or traffic stripe –Yellow thermoplastic stripe is going to be removed. Sometimes it needs to be handled as hazardous waste depending on the lead concentration. This is typically associated with older traffic stripes. There is a paving project scheduled for construction in the summer of 2015 that should be completed by the fall 2015. This project will pave over the existing striping and place new centerline striping. The newest yellow stripes no longer contain lead and as such don't require special handling and disposing of residue generated during stripe removal.

B. Value Analysis

The cost and scope of work is less than \$50 million and as such a value analysis study is not warranted.

C. Utilities

There are no potential utility conflicts as the project will be constructed upon the existing roadway surface.

D. Right of Way

There are no right-of-way issues as the project will be constructed within the existing roadbed and within the state right-of-way limits.

E. Nesting Birds

The adjacent land within the project vicinity is primarily rural with some rural-residential. The existing terrain consists of coastal foothills with steep slopes and a mix of riparian forest and chaparral. The area is potential habitat for nesting birds that are protected under existing law. The designated nesting season is February 15th to September 1st. Nesting birds could create a conflict with project construction activities that have minimum temperature requirements. The impact should be nominal. In order to comply with nesting bird laws, a qualified biologist must conduct a survey for nesting birds at least 2 weeks prior to any construction activities to determine the presence/absence of nesting birds within the project area. If any active nests are found a readily visible exclusion zone will need to be established until the biologist determines the nest is inactive.

F. Environmental-Pullouts could be utilize for construction staging operation areas where it's safe.

9. OTHER CONSIDERATIONS AS APPROPRIATE

Transportation Management Plan for Use during Construction

A Traffic Management Plan (TMP) will be prepared for use during construction. Traffic will be controlled by standard methods in accordance with lane closure charts, which will be provided in the PS&E phase

10. COMMUNITY INVOLVEMENT

No community involvement for this project is anticipated.

11. ENVIRONMENTAL DETERMINATION/DOCUMENT

This project is Categorically Exempt under California Environmental Quality Act (CEQA) and Categorically Excluded under National Environmental Policy Act (NEPA).

12. FUNDING/PROGRAMMING

This project is being proposed for amendment in the 2014 SHOPP with funding from the 20.XX.201.010 Safety Improvement Program in the 2016/2017 fiscal year. The escalated Construction, Right of Way, and Support costs estimates are summarized in the table below, followed by the proposed schedule.

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

Capital Outlay Support and Project Estimates

Fund Source	Fiscal Year Estimate							
	Prior	2012/13	2013/14	2014/15	2015/16	2016/17	Future	Total
20.XX.201.010								
Component	In thousands of dollars (\$1,000)							
PA&ED Support								
PS&E Support				\$452				\$452
Right-of-Way Support					\$33			\$33
Construction Support						\$218		\$218
Right-of-Way Construction						\$463		\$463
Total				\$452	\$33	\$681		\$1,166

- Note:
- 1) Construction Capital cost is escalated at 5% per year. Support cost are escalated at 10% based on an anticipated Indirect Cost Rate Proposal (ICRP) 11% increase in the 2015/2016 FY.
 - 2) Support categories are the same as those identified by SB 45.
 - 3) The support to capital ratio is 152%.

13. SCHEDULE

Project Milestones		Scheduled Delivery Date (Month/Day/Year)
PROGRAM PROJECT	M015	7/1/15
BEGIN ENVIRONMENTAL	M020	12/8/14
PA & ED	M200	6/15/15
PROJECT PS&E TO DOE	M377	3/3/16
RIGHT OF WAY CERTIFICATION	M410	3/3/16
READY TO LIST	M460	7/22/16
AWARD	M495	10/12/16
APPROVE CONTRACT	M500	10/26/16
CONTRACT ACCEPTANCE	M600	3/1/17
END PROJECT	M800	3/5/18

14. RISKS

A risk register has been prepared for the project and is attached. There were three risks found, two are low in risk and moderate in impact. They are easily avoidable and should not impact the project. The highest identified risk is the nesting bird impact to the construction schedule. It is high in risk and moderate in impact; however, since the project has such a short duration, it shouldn't be too big of an impact, therefore the project is considered low risk.

15. FHWA COORDINATION

This project is considered to be an Assigned Project in accordance with the current Federal Highway Administration (FHWA) and Department of Transportation (Caltrans) Joint Stewardship and Oversight Agreement.

16. PROJECT REVIEWS

Scoping team field review _____ Jim Espinosa _____ Date: 10/07/2014
 Scoping team field review attendance roster attached.
 District Program Advisor _____ Deb Larson _____ Date: 07/18/2014
 Headquarters SHOPP Program Advisor _____ John Holzhauser _____ Date: 07/18/2014
 Headquarters Design Coordinator _____ Paul Gennaro _____ Date: 07/28/2014
 Project Manager _____ Doug Hessing _____ Date: 07/09/2014
 FHWA _____ N/A _____ Date _____
 District Safety Review _____ Dario Senior _____ Date: 07/09/2014
 Constructability Review _____ Electronically Circulated _____ Date: 03/10/2015
 Other _____ Date _____

17. PROJECT PERSONNEL

Doug Hessing, Project Manager	(805) 549-3386
Steven McDonald, Design Manager	(559) 243-3537
Judith Lopez, Environmental	(559) 445-6663
Scott Morris, Traffic Safety	(805) 549-3238
Danny Millsap, Right of way	(805) 549-3207
Javier Huerta, Project Engineer	(559) 243-3538

18. ATTACHMENTS

- A. Vicinity Map
- B. Scoping Team Field Review Attendance Roster
- C. Right of Way Data Sheet
- D. CE Determination Form
- E. Planning Cost Estimate
- F. Risk Register
- G. Storm Water Data Report (SWDR)
- H. Typical Cross Sections
- I. TMP Checklist
- J. TASAS Table B

19. DISTRIBUTION LIST**Division / Program / Office**

HQ Division of Design	Design Report Routing	1
HQ Division of Engineering Serv.	Division of Engineering Services	1
HQ Environmental	Bob Pavlick	1
HQ Highway Safety Improvement Program	Ray Estakhri	1
HQ SHOPP Program Advisor	Kien Le	1
Project Manager	Douglas Hessing	2
Design Manager	Steven McDonald	1
Resident Engineer	TBD	1
District Maintenance	Lance Gorman	1
	Kelly McClain	1
District Traffic Liaison	Scott Morris	1
District Traffic Operations	Paul McClintic	1
Traffic Safety	Deb Larson	1
Region Traffic Design	Mohammed Qatami	1
District Traffic Management	Jacques Van Zeventer	1
Region Materials	Doug Lambert	1
Region Environmental	Susan Schilder	1
Region Right of Way	Marshall Garcia	1
District Planning	Claudia Espino	1
Region Landscape	Dennis Reeves	1
PPM	Linda Araujo	1
Surveys	Jeremy Villegas	1
	Bob Fredricks	1
Region Records	Victoria Pozuelo	1