



SHOPP Asset Management Pilot Request Form

SHOPPCPR: Ver 3 11/14

Submittal Date

Division of Transportation Programming
State Highway Operation and Protection Program (SHOPP)

Project Manager

Phone

Dist	County	Route	Prefix	PM	Prefix	PM	EA	PPNO	Project ID
01	Mendocino	1				4.6	X	X	X

Includes Multiple Locations (Complete Page 2 of this Form)

MPO:

Project Location/Description (Include the nearest city, town or landmark)

State Route 1 in Mendocino County from post mile 0.00 through 4.64, including the Community of Gualala

Need for project and proposed improvements (Elaborate using PID language)

The pilot project proposed on SR 1 combines several SHOPP asset programs identified for improvement along the corridor: Fish passage remediation at Fish Rock Gulch (PM 4.64), Rehabilitation or replacement of 21 culverts, and Bridge rail replacement and widening at Gualala River Bridge #10-0181. All of these assets have previously been identified as areas needing improvement. In addition to these SHOPP assets, complete streets enhancements in Gualala (PM 0.63 to PM 0.99) are included. Complete street enhancements in the community of Gualala were identified through a 2014 Project Study Report - Project Development Support and include: Two 11 foot wide travel lanes, A center two-way left turn lane, Two 5-foot wide Class II bike lanes, Two 8-foot wide pedestrian walkways, and Streetscape and landscape enhancements.

PA&ED / M200	<input type="text" value="02/01/2021"/>	R/W Cert / M410	<input type="text" value="02/01/2022"/>	CCA / M600	<input type="text" value="09/01/2026"/>
PS&E / M380	<input type="text" value="12/01/2021"/>	RTL / M460	<input type="text" value="03/01/2022"/>	END Project / M800	<input type="text" value="12/01/2027"/>

	Capital (\$1,000) (Escalated to FY of Programming)	
	FY	Cost
RW	2021/22	\$2,510
Construction	2020/21	\$14,520
Total Capital		\$17,030

Support (\$1,000)

	FY	Cost
PA & ED	2021/22	\$1,300
PS & E	2021/22	\$2,330
RW	2021/22	\$540
Construction	2021/22	\$1,800
Total Support		\$5,970

Legislative District Numbers
(Separate multiple Districts with a comma)

State Assembly	<input type="text" value="2"/>
State Senate	<input type="text" value="2"/>
Congressional	<input type="text" value="2"/>

Approved Denied

CAPITAL CONSTRUCTION COST ESCALATION RATE

District SFP (Print)	<input type="text" value="Jaime Matteoli"/>	District SFP (Sign)	<input type="text" value="Jaime Matteoli"/>	Phone	<input type="text" value="(707) 441-4581"/>
District Director (Print)	<input type="text" value="Charlie Fielder"/>	District Director (Sign)	<input type="text" value="Charlie Fielder"/>	Phone	<input type="text" value="(707) 445-6445"/>
SHOPP Exec. (Print)	<input type="text"/>	SHOPP Exec. (Sign)	<input type="text"/>	Phone	<input type="text"/>

Nomination for the Asset Management Program Pilot

Men 1 PM 0.00-4.64

August 2015

This project proposes the use of the State Highway Operation and Protection Program (SHOPP) Asset Management pilot program to address multi-modal transportation needs and maintenance on State Route 1 (SR 1) in Mendocino County from post mile 0.00 through 4.64. This pilot program nomination will describe the project and provide quantitative and qualitative assessment of the project relative to the Strategic Management Plan goals and state highway assets on the segment.

A multi-disciplinary team from District 1 identified and developed this project nomination. A project selection team met twice to identify potential projects and select projects to be nominated to this pilot program. The project selection team included representatives from District Management, Advance Planning, Regional Planning, System Planning, SHOPP Program Advisors and Coordinators, Traffic Operations, Traffic Safety, and Programming. District 1 Advance Planning and System Planning developed this project nomination with support from District SHOPP.

Project Background

The pilot project proposed on SR 1 combines several asset programs identified for improvement along the corridor:

- Safety (Rumble strips and clear recovery zone)
- Fish passage remediation at Fish Rock Gulch (PM 4.64),
- Rehabilitation or replacement of 21 culverts,
- Bridge rail replacement and widening at Gualala River Bridge #10-0181, and
- Streetscape enhancements in the community of Gualala (described below).

All of these assets have previously been identified as areas needing improvement. In addition to these SHOPP assets, complete streets enhancements in Gualala (PM 0.63 to PM 0.99) are included. Complete street enhancements in the community of Gualala were identified through a 2014 Project Study Report - Project Development Support document and include:

- Two 11 foot wide travel lanes
- A center two-way left turn lane,
- Two 5-foot wide Class II bike lanes,
- Two 8-foot wide pedestrian walkways, and
- Streetscape and landscape enhancements.

Scope of Work

Item (SHOPP Program Code)	Strategic Objectives (Goal)*	Performance Measures	Description of Work	Const. Cost (\$1,000)
Drainage (151)	Fix It First (2) Eliminate Recurring Maint. Cost (2)	Replacement or rehabilitation of 21 culverts	Cost includes the replacement of 11 culverts, and the rehabilitation of 10 culverts	\$500
Fish Passage (240)	Fix it first (2) Planet (3)	1 Fish Passage remediated	Cost include the construction of one structure over Fish rock Gulch	\$3,000

Item (SHOPP Program Code)	Strategic Objectives (Goal)*	Performance Measures	Description of Work	Const. Cost (\$1,000)
Bridge rail (112)	User Safety (1) Active Transportation (1) People and Planet(3)	1170 linear feet of bridge rail replaced and 8.900 sq. ft. added	Cost includes the replacement of bridge rail, widening of the structure with 6' shoulders, and a 6' separated multi-use path	\$5,000
Rumble Strips (015)	User Safety (1) Worker Safety (1)	23,000 linear feet	Cost includes the construction of 23,000 feet of centerline rumble strips	\$15
Census Station (315)	Efficiently Manage Operations (2) Improve integration and operation (4)	One two-lane census station	Cost includes the replacement and upgrade of one two-lane census station	\$80
Complete Streets enhancements (N/A)	People, Planet, Prosperity (3) Complete Streets (4) Collaboration (5)	Complete streets enhancements implemented	Cost includes construction of ADA curb ramps, Sidewalks, Crosswalks, Median islands, Bike lanes, landscape improvements, and right-of-way	\$3,000

Total \$11,595

*Goal Number

- (1) Safety & Health
- (2) Stewardship & Efficiency
- (3) Sustainability, Livability and Economy
- (4) System Performance
- (5) Organizational Excellence

**Support 40% of Capital cost

Safety and Health

Installation of rumble strips in the centerline of the traveled way (where appropriate) can alert inattentive or drowsy drivers that their vehicles are drifting out of the travel lane. Centerline rumble strips have a collision reduction factor of up to 25% for run-off-road type collisions on rural highways.

A CRZ should be provided whenever feasible. Fixed objects within the CRZ should be (in order of preference);

- 1. Removed/Relocated, or
- 2. Made Breakaway, or
- 3. Shielded

Studies have indicated that on conventional highways a clear width of 20-ft from the edge of the traveled way allows approximately 80% of errant vehicles that leave the traveled way to recover (Traffic Manual, Chapter 7, Traffic Safety Systems).

Two-way left-turn lanes in Gualala can reduce conflicts between cars waiting to turn left and through traffic, resulting in a reduction in total, injury, and rear-end collisions. In California, studies have shown a total collision reduction of 34% with two-way left-turn lanes, and a 46.4% reduction of rear-end collisions (Safety Evaluation of Installing Center Two-Way Left-Turn Lanes on Two-Lane Roads, FHWA). Two-Way Left-Turn Lanes are an approved Safety Improvement outlined in the 2014 Highway Safety Improvement Program Guidelines manual. Two-Way Left-Turn Lanes are described as having an average collision reduction of 25% of all collisions for a project with a 20 year life expectation.

The Pacific Coast Bike Route (PCBR) runs along SR 1 in Mendocino County and is a popular destination for touring cyclists. Providing bike lanes through Gualala will increase the safety of PCBR users. Non-motorized users will perceive the separated, multi-use path on the Gualala River Bridge as better access and a safer means across the Gualala River. This will encourage greater use of the route not only for recreational purposes, but also for commuting purposes. Improved access on the facility would encourage active transportation, reduce congestion and reduce emissions. Complete Streets enhancements in Gualala such as bike lanes and sidewalks will help to promote active transportation and improve community health.

Stewardship and Efficiency Needs

The following assets will be improved or added during this project:

Asset	Total Quantity	Pre-Project Condition			Post-Project Condition		
		Good	Fair	Poor	Good	Fair	Poor
Culverts	68	47	4	17	68	0	0
Fish Passage	1	0	0	1	1	0	0
Rumble Strips	23,000 linear feet	New Asset			23,00	0	0
HMA dike	13,333 LF	0	13,333	0	13,333	0	0
Sidewalks	2,835 LF.	New Asset			2,835	0	0
Crosswalks	348 LF	New Asset			348	0	0
ADA Ramps	15	New Asset			15	0	0
Median Islands	168 LF	New Asset			168	0	0
Bike Lanes	0.72 lane miles	New Asset			0.72	0	0
Census Station	1	0	1	0	1	0	0
Bridge Rail	1170 LF	0	1170	0	1170	0	0
Bridge widening	8,900 sq. ft.	New Asset			8,900	0	0
Multi-use path	1	New Asset			1	0	0

Centerline rumble strips will be installed throughout the project limits with the exception of Gualala (PM 0.63-0.99).

21 culverts will be rehabilitated or replaced, including:

- 11 replacements,
- 2 section replacements,
- 1 invert repair,
- 2 culvert barrel lining replacements,
- 1 end treatment addition,
- 3 sediment flushes, and
- 1 debris removal.

One fish passage remediation location has been identified in the project limits at Fish Rock Gulch (PM 4.64). Original recommendations included reducing the culvert barrel velocities and increasing the water depths. However, after inspection, it is recommended to replace the culvert with a structure as the culvert has deteriorated beyond repair.

Bridge rail replacement and bridge widening is proposed for the Gualala River Bridge #10-0181 (PM 0.01). This includes the widening of the structure to include 6' shoulders and a 6' multi-use path.

One census station will be replaced and upgraded within the project limits at PM 2.5 (station ID 11800).

In addition to these SHOPP assets, other assets will be added to the state highway system, including:

- ADA curb ramps,
- Sidewalks,
- Crosswalks,
- Median islands,
- Bike lanes, and
- landscape improvements

Sustainability, Livability and Economy

The addition of widened shoulders, Class II bike lanes and sidewalks will help Caltrans achieve its target of increasing non-motorized mode share. Greenhouse gas emissions will be lower with a larger non-motorized mode share. Quality of life through Gualala will be improved with the complete streets and landscape enhancements. The community of Gualala and the County of Mendocino partnered with the District to reach the ultimate design proposed in this project.

A fish passage barrier identified as one of 11 priority sites in the District will be remediated, allowing the free movement of fish between the Pacific Ocean and Fish Rock Gulch. Removal of this barrier will allow Coho salmon and Steelhead to access 2,900 feet of upstream habitat.

A sustainability matrix which includes a breakdown of sustainability, livability, and economy objectives is provided as Attachment A.

System Performance

The proposed left turn lane will decrease queuing in travel lanes by separating drivers turning left from through traffic. The addition of sidewalks and bike lanes throughout Gualala will help to increase the system performance of non-motorized users.

One traffic census station in the project limits (PM 2.5) will be replaced.

Organizational Excellence

During this project, the District will work with many outside agencies. As this project lies in the coastal zone, consultation with the Coastal Commission during project development to secure a coastal development permit will take place. In addition, the District will consult with the community of Gualala and Mendocino County during the development and delivery of the project.

Funding and Cost Savings

The following table gives a breakdown of the potential cost savings of delivering the improvements as one project as opposed to delivering each project separately. Estimated support costs for each item and the capital to support ratio is included.

Item	Description of Work	Standalone Costs (\$1000)			Total
		Capital	Right of Way	Support (Cap/Sup ratio)	
Drainage	Cost includes the replacement of 11 culverts, and the rehabilitation of 10 culverts	\$700	\$600	\$910 (70%)	\$2,210
Fish Passage	Cost include the construction of one structure over Fish rock Gulch	\$3,500	\$650	\$2,490 (60%)	\$6,640
Bridge rail	Cost includes the replacement of bridge rail, widening of the structure with 6' shoulders, and a 6' separated multi-use path	\$5,750	\$500	\$3,750 (60%)	\$10,000
Rumble Strips	Cost includes the construction of 23,000 feet of centerline rumble strips	\$50	\$10	\$60 (100%)	\$120
Census Station	Cost includes the replacement and upgrade of one two-lane census station	\$125	\$10	\$135 (100%)	\$270
Complete Streets enhancements	Cost includes construction of ADA curb ramps, Sidewalks, Crosswalks, Median islands, Bike lanes, landscape improvements, and right-of-way	\$3,250	\$400	\$2190 (60%)	\$5,840
Subtotal					\$25,080
Total with Asset Management					\$19,033
Savings					\$6,047

Funding Plan and Recommendation

	Items	Cost (\$1,000)
Capital Cost	Roadway Constr.	\$3,595
	Structures Constr.	\$8,000
	R/W	\$2,000
	Subtotal	\$13,595
Support Cost	PA&ED (0-Phase)	\$1,197
	PS&E (1-Phase)	\$2,120
	R/W (2-Phase)	\$490
	Constr. (3-Phase)	\$1,631
	Subtotal	\$5,438
Total Project Cost		\$19,033

The District proposes to allocate \$19,033,000 for this project entirely through the SHOPP Asset Management program pilot. This includes a capital cost of \$13,595,000 and \$5,438,000 for support. This project will save \$6,047,000 over individual projects, and is an efficient and responsible management of the State's assets. By proceeding with this project, the Department will contribute to satisfying the targets set forth in the 2015 Strategic Plan and begin the practice of implementing Caltrans' new Mission, Vision, and Goals.

If this project is chosen for the pilot program, a project initiation document will be prepared using resources provided by headquarters. After project initiation, funding will come from the SHOPP Asset Management Program.

Attachments:

Attachment A: Sustainability Matrix

Attachment A: sustainability Matrix

Sustainability Goal measures		Project Title: Men 1 Asset Management Pilot	Yes/No	Description (of Yes responses)
Quality of Life				
Stimulate Sustainable Growth and Development (Envision QL 1.2)				
Intent: Support and stimulate sustainable growth and development, including improvements in job growth, capacity building, productivity, business attractiveness and livability.				
1	Prosperity	Will the project enhance the community's quality of life and economic prosperity?	Yes	Ride quality will be improved, and complete streets enhancements in Gualala will improve the quality of life.
Improve Community Mobility and Access (Envision QL 1.2)				
Intent: Locate, design and construct the project in a way that eases traffic congestion, improves mobility and access, does not promote urban sprawl, and otherwise improves community livability.				
2	Access	Will the project provide good, safe access to adjacent facilities, amenities and transportation hubs, including appropriate wayfinding signage?	Yes	The route is currently a part of the Pacific Coast Bike Route, and this project will implement improvements to PCBR facilities
3	Non-Auto Mode Share	Will the project encourage the use of transit and/or non-motorized transportation?	Yes	Sidewalks and bike lanes through Gualala will be included
4	Non-Auto Mode Share	Has the project team coordinated the design with other infrastructure assets to improve walkability and livability?	Yes	Complete streets enhancements in Gualala were determined through public outreach in the community and will interact with other infrastructure assets
Preserve Historic and Cultural Resources (Envision QL 3.1)				
Intent: Preserve or restore significant historical and cultural sites and related resources to preserve and enhance community cultural resources.				
5	Env	Will the project minimize impacts on historic and cultural resources? (Consulted the tribal, historic and cultural resource staff in Environmental (PQS)?	Yes	The project team will coordinate with environmental planning, the district Native American Liason, and local tribes
Enhance Public Space (Envision QL 3.3)				
Intent: Improve existing public space including parks, plazas, recreational facilities, or wildlife refuges to enhance community livability.				
6	Livability	Will the proposed project make meaningful enhancements to public space or address Section 4(f) properties, (examples include parks, plazas, recreational facilities, or wildlife refuges) to enhance community, livability, and quality of life?	Yes	Community, Livability, and quality of life will all be improved through bike lanes, sidewalks, and landscape improvements in Gualala
Leadership				
Foster Collaboration and Teamwork (Envision LD 1.3)				
Intent: Eliminate conflicting design elements, and optimize system by using integrated design and delivery methodologies and collaborative processes.				
7	Sustainable Corridor Master Plan (SCMP)	Are the project owner and the project team intending to take a Context Sensitive Solutions view of the project?	Yes	Complete streets enhancements in Gualala were determined through public outreach in the community
Improve Infrastructure Integration (Envision LD 2.2)				
Intent: Design the project to take into account the operational relationships among other elements of community infrastructure which results in an overall improvement in infrastructure efficiency and effectiveness.				
8	Livability	Will the project team seek input from local stakeholders regarding how the project impacts or enhances the community infrastructure?	Yes	Stakeholders have already been consulted extensively through the Gualala improvements, and PCBR feasibility studies. In addition, fish passage stakeholders have been consulted
9	Freight	Will the project address the needs on the priority freight network included in the Freight Mobility Plan?	No	Not a priority freight network
Resource Allocation				
Use Recycled Materials (Envision RA 1.3)				
Intent: Minimize transportation costs and impacts and retain regional benefits through specifying local sources.				
10	Resource Consumption	Will the project team consider reuse of existing materials or recycled materials or use of materials from within 100 miles of the project site?	Yes	This project will be consistent with Deputy Directives DD-17 and DD-105
Reduce Energy Consumption (Envision RA 2.1)				
Intent: Conserve energy by reducing overall operation and maintenance energy consumption throughout the project life cycle.				

Sustainability Goal measures		Project Title: Men 1 Asset Management Pilot	Yes/No	Description (of Yes responses)
11	Energy	Can the project incorporate reducing energy consumption or generating energy supply during the construction phase or after as a purpose for the project?	No	
Natural World				
Preserve Prime Habitat and Species (Envision NW 1.1)				
Intent: Avoid placing the project – and the site compound/temporary works – on land that has been identified as of high ecological value or as having species of high value.				
12	Env	Does the project concept incorporate solutions to preserve, improve or connect important natural resources (habitat, species needs, or fish and wildlife movement corridors)?	Yes	Fish passage at improvements at Fish Rock Gulch will be implemented
Protect Wetlands and Surface Water (Envision NW 1.2)				
Intent: Protect, buffer, enhance and restore areas designated as wetlands, shorelines, and waterbodies by providing natural buffer zones, vegetation and soil protection zones.				
13	Water	Does the project concept address or enhance adjacent wetlands, hydraulic connection and waters functions, values, or existing deficiencies?	Yes	Fish passage at improvements at Fish Rock Gulch will be implemented, and culvert rehabilitation will be performed
Preserve Prime Farmland (Envision NW 1.3)				
Intent: Identify and protect soils designated as prime farmland, unique farmland, or farmland of statewide importance.				
14	Env	Does the project concept improve or enhance the existing farming conditions or associated interface with the transportation facility (water conveyance, quality, habitat preservation, weed management, farming operation, etc.)?	No	
Preserve Floodplain Functions (Envision NW 1.5)				
Intent: Preserve floodplain functions by limiting development and development impacts to maintain water management capacities and capabilities.				
15	Water	Does the project concept allow for natural floodplain functions restored or rectified related to existing infrastructure impingements?	No	
Manage Stormwater (Envision NW 2.1)				
Intent: Minimize the impact of infrastructure on stormwater runoff quantity and quality.				
16	Water Quality	Can the project be designed to treat more than minimum stormwater treatment requirements, for example post construction or TMDL compliance units?	No	
Roadside Vegetation Environment (Envision NW 3.4)				
Intent: Use appropriate non-invasive species and control or eliminate existing invasive species.				
17	Env	Does the project concept incorporate improvements to roadside vegetation through restorative actions to native/appropriate vegetation to reduce/eliminate need for future management (maintenance, water use, pesticides, invasive species, etc.)?	Yes	Landscaping through Gualala will include native vegetation
Climate & Risk				
Reduce Greenhouse Gas Emissions (Envision CR 1.1)				
Intent: Conduct a comprehensive life-cycle carbon analysis and use this assessment to reduce the anticipated amount of net greenhouse gas emissions during the life cycle of the project, reducing project contribution to climate change.				
18	GHG	Based on a life-cycle carbon assessment, will the project be designed in a way that substantially reduces carbon emissions?	No	
Assess Climate Threat (Envision CR 2.1)				
Intent: Develop a comprehensive Climate Vulnerability Assessment and Adaptation Plan.				
19	Resiliency	Will the project address potential risks or vulnerability deficiencies identified in state, regional, local or site specific plans?	No	
Manage Heat Island Effects (Envision CR 2.5)				
Intent: Minimize surfaces with a high solar reflectance index (SRI) to reduce localized heat accumulation and manage microclimates.				
20	Green Infrastructure	Will the project be designed to include green infrastructure such as reducing heat island effects by reducing the percentage of low solar reflectance index (SRI) surfaces?	No	