

# Memorandum

*Serious drought.  
Help Save Water!*

To: Michael B. Johnson  
State Asset Management Engineer

Date: August 13, 2015

From: AMARJEET BENIPAL  
District 3 Director



Subject: **SHOPP ASSET MANAGEMENT PILOT PROGRAM**

Please find attached the enclosed application for the ***SR 49 La Barr Meadows to McKnight Way Mobility Improvement Project*** application. This project proposes to add 8-foot paved shoulders, right turn pockets, a two way left turn lane, 20-foot Clear Recovery Zone (CRZ), bike paths and upgrade culverts and drainage. The project is on SR 49 in Nevada County.

The Nevada County Transportation Commission has been a committed partner with Caltrans District 3 in the planning, programming, and funding of construction improvements for ***SR 49 La Barr Meadows to McKnight Way Mobility Improvement Project***.

All cost estimates are preliminary at the time of this submittal.

If you have any questions, please contact Sergio Aceves at (530) 741-5120 or via email at [sergio.aceves@dot.ca.gov](mailto:sergio.aceves@dot.ca.gov). Thank you for your consideration.

Attachment(s)

- (1) SR 49 La Barr Meadows to McKnight Way Mobility Improvement Project Application



# 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
03	Nevada	49		11.1		13.3	TBD	TBD	TBD

Includes Multiple Locations (Complete Page 2 of this Form)

MPO:

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

On State Route 49 South of Grass valley from about 0.35-miles North of La Barr Meadows intersection to 0.4-miles South of Mcknight way interchange.  
This pilot project proposes the use of asset management principles to address the overall transportation needs of a major transportation project on State Route 49 in Nevada County from post-mile 11.10 to 13.30.

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

The purpose of this project is to reduce collisions through shoulder and clear recovery improvements, reduce congestion by constructing two-way-left-turn lane, add multi-modal assets through the addition of bicycle lanes, improve communications for traveling public, extend the service life of pavement, and rehabilitate the highway planting as well as reducing field maintenance work by installing vegetation control.

This project proposes to widen Shoulders, create a 20ft wide clear recovery zone, create a two-way left turn lane, add bicycle lanes, install CMS, perform pavement preservation, replace/rehabilitate highway planting, and install vegetation control on State Route-49 to bring roadway assets up to current standards.

PA&ED / M200

R/W Cert / M410

CCA / M600

PS&E / M380

RTL / M460

END Project / M800

Support (\$1,000)

Capital (\$1,000)  
(Escalated to FY of Programming)

	FY	Cost
R/W	2021/22	\$400
Construction	2021/22	\$12,920
<b>Total Capital</b>		<b>\$13,320</b>

	FY	Cost
PA & ED	2018/19	\$740
PS & E	2020/21	\$1,130
R/W	2020/21	\$245
Construction	2021/22	\$1,850
<b>Total Support</b>		<b>\$3,965</b>

Legislative District Numbers  
(Separate multiple Districts with a comma)

State Assembly	1
State Senate	1
Congressional	1

Approved  Denied

CAPITAL CONSTRUCTION COST ESCALATION RATE

District SFP (Print) <i>fol</i>	<input type="text" value="Thomas L Brannon"/>	District SFP (Sign)	<i>Paulene Dixon</i>	Phone	<input type="text" value="(530) 740-4846"/>
District Director (Print) <i>FAT</i>	<input type="text" value="Amarjeet S Benipal"/>	District Director (Sign)	<i>John F. ...</i>	Phone	<input type="text" value="(530) 741-4233"/>
SHOPP Exec. (Print)	<input type="text"/>	SHOPP Exec. (Sign)	<input type="text"/>	Phone	<input type="text"/>

Asset Management Pilot Project Nomination  
**La Barr Meadows Mobility Improvement Project**  
NEV -49-11.1-13.3

This pilot project proposes the use of asset management principles to address the overall transportation needs of State Route (SR) 49 in Nevada County from post-mile 11.1 to 13.3. All cost estimates are preliminary at the time of this submittal. Conceptually, this project proposes to add 8-foot wide paved shoulders, right turn lanes, a two way left turn lane (TWLTL), 20-foot minimum clear recovery zones (CRZ), bike lanes and upgrade culverts and drainage.

This pilot project lays the groundwork and will continue the effort to complete the Ultimate Facility of a four-lane, access controlled expressway with expanded mobility options along the corridor. Achievement of the ultimate facility will also improve safety on the transportation system, increase travel time reliability, reduce delay for all modes, and improve connectivity between modes and facilities, and close the gap between facility types thereby removing bottlenecks. SR 49 acts as a lifeline route to several communities in Nevada, Placer, and Sierra Counties and is the major interregional state highway connecting to the Interstate 80 (I-80) gateway. The facility improvements will improve key multimodal connections to Placer County Transit and Amtrak Capital Corridor Intercity Passenger Rail via the Auburn Conheim Multimodal Station, enhances an interregional bicycle facility connection, and will provide standard shoulders where shoulders do not currently exist (See Attachment 2, Photo #4).

Through the use of asset management principles, the proposed pilot project on SR 49 in Nevada County from post-mile 11.10 to 13.30 will lay the foundation to continue to address the overall transportation needs of the region. The ultimate project is of particular importance to the region as there are no parallel routes that can accommodate the travel demand. The ultimate project is a multi-agency partnership between the Nevada County Transportation Commission, Caltrans District 3, and Caltrans Headquarters Programming. The pilot will quantify the safety, operations, and roadside safety needs and will propose the corresponding programming for each need.

**Project Background**

SR 49 was originally built as a stagecoach route. It was later widened, paved and used as the primary north/south route connecting the towns in the Sierra foothills. Today, SR 49 acts as a lifeline route to several communities in Nevada, Placer and Sierra Counties. The highway carries significant volumes of commuter, trucking and recreational traffic. It also serves as a critical detour route when major incidents, weather events, or work occurs on Interstate 80 (I-80). SR 49 has been used as the detour route for the 188 incidents recorded between 2004 and 2014.

A Project Study Report (PSR) was approved on January 28, 1999, which recommended upgrading the full 12-mile segment to a four-lane conventional highway with a continuous median/left-turn lane and 8-foot shoulders, from Wolf/Combie Road to McKnight Way near Grass Valley. However, due to budgetary constraints starting in the 2002/2003 FY, the proposed project was shelved and

funding for the proposed project was moved out to the 2008/2009 FY. Due to local concerns regarding accident rates and degraded operations on SR 49 within the project limits, the project was re-scoped to a 1.5 mile segment (PM 9.7/11.1) from La Barr Meadows to McKnight Way.

SR 49 is evolving into a critical goods movement corridor as demonstrated by increasing truck traffic volumes. This project would further enhance goods movement in the region by improving the operations and safety along the corridor. SR 49 is a significant interregional connector for natural resource based product shipments including lumber and mining, and for travelers seeking tourist and recreational destinations. The corridor also serves as a vital link to regional employment centers in Placer and Sacramento Counties, and more affordable or rural housing opportunities in Nevada and Sierra Counties. Safety, mobility, and capacity are major issues on the SR 49 corridor.

### **Safety**

SR 49 from Dry Creek Road in Placer County to south of the McKnight Way Interchange in Nevada County is also designated as a "Safety Corridor" and daylight/headlight section. A Safety Corridor is a segment of highway with potential for fatal and severe collisions that is identified and focused on by the state and local officials, with increased enforcement, public awareness measures, and short-term and long-term highway improvements in order to reduce and prevent fatal and severe collisions. Improvements in this key corridor will improve safety, reduce congestion, provide multi-modal connections, and assist in achieving attainment of the federal ozone air quality standards, as well as statewide greenhouse emission reduction goals.

Widening to establish 8-ft wide shoulders and a 20-ft wide CRZ has been proven to reduce the potential for a variety of collision types by offering more room for errant vehicles to recover and also for drivers to evade other vehicles or obstacles. These features have the greatest impact on reducing head-on, run off-road and sideswipe collisions. In addition, wide shoulders and a CRZ offer a number of other safety benefits, including:

- Space is provided away from the traveled way for vehicles to stop because of mechanical difficulties, flat tires, or other emergencies.
- Space is provided for Maintenance vehicles and law enforcement stops.
- Sight distance is improved in horizontal curves and intersections by increasing offset to obstacles.
- Lateral clearance is provided for signs and guardrails.

### **Stewardship and Efficiency Needs**

Key challenges to mobility along the corridor exist, which include, but are not limited to, recurrent highway and roadway traffic congestion, limited parallel roadway capacity, lack of signal coordination on key arterials, transit facilities in need of additional ridership, and gaps and barriers

within the bicycle route network. The Ultimate Facility such as widening shoulders, reducing the number of left-turn lanes are key to the operational improvement of this corridor.

Through the use of asset management principles, the proposed pilot project on SR 49 in Nevada County from just north of La Barr Meadows Road (post-mile 11.1) to just south of the McKnight Way interchange (PM 13.3) addresses the overall transportation needs of the region. The project is of particular importance to the region as there are no parallel routes that can accommodate the region. This pilot project is a multi-agency partnership between the Nevada County Transportation Commission, Caltrans District 3, and Caltrans Headquarters Programming. The pilot will quantify the safety, operations, and roadside safety needs and will propose the corresponding programming for each need.

The NCTC has been a committed partner with Caltrans in the planning, programming, and funding of construction improvements in the SR 49 and 20 priority interregional corridors in Nevada County. The 1998 Interregional Transportation Strategic Plan (ITSP) included both SR 20 and SR 49 corridors as "Focus Routes". As Focus Routes these facilities were identified as part of the ten Interregional Road System (IRRS) corridors of highest priority in the state for completion to minimum facility standards in the twenty year period. The improvements of these facilities and continued partnership with Caltrans are a top regional priority.

The following SHOPP related needs have been identified by Caltrans District 3 staff. These improvements will provide benefits to all modes of transportation. The current facilities vary in terms of condition. The table below identifies the pre and post-project conditions:

SHOPP Program	Asset	Total Quantity	Pre-Project Condition			Post- Project Condition		
			Good	Fair	Poor	Good	Fair	Poor
015	Wider shoulders and clear recovery	2.2 centerline miles	0	0	2.2	2.2	0	0
310	Bicycle lanes	4.4 Lane Miles	0	0	4.4	4.4	0	0
310	Two Way Left Turn Lanes (TWLTL)	2.2 Centerline Miles	0	0	2.2	2.2	0	0
315	Changeable Message Sign (CMS)	1 Sign	0	0	1	1	0	0
120	Pavement Rehabilitation	4.2 Lane Miles	0	4.2	0	4.2	0	0
210	Planting and Irrigation	0.5 Acres	0	0.5	0	0.5	0	0
235	Install Vegetation Control under Guardrail	14 Locations	0	0	14	14	0	0

The pre-project condition of the area is a mixture of Fair and Poor conditions. The projects will upgrade these assets to a Good condition.

Item (Program)	Performance Measures	Description of Work	Cost
Safety (015)	98 collisions over 20 years	Widen shoulders, add clear recovery zone	\$7,100,000
Op. Improvements (310)	Minimal vehicle-hours delay reduced	Two-way left turn lane	\$2,100,000
Op. Improvements (310)	Minimal vehicle-hours delay reduced	Bicycle lanes along NB and SB shoulder to separate bicycles from traffic	\$1,800,000
Transportation Management Systems (315)	1 location	Install CMS for NB Traffic to inform motorist of traffic conditions on the 20, and 49 corridors within the mountain areas.	\$200,000
Pavement Rehabilitation (120)	4.2 Lane Miles Rehabilitated	Perform pavement preservation, and rehabilitation work on Nev-49 within project limits	\$850,000
Highway Planting Rehabilitation Program (210)	0.5 Ac	Replace and/or rehabilitate 0.5 Ac of Highway Planting 0.4 to 0.5 Mile south of W McKnight Way. This restoration will ensure the retention of the current "Classified Landscaped Freeway" Status which will assist in the regulation of outdoor advertising such as billboards.	\$25,000
Roadside Safety Improvements (235)	14 Locations	Install vegetation control at approximately 7000 LF of guardrail at various location throughout the project limits to reduce recurrent on-foot maintenance activities and/or chemical spraying associated with weed removal.	\$60,000

Total \$12,135,000

### **Sustainability, Livability and Economy**

The SR 49 corridor is an important route that serves local, regional, and interregional traffic. The SR 49 network includes the portion of SR 49 that begins at the I-80/SR 49 Interchange in Placer County and ends at the SR 49/SR 20 Junction in Nevada County, as well as select parallel and connector roadways, transit services and bike routes. The segment length is 23 miles. These facilities corridor were included and selected for inclusion in Caltrans Corridor System Management Plans (CSMP) in consultation with the respective local agencies.

Many mobility challenges exist along the corridor, which include, but are not limited to, recurrent highway and roadway traffic congestion, limited parallel roadway capacity, lack of signal coordination on key arterials, transit facilities in need of additional ridership, inadequate transit

capital and operations funding needed to grow transit ridership, and gaps and barriers within the bicycle route network.

### **System Performance**

The NCTC has been a committed partner with Caltrans in the planning, programming, and funding of construction improvements in the SR 49 and SR 20 priority interregional corridors in Nevada County. Interregional recreational travel and tourism are vital to the state and regional economies and should be considered in all aspects of transportation planning in conjunction with goods movement.

The SR 20 and SR 49 corridors serve the major east/west and north/south routes respectively for interregional movement for people and goods across the northern Central Valley, linking U.S. 101, Interstate 5, SR 99, SR 70 and I-80. These routes are part of a North state “crossroads” or “hub” for agricultural goods movement in the North Valley and through the Yuba City/Marysville urbanized area for connections to SR 99 and SR 70; and connect the SR 49 corridor in Nevada and Placer County to I-80. Additionally, both SR 29 and SR 40 are utilized as emergency detour routes when I-5 or I-80 are closed for major accidents, wildfires, and construction.

In 2013, the total value of Nevada County’s agricultural crop production was \$23,206,300. SR 20 and SR 49 are key interregional corridors for transporting Nevada County’s fruit and vegetable crops, field crops, nursery products, livestock, apiary, honey, wool products, and timber outside of the regional, and provide critical connections to the SR 70, SR 99, I-5, and I-80 gateways.

The *2015 Caltrans District 3 Goods Movement Study* projects that between 2012 and 2032, the vehicle-miles traveled by heavy duty trucks (5+ axle trucks) is forecast to increase 69% in Nevada County. In addition, the study identifies SR 49 as having a high deficiency for goods movement mobility in the base year, and in the no-build forecast, both SR 20 and SR 49 are identified as having high deficiency for goods movement mobility. SR 20, east of the Yuba County/Nevada County border, is identified as a segment of highest priority in Caltrans District 3 for improving goods movement mobility. Trucks contribute to the congestion in these corridors because they use more capacity per vehicle than automobiles. Improving freight transportation infrastructure and maintaining an efficient transportation system that provides for effective goods movement, allows local businesses to transport goods within Nevada County, and to markets outside of the area. It is important for NCTS and Caltrans to continue to partner in order to deliver improvements that reduce congestion, improve safety, reduce delays, and increase throughput in the SR 20 and SR 49 corridors.

Although the operational benefits of the TWLTL are hard to quantify given the number of roadway connections, it would offer definite benefits for drivers in reducing delay. There are currently single lanes of northbound and southbound traffic in this segment. After the widening, there will be two lanes per direction. A vehicle entering the roadway to make a left turn will have to cross two lanes of traffic to enter the TWLTL. Vehicles trying to turn off the highway will also no longer impede

traffic by creating queues of stopped vehicles as they await a gap in opposing traffic so they can make their turn. The TWLTL also offers safety benefits by removing stopped traffic from the through lanes and reducing risky driver behavior as they wait for an acceptable gap to turn.

Likewise, the operational benefits of bicycle lanes are hard to directly quantify. However, by offering a wider shoulder it will encourage more bicycle traffic along the corridor as the use of a bicycle for local trips will be more attractive. Safety benefits will also be seen as bicyclists along the shoulder will be able to maneuver around obstacles on the shoulder, such as stopped cars, without having to enter the traffic lanes.

### **Organizational Excellence**

The NCTC requested that Caltrans develop a phasing plan for the five-laning projects as part of the CSMP, making the SR 49 CSMP unique as a “first generation CSMP” in the two large major capital projects within Nevada County portion of the corridor have been redefined as a series of smaller projects, which have been prioritized based a phasing plan created by Caltrans and the NCTC. In response to NCTC’s request, Caltrans established an internal Project Development Team (PDT) that consisted of staff from various Program offices with the purpose of breaking down the two projects into smaller, multiple projects that could be phased over time in addition to examining a three-lane alternative. NCTC also requested that safety be the number one factor in project phasing.

The funding partnerships between NCTC and Caltrans advance both regional and statewide goals and leverage additional funding. Without the critical partnership of both Interregional Improvement Program (IIP) and Regional Improvement Program (RIP) funds, NCTC would not be able to complete the improvements in these key interregional corridors. Improvements in the SR 49 corridor are a top regional priority of the NCTC and will continue to be one of the top priorities in current and future State Transportation Improvement Program cycles. Previous Caltrans investments of approximately \$18.7 million of IIP funding and \$2.0 million of American Recovery and Reinvestment Act funding in the SR 49 corridor have leveraged approximately \$17.5 million of RIP funding and \$6.2 million of Proposition 1B Corridor Mobility Improvement Account funding by NCTC.

NCTC, in the 2014 STIP, programmed \$3 million of RIP funds in FY 2015/16 for Project Approval/Environmental Documentation (PAED) for the ultimate facility of widening SR 49, from the northern limits of the SR 49/La Barr Meadows Project to the McKnight Way Interchange in Grass Valley; and programmed \$3 million of RIP funds in FY 2017/18 for the Plans, Specifications, and Estimates (PS&E).

The CSMP focused on strengthening institutional partnerships, gathering and analyzing data, monitoring system performance, implementing operational strategies, and identifying strategic capital investments. Corridor enhancement will assist in fulfilling the goals of enacted legislation such as Assembly Bill 32 that addressed air quality and greenhouse emissions and Senate Bill 375 that addressed land use by improving mobility on the state highway system to reduce vehicle

emissions and provide viable transportation alternatives and accessibility across all modes of transportation.

The District is committed to risk management and the implementation of PD-09. As we move this project forward we are looking to the District Risk Register to identify, analyze, and plan for risk management. Below are some of the risks we anticipate for this project and will be further vetted during the PID development phase. We aim to identify these early on in project development so that they do not unreasonably delay project implementation.

- During construction we may uncover unsuitable material that may result in not meeting compaction requirements
- In order to ensure we're working effectively with our local partners and their different needs we will (continue to) communicate early on as this project develops.
- Project may require additional right of way which will increase necessary lead time and affect project delivery schedule but this will be addressed early on in the process of project development.
- Project may require additional Right of Way and landowners may be unwilling to sell and/or takes more money.
- Funding changes

**Funding Plan**

The following table depicts all of the currently programmed and currently unprogrammed needs broken down by project component. Presently, no funding has been programmed for this project.

**SHOPP Asset Management Program Estimate:**

	Total Need	Currently Programmed	Currently Unprogrammed SHOPP Needs
PAED	\$ 730,000	\$0	\$ 730,000
PS&E	\$ 1,100,000	\$0	\$ 1,100,000
Right of Way Support	\$ 240,000	\$0	\$ 240,000
Construction Support	\$ 1,800,000	\$0	\$ 1,800,000
Subtotal Support	\$3,870,000		\$3,870,000
Right of Way Capital	\$ 400,000	\$0	\$ 400,000
Construction Capital	\$ 12,135,000	\$0	\$ 12,135,000
Subtotal Capital	\$12,535,000		12,535,000
Total Project Cost	\$16,405,000	\$0	\$16,405,000

\*Total Support/Capital Cost ratio is 30%

## Project Savings

Combining several SHOPP Programs into one project will result in both capital and support cost project savings. While more effort will be expended during project planning phases to coordinate with several Program Advisors to develop project scope, significant savings will be achieved in subsequent project development phases. Savings in capital costs will be achieved by combining work items and obtaining savings from utilizing larger material and labor quantities. Larger contracts are more attractive to contractors due to the ability for them to be more efficient with their resources. This will translate into lower contract bids resulting in additional savings.

The following table shows estimated cost savings between programming projects under separate SHOPP programs versus programming as a SHOPP Asset Management project. For comparison purposes, Traffic Control (10%) and Mobilization (10%) items were used to show capital cost savings. It is assumed that additional savings will be achieved when a more detailed estimate is completed during development of the Project Initiation Document.

Cost Estimate	SHOPP Program (x1,000)							Total Cost (x 1,000)	SHOPP Asset Management Program	Estimated Savings
	015	310	310	315	120	210	235			
Construction Capital	\$8,160	\$2,420	\$2,070	\$230	\$980	\$30	\$70	\$13,960	\$12,135	\$1,825
RW Capital	\$ 230	\$ 70	\$ 60	\$ 7	\$30	\$1	\$2	\$400	\$400	\$ 0
Support	\$ 2,340	\$695	\$595	\$ 160	\$680	\$20	\$50	\$4,540	\$3,870	\$ 670
Total Project Cost	\$10,730	\$3,185	\$2,725	\$397	\$1,690	\$51	\$122	\$18,900	\$ 16,405	\$2,495

## Recommendation

Corridor system management is consistent in making smart mobility decisions that improve the environment, support a vibrant economy, and build communities, not sprawl. The objective of this project is improve safety on the transportation system, reduce travel time or delay on all modes, reduce traffic congestion, improve connectivity between modes and facilities, improve travel time reliability, and expand mobility options along the corridor in a cost effective manner. Laying the foundation for the Ultimate Facility which will improve safety on the transportation system and increase access to jobs, housing, and commerce is an excellent investment to all the pieces of the corridor to function as an efficient transportation system.

### Attachments:

- Attachment #1: Title Sheet
- Attachment #2: Photographs
- Attachment #3: Sustainability Checklist
- Attachment #4: Asset Management Nomination Evaluation
- Attachment #5: Letter of Support





La Barr Aerial Frontage Rd Construction Photo #1



La Barr Meadows Photo #2



Soundwall Photo #3





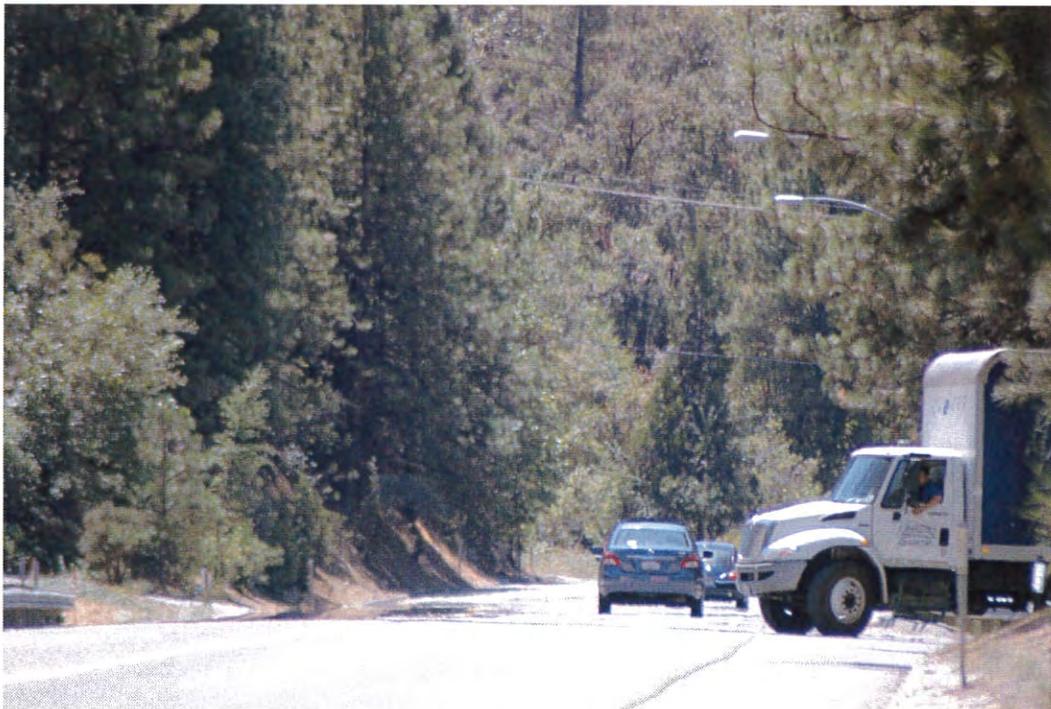
Photo #6



Photo #7



Photo #8



Side Access Photo #9

SHOPP Nomination Sustainability Contacts:

Complete 20 question below: Sections in Green

Please answer these 20 questions to help develop sustainability components (highlighted in Green) for your SHOPP Pilot project. This will be used for the project sustainability score as it relates to the Department's Strategic Goals for Sustainability, Livability and Economy (See Tab on Sustainability Goal for reference). For further background you can see the Envision Guidance tab.

Gina Moran (916) 651-8164  
 Amy Bailey (916) 651-8166  
 Mary Beth Herritt (916) 653-4166  
 Melissa Thompson (out July 29-Aug 11) (916) 653-7569

Sustainability Goal measures		Project Title: La Barr Meadows Widening Project	Yes/No	Description (of Yes responses)
<b>Quality of Life</b>				
<b>Stimulate Sustainable Growth and Development (Envision QL 1.2)</b>				
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	Improvements in this segment of SR 49 will improve the community's quality of life by improving operations, providing safer travel, access, and egress to the highway, thereby improving safety for residents and enhancing the travel experience for tourists visiting Nevada County.	
			Operational improvements that provide safer ingress and egress to the highway will enhance property values located adjacent to this segment of SR 49.	
			SR 49 is the major interregional gateway to Nevada County and any improvements that reduce congestion and reduce travel time will result in reduced costs to the motoring public and time savings for goods movement carriers.	
			By improving operations and reducing the probability of potential accidents in corridor the proposed project will reduce congestion and the related emission of Ozone precursor (western Nevada County is Non-Attainment for Ozone) and Greenhouse Gases.	
<b>Improve Community Mobility and Access (Envision QL 2.4)</b>				
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	This project will provide good and safe access to the City of Grass Valley, which serves as the economic hub of western Nevada County and is also the location of Tinloy Transit Center. Improvements in this segment of the SR 49 corridor will also enhance the benefits of recent improvement projects completed to the south and will provide safe access in the SR 49 interregional transit corridor to the Auburn Conheim Multimodal Station allowing for connections to Placer County Transit, the Amtrak Capital Corridor Inner-City Passenger Rail, transit connections to the Sacramento Light Rail, and access to Interstate 80.	
			Facility improvements will improve key multimodal connections to Placer County Transit and Amtrak Capital Corridor Intercity Passenger Rail via the Auburn Conheim Multimodal Station, will enhance interregional bicycle facility connection, and will provide shoulders where shoulders do not currently exist.	
3 Non-Auto Mode Share	Will the project encourage the use of transit and/or non-motorized transportation?	Yes	One of the key barriers identified in the Nevada County Bicycle Master Plan (BMP) is that lack of existing bicycle facilities. The Nevada County BMP identifies the SR 49 Corridor as a proposed Class III Multi-Use shoulder for bicyclists and pedestrians. Operational improvements that reduce congestion will improve the reliability of the interregional public transit service operated	

Sustainability Goal measures		Project Title: La Barr Meadows Widening Project	Yes/No	Description (of Yes responses)
4	Non-Auto Mode Share	Has the project team coordinated the design with other infrastructure assets to improve walkability and livability?	Yes	The project team will coordinate the design to connect to the 8' shoulders recently constructed as part of the SR 49 La Barr Meadows Road signalization and widening project providing additional mobility for residents in the area of the project.
				SR 49 Corridor in Nevada County is proposed to have Class III Multi-Use Shoulders the full length of the corridor eventually providing for interregional bicycle trips.
		<b>Preserve Historic and Cultural Resources (Envision QL 3.1)</b>		
		<b>Intent:</b> 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)?	N/A	
		<b>Enhance Public Space (Envision QL 3.3)</b>		
		<b>Intent:</b> 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?	N/A	It is a significant interregional connector for tourist and recreational destinations. Project would enhance the community, livability, and quality of life by reducing traffic congestion, providing easier access to employment centers in Placer county, and affordable or rural housing opportunities in Nevada and Sierra Counties. Facilitaing goods movement through the corridor. The reduction of traffic congestion would result in reduction of greenhouse gases while enhancing the quality of life and livability.
<b>Leadership</b>				
		<b>Foster Collaboration and Teamwork (Envision LD 1.3)</b>		
		<b>Intent:</b> Eliminate conflicting design elements, and optimize system by using integrated design and delivery methodologies and collaborative		
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	The pilot project will lay the groundwork for the ultimate facility of a four-lane, access controlled expressway with expanded mobility options along the corridor. This facility will improve safety on the transportation system, increase travel time reliability, reduce delay for all modes, and improve connectivity between modes and facilities, and close the gap between facility types.
		<b>Improve Infrastructure Integration (Envision LD 2.2)</b>		
		<b>Intent:</b> 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	Existing collaboration between Nevada, Placer, and Sierra Counties
9	Freight	Will the project address the needs on the priority freight network included in the Freight Mobility Plan?	Yes	SR is evolving into a critical goods movement corridor. It is a significant interregional connector for natural resource based product shipments including lumber and mining, tourist and recreational destinations. Corridor also serves as a vital link to regional employment centers in Placer county, and more affordable or rural housing opportunities in Nevada and Sierra Counties.
<b>Resource Allocation</b>				
		<b>Use Recycled Materials (Envision RA 1.3)</b>		
		<b>Intent:</b> 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?	N/A	
		<b>Reduce Energy Consumption (Envision RA 2.1)</b>		
		<b>Intent:</b> Conserve energy by reducing overall operation and maintenance energy consumption throughout the project life cycle.		

Sustainability Goal measures		Project Title: La Barr Meadows Widening Project	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?	N/A	
<b>Natural World</b>				
<b>Preserve Prime Habitat and Species (Envision NW 1.1)</b>				
<b>Intent:</b> 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)?	N/A	
<b>Protect Wetlands and Surface Water (Envision NW 1.2)</b>				
<b>Intent:</b> 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?	N/A	
<b>Preserve Prime Farmland (Envision NW 1.3)</b>				
<b>Intent:</b> 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.)?	N/A	
<b>Preserve Floodplain Functions (Envision NW 1.5)</b>				
<b>Intent:</b> 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?	N/A	
<b>Manage Stormwater (Envision NW 2.1)</b>				
<b>Intent:</b> 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?	N/A	
<b>Roadside Vegetation Environment (Envision NW 3.4)</b>				
<b>Intent:</b> 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.)?	N/A	
<b>Climate &amp; Risk</b>				
<b>Reduce Greenhouse Gas Emissions (Envision CR 1.1)</b>				
<b>Intent:</b> 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?	Yes	Operational improvements that reduce congestion related to vehicles entering and existing the highway and help prevent accidents will assist in achieving and maintaining free flow speeds and reduce carbon emissions per vehicle
<b>Assess Climate Threat (Envision CR 2.1)</b>				
<b>Intent:</b> 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?	N/A	
<b>Manage Heat Island Effects (Envision CR 2.5)</b>				
<b>Intent:</b> 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?	N/A	

TERRI ANDERSEN – Nevada City City Council  
NATE BEASON – Nevada County Board of Supervisors  
CAROLYN WALLACE DEE – Truckee Town Council  
JASON FOUYER – Grass Valley City Council (2015 Vice-Chair)  
ANN GUERRA – Member-At-Large  
LARRY JOSTES – Member-At-Large (2015 Chairman)  
ED SCOFIELD – Nevada County Board of Supervisors



DANIEL B. LANDON, Executive Director  
Nevada County Transportation Commission  
Nevada County Airport Land Use Commission

Grass Valley • Nevada City

Nevada County • Truckee

File: 260.0

August 13, 2015

Amarjeet Benipal  
Director, Caltrans District 3  
703 B Street  
Marysville, CA 95901

Dear Mr. Benipal: → AMARJEET

The Nevada County Transportation Commission (NCTC) supports the inclusion of the SR 49 La Barr Meadows Mobility Improvement Project in the SHOPP Asset Management Program.

NCTC has been a committed partner with Caltrans in the planning, programming, and construction of improvements in the SR 49 corridor in Nevada County. The 1998 ITSP included the SR 49 corridor as a "Focus Routes". Focus Routes were identified as part of the ten Interregional Road System (IRRS) corridors of highest priority in the state for completion to minimum facility standards in the twenty year period. The improvement of SR 49, and the continued partnership with Caltrans, is a high regional priority in Nevada County.

The SR 49 corridor serves major interregional movement for people and goods. Additionally, SR 49 is utilized as an Emergency Detour Route when Interstate 80 is closed for major accidents, wildfires, and construction and is designated to be able to handle STAA and CA Legal Trucks. Data collected by the Caltrans District 3 Traffic Management Center indicate that between 2004 and 2014 there were 188 closures of Interstate 80 where truck traffic and passenger vehicles were rerouted onto SR49.

Segments of SR 49 currently operate at Level of Service "F" during peak periods. The 2015 Caltrans District 3 Goods Movement Study projects that between 2012 and 2032, the vehicle-miles traveled by heavy duty trucks (5+ axle trucks) is forecast to increase 69% in Nevada County. In addition, the study identifies SR 49 as having a high deficiency for goods movement mobility in the base year, and in the no-build forecast, SR 49 is identified as having high deficiency for goods movement mobility. It is important for NCTC and Caltrans to continue to partner in order to deliver improvements that reduce congestion, improve safety, reduce delays, and increase throughput in the SR 49 corridor.

SR 49 acts as a lifeline route to several communities in Nevada, Placer, and Sierra Counties, and is the major interregional state highway connecting to the Interstate 80 gateway. SR 49 also plays a key role in providing interregional multi-modal connectivity, as an interregional public transit corridor providing connections to Placer County Transit and Amtrak Capital Corridor Inner-City Passenger Rail, at the Auburn Conheim Multimodal Station. In addition, completion of the planned improvements in the SR 49 corridor will enhance its existing function as an interregional bicycle facility.

101 Providence Mine Road, Suite 102, Nevada City, California 95959 • (530) 265-3202 • Fax (530) 265-3260

E-mail: [nctc@nccn.net](mailto:nctc@nccn.net) • Web Site: [www.nctc.ca.gov](http://www.nctc.ca.gov)

SR 49 from Dry Creek Road in Placer County to south of the McKnight Way Interchange in Nevada County is also designated as a "Safety Corridor" and daylight/headlight section. A Safety Corridor is a segment of highway with potential for fatal and severe collisions that is identified and focused on by the state and local officials, with increased enforcement, public awareness measures, and short-term and long-term highway improvements in order to reduce and prevent fatal and severe collisions. Improvements in this key corridor will improve safety, reduce congestion, provide multi-modal connections, and assist in achieving attainment of the federal ozone air quality standards, as well as statewide greenhouse gas emission reduction goals.

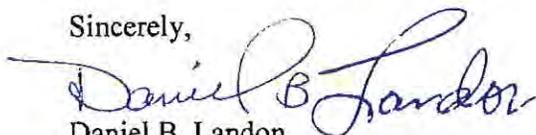
The funding partnership between NCTC and Caltrans advances both regional and statewide goals and leverages additional funding. Without this critical partnership, NCTC and Caltrans will not be able to complete the improvements in these key interregional corridors. Improvements in the SR 49 corridor are a top regional priority of the NCTC and will continue to be one of the top priorities in current and future State Transportation Improvement Program (STIP) cycles. Previous Caltrans investments of approximately \$20.7 million (\$18.7 million of IIP funding and \$2.0 million of American Recovery and Reinvestment Act funding) in the SR 49 corridor have leveraged approximately \$23.7 million (\$17.5 million of RIP funding and \$6.2 million of Proposition 1B Corridor Mobility Improvement Account) funding committed by NCTC.

NCTC, in the 2014 STIP, programmed \$3 million of RIP funds in FY 2015/16 for Project Approval/Environmental Documentation (PA/ED) for the next phase of widening SR 49, from the northern limits of the SR 49/La Barr Meadows Road Project to the McKnight Way Interchange in Grass Valley; and programmed \$3 million of RIP funds in FY 2017/18 for Plans, Specifications, and Estimates (PS&E). Partnership with Caltrans is critical to completing the planned improvements in the SR 49 corridor.

In order to honor the existing partnerships and commitments that have been made with Caltrans, and to continue to work collaboratively to fund the improvements in these priority interregional corridors, it is very important that the SR 49 La Barr Meadows Mobility Improvement Project be included as part of the new SHOPP Asset Management Program.

Thank you again for your consideration of these important facts.

Sincerely,

A handwritten signature in blue ink that reads "Daniel B. Landon". The signature is written in a cursive, flowing style.

Daniel B. Landon  
Executive Director

# SHOPP Asset Management Program

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## Introduction

As part of the Department's ongoing asset management implementation, a new asset management pilot program is being created in the SHOPP. The asset management pilot program will accept multi-objective project nominations from all districts. The project nominations will be reviewed by Strategic Plan goal teams that will evaluate the projects' contributions toward each of the department's five strategic goals relative to the proposed cost of the projects. These goals are **Safety and Health, Stewardship and Efficiency, Sustainability, System Performance** and **Organizational Excellence**. Nominated projects that are selected by the evaluation teams will be eligible for Planning resources and will be programmed in the 2018 SHOPP under the pilot program for delivery in a conventional manner.

## Benefits of the SHOPP Asset Management Pilot Program

To meet the goals of the Strategic Management Plan, this pilot program will allow Caltrans to evaluate a number of key aspects of our planned Asset Management Implementation.

**Multi-objective project prioritization** - SHOPP projects have typically been developed for a single asset with prioritization being done by the district and primary asset Program Manager. Quantifying the combined benefits from multiple assets/objectives has been challenging and therefore not regularly attempted. This pilot program along with the SHOPP prioritization tool provides the framework for the department to begin to fully define and report all benefits from multi-objective projects. Multi-objective project development often minimizes system disruption and maximizes the effectiveness of available transportation funding leading to an improved asset management approach.

**Weighting of the Departments Strategic Goals and Objectives** - The SHOPP prioritization process will generate necessary discussion on how the Department will evaluate project contributions toward the goals and objectives in the Strategic Plan. This pilot program is designed to generate a variety of project types for the evaluation teams to consider. Each project will receive a score associated with how well the project achieves each of the five Strategic Plan goals. These five scores must then be weighted and combined to calculate the overall project score. Establishing the goal weighting is one of the key outcomes of this pilot program.

**Integrating Planning and Transportation Asset Management** - Within an overall asset management approach, there is a need to develop a pool of viable projects. Candidate projects are encouraged to draw on available system planning work such as "Sustainable Corridor Master Plans" or similar in determining the scope of the proposed nomination. The asset management pilot projects will be prioritized prior to beginning the planning process to ensure that the "best" possible projects are moved forward into formal project planning. The information necessary to define the project and to conduct the prioritization represents a portion of the total planning effort necessary to ready projects for programming. This pilot will define the information necessary to "nominate" a project for prioritization and planning.

**Single fund source programming** - Current limitations in software and practice restrict the department from easily identifying project contributions from various funding sources. These limitations lead to needs within the same limits of highway being developed under multiple separate projects and then combined for construction or awarded individually. This practice results in unnecessary project development effort (multiple PIDs, multiple projects being managed, multiple engineering estimates, etc.) This pilot would evaluate the potential for having a single funding source for SHOPP funding of transportation asset management projects.

**External stakeholder input into the process** - This pilot would provide an opportunity to engage our external stakeholders in the process of developing the criteria for project evaluation and prioritization. This aspect of the pilot will help our external stakeholders better understand the challenges we face in evaluating trade-offs among competing objectives.

## Eligibility Criteria

The Asset Management Program Pilot will accept project nominations that meet the following criteria.

- **Include any combination of work on three or more types of physical assets OR strategic objectives on State owned assets associated with the State Highway System.**
  - Physical assets include items such as pavement, bridges, culverts, traffic management system elements, bike and pedestrian facilities, or other physical infrastructure.
  - Eligible strategic objectives can be found in the Departments Strategic Plan and may include safety improvements, reductions in environmental impacts, transportation mode integration, transportation in disadvantaged communities, "Complete Streets", "Active Transportation", "Smart Mobility", ADA Access, Climate change adaptation etc.
- **There is no restriction on which assets or objectives are included, only that the combination include three or more different objectives.**
- **The project can be delivered in the 2018 SHOPP period**
- **Projects with a total cost of between \$2 - \$20 million will be considered.**

## Nomination Process

Asset Management Pilot Program candidate projects shall be nominated using the SHOPP Asset Management Request Form and shall include a separate Microsoft Word document quantifying and/or discussing the following required supplemental items:

- A listing of the assets OR objectives included in the project. A minimum of at least three different assets types OR objectives or combinations thereof are required.
- Describe how this project will help the Department achieve its goals. List all goals that are applicable. A quantitative justification is preferred to a qualitative, however either will be accepted.
  - **Safety and Health** - Quantify or describe how the proposed project will reduce injuries or fatalities for those using the system (all modes) and/or working to maintain the system. Quantify ADT, Road speeds, alignment, grade and current accident rates as appropriate. Describe any active transportation improvements or reduction in vehicle miles travelled that will be realized upon completion of the proposed project.

- **Stewardship and Efficiency** - List and quantify the current condition of all physical assets included in the project and the expected post project conditions. List and quantify any new assets being added through the project. The condition measures shall be shown in terms of the Good, Fair and Poor measures required under State and Federal Asset Management regulations. Consult each asset Program Advisor for this information. Describe any partner or unique funding contributions that are expected to help fund a portion of the proposed work. Provide a funding breakdown if applicable.
  - **Sustainability, Livability and Economy** - Describe how the project will improve sustainability. Examples include: increasing non-vehicle modes of travel (bike, pedestrian and transit), reducing air, sound and water pollution, improving livability, facilitating modal choice, addressing climate change, improving resiliency of the system, improving freight efficiency, improving connectivity for people and wildlife, recycling of materials, reducing water use etc.
  - **System Performance** -Quantify or describe aspects of the project that improve system performance. Examples include: improved travel time reliability, informing users of travel times, facilitation of mode choice for congested areas, reduction of travel delays, incorporation of Complete Streets concepts etc.
  - **Organizational Excellence** - Describe how the proposed project demonstrates leadership and accountability, improves collaboration with partners and any specific innovation being implemented by the project.
- All nominations must include an estimate of the project level savings (if applicable) resulting from delivering a multi-objective project solution compared to conventional single asset delivery. Include tangible cost savings from reduction in delivery effort and estimates of reduction in user impact costs if applicable.
  - Project nominations should maximize the use of federal funding. Project nominations requiring state funding (office buildings, maintenance buildings, equipment shops, laboratories and weigh stations) will be competing for very limited funding. Provide an adequate budget breakdown to allow the Division of Budgets to determine the federal/state funding split if applicable.
  - Include maps, photos or other supporting information as needed to support the nomination.
  - It is recommended that the identification and development of the nomination be performed by a multi-disciplinary team that includes all relevant functional units.

## Nomination Submittal

All nominations for the SHOPP Asset Management Pilot Program must be submitted by August 15th, 2015. Submissions can be made by e-mail to michael.b.johnson@dot.ca.gov. Please include Asset Management Pilot Nomination in the subject line

## Project Selection

Nominations selected by the evaluation teams will be notified by e-mail prior to December 31, 2015. Selected projects will receive Project Initiation Document (PID) resources in preparation for the 2018 SHOPP.