

MEMORANDUM

Tab 81

To: CHAIR AND COMMISSIONERS
CALIFORNIA TRANSPORTATION COMMISSION

CTC Meeting: June 26-27, 2019

From: STEVEN KECK, Chief Financial Officer

Reference Number: 2.5d.(2), Action Item – **REPLACEMENT ITEM**

Prepared By: John Bulinski,
District 07 – Director

Subject: **ALLOCATION FOR PROJECT WITH COSTS THAT EXCEED THE PROGRAMMED AMOUNT BY MORE THAN 20 PERCENT (PPNO 07-4903/EA 07-31690 – LOS ANGELES COUNTY – STATE ROUTE 1) RESOLUTION FP-18-78**

ISSUE:

Should the California Transportation Commission (Commission) approve the California Department of Transportation's (Department) allocation request for \$11,502,000 for the State Highway Operation and Protection Program (SHOPP) Safety Signs and Lighting project (PPNO 4903) on State Route (SR) 1, and Interstate (I-10) 10, in Los Angeles County?

RECOMMENDATION:

The Department recommends that the Commission approve the requested allocation for this SHOPP project.

PROJECT DESCRIPTION:

This project will enhance the original tunnel lighting and paint the interior of the McClure Tunnel, which is located along SR 1 in Los Angeles County, for better visibility and improved safety to the traveling public. The 385 foot-long and approximately 56-foot-wide tunnel was built in 1935 and is currently in need of necessary safety improvements, including the installation of a Dynamic Message Sign (DMS), which is part of Queue Warning System. Additional safety improvement elements include installing a Maintenance Vehicle Pullout (MVP), High Friction Surface Treatment (HFST), and guard-rail upgrade. The project will also include fiber-optic connection to the Traffic Management Center (TMC), and development of proprietary software.

“Provide a safe, sustainable, integrated and efficient transportation system to enhance California’s economy and livability”

FUNDING AND PROGRAMMING STATUS:

The project was programmed in the 2018 SHOPP for \$5,180,000 in Construction Capital and \$1,903,000 in Construction Support for delivery in Fiscal Year 2018-19. The project's Plans, Specifications and Estimate (PS&E) phase, and an updated Engineer's Estimate (EE) were completed in March 2019, and the project was Ready to List (RTL) in March 2019. The updated cost of the project is \$8,465,000 for Construction Capital. The cost of Construction Engineering is estimated to be \$3,037,000. Therefore, the Department is requesting an allocation that exceeds the programmed funds by more than 20 percent.

REASON(S) FOR COST INCREASE:

In June 2017, the Department completed the Project Approval and Environmental Document (PA&ED) for the replacement of the tunnel sodium vapor lighting system, placement of a dynamic message sign, repainting and other necessary safety improvements including placement of high friction pavement surfaces and guard rail replacement to current standards. Based on planning level studies completed during the PA&ED phase, the estimated cost of this work was reviewed, updated and reflected in the March 2018 Commission-adopted 2018 SHOPP.

After Commission-adoption of the 2018 SHOPP and during the project design phase, the Department implemented a new tunnel lighting standard, based on standards adopted by the Illuminating Engineers Society of North America. This change directs the spacing and brightness of lights and automatic dim control capabilities based on the flow of traffic and time of day. The purpose of this change is to enhance visibility and driver response time while transiting through the tunnel. Implementation of the new standard changed the number and the cost of lighting fixtures in the tunnel. This cost associated with the upgrade to the new lighting standard was not factored into the cost presented in the 2018 SHOPP.

The overall project cost increase to deliver the updated project scope is \$4,419,000, which includes a \$3,285,000 for Construction Capital cost increase, and a \$1,134,00 for Construction Support cost increase.

Construction Capital Cost Increase

To conform with the new illumination standards, the Department must use advanced technology lighting fixtures, conduits, and electrical boxes, at a higher cost than the normally used standard electrical items. A large portion of the overall project cost increase is attributed to the cost of lighting fixtures, conduits, and electrical boxes that had to be upgraded from what was originally planned. Based on the new national illumination standard, the brightness and spacing of lights were changed as determined by traffic flow and tunnel length, which increased the number and the cost of lighting fixtures. As a result, all lighting material quantities were under estimated in the programmed project cost estimate.

*“Provide a safe, sustainable, integrated and efficient transportation system
to enhance California’s economy and livability”*

Furthermore, this tunnel is very close to the ocean and the use of corrosion resistant hardware is required. The additional cost of corrosion protection and corrosion-resistant hardware for the electrical and structural items was not include in the cost estimates development during the initial Planning and PA&ED phases. However, upon field inspection of the tunnel's existing electrical and structural hardware during the design phase, the importance of corrosion protection and corrosion resistance became clear.

Finally, to enhance driver safety and provide current information, a large cantilever overhead Dynamic Message Sign, along with a widened paved area and a retaining wall to provide for safe maintenance personnel access to the sign and controls, are included in the final scope of work. Additional cost was encountered in the connection of this sign with fiber optic cabling to the Traffic Management Center (TMC). This cost was not included in the earlier cost estimates.

The Department has exercised all feasible measures to minimize costs in carrying out work related to this project and has determined that all elements contained in the project provide significant benefits to the public. In addition, the Department has received input and support from local stakeholders and elected officials on the final design and safety features contained in the final project.

The Department has determined that the additional funds requested are in the best interest of the State to avoid delays in implementing this SHOPP Signs and Lighting project, which is consistent with the Commission-adopted goals and objectives of the Transportation Asset Management Plan.

Upon approval of this additional funding over the programmed amount, the Department is required to formally update the project in the federal programming document. Therefore, the Department is requesting an additional two months, beyond the allowable 6 months, to award the contract.

Construction Support Cost Increase

In 2017, the District revised the programmed scope, cost and schedule of the project based on the increasing scope of work for the tunnel to conform to the new lighting standards.

Additional specialty inspection will be needed for the new lighting fixture, corrosion-proof conduits, electrical boxes, longer fiber optic cables, controls from the DMS to the remote TMC hubs, and the new MVP and adjacent retaining wall.

The location of the project limits the traffic detours and most of the work will be performed at night time. Also, due to the constraints in the tunnel (two lanes in each direction) there will be additional traffic handling and traffic control systems that will need to be added and utilized.

The support cost for night-time work and Traffic Control were not correctly estimated in the original estimate. A service contract will be part of the support cost to develop the software that controls the DMS with the TMC Legacy System. Since the software used to operate the proposed DMS has not yet been developed when it is first installed, additional testing and modification will likely be required. District staff support will also be engaged in procuring, developing and testing the software.

*“Provide a safe, sustainable, integrated and efficient transportation system
to enhance California’s economy and livability”*

In addition, additional support is required for coordination with the City of Santa Monica for an excavation permit required for access to a proposed controller box.

Therefore, an additional amount of \$1,134,000 will be needed to adequately administer and deliver the project contract within its planned completion date.

CONSEQUENCES:

The Department has determined that if this allocation request for \$11,502,000 is not approved, the Department will not be able to advertise this SHOPP Bridge Preservation project and construction will be delayed. This would also significantly delay implementing the proposed safety elements of this project into a future programming cycle.

FINANCIAL RESOLUTION:

Resolved, that \$8,465,000 in Construction Capital be allocated from the Budget Act of 2018, Budget Act Items 2660-302-0042 and 2660-302-0890, and \$3,037,000 from Non-Budget Act Items 2660-001-0042 and 2660-001-0890, to provide funds to advertise the project.

Attachment