

## MEMORANDUM

## TAB 78

To: CHAIR AND COMMISSIONERS  
CALIFORNIA TRANSPORTATION COMMISSION

CTC Meeting: May 12-13, 2021

From: STEVEN KECK, Chief Financial Officer

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

Prepared By: Tim Gubbins,  
District 05 - Director

Subject: ALLOCATION FOR PROJECT WITH COSTS THAT EXCEED THE PROGRAMMED AMOUNT BY MORE THAN 20 PERCENT PPNO 2426A/EA 1C822 – SANTA BARBARA COUNTY – US HIGHWAY 101 RESOLUTION FP-20-79

Action Update: Book item updated in the “Funding and Programming Status” area to correct calculation error to cost increase amount, revised program amount, and additional supporting information on the cost analysis and comparison.

### ISSUE:

Should the California Transportation Commission (Commission) approve the California Department of Transportation’s (Department) allocation request for \$100,762,000 for the State Highway Operation and Protection Program (SHOPP) Roadway Rehabilitation project, on United States Highway (US) 101, in Santa Barbara County, to award the project?

### RECOMMENDATION:

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

### PROJECT DESCRIPTION:

This SHOPP project is located on US 101 in the City of Summerland in Santa Barbara County. The project will replace the existing structural sections of the freeway with continuously reinforced concrete pavement to correct the structural deficiencies as indicated in the Pavement Condition Survey. It will widen the outside shoulders to 10 feet, provide grade and alignment adjustments, replace nonstandard guard railing, raise the guard rail to standard height, and improve ramp geometry. Additionally, it will replace the ramps structural sections, upgrade dikes and drainage systems. Furthermore, this project

*“Provide a safe and reliable transportation network that serves all people and respects the environment.”*

will remove concrete curb and gutter at ramps and replace them with standard inside and outside shoulders with new and/or relocated drainage inlets where needed, and remove or shield trees and/or steep slopes in the Clear Recovery Zone.

This SHOPP project (EA 05-1C822) will be combined with the South Coast High Occupancy Vehicle (HOV) lanes project (EA 05-0N702) to become Segment 4B (EA 05-0N72U) of the Santa Barbara US 101 Multimodal Corridor project for construction; which is will be part of several segments along the Santa Barbara US 101 corridor. Segment 4B is sandwiched by Segment 4A and 4C, both of which are currently in construction. Constructing the 101 Multimodal Corridor requires a high level of coordination between the Department, the Santa Barbara County Association of Governments and local partners such as the County of Santa Barbara.

The Segment 4B project is being delivered using the Construction Manager/General Contractor (CMGC) project delivery method. The use of the CMGC on prior projects on this corridor has provided improved construction efficiency, and allows for maximize integration between active construction segments, which expedites delivery, and results in minimal disruption to the traveling public.

#### **FUNDING AND PROGRAMMING STATUS:**

This project was programmed in 2018 for \$60,650,000 in construction capital and \$12,490,000 in construction support in 2020-21. The SHOPP is being amended at this Commission meeting, under Tab 75, to reduce the construction capital from \$60,650,000 to \$57,111,000.

The reduction in construction capital is due to the environmental mitigation work that will be split from the parent project, EA 1C822, and included into three child projects: EA 1C8B1, for highway planting; EA 1C8B2, for biological monitoring; and EA 1C8B3, for environmental mitigation (fish passage).

This SHOPP project (EA 1C822/PPNO 2426A) and the non-SHOPP South Coast 101 HOV- project (EA 0N702/PPNO 7101D) will be combined for construction under EA 0N72U/Project ID 0520000169 using Construction Manager/General Contractor (CM/GC) method. The allocation for the South Coast 101 HOV project is also being requested at this Commission meeting, under Tab107.

The Plans, Specifications, and Estimate were completed in March 2021. The project's cost estimate was based on the price recommendations from an Independent Cost Estimator (ICE) as required in the Department's CMGC project delivery guidelines. The estimate reflects an Agreed to Price (ATP), or the amount the Contractor (CM) will charge to construct the project.

*"Provide a safe and reliable transportation network that serves all people and respects the environment."*

In April 2021, the Department and the Contractor negotiated the ATP to be \$85,907,000; an increase of \$28,797,000 or 50.4 percent over the programmed funds. The updated construction support cost is \$14,855,000; an increase of 19 percent over the programmed funds. The construction support cost increased because the number of working days increased from 730 to 840. Therefore, the Department is requesting an allocation of \$85,907,000 for construction capital.

The project contract is currently Ready to List, and pending approval of this allocation request, construction could begin as early as June 2021. The project is planned to be completed by October 2025.

**REASON FOR COST INCREASE:**

The costs associated with Segment 4B are trending higher than the two adjacent projects of Segments 4A and 4C. The cost increases for this project are mostly due to the changes in the stage construction strategy, increased concrete costs due to escalation in the material costs in the area, mobilization, and the subcontractors' prices coming in higher than anticipated.

In December 2020, the Department received the second Opinion of Probable Construction Cost (OPCC) for this project. Barriers and retaining walls along the corridor had aesthetic treatments that were subcontracted. The earlier OPCCs had assumed subcontractors' cost pricing similar to those from the two previous corridor segments. However, when subcontractors submitted their bids, the cost was much higher for the SHOPP eligible work than prior bids. Additionally, the size and footing type for the retaining wall increased between the 60 percent and 90 percent OPCC estimates, leading to an increase in project cost.

There was a change in stage construction strategy for this segment which occurred in between the estimates. Originally, the traffic staging was to use an express lane to route traffic through the construction area. As community access to the freeway was important for this region, this strategy was rejected due to the need for long term closures of consecutive ramps. There were also challenges connecting the ramps to the roadway profile at one stage that made this proposal impractical. Since the stage construction strategy assumed during the earlier OPCC reviews was no longer feasible, there is a need for additional temporary work that increased the project's overall costs. This staging change was not known until earlier this year and had a significant impact on the cost of the project. Regarding the Time Related Overhead (TRO) item, the increase in this item is due to the longer working days schedule. The amount of days increased from 730 to 840 due to the staging.

There is also an increase in mobilization costs because the contractor would need to hire additional staff and equipment to construct this segment while the adjacent segments are

*"Provide a safe and reliable transportation network that serves all people and respects the environment."*

still in construction. The contractor does not plan to pull crews and equipment away from the two adjacent segments, otherwise it would delay the completion of those projects. Construction work will be concurrent for all three segments; therefore, the contractor increased the mobilization item cost to account for onboarding and procurement of equipment.

The concrete costs in this area were higher than anticipated due to a large construction project being undertaken by Amazon, which has inflated concrete prices for all projects in the area. Other concrete suppliers were solicited for bids but could not guarantee the quantities or production requirements necessary for this segment. There was also an increase in the final structures' costs, due to changes included moving a Mechanically Stabilized Earth retaining wall alignment, increasing the wall heights, and changing its footing type to avoid a high-pressure gas line. Additionally, other retaining wall lengths and heights were also changed to accommodate roadway profile adjustments on the US 101 mainline. This in turn increased the aesthetic costs and concrete guardrail costs along the now longer wall.

The Department analyzed and compared the SHOPP items in the cost estimates for Engineer's Estimate (EE), ICE, and CM. The estimates are \$66.5 million, \$81.2 million, \$88.9 million, respectively. The cost difference between ICE and EE is 22.1 percent, while the cost difference between ICE versus CM is 9.5 percent. The ICE's estimate was much closer to the CM estimates than the EE, and after reviewing the contract items, it was determined that the EE was not in alignment with the current local market conditions. The Department and the CM negotiated for an ATP of \$85.9 million, which is \$3 million lower than the CM original estimate. The Department is confident that the negotiated ATP was reasonable since it is only 5.8 percent over the ICE estimate,

Below are some contract items with high cost difference between the ATP to EE.

Items	ATP vs EE difference
Traffic Control System, Temporary Railing (Type K), Queue Warning	\$2,573,000
Roadway Excavation, Structure Excavation and Backfill (Retaining Wall)	\$2,496,000
Mobilization 10.0%	\$6,033,000
Concrete Barrier (Type 60MC Mod2) and (Type 85 Mod1)	\$1,787,000
Structural Concrete, Retaining Wall	\$1,083,000
Continuously Reinforced Concrete Pavement (including JPCP)	\$2,230,000
Time-Related Overhead	\$3,474,000

The Department had considered the traditional Design/Bid/Build (DBB) contracting method. However, this contracting method was not selected because the ICE's estimate was significantly higher than the EE. Additionally, using the DBB approach would have likely

*“Provide a safe and reliable transportation network that serves all people and respects the environment.”*

result in a different contractor for the middle segment and the transition between stages and various segments, as well as lane and ramp closures, would need to be coordinated between different contractors. Any delays and complications caused by having two different contractors working in adjacent areas could expose the Department to potential claims. With the use of CMGC, construction work coordination and staging conflicts would be avoided by having the same contractor work on all three segments.

**CONSEQUENCES:**

If additional funds are not approved, the Department will not be able to advertise for the construction of this project. The Department has determined that the additional funds requested is in the best interest of the State to rehabilitate the Department's critical infrastructure assets.

**FINANCIAL RESOLUTION:**

Resolved, that \$85,907,000 be allocated from the Budget Act of 2020, Budget Act Item 2660-302-0890 and Non-Budget Act Item 2660-802-3290 for construction and \$14,855,000 for construction engineering, to provide funds to advertise the project.

Attachment