

MEMORANDUM

To: CHAIR AND COMMISSIONERS
CALIFORNIA TRANSPORTATION COMMISSION

CTC Meeting: March 25, 2020

From: STEVEN KECK, Chief Financial Officer

Reference Number: 2.5e.(4), Action Item

Prepared By: David Moore
District 02 – Director

Subject: **SUPPLEMENTAL FUNDS ALLOCATION FOR PREVIOUSLY VOTED PROJECT (PPNO 3526/EA 4F860) – TRINITY COUNTY – STATE ROUTE 36) RESOLUTION FA-19-32**

ISSUE:

Should the California Transportation Commission (Commission) approve the California Department of Transportation's (Department) request for an additional \$5,080,000 in construction capital and Support cost, for the State Highway Operation and Protection Program (SHOPP), Safety Improvement project (PPNO 3526) on State Route (SR) 36 in Trinity County, to complete the construction contract?

RECOMMENDATION:

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

PROJECT DESCRIPTION:

This project is located on SR 36 near the Town of Forest Glen, in Trinity County. The project will re-align and widen portions of the highway to improve the alignment and the sight distances. The awarded contract plans call for constructing a structure to eliminate several sub-standard curves. However, unforeseen field conditions were discovered during construction of one of the bridge foundations that uncovered unsuitable material and a high ground water elevation at the pier location. The Department considered several alternatives to ensure the integrity of the hillside embankment at this bridge support location. The selected alternative would extend the length of the bridge by 70 feet, converting the original abutment into a pier, and relocating the bridge abutment at a safe distance from the unstable material

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location. The additional field construction work would be as a Contract Change Order (CCO) to the awarded contract. The additional design work would be performed by the Department.

FUNDING AND CONTRACT STATUS:

The project contract was awarded to the lowest qualified bidder in November 2018 for \$9,985,000 in construction capital. The project has no G-12 authority funds, and the remaining construction capital budget is \$6,818,000, including \$256,000 in contingency funds. The remaining construction support fund amount is \$1,221,000.

Construction began in April 2019, with 103 days of the planned 190 working days having been exhausted, the construction contract is currently suspended. The Department will need to extend the number of working days by 120 days in order to complete the project by the revised construction completion date of November 15, 2021 and to achieve the contract acceptance date of January 7, 2022.

At this time, the center span of the bridge, which is located in an area not affected by the unforeseen field condition, has been partially completed. Both ends of the structure, including the 70-foot extension, remain to be constructed. The Department will need additional construction support funds in the amount of \$1,280,000 for the re-design and additional construction inspection. The Department is negotiating with the contractor and will issue a CCO when the construction cost is finalized. It is estimated, with a confidence level of 95 percent, that the amount needed to construct the additional span will be \$3,800,000. Although this added work was not included in the original contract plans, it is within the previously approved project scope.

The Department is requesting \$3,800,000 in construction capital and \$1,280,000 in construction support to complete the construction of this project.

REASON FOR COST INCREASE:

During the Project Approval and Environmental Document phase, geotechnical drilling was completed using input from geotechnical staff and policy/guidance. Based on available geotechnical information and field reviews, the data obtained from drilling was considered reasonable and representative of the expected site conditions. During construction, unsuitable material with significantly different soil properties as compared to that obtained via geotechnical drilling, was discovered at Pier 2. The Department then decided to develop and consider all options to construct the abutment embankment, including steepening of the adjacent abutment fill slope, rock buttress at toe of embankment, addition of a retaining wall, and extending the structure to avoid the unsuitable material. Ultimately, it was concluded that extending the structure to avoid having the embankment founded on unsuitable material was the best alternative based on cost, risk, and life-cycle performance of the structure.

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The available construction capital and construction support are contractually obligated to the remaining contract items. The Department is requesting supplemental funds to increase the current project budget to authorize a CCO allowing the contractor to perform the additional necessary work to extend the structure and to complete the project. The Department has concluded that bypassing the unstable soil location will be a safer, more cost-effective, and less risky solution to minimize the chance of future repair cost of the pier and abutment footings as well as the embankment slope.

CONSTRUCTION CAPITAL COST INCREASE

Unsuitable material and significant groundwater discovered during foundation excavation made the planned Geosynthetic Reinforced Embankment (GRE) not feasible as designed. Contingency funds were used to add multiple underdrain systems to manage the ground water situation for the overall slope, as well as near the pier footing, but did not prove successful. After evaluating multiple earthwork and structure options, the recommendation was to extend the structure by 70 feet to significantly minimize impacts and risks to the project.

The additional construction capital is necessary due to extending the structure, adding a new pier, changes to roadway features to be consistent with revised structure, costs related to delays to the contractor, changes to previously approved falsework, and additional erosion control measures due to an additional construction season.

SUPPORT COST INCREASE

The structure extension required additional efforts for geotechnical investigations at the new abutment location, design of the structure extension, and modifying roadway plans. Additional construction inspections will be required for the structure as well as resources related to additional, third construction season. It is anticipated that the increase in resources will exceed the G-12 authority.

The Department has determined that the requested additional funds are in the best interest of the State to avoid delays and to complete the project.

The Department has exercised all feasible measures to minimize costs in carrying out work related to this project and has determined that this request is well-supported and is the only viable alternative.

CONSEQUENCES:

If this project is not successful in obtaining supplemental funds, the District will have to program a new project to complete the Safety Project realignment at higher cost and risk of roadway incidents.

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FINANCIAL RESOLUTION:

Resolved, that \$3,800,000 be allocated from the Budget Act of 2019, Budget Act Item 2660-302-0890 for construction and \$1,280,000 for construction engineering, to provide funds to complete the construction contract of the project.

Attachment

2.5 Highway Financial Matters

Project #	Allocation Amount	Recipient	County	Dist-Co-Rte	Postmile	Project Title	Location	Project Description	Project Support Expenditures	PPNO Program Funding Year	Item #	Fund Type	Program Codes	Project ID	Adv Phase	EA	State Federal	Current Amount by Fund Type	State Federal Additional Amount by Fund Type	State Federal Revised Amount by Fund Type
2.5e.(4) Supplemental Funds for Previously Voted Project										Resolution FA-19-32										
	\$5,080,000					Near Forest Glen, from 0.5 to 0.1 mile west of Route 3.				02-3526								\$1,995,000		\$1,995,000
						<u>Outcome/Output:</u> Curve improvement.				001-0890										
										FTF										
						Supplemental funds are needed to Complete Construction.				20.10.201.010										
										001-0890								\$1,280,000		\$1,280,000
						Total revised amount \$13,425,000				FTF										
										20.10.201.010										
										SHOPP/2017-18										
										302-0042								\$127,000		\$127,000
										SHA										
										302-0890								\$6,223,000		\$6,223,000
										FTF										
										20.20.201.010										
										SHOPP/2019-20										
										302-0890								\$3,800,000		\$3,800,000
										FTF										
										20.20.201.010										
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