



Oregon

Kate Brown, Governor

Oregon Transportation Commission

Office of the Director, MS 11

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Salem, OR 97301-3871

DATE: November 24, 2020
TO: Oregon Transportation Commission

FROM: Kristopher W. Strickler
Director

SUBJECT: **Consent 11** – Amend the 2021-2024 Statewide Transportation Improvement Program (STIP) to increase construction funding for the US 197: The Dalles (Columbia River) Bridge project and cancel the construction phase of OR 6: Devils Lake Fork Wilson River Bridge painting project

Requested Action:

Approve amending the 2021-2024 Statewide Transportation Improvement Program (STIP) to increase construction funding for the US197: The Dalles (Columbia River) Bridge deck replacement project in The Dalles by \$13,142,482 so that the contract can be awarded. This increase is due to higher than expected bids. The total estimated cost of the project will increase from \$27,791,887 to \$40,934,369.

Additional funding will come from the Oregon 6: Devils Lake Fork Wilson River Bridge painting project located in Tillamook County, and The Washington Department of Transportation (WSDOT). The remaining funds from the OR6: Devils Lake Fork Wilson River Bridge construction phase will be returned to the State Bridge Program. The preliminary engineering and right-of-way phases of the OR6: Devils Lake Fork Wilson River Bridge project will continue as programmed, but the construction phase will be cancelled until funding becomes available.

STIP Amendment Funding Summary

Project	Current Funding	Proposed Funding
US197: The Dalles (Columbia River) Bridge (K20442)	\$27,791,887	\$ 40,934,369
OR6: Devils Lake Fork Wilson River Bridge (K21737)	\$7,159,600	\$224,500
Washington Department of Transportation - Additional	\$6,571,241	\$0
State Bridge Program	\$ 0	\$ 363,859
TOTALS	\$41,522,728	\$41,522,728

Project to be increase funding:

US197: The Dalles (Columbia River) Bridge (KN 20442)			
Phase	Year	Cost	
		Current	Proposed
Preliminary Engineering	2018	\$1,650,000	\$1,650,000
Right of Way	2020	\$160,000	\$160,000
Utility Relocation	2020	\$0	\$0
Construction	2020	\$25,981,887	\$39,124,369
TOTAL		\$27,791,887	\$40,934,369

Project to decrease funding:

OR6: Devils Lake Fork Wilson River Bridge (KN 21737)			
Phase	Year	Cost	
		Current	Proposed
Preliminary Engineering	2021	\$218,900	\$218,900
Right of Way	2022	\$5,600	\$5,600
Utility Relocation	N/A	\$0	\$0
Construction	2023	\$6,935,100	\$0
Other	N/A	\$0	\$0
TOTAL		\$7,159,600	\$224,500

Background:

The Dalles Bridge over the Columbia River on U.S. 197 was built in 1954. This narrow steel bridge has two 12-foot lanes with 4-foot shoulders. The concrete deck has been in poor condition since 2017 due to significant and widespread deterioration. Starting in 1986, there have been five projects to patch the deck. Severe cracking has led to multiple full depth failures. The asphalt wearing surface that covers the concrete deck has also failed in many locations, due to the deteriorated condition of the concrete deck. There is steel reinforcement that should be covered with concrete that is exposed and has an advanced level of corrosion.

Due to the poor condition of the deck, ODOT has programmed a deck replacement project. The deck will be replaced in sections so that closure during construction can be minimized. During deck replacement the bridge will be closed from Thursday evening to Monday morning to minimize the impacts to commuter traffic. An alternate Emergency Services Route will be provided utilizing The Dalles Dam which is adjacent to the existing structure.

ODOT owns U.S. 197 The Dalles Bridge, and by Agreement, costs for improvements on Bridge are equally shared between ODOT and WSDOT.

The Devils Lake Fork Wilson River Bridge on Oregon 6 was built in 1940. The bridge is in satisfactory condition, but many of the main structural elements of the bridge are steel, and are painted to provide protection from corrosion. The bridge is in Tillamook County, over 25 miles from the coast, and is in a much better environment than the painted bridges that are on the coastline. The protective paint system is failing and needs to be replaced so that this bridge can be preserved. In addition to areas of peeling paint, there are some areas of heavy corrosion. There are isolated locations where there is a measurable loss in the thickness of the structural members, and also locations where the build-up of rust is placing stresses on the fasteners used to connect the structural members together. In response to the deficiencies with the protective paint system, the Devils Lake Fork Wilson River Bridge on Oregon 6 has a painting project that is programmed for construction in 2023.

The final engineer's estimate (FEE) completed by ODOT for the US197: The Dalles (Columbia River) Bridge project showed a construction estimate of \$23,213,741 for biddable items, engineering, anticipated items, and contingency. This was less than the programmed funding amount of \$25,981,887.

The bids were opened on November 12, 2020. There were four bidders, and the low bidder was Hamilton Construction Company with a bid of \$32,946,675. After including construction engineering, anticipated items, and contingencies the total construction cost is \$39,124,369 which is \$13,142,482 more than what is currently programmed in the STIP.

The low bidder was found to have submitted a responsive bid. The ODOT Project Controls Office conducted an independent economic cost analysis of the bid which evaluated individual bid items, the bidding competition, and quality of the bidding documents. This technical analysis supports awarding the contract. ODOT's standard of practice has been to award bids based on this technical review, per the Federal Highway Administration's (FHWA) competitive bid assessment guidelines. (See the following website: <https://www.fhwa.dot.gov/programadmin/contracts/ta508046.cfm>.)

ODOT staff also performed a detailed comparison of bid items to evaluate cost overruns. Notable factors that contributed to the high bids include (1) the additional costs associated with utilizing Accelerate Bridge Construction to minimize the amount of time the bridge was closed; (2) additional costs associated with handling and placing the precast panels on the structure; (3) the high strength concrete that includes lightweight material; and (4) the limited access to the structure and the complexity surrounding bridge containment during demolition of the deck.

The four areas listed above were known risks to the project and the final engineer's estimate was adjusted to reflect the perceived costs of those risks. During bid, numerous questions from contractors arose around these specific items that highlighted the inherent risks of the Accelerated Bridge Construction and the complexity of placing pre-cast deck panels at this location. Items for this approach to the work are very difficult to estimate because any comparative work type and cost data is not very reliable, in terms of an ability to clearly apply directly from one project to the next. Bridge location, contractor availability, beam fabrication complexity, and expertise all play a factor in the value of these items.

In reviewing the contract documents there are no additional apparent or substantial changes that can be made that would result in significant cost reductions and as such ODOT proposes (subject to Commission approval and WSDOT approval) to award the contract to Hamilton Construction Company.

Options:

With approval, ODOT will proceed to fund, award, and construct the US197: The Dalles (Columbia River Bridge) project as described above, with half of the funding provided by WSDOT. This option will be contingent upon WSDOT approving the additional funds (occurring concurrently). Also, the construction phase of the OR6 Devils Lake Fork Wilson River Bridge project will be canceled. Once additional funds are available, the construction phase can be added back.

Without approval, ODOT and WSDOT will not have sufficient funds to construct the U.S. 197: The Dalles (Columbia River) Bridge deck replacement project. The bridge, which has already had one

location of a full-depth failure of the deck, will remain in service until it is closed due to safety and maintenance concerns.

Options such as redesigning and rebidding the project with a concrete deck that is constructed in place in a conventional manner will require a lengthy closure. The closest crossing of the Columbia River is 16 miles East at Biggs. In addition to the closure and detour concerns, there will be costs associated with project development and inflation. During project development ODOT reviewed the full closure option with various stakeholders, and subsequently determined it was not feasible. Significant impacts to commuter and commerce traffic between Klickitat County (Washington) and the The Dalles area, and imports to freight and other commerce travel for both states, along with a lack of emergency service access, were the major factors making an extended closure of 6-9 months unreasonable to consider further.

Attachments:

- Attachment 1 – *Location and Vicinity Map*