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## *Administration and Projects Committee* **STAFF REPORT**

**Meeting Date:** December 02, 2021

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| <b>Subject</b>                | <b>Interstate 680 (I-680)/State Route 4 (SR4) Interchange Improvements, Phase 3 Widening (Project 1117/6001) – Project Status Update</b>  |
| <b>Summary of Issues</b>      | <p>On October 17, 2018, the Authority Board approved Resolution 18-59-P, which awarded the I-680/SR4 Interchange Improvements, Phase 3 Widening (Project 1117/6001) to Brosamer &amp; Wall, Inc. (Brosamer) for construction services.</p> <p>In July 2019 and December 2020, staff provided project updates, which including a number of unforeseen issues.</p> <p>The project is now nearly complete and staff desires to keep the Authority Board informed of project status and budget.</p> |
| <b>Recommendations</b>        | Staff will provide an update on the status of this project. This is an informational item only; no staff recommendation at this time.   |
| <b>Staff Contact</b>          | Ivan Ramirez  |
| <b>Financial Implications</b> | None  |
| <b>Options</b>                | N/A   |
| <b>Attachments</b>            | None  |
| <b>Changes from Committee</b> | <i>None</i>   |

### **Background**

On October 17, 2018, the Authority Board approved Resolution 18-59-P, which awarded the

I-680/SR4 Interchange Improvements, Phase 3 Widening (Project 1117/6001) to Brosamer in the amount of \$86,305,702.81 for construction services. The first working day for the project was November 14, 2018.

In July 2019 and December 2020, staff provided project updates, which included unforeseen issues, such as utility conflicts, weather delays, Right-of-Way (ROW) delays, and other issues that caused financial impacts to the project.

The project is now nearly complete and staff desires to keep the Authority Board informed of project status and budget.

The following Contract Change Orders (CCOs) were required, which increased the cost and depleted the construction allotment:

**CCO No. 26 – I-680/SR4 Interchange Differing Site Condition (\$1,054,555.37)**

The contractor encountered differing site conditions related to roadway excavation, drainage removals, and concrete barrier removal in the median on I-680. The concrete barrier was found to be solid rather than hollow, which made its removal more difficult. The existing roadway section that was to be removed was thicker than shown on the plans. In addition, a drainage system was discovered at the face of the concrete barrier, which had to be removed and replaced.

**CCO No. 45 – Buried Manmade Objects (\$585,394.01)**

At various locations throughout the project, unexpected objects were found during excavation activities. Each of these led to additional costs for removal and disposal.

**CCO No. 74 – Stage 2 Concrete Pavement Terminal Joints and Transitions (\$870,000)**

During the concrete paving operations, several issues arose related to transitions from one paving material to another. The contract did not provide for the locations, details, and types of transitions and joints needed to complete the paving operations. Additionally, due to the centerline of the roadway not matching the centerlines of the bridges at Pacheco Boulevard and I-680, the concrete barrier rail geometry had to be adjusted, leading to several areas needing to be hand-poured rather than machine-poured.

**CCO No. 78 – Sawcut and Replace Existing Portland Cement Concrete Rolled Edge (\$571,386.30)**

The contract plans require a sawcut along the existing isolation joint for a considerable length along the freeway. After work began, the contractor notified the Authority that the joint had a rolled edge and was spalling where the sawcut was being performed. The sawcut was required to allow for a new isolation joint to be constructed against a flat surface.

**CCO No. 84 – Stage 2 Traffic Switch Miscellaneous Items (\$150,208.32)**

The pavement widths for portions of the existing eastbound (EB) and westbound SR4, as well as the ramps from SR4 to I-680 were not as wide as depicted on the plans. The Stage 2 traffic switch required an eleven-foot-wide lane to accommodate the new traffic pattern. In addition, other items such as drainage inlets and signage were required to be relocated due to the shift in the edge of the traveled way.

**CCO No. 92 – Grayson Creek Approach Slabs (\$-1,221,654.49)**

The contractor encountered very dense rock at depths between four (4) and six (6) feet along both sides of SR4 where large diameter pipes were to be placed. The dense rock was not identified in the contract documents. The Authority investigated numerous options to remove the rock and found the construction cost to be exorbitant. After considerable dialogue with the designer and applicable regulatory agencies, it was determined that the impacted pipes could be eliminated from the project.

**CCO No. 101 – Stage Modifications at SR4 (\$140,508.58)**

A permanent guardrail was installed along the EB SR4 to southbound I-680 connector prior to the final lift of pavement being placed to allow for Stage 2 traffic. The height for the guardrail needed to be adjusted once the final lift had been placed to be within the tolerances identified in the contract documents. In addition, the conform for the pavement was extended by 50 feet to create a smooth transition from one section of pavement to another.

**CCO Nos. 6, 7, 22, 24, 28, 31, 33, 81, 86, 91, 109, 116, and 138 – Miscellaneous Electrical (\$674,260.85)**

Several CCOs were written to take care of various conflicts and revisions to the electrical

systems on the project.

**CCO Nos. 25, 114, 120, 131, and 135 – Miscellaneous Guardrail (\$126,990.75)**

These CCOs were written to modify guardrail installations due primarily to differing site conditions. Unknown underground conflicts, above ground conflicts, and narrow embankments were the chief initiating factors.

**CCO Nos. 11, 46, 58, 93, 99, 110, 115, 118, and 129 – Miscellaneous Drainage (\$463,164.10)**

Drainage systems on the project were moved and/or modified, mostly due to unknown buried objects and differing site conditions.

In addition to the CCOs, the following bid item lines exceeded the amounts specified in the contract:

**Bid Item 12 – Temporary Railing (Type K) (\$197,370)**

Temporary concrete barriers were installed throughout the project to provide for the safety of workers and the public. The contract allowed for \$1,668,400 for this work; however, extra railing was installed in the interest of increased safety.

**Bid Item 14 – Temporary Crash Cushion Module (\$250,000)**

The amount of \$195,000 was allocated to replace crash cushions damaged by the public. However, more crash cushions were hit than anticipated, leading to a total cost of \$445,000 to date.

**Bid Item 45 – Roadway Excavation (\$970,120.70) and Bid Item 53 – Lightweight Embankment Material (Cellular Concrete) (\$538,793.90)**

The contract did not account for the need to excavate existing materials prior to placing the Lightweight Cellular Concrete (LCC). It also didn't account for the extra LCC needed to fill the excavation.

As of October 31, 2021, a total of 154 CCOs were identified for the project and nearly all the project's contingency and supplemental funds have been expended. The project is 98% complete and project costs are expected to increase by \$2,073,000.

The contractor has also notified the Authority that they intend to seek additional compensation, claiming inefficiencies in executing the work, which is beyond their control. Staff is reviewing the issue and will return to the Authority Board with more details in the future.

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