



City of Arts & Innovation

City Council Memorandum

TO: HONORABLE MAYOR AND CITY COUNCIL DATE: SEPTEMBER 5, 2017

FROM: PUBLIC WORKS DEPARTMENT WARD: 4

SUBJECT: BID NO. DMS003 – CONTRUCTION CONTRACT WITH SAK CONSTRUCTION, LLC, FOR THE TRAUTWEIN AND ALESSANDRO SEWER FORCE MAIN EMERGENCY REHABILITATION PROJECT – INCREASE IN CHANGE ORDER AUTHORITY FROM 3.4% TO 20% FOR A REVISED TOTAL CONTRACT AUTHORIZATION OF \$5,004,576 - FUNDS TRANSFER

ISSUE:

Authorize the change order authority from 3.4% to 20% for Bid No. DSM003 - Construction Contract with SAK Construction, LLC for the Trautwein and Alessandro Sewer Force Main Emergency Rehabilitation Project, for a revised total contract authorization of \$5,004,576.

RECOMMENDATION:

That the City Council:

1. Authorize the change order authority from 3.4% to 20% for Bid No. DSM003 - Construction Contract with SAK Construction, LLC for the Trautwein and Alessandro Sewer Force Main Emergency Rehabilitation Project, for a revised total contract authorization of \$5,004,576.
2. Approve the budget transfer of funding from the completed Ninth Street Sewer Replacement capital improvement project in the amount of \$1,900,000 to the Trautwein and Alessandro Sewer Force Main Emergency Rehabilitation Project.

BACKGROUND:

On April 18, 2017, due to the overall poor condition and recent ruptures of the sewer force main on December 4, 2016 and on March 18, 2017, the City Council adopted Resolution No. 23168 declaring the sewer force main at Trautwein and Alessandro an emergency project that is an urgent necessity for the preservation of life, health, property, and waive the formal bidding requirements of section 1109 of the City Charter.

On May 9, 2017, the City Council directed staff to create a capital improvement project for the emergency rehabilitation of the Trautwein and Alessandro sewer force main project for an estimated amount of \$4,800,000.

DISCUSSION:

On June 16, 2017, the City entered into a design / build contract for construction with SAK Construction, LLC (SAK) for an amount of \$4,170,480 to rehabilitate the existing force main via Cured In Place Pipe (CIPP) method. According to the City's administrative manual, the change order authority based on the amount of this contract is \$141,704.80, which is approximately 3.40%.

During the Project's preconstruction meeting, it was determined that the contractor should accelerate the above ground bypass pipe installation process to redirect the flow away from the existing below ground force main. This decision was based on the known condition of the below ground force main and risk analysis of another failure. The cost for the accelerated bypass installation is \$118,000. Unfortunately, on Sunday, June 25, 2017, two days before the completion and activation of the bypass system, the existing force main experienced a third rupture, which resulted in a sewer spill near the Trautwein Arroyo area. Since SAK was mobilized on site, this rupture was quickly repaired at a cost of \$29,886.46.

Once the bypass system was online, the next task was to design the new CIPP pressure liner that will be placed inside the existing below ground ductile iron sewer pipe. In order for SAK to properly design the liner to withstand the pumping pressure within the force main pipe, City staff installed a gage to monitor the line pressure. The pressure recordings indicated that the normal operating pressure hovered around 40 psi, but the pressure inside the pipe when the pump turned off increased to 160 psi. This high pressure spike is beyond the normal operating range of a CIPP lined sewer force main. This water hammer effect happens when a fluid in motion is forced to stop, creating waves of energy momentum traversing back and forth inside the pipe. This situation has caused a potential delay in the project schedule as a solution is determined and implemented.

In order to curtail the pressure spike, staff requested the project construction consultant, Carollo Engineers, Inc. (Carollo), to analyze the situation and prepare a recommendation. Subsequently, Carollo recommended GEI Consultants (GEI) conduct a pressure surge analysis and provide recommendations at a cost of \$10,500. As a result of the analysis, GEI recommended the installation of a 3,500 gallon surge tank be installed on the sewer force main at the Wood Road sewer pump station facility to absorb the surges inside of the sewer pipeline. It is estimated that the surge tank and related piping will cost approximately \$200,000.

The Public Works Department is seeking City Council authorization to increase the change order authority for The SAK Construction, LLC contract from 3.40% (\$141,704.80) to 20.00% (\$834,096.00) to account for the accelerated bypass system installation, the surge tank procurement and installation, potential project delay, and any other future unanticipated work that will need to be completed.

Staff is recommending that a budget transfer from the already completed Ninth Street Sewer Replacement project in the amount of \$1,900,000 be approved to complete this project.

FISCAL IMPACT:

There is no impact to the General Fund. With the budget transfer of \$1,900,000 from the Ninth Street Sewer Replacement project, account number 9859323-440301, to the Trautwein and Alessandro Sewer Force Main Emergency Rehabilitation Project, account number 9990323-440301, there is sufficient funding to cover the original contract with SAK Construction and the increase in the change order authority for the revised authorization of \$5,004,576.

Prepared by: Kris Martinez, Public Works Director

Certified as to

availability of funds: Adam Raymond, Acting Chief Financial Officer/Treasurer

Approved by: Al Zelinka, FAICP, Assistant City Manager

Approved as to form: Gary G. Geuss, City Attorney