



Item: Change Order #2 and Final Payment: Wastewater Treatment Plant Disinfection and Ammonia Removal Improvements, O.F. 1633.0

From: Engineering Division

Initiated By: Public Works Department

Presented By: Jim Rearden, Public Works Director

Action Requested: Approve Change Order #2 and Final Pay Request

Suggested Motion:

1. Commissioner moves:

“I move the City Commission (approve/not approve) Change Order # 2 reducing the contract by the amount of \$62,573.50 for the Wastewater Treatment Plant Disinfection and Ammonia Removal Improvements and approve Final Payment in the amount of \$26,497.53 to Swank Enterprises and \$267.47 to the State Miscellaneous Tax Fund.

2. Mayor requests a second to the motion, Commission discussion, public comment, and calls for the vote.

Staff Recommendation: Approve Change Order #2 and Final Payment Request.

Summary: This project completed the following improvements at the Wastewater Treatment Plant to comply with new Montana Department of Environmental Quality (MDEQ) permit requirements: upgrading of the treatment process to enhance ammonia removal by converting the four existing aeration basins with surface aerators into two bioreactors with turbo blower equipment; constructing a new bioreactor to the east of the existing basins; replacing the existing gaseous chlorine disinfection system with an Ultraviolet (UV) disinfection system to eliminate the need to dechlorinate; and adding flow metering devices at several locations throughout the treatment process to better monitor and report flows.

Change Order #2 provides a credit to the City for the value of the contract not needed for completion of the work. The final pay releases all retainage to the contractor and confirms that all punch-list work is complete for this project.

Background:

Significant Impacts

Improvements to the Wastewater Treatment Plant completed through this project allowed the City to meet new MDEQ requirements for final effluent limits for E. coli bacteria, Total

Residual Chlorine, and total ammonia as Nitrogen that went into effect on December 1, 2014. Construction milestones were completed on time to meet the MDEQ deadlines.

Workload Impacts

HDR, along with its partner firm Morrison Maierle, Inc. (MMI), provided construction inspection and administrative services. City Engineering and Environmental Division Staff, along with Veolia staff assisted with project review and administration duties. The Great Falls Wastewater Treatment Plant Improvements Project was Awarded Best Project for 2015 in the Water/Environment division for the Intermountain Region by Engineering News-Record (ENR).

Project Work Scope

This project incorporated three main improvements at the Wastewater Treatment Plant. The first improvement involved upgrading the existing treatment process to an ammonia removal process. The four aeration basins located at the plant were converted into two bioreactors and an additional bioreactor was constructed east of the existing basins. Turbo blower equipment was installed to provide oxygen to the system and replaced the aged surface aerators. The turbo blowers were placed in an extension of the main pipe tunnel located under the plant. The second improvement removed the existing gaseous chlorine disinfection system and replaced it with an Ultraviolet (UV) disinfection system. This eliminated the need to dechlorinate to meet the new permit requirements. The third and final improvement placed new flow metering at areas of the plant to better monitor and report flows coming in and going out of the plant to meet permit requirements. Existing piping that bypassed the secondary treatment process and went to the chlorine contact basins were plugged as well.

Evaluation and Selection Process

Seven bids were received and opened for this project on April 24, 2013. The base bids ranged from \$13,476,582.00 to \$15,148,000.00. Swank Enterprises submitted the low bid and executed all the necessary bid documents. Two additive bid items were accepted based on value. This brought the final bid total for Swank Enterprises to \$14,346,582.00.

Final Payment: The final project cost was \$14,387,114.50, which was \$62,573.50 less than the contract value including Change Order #1 approved on February 3, 2015. Change Order #1 added \$103,106.00 to the original contract and funded changing the Final Clarifier #4 component material from coated steel to stainless steel. Change Order #2 reduces the contract value to the final amount owed to the contractor. Costs associated with repairing the concrete in the existing aeration basins was much less than expected and was the main reason that the final project cost was less than the amended contract value. Substantial completion was reached on February 6, 2015 and the two year warranty began at this time.

Conclusion

City staff recommends approving Change Order #2 and approving Final Pay to Swank Enterprises in the amount of \$26,479.53, and \$267.47 to the State Miscellaneous Tax Fund.

Fiscal Impact:

This project was funded through Sewer Capital Funds and a State Revolving Fund (SRF) loan. The Sewer Capital Funds funded approximately \$1,692,982.00 of the project. The SRF loan funded the remaining \$12,694,132.50.

Alternatives:

The City Commission could vote to deny approval of Change Order #2 and Final Pay.

Attachments/Exhibits:

- Change Order #2

Change Order

No. 2

Date of Issuance: <u>November 10, 2015</u>	Effective Date: <u>December 1, 2015</u>	
Project: WWTP Disinfection and Ammonia Removal Improvements	Owner: City of Great Falls	Owner's Contract No.: <u>1633.0 SRF # C301297</u>
Contract: WWTP Disinfection and Ammonia Removal Improvements, O.F. 1633.0		Date of Contract: <u>May 7, 2013</u>
Contractor: Swank Enterprises		Engineer's Project No.: <u>182039</u>

The Contract Documents are modified as follows upon execution of this Change Order:
Description: Credit for unused amount of Bid Item No. 1C Miscellaneous Work

Attachments: (List documents supporting change):

CHANGE IN CONTRACT PRICE:	CHANGE IN CONTRACT TIMES:
Original Contract Price: <u>\$14,346,582.00</u>	Original Contract Times: <input type="checkbox"/> Working days <input checked="" type="checkbox"/> Calendar days Substantial completion (days or date): <u>548 days</u> Ready for final payment (days or date): <u>580 days</u>
<input checked="" type="checkbox"/> [Increase] <input type="checkbox"/> [Decrease] from previously approved Change Orders No. <u>1</u> to No. <u> </u> : <u>\$103,106.00</u>	<input checked="" type="checkbox"/> [Increase] <input type="checkbox"/> [Decrease] from previously approved Change Orders No. <u>1</u> to No. <u> </u> : Substantial completion (days): <u>60</u> Ready for final payment (days): <u>60</u>
Contract Price prior to this Change Order: <u>\$14,449,688.00</u>	Contract Times prior to this Change Order: Substantial completion (days or date): <u>608 days</u> Ready for final payment (days or date): <u>640 days</u>
<input type="checkbox"/> [Increase] <input checked="" type="checkbox"/> [Decrease] of this Change Order: <u>\$62,573.50</u>	<input type="checkbox"/> [Increase] <input type="checkbox"/> [Decrease] of this Change Order: Substantial completion (days or date): <u> </u> Ready for final payment (days or date): <u> </u>
Contract Price incorporating this Change Order: <u>\$14,387,114.50</u>	Contract Times with all approved Change Orders: Substantial completion (days or date): <u>608</u> Ready for final payment (days or date): <u>640</u>

RECOMMENDED: By: <u>[Signature]</u> Engineer (Authorized Signature) Date: <u>11/10/2015</u>	ACCEPTED: By: <u>[Signature]</u> Owner (Authorized Signature) Date: <u> </u>	ACCEPTED: By: <u>[Signature]</u> Contractor (Authorized Signature) Date: <u>11-12-15</u>
Approved by Funding Agency (if applicable): <u> </u>	Date: <u> </u>	Date: <u> </u>