



Legislation Details (With Text)

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Title: Proposed Change Order No. 1
GLWA-CON-133
Water Plant Production Flow Measurement and Related Facility
CIP#/BCE Score: 114003 / 50.6

Sponsors: Cheryl Porter, Grant Gartrell

Indexes: Water Operations

Code sections:

Attachments:

Date	Ver.	Action By	Action	Result
4/24/2019	1	Board of Directors	Approved	Pass
4/11/2019	1	Operations and Resources Committee	Recommended for Approval	Pass

Proposed Change Order No. 1

GLWA-CON-133

Water Plant Production Flow Measurement and Related Facility

CIP#/BCE Score: 114003 / 50.6

Agenda of: April 24, 2019

Item No.: **2019-152**

Amount:	Original Contract	\$6,876,833.00
	Proposed Changed Order #1	183,282.49
	Total Revised Contract	\$7,060,115.49

TO: The Honorable
Board of Directors
Great Lakes Water Authority

FROM: Sue F. McCormick
Chief Executive Officer
Great Lakes Water Authority

DATE: April 3, 2019

RE: Proposed Change Order No. 1
GLWA-CON-133
Water Plant Production Flow Measurement and Related Facility
Vendor: LGC Global, Inc.

MOTION

Upon recommendation of Cheryl Porter, Chief Operating Officer - Water and Field Services, the Board of Directors (Board) of the Great Lakes Water Authority (GLWA), authorizes the Chief Executive Officer (CEO) to **enter into Contract No. GLWA-CON-133 Change Order No. 1 “Water Plant Production Flow Measurement and Related Facility” with LGC Global, Inc., at an increased amount of \$183,282.49 for a total cost of \$7,060,115.49 for a duration of 306 days for a total contract length of 1,036 days;** and authorizes the CEO to take such other action as may be necessary to accomplish the intent of this vote.

BACKGROUND

Contract No. GLWA-CON-133 with Lakeshore Global Corporation (Contractor) is a construction contract for the rehabilitation and improvement of water production flow metering at the Northeast, Southwest and Springwells Water Treatment Plants. The work involves rehabilitating a total of 16 flow meters and associated equipment at these 3 water treatment plants. The current contract amount is \$6,876,833.00. The contract time commenced to run on July 31, 2017 and ends on July 21, 2019. The Contractor is nearing completion of the work at the Northeast and Southwest water plants and started work at the Springwells water plant in November 2018.

The construction related delays that have occurred on this contract have been associated with concealed and differing site conditions that are out of the Contractor’s control. The additional contract time and funds being requested in this proposed change order are reasonable and are directly associated with the delays. The water production flow metering improvements are needed to accurately measure finished water flows from the treatment plants. In addition, water production flow metering improvements should be completed at the Northeast and Springwells water plants by June 30, 2020 according to the Water and Sewer Services Agreement, dated June 12, 2015 between the City of Detroit and GLWA (hereinafter referred to as the “Services Agreement”). Extending the duration of Contract No. CON-133 and continuing with this Contractor is the only way to meet the June 30, 2020 date established in the Services Agreement.

As mentioned above, differing conditions associated with the inability to isolate transmission mains in a timely manner and concealed conditions associated with leaky transmission mains have caused project delays outside of the Contractor’s control. Some of the specific differing and changed conditions that have caused delay are as follows:

1. At the Southwest Water Treatment Plant (SWWTP), the first attempt to isolate VM-1 and VM-2 was unsuccessful due to the discovery of a broken actuator on valve No. V-60 at the intersection of Moran Street and Old Goddard Street. Leaks were also discovered in the piping inside the east and west walls of the vault. Repair of these leaks delayed work on CON

-133 for several weeks. Once the above repairs were completed, a second attempt was made to isolate VM-1 and VM-2 at SWWTP. Transmission Main No. 2 was successfully isolated, but Transmission Main No. 1 was not. It was necessary to identify and close additional valves beyond the specified isolation area to achieve isolation with a manageable amount of leakage. Also, it was discovered that the vault for valve No. V-64 on Old Goddard Road was covered over by paving and fencing for a local collision shop and a used car lot. Approximately two weeks was expended to locate the vault, uncover the access hatch and valve boxes, pump it out and close valve No. V-64. Isolation of Transmission Main No. 1 is on-going.

2. At SWWTP, additional leaks were discovered in the existing reducer pipe inside Venturi Pit L. These leaks will necessitate an additional shutdown of Transmission Mains No. 4 and No. 5 to facilitate repairs. Because this repair is delaying completion of the high-performance pipe coating inside Pit L, the installation and commissioning of instrumentation for the new venturi meter inserts is also delayed.
3. At Springwells Water Treatment Plant (SPWTP), it took GLWA crews about one week longer to drain the transmission main for Venturi Meter VM-7 due to the profile of the transmission main. Also, about a month of delay was encountered in the repeated inspections required on VM-7 because the interior as-built state of this meter is different than planned.
4. At SPWTP, isolation of Transmission Mains No. 1 and No. 3 have proven to be challenging due to the age, condition and operability of the existing yard valves and the availability of the GLWA valve crews. Isolation efforts began on December 10, 2018 and isolation has still not been achieved to date despite the best efforts of the GLWA crews and the Contractor. Similar difficulties are anticipated with the remaining shutdowns at SPWTP.
5. At SPWTP, thickness testing of the existing pipes inside the meter vaults has revealed considerable reduction in the thickness of the steel pipe; particularly at Venturi Meters VM-3 and VM-4. It is possible that additional delays will be encountered due to pipe rehabilitation measures that will be taken when the time comes that are more extensive than anticipated and specified by the Contract Documents.

JUSTIFICATION

There have been several changed conditions in the course of work so far that have caused delays beyond the Contractor's control. The changed conditions mainly relate to delays in obtaining adequate isolation needed to take pipelines out of service to allow for the rehabilitation of the flow meters, and leaking yard piping. Delays have occurred during the work conducted at the Northeast and Southwest water plants. Delays are also occurring at the Springwells water plant.

This proposed change order requests that the Contract Time be increased by 306 days so that the Final Contract Completion date is June 1, 2020 and the Contract dates for Substantial Completion shall be as follows:

- Substantial Completion of the Work at the Northeast Water Treatment Plant shall be April 30, 2019.
- Substantial Completion of the Work at the Southwest Water Treatment Plant shall be June 28, 2019.
- Substantial Completion of the Work at the Springwells Water Treatment Plant shall be March 2, 2020.

The additional cost associated with the delays is \$183,282.49, which is the proposed increase in the contract amount of Contract No. CON-133. Therefore, this proposed change order would increase the total contract amount to \$7,060,115.49. Additional changed conditions and delays that may occur at the Springwells Water Treatment Plant are not part of Change Order No. 1 presented herein and would have to be covered under a future additional change order.

PROJECT MANAGEMENT STATUS

Original Contract Time	730 Days
Proposed Change Order No. 1	306 Days
New Contract Time	1036 Days

PROJECT ESTIMATE

Original Contract Price	\$6,876,833.00
Proposed Change Order No. 1	183,282.49
New Contract Total	\$7,060,115.49

FINANCIAL PLAN IMPACT

Summary: Sufficient funds are provided in the financial plan for this project.

Funding Source: Water Construction Bond

Cost Center: Water Engineering

Expense Type: Construction (5519-882111.000-616900-114003)

Estimated Cost by Year and Related Estimating Variance: See table below.

Fiscal Year

FY 2018 Plan \$ 3,265,833.00

FY 2019 Plan 3,531,000.00

FY 2020 Plan 80,000.00

Financial Plan Estimate \$ 6,876,833.00

Proposed New Contract 7,060,115.49

Negative Estimating Variance \$ (183,282.49)

This negative estimating variance to be funded from capital reserves.

COMMITTEE REVIEW

This item was presented to the Operations and Resources Committee at its meeting on April 11, 2019. The Operations and Resources Committee unanimously recommended that the GLWA Board adopt the resolution as presented.

SHARED SERVICES IMPACT

This item does not impact the shared services agreement between GLWA and DWSD.