



Legislation Details (With Text)

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Title: Proposed Change Order No. 1
GLWA-CON-183
Detroit River Interceptor Construction
Sponsors: Cheryl Porter
Indexes: Water Operations
Code sections:
Attachments: 1. GLWA-CON-183 CO 1 DRI Alignment Map

Date	Ver.	Action By	Action	Result
11/28/2018	1	Board of Directors	Approved	Pass
11/14/2018	1	Operations and Resources Committee	Recommended for Approval	Pass

Proposed Change Order No. 1

GLWA-CON-183

Detroit River Interceptor Construction

Agenda of: November 28, 2018

Item No.: **2018-989**

Amount:	Original Contract	\$ 2,159,925.00
	Proposed Change Order No. 1	2,424,009.90
	Total Revised Contract	\$ 4,583,934.90

TO: The Honorable
Board of Directors
Great Lakes Water Authority

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

DATE: November 7, 2018

RE: **Proposed Change Order No. 1**
Contract No. GLWA-CON-183
Detroit River Interceptor Construction Emergency Repairs

Vendor: Inland Waters Pollution Control, 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-183 Change Order No. 1 “Detroit River Interceptor Construction” with Inland Waters Pollution Control, Inc., at an increased cost of \$2,424,009.90 for a total cost not to exceed \$4,583,934.90 and for an increased contract length of 5 months for a total contract duration of 14 months;** and authorizes the CEO to take such other action as may be necessary to accomplish the intent of this vote.

BACKGROUND

The GLWA Wastewater Conveyance System consists of a network of sewers which collect and transfer wastewater through major interceptors to the Water Resource Recovery Facility (WRRF). There are three major interceptors - Detroit River Interceptor (DRI), North West Interceptor (NWI), and North Interceptor East Arm (NIEA). The DRI runs parallel to the Detroit River. The pipe size varies from 8 ft. to 16 ft. in diameter and carries about 36% of the total flow to the WRRF. The NWI runs parallel to the Rouge River. The pipe sizes are up to 13.5 ft. and carries about 35% of the flow. The NIEA is 15 miles long. The pipe size varies from 12 ft. to 17.5 ft. and it carries about 29% of the flow.

The DRI is the oldest of the three interceptors, constructed in 1927. The purpose of the DRI was to bring the majority of Detroit’s sewage to a common point to prevent newly constructed sewers from discharging directly into the river. It also allowed the sewage to be discharged further downriver from the water supply inlet.

A Closed-Circuit Television (CCTV) inspection of the DRI, in accordance with the Pipeline Assessment Certification Program (PACP) as developed by the National Association of Sewer Service Companies (NASSCO), was completed in February to March of 2016. This inspection determined that an auger had perforated the DRI and raised concerns due to high PACP ratings, indicating structural and corrosion issues within the interceptor. Stretches of the DRI had manual entry inspections completed on them in December 2016 and January 2017.

The scope of the repairs for GLWA-CON-183, “Detroit River Interceptor Construction” (2017), were limited to these identified needs: (1) removal and repair of the auger between MH-3 and MH-4; (2) removal of debris from MH-2 to MH-5 and MH-7 to MH-8; (3) installation of 1700 linear feet of a springline working platform; (4) various repairs to joints, leaks, cracks; (5) manhole improvements; and (6) removal of the platform and restoration. The design of the repairs and construction documents were prepared by FK Engineering Associates (FKE) under Purchase Order No. 0005030, “Capital Project: CIP-1263 - DRI Inspection.”

A separate design build project (GLWA-DB-226, “Repair and Rehabilitation of DRI from Alter Rd. to WRRF”) was approved by the Board on March 14, 2018, that addresses the remaining portions of the DRI that have not been repaired extending from the City of Detroit/Grosse Pointe border to the WRRF Pump Station 1.

The first of two major causes for the requested increase in time and money is based on delays to the work outside of the control of the contractor. These delays were necessary due to the operational requirements of the WRRF to maintain National Pollutant Discharge Elimination System (NPDES) permit compliance and wet weather days that precluded work in the DRI.

To date, these delays have accounted for over a 300 percent increase (108 days versus 30 days) in the wet-weather-day unit. The contractor has requested an increase in fees in accordance with the Federal government’s “Eichley claim” (a

government-recognized mechanism for a contractor to recover the amount of unabsorbed overhead that is a result of a major delay outside the control of the Contractor) principles. This is approximately \$433,000 of this requested change order.

At the setup of CON-183 in preparation for construction, another poor condition was identified requiring immediate attention. The second major cause for this change order request, and of great concern, is the condition of the DRI along its joints in the area of the CON-183 repairs. These concerns are focused on the upper portion of the joints that were found in poor condition, with complete loss of concrete with exposed overlaying soil in sections. This is a critical condition that was only determined after construction of the springline platform and associated physical inspection that the platform allowed on the upper portions of the 16-foot diameter portion of the tunnel. This work, along with balancing of the actual versus bid quantities, is the remainder of the total additional change order fee request of \$2,424,009.90. The requested extension in completion date is to December 21, 2018, an extension of 144 days.

The work is expected to renew the asset for approximately 25 to 50 years depending on the ultimate conditions found and types of repairs implemented and is in line with the current scope of CON-183.

JUSTIFICATION

The Board is being asked to approve this change order request based on the following factors: (1) the revised delay claim was negotiated and deemed fair and reasonable by GLWA's consultant, owner's representative, and technical staff; (2) the additional repairs are critically needed and do not allow for the preparation of a new project bid package with associated standard or expedited procurement procedures. The work is necessary on an emergency basis to prevent the potential failure of the DRI which would cause human health and environmental safety concerns. The extension of this contract to conduct the additional repairs represents the best value to GLWA considering the consequences of a potential catastrophic failure of the DRI due to these identified issues.

PROJECT MANAGEMENT STATUS

Original Contract Time: 9 months

Change Order No. 1: 5 months

New Contract Time: 14 months

PROJECT ESTIMATE

Original Contract Price: \$ 2,159,925.00

Change Order No. 1: \$ 2,424,009.90

New Contract Total: \$ 4,583,934.90

FINANCIAL PLAN IMPACT

Contract Value: \$ 2,159,925.00

Add: Change Order Value: \$ 2,424,009.90

New Proposed Contract Value: \$ 4,583,934.90

Negative Estimating Variance: \$ (2,424,009.90)

SAVINGS, COST OPTIMIZATION, AND REVENUE ENHANCEMENT IMPACT

The \$2,424,009.90 budget impact resulting from the authorization of this change order for the Detroit River Interceptor Construction Change Order No. 1 will be recorded in wastewater capital reserve account.

Current contract value: \$ 2,159,925.00

New contract value: 4,583,934.90

Capital reserve adjustment: \$ (2,424,009.90)

COMMITTEE REVIEW

This item was presented to the Operations and Resources Committee at its meeting on November 14, 2018. The Operations and Resources Committee unanimously recommended that the GLWA Board adopt the resolution as presented, subject to receiving information regarding pricing of new repairs.

SHARED SERVICES IMPACT

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