



## Legislation Details (With Text)

**File #:** 2020-009      **Version:** 1      **Name:**

**Type:** Resolution      **Status:** Passed

**File created:** 1/6/2020      **In control:** Board of Directors

**On agenda:** 1/22/2020      **Final action:** 1/22/2020

**Title:** Proposed Change Order No. 1  
Contract No. 1803823  
Lake Huron Water Treatment Plant Raw Sludge Clarifier and Raw Sludge Pumping Improvements  
CIP# 111007 / BCE 53.2

**Sponsors:** Cheryl Porter, Grant Gartrell

**Indexes:** Water Operations

**Code sections:**

**Attachments:** 1. CIP 111007

Date	Ver.	Action By	Action	Result
1/22/2020	1	Board of Directors	Approved	Pass
1/8/2020	1	Operations and Resources Committee	Recommended for Approval	Pass

### Proposed Change Order No. 1

### Contract No. 1803823

### Lake Huron Water Treatment Plant Raw Sludge Clarifier and Raw Sludge Pumping Improvements

### CIP# 111007 / BCE 53.2

Agenda of: January 22, 2020

Item No.: **2020-009**

Amount:	Original Contract	\$7,056,735.00
	Proposed Change Order No. 1	381,436.69
	Total Revised Contract	\$7,438,171.69

**TO:** The Honorable  
Board of Directors  
Great Lakes Water Authority

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

**DATE:** January 6, 2020

**RE: Proposed Change Order No. 1**  
**Contract No. 1803823**  
**Lake Huron Water Treatment Plant Raw Sludge Clarifier and Raw Sludge Pumping Improvements**  
**Vendor: Weiss Construction Company, LLC**

**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. 1803823 “Lake Huron Water Treatment Plant Raw Sludge Clarifier and Raw Sludge Improvements” with Weiss Construction Company, LLC, at an increased cost of \$381,436.69 for a total cost not to exceed \$7,438.171.69, and an increased duration of 71 days for a total contract duration of 851 days;** and authorizes the CEO to take such other action as may be necessary to accomplish the intent of this vote.

**BACKGROUND**

Construction Contract No. 1803823 “Lake Huron Water Treatment Plant (LHWTP) Raw Sludge Clarifier and Raw Sludge Pumping Improvements” at the LHWTP was designed under Contract No. GLWA-CS-171 “Raw Sludge Clarifiers and Raw Sludge Pumping System Improvements - Lake Huron Water Treatment Plant.” Capital improvements for this LHWTP project include: demolition of existing clarifiers and sludge pumping station, construction of new cast-in-place reinforced concrete waste wash water retention basin (WWRB), construction of new sludge pumping station equipped with new pump lifting mechanisms, installation of new diversion gate structures between sludge drying lagoons, installation of new junction structures between existing and new WWRB basins, and installation of new yard lighting around the existing and new WWRBs.

Contract No. 1803823 was awarded to Weiss Construction and the notice to proceed was given on June 12, 2019. Part of the work scope included installing two drilled test piers and tension testing to validate the foundation system before starting construction on permanent piers. On September 30, 2019, the drilled test piers failed by not meeting the design capacity of 140 tons. The failure occurred due to the soil having less resistance to uplift compared to what was determined during the geotechnical investigation with 6 test bores drilled completed through the associated design contract and evaluation of past drilled pier testing completed on site under LH-390, Clearwell No. 3 project. The most cost-effective solution to attain the desired foundation capacity is to increase the number of drilled piers. An additional 57 drilled piers for a total of 157 will be needed due to the weaker existing soils at the site. The layout of the 157 foundation piers was redesigned by Brown and Caldwell, LLC and issued to the Contractor on November 5, 2019 for its quotation. The drilled pier work is on the project’s critical path and this solution requires a 71-day contract extension to substantial and final completion to account for the time to determine the most cost/schedule effective solution and the time to complete the additional work. Construction Change Directive CCD-001 was issued to the Weiss Construction at a cost of \$352,584.46 to start installing the 57 additional piers to prevent further delay. This proposed Change Order No. 1 provides an additional \$381,436.69 to cover the remaining cost of the change not covered by CCD-001. The cost breakdown for proposed Change Order No. 1 follows:

- \$175,000.00 Adding back a portion of the allowance that was previously expended,
- \$104,240.42 Additional cost to remove the stone base using small equipment and additional labor to work around more closely spaced piers,
- \$70,327.47 Extending the General Conditions due to the contract extension and increased bonding and

insurance cost for the increased overall contract value, and

\$31,868.80 Additional spoil removal and support with testing, inspection and documentation of additional piers.

The current contract end dates for substantial and final completion are February 2, 2021 and July 31, 2021, respectively. The new contract end dates substantial and final completion and October 10, 2021, respectively upon execution of this proposed Change Order No. 1.

### **JUSTIFICATION**

The weaker existing site soils upon which the new raw sludge clarifier will be built is an unforeseen differing site condition. As a result, the foundation design for the new clarifier had to be changed, which results in additional construction effort beyond that specified in the contract documents. This proposed Change Order No. 1 provides the additional contract funds and time to complete the additional foundation work at the site.

### **PROJECT MANAGEMENT STATUS**

Original Contract Time	780 Days
Proposed Change Order No. 1	71 Days
New Contract Time	851 Days

### **PROJECT ESTIMATE**

Original Contract Price	\$ 7,056,735.00
Proposed Change Order No. 1	381,436.69
New Contract Total	\$ 7,438,171.69

### **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 (5519-882111.000-616900-111007)

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

**Fiscal Year**

Original Contract Price	\$7,056,735.00
Proposed Change Order No. 1	<u>381,436.69</u>
New Contract Total	7,438,171.69
Amended Financial Plan Estimate	<u>7,066,000.00</u>
Negative Estimating Variance	\$ (372,171.69)

This negative estimating variance to be funded from capital reserves.

Amounts above as per the Draft 2021-2025 CIP.

### **COMMITTEE REVIEW**

This item was presented to the Operations and Resources Committee at its meeting on January 8, 2020. 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.