Legislation Details (With Text)

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Type:	Resolution			**Status:**	Passed
File created:	7/7/2021			**In control:**	Board of Directors
On agenda:	7/28/2021			**Final action:**	7/28/2021
Title:	Proposed Change Order No. 1 Contract No. 1900134 Springwells Water Treatment Plant Low Lift Pump Suction Gate Replacement CIP# 114002 / BCE Score: 69.2				
Sponsors:	Cheryl Porter, Grant Gartrell				
Indexes:	Water Operations				
Code sections:					
Attachments:					

Date	Ver.	Action By	Action	Result
7/28/2021	1	Board of Directors	Approved	Pass
7/14/2021	1	Operations and Resources Committee	Recommended for Approval	Pass

Proposed Change Order No. 1

Contract No. 1900134

Springwells Water Treatment Plant Low Lift Pump Suction Gate Replacement

CIP# 114002 / BCE Score: 69.2

Agenda of: July 28, 2021
Item No.: **2021-273**

Amount:		
	Original Contract	$13,733,521.00
	Proposed Change Order No. 1	825,978.00
	Total Revised Contract	$14,559,499.00

TO: The Honorable
Board of Directors
Great Lakes Water Authority

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

DATE: July 7, 2021

RE: Proposed Change Order No. 1

Contract No. 1900134
Springwells Water Treatment Plant Low Lift Pump Suction Gate Replacement
Vendor: Barton Malow Company

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. 1900134 Proposed Change Order No. 1 "Springwells Water Treatment Plant Low Lift Pump Suction Gate" with Barton Malow Company, at an increased cost of $825,978.00 for a total cost not to exceed $14,559,499.00, and an increased duration of 270 days for a total contract duration of 1,000 days;** and authorizes the CEO to take such other action as may be necessary to accomplish the intent of this vote.

BACKGROUND

GLWA Contract No. 1900134, Springwells Water Treatment Plant Low Lift Pump Suction Gate Replacement, is a design-build contract that involves replacing suction and discharge side isolation gates and appurtenances for the plant's low-lift pumping units. The majority of the construction work is being performed using underwater divers. Consequently, the low-lift pumps are shut down while the work is performed to protect the safety of the construction divers. As a result, the construction work has been performed each night between approximately 9:30 p.m. and 4:00 a.m. and is limited to the low-demand season that generally spans October through April. The work restrictions specified in the contract, however, allowed for an eight-hour shutdown each night to complete the work. The reasons that the contractually-planned shutdowns have not been 8 hours long each night are principally due to reduced reservoir storage capacity at Springwells. The reservoir capacity has been reduced because the reservoirs have been inspected and rehabilitated concurrent with the low-lift pump suction gate replacement work. Similarly, construction of the reservoir fill pipeline required that one of the three reservoirs be periodically out of service during its construction. Lastly, construction work in other areas of the water system (e.g., Ford Road Pump Station, Raw Water Tunnel Rehabilitation) has created additional water demand on Springwells during the low-lift suction gate replacement project that has required Springwells to bring its low-lift pumping units online earlier in the day than planned.

The base contract specified that structural anchorage for the new gates be designed for a water pressure emanating from the raw water tunnel side only, as was the case in the plant's original design. During the design phase, however it was decided that the new gates should be designed to withstand water pressure on either side of the gate (i.e., the pump suction side or the raw water tunnel side). This design change accounts for potential operational error that would result in higher head on the pump discharge side of the gate. As a result, the structural anchors were changed from a 5-inch embedment to a 14-inch embedment. This change in scope requires an additional 56 working days.

This proposed change order adds a total of 270 days to the contract duration and an additional $825,978.00 to the contract amount. Of this amount, $504,629.00 is related to the additional time required due to the shorter working hours available for underwater construction to cover additional general conditions, additional general contractor costs, additional engineering support, an additional mobilization of the diving contractor for one additional work season, and an additional diving crew. The remaining $321,349.00 is related to the greater embedment depth of the structural anchors that covers the longer anchors, more epoxy, and more labor and equipment costs.

JUSTIFICATION

A time extension is required to complete the remaining work of the contract because GLWA has not been able to afford the 8-hour daily shutdowns to the contractor as specified in the Contract Documents. To date, all the discharge side isolation gates have been installed and four of the eight suction side isolation gates have been demolished. The remaining work includes finishing demolition of the last four suction side isolation gates and full installation of the eight new suction side isolation gates and appurtenances. Based on production rates to date under the contract, we anticipate that this remaining work will be completed in the next low-demand season starting in October 2021 and ending in April 2022.

PROJECT MANAGEMENT STATUS

Original Contract Time	730 days
Proposed Change Order No. 1	270 days
New Contract Time:	1,000 days

PROJECT ESTIMATE

Original Contract Price	$13,733,521.00
Proposed Change Order No. 1	825,978.00
New Contract Total	$14,559,499.00

FINANCIAL PLAN IMPACT

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

Funding Source: Water Construction Fund

Cost Center: Water Engineering

Expense Type: Construction (5519-882111.000-6169000-114002)

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

Original Contract Price	$ 13,733,521.00
Proposed Change Order No. 1	825,978.00
New Contract Total	14,559,499.00
Amended Financial Plan Estimate	14,559,499.00
CIP Plan Balance for Other Commitments	$ 188,502,501.00

CIP 114002 has sufficient unallocated construction plan spend to fund the above proposed change order.

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COMMITTEE REVIEW

This item was presented to the Operations and Resources Committee at its meeting on July 14, 2021. 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.