



City of Grand Island

Tuesday, August 09, 2011

Council Session

Item G23

#2011-207 - Approving Change Order No. 1 on Project WWTP-2010-3 for Aeration Basin Improvements at the Wastewater Treatment Plant

Staff Contact: John Collins, Public Works Director

Council Agenda Memo

From: John Henderson, Superintendent Wastewater Treatment Plant

Meeting: August 9, 2011

Subject: Approving Change Order No. 1 on Project WWTP-2010-3 for Aeration Basin Improvements at the Wastewater Treatment Plant

Item #'s: G-23

Presenter(s): John Collins, Public Works Director

Background

The City Council approved the contract for construction to Oakview dck, LLC of Red Oak, Iowa for the Aeration Basin Improvements for the Wastewater Treatment Plant on December 13, 2010.

The primary purpose of the Aeration Basin Improvements project is to replace existing aeration equipment that is at or near the end of its useful life. Two existing blowers shall be replaced with two high efficiency units that will improve reliability and reduce energy usage and operating costs. The two new blowers will operate with the two existing blowers to remain in service.

In addition to the blowers, the aeration basin piping and aeration equipment is being modified or replaced to optimize process controls and replace aged equipment.

The existing aeration diffusers currently require annual cleaning to prevent high pressure loss and increased energy consumption leading to high operations and maintenance costs. The new diffusers will reduce both operations and maintenance costs. The new diffusers, along with automated valves and instrumentation, will allow operations staff to optimize aeration basin operations based on the current aeration basin configuration.

Discussion

Change Order No. 1 covers concrete and joint repair in the aeration basins. Following dewatering and cleanup of Basin No. 4, it became evident that repair of cracks in the concrete floor and expansion joints in the floor and walls was needed. The current condition of the floor and joints is not a structural concern at this time; however, the repair work is recommended to prolong the life of the basins and reduce the risk of a significant repair in the future. It is anticipated that similar repair work will be required for the other three basins. As such, allowances for the other basins are included in this change order. A subsequent change order will be required to adjust the

Contract Price based on actual quantities. An itemized list of the work items is included in the attached change order summary.

Item CO1-1. Floor Concrete Repair in Basin No. 4

Revealed by: Contractor
Initiated by: Engineer
Recommendation by: Wastewater Staff

This change involves repair of the floor adjacent to the expansion joints in Anoxic Zone 3 and Oxidic Zone 2. Unsound concrete will be removed and replaced as follows: saw cut perimeter (1 inch deep min.), remove concrete to joint, apply bonding agent, and repair with Sika Monotop 611, or approved equal, with 3/8-inch aggregate. The estimated quantity is 40 cubic feet.

Item CO1-2. Floor Expansion Joint Repair in Basin No. 4

Revealed by: Contractor
Initiated by: Engineer
Recommendation by: Wastewater Staff

This change involves removal of loose sealant in the four expansion joints in the floor, each about 66 feet long (full width of basin). The joints will be re-sealed using the original product type, Gardox, or approved equal. The joints will be prepared in accordance with the manufacturer's recommendations. The estimated quantity is 264 feet.

Item CO1-3. Caulking of Wall Expansion Joints in Basin No. 4

Revealed by: Contractor
Initiated by: Engineer
Recommendation by: Wastewater Staff

This change involves sealing of the wall expansion joints, interior only. No sealant was used originally, only expansion joint filler material. Caulking product will be Polymeric Systems "RC-270", Pecora "Dynatred", or approved equal. Caulk will be approx 1/2-inch deep with backer rod where necessary. Joints will be prepared in accordance with the manufacturer's recommendations. The estimated quantity is 160 feet.

Item CO1-4. Allowance – Floor Concrete Repair in Basin Nos. 1, 2, and 3

Initiated by: Engineer
Recommendation by: Wastewater Staff

This allowance covers the anticipated concrete repair of the floor in Basin Nos. 1, 2, and 3. The allowance is based on an estimated quantity of 150 cubic feet.

Item CO1-5. Allowance – Floor Expansion Joint Repair in Basin Nos. 1, 2, and 3

Initiated by: Engineer

Recommendation by: Wastewater Staff

This allowance covers the anticipated joint repair of the floor in Basin Nos. 1, 2, and 3. The allowance is based on an estimated quantity of 792 feet.

Item CO1-6. Allowance - Caulking of Wall Expansion Joints in Basin Nos. 1, 2, and 3

Initiated by: Engineer

Recommendation by: Wastewater Staff

This allowance covers the anticipated caulking of the wall joints in Basin Nos. 1, 2, and 3. The allowance is based on an estimated quantity of 480 feet.

The Contract Price shall be modified as follows as a result of the changes described by this modification request. Additions to the Contract Price are indicated by a "+" in front of the amount, deductions by a "-".

Effect on Contract Price

<u>Item</u>	<u>Description</u>	<u>Increase/Decrease In Contract Price (+/-)</u>
CO1-1	Floor Concrete Repair in Basin No. 4	+\$15,600.00
CO1-2	Floor Expansion Joint Repair in Basin No. 4	+\$2,508.00
CO1-3	Caulking of Wall Expansion Joints in Basin No. 4	+\$1,280.00
CO1-4	Allowance – Floor Concrete Repair in Basin Nos. 1, 2, and 3	+58,500.00
CO1-5	Allowance – Floor Expansion Joint Repair in Basin Nos. 1, 2, and 3	+7,524.00
CO1-6	Allowance - Caulking of Wall Expansion Joints in Basin Nos. 1, 2, and 3	+\$3,840.00
	NET CHANGE IN CONTRACT PRICE	+89,252.00
	BID AMOUNT OF ORIGINAL CONTRACT	\$3,487,000.00
	PREVIOUS CHANGE ORDER ADJUSTMENTS	<u>+\$0.00</u>
	CURRENT CONTRACT AMOUNT	\$3,487,000.00
	CHANGE ORDER NO. 1	<u>+\$89,252.00</u>
	ADJUSTED CONTRACT AMOUNT	\$3,576,252.00

Alternatives

It appears that the Council has the following alternatives concerning the issue at hand. The Council may:

1. Move to approve a resolution authorizing the Mayor to execute Change Order No. 1 with Oakview dck, LLC of Red Oak, Iowa.
2. Refer the issue to a Committee.
3. Postpone the issue to future date.
4. Take no action on the issue.

Recommendation

Public Work's staff, Engineer, and City Administration recommend that the Council pass a Resolution approving Change Order No. 1 to Oakview dck, LLC, of Red Oak, Iowa on the Aeration Basin Improvements Project. The net change in cost of the contract is \$89,252.00.

Public Works Administration and the engineering firm Black & Veatch recommend that the Council approve Change Order No. 1 to Oakview dck, LLC of Red Oak, Iowa for a contractual value of \$3,576,252.00.

Sample Motion

Move to approve Change Order Number 1 for Aeration Basin Improvements at the Wastewater Treatment Plant.

RESOLUTION 2011-207

WHEREAS, on December 7, 2010, by Resolution 2010-342, the City of Grand Island awarded Oakview dck, LLC of Red Oak, Iowa the bid in the amount of \$3,487,000 for furnishing materials and services for WWTP-2010-3 Aeration Basin Improvements project at the Wastewater Treatment Plant; and

WHEREAS, it has been determined that additions to the work to be performed by Oakview dck, LLC of Red Oak, Iowa are necessary for structural sealing in joint work within the basins; and

WHEREAS, engineer Black & Veatch has reviewed the unit cost for additional structural sealing joint work within the basins as fair and reasonable; and

WHEREAS, city staff and engineer Black & Veatch have negotiated a unit cost Change Order No. 1 with Oakview dck, LLC of Red Oak, Iowa at \$89,252.00; and

WHEREAS, such change order shall provide for structural joint repair within the individual aeration basins; and

WHEREAS, after Change Order No. 1, the revised contract is \$3,576,252.00; and

NOW, THEREFORE, BE IT RESOLVED BY THE MAYOR AND COUNCIL OF THE CITY OF GRAND ISLAND, NEBRASKA, that Change Order No. 1 with the contracting firm, Oakview dck, LLC of Red Oak, Iowa, in the amount of \$89,252.00 for WWTP-2010-3 Aeration Basin Improvements project at the Wastewater Treatment Plant is hereby approved.

BE IT FURTHER RESOLVED, that the Mayor is hereby authorized and directed to execute such contract on behalf of the City of Grand Island.

- - -

Adopted by the City Council of the City of Grand Island, Nebraska, August 9, 2011.

Jay Vavricek, Mayor

Attest:

Approved as to Form ☐ _____
August 9, 2011 ☐ City Attorney

RaNae Edwards, City Clerk