



ERIE COUNTY WATER AUTHORITY

INTEROFFICE MEMORANDUM

October 19, 2018

To: Terrence D. McCracken, Secretary to the Authority

From: Leonard F. Kowalski, Senior Distribution Engineer *LFK*

Subject: Contract NC-034
Sturgeon Point Raw Water Pump Station Improvements
ECWA Project No. 201500175

Attached is Change Order request No. 3 for the above referenced project. This Change Order was developed to provide the Contractor, STC Construction Inc. with an additional 186 days for Final Completion of the project. The timing of equipment deliveries coincided with the summer demand and the Authority could not provide the shutdowns being requested and the work on the VFD's had to be delayed until after Labor Day. Additional time is also required to allow the contractor to complete their field data collection for the Arc-Flash portion of the project. The field collection could not be completed until all the electrical modifications were completed. The Arc-Flash study is being performed to be in compliance with NFPA 70E.

A total contract increase of \$88,127.00 is being requested and the budget line is adequately funded to cover the increase. This project involved installing new raw water screens into the existing raw water pump station, modifying the existing wet well, along with major electrical modifications to the pump station. During the project several unforeseen conditions were discovered and needed to be resolved to complete the project. Some of the changes involved additional concrete work that was required to properly install the new screens, but most of the additional costs were associated with electrical changes that were unknown at the time of design. Since this was a rehabilitation project, the new VFD's were installed in the existing electrical equipment footprint which created the need to remove an existing control cabinet and conduits. There was also a discrepancy between the existing as-built drawings and what was found in the field for the conductors that ran between the VFD's and the raw water pumps. The correct conductors had to be installed to make complete the project correctly.

The following documents are attached:

- Blue Authorization Form - this form provides the project name and project number, the action that is being requested of the Board, and it provides a list of approvals that are required prior to being acted on by the Board.
- Four (4) original Change Order requests signed by the Engineering Consultant.

LFK:jmf

Attachments

cc: R.Stoll

CONT-NC-034-1501-I-186-B

CHANGE ORDER NO. 3/Final

**Erie County Water Authority
350 Ellicott Square Building
295 Main Street
Buffalo, New York 14203**

Contract No. 16-26-12 Project No. 201500175 Date: October 16, 2018

Project: Contract NC-34
 Sturgeon Point
 Raw Water Pump Station Improvements

Contractor: STC Construction, Inc.
 63 Zoar Valley Road
 Springville, NY 14141

Engineer: Nussbaumer & Clarke, Inc.
 3556 Lake Shore Road
 Buffalo, New York 14219

DESCRIPTION OF CHANGE:

1. Delete the following under Section 00500 Agreement, Article 3 – Contract Times, 3.02 Days to Achieve Substantial Completion and Final Payment, as previously amended under Change order No. 2.
 - A. The Work shall be substantially completed by April 30, 2018 as provided in paragraph 2.03 of the General Conditions, and completed and ready for final payment by May 14, 2018 in accordance with paragraph 14.07 of the General Conditions.
2. Insert the following under Section 00500 Agreement, Article 3 – Contract Times, 3.03 Days to Achieve Substantial Completion and Final Payment.
 - A. The Work shall be substantially completed by April 30, 2018 as provided in paragraph 2.03 of the General Conditions, and completed and ready for final payment by November 16, 2018 in accordance with paragraph 14.07 of the General Conditions.

3. Delete the following under Section 012700 Measurement and Payment, Part 3 Execution, 3.01 Schedule of Allowances, as previously amended under Change order No. 2:
 - A. Include a stipulated contingency allowance of \$327,227.00 for Bid Item 2 – Miscellaneous Contingency Allowance for use in accordance with the Owner's instruction to perform miscellaneous work such as, but not limited to:
 1. Unanticipated work.
 2. Site Security Services.
 3. Repairs to the 48-inch Raw Water Discharge Header.
 4. Hazardous material handling and disposal beyond that shown or specified.
 5. Rock removal.
 6. Additional watermain materials for the 42-inch Delivered Water Transmission Main.
 7. Mitigation of water infiltration into the electrical duct banks.
 8. Repairs to existing concrete surfaces beyond the limits stipulated.
 9. Repairs to existing masonry surfaces beyond the limits stipulated.
 - B. Include a stipulated contingency allowance of \$22,773.00 for Bid Item 3 – Door Access Contingency Allowance for use in accordance with the Owner's instruction for door access control work to be performed by Stanley Security Services.
 - C. Include a stipulated contingency allowance of \$50,000.00 for Bid Item 4 – SCADA Contingency Allowance for use in accordance with the Owner's instruction for SCADA system work to be performed by Kaman-Zeller-ACS.
4. Insert the following under Section 012700 Measurement and Payment, Part 3 Execution, 3.01 Schedule of Allowances:
 - A. Include a stipulated contingency allowance of \$421,726.00 for Bid Item 2 – Miscellaneous Contingency Allowance for use in accordance with the Owner's instruction to perform miscellaneous work such as, but not limited to:
 1. Unanticipated work.
 2. Site Security Services.
 3. Repairs to the 48-inch Raw Water Discharge Header.
 4. Hazardous material handling and disposal beyond that shown or specified.
 5. Rock removal.
 6. Additional watermain materials for the 42-inch Delivered Water Transmission Main.
 7. Mitigation of water infiltration into the electrical duct banks.
 8. Repairs to existing concrete surfaces beyond the limits stipulated.
 9. Repairs to existing masonry surfaces beyond the limits stipulated.
 - B. Include a stipulated contingency allowance of \$22,773.00 for Bid Item 3 – Door Access Contingency Allowance for use in accordance with the Owner's instruction for door access control work to be performed by Stanley Security Services.

- C. Include a stipulated contingency allowance of \$43,628.00 for Bid Item 4 – SCADA Contingency Allowance for use in accordance with the Owner's instruction for SCADA system work to be performed by Kaman-Zeller-ACS.

REASON FOR CHANGE:

1. The existing Final Completion date is being deleted because a new one is being established.
2. New Final Completion date is being established for the Contract. Additional time for the contract was required to complete the additional work items described in the following section, to account for electrical shutdowns required for the work on the VFDs that could not be provided during the high demand summer season and to accommodate the contractor's final field data collection portion of the Arc-Flash study.
3. The existing Miscellaneous Contingency and SCADA Contingency Allowances are being deleted because new ones are being established.
4. New Miscellaneous Contingency and SCADA Contingency Allowances are being established for the Contract. The work that was added to the contract was related to the original scope of work and was added due to unforeseen conditions and safety improvements.

CHANGE IN CONTRACT PRICE:

1. Not Applicable
2. Not Applicable
3. Not Applicable
4. Miscellaneous Contingency Allowance Increase: \$88,127.00, Transfer from SCADA Contingency Allowance to Miscellaneous Contingency Allowance: \$6,372.00

(The below list of Additional Work Proposal items are paid with the Contingency Allowance Increase in the amount of \$88,127.00, the Transfer from SCADA Contingency Allowance in the amount of \$6,372.00, the Credit for Header Painting in the amount of \$3,871.00 and the Balance of Miscellaneous Contingency Allowance in the amount of \$2,528.00)

- a. \$4,338.00 for material, labor and equipment to perform additional concrete demolition and replacement around the east screen chamber and wet well. Concrete demolition and replacement adjacent to this area was incorporated into the original project, however, additional quantity was identified during construction as this portion was obscured from view during the design process.
- b. \$2,705.00 for material and labor to provide breaker locks and to modify existing covers for proper installation as requested by ECWA.
- c. \$1,472.00 for material and labor to provide framing and flashing around the west store front door opening. The framing was required to cover the exposed speed tile walls around the perimeter of the door rough opening that were not visible prior to the demolition of the existing overhead door.
- d. \$43,752.00 for material and labor to replace the ground wire and conductors between the switchboard and the VFD's and from the VFD's to the Raw Water Pump motors. The conductor size as noted on the record drawings were incorrect and were not verifiable during the design phase.
- e. \$12,009.00 for material and labor to replace the VFD control circuit wiring.
- f. \$12,878.00 for labor and materials for electrical demolition and installation of various conduits and conductors and control wires within manholes and within the basement of the raw water building. Condition of electrical components were unknown during the design phase and were identified and evaluated during construction.
- g. \$17,387.00 for material and labor unforeseen demolition and installation of conduit, wiring and electrical components to accommodate the removal of the existing control cabinet adjacent to newly installed VFD's and for the installation and accommodation of time delay relays on the seal water circuits due to unforeseen momentary seal water flow fluctuations.
- h. \$852 for material and labor to install steel threshold at the west store front opening. The threshold was required to span the gap between the door and the recess in the floor that was not visible prior to the demolition of the existing overhead door.
- i. \$1,312.00 for material and labor for the replacement of the actuator on the existing outside air intake damper on the south wall near the south east corner of the building. The existing actuator is incompatible with the upgraded electrical feed to this location.
- j. \$1,637.00 for disposal costs and required medical testing associated with the previously approved lead paint abatement on the 48" header pipe.
- k. \$986.00 for materials and labor to drill hole in the floor slab to relieve ponding water and rigging and removal of stop logs from basement. The ponding of water

in the location in question was not identified as this location was chronically wet due to the leaking screen shrouds, therefore, this condition was not identified until the screen shrouds were replaced. The stop logs were identified as no longer required due to the smooth operation of the newly installed sluice gates.

- I. \$1,570.00 to cover the additional bond costs for work performed above and beyond the current contract price (as allowed under Specification Section 00700-29, Article 11.01.A.5.i) as none of the above listed proposals include bond costs.

CHANGE IN CONTRACT TIME:

1. Not Applicable
2. Addition of 186 days to the Final Completion date.
3. Not Applicable
4. Not Applicable

APPROVALS - CHANGE ORDER NO. 3

Erie County Water Authority: _____ Date: _____
Chairman

Contractor: _____ Date: _____
STC Construction, Inc.

Engineer: _____ Date: 10/16/2018
Nussbaumer & Clarke, Inc.

SUMMARY

CHANGE IN CONTRACT PRICE:

Original Contract Price:
\$ 3,512,506.00

**Net changes from previous
Change Orders:**
No. 1 - 2
\$ 139,914.00

**Contract Price prior to this
Change Order:**
\$ 3,652,420.00

**Net Increase of this
Change Order:**
\$ 88,127.00

**Contract Price with All Approved
Change Orders:**
\$ 3,740,547.00

CHANGE IN CONTRACT TIME:

Original Contract Time:
Milestone M1: Feb. 4, 2017
Substantial Completion: Jan. 31, 2018
Final Completion: Feb. 28, 2018

**Net changes from Previous
Change Orders:**
No. 1 - 2

Milestone M1: 85 days
Milestone M2: 0 days
Milestone M3: 0 days
Milestone M4: 0 days
Substantial Completion: 89 days
Final Completion: 75 days

**Contract Times prior to this
Change Order:**
Milestone M1: Apr. 30, 2017
Milestone M2: Mar. 31, 2018
Milestone M3: Mar. 31, 2018
Milestone M4: Apr. 30, 2018
Substantial Completion: Apr. 30, 2018
Final Completion: May. 14, 2018

**Net Increase of this
Change Order:**
Milestone M1: 0 days
Milestone M2: 0 days
Milestone M3: 0 days
Milestone M4: 0 days
Substantial Completion: 0 days
Final Completion: 186 days

**Contract Times with all Approved
Change Orders:**
Milestone M1: Apr. 30, 2017
Milestone M2: Mar. 31, 2018
Milestone M3: Mar. 31, 2018
Milestone M4: Apr. 30, 2018
Substantial Completion: Apr. 30, 2018
Final Completion: Nov. 16, 2018