

CITY OF HIGH POINT

AGENDA ITEM



Title: Ward Water Treatment Plant/ Lead paint Abatement and Electrical Building HVAC modification.
Wharton -Smith Inc. - Change Order # 2

From: Terry Houk – Public Services Director
Derrick Boone – Asst. Public Services Director
Nawfal Shujaa- Projects Engineer

Meeting Date: March 2, 2020

Public Hearing: No

Advertising Date: N/A

Advertised By: N/A

Attachments: Photo's (1-3) & Attachment (A)

PURPOSE:

The Public Services Department recommends that the City Council approves a change order for performing the work listed and further explained in attachment (A) at WARD WTP.

Below are the additional work items;

1. To abate/remove and safely dispose of the lead-based coating from the existing pipes, and equipment at the contractor working areas in accordance to the WARD WTP Upgrades contract document, and to recoat the abated surfaces.
2. To change the type of packaged HVAC unit for the new electrical building into a cooling unit and indoor wall mount heater for more efficient climate control that supports the requirements of the newly installed electrical equipment.
3. To relocate the non-potable waterline away from MCC # 3 electrical control center.

BACKGROUND:

Ward Water Treatment Plant produces potable water to the City of High Point citizens. The electrical, HVAC and instrumentation needed to be upgraded to assure the continuity of providing the required quantity and quality of water.

1. The contract scope of work includes an item for testing the existing equipment coating by a certified material testing firm for lead paint. The test identified lead-based paint on some of the pipes, pumps, and fittings. The contractor stopped working in the affected area in accordance with the contract document and as part of their safety protocols.
2. The original design of the electrical building HVAC unit was to install a (heat-cool) packaged unit, after approving the new electrical equipment to be installed in the electrical building it was determined that a change in the HVAC design is required for better efficiency and durability.
3. Master Control Center (MCC) #3 is to provide power to the new HVAC units as well as other electrical panels, it was determined that a Water Line is directly above MCC#3 should be relocated to meet the North Carolina Electrical Code requirement.

BUDGET IMPACT:

Funds for this are available in the FY 2019-2020 budget

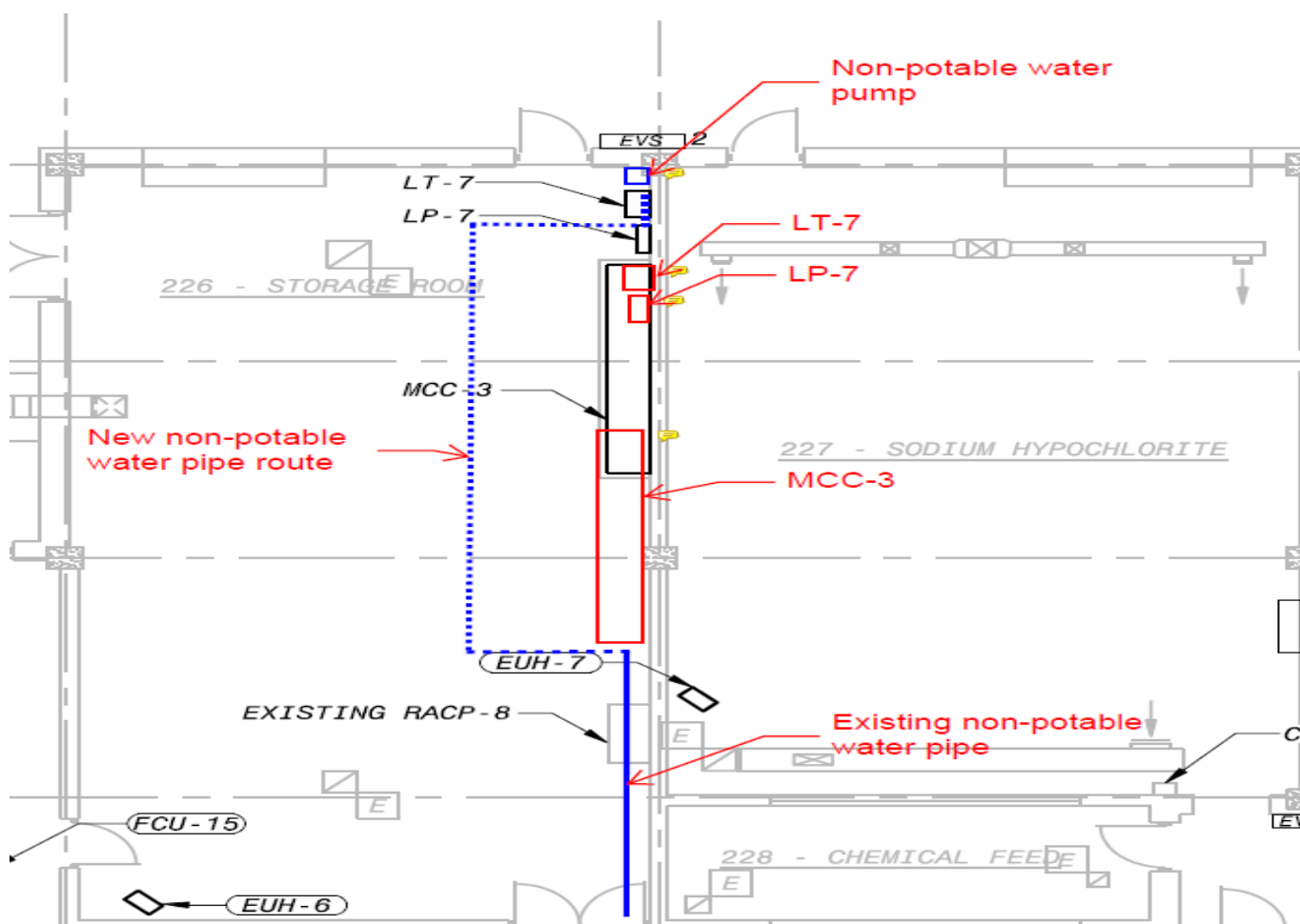
RECOMMENDATION / ACTION REQUESTED:

The Public Services Department recommends approving Change Order #2 in the amount of \$ 209,817.00.

Photo (1): High service pumps/pipes



Photo (2): Transfer pumps/pipes





Attachment (A)

February 21st, 2020

Terry Houk
Public Services Director
City of High Point (CHP)
211 South Hamilton Street
High Point, NC 27260

Ward Water Plant Upgrades
B&V Project 190221
B&V File 81.1750

**Subject: Ward Water Treatment Plant Upgrades Project
Change Order 002 Descriptive Narrative**

Dear Mr. Houk:

This communication serves the objective to document and summarize an amendment to the Contract Documents in terms of changes to both the Contract Price and Contract Time by means of Change Order 002. This contractual amendment is being recommended in duly conformance to Article 11 "*Amending the Contract Documents; Changes in the Work*" as stipulated in the EJCDC C-700 Standard General Conditions of the Construction Contract between Wharton Smith Inc. (Contractor) and The City of High Point (Owner).

The detail scope of changes to be incorporated into the Contract Documents via Change Order 002 are as follows:

Item #1 – Lead Paint Abatement of High Service and Transfer Pumps Systems, including associated piping and accessories for an additional cost of \$193,774.00, and a time extension of 90 calendar days.

In accordance with Par. 18.02 "*Potential Lead Based Paint*" from Specification 01015 "*Project Requirements*" of the Project Manual, the City of High Point was uncertain at the time of project bid whether the pump/piping equipment to be demolished as part of this project at the existing High Service and Transfer Pumps Systems was coated with lead-based paint. Due to these circumstances, the scope of the Contract included provisions for the Contractor to perform coating testing where lead paint was suspected through a certified material testing firm.

For such lead-containing testing survey, the Contractor retained the services of ATC from Charlotte, NC. This certified firm conducted a random lead-containing paint screening across the accessible areas of the High Service and Transfer Pumps, and associated piping, which revealed painted surfaces on the selected equipment with detectable lead concentration in excess of regulated levels. Based on such field conditions along with associated contractual dispositions, considering lead-based paint was identified and

Contractor's activities cause this to present a hazard to field personnel or the environment, the Contractor was guided to stop work in the affected area and engage a lead abatement Subcontractor to encapsulate, remove and dispose of all lead based paint, as well as monitor environment air quality levels at all times during such process in accordance with current regulations of the Environmental Protection Agency and the U. S. Department of Labor Occupational Safety and Health Administration, the state lead paint regulating agency, and any local government agency. Payment for such lead-paint abatement work is set contractually to be covered by a Change Order per Specification 01015.

Item #2 – Modification to the Packaged Air Conditioning Unit (PAC) at the Electrical Building for an additional cost of \$9,023.00 with no time extension.

The scope of contracted work for this project includes the installation of a roof mounted PAC Unit at the new Electrical Building, which is the structured housing the new Switchgear #1 and the Adjustable Frequency Drives for the High Service Pumps, among other equipment.

During construction, the reviews of the new electrical equipment submittals revealed that heat load emissions from this equipment would render the new packaged heat pump component of the PAC Unit to be not as efficient as originally conceptualized. With the aim to optimize long term equipment operation and power efficiency, which will result in prospective operational savings to the City of High Point, several discrete modifications were incorporated into this new HVAC System, which included the replacement of the packaged heat pump with an interior wall-mounted heater unit located inside the Electrical Building, as well as the substitution of the roof mounted PAC Unit by a roof mounted Air Handling Unit, including minor electrical modifications associated with equipment wiring and conduit layout as well as power hardware such as panel breakers.

Item #3 – Relocation of Non-Potable Water Line located above the new Motor Control Center #3 for an additional cost of \$7,020.00 with no time extension.

The scope of contracted work for this project includes the installation of a new Motor Control Center (MCC-3), which provides power and control provisions to new HVAC equipment and I&C Panels at the main Operations Building. This new MCC is in turn housed on the second floor of the building inside Storage Room #226.

During construction, the review of the MCC shop drawing submittal revealed that an existing Non-Potable Water Line was closer to the MCC upper side than originally anticipated. Such existing water line runs exposed and closed to the wall just nearby the roof.

Per the National Electric Code, all water lines shall be located at a minimum of 6 feet away from this type of electrical equipment, resulting in the need to relocate the existing water line within the interior premises of the storage room. The scope of additional work entails disassembling and relocating the water line inside Storage Room #226, approximately 4-5"

west of column "E" between the building potable water line (copper pipe) and the existing drain pipe. Also, the additional scope of work consist of the installation of a stainless steel splash guard to be located just under the existing copper pipe/vinyl tube fitting to provide additional protection to the new MCC in any event of a water leak, as well as the relocation of an existing non-potable water pump to the north east corner of Storage Room #226 to accommodate additional clearance for the installation of the new instruments/panel LT-7 and LP-7.

The total Contract Price adjustment by Change Order 002 is \$209,817.00, including a Contract Time adjustment of 90 calendar days to the date of Final Completion of the Work.

Respectfully,

BLACK & VEATCH INTERNATIONAL COMPANY



Ramon Ortiz-Morgado
Construction Manager

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