



Illinois Department of Transportation

2300 South Dirksen Parkway / Springfield, Illinois / 62764

November 19, 2014

SUBJECT: Williams Road
Section 09-00030-00-BR (Warrenville)
DuPage County
Contract No. 63761
Item 34
November 21, 2014 Letting
Addendum (A)

NOTICE TO PROSPECTIVE BIDDERS:

Due to clarify information necessary to revise the following:

- 1. Revised pages 31, 35, 37 & 39 of the Special Provisions.**
- 2. Revised plan sheets 26 & 28.**

Prime contractors must utilize the enclosed material when preparing their bid and must include any Schedule of Prices changes in their bidding proposal.

Bidders using computer-generated bids are cautioned to reflect any and all Schedule of Prices changes, if involved, into their computer programs.

Very truly yours,

John Baranzelli, P.E.
Acting Engineer of Design and Environment

A handwritten signature in black ink, reading "Ted B. Walschleger P.E." with a stylized flourish at the end.

By: Ted B. Walschleger, P.E.
Engineer of Project Management

Warranty:

All components covered under this pay item shall carry, at a minimum, comprehensive, parts and labor, twelve (12) months guarantee against defects in workmanship and material from the date of final inspection and acceptance.

In the event a component fails to perform as specified or is proven defective during the warranty period, excluding items of supply normally expended during operation, the manufacturer shall provide a replacement part without cost to the City.

Basis of Payment. This work shall be paid for at the contract lump sum price for SANITARY SEWER LIFT STATION which price shall include furnishing and installing the wet well structure, valve vault structure, and all piping, pumps, valves, fittings, and accessories within both structures and between the wet well and valve vault exclusive of all electrical and SCADA related items. The lift station shall include a guiderail or guide cable system for pump removal without entering the wet well, two submersible pumps with hydraulic sealing flanges, power cords, pump guides, pump mounting plates, with discharge elbows and upper and lower guide rail supports, sealing flanges, access frames and covers, ladders, guide rail supports, carrier assembly, stainless steel pump lifting chain with hooks, vent piping, sump pumps, the valve vault sump pump outlet pipe, the wet well protective coating, concrete foundation for the control panel, and the Contractor and pump manufacturer's start-up services. This price shall also include excavation, backfill, trench backfill, dewatering, and disposal of removed material associated with these items.

PUMP STATION ELECTRICAL WORK

This work shall be in accordance with Division 800 of the Standard Specifications, NFPA 70 National Electrical Code, the manufacturer's instructions and recommendations, the Electrical Diagram in the drawings, and the Supplemental Specifications for the Pump Station Electrical Work contained herein. This work shall include furnishing and installing all necessary items related to both the electrical and control systems associated with the sanitary sewer lift station, including all labor, materials, and equipment for a complete, tested and ready for operation system.

Any apparatus, appliance, material, work or minor details not shown in plan or specified, but necessary for proper installation and operation, shall be included in the price of this item at no additional cost to the City, the same as if herein specified or shown.

This work shall be completed by an experienced and qualified electrical contractor who has completed a minimum of five (5) similar facilities in type and size within the last five (5) years.

This item includes all SCADA and electrical items including conduits, wires, cables, GFI outlets, NEMA-3R weatherproof pad mounted traffic enclosure for controls, meter, manual transfer switch, connection for a portable generator, transducers, and SCADA and float switches. This price shall also include excavation, backfill, trench backfill, dewatering, and disposal of removed material associated with these items. This work shall also include start-up and testing of all electrical systems and the lift station.

The control panel manufacturer shall be listed with Underwriters Laboratories under UL508 (Type L) listing category for the manufacture of control equipment. The control panel shall contain UL listed components.

Operator Interface:

The operator interface shall show system status, and shall provide the operator with convenient touch screen for the entry of pass codes, set points, and commands. Touch screen shall produce instructional screens that will guide the operator in set point entry and alarm diagnosis. Multi-level password protection shall be available to prevent unauthorized set point changes. All information displayed on the screen shall be in plain English or simple graphic representations.

The touch screen operator interface shall be a 7" color TFT. SVGA(800X600) with 128MB Flash ROM and have RS232/485/422 ports as well as Host and high speed Client USB connections

Statistical display screen:

1. Pump status (off/running/alarm) (Each pump)
2. Wet well level
3. Level set points
4. Alarm conditions
5. Pump failure
6. Transducer failure

Set point screens:

1. Level set points
2. Pump curve staging points
3. Control loop constants
4. Alarm set points
5. All set points shall be pass word protected

Pump Controller "Traffic" Enclosure:

The control panel / SCADA panel and all above mentioned equipment shall be mounted in a free standing, traffic type, Stainless Steel NEMA-3R module. In addition to the control panel, the traffic box shall include a dual 120 volt AC GFI convenience outlet. A meter socket shall be supplied and mounted by the contractor. The Main Service Disconnect and manual transfer switch shall be located in the traffic box enclosure.

SCADA:

The SCADA controls shall allow the transducer primary control and use the float system as a backup in case the transducer fails. A separate conduit shall be installed for the transducer. The pump station controls shall include a modem that shall be tied into the City's SCADA system Master PLC located at City Hall for monitoring the necessary alarms similar to that installed at the City's Cerny Park lift station. A copy of the monitoring schedule (list of inputs and outputs) is on file with the Engineer for reference.

The SCADA system shall use a dedicated phone line that communicates from the new pump controller located at the Williams Road pump station to the master computer located at City Hall.

Operation of System:

On sump level rise, the pressure shall energize and start lead pump. With lead pump operating sump level shall lower until the off level is reached, thereby de-energizing the lead pump. The system shall alternate on the stopping of "lead" pump so the opposite lag pump will start on next operation. If sump level continues to rise when lead pump is operating, the lag pump shall start upon reaching the override. Both lead and lag pump shall operate together until the off level is reached. If level continues to rise when both pumps are operating, and the high level is reached, the high level alarm shall be activated. If one pump should fail for any reason, the second pump shall operate on the override control.

QUALITY ASSURANCE:

Testing:

1. Manual Transfer Switch and all required provisions for portable generator.
2. The control panel shall be thoroughly tested at the factory prior to shipment.

Equipment Identification: All electrical equipment shall be identified in accordance with these specifications. All identification labels, both within the enclosure and external, shall be laser-screened, laminated Mylar. All control wiring shall be numbered on each termination.

Screw-in type, engraved nameplates or laser-screened laminated Mylar shall be provided to identify all individually mounted push-buttons, rocker switches, lights, meters, disconnect switches, circuit breakers, motor starters, transformers, relays, fuses, phase monitors, surge arrestors and any other equipment for which identification is required for eventual service or replacement. This includes the appropriate equipment within the cabinet. Embossed tape is not acceptable.

A factory ID label shall be installed inside the outer door including the following information:

1. Factory Order Number
2. Factory Ship Date
3. Supply Voltage, Phase and Frequency
4. Control Voltage
5. Electrical Wiring Diagram Number
6. Wire (number of incoming wires)
7. Motor HP and Full Load Current

A warning label stating "DANGER - Disconnect all sources of power before opening door" shall be installed on the door.

Control switches, indicators and all back panel-mounted components shall be clearly labeled in accordance with the schematic ladder diagram.

Component Standards: All equipment and materials shall be new and shall bear the manufacturers' name and trade name. In cases where the standard has been established for the particular material, the material shall be so labeled. The equipment to be furnished shall be

3. A complete detailed O & M manual specifically prepared for this system in a 3-ring binder. A typical general O & M manual will not be acceptable. It shall include, at a minimum, installation instructions, operating instructions, control cabinet schematics, wiring diagrams, parts list, and, where applicable, test data and curves shall be provided.
4. Control details and electrical schematic diagrams.
5. All other information necessary to enable the Engineer to determine whether the proposed equipment meets the specifications.

Basis of Payment. This work shall be paid for at the contract lump sum price for PUMP STATION ELECTRICAL WORK which price shall include furnishing and installing the electrical system and the Supervisory Control and Data Acquisition (SCADA) system for a complete installation as indicated on the drawings and outlined in the provisions above and Supplemental Specifications for Pump Station Electrical Work. The electrical system includes assembling and mounting the control panel, the pump controller, manual transfer switch, all connections and controls for connection to a portable generator, feeds to the pumps, GFI outlets, conduits, cables, connections, grounding, and all associated items and electrical testing. SCADA system includes furnishing and installing the floats and level transducers and feeds to the floats and level transducers, related appurtenances, programming, and all SCADA testing. The lump sum price shall also include one full day of start-up services, excavation, backfill, trench backfill, dewatering, and disposal of removed material.

REMOVE EXISTING VALVE AND VAULT

This work shall be in accordance with Section 605 of the Standard Specifications insofar as applicable and the following provisions. This work shall consist of all work necessary for the full depth removal of the valve vault and removal and salvage of the existing valve. The valve shall be delivered to the City yard. Delivery shall be included in the cost of the item being removed.

This work will be paid for at the contract unit price per each for REMOVE EXISTING VALVE AND VAULT which includes all material, equipment, and labor for a complete removal, including delivery of the salvaged valve to the City yard.

CONCRETE BRIDGE RAIL, SIDEWALK MOUNTED

This work consists of constructing a sidewalk mounted concrete bridge rail at the locations shown on the plans. This work shall be in accordance with the applicable articles of Section 503 of the Standard Specifications, the details in the plans and the following provisions.

Concrete Bridge Rail, Sidewalk Mounted will be measured for payment in place in feet. Reinforcement bars in the concrete bridge rail will not be measured for payment separately.

This work will be paid for at the contract unit price per foot for CONCRETE BRIDGE RAIL, SIDEWALK MOUNTED. Reinforcement bars in the concrete bridge rail will not be paid for separately, but shall be included in the cost of this item.