



1068-2014 ADDENDUM 3

Water Treatment Research and Process Optimization Facility Mechanical and Electrical Construction Services

URGENT

**PLEASE FORWARD THIS DOCUMENT TO
WHOEVER IS IN POSSESSION OF THE BID
OPPORTUNITY**

ISSUED: February 26, 2015
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**THIS ADDENDUM SHALL BE INCORPORATED
INTO THE BID OPPORTUNITY AND SHALL
FORM A PART OF THE CONTRACT
DOCUMENTS**

Template Version: A20131129

Please note the following and attached changes, corrections, additions, deletions, information and/or instructions in connection with the Bid Opportunity, and be governed accordingly. Failure to acknowledge receipt of this Addendum in Paragraph 8 of Form A: Bid may render your Bid non-responsive.

PART E – SPECIFICATIONS

E1. APPLICABLE SPECIFICATION AND DRAWINGS

Add: E1.4 The shop drawings for the PLC produced by the vendor are available for viewing at CH2M HILL (1301 Kenaston Boulevard, Winnipeg, MB).

E2. COMPONENTS OF WORK

Revise: E2.2(a)

Supply one Mechanical Foreman to facilitate in the construction of the City of Winnipeg Water Treatment Research and Process Optimization (WTRPO) Plant. The Mechanical Foreman shall have a minimum of 10 years' experience supervising the day to day activities on an industrial construction site. The Mechanical Foreman shall assist the City Representative to prepare a project schedule. The schedule shall include task hierarchy, manpower estimates, milestones, start-up and commissioning activities. The Mechanical Foreman shall prepare material take-offs and coordinate the purchasing of this material. The Mechanical Foreman shall work with the City Representative to schedule the mechanical installation portion of the work. The Mechanical Foreman shall direct the day to day activities/work of the journeyperson plumbers/ pipefitters/ millwrights. The Mechanical Foreman shall cooperate with the Electrical Foreman to maintain progress of both trades throughout the project. The Mechanical Foreman is to have experience in the layout and installation of PVC pressure piping (pigmented and clear), stainless steel piping with threaded fittings, stainless steel tubing with compression fittings and soldered copper tubing with pressure fittings. The Mechanical Foreman shall have experience in the layout and placement of pumps, compressors, tanks, installation of instrumentation and the layout and installation other equipment associated with WTRPO plant. The Mechanical Foreman shall review installation procedures prior to installing equipment. The Mechanical Foreman shall have experience in start-up, troubleshooting and commissioning of industrial systems. Costs to be broken out for:

- (i) Installation of WTRPO less filter Bank B, include installation of FE/FIT-X4220 (flow meter and transmitter) in this component of work,

- (ii) Installation of filter Bank B with installation of systems after FE/FIT-X4220 (flow meter and transmitter) in this component of work, and
- (iii) Installation of hot water heater and emergency eyewashes/showers.

Revise: E2.2(b)

Supply one Electrical Foreman to facilitate in the construction of the City of Winnipeg Water Treatment Research and Process Optimization (WTRPO) Plant. The Electrical Foreman shall have a minimum of 10 years' experience supervising the day to day activities on an industrial construction site. The Electrical Foreman shall assist the City Representative to prepare a project schedule. The schedule shall include task hierarchy, manpower estimates, milestones, start-up and commissioning activities. The Electrical Foreman shall prepare material take-offs and coordinate the purchasing of this material. The Electrical Foreman shall work with the City Representative to schedule the electrical installation portion of the work. The Electrical Foreman shall direct the day to day activities/work of the journeyman electricians. The Electrical Foreman shall cooperate with the Mechanical Foreman to maintain progress of both trades throughout the project. The Electrical Foreman is to have experience in the layout and installation of cable tray, conduit systems, low voltage wiring (600V and less), instrumentation wiring/terminations, fibre-optic cable and 347V lighting systems. The Electrical Foreman will have experience in the layout, placement and terminations of motor control centres (MCC) and programmable logic controller (PLC) cabinets. The Electrical Foreman shall review installation procedures prior to installing equipment. The Electrical Foreman will have experience in start-up, troubleshooting and commissioning of industrial systems. Costs to be broken out for:

- (i) Installation of WTRPO less filter Bank B, include installation of FE/FIT-X4220 (flow meter and transmitter) in this component of work,
- (ii) Installation of filter Bank B with installation of systems after FE/FIT-X4220 (flow meter and transmitter) in this component of work,
- (iii) Installation of hot water heater and emergency eyewashes/showers, and
- (iv) Installation of new lighting.

Revise: E2.2(c)

Supply journeyman plumbers, pipefitters, welders or millwrights (as dictated by the work requirement) to facilitate in the construction of the City of Winnipeg Water Treatment Research and Process Optimization Facility. The journeyman will have a minimum of five (5) years' experience similar to the work being completed on industrial construction sites. The journeyman is to have experience in the layout and installation of PVC pressure piping (pigmented and clear), stainless steel tubing with compression fittings and soldered copper tubing with pressure fittings. The journeyman will have experience in the layout and placement of pumps, compressors, tanks, installation of instrumentation and the layout and installation other equipment associated with Plant. Costs to be broken out for:

- (i) Installation of WTRPO less filter Bank B, include installation of FE/FIT-X4220 (flow meter and transmitter) in this component of work,
- (ii) Installation of filter Bank B with installation of systems after FE/FIT-X4220 (flow meter and transmitter) in this component of work, and
- (iii) Installation of hot water heater and emergency eyewashes/showers.

Revise: E2.2(d)

Supply industrial electricians, instrumentation mechanics to facilitate in the construction of the City of Winnipeg Water Treatment Research and Process Optimization Plant. The journeyman will have a minimum of five (5) years' electrical/instrumentation experience on an industrial construction site. The journeyman are to have experience in the layout and installation of cable tray, conduit systems, low voltage wiring (600V and less), instrumentation wiring/terminations, fibre-optic cable and 347V lighting systems. The

journeyperson will have experience in the layout, placement and terminations of motor control centres (MCC) and programmable logic controller (PLC) cabinets.
Costs to be broken out for:

- (i) Installation of WTRPO less filter Bank B, include installation of FE/FIT-X4220 (flow meter and transmitter) in this component of work,
- (ii) Installation of filter Bank B with installation of systems after FE/FIT-X4220 (flow meter and transmitter) in this component of work,
- (iii) Installation of hot water heater and emergency eyewashes/showers, and
- (iv) Installation of new lighting.

Add: E2.2 (v)

For the ozone alarm signaling devices:

- (i) Supply and install three (3) relay control enclosures complete with six (6) control relays and field terminal blocks.
- (ii) Relays to be Omron, 120 VAC coil voltage, and 120 VAC rate 4PDT contacts.
- (iii) Connect relays in circuit to activate existing ozone alarm light and two (2) new ozone alarm tower lights based on signals from AIT-X6020, AIT-X6030, and existing ozone alarm system. Relay contacts shall be arranged to isolate power supply to light from separate power sources.
- (iv) Mount one new ozone alarm tower light in residuals handling process area and one new ozone alarm light outside door, next to HS-X3300
- (v) Mount relay enclosure on closet wall to alarm light.