



663-2023 ADDENDUM 1

PROFESSIONAL CONSULTING SERVICES FOR JESSIE FLOOD PUMPING STATION (FPS) UPGRADES

URGENT

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

ISSUED: September 1, 2023
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**THIS ADDENDUM SHALL BE INCORPORATED
INTO THE BID/PROPOSAL AND SHALL FORM
A PART OF THE CONTRACT DOCUMENTS**

Template Version: Add 2021-03-05

Please note the following and attached changes, corrections, additions, deletions, information and/or instructions in connection with the Bid/Proposal, and be governed accordingly. Failure to acknowledge receipt of this Addendum in Paragraph 10 of Form A: Bid/Proposal may render your Bid/Proposal non-responsive.

PART B – BIDDING PROCEDURES

Revise: B2.1 to read: The Submission Deadline is 12:00 noon Winnipeg time, September 14th, 2023
Add: B11.2 (f) PLC programming lead engineer.

PART D – SUPPLEMENTAL CONDITIONS

Revise: D3.3 (a) (iii) to read: Evaluate existing condition of 750 kVA transformer. Replace the transformer should it be determined to violate current codes or if the transformer is found to be leaking oil. New service entrance rated 5 kV switchgear complete with main disconnect switch and metering section will be required to be added upstream of the 750-kVA transformer.

Add: D3.3 (b) (vi) Provide heated supplied air to all rooms of the station except for the Wet Well.

Revise: D3.3 (c) (v) to read: Replacement of the stairs/ladders/railings in wet well as required.

Add: D3.3(c) (ix) New chain link fence on top of discharge box to prevent unauthorized access to the station roof.

Revise: D5 (g) to read: Develop a clearly defined functional design and summary preliminary report based upon the Water and Waste Departments requirements, as defined by above the project quality, scope, budget, and schedule will also be confirmed and refined. A Class three (3) estimate to be prepared once the preliminary design has been agreed upon between the overall design team.

Revise: D6.1(b) (ii)(g) to read: New Motor Control Centre(s) (MCC). Include the following:

- Service entrance rated main breaker complete with adjustable Long, Short and Instantaneous (LSI) settings. Main breaker shall be in a service entrance compartment and have a kirk key interlock installed.
- digital power metering and connected into PLC Control Panel.
- Provide for the installation of a Transient Voltage Surge Suppressor (TVSS) with signal tied into the new PLC Control Panel.

- Provide for the installation of a power fail relay with automatic reset and tie into the new PLC Control Panel.
- Pump motor starters complete with soft starts, by-pass contactors and isolation contactors. Note that isolation contractors are required to only be closed when flood pumps are called to run. Flood pump starters also require interval timing relay controls such that only one (1) flood pump can be started at any time with a minimum of ten (10) seconds before another flood pump can start up. Each flood pump shall have the following signals sent to the PLC control panel for remote monitoring: Pump Ready, Pump Running, Pump Fault, Auto mode and Manual mode, An emergency stop button shall be provided for each flood pump on the MCC, adjacent to each flood motor and adjacent to each flood pump in the dry well.
- Provide across-the-line starter for HVAC cooling fan along with HVAC fans. Each fan shall have the following signals sent to the PLC control panel for remote monitoring: Fan Running, Fan Fault.
- Provide a breaker for the 120/240V transformer.
- Provide separate breakers for each electric heating load (unit heater, duct heater etc.).

- Revise: D6.1(b) (ii) (k) to read: Provide details regarding the type and configuration of the ventilation controls, independent of any PLC controls and tied into the PLC Control Panel for remote monitoring. At this time, separate HVAC controllers tied into an HVAC Control Panel shall be provided for control of all HVAC dampers. Unless approved by the City, all ventilation dampers are required to have motorized actuators with status signals tied into the PLC Control Panel. All motorized dampers shall be shown in motor connection diagrams (if connected into MCC controls) or provided as loop diagrams.
- Add: D6.1(b) (ii) (r) New vibration sensors and 4 – 20 mA transmitters shall be added for each flood pump. Sensors shall be added to motor top bearing and pump top bearing. Connect vibration signals into PLC Control Panel for monitoring.
- Add: D6.1(b) (ii) (s) New vibration sensors and 4 – 20 mA transmitters shall be added for each flood pump. Sensors shall be added to motor top bearing and pump top bearing. Connect vibration signals into PLC Control Panel for monitoring.
- Revise: D6.1(b) (iii) (b) to read: The PLC shall be a Schneider M580 PLC with DNP3 capability and programmed using the Unity Pro software package. The Consultant shall design the PLC system with NOR cards for wireless and wired (PSTN) communications to SCADA operators. Provide programming for the new Schneider Electric M580 PLC. PLC programming and communication, set up DNP3 mapping including all internal PLC variables and establish communication with SCADA.
- Add: D6.1(b) (iii) (q) The station contains an existing CSO equipment panel and existing CSO instruments that will be reused and is currently fed using a 120 VAC power feed. The existing CSO signals will be required to be sent to the new PLC Control Panel. The 24 VDC power supply within the CSO Panel shall be removed and a new feed provided by PLC Control Panel 24 VDC UPS system. This will ensure that all CSO instruments are backed up in the event of a power failure. A new 120 VAC feed will also need to be provided to the CSO Panel.
- Add: D6.1(c) (i) (i) All HVAC fans shall be shall include a current switch within the motor starter and tied into the PLC Control Panel for monitoring. Preference is to use motors that are direct driven as opposed to belt driven.
- Add: D6.1(c) (i) (j) Should the existing 750 kVA transformer be reused, all HVAC heaters (duct, unit, etc.) shall be on contactors within the motor starter buckets. When all flood pumps are running the contactors shall automatically open in order to load shed such that the main

transformer is not overloaded. Should the transformer be replaced and be larger than 750 kVA, then no contactors and/or load shedding is required.

Revise: D6.1(d) (i) (d) to read: Replacement of the stairs/ladders/railings in wet well as required.

Add: D6.1(d) (i) (g) New chain link fence on top of discharge box.

Add: D6.2(a) (iv) (a) Include PLC programming in pdf format including HMI screens along with software file.

Add: D6.2(a) (v) (a) Include PLC programming in pdf format including HMI screens along with software file

Delete: D6.5 (d) (x) Delete the second (2) D6.5 (d) (x) Outdoor temporary generator hookup arrangement and bill of materials.

Add: D6.5 (g) The following PLC Programming Construction Documents will be required to be produced by the Consultant and reviewed by the City prior to the project going to Tender:

Add: D6.5 (g) (i) PLC Programming in report format. The PLC Programming report shall include a table of content, setup of each I/O card, a section for mapping of signal and internal variables, the general PLC program structure, control details of all alarm and control logic along with screenshots of the HMI windows.

Add: D7.2(m) (i) Unless approved by the City, the Consultant will be required to ensure that separate commissioning forms are filled out for each piece of equipment. All equipment associated with the flood pump operation (flood motors, PLC Control Panel, level transmitter, motor control center, 5 kV switchgear, main transformer, etc.) shall be submitted to the Consulting Contract Administrator no later than March 1, 2025. The remaining of commission forms shall be submitted no later than one (1) week after Substantial Performance has been reached. All commissioning forms filled out shall be included in all final Operations & Maintenance Manuals.

Revise: D8.1.2 (vii) to read: Provide a sealed arc flash study report including SKM model, incident energy, protective device coordination with time current curves (TCCs) and short-circuit duty information. The Consultant will be required to print and attach all arc flash labels for all equipment. For any equipment with multiple sections (5 kV switchgear, motor control centers, etc.) an arc flash label is required on each section.

Add: D8.2 (e) After final sealed record drawings have been received, the Consultant shall arrange to have the single line diagram along with all P&ID drawings printed in full size that are laminated and mounted onto foam core. The Consultant will be required to hang all drawings on the station main floor walls.

Add: D8.2 (f) Record documents shall also include Soft Starter Setting Letters, Control Narrative Report, PLC Programming Report and Arc Flash Report.

APPENDICES

Add: Appendix F Asset Equipment Register Template