

## ADDENDUM | No. 1

<b>PROJECT</b>	LAKE NORDEN WTF IMPROVEMENTS AND WELLFIELD CONTROLS - 2018
<b>BID DATE</b>	2:00 PM CST 11/08/2018
<b>BID LOCATION</b>	Lake Norden City Hall 508 Main Avenue, Lake Norden, SD 57248
<b>ISSUE DATE</b>	10/22/2018
<b>NOTICE</b>	Failure to acknowledge all addenda in the BID may cause rejection of the BID. See Instructions to Bidders.

### SCOPE OF THIS ADDENDUM

The following becomes a part of the original project manual and drawings, taking precedence over the items that may conflict. The bidder shall note receipt and make acknowledgment of the Addendum on his/her bid form, incorporating its provision in his/her bid.

### PRIOR APPROVALS

The following manufacturers of the items and materials have been added to the list of approved manufacturers. Listing of an item does not change the requirements of the specifications. Equipment furnished shall meet the materials and performance requirements as specified.

SECTION	DESCRIPTION	MANUFACTURER
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### GENERAL

#### PROJECT MANUAL

The following additions, changes and clarifications have been made to the Project Manual.

#### Section 40 0000– Integrator Controls,

*Add entire Section*



SECTION 40 0000 – INTEGRATOR COORDINATION

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Definition of the various “integrators” responsibilities

B. Related Sections include but are not necessarily limited to:

1. Division 1 For Submittal Requirements
2. Division 40 Section “Process Integration,” for software and telemetry integration, controls, and requirements.
3. Division 40 Section “Instrumentation and Control for Process Systems,” for general requirements for hardware products and integration.

1.2 SYSTEM DESCRIPTION

A. The control system shall be the result of the combined efforts of the Control System Integrator, Electrical Sub-Contractor, Process, and Telemetry Equipment Suppliers. Descriptions are provided as follows:

1. **Control System Integrator** – The Control System Integrator shall be responsible for the replacement and development of the new SCADA System, that shall incorporate existing and new RTU’s, instruments, and processes, while maintaining full functionality of the Water Treatment Facility during development and handoff to new SCADA System.
2. **Pre-Submittal Site Visit and Documentation** – The Control System Integrator shall be responsible for visiting the site prior to submittal of instrumentation and line diagram documents. Integrator shall verify voltages of existing signal wires, power wires, and instruments to remain. Integrator shall use this time to verify measurements of enclosures to be replaced and re-used, locations of existing conduits, lay lengths, diameters, and connection style of instruments, and other relevant information prior to ordering instruments, mounting hardware, and panel building. An ISA Form S20.26 or S20.40a shall be provided and filled out for each piece of equipment existing and new. In addition, the Integrator shall be responsible for the following;
  - a. Purchasing of all PLC panel materials and construction of PLC panels
  - b. Purchase of the computers and SCADA servers
  - c. Purchase of the HMI and PLC programming software
  - d. Development of modern SCADA System incorporating new and existing processes
  - e. Develop and test PLC programs for the PLC Control System
  - f. Develop HMI software interface screens and reports
  - g. Overseeing and verifying the field connections and functionality of all sensors and devices connected to the PLC system
  - h. Hardware testing of all PLC control panels
  - i. Overseeing and verifying the communications cabling and all communication terminations required for operation of the PLC control system.

- j. Maintaining full functionality of the Water Treatment and Distribution Process during the development of the new SCADA System and during the transfer of control from the Existing SCADA System to the New SCADA System
    - k. Assisting with the start-up and field verification of the various control loops in the system
    - l. Generate the O&M Manuals regarding all equipment supplied for the PLC control system.
    - m. Work with Electrical Sub-Contractor to install an Ethernet Network that is a “Fault Tolerant Ring” design.
    - n. Define and refine the control loop requirements with the Engineer and/or Owner.
    - o. Disconnection and removal of the existing SCADA System and all associated wiring, cabling, hardware, process instrumentation, computer systems, and hardware. Coordinate with the owner regarding the storing locations or equipment to be discarding.
  - 3. **Electrical Sub-Contractor (If Necessary)** – The Electrical Sub-Contractor shall be a sub-contractor of the Control System Integrator for this project and shall provide the installation and wiring of the PLC Control System. All of the signal wiring, communications wiring, coaxial cable, fiber optic cable terminations, T1 cable terminations, and all other terminations will be provided by the Electrical Sub-Contractor.
    - a. Work with Control System Integrator to install an Ethernet Network that is a “Fault Tolerant Ring” design.
    - b. Electrical Sub-Contractor shall be responsible for providing and installing all conduit and wire as shown on series 19 plan sheets.
  - 4. **Instrumentation Supplier** – If the Instrumentation Supplier providing the “Instrumentation and Control for Process Systems” in Section 409100 is different from the Control System Integrator, the Instrumentation Supplier shall be responsible for the overseeing the installation and field calibration of all items supplied. Field calibration shall be witnessed by the Owner or Control System Integrator and require a signed “calibration” sheet for each instrument prior to acceptance of the equipment.
- B. The Control System Integrator, Electrical Sub-Contractor, and Instrumentation Suppliers shall meet in person with the Engineer and/or Owner prior to the start of construction to go through the above responsibilities and submittal process for the project.

### 1.3 SUBMITTALS

- A. See Section 01 3300 “Submittals” for requirements for the mechanics and administration of the submittal process.
- B. Operation and Maintenance Manuals:
  - 1. See Section 013300 “Submittal Procedures” for requirements for:
    - a. The mechanics and administration of the submittal process
    - b. The content of Operation and Maintenance Manuals

PART 2 - PRODUCTS - (NOT APPLICABLE TO THIS SECTION)

PART 3 - EXECUTION - (NOT APPLICABLE TO THIS SECTION)

LAKE NORDEN WTF IMPROVEMENTS AND WELLFIELD CONTROLS - 2018  
LAKE NORDEN, SOUTH DAKOTA  
SECTION 40 0000 – PROCESS INTEGRATION

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PART 4 - MEASUREMENT AND PAYMENT - (NOT APPLICABLE TO THIS SECTION)

END OF SECTION