

ADDENDUM | No. 2

PROJECT	Alcester WWTF Improvements		
BID DATE	11:00 AM	Central Time Zone	June 28, 2022
BID LOCATION	Alcester City Hall 500 Dakota Street Alcester, SD 57001		
ISSUE DATE	June 24, 2022		
NOTICE	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
40 9100	SITRANS P320/420 series Pressure Transmitter	Siemens
40 9100	DO, pH, and Temperature Sensor Controller	YSI
40 9100	Dissolved Oxygen Sensor	YSI
40 9100	pH Analyzer	YSI

GENERAL

Soil borings were completed at the Alcester Wastewater Treatment Facility and a geotechnical report was prepared. That geotechnical report is available for download at the following link:
<https://bannerassociates.com/bid-information/alcester-wastewater-treatment-facility-wwtf-improvements>
Download it by clicking on "Soils Report (06/23/22)" under ADDITIONAL FILES beneath the BID SCHEDULE(S) header of the above web page.



Minutes from the prebid meeting held on June 21, 2022, at 1:30 pm are attached to this addendum. Discussion occurred at the preconstruction meeting as to whether the existing blowers could be used to aerate the new basin during construction. After reviewing the available blowers, the Equalization Basin Blower located east of the Equalization Basin and shown on Sheet C-100 could be used to temporarily provide aeration to the proposed aeration basin. If the Contractor chooses to do this, the Contractor is responsible for providing temporary air piping between the Equalization Basin Blower and the basin.

PROJECT MANUAL

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

C-410 Bid Form – an updated Bid Form is attached

Article 7.01 E,

Replace with:

- E. Form 6100-4 – DBE Subcontractor Utilization Form

Article 5.01 B. 1,

Replace with:

- 1. Total Lump Sum Bid Alternative No. 1 (Horizontal Mixer, appurtenances, and required accommodation work in Existing Aeration Basin per Section 01 2300)

Article 7.02,

Delete the following:

- ~~A. Form 6100-3 – DBE Subcontractor Performance Form;~~
- ~~B. Form 6100-4 – DBE Subcontractor Utilization Form;~~

Attachments to C-410 Bid Form (4th page after C-430 Bid Bond),

The Certification Regarding Debarment, Suspension, and Other Responsibility Matters page issued with Addendum No. 1 had the incorrect SRF Project Number. Replace this sheet with the attached sheet that has the correct SRF Project number of C461212-01.

01 2300 – Alternatives

Section 3.1 A,

Replace with:

- A. Bid Alternate No. 1: Horizontal Mixer, appurtenances, and required accommodation work in Existing Aeration Basin. The final decision to install the horizontal mixer will be based on the existing wall structure in the aeration basin. The location and condition of the walls, and



therefore the need for the mixer to prevent short circuiting, cannot be fully assessed until the tank is drained. The appurtenances include but are not limited to the davit crane and updated guard rails in the aeration basin to accommodate the installation of and access to the davit crane. Whether or not the mixer is installed will affect the installation of the diffusers in the existing Aeration basin, but is not expected to affect the number of diffusers or any other aeration requirements.

All equipment, materials and work required for installation of the alternate as shown on the Contract Drawings (Sheet 3D-101) and as Specified in the Project Manual Section 44 4213 2.5 Horizontal Mixer. The work shall include but not be limited to construction, furnishing, and installing of work and equipment as shown on the project plans but not herein mentioned.

08 7100 – Door Hardware

Section 3.6, Door Hardware Sets

Change:

Door Hardware Set #2: Lockset shall change to cylindrical locks in lieu of mortised locks.

Basis of Design: Corbin Russwin, CLX3300 Series.

Clarification:

Door Hardware Set #3, 4 & 5: Locksets shall be cylindrical locks.

Basis of Design: Corbin Russwin, CL3300 Series.

09 9600 – High Performance Coatings

Section 2.5,

Add Paragraph I:

- I. Exterior CMU And Concrete Surfaces
 1. Preparation of Surfaces: Prepare all surfaces as required by manufacturer. Existing coatings vary in current levels of condition.
 2. Primer: Manufacture’s standard primer over existing finishes.
 3. Top-Coat Product: Acrylic Coating
 - 1) S-W: PRO INDUSTRIAL – DTM Acrylic coating
 - 2) Tnemec: Series 156 Enviro-Crete



40 9000 – Process Integration

Section 2.5

Add:

X. Seal Failure/Over-Temp Protectors (Provided by Pump Supplier):

1. A solid-state device or equal, as provided by the pump supplier, which provides a signal to the pump mounted moisture and thermal sensors shall measure the moisture and thermal characteristics of the motor and provide an indication of an out of tolerance condition. Upon an over-temperature condition, the unit mounted LED and door mounted pilot light will illuminate, and the motor shall shut down. When the temperature reaches an acceptable level, the pump shall automatically re-start. Upon seal failure condition, the pump will continue to run, and the unit mounted LED and door mounted pilot light will illuminate. Control panel supplier shall be responsible for installing the pump protectors and coordinating with pump supplier for exact sizes and requirements.

40 9100 – Instrumentation and Control for Process Systems

Section 2.1.B.3

Add:

Siemens (SITRANS P320/420) to the list of Approved Manufacturers for Pressure Transmitters.

Section 2.1.G.3

Add:

YSI to the list of Approved Manufacturers for DO, pH, and Temperature Sensor Controllers.

Section 2.1.H.3

Add:

YSI to the list of Approved Manufacturers for Dissolved Oxygen Sensors.

Section 2.1.I.3

Add:

YSI to the list of Approved Manufacturers for pH Analyzers.

44 4213 – Aeration and Mixing Equipment

Section 2.1.A

Add the following:

“Maximum Pressure at Top of Dropleg = 7.6 psig”

Section 2.3.A.1

Add the text in bold below to the existing paragraph:



“General: The aeration system shall be comprised of porous dome diffusers integrally mounted on stainless steel or unplasticized poly (vinyl chloride) (UPVC) distribution piping and stainless-steel air headers. **Stainless steel air headers shall extend from the drop line to the lateral distribution piping.** For the purpose of standardization and total system responsibility, all of the equipment specified in this Section may be supplied by one manufacturer. The diffusers shall be equally spaced around each aeration basin except for as outlined on the process drawings.

Section 2.3.A.2.a

Delete existing whole section and replace with:

“EPDM Membrane Discs: Membrane disc diffusers shall be disc shaped with a nominal diameter of 9 inches. The circular membrane diffuser discs shall be supplied with integral O-ring of EPDM synthetic rubber compound with precision die formed slits. Thermoplastic materials (ie plasticized PVC or polyurethane) are not acceptable. Carbon black shall be added to the membrane for resistance to ultraviolet light.”

Section 2.3.A.2.b

Add the text in bold below to the existing paragraph:

“Flow control device: A flow control device consisting of a metering orifice shall be installed in each air diffuser assembly. The device shall be easily removable to facilitate cleaning or removal of foreign matter. **The use of easily removable blank off holders is acceptable.** The device shall be sized to provide uniform distributing of air flow among the diffusers in the basin at the volumes required for mixing and oxygen transfer.”

Section 2.3.A.3

Add in section 'f' with text below.

“Aeration Dropleg Pipe: Each aeration grid shall be supplied with a stainless steel dropleg pipe. The dropleg shall be welded stainless steel pipe. Stainless steel pipe shall be fabricated from Type 304 ELC or type 316L stainless steel conforming to ASTM specifications A240. Maximum hardness shall be Rockwell B80. Maximum yield strength shall be 42,000 PSI. Pipe shall be of sufficient wall thickness as designated by the manufacturer to withstand all internal and external forces based on design procedures set forth in AWWA M11. All piping and fittings shall be a minimum of schedule 10 S.”

44 4256 – Pumps

Section 2.3.D

Updated as noted below, added items are in old, removed items are crossed out

- 6. Motor Voltage Inverter Duty Rated, 460 V, 60 Hz, ~~Single~~**Three** Phase
- 8. Discharge Size ~~3 inch~~ **4 inch or 6 inch is acceptable**
- 9. Solid Size ~~4 inch~~ **3 inch**

Section 2.3.H

Updated as noted below, added items are in old, removed items are crossed out



“Spare Parts: The Manufacturer shall furnish complete pump repair kits which shall include but not be limited to pump seals, **O-rings**, ~~pump impeller, pump shaft and sleeve~~ and pump bearings, The following spare parts shall be furnished:

1. One (1) Complete Pump Repair Kit **per installation of new set of pumps.”**

Section 2.3.L

Add as noted below:

“L. Pump Protection Relay – For each new pump provided as part of this project, pump manufacturer shall provide Pump Saver, MiniCAS, or other engineer approved equal as a relay to indicate pump over temp and pump seal fail. Protection Relay shall be installed as shown in plans. See integration spec for additional detail.”

Section 2.4.L

Add as noted below:

“L. Pump Protection Relay – For each new pump provided as part of this project, pump manufacturer shall provide Pump Saver, MiniCAS, or other engineer approved equal as a relay to indicate pump over temp and pump seal fail. Protection Relay shall be installed as shown in plans. See integration spec for additional detail.”

Section 3.3

Updated as noted below, added items are in old, removed items are crossed out

A. Each pump manufacturer shall provide the services of a factory trained service technician for a minimum of one (1) eight (8) hour day for installation and checkout of each pump or pump system and to instruct plant operating personnel in the proper operation and maintenance procedure for the installation. Manufacturer’s sales representatives that have not had complete factory service training will not be an acceptable substitute. Two (2) printed copies and an electronic copy of the operation and maintenance manuals shall be provided for each pump or pump system specified herein. ~~Startup services shall include checking the natural frequencies and vibrations amplitudes and frequencies of pump(s) furnished. Complete reports including the results of frequency and vibration testing shall be submitted to the Engineer for approval. Vibration amplitude in excess of three (3) mils will not be acceptable.~~

B. Field Tests: Each pump shall be field tested on water for vibration, capacity/head, voltage, and full load amperage. ~~The vibration testing shall include checking the natural frequency of the pump system and vibration readings at pump operating speed. The limits of vibration as set forth in the Standards of the Hydraulic Institute shall govern.~~ Field testing shall be performed on the pumps upon completion with the Engineer on site to oversee field testing of the pumps. **Pumps shall demonstrate satisfactory operation without causing excessive noise, cavitation, vibration, or overheating.**



44 6013 – Process Piping and Valves

Section 2.4

Add:

“Section 2.4.I – Restrained Flexible Coupling: Restrained flexible couplings shall be installed as shown on the drawings or where required to attach fittings. The fittings shall be appropriately sized to connect the pipes as shown on the drawings. The couplings shall be Victaulic style 232S stainless steel restrained flexible couplings or engineer approved equal.”

Section 2.6.G

Delete the following:

“All buried mechanical joint fittings connected to another mechanical joint shall be joined together using a foster adaptor as required.”

Add the following where the previous note was deleted:

“Adaptors shall be installed as shown on the drawings or where required to attach fittings. Adaptors shall be a bolt-through positive restraint mechanism manufactured of U.S.A. ductile iron conforming to ASTM A536, 80-55-06. The positive restraint device shall connect the valves and/or fittings at a linear distance not to exceed three (3) inches and without attachment to pipe. The device shall come complete with all accessories, including standard styrene butadiene rubber (SBR) MJ gaskets conforming to the latest revision of AWWA C111/ASTM F-477 and corrosion resistant fluoro-carbon bolts conforming to AWWA C111/A21.11. The bolt through MJ positive restraining device and the ductile iron spacers shall be supplied with an NSF 61, 7 mil. Fusion bonded epoxy. The device shall be used with standard mechanical joint fitting (AWWA C110 or C153) and valves. The device shall be Infact Corporation Foster Adaptor or engineer approved equal.”

Section 2.7.A (plug valves)

Add in section ‘8’ with text below

“8. Modulating Electric Operators:

1. Basic Actuator: The electric valve actuator shall include the motor, actuator unit gearing, limit switch gearing, position limit switches, torque switches, stem nut, declutch lever, and handwheel as a self-contained unit. The valve actuator motor and all electrical enclosures shall be NEMA 4X (watertight).
2. Motor: The motor shall be specifically designed for valve modulating service and shall be of high starting torque, totally enclosed non-ventilated construction. Motor insulation shall be a minimum NEMA Class F with a maximum continuous temperature rating of 155

degrees C (rise plus ambient) for the duty cycle specified. Optional insulation classes are available if service conditions warrant.

- 1) The motor shall be of sufficient size to modulate the valve from open to close the valve at the maximum stated torque. The motor shall be capable of operating at plus or minus 10% of specified voltage. The motor duty rating shall be sufficient for modulating service without exceeding its temperature rating. Motor bearings shall be of the anti-friction type, and permanently lubricated.
 - 2) The motor shall be an independent sub-assembly such that the power gearing shall not be an integral part of the motor assembly to allow for motor or gear changes dictated by system operation requirements.
 - 3) The motor shall be equipped with internal thermal contacts to protect against motor overload. Power supply shall be 480 volt.
3. Power Gearing: The actuator shall be a multiple reduction unit with power gearing consisting of spur, helical, or bevel gears and worm gearing. The spur, helical, or bevel gearing and worm shall be of hardened alloy steel and the worm gear shall be alloy bronze. All gearing shall be accurately cut. Non-metallic, aluminum, or cast gearing shall not be allowed. Anti-friction bearings shall be used throughout.
 4. Lubrication: All rotating power train components shall be immersed in grease with provisions for inspection and re-lubrication without disassembly. Lubricants shall be suitable for ambient conditions of minus 20 degrees F to 150 degrees F. Adequate seals shall be provided on all shafting.
 5. Self-Locking Feature: Actuator gearing and/or stem threading shall be self-locking when required by the application.
 6. Manual Operation: A metallic handwheel shall be provided for manual operation with an arrow to indicate "open" rotation. The handwheel shall not rotate during motor operation. A fused motor shall not prevent manual operation. When in the manual operating mode, the actuator will remain in this mode until the motor is energized, at which time the actuator will automatically return to electric operation. Movement from motor operation to handwheel operation shall be accomplished by a positive padlockable declutch lever which mechanically disengages the motor and related gearing. It shall be impossible for simultaneous manual and motor operation to occur. Friction type declutch mechanism is not acceptable.
 7. Stem Nut: The valve actuator shall have a removable stem nut (or drive bushing) of high tensile bronze or other material compatible with the valve stem material.
 8. Position Limit Switches: Position limit switches and the associated gearing shall be an integral part of the valve actuator. Limit switch gearing shall be of the intermittent type, made of bronze or stainless steel, grease lubricated, and totally enclosed to prevent dirt and foreign matter from entering the gear train. Switches shall be adjustable, allowing for trip points from fully open to fully closed positions of valve travel. They shall not be subject to breakage or slippage due to over-travel. Limit switch contacts shall be heavy duty, silver plated with wiping action. The actuators shall have 16 contacts, 4 contacts/4 rotor type, all of the same basic design. Contacts shall be convertible from N/O to N/C,



- or reverse. Switch design shall permit visual verification of switch position without disassembly.
9. All actuators in modulating service shall be furnished with a feedback potentiometer in addition to the following motor controls and features:
 - 1) Positioner, “open-close-remote” selector switch in addition to red and green indicating lights.
 - 2) The positioner shall be capable of accepting a 4-20mADC command signal and positioning the valve by comparing the command signal with the present valve position as indicated by the feedback potentiometer mounted inside the actuator.
 - 3) The positioner shall be field adjustable to fail to the “open”, “closed” or “last” position on loss of 4-20mADC command signal.
 - 4) The pneumatic operator shall be capable of accepting a signal from the control system to control opening and closing of the valve.
 10. Torque Switch: Each valve actuator shall be equipped with a switch that will interrupt the control circuit in both the opening and closing directions when valve torque overload occurs or when valves require torque seating in the closed or open position. Contacts shall be silver plated.
 - 1) The torque switch shall have graduated dials for both open and close directions of travel and each shall be independently adjustable with a positive means to limit the adjustability so as not to exceed the actuator output torque capability.
 - 2) Switch design shall permit visible verification of switch position without disassembly.
 11. Switch Contact Ratings: The position limit switch and torque switch shall be rated 600 volts per NEMA standard ICS 2-125, heavy duty. The motor actuator shall be as manufactured by Rotork, Auma, Limitorque or approved equal.”

Section 2.7.C (gate valves)

Add in section ‘3’ with text below

- “3. Modulating Electric Operators:
 1. Basic Actuator: The electric valve actuator shall include the motor, actuator unit gearing, limit switch gearing, position limit switches, torque switches, stem nut, declutch lever, and handwheel as a self-contained unit. The valve actuator motor and all electrical enclosures shall be NEMA 4X (watertight).
 2. Motor: The motor shall be specifically designed for valve modulating service and shall be of high starting torque, totally enclosed non-ventilated construction. Motor insulation shall be a minimum NEMA Class F with a maximum continuous temperature rating of 155 degrees C (rise plus ambient) for the duty cycle specified. Optional insulation classes are available if service conditions warrant.

- 1) The motor shall be of sufficient size to modulate the valve from open to close the valve at the maximum stated torque. The motor shall be capable of operating at plus or minus 10% of specified voltage. The motor duty rating shall be sufficient for modulating service without exceeding its temperature rating. Motor bearings shall be of the anti-friction type, and permanently lubricated.
 - 2) The motor shall be an independent sub-assembly such that the power gearing shall not be an integral part of the motor assembly to allow for motor or gear changes dictated by system operation requirements.
 - 3) The motor shall be equipped with internal thermal contacts to protect against motor overload. Power supply shall be 480 volt.
3. Power Gearing: The actuator shall be a multiple reduction unit with power gearing consisting of spur, helical, or bevel gears and worm gearing. The spur, helical, or bevel gearing and worm shall be of hardened alloy steel and the worm gear shall be alloy bronze. All gearing shall be accurately cut. Non-metallic, aluminum, or cast gearing shall not be allowed. Anti-friction bearings shall be used throughout.
 4. Lubrication: All rotating power train components shall be immersed in grease with provisions for inspection and re-lubrication without disassembly. Lubricants shall be suitable for ambient conditions of minus 20 degrees F to 150 degrees F. Adequate seals shall be provided on all shafting.
 5. Self-Locking Feature: Actuator gearing and/or stem threading shall be self-locking when required by the application.
 6. Manual Operation: A metallic handwheel shall be provided for manual operation with an arrow to indicate "open" rotation. The handwheel shall not rotate during motor operation. A fused motor shall not prevent manual operation. When in the manual operating mode, the actuator will remain in this mode until the motor is energized, at which time the actuator will automatically return to electric operation. Movement from motor operation to handwheel operation shall be accomplished by a positive padlockable declutch lever which mechanically disengages the motor and related gearing. It shall be impossible for simultaneous manual and motor operation to occur. Friction type declutch mechanism is not acceptable.
 7. Stem Nut: The valve actuator shall have a removable stem nut (or drive bushing) of high tensile bronze or other material compatible with the valve stem material.
 8. Position Limit Switches: Position limit switches and the associated gearing shall be an integral part of the valve actuator. Limit switch gearing shall be of the intermittent type, made of bronze or stainless steel, grease lubricated, and totally enclosed to prevent dirt and foreign matter from entering the gear train. Switches shall be adjustable, allowing for trip points from fully open to fully closed positions of valve travel. They shall not be subject to breakage or slippage due to over-travel. Limit switch contacts shall be heavy duty, silver plated with wiping action. The actuators shall have 16 contacts, 4 contacts/4 rotor type, all of the same basic design. Contacts shall be convertible from N/O to N/C, or reverse. Switch design shall permit visual verification of switch position without disassembly.



9. All actuators in modulating service shall be furnished with a feedback potentiometer in addition to the following motor controls and features:
 - 1) Positioner, “open-close-remote” selector switch in addition to red and green indicating lights.
 - 2) The positioner shall be capable of accepting a 4-20mADC command signal and positioning the valve by comparing the command signal with the present valve position as indicated by the feedback potentiometer mounted inside the actuator.
 - 3) The positioner shall be field adjustable to fail to the “open”, “closed” or “last” position on loss of 4-20mADC command signal.
 - 4) The pneumatic operator shall be capable of accepting a signal from the control system to control opening and closing of the valve.
10. Torque Switch: Each valve actuator shall be equipped with a switch that will interrupt the control circuit in both the opening and closing directions when valve torque overload occurs or when valves require torque seating in the closed or open position. Contacts shall be silver plated.
 - 1) The torque switch shall have graduated dials for both open and close directions of travel and each shall be independently adjustable with a positive means to limit the adjustability so as not to exceed the actuator output torque capability.
 - 2) Switch design shall permit visible verification of switch position without disassembly.
11. Switch Contact Ratings: The position limit switch and torque switch shall be rated 600 volts per NEMA standard ICS 2-125, heavy duty. The motor actuator shall be as manufactured by Rotork, Auma, Limatorque or approved equal.”

Section 2.7.D (butterfly valves)

Add in section '5' with text below

“5. “Modulating Electric Operators:

1. Basic Actuator: The electric valve actuator shall include the motor, actuator unit gearing, limit switch gearing, position limit switches, torque switches, stem nut, declutch lever, and handwheel as a self-contained unit. The valve actuator motor and all electrical enclosures shall be NEMA 4X (watertight).
2. Motor: The motor shall be specifically designed for valve modulating service and shall be of high starting torque, totally enclosed non-ventilated construction. Motor insulation shall be a minimum NEMA Class F with a maximum continuous temperature rating of 155 degrees C (rise plus ambient) for the duty cycle specified. Optional insulation classes are available if service conditions warrant.

- 1) The motor shall be of sufficient size to modulate the valve from open to close the valve at the maximum stated torque. The motor shall be capable of operating at plus or minus 10% of specified voltage. The motor duty rating shall be sufficient for modulating service without exceeding its temperature rating. Motor bearings shall be of the anti-friction type, and permanently lubricated.
 - 2) The motor shall be an independent sub-assembly such that the power gearing shall not be an integral part of the motor assembly to allow for motor or gear changes dictated by system operation requirements.
 - 3) The motor shall be equipped with internal thermal contacts to protect against motor overload. Power supply shall be 480 volt.
3. Power Gearing: The actuator shall be a multiple reduction unit with power gearing consisting of spur, helical, or bevel gears and worm gearing. The spur, helical, or bevel gearing and worm shall be of hardened alloy steel and the worm gear shall be alloy bronze. All gearing shall be accurately cut. Non-metallic, aluminum, or cast gearing shall not be allowed. Anti-friction bearings shall be used throughout.
 4. Lubrication: All rotating power train components shall be immersed in grease with provisions for inspection and re-lubrication without disassembly. Lubricants shall be suitable for ambient conditions of minus 20 degrees F to 150 degrees F. Adequate seals shall be provided on all shafting.
 5. Self-Locking Feature: Actuator gearing and/or stem threading shall be self-locking when required by the application.
 6. Manual Operation: A metallic handwheel shall be provided for manual operation with an arrow to indicate "open" rotation. The handwheel shall not rotate during motor operation. A fused motor shall not prevent manual operation. When in the manual operating mode, the actuator will remain in this mode until the motor is energized, at which time the actuator will automatically return to electric operation. Movement from motor operation to handwheel operation shall be accomplished by a positive padlockable declutch lever which mechanically disengages the motor and related gearing. It shall be impossible for simultaneous manual and motor operation to occur. Friction type declutch mechanism is not acceptable.
 7. Stem Nut: The valve actuator shall have a removable stem nut (or drive bushing) of high tensile bronze or other material compatible with the valve stem material.
 8. Position Limit Switches: Position limit switches and the associated gearing shall be an integral part of the valve actuator. Limit switch gearing shall be of the intermittent type, made of bronze or stainless steel, grease lubricated, and totally enclosed to prevent dirt and foreign matter from entering the gear train. Switches shall be adjustable, allowing for trip points from fully open to fully closed positions of valve travel. They shall not be subject to breakage or slippage due to over-travel. Limit switch contacts shall be heavy duty, silver plated with wiping action. The actuators shall have 16 contacts, 4 contacts/4 rotor type, all of the same basic design. Contacts shall be convertible from N/O to N/C, or reverse. Switch design shall permit visual verification of switch position without disassembly.



9. All actuators in modulating service shall be furnished with a feedback potentiometer in addition to the following motor controls and features:
 - 1) Positioner, “open-close-remote” selector switch in addition to red and green indicating lights.
 - 2) The positioner shall be capable of accepting a 4-20mADC command signal and positioning the valve by comparing the command signal with the present valve position as indicated by the feedback potentiometer mounted inside the actuator.
 - 3) The positioner shall be field adjustable to fail to the “open”, “closed” or “last” position on loss of 4-20mADC command signal.
 - 4) The pneumatic operator shall be capable of accepting a signal from the control system to control opening and closing of the valve.
10. Torque Switch: Each valve actuator shall be equipped with a switch that will interrupt the control circuit in both the opening and closing directions when valve torque overload occurs or when valves require torque seating in the closed or open position. Contacts shall be silver plated.
 - 1) The torque switch shall have graduated dials for both open and close directions of travel and each shall be independently adjustable with a positive means to limit the adjustability so as not to exceed the actuator output torque capability.
 - 2) Switch design shall permit visible verification of switch position without disassembly.
11. Switch Contact Ratings: The position limit switch and torque switch shall be rated 600 volts per NEMA standard ICS 2-125, heavy duty. The motor actuator shall be as manufactured by Rotork, Auma, Limitorque or approved equal.”

DRAWINGS

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

Drawing Sheet X-101

Add the following to Key Note 6:

FILL MATERIAL REPLACING REMOVED STRUCTURES SHALL BE “GRANULAR STRUCTURAL FILL” UP TO BOTTOM SLAB OF NEW AERATION BASIN. INFORMATION ON THE EXACT SIZE AND DEPTH OF THE BURIED AND ABANDONED PUMP HOUSE CONSTRUCTED IN 1939 OR PRIOR IS NOT AVAILABLE. CONTRACTOR RESPONSIBLE FOR ITS COMPLETE REMOVAL.

Drawing Sheet A-800

Clarification:



General Notes: All exterior buildings shall be painted. Existing coatings shall be treated/prepped for new paint. Refer to Specification Section 09 9600 for requirements.

Drawing Sheet A-800

Add:

General Notes: 2. Refer to Series A & D Drawings for additional coatings locations and requirements at each building.

Drawing Sheet Y-502

Add to PLC-1

DI-137 – PB-101 – WAS Pump #1 – Control Status – Overtemp Reset

DI-138 – PB-102 – WAS Pump #1 – Control Status – Fail Reset

DI-139 – PSR-101 – WAS Pump #1 Overtemp Alarm

DI-140 – PSR-102 – WAS Pump #1 Seal Fail Alarm

DI-141 – PB-103 – WAS Pump #2 – Control Status – Overtemp Reset

DI-142 – PB-104 – WAS Pump #2 – Control Status – Fail Reset

DI-143 – PSR-103 – WAS Pump #2 Overtemp Alarm

DI-144 – PSR-104 – WAS Pump #2 Seal Fail Alarm

Add to VFD-103:

DI-103.9 – PB-103.1 – Equalization Pump #1 – Control Status – Overtemp Reset

DI-103.10 – PB-103.2 – Equalization Pump #1 – Control Status – Fail Reset

DI-103.11 – PSR-103.1 – Equalization Pump #1 Overtemp Alarm

DI-103.12 – PSR-103.2 – Equalization Pump #1 Seal Fail Alarm

Add to VFD-104:

DI-104.9 – PB-104.1 – Equalization Pump #2 – Control Status – Overtemp Reset

DI-104.10 – PB-104.2 – Equalization Pump #2 – Control Status – Fail Reset

DI-104.11 – PSR-104.1 – Equalization Pump #2 Overtemp Alarm

DI-104.12 – PSR-104.2 – Equalization Pump #2 Seal Fail Alarm

Drawing Sheet 3A-100

Add:

Keynote #1 shall be applied to all walls in Intermediate Drywell (Lower Level Pump Room) below Operations Building.

Drawing Sheet 3A-101

Clarification:



Opening shown at Keynote #13 should show a new storefront window as indicated with the keynote.

Drawing Sheet 3A-101

Add:

Lab Casework Interior Elevations. Refer to Attachment Figure 2-1.

Drawing Sheet 3A-101

Change:

Keynote #2 shall read as: Stainless steel countertop w/integral backsplash and open lower shelf.

Keynote #8 shall read as: Prefinished, painted Lab-grade metal upper cabinets – 14” deep.

Drawing Sheet 3A-400

Add:

Keynote #1 shall be applied to all walls in Intermediate Drywell (Lower-Level Pump Room) below Operations Building.

Drawing Sheet 3D-800

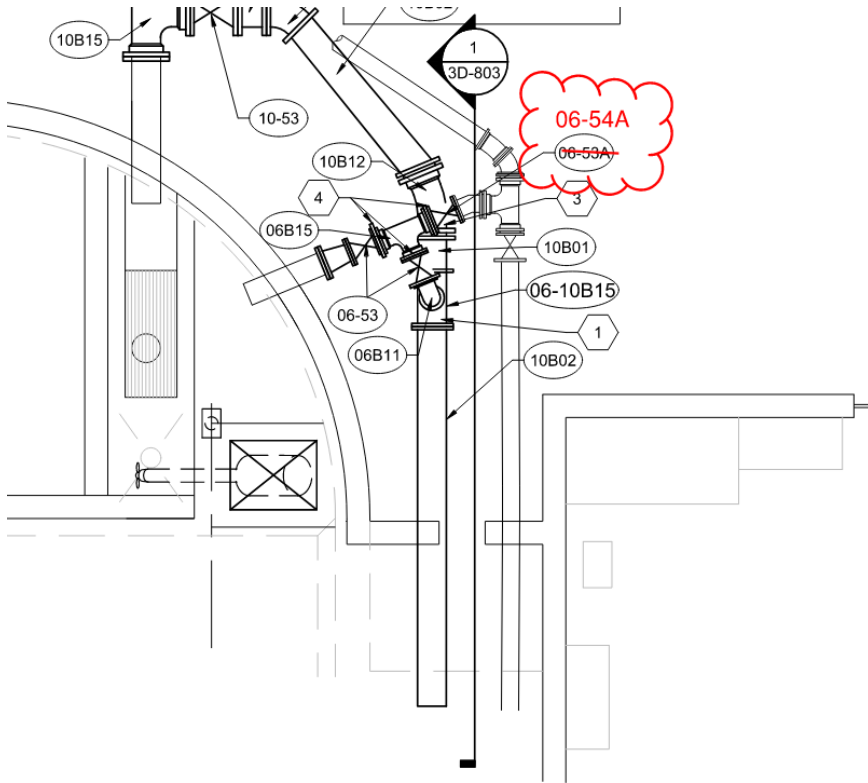
Add note to indicate that the 'A' behind plug valve will indicate that it is actuated.



PIPE SCHEDULE					
PIPE SIZE	MAT.	FITTING DESIG.	DESCRIPTION	CONNECTION	COMMENTS
4			4-INCH DIAMETER PIPE AND FITTINGS		
6			6-INCH DIAMETER PIPE AND FITTINGS		
8			6-INCH DIAMETER PIPE AND FITTINGS		
10			10-INCH DIAMETER PIPE AND FITTINGS		
	A		DUCTILE IRON - CLASS 53 UNLINED		ABOVE GRADE PIPE TO BE COATED PER 09 9600
	B		DUCTILE IRON - CLASS 53 MORTAR LINED		
	F		SCHEDULE 80 PVC		
	T		SCHEDULE 10S 304		
		00	PIPE SPOOL	FL x FL	
		01	PIPE SPOOL	FL x PE	
		02	PIPE SPOOL	PE x PE	
		11	90 DEGREE BEND		
		12	45 DEGREE BEND		
		15	TEE		
		16	CROSS	FL	
		23	BLIND FLANGE	FL	
		28	LONG BODY SLEEVE	MJ	
		43	CHECK VALVE	FL	
		53	GATE VALVE	FL	A DESIGNATION AT END OF PIPE CALL OUT INDICATES ACTUATED VALVE
		54	PLUG VALVE	FL	A DESIGNATION AT END OF PIPE CALL OUT INDICATES ACTUATED VALVE
		63	COMBINATION AIR VAVLE	THR	1/16TH INCH ORIFACE SIZE
		91	DISMANTLING JOINT		
		92	EXPANSION JOINT		
		98	RESTRAINED FLANGE ADAPTOR		
PIPING SCHEDULE IS FOR GENERAL INFORMATION ONLY. ADDITIONAL FITTINGS AND PIPE LENGTHS MAY BE REQUIRED TO ASSEMBLE THE COMPLETED PROCESS PIPING SYSTEM.					

Drawing Sheet 3D-803

Actuated valve outside of structure shall be changed from gate valve to plug valve



NORTH  **BYPASS PIPE PLAN**
3/16" = 1'-0"

NOTE

The Plan Holders List and Addendums are available on our website at <http://www.bannerassociates.com> by clicking on **View Bid Information / Project Name / Project Information** link.



Project Manual and Drawing inquiries regarding the work should be directed to:

CONTACT PERSON(S)

Banner Associates, Inc. Tel 1-605-692-6342 | Toll Free 1-855-323-6342

Tanya Miller	Project Manager	tanyam@bannerassociates.com
Christa DeVries	Process Engineer	christad@bannerassociates.com
Adam Hanson	Structural Engineer	adamh@bannerassociates.com
Neil Eichstadt	Civil Site Engineer	neile@bannerassociates.com
Dave Lorang	Architect	davel@bannerassociates.com
Dennis Rebelein	Controls	dennizr@bannerassociates.com

Subconsultants

Mark Joffer	Electrical Engineer	mark.joffer@pegrouppengr.com
Jon Giles	Mechanical Engineer	jon.giles@innovative-engr.com

ATTACHMENTS

1. Prebid meeting minutes.
2. C-410 Bid Form
3. Figure 2-1 – Interior Elevations
4. Certification Regarding Debarment, Suspension, and Other Responsibility Matters with corrected SRF Project Number
5. Electrical Addendum No. 1



Tanya Miller, P.E. #8326

PRE-BID MEETING MINUTES

DATE	June 21, 2022	
PROJECT	Alcester Wastewater Treatment Facility Improvements	BAI No. 23514.00
SUBJECT	Pre-Bid Meeting	
LOCATION	Alcester City Hall Followed by Site Visit to Treatment Facility	
ATTENDEES	Tanya Miller, Banner Associates. Inc.	
	Patricia Jurrens, City of Alcester, SD	
	See attached Roster for Additional Attendees	

Meeting minutes are in red italics.

1) ROSTER SIGN-IN AND INTRODUCTIONS

See attached roster for additional attendees.

2) SCOPE OF WORK

a) Base Bid

- i) Improvements to existing Aeration, Operations, and Pumping Building including new roof, coatings, lab, restroom, WAS pumps, interior piping modifications, installation of fine bubble diffusers, and electrical and mechanical improvements;
- ii) Improvements and new roof to existing building to house relocated power feed and MCC and new blowers for aeration system;
- iii) New roof for Final Clarification Building;
- iv) Construction of a new 24' x 48' x 17.5' deep aeration basin with fine bubble diffusers;
- v) Modifications to existing Disinfection Building to install new UV disinfection equipment and roof;
- vi) Demolition of site buildings and structures;
- vii) Site grading and utilities;

b) Process Integration Fixed Priced Package: \$276,800.00

c) Total Lump Sum Bid Price (Includes Base Bid and Process Integration Fixed Priced Package)

d) Lump Sum Bid Alternative No. 1

- i) Horizontal Mixer, appurtenances, and required accommodation work in Existing Aeration Basin. See Specification Section 01 2300 for additional details.



3) DELIVERY OF BID

- a) Bids will be received by the City of Alcester, SD until 11:00 a.m. local time, June 28, 2022. Bids shall be delivered to Patricia Jurrens, Finance Officer at the Alcester City Hall, 500 Dakota Street, Alcester, SD 57001.
- b) Opening of Bids: Bids will be opened and read aloud at Alcester City Hall.
- c) Bid Documents consist of:
 - i) Bid Form;
 - ii) Required Bid security in accordance with Article 8 of the Instructions to Bidders;
 - iii) List of proposed Subcontractors and Suppliers;
 - iv) DBE Subcontractors Solicitation Information DBE-6;
 - v) Form 6100-3 – DBE Subcontractor Performance Form
 - vi) Form 6100-4 – DBE Subcontractor Utilization Form
 - vii) Certification Regarding Debarment, Suspension, and Other Responsibility Matters;
 - viii) American Iron and Steel Certification.
- d) Bid Completeness Requirements:
 - i) Acknowledgement of Addenda on Bid Form.
 - ii) Fill in the Bid amounts for the items in the project taking into account Bid Schedule No. 1, Process Integration Fixed Priced Package, and overall Lump Sum Price as well as Lump Sum Bid Alternative No. 1.
 - iii) Complete bidder information as requested.
 - iv) Sign and Attest the bid.
- e) The following forms must be submitted by the apparent low-bidder within ten calendar days of the bid opening:
 - i) EEO-7 – Notification of Subcontractor Awarded > \$10,000
 - ii) C-451 Bidder's Statement of Qualifications

4) PROJECT DEADLINES

- a) Substantial Completion – May 1, 2024
- b) Final Completion – June 1, 2024
- c) *The above project completion dates are from Addendum No. 1. The dates were modified in Addendum No. 1 to address concerns with equipment lead times, especially for electrical equipment.*

5) PROJECT ADDENDA

- a) Clarifications in response to questions about the technical specifications.



- b) Prior approval listings for equipment listed in specs as “or equal” or “or Engineer approved equal.”
- c) List of planholders (See www.bannerassociates.com website).
- d) Names of contacts for questions – see end of pre-bid agenda.
- e) Addendum #1 was issued on June 17, 2022.
- f) An addendum will be sent out around June 24, 2022 that includes minutes from this meeting.
- g) A third addenda may or may not be sent out.

6) CONTRACT DOCUMENTS AND REQUIREMENTS

- a) Listed in C-520 Agreement 9.01
- b) Contract includes Plans, Specifications and Reference Documents

7) FUNDING AND ASSOCIATED REQUIREMENTS

- a) SD DENR requirements for State Revolving Fund Loan.
 - i) Contract Goals - 1% DBE/MBE Firms, 4% WBE Firms (Documentation of Effort is required, include form with bid).
 - ii) Workforce Goals for minority utilization is 1.2% and for female utilization is 6.9%.
 - iii) Davis-Bacon and related acts provisions apply to this project. All provisions relative to those acts must be met.
 - iv) Compliance with the American Iron and Steel provision of the Consolidated Appropriations Act of 2014.

8) CONTRACTOR'S LIABILITY INSURANCE

- a) Amounts are listed in C-800 Supplementary Conditions, Paragraph SC.6.03.

9) CONSTRUCTION SEQUENCING

- a) Refer to Section 01 0000 – General Requirements Part 4.1 of the Project Manual.
 - i) Alcester Wastewater Treatment Facility (WWTF) shall remain in operation and the Contractor shall make every effort to prevent treatment process disruptions during construction.
 - ii) See Sheet G-004 for Construction Phasing Requirements.

10) RAILROAD COORDINATION

- a) Contractor required to obtain insurance for work in the railroad right-of-way per Civil General Construction Notes on Sheet G-005.



- b) Flagging may be required if work is within 10-feet of the railroad or if open excavation causes concern during railroad traffic. Coordinate with D&I Railroad to determine requirements.

11) OWNER COMMENTS

- a) None.

12) CONTRACTOR/VENDOR COMMENTS OR QUESTIONS

- a) *Question was asked about coating requirement in Intermediate Drywell (Lower Level Pump Room beneath Operations Building). High-performance wall coating and pipe coating is required in this room. Refer to architectural sheets and Specification Section 09 9600 High Performance Coatings for information. Additional information will be provided in Addendum No. 2.*
- b) *Question was asked about coating requirement in Lower Level of Final Clarifier Building. High-performance pipe coating is required in this room. Walls will not be coated. Refer to architectural sheets and Specification Section 09 9600 High Performance Coatings for information.*
- c) *Refer to plans for additional information on high-performance coating requirements of water bearing tanks and lift stations in the project.*

13) SITE VISIT: WWTF SITE

- a) *Discussion occurred at the preconstruction meeting as to whether the existing blowers could be used to aerate the new basin during construction. After reviewing the available blowers, the Equalization Basin Blower located east of the Equalization Basin and shown on Sheet C-100 could be used to temporarily provide aeration to the proposed aeration basin. If the Contractor chooses to do this, the Contractor is responsible for providing temporary air piping between the Equalization Basin Blower and the basin.*

14) CONTACT PERSONS

BANNER ASSOCIATES, INC.

Tanya Miller (General), Christa DeVries (Process), Neil Eichstadt (Civil), Dennis Rebelein (Instrumentation & Controls), and Adam Hanson (Structural)

Phone - (605) 692-6342

Toll Free – (855) 323-6342

Email – tanyam@bannerassociates.com
christad@bannerassociates.com



neile@bannerassociates.com
dennisr@bannerassociates.com
adamh@bannerassociates.com

PE GROUP

Mark Joffer (Electrical)
Phone- (605) 297-3647
Email – mark.joffer@pegrouppengr.com

INNOVATIVE ENGINEERING SOLUTIONS

Jon Giles (Mechanical)
Phone- (605) 366-9457
Email – jon.giles@innovative-engr.com

PREPARED BY Tanya Miller/Project Manager

MEETING ATTENDANCE ROSTER

DATE	June 21, 2022	
PROJECT	ALCESTER WASTEWATER TREATMENT FACILITY IMPROVEMENTS	BAI No. 23514.00
SUBJECT	PRE-BID MEETING	
LOCATION	ALCESTER CITY HALL	

Please provide name, firm name, phone number and email address.

- 1 NAME: Darryl Doty EMAIL: darryl@IndustrialProcessTechnology.com
 FIRM: Industrial Process Technology TEL: 605-995-5985
- 2 NAME: Scott Persing EMAIL: Persing Dig at gmail.com
 FIRM: Hudson SD TEL: 605-984-2644
- 3 NAME: Regan W. Pearson EMAIL: BoPper Pearson@GMAIL.com
 FIRM: PEARSON DIRT CONST TEL: 605-214-2406
- 4 NAME: Ethan Dooley EMAIL: edooley@tctaamerica.com
 FIRM: ARS TEL: 605-335-1687
- 5 NAME: Jason Kruse EMAIL: JKRUSE@ECCSFSD.com
 FIRM: ECC TEL: 605-336-2800
- 6 NAME: Arick Hoogendoorn EMAIL: arick@hoogendoornconstruction.com
 FIRM: Hoogendoorn Const. TEL: 605-987-4319
- 7 NAME: _____ EMAIL: _____
 FIRM: _____ TEL: _____
- 8 NAME: _____ EMAIL: _____
 FIRM: _____ TEL: _____
- 9 NAME: _____ EMAIL: _____
 FIRM: _____ TEL: _____
- 10 NAME: _____ EMAIL: _____
 FIRM: _____ TEL: _____

Bid Form

TABLE OF CONTENTS

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ARTICLE 1 – BID RECIPIENT

1.01 This Bid is submitted to:

Finance Officer
City of Alcester
500 Dakota Street
Alcester, SD 57001

1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 2 – BIDDER’S ACKNOWLEDGEMENTS

2.01 Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for 30 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

ARTICLE 3 – BIDDER’S REPRESENTATIONS

3.01 In submitting this Bid, Bidder represents that:

A. Bidder has examined and carefully studied the Bidding Documents, and any data and reference items identified in the Bidding Documents, and hereby acknowledges receipt of the following Addenda:

<u>Addendum No.</u>	<u>Addendum, Date</u>
_____	_____
_____	_____
_____	_____
_____	_____

B. Bidder has visited the Site, conducted a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and satisfied itself as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

C. Bidder is familiar with and has satisfied itself as to all Laws and Regulations that may affect cost, progress, and performance of the Work.

D. Bidder has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or adjacent to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings, and (2) reports and drawings relating to Hazardous Environmental Conditions, if

- any, at or adjacent to the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings.
- E. Bidder has considered the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and any Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder; and (3) Bidder's safety precautions and programs.
 - F. Bidder agrees, based on the information and observations referred to in the preceding paragraph, that no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents.
 - G. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.
 - H. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and confirms that the written resolution thereof by Engineer is acceptable to Bidder.
 - I. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance and furnishing of the Work.
 - J. The submission of this Bid constitutes an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article, and that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

ARTICLE 4 – BIDDER'S CERTIFICATION

4.01 Bidder certifies that:

- A. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation;
- B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;
- C. Bidder has not solicited or induced any individual or entity to refrain from bidding; and
- D. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 4.01.D:
 - 1. "corrupt practice" means the offering, giving, receiving, or soliciting of any thing of value likely to influence the action of a public official in the bidding process;

2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;
 3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels; and
 4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.
- E. The prices bid herein include sales tax and all other applicable taxes and fees.
- F. The goal for DBE/MBE participation on this project is 1% and the goal for WBE participation on this project is 4% of the total dollar value of the construction contract. The bidder shall submit a fully executed Disadvantaged/Minority Business Enterprise Assurance Form (Part C of the Special Provisions) with this Bid Proposal to indicate the DBE/MBE and WBE goal achievement and/or good faith effort. **FAILURE TO DO SO MAY RENDER THE BID NULL AND VOID.**
- G. The undersigned bidder hereby expressly acknowledges understanding of, and agreement to comply during the performance of any work under any contract resulting from this bid with all equal opportunity obligations as set forth in 41 CFR Part 60:1 and Part 60:4 and 40 CFR Part 8.

ARTICLE 5 – BASIS OF BID

5.01 Bidder will complete the Work in accordance with the Contract Documents for the following price(s):

A. Lump Sum Bid Price:

1. Bid Schedule No. 1 ((for all work apart from process integration – this work will be classified under Davis-Bacon Wage Requirements for Heavy Highway)
\$ _____
2. Process Integration Fixed Price Package \$ 276,800.00
3. Total Lump Sum Bid Price (Includes Schedule 1 and Process Integration Fixed Priced Package)

_____ (words)

_____ (numerals)

B. Lump Sum Bid Alternative No. 1:

1. Total Lump Sum Bid Alternative No. 1 (Horizontal Mixer, appurtenances, and required accommodation work in Existing Aeration Basin per Section 01 2300)

(words)

(numerals)

ARTICLE 6 – TIME OF COMPLETION

6.01 Bidder agrees that the Work will be substantially complete and will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.

6.02 Bidder accepts the provisions of the Agreement as to liquidated damages.

ARTICLE 7 – ATTACHMENTS TO THIS BID

7.01 The following documents are submitted with and made a condition of this Bid:

- A. Required Bid security in accordance with Article 8 of the Instructions to Bidders;
- B. List of proposed Subcontractors and Suppliers;
- C. DBE Subcontractors Solicitation Information DBE-6;
- D. Form 6100-3 – DBE Subcontractor Performance Form
- E. Form 6100-4 - DBE Subcontractor Utilization Form;
- F. Certification Regarding Debarment, Suspension, and Other Responsibility Matters;
- G. American Iron and Steel Certification

7.02 The following forms must be submitted by the apparent low-bidder within ten calendar days of the bid opening:

- A. EEO-7 – Notification of Subcontractor Awarded > \$10,000;
- B. Bidders’ Statement of Qualifications (C-451 – Qualifications Statement);

ARTICLE 8 – DEFINED TERMS

8.01 The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

ALCESTER WASTEWATER TREATMENT FACILITY (WWTF) IMPROVEMENTS
ALCESTER, SOUTH DAKOTA
BID FORM

BID SUBMITTAL

BIDDER: *[Indicate correct name of bidding entity]*

By:

[Signature] _____

[Printed name] _____

(If Bidder is a corporation, a limited liability company, a partnership, or a joint venture, attach evidence of authority to sign.)

Attest:

[Signature] _____

[Printed name] _____

Title: _____

Submittal Date: _____

Address for giving notices:

Telephone Number: _____

Fax Number: _____

Contact Name and e-mail address: _____

Bidder's License No.: _____

(where applicable)

CERTIFICATION REGARDING DEBARMENT, SUSPENSION, AND OTHER RESPONSIBILITY MATTERS

A. INSTRUCTIONS

Under Executive Order 12549, an individual or organization debarred or excluded from participation in Federal assistance or benefit programs may not receive any assistance award under a Federal program, or a sub-agreement thereunder for \$25,000 or more. The status of prospective individuals or organizations can be checked at:

<http://epls.arnet.gov/>

Accordingly, each prospective recipient of an EPA grant, loan, or cooperative agreement and any contract or sub-agreement participant thereunder must complete the attached certification or provide an explanation why they cannot complete the certification. For further details, see 40 CFR 32.510, Participants Responsibilities.

B. WHERE TO SUBMIT

A prospective prime contractor must submit a completed certification or explanation to the project owner for the project. Each prospective subcontractor must submit a completed certification or explanation to the prime contractor for the project.

C. HOW TO OBTAIN FORMS

This form may be reproduced as necessary. If needed, additional forms may be obtained from the Department of Environment and Natural Resources.

United States Environmental Protection Agency
Washington, DC 20460

**Certification Regarding
Debarment, Suspension, and Other Responsibility Matters**

The prospective participant certifies to the best of its knowledge and belief that it and its principals:

- (a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
- (b) Have not within a three year period preceding this proposal been convicted of or had a civil judgement rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
- (c) Are not presently indicted for or otherwise criminally or civilly charged by a government entity (Federal, State, or local) with commission of any of the offenses enumerated in paragraph (1)(b) of this certification; and
- (d) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State, or local) terminated for cause or default.

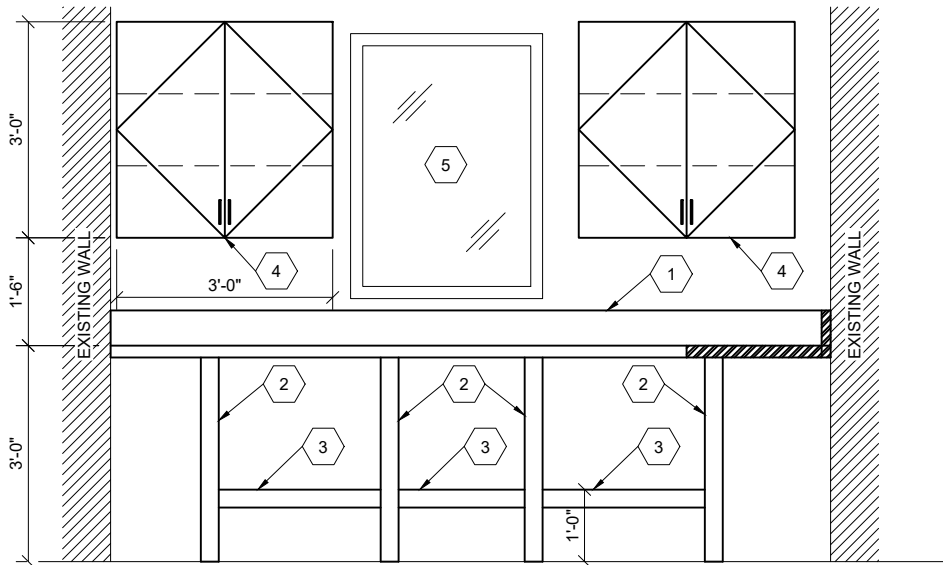
I understand that a false statement on this certification may be grounds for rejection of this proposal or termination of the award. In addition, under 18 USC Sec. 1001, a false statement may result in a fine of up to \$10,000 or imprisonment for up to 5 years, or both.

Typed Name & Title of Authorized Representative

Signature of Authorized Representative

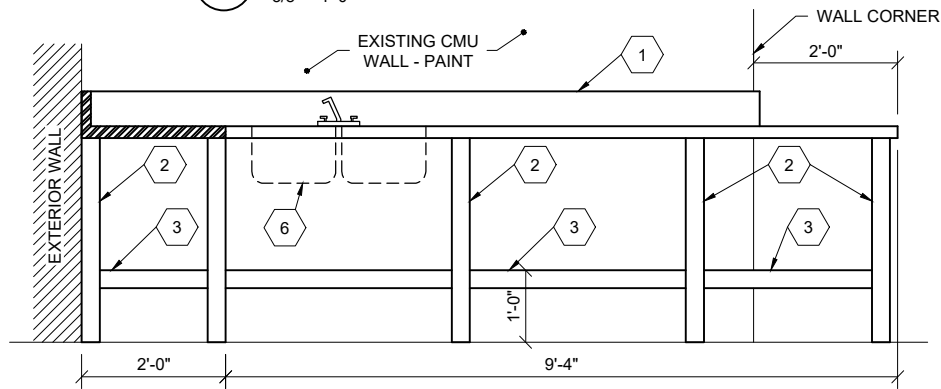
Date

_____ I am unable to certify to the above statements. My explanation is attached.

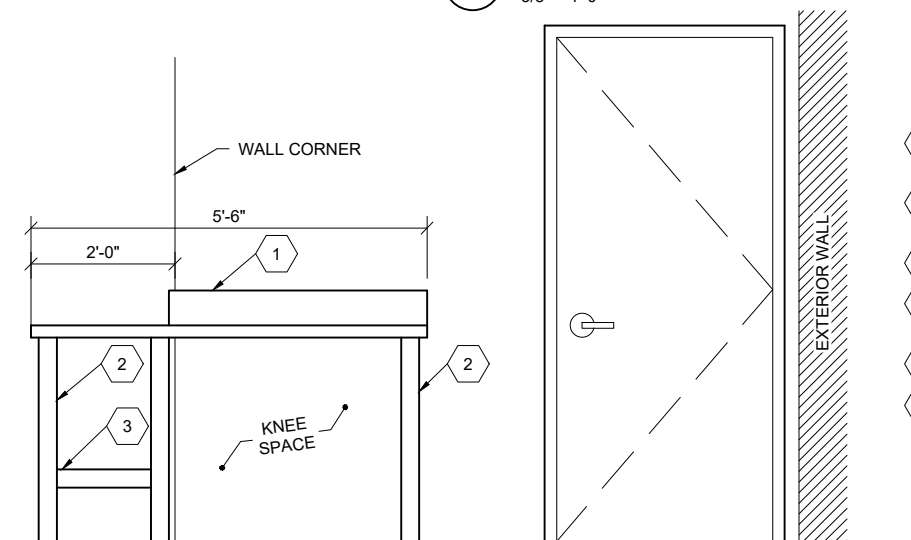


LOOKING EAST - REFER TO SHEET 3A-101

1 LAB 3A-102 EAST ELEVATION
3A-101 3/8" = 1'-0"



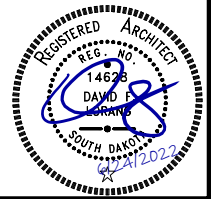
2 LAB 3A-102 SOUTH ELEVATION
3A-101 3/8" = 1'-0"



3 CONTROL ROOM 3A-100 EAST ELEVATION
3A-101 3/8" = 1'-0"

**INTERIOR ELEVATION
KEY NOTES:**

- 1 STAINLESS STEEL COUNTERTOP W/ INTEGRAL BACK SPLASH
- 2 STAINLESS STEEL SUPPORT LEGS - MAX. SPACING OF 4'-0"
- 3 STAINLESS STEEL SHELF
- 4 PREFINISHED, PAINTED LAB-GRADE METAL UPPER CABINETS - 14" DEEP
- 5 EXISTING WINDOW
- 6 STAINLESS STEEL 2-COMPARTMENT SINK



PROJECT / SHEET TITLE :
ALCESTER WASTEWATER TREATMENT FACILITY IMPROVEMENTS
AERATION, PUMPING & OPS BLDG - MAIN FLOOR PLAN
 ADDENDUM #2
 ALCESTER, SOUTH DAKOTA

TECHNICIAN:	AME
DESIGNER:	DFL
ENG/ARCH:	DFL
JOB NO.:	23514.00
DATE:	JUNE 2022
FIGURE NO.:	2-1

Electrical Addendum

TO: All Plan holders
FROM: Mark W. Joffer, PE
DATE: 6-24-22
RE: Wastewater Facility Improvements
Alcester, SD
PE Group #30-21227



The following addendum items shall become a binding part of the contract documents and shall be included as part of the contract price:

Drawings:

Sheet E-001

1. Insert the attached J-O-R / H-O-A Switch Position Table on this sheet. Utilize this table to determine field control wiring between each J-O-R switch and its associate H-O-A switch.

Sheet E-003

1. Change NEMA S1 FVNR motor starter presently shown for a 10 HP Existing Aerator to a Spare S1 motor starter. No connection to an existing Aerator is required.
2. Install Overtemp/Seal Fail relay in Equalization Lift Pump VFD cabinet. Relay is furnished by pump manufacturer. This applies to both Equalization Lift Pump 1 and Equalization Lift Pump 2.
3. Signal wires for Overtemp and Seal Fail are provided in Pump Cable that is furnished by Equalization Pump manufacturer. Terminate signal wires for Overtemp and Seal Fail on Overtemp/Seal Fail relay noted in item 2 above. This applies to both Equalization Lift Pumps 1 and 2.
4. Note that Equalization Lift Pump Seal Fail signal is to be used by the SCADA system for alarm purposes. This applies to both Equalization Lift Pumps 1 and 2.
5. Provide a 2-pole isolation relay in Equalization Lift Pump VFD cabinet. Tie Overtemp signal from equalization pump into isolation relay coil. Interlock one (1) set of isolation relay contacts with Equalization Pump VFD run signal so that Equalization Pump shuts down on Overtemp alarm. The second set of isolation relay contacts is to be used by the

Parker, SD
225 North Main Avenue, 57053
Ph: (605) 297-3647 / Fax (605) 297-3681

www.pegrouppengr.com



"Integrity, Teamwork...Excellence"

SCADA system for alarm purposes. This applies to both Equalization Lift Pumps 1 and 2.

Sheet E-101

1. Provide an Oil Tight, full size, Jog-Off-Remote (J-O-R) Switch in a NEMA 4X Stainless Steel box at each of the new Equalization Lift Pumps. Interwire with H-O-A in Pump VFD per J-O-R / H-O-A Switch Position Table.

Sheet E-300

1. Electrical Service Pedestal Detail: Eliminate the Lift Station Control Panel that is shown on this detail.

Sheet 3E-200

1. Install Overtemp/Seal Fail relay in new WAS Pump motor starter cabinet. Relay is furnished by pump manufacturer. This applies to both Was Pumps.
2. Signal wires for Overtemp and Seal Fail are provided in Pump Cable that is furnished by WAS Pump manufacturer. Terminate signal wires for Overtemp and Seal Fail on Overtemp/Seal Fail relay noted in item 1 above. This applies to both WAS Pumps.
3. Note that WAS Pump Seal Fail signal is to be used by the SCADA system for alarm purposes. This applies to both WAS Pumps.
4. Provide a 2-pole isolation relay in WAS Pump motor starter cabinet. Tie Overtemp signal from WAS pump into isolation relay coil. Interlock one (1) set of isolation relay contacts with WAS Pump run signal so that WAS Pump shuts down on Overtemp alarm. The second set of isolation relay contacts is to be used by the SCADA system for alarm purposes. This applies to both WAS pumps.

Sheet 3E-300

1. Provide an Oil Tight, full size, Jog-Off-Remote (J-O-R) Switch in a NEMA 4X Stainless Steel box at each of the new WAS Pumps. Interwire with H-O-A in WAS Pump motor starter per J-O-R / H-O-A Switch Position Table.

Parker, SD

225 North Main Avenue, 57053
Ph: (605) 297-3647 / Fax (605) 297-3681

www.pegrouppengr.com



"Integrity, Teamwork...Excellence"

Specifications:

Section 262419

1. Section 2.9: Add item (I) which states: "Provide Oiltight H-O-A switch in each starter door.

Section 262913

1. Section 2.3(D)1: Add item (e) which states: "Provide Oiltight H-O-A switch in VFD starter door.

Section 262923.03

1. Add the attached specification Section Entitled: Manual and Magnetic Motor Controllers. This shall become part of the project Electrical scope.

End of Addendum

Parker, SD
225 North Main Avenue, 57053
Ph: (605) 297-3647 / Fax (605) 297-3681

www.pegrouppengr.com

Alcester Elec Addendum form 6-24-22

J-O-R / H-O-A SWITCH POSITION TABLE

SWITCH POSITION & EQUIPMENT OPERATION TABLE

MODE	LOCAL JOG-OFF-REMOTE (JOR) SWITCH		MCC HAND-OFF-AUTO (HOA) SWITCH			EQUIPMENT ACTION	
	J	O	R	H	O		A
1	X			X			RUN W/OUT CONTROL
2	X				X		OFF
3	X					X	RUN W/OUT CONTROL
4		X		X			OFF
5		X			X		OFF
6		X				X	OFF
7			X	X			RUN W/OUT CONTROL
8			X		X		OFF
9			X			X	RUN W/CONTROL
X – DESIGNATES SWITCH POSITION							
<u>SWITCH POSITION TABLE DEFINITIONS</u>							

OFF – PUMP IS OFF NO MATTER WHAT

RUN W/OUT CONTROL – PUMP RUNS REGARDLESS OF CONTROL SYSTEM CALLING PUMP TO START/STOP.

RUN W/CONTROL – PUMP RUNS/STOPS WHEN CONTROL SYSTEM CALLS PUMP TO START/STOP.

SECTION 262913.03 - MANUAL AND MAGNETIC MOTOR CONTROLLERS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Manual motor controllers.
 - 2. Combination full-voltage magnetic motor controllers.
 - 3. Enclosures.
 - 4. Accessories.
 - 5. Identification.

1.3 DEFINITIONS

- A. CPT: Control power transformer.
- B. MCCB: Molded-case circuit breaker.
- C. MCP: Motor circuit protector.
- D. NC: Normally closed.
- E. OCPD: Overcurrent protective device.
- F. SCCR: Short-circuit current rating.
- G. SCPD: Short-circuit protective device.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product.
 - 1. Include rated capacities, operating characteristics, electrical characteristics, and furnished specialties and accessories.
- B. Shop Drawings: For each type of magnetic controller.
 - 1. Include plans, elevations, sections, and mounting details.

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2. Indicate dimensions, weights, required clearances, and location and size of each field connection.
3. Wire Termination Diagrams and Schedules: Include diagrams for signal, and control wiring. Identify terminals and wiring designations and color-codes to facilitate installation, operation, and maintenance. Indicate recommended types, wire sizes, and circuiting arrangements for field-installed wiring, and show circuit protection features. Differentiate between manufacturer-installed and field-installed wiring.
4. Include features, characteristics, ratings, and factory settings of individual overcurrent protective devices and auxiliary components.

C. Product Schedule: List the following for each enclosed controller:

1. Each installed magnetic controller type.
2. NRTL listing.
3. Factory-installed accessories.
4. Nameplate legends.
5. SCCR of integrated unit.
6. For each combination magnetic controller include features, characteristics, ratings, and factory setting of the SCPD and OCPD.
 - a. Listing document proving Type 2 coordination.

1.5 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: For magnetic controllers to include in operation and maintenance manuals.

1. In addition to items specified in "Operation and Maintenance Data," include the following:
 - a. Routine maintenance requirements for magnetic controllers and installed components.
 - b. Manufacturer's written instructions for testing and adjusting circuit breaker and MCP trip settings.
 - c. Manufacturer's written instructions for setting field-adjustable overload relays.
 - d. Load-Current and List of Settings of Adjustable Overload Relays: Compile after motors have been installed, and arrange to demonstrate that switch settings for motor-running overload protection suit actual motors to be protected.

1.6 MAINTENANCE MATERIAL SUBMITTALS

A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

1. Fuses: Equal to 10 percent of quantity installed for each size and type, but no fewer than three of each size and type.
2. Auxiliary Contacts: Furnish one spare(s) for each size and type of magnetic controller installed.

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3. Power Contacts: Furnish three spares for each size and type of magnetic contactor installed.

1.7 QUALITY ASSURANCE

- A. Testing Agency Qualifications: Accredited by NETA.
 1. Testing Agency's Field Supervisor: Certified by NETA to supervise on-site testing.

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Store controllers indoors in clean, dry space with uniform temperature to prevent condensation. Protect controllers from exposure to dirt, fumes, water, corrosive substances, and physical damage.

1.9 FIELD CONDITIONS

- A. Ambient Environment Ratings: Rate equipment for continuous operation under the following conditions unless otherwise indicated:
 1. Ambient Temperature: Not less than 23 deg F (minus 5 deg C) and not exceeding 104 deg F (40 deg C).
 2. Altitude: Not exceeding 6600 feet (2010 m) for electromagnetic and manual devices.
 3. The effect of solar radiation is not significant.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and use.
- B. UL Compliance: Fabricate and label magnetic motor controllers to comply with UL 508 and UL 60947-4-1.
- C. NEMA Compliance: Fabricate motor controllers to comply with ICS 2.

2.2 COMBINATION FULL-VOLTAGE MAGNETIC MOTOR CONTROLLER

- A. Description: Factory-assembled, combination full-voltage magnetic motor controller consisting of the controller described in this article, indicated disconnecting means, SCPD and OCPD, in a single enclosure.
- B. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

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1. ABB, Electrification Business.
 2. Eaton.
 3. Rockwell Automation, Inc.
 4. Siemens Industry, Inc., Energy Management Division.
 5. Square D; Schneider Electric USA.
- C. Standard: Comply with NEMA ICS 2, general purpose, Class A.
- D. Configuration: Non-reversing.
- E. Contactor Coils: Pressure-encapsulated type.
1. Operating Voltage: Coordinate with SCADA System vendor.
- F. Control Power:
1. For on-board control power, obtain from line circuit or from integral CPT. The CPT shall have capacity to operate integral devices and remotely located pilot, indicating, and control devices.
- G. Overload Relays:
1. Solid-State Overload Relay:
 - a. Switch or dial selectable for motor-running overload protection.
 - b. Sensors in each phase.
 - c. Class 10/20 selectable tripping characteristic selected to protect motor against voltage and current unbalance and single phasing.
- H. Fusible Disconnecting Means:
1. NEMA KS 1, heavy-duty, horsepower-rated, fusible switch with clips or bolt pads to accommodate indicated fuses.
 2. Lockable Handle: Accepts three padlocks and interlocks with cover in closed position.

2.3 ENCLOSURES

- A. Comply with NEMA 250, type designations as indicated on Drawings, complying with environmental conditions at installed location.
- B. The construction of the enclosures shall comply with NEMA ICS 6.
- C. Enclosures shall be NEMA 12, gasketed.

2.4 ACCESSORIES

- A. General Requirements for Control Circuit and Pilot Devices: NEMA ICS 5; factory installed in controller enclosure cover unless otherwise indicated.

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1. Push Buttons, Switches, Pilot Lights, and Selector Switches: Heavy-duty or oil-tight.
 - a. H-O-A Selector Switch.
 - b. Pilot Lights: Green LED to indicate motor running.
- B. Motor protection relays shall be with solid-state sensing circuit and isolated output contacts for hardwired connections.
 1. Phase-failure.
 2. Phase-reversal, with bicolor LED to indicate normal and fault conditions. Automatic reset when phase reversal is corrected.
 3. Under/overvoltage, operate when the circuit voltage reaches a preset value, and drop out when the operating voltage drops to a level below the preset value. Include adjustable time-delay setting.

2.5 IDENTIFICATION

- A. Controller Nameplates: White label with engraved Black letter.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas and space conditions for compliance with requirements for motor controllers, their relationship with the motors, and other conditions affecting performance of the Work.

3.2 INSTALLATION

- A. Comply with NECA 1.
- B. Wall-Mounted Controllers: Install magnetic controllers on walls with tops at uniform height indicated, and by bolting units to wall or mounting on lightweight structural-steel channels bolted to wall.
- C. Maintain minimum clearances and workspace at equipment according to manufacturer's written instructions and NFPA 70.
- D. Wiring within Enclosures: Bundle, lace, and train conductors to terminal points with no excess and without exceeding manufacturer's limitations on bending radii. Install lacing bars and distribution spools.
- E. Setting of Overload Relays: Select and set overloads on the basis of full-load current rating as shown on motor nameplate. Adjust setting value for special motors as required by NFPA 70 for motors that are high-torque, high-efficiency, and so on.

3.3 IDENTIFICATION

- A. Identify system components, wiring, cabling, and terminals. Comply with requirements for identification specified in Section 260553 "Identification for Electrical Systems."

3.4 FIELD QUALITY CONTROL

- A. Manufacturer's Field Service: Engage a factory-authorized service representative to test and inspect components, assemblies, and equipment installations, including connections.
- B. Perform tests and inspections with the assistance of a factory-authorized service representative.
- C. Tests and Inspections:
 - 1. Visual and Mechanical Inspection:
 - a. Compare equipment nameplate data with drawings and specifications.
 - b. Inspect physical and mechanical condition.
 - c. Inspect anchorage, alignment, and grounding.
 - d. Verify the unit is clean.
 - e. Inspect contactors:
 - 1) Verify mechanical operation.
 - 2) Verify contact gap, wipe, alignment, and pressure are according to manufacturer's published data.
 - f. Motor-Running Protection:
 - 1) Verify overload element rating is correct for its application.
 - 2) If motor-running protection is provided by fuses, verify correct fuse rating.
 - g. Inspect bolted electrical connections for high resistance using one of the two following methods:
 - 1) Use a low-resistance ohmmeter. Compare bolted connection resistance values with values of similar connections. Investigate values that deviate from those of similar bolted connections by more than 50 percent of the lowest value.
 - 2) Verify tightness of accessible bolted electrical connections by calibrated torque-wrench method according to manufacturer's published data or NETA ATS Table 100.12. Bolt-torque levels shall be according to manufacturer's published data. In the absence of manufacturer's published data, use NETA ATS Table 100.12.
 - h. Verify appropriate lubrication on moving current-carrying parts and on moving and sliding surfaces.
 - 2. Electrical Tests:
 - a. Perform insulation-resistance tests for one minute on each pole, phase-to-phase and phase-to-ground with switch closed, and across each open pole. Insulation-

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- resistance values shall be according to manufacturer's published data or NETA ATS Table 100.1. In the absence of manufacturer's published data, use Table 100.5. Values of insulation resistance less than those of this table or manufacturer's recommendations shall be investigated and corrected.
- b. Measure fuse resistance. Investigate fuse-resistance values that deviate from each other by more than 15 percent.
 - c. Test motor protection devices according to manufacturer's published data.
 - d. Perform operational tests by initiating control devices.
3. Infrared Inspection: Perform the survey during periods of maximum possible loading. Remove all necessary covers prior to the inspection.
- a. After Substantial Completion, but not more than 60 days after Final Acceptance, perform infrared inspection of the electrical power connections of each motor controller.
 - b. Report of Infrared Inspection: Prepare a certified report that identifies the testing technician and equipment used, and lists the following results:
 - 1) Description of equipment to be tested.
 - 2) Discrepancies.
 - 3) Temperature difference between the area of concern and the reference area.
 - 4) Probable cause of temperature difference.
 - 5) Areas inspected. Identify inaccessible and unobservable areas and equipment.
 - 6) Load conditions at time of inspection.
 - 7) Photographs and thermograms of the deficient area.
 - 8) Recommended action.
 - c. Equipment: Inspect distribution systems with imaging equipment capable of detecting a minimum temperature difference of 1 deg C at 30 deg C. The equipment shall detect emitted radiation and convert detected radiation to a visual signal.
 - d. Act on inspection results and recommended action, and considering the recommendations of NETA ATS, Table 100.18. Correct possible and probable deficiencies as soon as Owner's operations permit. Retest until deficiencies are corrected.
- D. Motor controller will be considered defective if it does not pass tests and inspections.
- E. Prepare test and inspection reports.
- 3.5 SYSTEM FUNCTION TESTS
- A. System function tests shall prove the correct interaction of sensing, processing, and action devices. Perform system function tests after field quality control tests have been completed and all components have passed specified tests.

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1. Develop test parameters and perform tests for the purpose of evaluating performance of integral components and their functioning as a complete unit within design requirements and manufacturer's published data.
 2. Verify the correct operation of interlock safety devices for fail-safe functions in addition to design function.
 3. Verify the correct operation of sensing devices, alarms, and indicating devices.
- B. Motor controller will be considered defective if it does not pass the system function tests and inspections.
- C. Prepare test and inspection reports.

3.6 DEMONSTRATION

- A. Train Owner's maintenance personnel to adjust, operate, and maintain switchgear.

END OF SECTION 262913.03