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ADDENDUM #1

TOWN OF STERLINGTON
RELOCATION OF MARION STATE BANK SEWER LIFT STATION
PROJECT NO. 1146803

ORIGINAL BID DATE: FEBRUARY 3, 2026 - 10:00 A.M.
REVISED BID DATE: FEBRUARY 10, 2026 – 10:00 A.M.

BIDDER MUST acknowledge receipt of this addendum and all other addenda on Page 1 of the Bid Proposal.

The following changes have been made to the plans and specifications:

1. The bid date has been postponed by one (1) week. The new bid date is February 10, 2026. Bids will be received no later than 10:00 A.M. and will then be opened and read aloud.

2. Specification Section IV-Sewage Pumping Station (Self Priming) has been revised. Please see attached Revised Specification Section IV-Sewage Pumping Station (Self Priming) to be used in bidding this project.

Should you have any questions or need any additional information, please contact this office at any time.

VOLKERT, INC.

ROBERT B. HARRELL, P.E.

RBH/sah

January 28, 2026

SECTION IV
SEWAGE PUMPING STATION
(SELF-PRIMING)

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SECTION IV
SEWAGE PUMPING STATION
(SELF-PRIMING)

IV-1 GENERAL:

The Contractor shall provide all plant, labor, material and equipment and perform all work required to install and make operative the sewage pumping station as shown on the plans and specified herein.

The pumping station shall come with the pumps and motors factory mounted on a steel skid ready to mount on the floor of the pump house with controls pre-wired and tested. All electrical equipment shall be complete and ready to connect to the existing power supply.

IV-2 MATERIALS:

(A) **General:** The sewage pumping system shall be complete with two (2) self-priming pumps and motors, sized as shown on the plans, and shall be tested and complete with controls as specified hereinafter. All self-priming pumps shall be similar and equal to those manufactured by the Gorman-Rupp Company, Mansfield, Ohio. The Contractor shall submit to the Engineer six (6) sets of shop drawings, for written approval, indicating all details of the pumps, motors, controls, etc.

(B) **Operating Conditions:** Each of the pumps and motors shall be capable of pumping unscreened sewage at a rate and head conditions as shown in the table on the lift station plan sheet(s). Each pump shall be capable of passing solids of 3.0 inch diameter.

(C) **Self-Priming Pump – Motor Construction:** The pump casing shall be designed so that sufficient liquid is retained in the case to reprime, even if the suction check valve is held open by solids causing liquid to drain back to SUMP when sump is idle. See section IV-4 for details of the check valve.

The pump impeller shall be of the two (2) blade semi-open non-clog type with pump out vanes on the back shroud. A removable volute lip late or full diameter back plate shall be used with the impeller so that rimmed impellers can be used without loss of priming efficiency. Impeller and lip plate shall be of ductile iron and shall be dynamically balanced.

The impeller shall screw onto the shaft and shall be secured with a suitable locking device.

The pump shall be fitted with a bearing bracket which contains the shaft and heavy duty ball bearings of adequate size to withstand imposed loads. The shaft shall be sealed with two (2) mechanical seals with an oil chamber between the seals.

The shaft seal shall be the double-floating, mechanical type with tungsten titanium carbide (or approved equal material) stationary and rotating faces. All metal parts of the seal shall be of stainless steel. Replacement of the seal, lip, plate, impeller and wear plate shall be accomplished through the removable inlet elbow opening. The shaft shall be covered with a stainless steel sleeve. The mechanical seal shall be housed in an oil lubricated seal housing with atmospheric drain.

(D) **Pump Design Information:** The pump shall be similar and equal in all respects, including the pump performance curve, to a Gorman-Rupp, Super T-Series, Model T4CSC. The pump shall operate at the design conditions.

(E) **Motors:** Pump motors shall be horizontal, open drip-proof, cast iron frame, with normal starting torque suitable for three phase (3Ø), 240-volt electric current. The motors shall be minimum 20 H.P. The motors shall be non-overloading throughout the entire range of the pump curve as shown on the Pump Manufacturer's Pump Curve Bulletin.

(F) **Drive:** The pumps and motors shall be mounted on a fabricated steel skid and belt connected with belts adequately sized for the rated speed and horsepower. Minimum service factor on the V-belt drive system is 1.5. The belts shall be covered with an OSHA approved guard, which shall be painted as per the pump manufacturer's recommendation.

(G) **Electrical Control Panel:** The control panel shall have a Nema 4X weather-tight enclosure and shall be dead front with separate hinged inside panel to protect electrical equipment. The panel shall have H-O-A switches for each pump and a running light for each pump. A locking hasp shall be provided on the outside door.

A circuit breaker and a NEMA rated magnetic contactor with separate electronic Nema rated 3-leg overload protection shall be provided for each pump. An alternating relay shall be provided to alternate pumps on each successive cycle of operation. Starters shall have auxiliary contacts to operate both pumps on override condition. An interlock relay shall be provided to automatically re-connect the control circuit in case of circuit breaker trip on one pump. H-O-A switches and run lights shall be provided for each pump.

All control panels shall include a transformer to reduce the control voltage to 115 volts.

All control panels shall be UL enclosed approved.

All control panels shall also include: single-phase secondary surge arrestor, elapsed time meters, through-the-door operators for all circuit breakers, electronic phase failure and voltage protection relays, re-settable high temp shutdown systems for each pump and all wiring numbered at terminations on both ends.

A terminal strip shall be provided for connecting pump and control wires. Additional terminals shall be provided to connect alarm, heat sensors and seal failure wires. The panel shall have lightning arrestors and a phase failure protection. A panel strip heater shall also be provided.

Additional terminals shall be provided to connect alarm, heat sensors, casing heaters, etc.

Panel Heater: The control panel shall be equipped with a panel heater to minimize the effects of humidity and condensation. The heater shall include a thermostat.

High Temperature Shutdown Switch: A high pump temperature protection circuit shall override the level control and shut down the pump motor(s) when required to protect the pump from excessive temperature. A thermostat shall be mounted on each pump casing and connected to a pump shutdown circuit. If casing temperature rises to a level sufficient to cause damage, the thermostat causes the shutdown circuit to interrupt power to the motor. A visible indicator, mounted through the control panel door shall indicate motor stopped due to high pump temperature. The motor shall remain locked out until the pump has cooled and circuit has been manually reset. Automatic reset of this circuit is not acceptable.

Transient Voltage Surge Suppressor: The control panel shall be equipped with a transient voltage surge suppressor to minimize damage to the pump motors and control from transient voltage surges. The suppressor shall utilize silicon-oxide varistors encapsulated in a non-conductive housing. The arrestor shall have a current rating of 60,000 Amps, and a Joule rating of 1500.

One-Phase Voltage Monitor: The control panel shall be equipped to monitor the incoming power and shut down the pump motors when required to protect the motor(s) from damage caused by phase reversal, phase loss, voltage unbalance, high voltage, and low voltage. An adjustable time delay shall be provided to minimize nuisance trips. The motor(s) shall automatically restart, following an adjustable time delay, when power conditions return to normal.

(H) **Wiring Channel:** When control box is to be mounted on sump cover or near to the sump, the wiring channel shall be used. Wiring channel shall provide cord grip holders for the pump cords and the control cords. The channel box shall have a removable cover for easy adjustment of cords to pumping levels required. All cords shall extend from one end of the box and be taken through conduit in sump cover to control box. No splices shall be made in the wiring channel. Continuous cords must

be used from control panel to pumps and controls. Wiring channel shall mount on supports fastened to access frame.

(I) **Sump Level Controls:** The Contractor shall furnish and install four (4) float switches as shown on the drawings and as required for a complete and properly operating system. One (1) float shall turn off the pump(s) at the LWL (see plans), one (1) float shall start the lead pump, one (1) float shall start the lag pump if the level rises above HWL2 and one (1) float shall activate a high water alarm which shall be a flashing red light to be mounted on the outside of the pump house. The Contractor shall be responsible for setting all float switches to the elevations as shown on the plans.

The floats shall use fiber optic cable to transmit a beam of light from a transmitter in the control panel to the float where the beam makes and breaks depending on the tilt of the float. The receiver in the control panel shall detect the presence or absence of light and operate a relay in the receiver. The float shall have no electrical components or metallic wires that could cause arcs and sparks in an explosive atmosphere.

The float switch shall be mercury and lead free and shall be made of all safe, recyclable materials. The float switch housing shall be polypropylene. It shall be a simple robust device designed for many years of dependable service. The beam eclipser shall be stainless steel in an inert non-toxic dampening fluid that prevents chatter due to wave action. The viscosity of the fluid shall not change significantly over the range of –50 to +155F (-45 to +70C). The transceivers (transmitter and receiver combination) shall be dual din rail mounted units capable of connection to 2 floats. Provide one dual transceiver for every 2 floats. The fiber optic cable shall be custom made for the float and shall consist of dual plastic fibers with an overall specially blended PVC sheath for flexibility. No special tools or experience shall be required for connection of the optical cable to the transceivers. The cable shall be connected and sealed at the float housing using a double seal method that will prevent water from entering the float even if the outer sheath is damaged. The float color shall be two tone with the lighter color on the dome for easier viewing underwater when tilted up.

The transceivers shall operate in ambient temperatures of –15 to +130F (-25 to +55C). The transceivers shall operate at 12 VDC and shall be protected against accidental polarity reversal. The system shall operate in the visible and infrared light region with wavelengths between 400 and 1200 nm. The output relays in the receivers shall have the capability of being connected normally open or normally closed. The transceivers shall have a green led power-on light and red led lights on each channel indicating that the light beam is being received – float tilted up. The floats shall operate in liquid temperatures of +32 to +130F (0 to +55C). The floats shall have an ambient air standby operating temperature rating of –15 to +155C (-25 to +70C).

The float switches and transceivers shall be the Optical Float® level detection system by Cox Research and Technology, Inc., Baton Rouge, La. The dual transceivers shall be model TR2, and the floats shall be Opti-Float® model F1.

(J) Alarm Light: The Station manufacturer will supply one (1) 115 VAC alarm light fixture with vapor-tight shatter resistant red globe, conduit box, and mounting base. The design must prevent rain water from collecting in the gasketed area of the fixture, between the base and globe. The high water alarm light shall be supplied in separate Nema 3 enclosure for mounting on the lift station enclosure. The alarm light shall be installed by the Contractor.

Alarm light shall glow dim at all times except under alarm conditions, then light shall glow bright and flash. Alarm bell or horn shall have silencing switch with automatic reset.

(K) Operation of System: On sump level rise lower float switch shall first be energized, then upper level switch shall next energize and start lead pump. With lead pump operating, sump level shall lower to low switch turn-off setting and pump shall stop. Alternating relay shall index on stopping of pump so that lag pump will start on next operation. If sump level continues to rise when lead pump is operating, override switch shall energize and start lag pump. Both lead and lag pumps shall operate together until low level switch turns off both pumps. If level continues to rise when both pumps are operating, alarm switch shall energize and signal the alarm. If one pump should fail for any reason the second pump shall operate on the override control, alarm shall signal. All level switches shall be adjustable, for level setting, from the surface.

(L) Station Cover: See specifications section XV for lift station cover.

The flashing red alarm light shall be mounted on the entrance side of the lift station cover and shall be equipped with an approved disconnect such that the red light can be readily disconnected when it is necessary to remove the station cover.

(M) Lift Station Pump Accessories: Each pump in each of the lift stations as described in this section shall come complete with the following accessories.

1. Gauge Kit: A gauge kit shall be supplied for each pump. Suction pressure must be monitored by a glycerin-filled compound gauge, and discharge pressure by a glycerin-filled pressure gauge. Gauges to be at least 4 inches in diameter, graduated in feet water column. Rated accuracy shall be 1% of full scale reading. Compound gauge shall be graduated -34 to +34 feet water column minimum. Pressure gauge to be graduated 0 to 140 feet water column minimum.

Gauges shall be factory mounted on a resilient panel with frame assembly secured to pumps or piping. Gauge installations shall be complete with all

hoses and stainless steel fittings, including a shutoff valve for each gauge line at the point of connection to suction and discharge pipes.

2. **Automatic Air Release Valves:** All pumps shall be equipped with an automatic air release valve, designed to vent air to atmosphere during initial priming, or unattended repriming cycles. Upon completion of the priming or repriming cycle, the valve shall automatically close to prevent recirculation. A visible indication of valve closure shall be evident, and shall operate solely on discharge pressure. Valves which connect to the suction line, or rely on vacuum pumps are not acceptable.

   All valve parts exposed to sewage shall be cast iron, stainless steel, or similar corrosion resistant materials. Diaphragms shall be fabric-reinforced neoprene, or similar inert material.

   Valve design shall incorporate following maintenance features:
   (a) A clean-out port, at least 3 inches in diameter, shall allow easy inspection, clean-out, and service.
   (b) Valves shall be field adjustable for varying discharge heads.
   (c) Connection of the air release valves to the station piping shall include stainless steel fittings.

   Automatic air release valve shall come with N.P.T. female 1" x 1" connections. Air release valves shall be manufactured by Gorman-Rupp or an approved equal manufacturer.
   (a) Model GRP33-07A or approved equal for pump discharge head range 4'-17'.
   (b) Model GRP33-07 or approved equal for pump discharge head range 18'-49'.
   (c) Model GRP33-07B or approved equal for pump discharge head range over 50'.

3. **Spare Parts Kit:** The following minimum spare parts shall be furnished with each pump station:
   (a) One (1) spare pump mechanical seal (complete with shaft sleeve).
   (b) Two (2) cover plate O-Rings.
   (c) Two (2) rotating assembly O-Rings.
   (d) One (1) set of impeller clearance adjustment shims.

4. **Casing Heater:** Each pump shall be equipped with a casing heater.

IV-3 PAINTING:

All piping and exposed steel framework shall be cleaned prior to painting. All above grade non-submerged piping, steel, etc. shall be coated with 4-6 mils dry film thickness (minimum) Tnemec Series 66, and a topcoat of 2-3 mils dry film thickness (minimum)

Tnemec Series 1094 Urethane. All below grade submerged piping or exposed steel shall be coated with 2 coats of Tnemec Series 66 at 4-6 mils dry film thickness (minimum) each. All factory painted pumps, valves, etc. shall be coated as per the manufacturer's recommendation.

IV-4 PIPING, VALVES, ETC.:

Discharge Piping: Discharge piping shall be Ductile Iron with flanged connections and shall meet the requirements of Federal Specifications WW-P-421c and ANSI A21.51, Class 150. Flanges shall meet the requirements of ASA Class 125 and ANSI A21.10. Gaskets for flanged joints shall be rubber with cloth inserts.

Check Valve: A full-flow discharge check valve, capable of passing a 3" spherical solid, shall be supplied for each pump. The check valve shall have a 3" removable clean-out port with o-ring seal for servicing. The suction check valve shall be mounted in suction casting so that the check valve rests on tapered seat. A spacer flange shall be installed at the suction casting so that check valve can be removed for inspection and/or replacement without disturbing the suction piping.

Gate Valve: Gate valves shall be iron body, bronze stem, rubber disc, resilient wedge seat type and shall be AWWA standard, with flanged ends. Gate Vales shall be similar and equal to the AWWA non-rising stem gate valves as manufactured by the Mueller Company. A plug or globe valve of equal construction may be substituted for the gate valve.

Air Return Piping: A scheduled 40, PVC air vent return line shall be installed in the discharge line between pump and discharge check valve. Line shall be 1" minimum diameter and shall be connected to the automatic air release valves located on each pump. Automatic air release valves shall be similar and equal to those described in Section IV-2 (M) of these specifications.

Outlet of air vent line shall discharge into wet-well and shall terminate immediately below the station slab.

IV-5 EXCAVATION AND BACKFILL:

All excavation and backfill shall be in accordance with applicable portions of Section I.

IV-6 CONCRETE:

All cast-in-place concrete shall be in accordance with applicable portions of Section II.

IV-7 WET WELL:

New Wet Wells: Precast portions of wet well shall be reinforced concrete pipe meeting the requirements of ASTM C-76-60T, Class III.

Existing Wet Wells: Wet wells for existing sewage pumping stations shall be cleaned of all trash, debris, etc. and the condition of the wet well shall be reported to the Engineer. All existing valves and piping shall be removed from the wet well and replaced with all new piping, valves, etc. All proposed valves and piping shall be cleaned, primed and painted.

IV-8 INSTALLATION:

The Contractor shall install the sewage pumping station in accordance with manufacturer's recommendations and these plans and specifications.

The Engineer will locate the plant in the field and set the Contractor a temporary bench-mark adjacent to the site. The Contractor will be responsible for determining all lines; grades and elevations therefrom.

The Contractor shall make the entire plant operative, including testing all components of discharge piping and new force main to fifty pounds per square inch (50 PSI). Should any leakage occur in the discharge piping or any leakage occur in excess of that specified in paragraph III-12 for the force main, the Contractor shall repair such. The Contractor shall arrange and adjust all controls to function at the elevations shown on the plans. The Contractor shall perform a capacity test on the plant by installing a pressure gauge on the discharge of the pumps, plugging the influent line and measuring the volume of water removed from the wet well.

IV-9 WARRANTY & TESTING:

Standard Warranty: All equipment, piping, valves, etc. shall be guaranteed free from defects in design, workmanship and material, and the Contractor shall furnish a guarantee to replace or repair, without cost to the Owner, any part or parts of any equipment proving defective in design workmanship or material within one year after equipment has received final acceptance. The fiberglass building manufacturer shall provide a 20 year warranty on the reinforced fiberglass pump station enclosure.

Extended Warranty: If the pump station is a factory assembled package station, the pump station manufacturer shall provide a 5 year warranty on all station components. Each pump station shall be factory tested, by the pump station manufacturer, on individual station requirements – including actual wetwell depths. Tests shall be performed in accordance with Hydraulic Institute standards. Tests shall be witnessed by the consulting engineer and owner, should they choose to be present.

IV-10 ELECTRICAL POWER:

The Lift Station Contractor shall arrange for the permanent electrical power at the lift station site and shall pay any required deposit, which shall be made in the Owner's name, unless there is an existing electrical meter that is to supply the electricity for the proposed lift station.

The Lift Station Contractor will be responsible for paying for the electrical bill at the meter until such time as the Owner accepts this portion of the project as being substantially complete.

If there is an existing electrical meter which is to service the proposed new lift station, then the electrical power for constructing and testing the lift station shall be made available by the Owner at no additional charge to the Contractor.

Should there be an agreement made between the Owner and the Lift Station Contractor, for whatever reason, which would allow the Owner or another Contractor to use the lift station prior to its being accepted by the Owner, then it shall be the Lift Station Contractor's responsibility to have the electrical meter read by the Power Company or by the Resident Inspector so that the responsibility for electrical power can be separated. Otherwise, the Lift Station Contractor shall be fully responsible for the paying of the electrical bill, whether or not such power was used for his purposes.

Should, for any of the above or any other reason, the permanent power not be made available on a timely basis, it will be the Lift Station Contractor's responsibility to arrange for any necessary temporary electrical service.

IV-11 WATER FOR TESTING:

If the proposed lift station is to be constructed at a site where the Owner currently has a supply of water, then the Owner shall furnish the Lift Station Contractor the necessary water for testing at no additional cost to the Lift Station Contractor. The Lift Station Contractor should check this arrangement with the Owner or Engineer prior to bidding.

If the Owner does not have sufficient available water at the site, then it shall be the Lift Station Contractor's responsibility to furnish the necessary water for testing of the lift station.

IV-12 MEASUREMENT AND PAYMENT:

(A) **Measurement:** All work done under this section will be measured as a Lump Sum Item; which measurement shall include all excavation backfill, concrete, mechanical and electrical equipment necessary to install the sewage pumping station and place it in operation as shown on the plans and as specified herein, except the force main which will be measured by the lineal foot in place and accepted.

(B) **Payment:** The sewage pumping station as measured above, will be paid for the Contract Lump Sum Price, for Sewage Pumping Station, which price and payment shall constitute full compensation for all plant, labor, equipment and materials, including all excavation, backfill, concrete, pumps, motors, controls, piping, valves and all mechanical and electrical equipment required to install and place into operation the sewage pumping station as shown on the plans and specified herein.

END OF SECTION