A.L. FRANKS ENGINEERING

118 East Broad Street
Texarkana, AR 71854
PHONE 870.216.1906 • FAX 870.216.1907

ADDENDUM NO. 1

TO: ALL PLAN HOLDERS

RE: CITY OF ATLANTA, TEXAS
Horne Lift Station

ADDENDUM DATE: October 1, 2025

BID DATE: October 7, 2025

The Plans, Specifications and Contract Documents for the above referenced project are hereby modified as follows:

1. Remove Tech Specification- Section 11135 – Sewer Pump Station and Replace with Section ME2-Non-Clog Centrifugal Pumps and Accessories.

   The existing pump control panel will be utilized but shall include replacement of motor starters and amp overload relays for the newly furnished pumps. In addition the pump control alternator shall be included for replacement.

   Service and review of the pumps shall be included in the bid as described in the new specification.

2. Bidders shall review the existing pump station hoist railing and supports to determine if clearance and access will hinder installation of the new concrete top and pump assembly. Modification to the hoist support shall be included as necessary for the installation. Wet wells 1 & 2 shall remain fully serviceable from the hoist.

ADDENDUM NO. 1 ISSUED BY:

A.L. FRANKS ENGINEERING

Jason C. Haley, P.E.
Project Manager

TECHNICAL SPECIFICATIONS

SECTION ME2 – NON-CLOG CENTRIFUGAL PUMPS AND ACCESSORIES

ME2.1. GENERAL: The items to be furnished and installed under this section of the Specifications consist of self-priming centrifugal pumps, controls, and all associated equipment. The pump supplier shall furnish pumps, motors, discharge elbows, pump base, pump controls, power cables, cable holders, access covers, floats, and any other equipment, accessories, and appurtenances necessary for a complete and operable system.

This specification shall be utilized for the installation of pumps at the Horne Lift Station and shall include pumps, wet well concrete top, motor starters, amp overload relays, suction & discharge piping, an insulated enclosure, and other appurtenances described herein.

ME2.2. SUBMITTALS: The Contractor shall provide to the Engineer, for approval, submittals showing full details of equipment. The submittals shall be supported by such notes or written directions as may be necessary.

This submission shall be made as soon as feasible after award of the Contract, and in any event, shall be submitted and approval obtained before beginning installation of the equipment.

The information required on the submittals shall include, but not necessarily be limited to the following:

A. Full and complete Specifications covering the equipment proposed to be furnished including pump curves and performance data.

B. Detail drawings showing plan and elevation dimensions of the equipment proposed to be furnished.

C. Full and complete Specifications for each motor or motor drive unit proposed to be furnished as a component part of the equipment.

D. Such weights of the equipment as necessary including the heaviest piece to be handled during construction.

E. Nearest location of factory maintenance and service facilities that will be available to service the equipment offered.

F. Assembly, installation, and adjustment instructions.

G. Electrical requirements including power and control schematics.

H. Warranty as herein specified.
Failure to submit the above data shall be cause for rejection of the equipment offered for installation.

ME2.3. DESIGN CONDITIONS:

The pumps shall meet the operating conditions specified on the Plans and shall be designed to operate on a continuous duty basis. Pumps shall be Model: Pioneer GS6 or approved equal with 30 HP/1800 RPM/3PH/60Hz/480V/ODP Motors self-priming Centrifugal Pump or approved equal with 6" suction connection and 6" discharge connection.

Performance Guarantee: Each pump shall be capable of delivering 1200 US GPM against a total dynamic head of 50 feet, including 17 feet suction lift. Secondary point shall be 800 gpm @ 65'.

ME2.4. PUMP CONSTRUCTION:

A. Design: The pumps shall be of the horizontal, self-priming sewage type specifically designed for pumping raw unscreened sewage. Each pump shall be equipped with a removable cover plate allowing complete access to the interior of the pump without disturbing suction and discharge connections.

All openings, internal passages, and internal recirculation ports shall be large enough to permit the passage of a sphere 3" in diameter, and any trash or stringy material which may pass through the average house collection system. The discharge connection elbow shall be permanently installed in the wet well along with the discharge piping.

B. Construction: Major pump components shall be of gray cast iron (Class 30 minimum), with smooth surfaces devoid of blow holes and other irregularities. Where watertight sealing is required, O-rings made of nitrile rubber shall be used. All exposed nuts and bolts shall be of stainless steel 304 or brass construction. All surfaces, coming into contact with sewage, other than stainless steel or brass, shall be protected by an approved sewage resistant coating.

Consideration shall be given to the sanitary sewage service anticipated, in which occasionally debris will lodge between the pump suction check valve and seat, resulting not only in loss of the

suction leg, but also in the siphoning of liquid from the pump casing to the approximate centerline of the impeller. Such occurrence shall be considered normal with proper installation of air release to atmosphere. In consideration of such occurrence, and of the unattended operation anticipated, each pump shall be designed as to retain adequate liquid in the pump casing to insure unattended automatic repriming while operating at its rated speed in a completely open system without suction check valves and with a dry suction leg.

Each pump must be capable of a reprime lift of 15 feet while operating at low speed and the selected impeller diameter. Reprime lift is defined at the static height of pump suction centerline above liquid that the pump will prime, and delivery within five minutes of liquid remaining in the pump casing after delivering pump is shut down with the suction check valve removed. Vacuum priming pumps are not acceptable. Additional standards under which reprime tests shall be run are:

A. Piping shall incorporate a discharge check valve downstream from the pump. Check valve shall be equal to (or greater than) the pump discharge diameter.
B. No restrictions shall be present in the pump or suction piping which could serve to restrict the rate of siphon drop of the suction leg. Suction pipe configuration for reprime test shall incorporate a minimum horizontal run of 4.5 feet and one 90 elbow.
C. Impeller shall be set at the clearance recommended by the manufacturer in the pump service manual.
D. Reprime lift repeatability shall be demonstrated by five sequential reprime cycles.
E. Liquid to be used for reprime test shall be water.

On request from the Engineer, submit certified reprime performance test data prepared by the pump manufacturer and certified by a Registered Professional Engineer.

Pumps shall be equipped with a removable cover plate, allowing access to pump interior to permit the clearance of stoppages and to provide simple access for service and repairs without removing suction and discharge piping.

Pumps shall be fitted with a replaceable wear plate. The entire rotating assembly, which includes bearings, shaft, mechanical shaft seal, and impeller shall be removable as a unit without removing the pump volute or piping. Means shall be provided for external

adjustment of the clearance between the impeller and wear plate/volute. Pumps requiring the removal of bolts to facilitate this adjustment will not be considered equal. The entire rotating assembly shall move as one unit to enable the clearances to be adjusted.

Each pump shall incorporate a suction check valve that can be removed or installed through the removable cover plate opening without disturbing suction piping. The sole function of the check valve shall be to eliminate repriming with each cycle. Pumps requiring the suction check valve to prime or reprime are not acceptable.

Each pump's impeller shall be two vaned, semi-open, non-clog, ductile iron with integral pump out vanes on the back shroud. Impellers shall be secured with a stainless steel lock nut to the pump shaft. The impeller shall be capable of handling solids, fibrous materials, heavy sludge and other matter found in normal sewage applications. The impeller shall be capable of passing a minimum 3" solid sphere.

The pump shaft shall be sealed against leakage by a mechanical shaft seal. Each of the mating surfaces shall be lapped to a flatness of one-half light band (5.8 millionths of an inch), as measured by an optical flat under a monochromatic light. The stationary seal seat shall be double floating so that faces will not lose alignment during periods of shock loads that will cause deflection, vibration, and axial movement of the pump shaft. The seal shall be lubricated with oil or grease from a separate reservoir.

The pump shaft shall be heavy duty and larger diameter than standard to be suitable for use under the specified performance criteria.

The pump shaft bearings shall be anti-friction ball or tapered roller bearings of ample size and proper design to withstand all radial and thrust loads which can reasonable be expected during normal operation. Bearings shall be lubricated from a separate reservoir. Pump designs in which the same oil lubricates both the shaft bearings and the shaft seal are not acceptable.

Each pump shall be mounted on a steel base and connected through a guarded multi-vee drive to a belt tightening steel base mounted motor. Drives with less than two (2) belts per pump will not be considered equal. Direct drive units, those having pump and motor shaft the same, will not be considered.

ME2.5. MOTOR: The pump motors shall not be less than 30.0 HP, horizontal, drip proof, 60 cycle, 3 phase, 1800 RPM, designed to operate on 480 Volts. The motors shall be non-overloading throughout the entire range of performance possible for this installation. Motors shall have no less than 1.15 service factor. Each motor shall be of current NEMA design and be in accordance with The Energy Policy Act of 1992 (EPACT).

There shall be furnished two overload relays that shall be of the ambient compensated, bi-metallic, quick trip design. Pressing of the overload reset lever shall not actuate the control contact until such time as the overload spindle has reset. Resetting of the overload reset lever shall cause a snap action control contact to reset, thus re-establishing a control circuit. Overload relays shall be manually reset. The overload relays shall have a range of 30-40 amps model LRD340.

A high pump temperature protection sensor shall over ride the level control and shutdown the pump motor(s) when required to protect the pump(s) from excessive temperature. A thermostat shall be mounted on each pump casing and connected to a pump shutdown circuit. If the pump casing temperature rises to a level sufficient to cause damage, the thermostat shall cause the shutdown circuit to interrupt power to the motor. A visible indicator, mounted through the control panel door shall indicate the motor has stopped due to high pump temperature. The motor shall remain locked out until the pump has cooled and the circuit shall automatically reset.

Upon operator selection of automatic operation, the D.C.L.M. level control shall start one pump motor when water rises to the ‘lead pump start’ level. When the water is lowered to the ‘all pumps off’ level, the system shall stop the pump. These actions shall constitute one pumping cycle. Should the water continue to rise, the D.C.L.M. shall start the second pump after the water reaches the ‘lag pump start’ level so that both pumps operate together. Both pumps shall stop at the same ‘all pumps off’ level. Circuit design in which application of power to the lag pump motor starter is contingent upon completion of the lead pump circuit shall not be acceptable.

The existing panel level controls shall be reset to reflect the plan design levels.

ME 2.6 CONTROLS

All operating controls and instruments shall be securely mounted in such a manner that any or all standard options offer by the pump station manufacturer may be added in the field without

rearrangement of existing controls and instruments. All controls and instruments shall be clearly labeled to indicate function.

An open frame, across-the-line, (50 amp min.) NEMA style magnetic motor starter shall be furnished for each pump motor. Starters of NEMA size 1 and above shall be designed for addition of at least two auxiliary contacts. Starts rated '0' or '00' are not acceptable. Power contacts shall be double break and made of cadmium oxide silver. All motor starters shall be equipped to provide under voltage release and overload protection on all three phases. Motor starter contacts shall be easily replaceable without removing the motor starter from its mounted position.

Overload relays shall be of the ambient compensated, bi-metallic, quick trip design. Pressing of the overload reset lever shall not actuate the control contact until such time as the overload spindle has reset. Resetting of the overload reset lever shall cause a snap action control contact to reset, thus re-establishing a control circuit. Overload relays shall be manually reset. Trip setting shall be determined by heater elements.

Pump mode selector switches shall be connected to permit manual start and manual stop of each pump individually, and to select automatic operation of each pump under control of the level control system. Manual operation shall over-ride all shutdown systems, but not the motor overload relays.

Control panel shall be provided with one pilot light for each pump motor. Light shall be wired in parallel with the related pump motor starter to indicate that the motor is or should be running.

A high-level alarm light and audible warning siren shall be provided and shall be activated upon a high-level signal from the level control system as set by the installer/operator.

Replace two (2) existing Surge Capacitors: Provide 3-pole CA 603R Type.
Replace the existing quadplex station pump control Alternator.

ME2.7. ENCLOSURE: Provide and Install FRP enclosure, minimum 1.5" thick insulated walls and roof. To include access doors on each side, lockable. Enclosure shall be bolted down to concrete wet well top with stainless steel bolts.

BASES: Unit shall be mounted on a heavy equipment base. Bases shall be constructed of reinforced ASTM A36 material with a minimum of 3/8" thickness. Reinforce material shall be ASTM A36, 3"x2"x3/8" with minimum 12" spacing between welds. The surfaces shall be abrasion prepped and three separate coatings shall be applied. The base coat shall be applied top and bottom and shall be 15 mil minimum of medium oil and phenolic modified resin alkyd primer. This coating shall contain corrosion resistant pigments of zinc oxide, zinc phosphate, and micaceous iron. This coating shall have a minimum grind number of 6 on the Hegman scale. The exterior top coat shall be black in color and the interior top coat shall be medium gray in color. These coatings shall be medium oil and phenolic modified resin alkyd industrial enamels and shall be applied at a thickness of 15 il. The grind shall be 7+ on the Hegman scale. The underside of theabove shall first be coated with the afore mentioned alkyd primer and then shall be coated to a minimum 25 mil thickness with a heavy industrial grade asphalt petroleum hydrocarbon corrosion inhibitor.

ME2.8. INSTALLATION: Installation of pumps and related equipment shall be in accordance with written instruction provided by the pump manufacturer.

ME2.9. START-UP SERVICE: The pump supplier shall provide at no extra cost the services of a qualified service representative for system start-up, calibration and instruction of operating personnel to include pumping and control system.

The pump supplier shall also provide the following service and maintenance for the first year of operation including the following as a minimum.

A. After 60 days operation, pull each pump, open the volute and examine the condition of the volute, impeller, and wear rings. Check condition of oil in seal chamber sand condition of coating system on motor housing. Perform any necessary repair under terms of the warranty.

B. After 11 months operation, repeat procedure described above for 60 days. Change oil in the seal chambers.

A written report shall be provided to the Owner listing the results of each maintenance check.

ME2.10. OPERATION AND MAINTENANCE MANUALS: A minimum of five (5) copies of the operation and maintenance manuals for the components of the system shall be provided to the Engineer prior to start-up acceptance by the Engineer.

ME2.11. WARRANTY: The manufacturer shall guarantee for one (1) year from the date of Certificate of Acceptance that the pumping design and equipment will be free from defects in materials and workmanship.

A full written parts and service warranty shall be provided on the complete system for this period of one (1) year.