Procurement Bid Office
Customer Center 1st Floor, Room 002
21 W. Church Street
Jacksonville, Florida 32202

February 7, 2018

ADDENDUM NUMBER: **TEN (10)**

TITLE: PURCHASE AND INSTALLATION OF PONY PUMPS FOR JEA LIFT STATIONS

JEA ITN NUMBER: **039-18**

RESPONSE DUE DATE: **02/22/2018**

TIME OF RECEIPT: **12:00 PM**

TIME OF OPENING: **2:00 PM**

THIS ADDENDUM IS FOR THE PURPOSE OF MAKING THE FOLLOWING CHANGES OR CLARIFICATIONS:

*** Notes regarding the revised Bid Workbook are at the end of this Addendum ***

ADD: Attached to this Addendum 10 are drawings in "039-18 Addendum 10 Shop Drawings" These drawings are either new drawings or replacements for previously issued drawings with the same location.

ADD: Attached to this Addendum 10 are drawings in "039-18 Addendum 10 020618 Drawings" These drawings are either new drawings or replacements for previously issued drawings with the same location.

CHANGE: The Bid Due Date has been changed to February 22, 2018, 12:00 PM (NOON) EST.

CLARIFICATIONS AND CHANGES TO THE SOLICITATION:

1. **REPLACE:** The following section 2.5.1 LIQUIDATED DAMAGES replaces the section 2.5.1 issued with the original solicitation and in prior addendums.

2.5.1 LIQUIDATED DAMAGES

For each Pony Pump described in the Bid Workbook, if the Company fails to obtain Acceptance on any portion of the Work on an individual pump basis, on or after ~~July 10~~ **August 25**, 2018 JEA will deduct five percent (5%) of the Total Bid Price on an itemized basis.

OR

For each Pony Pump described in the Bid Workbook, if the Company fails to obtain Acceptance on any portion of the Work on an individual pump basis, after July 31 **September 15**, 2018~~7~~, JEA will deduct ten percent (10%) of the Total Bid Price on an itemized basis.

The Aggregation of Liquidated Damages is capped at a maximum of **ten** ~~fifteen~~ percent (10%) of the Contract Price.

The Company understands and agrees that said sum is to be paid not as a penalty, but as compensation to JEA as a fixed and reasonable liquidated damages for losses that JEA will suffer because of such default, whether through increased administrative and engineering costs, interference with JEA's normal operations, other tangible and intangible costs, or otherwise, which costs will be impossible or impractical to measure or ascertain with any reasonable specificity.

Liquidated damages may, at JEA's sole discretion, be deducted from any monies held by JEA that are otherwise payable to Company.

The Company's responsibility for liquidated damages shall in no way relieve the Company of any other obligations under the Contract.

2. **CLARIFICATION:** A site preconstruction conference will be required for each location. The preconstruction conference shall be coordinated with JEA's construction inspection lead for this project, Mr. Charles Crosby (904-665-8352 or croscf2@jea.com).

3. **CLARIFICATION:** The engine manufacturer shall specify the engine starting voltage. For 12-volt systems, a DC inverter will be provided by JEA, within the JEA SCADA Panel (also labeled RTU on the drawings), which will provide a 24V feed to the RTU. The JEA SCADA Panel shall be powered, through the designated conduit, by the pony pump battery. The battery(s) shall be capable of providing 6 Amp 12VDC or 3 Amp 24VDC in addition to the engine cranking or operating requirements.

4. **CLARIFICATION:** A distributed I/O panel shall be installed adjacent to the pony pump. A detail sheet is provided in this addendum showing how the panel is to be mounted. JEA will provide the panel to the Contractor prior to June 1^{s}. The Contractor shall include the cost to mount the panel and wire the panel per the schematic that will be included at the time the panel is delivered. The panel cost shall not be included in the Contractor's bid price. The Contractor shall decide the location of the panel in coordination with JEA's construction inspection lead for this project, Mr. Charles Crosby. For general location guidelines, the panel shall be installed between the pony pump control panel and the JEA SCADA panel (also labeled as RTU on the drawings). The panel shall not be located within 36" of an existing fence, unless approved by Mr. Crosby, and shall not impede access to any appurtenance located within the pump station site. A 24VDC power supply shall be provided, through the designated conduit, from the JEA SCADA Panel (also labeled RTU on the drawings) to the distributed I/O panel.

5. **CLARIFICATION:** All drain ports from the pump shall be piped through a single pipe into the wetwell. The pipe shall be sized by the pump manufacturer and shall be no less than one inch (1") Schedule 40 PVC. Where installed in non-concrete areas, the pipe shall be buried and cored into the side of the wetwell. Where an existing concrete slab prevents burying the drain pipe, the pipe shall be laid on, and secured to, the concrete slab utilizing stainless steel hardware. The route of the pipe shall be under and following the suction piping to avoid creating a tripping hazard and shall enter the top slab of the wetwell. When a core is required for the suction pipe, core a large enough hole to accommodate the drain as well. Where a suction pipe already exists, core a new hole into the top slab as close as possible to the existing suction pipe and repair the hole as indicated on the design drawings.

6. **CLARIFICATION:** A revised piping support detail, showing the required concrete support footer in non-concrete areas, has been provided on the included detail sheet to accompany the notes provided in a previous addendum.

7. **CLARIFICATION:** Start and stop float switches shall be in accordance with JEA Water and Wastewater Standards Section 433, Submersible Wastewater Pump Stations

RESPONSE TO SUPPLIER INQUIRIES – Supplier Inquiry in lowercase black font, JEA Response in red, underlined font.

1. Where the existing concrete is acceptable but not completely level is shim and grout acceptable for the pumps?

Shims and grout are acceptable provide the pump/engine manufacturer approves the leveling method.

2. The buried electrical is shown twenty-four inch (24") below grade,,, in some cases it is shown fastened to the top of the slab. Which is required for the new conduit on existing slabs?

In most cases, conduits will be buried, below the existing concrete, in order to prevent potential tripping hazards. However, where digging would be difficult, or when not in the direct walking area, conduits are shown above concrete and, in those cases, shall be fastened to the concrete.

3. Where we are to remove existing 90 deg. Ells, valves, cam fittings, etc. can these be reused if cleaned & painted?

No 90 deg ells, valves, cam fittings, or other appurtenances on the existing discharge or suction piping are to be re-used for this project. The contractor shall assume ownership of all removed ells, valves and fittings and they shall be removed from the site.

4. Are expansion joints required at the pump flange tie-ins?

Yes, all locations shall be provided with an expansion joint at the pump flange tie-in.

5. The drawings are not scaled and quantities of pipe cannot be accurately estimated. Please send revised drawings showing a scale.

Because the contractor has the option to use multiple pump vendors with differing suction and/or discharge configurations, and because each manufacturer has the option to select the most effective pump for the given location, exact piping/fitting configurations could not be prepared. The drawings include a note stating that piping layouts are depicted as approximate and will need to be adjusted to match the selected pump layout. As a result, scaled drawings and exact pipe quantities will not be provided.

CLARIFICATION: GO Switch Leverless limit switch model # 81-10528-A3

REVISION (Deletions in strikethrough, additions in red, underlined font):

The following sections of Section 470, previously provided in this bid, shall be amended as follows:

A. II.5. Engine shall be provided with suitable safety controls to automatically provide warnings and stop the unit when low oil pressure, low coolant level, water temperature or engine speed exceeds safe limits. Pilot lights shall be provided to visually indicate faults and warnings. Pilot lights and controls shall operate off battery circuit and shall be on pump-engine control panel. Provide contacts for remote engine failure annunciation and warnings. The unit will also have a display that can read the last 32 fault warning events with time stamps that also indicates the date.

B. II.15.5 Battery charger shall perform diagnostics on the battery. It shall provide Battery Charger Fail, Low Battery Voltage and Low Cranking Voltage

C. II.15.5. The service powered battery charger shall provide the following features at a minimum. ~~float charge the battery pack and shall be solid-state, full-wave bridge rectified type, using silicon controlled rectifiers for power control~~. ~~The battery charger shall be suitable for the required voltage, and current, battery pack type, shall have a dc output circuit breaker, floating voltage equalization, equalizing timer, a ground detection system, a voltage relay to activate low battery voltage alarms at the engine-generator control panel, and battery charger failure which shall alarm at the engine-generator control panel~~.

   i. Charger shall be 120v single phase.
   ii. Intelligent Battery Charger with microprocessor based technology to provide accurate charging and monitoring of various battery types.
   iii. AC input under/over voltage to protect the charger and provide alarm in the event of an AC input failure.
   iv. Intelligent three & four stage charging profiles. Provides safe and complete charging and charge maintenance of various battery types.
   v. Adjustable current limit. Output current can be adjusted to suit alternative battery sizes and prevent overcharging on custom curves.
   vi. Manual & automatic boost. Provides a faster charging cycle and automatically maintains a full charge.
   vii. Low output ripple/excellent line regulation. Safe charging of both sealed and vented battery types.
   viii. Customizable charging curves. Provides the flexibility to charge battery types not available in the standard curve library.
   ix. Auto self-test function. The battery charger self diagnosis at regular intervals, providing advance warning of any internal fault. Provides a warning if a battery Is not connected or has been disconnected. Provides warning in the event that the battery voltage is low and may not be charging.

x. Output short circuit and inversion polarity with auto recovery. Protects the charger in the event of a short circuit or crossed polarity with automatic charger on correction of the fault.

xi. Auto power de-rating at high ambient temperatures. Prevents damage to the battery and charger caused by overcharging in warm climates. Remote display for monitoring of the battery charging and charger status from a remote location.

D. IV.3.3.5. The controller shall be microprocessor based. ~~have only one circuit board with eight built-in relays.~~ ~~Three (3) of the~~ It shall have onboard relays that are ~~shall be~~ programmable to output desired parameter on display and to be used as dry-contacts for communication with JEA SCADA system, all via the keypad without changing relays, chips, printed circuits, or any hardware or software.

E. IV.3.3.6. Standard components shall consist of (24) digital inputs, (7) analog inputs, (1) magnetic pick-up input, (8) 20-amp form "C" relays, ~~(1) RS232 port~~, (1) RS485 port, ~~(1) RS232/RS485 port~~, (1) J1939 port, and (1) Full graphic LCD display with backlight.

F. IV.3.3.7. The industrially-hardened Controller shall be conformal coated to withstand 10ppm H2S, Vibration of 3 g, 3 axis, frequency swept 10-1000 Hz, in an operating temperature Range of 4 to 176F (-20 to 80C) and an operating humidity range of 0-95% Non-Condensing.

G. IV.3.3.8. Controller shall be capable be capable of communicating all status and control via ONE of the following protocols Modbus, Profibus or Profinet. No translators are to be allowed, protocols must be a native to the controller.

H. VII.4.2.1. The steel tank shall be wrapped with a minimum of ¼ inch thick Styrofoam (foam) insulation and an impervious barrier of 30 MIL high density polyethylene membrane (poly). The 30 MIL poly shall provide containment for a fuel leak through the steel tank. A leak detector pipe terminating in the secondary containment shall provide positive-proof that the tank is not leaking. Contractor shall be responsible for wiring the Fuel Level to the distributed I/O module for JEA SCADA.

I. VII.4.5. Overfill Protection - The tank shall be provided with the following methods to protect against overfill: (a) direct reading level gauge at the tank which is visible from fill pipe location, Greenleaf EFG 8000-I solar gauge with AC back up mounted on exterior of enclosure and 4-20m.A.1 data converter mounted in engine control panel; (b) valve located within fill pipe access to close automatically at a specified fill level. Fuel level will be calibrated to tank size for proper 4-20ma scalling. Contractor shall be responsible for wiring the Fuel Level to the distributed I/O module for JEA SCADA.

REPLACE: The Bid Workbook attached to this Addendum 10, replaces the Bid Workbook, issued in previous addendums and with the original solicitation. The explanations for the "Optional" items are below. Award basis will NOT consider the Optional pricing, which JEA may elect to award to the lowest bidder on an itemized or aggregate basis, depending on the number of contracts awarded.

THE FOLLOWING ITEMS ARE TO BE INCLUDED AS ADDITIVE BID ITEMS AND MAY OR MAY NOT BE INCLUDED IN THE AWARDED CONTRACT:

1. An **Optional bid item A** has been added to the attached revised bid worksheet for additional grounding rods if required.

   A grounding detail sheet is provided in this addendum. Bid prices shall include a single 60 foot grounding rod. The new grounding rod shall be tied into the pump station ground. If that grounding system is not accessible, the Contractor shall tie the JEA SCADA Panel (also labeled RTU on the drawings) into the newly installed ground. Ground shall range between 5 and 10 ohms. Any required additional grounding rods are to be included in the additive bid price.

2. An **Optional bid item B** has been added to the attached revised bid worksheet. This item is to include cost and completion timeline alternatives for the following proposed revision to Section 470, paragraph I.3 (revisions in red):

   Pump Engine set shall be capable of producing rated output for continuous duty at rated engine pump RPM when equipped with necessary operating accessories such as air cleaners, lubricating oil pump, fuel transfer pump, radiator fan, and jacket water pump. Unit shall be sized to pump _____ gpm. Responsibility for sizing pump engine shall lie with the pump engine supplier and Engineer. Due to the corrosive nature of wastewater all equipment, electronics, fasteners or anything else within the pony

pump system shall be rated for continuous 10 ppm of Hydrogen Sulfide. All control boards shall be conformal coated for corrosion resistance.

3. An **Optional bid item C** has been added to the attached revised bid worksheet. This item is to include cost and completion timeline alternatives for the following proposed revision to Section 470, paragraph IV.2 (revisions in red):

> Pump-engine controls will include an auto start feature controlled by one or more float balls or submersible transducer. It shall be a mechanical non-mercury type float switch housed in a hermetically sealed polypropolene enclosure designed to extend into a wet well. The transducers polyurethane jacket shielded cable shall be of suitable length for proper installation into a wet well without splicing. The level control system shall continuously monitor the wet well level. Upon operator selection of automatic operation, the level controller shall start the pump- engine unit when the liquid level in the wet well rises to the pump start level. When the liquid is lowered to the pump stop level the level controller shall stop this pump – engine. The pump shall have the ability to limit the maximum speed as a setting on the control panel to prevent excessive pressures. The pump shall be able to have a programmable ramp speed that is adjustable through the controller. The pump will also monitor the pressure on the discharge and, if it exceeds an adjustable setpoint, the engine will automatically throttle back until the pressure goes below the setpoint.

The Contractor may utilize one of the two 2-inch welded steel nipples on the discharge piping to install the required pressure monitoring equipment to accomplish the revision provided in the previous paragraph.

Acknowledge receipt of this addendum on the Response Form