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## Addendum # 4 Lewis Road Gravity Sewer System and Pump Station

Date of Addendum: 2/13/2025

### NOTICE TO ALL BIDDERS AND PLANHOLDERS

The Bid Documents for the above-referenced Project are modified as set forth in this Addendum. The original Bid Documents and any previously issued addenda remain in full force and effect, except as modified by this Addendum, which is hereby made part of the Bid Documents. Vendors will take this Addendum into consideration when preparing and submitting a bid, and shall acknowledge receipt of this Addendum in the space provided in the Bid Documents.

### BID SUBMITTAL DEADLINE

The bid submittal time and date is Wednesday, February 19, 2025 at 2:30pm.

### 1.0 – ATTACHMENTS

Item	Description
1.1	Section 01 20 00 Measurement Payment (002)
1.2	Section 22 13 29 Wastewater Non clog Submersible Pumps
1.3	EJCDC C410 REVISED Bid Form (this revised Bid Form is to be used in lieu of the Bid Form provided in the original Bid Documents)

### 2.0 – QUESTIONS AND ANSWERS

The following questions and answers are provided as a matter of information to clarify issues raised about the Bid Documents.

Item	Questions and Answers
2.1	<p>Q. 022500, 2.2, A, 2 indicates that Borrow Material will be paid at the contract unit price, however there is no contingent item for Borrow Material. Will the County add a contingent item to the Bid Form for Borrow Material?</p> <p>A. Line Items 22: Borrow Material has been added to the Contract Documents per this addendum. See attached. Pertinent pages of the Bid Documents are to be Removed and Replaced with the attached pages.</p>
2.2	<p>Q. Will the County be providing specifications for the Submersible Sewage Pumps?</p> <p>A. A Pump Specification section has been added via this addendum. See attached.</p>
2.3	<p>Q. Standard Detail G-2 calls for 6” Stone Road Base, however Bid Item 18 calls for 8” Road Base. Please clarify the item requirement.</p> <p>A. A 6” Stone Road base is required for the project. The bid form and measurement and payment sections have been amended to specify 6” of Stone Road Base.</p>
2.4	<p>Q. How will 1.5” HDPE Sewer Services be paid? The additional quantity is not reflected in Bid Item 3.</p> <p>A. It is to be included within Bid Item No. 3 - 1.5” HDPE SDR-11 Forcemain. The Bid Form has been revised to adjust the unit quantity to include the service lengths.</p>
2.5	<p>Q. Is it possible to extend the contract duration to 365 days? The current 240 calendar day duration does not allow enough time to complete this project especially with the lead time for pump station materials.</p> <p>A. The contract has been extended to 365 calendar days per this addendum.</p>

2.6	<p>Q. Will the Contractor be required to temporarily patch the road surface with HMA base course on a daily basis or can this be done once a week or at the end of the work ?</p> <p>A. Per 02 80 00-Restoration, Section 3.2, restoration in paved area shall occur daily. The County will allow trenches to be stabilized with stone and maintained in good condition daily by the Contractor. Temporary road surface patching can occur on an intermittent/rolling basis but must be completed within 30 days of road surface disturbance at any location prior to installation of the final base and surface asphalt sections.</p>
2.7	<p>Q. Can one dual access NEMA 4X enclosure with common backplates be used in lieu of the 2 shown on the drawing.</p> <p>A. The contractor can elect to utilize a dual access NEMA 4x enclosure in lieu of the 2 independent enclosures.</p>
2.8	<p>Q. Can you please clarify the below statements:</p> <ul style="list-style-type: none"> <li>• They do not reference “runtime” for the fuel tank requirement</li> <li>• 2.8.A states 200 Gal</li> <li>• 2.8.B.2 states 600 Gal</li> <li>• 40kW burns 3.66 Gal/hr at full load</li> <li>• 200Gal tank would be approx 55HR runtime at 100% load, however genset will never run at 100% since CB is 50A, and full output of genset is 61A @ 480V</li> </ul> <p>Please clarify sub-base tank capacity requirement based on runtime.</p> <p>A. The 200-gallon capacity stated in Section 26 32 13, paragraph 2.8.A is correct. The “600 Gallon Capacity” stated in paragraph 2.8.B.2 should be “200 Gallon Capacity”.</p>

**END OF ADDENDUM**

SECTION 01 20 00  
MEASUREMENT AND PAYMENT

PART 1 GENERAL

1.1 DESCRIPTION

A. Scope of Work

1. The items listed in this Section refer to and are the same pay items listed on the Bid Form. They constitute all of the pay items for the completion of the Work. Compensation for all such services and materials shall be included in the prices stipulated for the lump sum and unit price pay items listed herein. Items of Work not specifically included in this Section for measurement and payment as described herein will not be measured for payment but will be considered incidental to the Contract with the associated costs borne solely by the CONTRACTOR.
2. Schedule of Values
  - a. The Schedule of Values is a list of line items, corresponding to each aspect of the Work, establishing in detail the value or cost of each major part of the Work, and is submitted to ENGINEER for acceptance.
  - b. Upon request of ENGINEER, support values with data that substantiate their correctness.
  - c. The preliminary Schedule of Values is submitted to the ENGINEER for initial review. The CONTRACTOR shall incorporate the ENGINEER's comments into the Schedule of Values and provide a re-submittal to the ENGINEER. The ENGINEER may require corrections and re-submittal of the Schedule of Values until it is acceptable.
  - d. The Schedule of Values and the Progress Schedule updates specified in Section 01 33 00, Submittals, shall be used as the basis for preparing each Application for Payment. The Schedule of Values having sufficient breakdown of materials, labor and installation costs may be used as a basis for negotiating the price of changes in the Work.
  - e. Unit price payment items with their associated quantity shall be included in the Schedule of Values. Provide in the Schedule of Values a detailed breakdown of the unit prices when required by the ENGINEER.

## 1.2 SUBMITTALS

### A. Schedule of Values

1. The CONTRACTOR shall submit to the ENGINEER for acceptance a Schedule of Values that allocates cost to each item of the Work.
2. The Schedule of Values shall include an itemized list of Work for each major part of the Contract, for each payment item as listed in the Bid Form.
3. This schedule, when approved by the ENGINEER, shall be used as the basis for the CONTRACTOR's Applications for Progress Payments.
4. Submit the required number of copies of the Schedule of Values to ENGINEER at or before the Pre-construction meeting. The first Application for Payment will not be processed without a Schedule of Values approved by the ENGINEER.
5. When required by the ENGINEER, promptly submit an updated Schedule of Values to include cost breakdowns for changes in the Work, including Change Orders.

## 1.3 MEASUREMENT

Measurement shall be made in accordance with the Bid Form items and as described in the following sections.

### A. Estimate of Quantities

1. The estimated quantities for unit price pay items, as listed in the Bid Form, are approximate only and are included solely for the purpose of comparison of Bids. The ENGINEER does not expressly or by implication agree that the nature of the materials encountered below the surface of the ground or the actual quantities of material encountered or required will correspond therewith, and reserves the right to increase or decrease any quantity or to eliminate any quantity as the ENGINEER may deem necessary in accordance with the Contract Documents. CONTRACTOR shall not be entitled to any adjustment in a unit bid price as a result of any change in an estimated quantity and agrees to accept the aforesaid unit bid prices as complete and total compensation for any additions or deductions caused by changes or alterations in the Work directed by the COUNTY. Increased or decreased Work involving change orders will be paid for as stipulated in the Contract Documents.

## 1.4 PAYMENT

- A. Payments to the CONTRACTOR shall be in accordance with Article 15 of the General Conditions and the Agreement.
- B. Lump sum price items shall be paid for the actual percentage of Work completed as identified in the approved Schedule of Values as required in Paragraph 1.1.A.2.
- C. Unit price items shall be paid in accordance of Article 15 of the General Conditions and the Agreement.
- D. Payment for the Work shall be made in accordance with the Bid Form items as described in the following sections.
- E. Payment Items: The items listed in the Contract Documents refer to the pay items listed on the Bid Form. They constitute all of the pay items for the completion of the Work. Compensation for all such services and materials shall be included in the prices stipulated for the unit price and lump sum pay items listed on the Bid Form.
  - 1. Each lump sum and unit bid price will be deemed to include an amount considered by the CONTRACTOR to be adequate to cover the CONTRACTOR's overhead and profit for each separately identified item.
  - 2. No progress payments will be made by the ENGINEER until the Construction Schedule and the Schedule of Values have been submitted to and approved by the ENGINEER.
  - 3. The CONTRACTOR shall accept in compensation, as herein provided, full payment for furnishing all materials, labor, tools, equipment, and incidentals necessary to the completed Work and for performing all Work contemplated and embraced by the Contract, also for all loss or damage arising from weather or other unforeseen conditions which may be encountered during the execution of the Work and until its final acceptance by the ENGINEER, and for all risks of every description connected with the prosecution of the Work, except as provided herein, also for all expenses incurred as a result of the suspension of the Work as herein authorized.
  - 4. The payment of any partial estimate or of any retained percentage, except by and under the approved final invoice, in no way shall affect the obligation of the CONTRACTOR to repair or renew any defective parts of the construction or to be responsible for all damage due to such defects.
- F. Eliminated Items: Should any items contained in the Schedule of Values be found unnecessary for the proper completion of the Work contracted, the ENGINEER may

eliminate such items from the Contract, and such action shall in no way invalidate the Contract. No allowance will be made for payment of items so eliminated.

G. Progress Payments:

1. Percentage of Work Complete – At the end of each pay period, the CONTRACTOR’s Superintendent or other authorized representative of the CONTRACTOR shall meet with the ENGINEER and determine and agree upon the percentage of the project completed during the pay period.
2. Application for Payment – The CONTRACTOR will then prepare and submit an Application for Payment to the ENGINEER. The ENGINEER will evaluate the Application for Payment, determine the amounts owed, and issue a Recommendation of Payment in such amounts as provided in the Contract Documents. Progress payments shall be made monthly as the Work progresses. All progress invoices and payments shall be subject to correction in the final invoice and payment. The progress payment will be based on invoices prepared by the CONTRACTOR and approved by the ENGINEER for the value of the Work performed, and materials complete in place in accordance with the Contract. Retainage shall be as specified in the Contract Documents. The payment schedule shall be in accordance with the Contract Documents.

H. Final Payment: The CONTRACTOR shall make and the ENGINEER shall approve, as soon as practicable after the completion of the project, a final invoice for the amount of Work performed under the Contract and establish the value of such Work. Final payment shall be made in accordance with the Contract Documents.

1.5 MEASUREMENT AND PAYMENT OF BASE BID ITEMS

Bid Item No. 1 – Mobilization, Demobilization, Testing, and Permitting

This item shall include all items necessary to prepare CONTRACTOR onsite for project commencement as well as all items necessary for disassembly at project completion and required bonds.

All soils, pipe, electrical, compaction, gravity sewer, pressure, concrete, and any testing required not specifically mentioned shall be included within this measurement and payment item.

All permits required to construct the project including but not limited to grading, electrical, plumbing, and any other county or state permit required not specifically mentioned. MDE Dewatering Discharge permit shall be under Bid Item No. 15.

Bid Item No. 1 will not be Measured and Payment shall be by lump sum at the Contract price.

#### Bid Item No. 2 – E-One Simplex Grinder Pump Station

This item consists of all materials, labor, and equipment to complete all Work activities relating to the installation of the sewer Grinder Pump Stations as shown on the Contract Drawings, including the excavation, backfill of onsite suitable material, compaction, and removal of excess soils, restoration, setting of pump station, household residential electrical and plumbing connections from the house to service forcemain and station, backfilling, appurtenances and all other associated work not specifically mentioned hereon.

Any permits needed for the residential plumbing and electrical connections shall be under Bid Item No. 1.

Measurement and Payment for Bid Item No. 2 will be on a per each basis at the Contract Price.

#### Bid Item No. 3 – 1.5” HDPE SDR-11 Forcemain

This item consists of all materials, labor, and equipment to complete Work activities that include, but not be limited to, excavation, trench dewatering, installation, backfill of onsite suitable material, compaction, tracer wire, valves, and work associated with the 1.5” forcemain from Grinder pump station to gravity sewer main inclusive of continuity stations, manhole connections, low pressure service connections, terminal flushing connections, and all other associated work not specifically mentioned hereon as shown on the Contract Drawings.

Measurement for Bid Item No. 3 will be field performed by the inspector and Payment shall be by the linear foot at the Contract Price.

#### Bid Item No. 4 – 4” Forcemain (Various materials)

This item consists of all materials, labor, and equipment to complete Work activities relating to the furnishing, installation of, and testing associated with the installation of the 4” ductile iron and 4” HDPE forcemain from connection point at the pump station site valve vault to the existing connection point on Lewis Road, inclusive of continuity stations, buttress, fittings, transition couplings, plug valves, blow off assembly, test pitting, warning tape, tracer wire, compaction, excavation, backfill of onsite suitable material, and all other associated appurtenances required for a complete, safe, and satisfactory installation as shown on the Contract Drawings.

Measurement for Bid Item No. 4 will be field performed by the inspector and Payment shall be by the linear foot at the Contract Price.

Bid Item No. 5 – 6” SDR-35 PVC Sewer Services from Right of Way to Gravity Main

This item shall include all equipment, labor, and materials to furnish and install all items necessary to install gravity sewer service laterals as shown on the Contract Drawings from the sewer main to the property line, install cleanout, fittings, excavation, warning tape, tracer wire, backfilling of onsite suitable material, trench dewatering compaction, and all other items required for a complete, safe, and satisfactory installation.

Measurement and Payment for Bid Item No. 5 shall be on a per each price basis at the Contract Price.

Bid Item No. 6 – 6” SDR-35 PVC Gravity Sewer Laterals (Right of Way to Residence)

This item shall include all equipment, labor, and materials to furnish and install all items necessary to install gravity sewer service laterals as shown on the Contract Drawings from the right of way cleanout to the residence, install cleanout, fittings, excavation, warning tape, tracer wire, backfilling of onsite suitable material, compaction, and all other items required for a complete, safe, and satisfactory installation.

Measurement for Bid Item No. 6 will be field performed by the inspector and Payment shall be by the linear foot at the Contract Price.

Bid Item No. 7 – 8” SDR-35 PVC Gravity Sewer Main (0’ to 8’ deep)

This item shall include all equipment, labor, and materials necessary to install the 8” gravity sewer main where it resides at a depth between 0 and 8 feet from the roadway surface, fittings, excavation, warning tape, tracer wire, backfilling of onsite suitable material, compaction, and all other items required for a complete, safe, and satisfactory installation.

Measurement for Bid Item No. 7 will be field performed by the inspector and Payment shall be by the linear foot at the Contract Price.

Bid Item No. 8 – 10” SDR-35 PVC Gravity Sewer Main (0’ to 8’ Deep)

This item shall include all equipment, labor, and materials necessary to install the 10” gravity sewer main where it resides at a depth between 0 and 8 feet from the roadway surface, fittings, shoring, excavation, warning tape, tracer wire, testing, backfilling of onsite suitable material, compaction, and all other items required for a complete, safe, and satisfactory installation.

Measurement for Bid Item No. 8 will be field performed by the inspector and Payment shall be by the linear foot at the Contract Price.



#### Bid Item No. 9 – 10” D.I. Class 52 Gravity Sewer

This item shall include all equipment, labor, and materials necessary to install the 10” ductile iron gravity sewer main from manhole S-1 to the pump station wetwell, fittings, excavation, shoring, warning tape, backfilling of onsite suitable material, compaction, and all other appurtenances required for a complete, safe, and satisfactory installation.

Measurement for Bid Item No. 9 will be field performed by the inspector and Payment shall be by the linear foot at the Contract Price.

#### Bid Item No. 10 – 10” SDR-35 PVC Gravity Sewer Main (8’ to 20’ Deep)

This item shall include all equipment, labor, and materials necessary to install the 10” gravity sewer main where it resides at a depth between 8 feet and 20 feet from the roadway surface, shoring, fittings, excavation, warning tape, tracer wire, backfilling of onsite suitable material, compaction, and all other items required for a complete, safe, and satisfactory installation.

Measurement for Bid Item No. 10 will be field performed by the inspector and Payment shall be by the linear foot at the Contract Price.

#### Bid Item No. 11 – The Landings WWTP Wet Well Connection

This item shall include all equipment, labor, and materials necessary to perform the connection of the existing forcemain pipe to the existing wet well at The Landing Wastewater Treatment Plant as shown on Drawing C-503 of the Contract Drawings. Contractor shall coordinate with the Local Plant Operator for shut down and scheduling.

Bid Item No. 11 will not be measured and shall be paid on a Lump Sum basis at the Contract price.

#### Bid Item No. 12 – Pump Station - Civil and Mechanical

This item consists of all materials, labor, and equipment to complete all Work activities associated with the complete installation of all of the civil and mechanical work associated with the proposed pump station site. The Work shall include, but not be limited to, tree and stump removal, clearing, grubbing, stockpiling, rough grading, hauling of materials offsite, excavation, backfill of onsite suitable material, link seals, structural design, buoyancy calculations, exterior coatings, strapping, buttress, minor dewatering, precast wet well and lid, submersible pumps, slide rails, wet well piping, all wet well appurtenances, precast valve vault and lid, valve vault piping, valve vault valves, all valve vault appurtenances and drains, precast meter pit

and lid, mag meter, meter vault bypass piping, meter vault bypass valves, cast in place concrete, concrete testing, concrete reinforcement, all appurtenances associated with cast in place concrete installation, complete installation of the stormwater management rain grading, ventilation blower and piping, yard hydrant, 1" water service connection and lateral, curb stops, roadway restoration associated with water service lateral connection, site fence, driveway aggregate for asphalt pavement, driveway asphalt pavements, aggregate for non-paved areas, installation of 15" RCP driveway culvert stormwater pipe, seeding and stabilization for disturbed areas.

This lump sum item shall include all work associated with the complete installation of all items as shown on the contract drawings relating to the civil and mechanical items.

Contractor shall provide a pump station start up and operational test the functionality of the completed station

Erosion and Sediment Control items associated with the Pump Station Site shall be under Bid Item No. 20. Ductile Iron Gravity 10" sewer shall be under Bid Item No. 9. Various material 4" forcemain shall be Bid Item No. 4 with the exception of the meter vault by-pass piping and connections and valves.

While working on the Pump station Site area contractor shall work in accordance with the MDE JPA permit rule and regulations.

Measurement and Payment for Bid Item No. 12 shall be on lump sum basis at the Contract Price.

#### Bid Item No. 13 – Pump Station – Electrical and Controls

This item shall include all items related to the conduits, conductors, site light, Scada, emergency generator, transformer, motor starters, ATS, hatch limits switches, power and control wiring for all electrical items, ventilation, equipment mounting and enclosures, setup and programming, installation of the Pump Control Panel, and programming of the PLC and operator interface in the pump control panel. Installation of service entrance conductors, meter, panelboards, and disconnects. All other appurtenances required for a complete, safe, and satisfactory installation of all power and control related to the full operation of the pump station.

Measurement and Payment for Bid Item No. 13 will not be measured and shall be paid by lump sum at the Contract price as shown on Bid Item No. 13 in accordance with the Contract Documents.

#### Bid Item No. 14 – Precast Concrete Sewer Manholes

This item shall include all equipment, labor, and materials to furnish and install the Worcester County standard Precast Concrete Manholes, testing, dewatering,

subgrade preparation, excavation, trucking, backfilling, compaction, parging, flow channels, exterior coatings, frame and lid, and all other items required for a complete, safe, and satisfactory installation.

Measurement and Payment for Bid Item No. 14 shall be on a per each price basis at the Contract Price.

#### Bid Item No. 15 – Dewatering and Well Point Systems

This item shall include all equipment, labor, and materials to furnish and install and permit a fully functional dewatering well point system in accordance with the state requirement set for by the permit. System shall be designed to accommodate all dewatering needs for the installation of structures, pipes, forcemain, laterals, wetwell, valve vault, or anything not specially mentioned that will need the groundwater level lowered for a complete, safe, and satisfactory installation.

Measurement and Payment for Bid Item No. 15 shall be on a lump sum price basis at the Contract Price.

#### Bid Item No. 16 – 2.5” Base Superpave Asphalt, 19.5mm

This item shall include all equipment, labor, and materials to furnish and install the 2.5” thick base course (19.5mm) of asphalt pavement per trench pavement restoration detail on Drawing C-501, milling, tack, and all other items required for a complete, safe, and satisfactory installation.

Measurement for Bid Item No. 16 will be based on tickets provided to the field inspector and Payment shall be by the Ton at the Contract Price.

#### Bid Item No. 17 – 2” Surface Superpave Asphalt, 9.5mm

This item shall include all equipment, labor, and materials to furnish and install the 2” thick surface course (9.5mm) of asphalt pavement per the trench pavement restoration detail on Drawing C-501, milling, tack, and all other items required for a complete, safe, and satisfactory installation.

Measurement for Bid Item No. 17 will be based on tickets provided to the field inspector and Payment shall be by the Ton at the Contract Price.

#### Bid Item No. 18 – 6” CR-6 Road Base Aggregate

This item consists of all materials, labor, and equipment to complete Work activities for providing Crusher Run (CR-6) road base. The Work shall include, but not be limited to, furnishing and placing CR-6 to include delivery, placement, excavation, backfill and compaction. The price bid shall include furnishing all labor, tools,

equipment, and materials necessary to satisfactorily complete the work as shown and specified in accordance with the Contract Documents

Measurement for Bid Item No. 18 will be field performed by the inspector and Payment shall be by the square yard at the Contract Price.

**Bid Item No. 19 – Demolition and Abandonment of Septic Tanks, Plumbing, Connections, and Appurtenances**

This item consists of all materials, labor, and equipment to complete Work activities to demolish and abandon in place the existing septic tanks in accordance with the requirements set for by County and State agencies. The Work shall include, but not be limited to electrical connections/disconnection for pumps associated with septic tanks, sewer plumbing connections associated with house disconnection from the septic tank and new connection from the house to the new sewer gravity lateral, excavation, backfill, compaction, grading, and all other items required for a complete, safe, and satisfactory installation.

Contractor shall submit a procedure and demolition plan to Worcester County for Approval prior to any septic tank demolition occurring.

Associated permits and testing requirements shall be under bid items No. 1.

Bid Item No. 19 will not be measured and shall be paid on a Per Each basis at the Contract price.

**Bid Item No. 20 – Erosion/Sediment Control, Site Restoration, and Stabilization**

This item shall include erosion and sediment control items as described in the Contract Specifications which includes, but is not limited to a setup a preconstruction meeting, stabilized construction entrance, silt fence, perimeter controls, bypass pumping, filter bag, silt fence, sump pit, topsoil, fertilizer, maintenance of controls, weekly inspections and reporting, and other necessary controls that may be required by the owner, state, or representative. This item also includes site restoration including temporary and permanent seeding and stabilization. Item will not be considered complete until project completion, approval from the regulatory agency, and appropriate removal of controls are performed.

Measurement and Payment for Bid Item No. 20 will be on a Lump Sum price basis at the Contract Price.

**Bid Item No. 21 – Traffic Control**

This item shall include all items necessary to furnish all materials and labor needed to provide adequate traffic control to provide a safe work zone within Lewis Road.

This item also includes preparation and mailing of letters to affected residents, and emergency services as to location, durations, and driveways closures that will be occurring. Includes all other items required for a safe and satisfactory work zone.

During the submittal process the Traffic Control Plan Shall be submitted and approved by Worcester County.

Bid Item No. 21 will not be Measured and Payment shall be on a Lump Sum Basis at the Contract Price.

#### Bid Item No. 22 – Transportation and Disposal of Unsuitable Soils Material and Import of Select Fill Material

This item consists of all materials, labor, and equipment to complete work activities for the transportation and disposal of onsite unsuitable soils materials and import of select fill materials for all work associated with underground installation of utilities and structures. The work shall include transportation, hauling, disposal, import, and placement of an approved select fill material.

Excavation, compaction, backfilling, testing, etc., and all other work not specifically mentioned shall be paid for under their respective bid item number line item.

Unsuitable soils shall be determined by the contractors geotechnical testing firm and the Owner's onsite resident project representative.

Measurement for Bid Item No. 22 will be field performed by the inspector and Payment shall be by the Cubic Yard at the Contract Price.

#### PART 2 PRODUCTS

Not used.

#### PART 3 EXECUTION

Not used.

**\*\* End of Section \*\***

SECTION 22 13 29  
WASTEWATER, NON-CLOG SUBMERSIBLE PUMPS

PART 1 GENERAL

1.1 DESCRIPTION

- A. This Section includes the requirements for providing all labor, materials, equipment, pump protective devices, and incidentals necessary for furnishing, installing, testing, and placing two (2) Solids Handling, Submersible Pumps into service for the purpose of conveying sanitary wastewater.
- B. CONTRACTOR shall furnish and install two non-clog, submersible pumping units, complete with all accessories and appurtenances required for the pump's operation and control, as shown in the plans and specified herein or as required for a complete operating system. Each Pumping Unit shall be rated for continuous duty in accordance with the operating conditions defined in Section 2.1 of this specification section.

1.2 SUBMITTALS

The following shall be submitted in accordance with Section 01 33 00, Submittals.

- A. Manufacturer's qualifications package, as specified herein.
- B. Manufacturer's warranty of the supplied products.
- C. Shop Drawings and Manufacturer's Data: Submit shop drawings and manufacturer's data showing pump size, layout, piping, and any special requirements.
- D. Submit data for pump protective devices (moisture detection system and high temperature sensor). Pump protective devices shall be installed in accordance with manufacturer's recommendations.
- E. Certified Hydrostatic Test Reports: Submit test reports of pump performance in manufacture's plant.
- F. Certified Pump Performance Curves: Pump performance curves showing the head, capacity, speed, efficiency, and brake horsepower required when operating at specified conditions.
- G. Field Test Report: Submit summary report detailing each pumps performance in the field test showing at a minimum that the pump is properly installed and anchored, and operates smoothly throughout the specified speed range without exceeding the full load amperage rating of the motor, or causing excessive motor heating.
- H. Operation and Maintenance Manuals: Within four (4) weeks following the receipt of approved shop drawings, submit to the ENGINEER for review and approval, copies of equipment operation and maintenance manuals prepared by the manufacturer/supplier, or the CONTRACTOR. The submission and approval of each set of manuals will be considered to be an integral part of furnishing and installation of the respective equipment or system.

Incomplete or inadequate manuals will be returned to the CONTRACTOR for correction and resubmission. Include the following elements in each manual:

1. Title page giving name and location of facility.
2. List of equipment furnished for project with name, address, and telephone number of vendor.
3. List of serial numbers.
4. Performance curves for all pumps and equipment.
5. Copy of final approved shop drawings corrected to reflect the as-built conditions and assembly drawings of each piece of equipment.
6. Manufacturer's data sheets and dimension drawings of each piece of equipment and details of all replacement parts.
7. Manufacturer's erection, installation, operation, maintenance, and lubrication instructions for all equipment and apparatus, including lubrication chart and schedules showing manufacturer recommended lubrications for each rotating or reciprocating unit, and other information necessary for the County to establish an effective operating and maintenance program.
8. Complete listing of nameplate data.
9. Complete wiring diagrams of all individual pieces of equipment and systems, including one-line diagrams, schematic or elementary diagrams, and interconnection and terminal board identification diagrams.
10. Complete pipe and interconnecting drawings.
11. Complete parts list with parts assembly drawings (preferably by exploded view), names and addresses of spare parts suppliers, recommended list of spare parts to be kept in stock, and sample order forms for ordering spare parts. Lead times for required ordering parts shall be estimated.
12. Start-up procedures.
13. Recommended and alternative procedures.
14. Schedule of preventive maintenance requirements.
15. Detailed maintenance procedures.
16. Data sheet listing pertinent equipment or system information, as well as the addresses and telephone numbers of the nearest sales and service representatives.

### 1.3 QUALITY ASSURANCE

- A. Material and installation shall be in accordance with the latest revision of the following codes, standards, and specifications, except where more stringent requirements have been specified herein:
  1. American Water Works Association (AWWA)
  2. Hydraulic Institute
  3. Institute of Electrical and Electronics Engineers (IEEE)
  4. National Electrical Code (NEC)
  5. National Electrical Manufacturers Association (NEMA)
  6. Submersible Wastewater Pump Association (SWPA)
  7. American National Standard Institute (ANSI)
- B. Qualifications of Manufacturers: The Submersible Pumping Units specified shall be the products of reputable manufacturers who have been regularly engaged in the design, manufacture and furnishing of Submersible Wastewater Pumps and Motors for at least ten (10) years. The manufacturer of the pump shall assume full responsibility for the

compatibility of the supplied components with the application. The motor and pump shall be manufactured by one company providing sole source responsibility for the warranty of the unit. Manufacturers who do not manufacture the submersible motor and who limit their warranty to that of the motor manufacturer shall not be acceptable. Additionally, the products of third party packagers, assemblers or distributors shall neither be considered equal, nor shall they be acceptable.

C. Design. The submersible pumps shall be specifically designed for continuous duty operation, submerged in a wet well. The pumps shall not overload the motors at any point on the pump performance curve.

D. Warranty

1. The Pump Manufacturer shall provide a Warranty stating that the Submersible Pump Units are free from defects in material and workmanship, and this warranty period shall be for one (1) year from date of acceptance or fifteen (15) months from date of shipment, whichever is sooner. This warranty to the COUNTY shall cover the cost of labor and materials, excluding removal and reinstallation costs, required to correct any warrantable defect, FOB, Manufacturer's Authorized Service Center.

2. Additionally, the Pump Manufacturer shall provide and administer a five (5) year, prorated materials warranty on the Submersible Motor against defects in materials and workmanship. The motor warranty shall provide for the replacement of any part of the motor (excluding mechanical seals) found to be defective in accordance with the following schedule:

19 to 31 Months	Payment of 75% of the Current Replacement Parts Cost.
32 to 45 Months	Payment of 50% of the Current Replacement Parts Cost.
46 to 60 Months	Payment of 25% of the Current Replacement Parts Cost.

1.4 DELIVERY, STORAGE, AND HANDLING

A. New and Existing Equipment: Unload, transfer and store new equipment with care, and in the event of damage, make repairs or replacements at no increase in the Contract price. Follow manufacturer's instructions for unloading the equipment.

B. Removal, transfer, storage, and care of pumping equipment shall be done in accordance with manufacturer's written instructions.



## PART 2 PRODUCTS

### 2.1 DESIGN CRITERIA

- A. The pumps shall meet the following design criteria for respective service:

Service	Raw Sewage
Design Point Capacity	85 gpm
Design Point Total Head	53 ft
Discharge Size (min)	2.5-inch
Motor Horsepower	4
Full Speed (nominal)	3370 rpm
Solids Passage (min)	2-inch
Pump Operation	Single Speed
Design Basis	Flygt NP 3069.160 SH

The submersible pump model Flygt NP 3069.160 SH is utilized for the basis of design. The Contractor may submit for an approved equal provided the submersible pump, motor, and impeller meet the design criteria within this section

### 2.2 SUBMERSIBLE NON-CLOG CENTRIFUGAL SEWAGE PUMPS

- A. The Contractor shall furnish and install (2) submersible non-clog centrifugal sewage pumps in the locations shown on the Contract Drawings and as specified herein. Each pump shall be equipped with a 4 horsepower submersible electric motor, designed to operate using a 460 volts, three-phase, 60 hertz service. The pump motor shall be supplied with 50 feet of submersible cable (SUBCAB) suitable for submersible pump applications. The power cable shall be sized according to NEC and ICEA standards and also meet with P-MSHA approval. Equipment specified herein is intended to be standard equipment for pumping liquids described in design criteria.
- B. The pumping units shall be supplied with a mating gray iron 2.5-inch discharge connection and be capable of delivering 85 gallons per minute at 53 feet of total dynamic head when one pumps is in operation. The pump(s) shall be automatically and firmly connected to the discharge connection, guided by no less than two guide bars extending from the top of the station to the discharge connection. There shall be no need for personnel to enter the wet-well. Sealing of the pumping unit to the discharge connection shall be accomplished by a machined metal-to-metal watertight contact. Sealing of the discharge interface with a diaphragm, O-ring or profile gasket will not be acceptable. No portion of the pump shall bear directly on the sump floor.
- C. Each pump shall be fitted with 50 feet of lifting chain or stainless steel cable. The working load of the lifting system shall be 50% greater than the pump unit weight. One complete, portable, manual jib-type crane shall be provided for retrieval and re-installation of the submersible pumps and trash basket. The crane shall have a capacity of at least two times (2x) the expected operational weight of one submersible pump (i.e., pump weight plus

entrapped water and/or debris) and be provided with mechanical advantage sufficient for one person operation.

D. Power and pilot cable supports shall be provided and consist of a wire braid sleeve with attachment loops or tails to connection to the under side of the access hatch. Contractor shall coordinate cable lengths to suit field conditions.

E. Pump

1. Pump Casing

- a. Major pump components shall be of gray cast iron, ASTM A-48, Class 35B, with smooth surfaces devoid of blow holes and other casting irregularities. The lifting handle shall be of stainless steel. All exposed nuts and bolts shall be of stainless steel construction. All metal surfaces coming into contact with the pumped media, other than stainless steel or brass, shall be protected by a factory-applied spray coating of acrylic dispersion zinc phosphate primer with a polyester resin paint finish on the exterior of the pump.
- b. Sealing design shall incorporate metal-to-metal contact between machined surfaces. Critical mating surfaces where watertight sealing is required shall be machined and fitted with Nitrile rubber O-rings. Fittings will be the result of controlled compression of rubber O-rings in two plans and O-ring contact of four sides without the requirement of a specific torque limit.
- c. Rectangular cross-sectioned gaskets requiring specific torque limits to achieve compression shall not be considered as adequate or equal. No secondary sealing compounds, elliptical O-rings, grease, or other devices shall be used.

2. Pump Impeller

- a. The impeller shall be of ASTM A-48, Class 35B grey iron, dynamically balanced, semi-open, multi-vane, back swept, S-shaped, non-clog design. It shall have large passages to provide smooth flow transition and unimpeded passage of large spherical solids. Impellers shall be statically and dynamically balanced to provide vibration-free operation. The pump manufacturer shall assume full responsibility for the operation of the pumping unit within the vibration limits set forth in the Hydraulic Institute Standards for this class of pumping equipment.
- b. The impeller leading edges shall be mechanically self-cleaned automatically upon each rotation as they pass across a spiral groove located on the volute suction. The leading edges of the impeller shall be hardened to  $R_c$  45 and shall be capable of handling solids, fibrous materials, heavy sludge and other matter normally found in wastewater. The screw shape of the impeller inlet shall provide an inducing effect for the handling of up to 5% sludge and rag-laden wastewater.
- c. The impeller-to-volute clearance shall be readily adjustable by the means of a single trim screw.
- d. The impeller shall be locked to the shaft, held by an impeller bolt and shall be coated with alkyd resin primer.

3. Pump / Motor Shaft: Pump and motor shaft shall be the same unit. The pump shaft is an extension of the motor shaft. Shafts using mechanical couplings shall not be acceptable. The shaft shall be stainless steel – ASTM A479 S43100-T. Shaft sleeves will not be acceptable.

4. Volute / Suction Cover: The pump volute shall be a single piece grey cast iron, ASTM A-48, Class 35B, non-concentric design with smooth passages of sufficient size to pass any solids that may enter the impeller. Minimum inlet and discharge size shall be as specified. The volute shall have a replaceable suction cover insert ring in which are cast spiral-shaped, sharp-edged groove(s). The spiral groove(s) shall provide trash release pathways and sharp edge(s) across which each impeller vane leading edge shall cross during rotation so to remain unobstructed. The insert ring shall be of ASTM A-48, Class 35B grey iron and provide effective sealing between the multi-vane semi-open impeller and the volute housing.
5. Bearings
  - a. The pump/motor bearings shall be specifically selected to carry all radial and axial loads imposed by the pump and motor. Bearings shall be rated to provide a minimum L-10 Bearing Life of 50,000 hours at any design operating point within plus or minus 40 percent of the best efficiency point (BEP) of the pump performance curve.
  - b. The pump/motor shaft shall rotate on at least two bearings that take radial and thrust loads. The motor bearings shall be sealed and permanently grease-lubricated with high temperature grease. The upper motor bearing shall be a two-row angular contact ball bearing. The lower bearing shall be a two-row angular contact ball bearing to handle the thrust and radial forces. All bearings shall be commercially available from third party sources other than the pump/motor manufacturer.
6. Hardware and Nameplates: All external hardware including nameplates on the Pump/Motor shall be stainless steel.

#### F. Motor

1. The pump motor shall be a NEMA B design, induction type with a squirrel cage rotor, shell type design, housed in an air filled, watertight chamber. The stator windings shall be insulated with moisture resistant Class H insulation rated for 180°C (356°F). The stator shall be insulated by the trickle impregnation method using Class H monomer-free polyester resin resulting in a winding fill factor of at least 95%. The motor shall be inverter duty rated in accordance with NEMA MG1, Part 31. The stator shall be heat-shrink fitted into the cast iron stator housing. The use of multiple step dip and bake-type stator insulation process is not acceptable. The use of bolts, pins or other fastening devices requiring penetration of the stator housing is not acceptable. The motor shall be designed for continuous duty handling pumped media of 40°C (104°F) and capable of no less than 30 evenly spaced starts per hour. The rotor bars and short circuit rings shall be made of cast aluminum. Thermal switches set to open at 125°C (260°F) shall be embedded in the stator end coils to monitor the temperature of each phase winding. These thermal switches shall be used in conjunction with and supplemental to external motor overload protection and shall be connected to the control panel. The motor and the pump shall be produced by the same manufacturer.
2. The combined service factor (combined effect of voltage, frequency and specific gravity) shall be a minimum of 1.15. The motor shall have a voltage tolerance of plus or minus 10%. The motor shall be designed for operation up to 40°C (104°F) ambient and with a temperature rise not to exceed 80°C. A performance chart shall be provided upon request showing curves for torque, current, power factor, input/output kW and efficiency. This chart shall also include data on starting and no-load characteristics. The motor

- horsepower shall be adequate so that the pump is non-overloading throughout the entire pump performance curve from shut-off through run-out.
3. The power cable shall be sized according to the NEC and ICEA standards and shall be of sufficient length to reach the junction box without the need of any splices. The outer jacket of the cable shall be oil resistant chlorinated polyethylene rubber. The cable shall be capable of continuous submergence underwater without loss of watertight integrity to a depth of 65 feet or greater.
  4. Motor Nameplate. The motor nameplate shall contain information in accordance with the NEMA Standard MG1-1978, paragraph MG1-20.60 and shall at a minimum include the following:
    - a. Manufacturer's name, motor part number, and serial number.
    - b. Rated Horsepower
    - c. Duty Cycle Rating
    - d. Temperature Rating
    - e. Speed at Rated Load
    - f. Voltage, Frequency, and Phase required
    - g. Full Load Current
    - h. NEMA Code Letter
  5. Predicted Performance Data shall be submitted and include:
    - a. Locked rotor, pull up and breakdown torques
    - b. Efficiency at 1/2, 3/4 and full load
    - c. Power factor at 1/2, 3/4 and full load
  6. Motor Construction:
    - a. The stator windings shall be insulated with moisture resistant Class H insulation rated for 180°C (356°F). The stator shall be insulated by the trickle impregnation method using Class H monomer-free polyester resin resulting in a winding fill factor of at least 95%. The motor shall be inverter duty rated in accordance with NEMA MG1, Part 31. The stator shall be heat-shrink fitted into the cast iron stator housing. The use of multiple step dip and bake-type stator insulation process is not acceptable. The use of pins, bolts, screws or other fastening devices used to locate or hold the stator and that penetrate the stator housing are not acceptable. The motor shall be designed for continuous duty while handling pumped media of up to 104°F. The motor shall be capable of no less than 30 evenly spaced starts per hour. The rotor bars and short circuit rings shall be made of aluminum. Three thermal switches shall be embedded in the stator end coils, one per phase winding, to monitor the stator temperature. These thermal switches shall be used in conjunction with and supplemental to external motor overload protection and shall be connected to the motor control panel.
    - b. The junction chamber shall be sealed off from the stator housing and shall contain a terminal board for connection of power and pilot sensor cables using threaded compression type terminals. The use of wire nuts or crimp-type connectors is not acceptable. The motor and the pump shall be produced by the same manufacturer.
    - c. The motor service factor (combined effect of voltage, frequency and specific gravity) shall be 1.15. The motor shall have a voltage tolerance of +/- 10%. The motor shall be designed for continuous operation in up to a 40°C ambient and shall have a NEMA Class B maximum operating temperature rise of 80°C.

- d. Shaft Sealing
    - i. Each pump shall be provided with a positively driven dual, tandem mechanical shaft seal system consisting of two seal sets, each having an independent spring. The lower primary seal, located between the pump and seal chamber, shall contain one stationary and one positively driven rotating corrosion and abrasion resistant tungsten-carbide ring. The upper secondary seal, located between the seal chamber and the seal inspection chamber shall be a leakage-free seal. The upper seal shall contain one stationary and one positively driven rotating corrosion and abrasion resistant tungsten-carbide seal ring.
    - ii. The rotating seal ring shall have small back-swept grooves laser inscribed upon its face to act as a pump as it rotates, returning any fluid that should enter the dry motor chamber back into the lubricant chamber. All seal rings shall be individual solid sintered rings. Each seal interface shall be held in place by its own spring system. The seals shall not depend upon direction of rotation for sealing. Mounting of the lower seal on the impeller hub is not acceptable. Shaft seals without positively driven rotating members or conventional double mechanical seals containing either a common single or double spring acting between the upper and lower seal faces are not acceptable. The seal springs shall be isolated from the pumped media to prevent materials from packing around them, limiting their performance.
    - iii. Each pump shall be provided with a lubricant chamber for the shaft sealing system. The lubricant chamber shall be designed to prevent overfilling and shall provide capacity for lubricant expansion. The seal lubricant chamber shall have one drain and one inspection plug that are accessible from the exterior of the motor unit. The seal system shall not rely upon the pumped media for lubrication.
    - iv. The area about the exterior of the lower mechanical seal in the cast iron housing shall have cast in an integral concentric spiral groove. This groove shall protect the seals by causing abrasive particulate entering the seal cavity to be forced out away from the seal due to centrifugal action.
    - v. A separate seal leakage chamber shall be provided so that any leakage that may occur past the upper, secondary mechanical seal will be captured prior to entry into the motor stator housing. Such seal leakage shall not contaminate the motor lower bearing. The leakage chamber shall be equipped with a float type switch that will signal if the chamber should reach 50% capacity.
  - e. The cable entry seal design shall preclude specific torque requirements to insure a watertight and submersible seal. The cable entry shall consist of dual cylindrical elastomer grommets, flanked by washers, all having a close tolerance fit against the cable outside diameter and the entry inside diameter. The grommets shall be compressed by the cable entry unit, thus providing a strain relief function. The assembly shall provide ease of changing the cable when necessary using the same entry seal. The cable entry junction chamber and motor shall be sealed from each other, which shall isolate the stator housing from foreign material gaining access through the pump top. Epoxies, silicones, or other secondary sealing systems shall not be considered equal.
8. Testing: Tests shall be performed on the motor as follows:
- a. Routine tests at the factory: Routine tests shall be conducted as specified in NEMA Standard No. MG1-12.51-1987 and certified test reports furnished per IEEE Standard 112, Form A-1.

- b. Complete initial heat run tests shall be conducted in accordance with NEMA and IEEE Standard 112, Test Standards. Certified test reports shall be submitted and shall be based on IEEE Standard 112, Form A-2.
- c. Certificates and Data: A certificate for the motor shall be provided by the manufacturer in accordance with the paragraph entitled, SUBMISSION OF MANUFACTURER'S CERTIFICATES in the section entitled, SUBMITTALS. All test and adjustment data shall be recorded and submitted in accordance with subparagraph herein entitled, TESTING.

#### G. Pump Monitoring System

- 1. The submersible non-clog pumps shall be provided with a Flygt miniCAS monitoring system, or equal. The monitoring system consists of a leak sensor and a thermal overload sensor (MiniCAS II relay mounted in the pump control panel).
- 2. Inputs and Outputs
  - a. The pump monitoring system shall be provided with the following outputs for pump control and alarm indication:
    - i. Seal Leak Alarm (normally open contact)
    - ii Over Temperature Alarm (normally closed contacts)
  - b. Motor protective devices and field wiring shall be connected to the base unit. Enable and alarm contact connections shall also be made at the base unit.
- 3. Operation: The pump monitoring system shall monitor the signals from the field devices and shall initiate the pump fail alarm in the respective pump control circuit when any of the signals from the devices listed in paragraph 2.2.3.B, Inputs And Outputs, indicates a temperature or leak problem with the pump. If the sensors and corresponding signals sense no problem with the pump, then the "pump enable" signal from the base unit shall allow the pump to be started.

### PART 3 EXECUTION

#### 3.1 INSTALLATION

- A. Install the pumps and appurtenances in accordance with the manufacturer's recommendations.

#### 3.2 CERTIFIED FACTORY PUMP TESTS

- A. Certified pump tests of each unit furnished shall be provided. The pumps shall be tested in accordance with the standards of Hydraulic Institute. The pumps shall be fully tested at the manufacturer's plant before shipment. Tests shall consist of instantaneous readings of head, capacity, efficiency, NPSHR and brake horsepower, at full speed and minimum speed conditions to properly establish the performance curve from shut-off to run-out points. Certified copies of test reports shall be submitted to the Engineer. Test reports shall be signed and sealed by a registered professional engineer. The Contractor shall furnish six (6) certified prints of each test performance curve and all test data. The standards of the Hydraulic Institute shall govern all procedures and calculations for these tests. Proof of meter set-up and reports shall be submitted

to the Engineer. The performance curve sheets are to include "Pump Efficiency", "Brake Horsepower" and "Net Positive Suction Head Required". Approval of results shall be precedent to shipment of pump.

### 3.3 FACTORY-WITNESSED PERFORMANCE TESTS

- A. Sewage pumps shall be tested at their place of manufacture to obtain all curves and NPSH points as specified hereinbefore and as approved by the Engineer.

### 3.4 PUMP FIELD TESTS

- A. When the pumps and electrical controls and all related piping have been installed, the Contractor shall conduct a field test of the pumping units in the presence of the Engineer.
- B. The sewage pumping units shall meet the hydraulic and field vibration requirements and limits of the "Standards of the Hydraulic Institute", latest edition.

### 3.5 OPERATOR AND MAINTENANCE TRAINING

- A. Training shall be performed on site, and by the pump manufacturer's factory trained representative who performed the field service. The CONTRACTOR shall provide written notification to the ENGINEER for scheduling training for a particular type of instrument a minimum of ten (10) calendar days in advance of proposed training. Training shall accommodate a minimum of twelve (12) persons to be identified by the OWNER. Training session shall consist of a minimum of eight (8) hours of onsite instruction and include instructions appropriate for both operators and maintenance personnel. A separate and distinct onsite visit by the appropriate representative shall be provided for training.
- B. A sample training manual and training syllabus shall be provided to the ENGINEER with the written request for scheduling training. Training manuals shall be provided to the persons attending the training session when the training session commences.

\*\* End of Section \*\*

# BID FORM FOR CONSTRUCTION CONTRACT

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.

## ARTICLE 1—OWNER AND BIDDER

- 1.01 This Bid is submitted to: **County Commissioners of Worcester County, One West Market Street, Room 1103, Snow Hill, Maryland 21863**
- 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—ATTACHMENTS TO THIS BID

- 2.01 The following documents are submitted with and made a condition of this Bid:
- A. Required Bid security;
  - B. List of Proposed Subcontractors;
  - C. List of Proposed Suppliers;
  - D. Evidence of authority to do business in the state of the Project; or a written covenant to obtain such authority within the time for acceptance of Bids;
  - E. Contractor’s license number as evidence of Bidder’s State Contractor’s License or a covenant by Bidder to obtain said license within the time for acceptance of Bids;
  - F. Required Bidder Qualification Statement with supporting data;~~and~~
  - G. **If Bid amount exceeds \$10,000, signed Compliance Statement (RD 400-6). Refer to specific equal opportunity requirements set forth in the Supplementary Conditions of the Construction Contract (EJCDC C-800);**
  - H. **If Bid amount exceeds \$25,000, signed Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion - Lower Tier Covered Transactions (AD-1048);**
  - I. **If Bid amount exceeds \$100,000, signed RD Instruction 1940-Q Exhibit A-1, Certification for Contracts, Grants, and Loans.”**

## ARTICLE 3—BASIS OF BID—LUMP SUM BID AND UNIT PRICES

### 3.01 *Unit Price Bids*

- A. Bidder will perform the following Work at the indicated unit prices:

Item No.	Description	Unit	Estimated Quantity	Bid Unit Price	Bid Amount
1	MOBILIZATION, DEMOBILIZATION, TESTING, AND PERMITTING	LS	1	\$	\$



2	E-ONE SIMPLEX GRINDER PUMP STATION	EA	2	\$	\$
3	1.5" HDPE SDR-11 FORCEMAIN	LF	930	\$	\$
4	4" FORCE MAIN (VARIOUS MATERIALS)	LF	1,002	\$	\$
5	6" SDR-35 PVC SEWER SERVICES FROM RIGHT OF WAY TO GRAVITY MAIN	EA	40	\$	\$
6	6" SDR-35 PVC GRAVITY SEWER LATERAL (RIGHT OF WAY TO RESIDENCE)	LF	2,370	\$	\$
7	8" SDR-35 PVC GRAVITY SEWER MAIN (0' TO 8' DEEP)	LF	186	\$	\$
8	10" SDR-35 PVC GRAVITY SEWER MAIN (0' TO 8' DEEP)	LF	1,617	\$	\$
9	10" D.I. CLASS 52 GRAVITY SEWER	LF	70	\$	\$
10	10" SDR-35 PVC GRAVITY SEWER MAIN (8' TO 20' DEEP)	LF	3,304	\$	\$
11	THE LANDING WWTP WET WELL CONNECTION	EA	1	\$	\$
12	PUMP STATION - CIVIL AND MECHANICAL	LS	1	\$	\$
13	PUMP STATION - ELECTRICAL AND CONTROL	LS	1	\$	\$
14	PRECAST CONCRETE SEWER MANHOLES	EA	22	\$	\$
15	DEWATERING AND WELL POINT SYSTEMS	LS	1	\$	\$
16	2.5" BASE SUPERPAVE ASPHALT 19.5MM	TON	870	\$	\$
17	2" SURFACE SUPERPAVE ASPHALT 9.5MM	TON	690	\$	\$
18	6" CR-6 ROAD BASE AGGREGATE	SY	2,800	\$	\$
19	DEMOLITION AND ABANDONMENT OF SEPTIC TANKS, PLUMBING CONNECTIONS, AND APPURTENANCES	EA	23	\$	\$
20	EROSION/SEDIMENT CONTROL, SITE RESTORATION, AND STABILIZATION	LS	1	\$	\$
21	TRAFFIC CONTROL	LS	1	\$	\$
22	TRANSPORTATION AND DISPOSAL OF UNSUITABLE SOILS MATERIAL AND IMPORT OF SELECT FILL	CY	10,000	\$	\$
Total of All Unit Price Bid Items					\$

B. Bidder acknowledges that:

1. each Bid Unit Price includes an amount considered by Bidder to be adequate to cover Contractor's overhead and profit for each separately identified item, and
2. estimated quantities are not guaranteed and are solely for the purpose of comparison of Bids, and final payment for all Unit Price Work will be based on actual quantities, determined as provided in the Contract Documents.

3.02 *Total Bid Price (Lump Sum and Unit Prices)*

Total Bid Price (Total of all Lump Sum and Unit Price Bids)	\$
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**TOTAL BID PRICE IN WORDS**

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**ARTICLE 4—BASIS OF BID—COST-PLUS FEE - DELETED**

**ARTICLE 5—PRICE-PLUS-TIME BID - DELETED**

**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 agrees that the Work will be substantially complete on or before [Bidder inserts date], and will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before [Bidder inserts date].~~
- 6.03 ~~Bidder agrees that the Work will be substantially complete within [Bidder inserts number] calendar days after the date when the Contract Times commence to run as provided in Paragraph 4.01 of the General Conditions, and will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions within [Bidder inserts number] calendar days after the date when the Contract Times commence to run.~~
- 6.04 Bidder accepts the provisions of the Agreement as to liquidated damages.

**ARTICLE 7—BIDDER'S ACKNOWLEDGEMENTS: ACCEPTANCE PERIOD, INSTRUCTIONS, AND RECEIPT OF ADDENDA**

7.01 *Bid Acceptance Period*

- A. This Bid will remain subject to acceptance for 60 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

7.02 *Instructions to Bidders*

- A. Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security.

7.03 *Receipt of Addenda*

- A. Bidder hereby acknowledges receipt of the following Addenda: **[Add rows as needed. Bidder is to complete table.]**

Addendum Number	Addendum Date

**ARTICLE 8—BIDDER’S REPRESENTATIONS AND CERTIFICATIONS**

8.01 *Bidder’s Representations*

- A. In submitting this Bid, Bidder represents the following:
1. Bidder has examined and carefully studied the Bidding Documents, including Addenda.
  2. Bidder has visited the Site, conducted a thorough visual examination of the Site and adjacent areas, and become familiar with the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
  3. Bidder is familiar with all Laws and Regulations that may affect cost, progress, and performance of the Work **including all Domestic Preference requirements.**
  4. Bidder has carefully studied the reports of explorations and tests of subsurface conditions at or adjacent to the Site and the drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, with respect to the Technical Data in such reports and drawings.
  5. Bidder has carefully studied the reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, with respect to Technical Data in such reports and drawings.
  6. 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 the Technical Data identified in the Supplementary Conditions or by definition, with respect to the effect of such information, observations, and Technical Data on (a) the cost, progress, and performance of the Work; (b) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, if selected as Contractor; and (c) Bidder’s (Contractor’s) safety precautions and programs.
  7. Based on the information and observations referred to in the preceding paragraph, Bidder agrees that no further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract.
  8. 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.

9. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and of discrepancies between Site conditions and the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.
10. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.
11. The submission of this Bid constitutes an incontrovertible representation by Bidder that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

8.02 *Bidder's Certifications*

A. The Bidder certifies the following:

1. 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.
2. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid.
3. Bidder has not solicited or induced any individual or entity to refrain from bidding.
4. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 8.02.A:
  - a. Corrupt practice means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process.
  - b. 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.
  - c. 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.
  - d. 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.

BIDDER hereby submits this Bid as set forth above:

Bidder:

\_\_\_\_\_  
*(typed or printed name of organization)*

By: \_\_\_\_\_  
*(individual's signature)*

Name: \_\_\_\_\_  
*(typed or printed)*

Title: \_\_\_\_\_  
*(typed or printed)*

Date: \_\_\_\_\_  
*(typed or printed)*

*If Bidder is a corporation, a partnership, or a joint venture, attach evidence of authority to sign.*

Attest: \_\_\_\_\_  
*(individual's signature)*

Name: \_\_\_\_\_  
*(typed or printed)*

Title: \_\_\_\_\_  
*(typed or printed)*

Date: \_\_\_\_\_  
*(typed or printed)*

Address for giving notices:

\_\_\_\_\_  
\_\_\_\_\_

Bidder's Contact:

Name: \_\_\_\_\_  
*(typed or printed)*

Title: \_\_\_\_\_  
*(typed or printed)*

Phone: \_\_\_\_\_

Email: \_\_\_\_\_

Address: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Bidder's Contractor License No.: (if applicable) \_\_\_\_\_