

**July 5, 2019**  
**BOARD OF COUNTY COMMISSIONERS**  
**ORANGE COUNTY, FLORIDA**  
**ADDENDUM NO. 1 / IFB Y19-774-RM**  
**ORANGE COUNTY CLASS III LANDFILL GAS MANAGEMENT SYSTEM HEADER EXPANSION**  
**BID OPENING DATE: July 16, 2019**

This addendum is hereby incorporated into the bid documents of the project referenced above. The following items are clarifications, corrections, additions, deletions, and/or revisions to and shall take precedence over the original documents. Additions are indicated by underlining; deletions are indicated by ~~strikethrough~~.

**A. The bid opening date remains July 16, 2019**

**B. The following are questions/responses/clarifications:**

1. What Local, County, and or State licenses, permits, or fees will the contractor be expected to obtain specific to this project?

**RESPONSE: A Building Permit will be required for the electrical connection of the new air compressor to the existing system.**

2. Has the site accepted asbestos?

**RESPONSE: Please see Drawing No. C1. The County's designated asbestos disposal area is denoted in the center of this drawing. The County has only used the southern portion of the designated area. Buried asbestos is not expected within the trenching excavation of Cell 2. However, the Class I waste was placed prior to 1985. If asbestos is discovered during the project, the CONTRACTOR is to immediately notify the County.**

3. Can Bid Items 23 & 24 be changed to have a quantity and units that can be measured for payment, which would have all of the bidders pricing the same amount of work?

**RESPONSE: These bid items are Lump Sum in effort to minimize disturbance of existing vegetation. The only areas requiring sodding is the ditch cross-over (See Drawing No. C1) and the southeast corner of Cell 1 where header pipe runs up the 3H:1V slope to the connection point (Condensate Trap CT-1).**

**C. CHANGES TO SPECIFICATIONS**

1. DELETE and REPLACE "Y19-774-RM SCHEDULE OF PRICES" form Part D, Pages D-3 through D-4 with the attached "REVISED Y19-774-RM SCHEDULE OF PRICES" form.

**IMPORTANT: Failure to submit your bid with the "Revised pages D-3 through D-4" per this Addendum shall be cause for your bid to be rejected as non-responsive.**

2. Specification 01010, SUMMARY OF WORK, Section 1.02 B. 3<sup>rd</sup> Line, DELETE the word "inactive".
3. DELETE and REPLACE Specification Section 01025 with the attached Specification Section 01025 – MEASUREMENT AND PAYMENT

**4. DELETE and REPLACE Specification Section 02221 with the attached Specification Section 02221 - TRENCHING AND TRENCH BACKFILLING**

**5. Clarification:**

Excavations that will remove Class I Waste needs to be loaded by the CONTRACTOR onto CONTRACTOR provided vehicles, transported to the Class I landfill, and unloaded as directed by the County. A list of the locations where the CONTRACTOR is expected to excavate Class I waste is as follows:

a. Trenching Excavations: See Table below:

<b>Class I Waste Locations During Trenching</b>	<b>Drawing C1 Station Numbers</b>	<b>Applicable Trenching Detail</b>	<b>Linear Feet of Excavation</b>
Southern Header Route	Between 0+00 and 1+10	Drawing C7, Detail 3	115
Southern Header Route	Between 17+10 and PS-3	Drawing C7, Detail 3	275
Southern Header Route	Between PS-3 and 32+50	Drawing C7, Detail 8	1,275
Western Header Route	Between 0+00 and 2+00	Drawing C7, Detail 7	205
Western Header Route	Between 14+50 and 17+30	Drawing C7, Detail 3	285
Northern Header Route	Between 0+00 and 24+49	Drawing C7, Detail 2	2,450
Northern Airline and Forcemain Line	Between PS-6 and PS-7	Drawing C7, Detail 1	1,448
Northern Airline and Forcemain Line	Between PS-7 and PS-8	Drawing C7, Detail 1	831

- b. New Pump Station Excavations: All installed pump stations, numbers PS-3 through PS-8.
- c. Header Tie-In Locations: Western Header Tie-In at Station 0+00; Northern Header Tie-In at Pump Station CS-3; Southern Header Tie-In at Station 0+00.
- d. Condensate Manifold: Well drill cuttings from Condensate Manifold No. 3 located in the northwest corner of the landfill.

All remaining excavated materials are expected to be Class III waste that needs to be loaded by the CONTRACTOR onto CONTRACTOR provide vehicles, transported to the Class III landfill working face, and unloaded as directed by the County.

**D. All other term and conditions of the IFB remain the same.**

**The Bidder shall acknowledge receipt of this addendum by completing the applicable section in the solicitation or by completion of the acknowledgement information on the addendum. Either form of acknowledgement must be completed and returned not later than the date and time for receipt of the bid.**

**Receipt acknowledged by:**

\_\_\_\_\_  
Authorized Signature

\_\_\_\_\_  
Date Signed

\_\_\_\_\_  
Title

\_\_\_\_\_  
Name of Firm

**ATTACHMENT 1**

**Revised Bid Form**

**REVISED Y19-774-RM SCHEDULE OF PRICES  
REVISED D-3**

ITEM NO.	ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE	TOTAL PRICE
1	Mobilization/Demobilization	LS	1		
2	Project Field Survey	LS	1		
3	Administration	LS	1		
4	Project Record Documentation	LS	1		
	<b>LFG Header, Condensate, and Airline Piping</b>				
5	12-inch HDPE SDR-17 LFG Header Pipe	LF	6930		
6	8-inch HDPE SDR-17 LFG Header Pipe	LF	650		
7	3-inch HDPE SDR-11 Condensate Force Main	LF	5300		
8	2-inch HDPE SDR-9 Compressed Air Line	LF	6930		
9	12-in Butterfly Control Valve	EA	3		
10	8-in Butterfly Control Valve	EA	2		
11	Header Pipe Tie-In to Existing Pipe	EA	6		
12	Airline Tie-In to Existing Pipe	EA	2		
13	Condensate Forcemain Tie-In to Existing Pipe	EA	1		
14	Air Supply Line Isolation/Blow-Off Station	EA	2		
15	Forcemain Line Stub-Out	EA	2		
16	Road Crossing CMP Casing	LF	55		
17	36-inch HDPE Condensate Pump Stations	EA	6		
18	Condensate Injection Manifolds	EA	3		
	<b>Stormwater Ditch Crossing</b>				
19	Earthwork	LS	1		
20	48-inch Corrugated HDPE Culvert Pipe	LF	105		
21	Mitered End Sections	EA	2		
	<b>Final Grade Treatment</b>				

22	Bollards	EA	42		
23	Sodding	LS	1		
24	Hydro-Seeding/Mulch	LS	1		
25	Air Compressor	LS	1		
26	Indemnification	LS	1	\$100.00	\$100.00
<b>TOTAL ESTIMATED BID PRICE (Items 1-26)</b>					

**IMPORTANT: Failure to submit your bid with the “Revised pages D-3 through D-4” per this Addendum shall be cause for your bid to be rejected as non-responsive.**

**REVISED D-4**

## **ATTACHMENT 2**

### **Revised Technical Specifications**

Section 01025 – MEASUREMENT AND PAYMENT

Section 02221 - TRENCHING AND TRENCH BACKFILLING

## SECTION 01025

### MEASUREMENT AND PAYMENT

#### PART 1 – GENERAL

##### 1.01 DESCRIPTION

- A. The CONTRACTOR shall receive and accept the compensation provided in the Contract as full payment for furnishing all labor, equipment, and materials and for performing all construction/operations necessary to complete the WORK as described in the Contract, and in full payment for all losses or damages incurred during the WORK, for any discrepancies between actual and estimated quantities, or from any unanticipated difficulties which may arise during the WORK until final acceptance by the COUNTY.
- B. Payment for the various items on the CONTRACTOR's Bid Form, as further specified herein, shall include all compensation to be received by the CONTRACTOR for furnishing all tools, equipment, supplies, and manufactured articles and for all labor, operations, supervision, overhead, and profit, and incidentals appurtenant to the items of work being described as necessary to complete the various items of the WORK all in accordance with the requirements of the Contract Documents, including all appurtenances thereto, and including all costs of compliance with the regulations of public agencies having jurisdiction, including Safety and Health Requirements of the Occupational Safety and Health Administration (OSHA) of the U.S. Department of Labor.
- C. No separate payment will be made for any item that is not specifically set forth on the CONTRACTOR's Bid Form and all costs, therefore, shall be included in the prices named on the CONTRACTOR's Bid Form for the various appurtenant items of work. Payment for complying with the safety requirements for construction on the work site shall be included in the contract unit price paid for the various items of work wherein it is required, and no separate payment will be made, therefore. In addition, no separate payment shall be made for the following work, and all costs shall be included in appropriate payment item in the lump sum or unit price portion of the bid:
- a. Trench excavation, sheeting, shoring and bracing;
  - b. Benching, if required, for drilling access to well locations;
  - c. Dewatering, storm water runoff management and disposal of water during construction;
  - d. Trash fencing, silt fencing and turbidity barriers;
  - e. Erosion control, protection of Work from storms and erosion and construction of temporary; structures during construction;
  - f. Cleaning stormwater inlets, culverts, and structures due to sediment from landfill gas (LFG) construction;
  - g. Transportation of any solid waste to the active portion of the landfill face for disposal.
  - h. Removal of any granular fill contaminated with solid waste cuttings or from excavation from well construction or other construction activities of the CONTRACTOR and transport to the active portion of the landfill face for disposal;
  - i. Hauling and disposal of construction waste material and site cleaning;
  - j. Traffic control activities;
  - k. Dust control;
  - l. Field verifications or locating buried utilities;
  - m. Taxes, insurance, overhead and profit;
  - n. Project Schedule; and
  - o. All other work required and incidental to the Contract.

- D. The total Bid Amount shall cover all work required by the Contract Documents. All costs in connection with the proper and successful completion of the Work, including furnishing all materials, equipment, supplies, and appurtenances; providing all construction equipment and tools; including all costs and expenses for taxes, commissions, transportation charges, and expenses, permit fees, patent fees, royalties, handling and tests; and performing all necessary labor and supervision to fully complete the WORK shall be included in the bid. All work not specifically set forth as a pay item on the CONTRACTOR's Bid Form shall be considered a subsidiary obligation of CONTRACTOR and all costs in connection therewith shall be included in the unit prices bid.
- E. There will be no payment for rejected or unused products. Payment will not be made for the following:
  - a. Loading, hauling, and disposing of rejected material;
  - b. Quantities of material wasted, eroded, washed away or disposed of in a manner not called for under Contract Documents;
  - c. Rejected loads of material, including material rejected after it has been placed by reason of the failure of CONTRACTOR to conform to provisions of Contract Documents;
  - d. Material not unloaded from transporting vehicle;
  - e. Failure to submit an updated progress schedule with pay application;
  - f. Defective work not accepted by the COUNTY;
  - g. Work performed without approved shop drawing;
  - h. Material remaining on hand after completion of work.
- F. All estimated quantities stipulated on the CONTRACTOR's Bid Form are approximate and are to be used only (a) as a basis for estimating the probable cost of the WORK and (b) for the purpose of comparing the bids submitted for the WORK. The actual amounts of work done and materials under unit price items may differ from the estimated quantities. The basis of payment for work and materials will be the actual amount of work done and materials furnished unless it exceeds the estimated quantities in which case a change order must be approved prior to payment for quantities exceeding the estimated quantity.
- G. The CONTRACTOR shall field verify all quantities and dimensions shown on the Drawings or contained in the Contract Specifications.
- H. The CONTRACTOR shall be responsible for establishing contracts with its subcontractors, which have a measurement and payment in accordance with this Section. If the CONTRACTOR establishes a contract with its subcontractors, which conflicts with this Section, any additional cost incurred will be borne by the CONTRACTOR.
- I. Partial Payment for Stored Materials and Equipment:
  - a. Partial Payment: No partial payments will be made for materials and equipment delivered or stored.
  - b. Final Payment: Will be made only for products incorporated in work and the product has been completed, tested and accepted by the COUNTY.

## **1.02 COMPUTATION OF QUANTITIES**

- A. Measurement of quantities expressed as area shall be based upon a horizontal, planimetric projection to the work limits as determined by survey record drawings prepared by a surveyor licensed in the State of Florida. Cost of surveying shall be paid by CONTRACTOR, and incorporated into Bid Items, as appropriate or as otherwise called out by this Section.



- B. Measurement of linear items will be for quantities actually field installed to the specified work limits, based upon surveyed stations recorded along the straight or curved centerline of each respective item. Measurement conducted by survey is to be conducted by the CONTRACTOR's approved Florida licensed land surveyor.
- C. Payment will be made to the limits as specified in the Contract Documents. If the constructed limits are less than the specified limit, payment will be made to the actual limits of construction as shown on the Record Drawings. Payment for quantities that exceed the specified contract limits will only be made with the approval of the Project Manager. Payment for quantities that exceed the Contract quantities can only be obtained through an approved change order.
- D. No partial payments shall be made for the installation of items which have not been tested and approved.
- E. Payment will be made monthly until the completion of each unit price item based on quantity completed by CONTRACTOR and verified by the Project Manager. Final payment will be based on quantity calculated from Record Drawings prepared by a Florida Licensed Land Surveyor and confirmed by field measurement by the Project Manager and ENGINEER.
- F. Payment for Lump Sum items will be made as described for each individual lump sum Bid Item, as described in Part 3 of this Section.

### **1.03 VARIATIONS IN ESTIMATED QUANTITIES**

- A. The quantities given in the Contract Documents are approximate and are given as a basis for the uniform comparison of bids. The COUNTY does not expressly, or by implication, agree that the actual amount of work will correspond therewith.
- B. The CONTRACTOR must provide, for Unit Price Work, a proposed contract price determined on the basis of estimated quantities required for each item. The estimated quantities of items are not guaranteed and are solely for the purpose of comparing bids. Each such unit will be deemed to include an amount for overhead, profit and indirect costs for each separately defined item.

## **PART 2 - PRODUCTS (Not Used)**

## **PART 3 - EXECUTION**

### **3.01 MEASUREMENT AND PAYMENT ITEMS**

#### **Section 1 - General**

#### **Bid Item 1a. - Mobilization/Demobilization (Lump Sum)**

1. Measurement. The work required for this item shall not be measured for payment.
2. Payment. Payment for this item will be on a lump sum basis as described below and shall constitute full compensation for all material, labor, equipment, and work incidental thereto, necessary to complete this item in accordance with the Contract Documents. Payment shall cover all work as per Section 01025. This includes, but is not limited to, movement of personnel, equipment, supplies, and incidentals to the project site. No price adjustments will be made for this item due to changes in the work. Demobilization includes removal from the site of all materials, resources, equipment, temporary support facilities, utilities, and all remaining construction debris at the completion of the project and includes the release of liens and other incidentals as specified as requirements of project closeout. The combined mobilization/demobilization cost shall not exceed five percent (5%) of the total contract price and shall be equally split.

The final payment for mobilization/demobilization will not be made until all temporary facilities, temporary erosion and sedimentation controls, equipment, and appurtenances have been removed from the site.

**Bid Item ~~24b~~ - Project Field Survey (Lump Sum)**

1. Measurement. The work required for this item shall be on a completed lump sum basis.
2. Payment. Payment for this item shall be on a lump sum basis for the completed survey. The project survey will include tying into the site coordinate and elevations by a Florida Licensed Land Surveyor; field staking of proposed landfill gas extraction wells; field staking of proposed route for landfill gas headers, landfill gas laterals, air supply line and force main line prior to construction; and an as-built survey of installed wells, above and below ground pipe, fittings, tie-ins, road crossings, valves, and appurtenances. The as-built survey notes will identify such items as: state plane coordinates, ground elevations, pipe depth, pipe slope, top of pipe coordinates and elevations, pipe diameter, identification of fitting sizes, and construction, pipe, and fitting notes.

**Bid Item ~~3.1e~~ - Administration (Lump Sum)**

1. Measurement. The work required for this item shall be on a completed lump sum basis.
2. Payment. Payment for this item will be on a lump sum basis as described below and shall constitute full compensation for all material, labor, equipment, and work incidental thereto, necessary to complete this item in accordance with the Contract Documents. This includes, but is not limited to, obtaining all permits, insurance, and bonds; and any other pre-construction expense necessary for the start of the work; attending project meetings; preparing and submitting shop drawings, partial payment requests, contract forms; coordination with subcontractors and suppliers; and providing temporary support facilities.

**Bid Item ~~41d~~ - Project Record Documentation (Lump Sum)**

1. Measurement. Measurement for this item shall be on a completed lump sum basis.
2. Payment. Payment for this item shall be on a lump sum basis for the completed Project Record Documents. The pay item includes drawings, operation and maintenance manuals, vendor and material supply information, construction photographs and video, and all other items required for Project Record Documentation as described in Section 01720. Payment shall constitute full compensation for all material, labor, equipment, and work incidental thereto, necessary to complete this item in accordance with the Contract Documents.

**Section 2 - Landfill Gas Header, Condensate Discharge Force Main, and Compressed Airline**

**Bid Item ~~52a~~ - 12-inch HDPE SDR-17 Landfill Gas Header Pipe (Linear Foot)**

1. Measurement. Measurement for this item shall be on a horizontally installed linear foot basis per specified pipe size as measured during the conformance survey conducted by a Florida Licensed Professional Surveyor. Measurement shall not include vertical components (i.e., riser) of laterals.
2. Payment. Payment for this item shall be at the contract unit price per horizontal linear foot for each pipe size specified on the bid form. Payment includes health and safety requirements; excavation, trenching, transportation of excavated refuse to the designated landfill working face, sand and clean soil backfill material, pipe bedding, backfilling, soil compaction, fittings, piping, connections, flange backing rings, cleanouts, risers, pipe location markings, quality control surveying, testing, and incidentals. Payment shall constitute full compensation for all material, labor, equipment and work incidental thereto, necessary to complete this item in accordance with the Contract Documents.

**Bid Item ~~62b~~ - 8-inch HDPE SDR-17 Landfill Gas Header Pipe (Linear Foot)**

1. Measurement. Measurement for this item shall be on a horizontally installed linear foot basis per specified pipe

size as measured during the conformance survey conducted by a Florida Licensed Professional Surveyor. Measurement shall not include vertical components (i.e., riser) of laterals.

2. Payment. Payment for this item shall be at the contract unit price per horizontal linear foot for each pipe size specified on the bid form. Payment includes health and safety requirements; excavation, trenching, transportation of excavated refuse to the designated landfill working face, sand and clean soil backfill material, pipe bedding, backfilling, soil compaction, fittings, piping, connections, flange backing rings, cleanouts, risers, pipe location markings, quality control surveying, testing, and incidentals. Payment shall constitute full compensation for all material, labor, equipment and work incidental thereto, necessary to complete this item in accordance with the Contract Documents.

**Bid Item 7.2e - 3-inch HDPE SDR-11 Condensate Discharge Force Main (Linear Foot)**

1. Measurement. Measurement for this item shall be on a horizontally installed linear foot basis per specified pipe size as measured during the conformance survey conducted by a Florida Licensed Land Surveyor. Measurement shall not include vertical components (i.e., riser to wellheads).
2. Payment. Payment for this item shall be at the contract unit price per horizontal linear foot for each pipe size specified on the bid form. Payment includes health and safety requirements; excavation, trenching, transportation of excavated refuse to the designated landfill working face, sand bedding, clean soil backfill, backfilling, soil compaction, fittings, piping, connections, risers for connection to pumps, pipe location markings, quality control surveying, testing, and incidentals. Payment shall constitute full compensation for all material, labor, equipment and work incidental thereto, necessary to complete this item in accordance with the Contract Documents. Price shall include the above-grade riser pipe at each well for the pump. Additional payment will not be made for the above-grade riser.

**Bid Item 8.2d - 2-inch HDPE SDR 9 Compressed Air Line (Linear Foot)**

1. Measurement. Measurement for this item shall be on a horizontally installed linear foot basis per specified pipe size as measured during the conformance survey conducted by a Florida Licensed Land Surveyor. Measurement shall not include vertical components (i.e., riser to wellheads).
2. Payment. Payment for this item shall be at the contract unit price per horizontal linear foot for each pipe size specified on the bid form. Payment includes health and safety requirements; excavation, trenching, transportation of excavated refuse to the designated landfill working face, sand bedding, clean soil backfill, backfilling, soil compaction, fittings, piping, connections, risers for connection to pumps, pipe location markings, quality control surveying, testing, and incidentals. Payment shall constitute full compensation for all material, labor, equipment and work incidental thereto, necessary to complete this item in accordance with the Contract Documents. Price shall include the above-grade riser pipe at each well for the pump. Additional payment will not be made for the above-grade riser.

**Bid Item 9.2e - 12-inch Butterfly Control Valve (Each)**

1. Measurement. Measurement for this item shall be on a completed and installed unit basis.
2. Payment. Payment for this item will be at the contract unit price per installed unit, including health and safety requirements; excavation, transportation of excavated refuse to the designated landfill working face, backfilling, valving, valve stem extension controls, fittings, spacers, piping installation and connections, monitoring ports, and related component, identification markings, testing, and other incidentals. Payment shall constitute full compensation for all material, labor, equipment, and work incidental thereto, necessary to complete this item in accordance with the Contract Documents.

**Bid Item 10.2f - 8-inch Butterfly Control Valve (Each)**

1. Measurement. Measurement for this item shall be on a completed and installed unit basis.
2. Payment. Payment for this item will be at the contract unit price per installed unit, including health and safety requirements; excavation, transportation of excavated refuse to the designated landfill working face, backfilling, valving, valve stem extension controls, fittings, spacers, piping installation and connections, monitoring ports, and related component, identification markings, testing, and other incidentals. Payment shall constitute full compensation for all material, labor, equipment, and work incidental thereto, necessary to complete this item in accordance with the Contract Documents.

**Bid Item ~~112g~~ - Header Line Tie-In to Existing Pipe (Each)**

1. Measurement. Measurement for this item shall be on a completed and installed unit basis.
2. Payment for this item shall be at the contract unit price per installed unit, including health and safety requirements; excavation, transportation of excavated refuse to the designated landfill working face, soil, pipe bedding, backfilling, soil compaction, piping, connections, fittings, ~~connections~~, quality control surveying, testing, and other incidentals. Payment shall constitute full compensation for all material, labor, equipment, and work incidental thereto, necessary to complete this item in accordance with the Contract Documents.

**Bid Item ~~122h~~ - Airline Tie-In to Existing Pipe (Each)**

1. Measurement. Measurement for this item shall be on a completed and installed unit basis.
2. Payment for this item shall be at the contract unit price per installed unit, including health and safety requirements; excavation, transportation of excavated refuse to the designated landfill working face, soil, pipe bedding, backfilling, soil compaction, piping, connections, fittings, ~~connections~~, quality control surveying, testing, and other incidentals. Payment shall constitute full compensation for all material, labor, equipment, and work incidental thereto, necessary to complete this item in accordance with the Contract Documents.

**Bid Item ~~13.2i~~ - Condensate Force Main Tie-In to Existing Pipe (Each)**

1. Measurement. Measurement for this item shall be on a completed and installed unit basis.
2. Payment for this item shall be at the contract unit price per installed unit, including health and safety requirements; excavation, transportation of excavated refuse to the designated landfill working face, soil, pipe bedding, backfilling, soil compaction, piping, connections, fittings, ~~connections~~, quality control surveying, testing, and other incidentals. Payment shall constitute full compensation for all material, labor, equipment, and work incidental thereto, necessary to complete this item in accordance with the Contract Documents.

**~~J. — Bid Item 2~~ Bid Item 14. - Air Supply Line Isolation/Blow-off Station (Each)**

1. Measurement. Measurement for this item shall be on a completed and installed unit basis.
2. Payment. Payment for this item shall be at the contract unit price per installed unit, including health and safety requirements; excavation, transportation of excavated refuse to the designated landfill working face, soil, pipe bedding, backfilling, soil compaction, piping, connections, valving, fittings, ~~connections~~, pipe supports, pipe location markings, appurtenances, quality control surveying, testing, and other incidentals. Payment shall constitute full compensation for all material, labor, equipment, and work incidental thereto, necessary to complete this item in accordance with the Contract Documents.

**Bid Item ~~152k~~ - Forcemain Line ~~Blow-off~~ Stub-Out (Each)**

1. Measurement. Measurement for this item shall be on a completed and installed unit basis.

2. Payment. Payment for this item shall be at the contract unit price per installed unit, including health and safety requirements; excavation, transportation of excavated refuse to the designated landfill working face, soil, pipe bedding, backfilling, soil compaction, piping, connections, valving, fittings, ~~connections~~, pipe supports, pipe location markings, appurtenances, quality control surveying, testing, and other incidentals. Payment shall constitute full compensation for all material, labor, equipment, and work incidental thereto, necessary to complete this item in accordance with the Contract Documents.

**Bid Item ~~16.21~~ - Road Crossing CMP Casing for Piping (Linear Feet)**

1. Measurement. Measurement for this item shall be on an installed linear foot basis as measured during the conformance survey conducted by a Florida Licensed Land Surveyor.
2. Payment. Payment for this item shall be at the contract unit price per linear foot as specified on the Bid Form. Payment is in addition to the payment for HDPE piping and includes additional health and safety requirements; excavation, transportation of excavated refuse to the designated landfill working face, bedding, backfilling, piping placement inside the casing, and repair of the road to its original condition after construction to the satisfaction of the COUNTY.

**Section 3. 36-inch HDPE Condensate Pump Stations**

**Bid Item ~~173a~~ - 36-inch HDPE Condensate Pump Stations (Each)**

1. Measurement. Measurement for this item shall be on a completed and installed unit basis.
2. Payment. Payment for this item shall be at the contract unit price per installed unit including boring, transportation of excavated refuse to the designated landfill working face, gravel leveling layer, concrete ballast, connection to LFG piping, connection to airline and forcemain piping, pump, pump tubing, pump cycle counter, air pressure regulator, backfilling, compaction, quality control surveying, testing and other incidentals. Payment shall constitute full compensation for all material, labor, equipment and work incidental thereto, necessary to complete this item in accordance with the Contract Documents.

**Section 4. Condensate Injection Manifolds**

**Bid Item ~~184a~~ - Condensate Injection Manifold (Each)**

1. Measurement. Measurement for this item shall be on a completed and installed unit basis.
2. Payment. Payment for this item shall be at the contract unit price per installed unit including boring, transportation of excavated refuse to the designated landfill working face, gravel fill, piping, fittings, backfilling, compaction, quality control surveying, testing and other incidentals. Payment shall constitute full compensation for all material, labor, equipment and work incidental thereto, necessary to complete this item in accordance with the Contract Documents.

**Section 5. Stormwater Ditch Crossing**

**Bid Item 19. 5a— Earthwork (Lump Sum)**

1. Measurement. Measurement for this item shall be on a completed lump sum basis.
2. Payment. Payment for this item will be on a lump sum basis and shall constitute full compensation for all material, labor, equipment, and work incidental thereto, necessary to complete this item in accordance with the Contract Documents. This includes, but is not limited to, health and safety requirements, excavation of unsuitable soils, soil, pipe bedding material, placement of the soil, placement of the pipe bedding material, excavation, backfill,

grading, compaction, and fine grading at the mitered end sections.

**Bid Item 20.5b – 48-inch Corrugated HDPE Culvert Pipe (Linear Feet)**

1. Measurement. Measurement for this item shall be on an installed linear foot basis as measured during the conformance survey conducted by a Florida Licensed Land Surveyor
2. Payment. Payment for this item shall be at the contract unit price per linear foot as specified on the Bid Form. Payment includes health and safety requirements; placement of the pipe, quality control surveying, and incidentals. Payment shall constitute full compensation for all material, labor, equipment and work incidental thereto, necessary to complete this item in accordance with the Contract Documents.

**Bid Item 21.5e – Mitered End Sections (Each)**

1. Measurement. Measurement for this item shall be on a completed and installed unit basis.
2. Payment. Payment for this item will be at the contract unit price per installed unit. A unit is defined as one mitered end section. Payment shall constitute full compensation for all material, labor, equipment, and work incidental thereto, necessary to complete this item in accordance with the Contract Documents

**Section 6-Final Grade Treatment**

**Bid Item 226a. - Bollards (Each)**

1. Measurement. Measurement for this item shall be on a completed and installed unit basis.
2. Payment. Payment for this item will be at the contract unit price per installed unit. A unit is defined as one bollard. Two bollards are to be installed at each designated location including at the riser pipes, piping blow offs, and new valves. Payment shall constitute full compensation for all material, labor, equipment, and work incidental thereto, necessary to complete this item in accordance with the Contract Documents.

**Bid Item 236b. - Sod (Lump Sum)**

1. Measurement. Measurement for this item shall be on a completed and installed lump sum basis.
2. Payment. Payment for this item shall be on a completed and installed lump sum basis. Payment for sod for the surface areas disturbed during the installation of piping and valve within the Cell I landfill area and ditch crossing as designated by the Contract Documents. Payment shall include any necessary surface regrading of equipment disturbed areas and watering and shall constitute full compensation for all material, labor, equipment, and work incidental thereto, necessary to complete this item in accordance with the Contract Document and to the satisfaction of the COUNTY. Payment is for regrading, installing new sod, and watering. Payment will not be made for any needed surface area repaired by the CONTRACTOR that the ENGINEER and COUNTY believes has been disturbed unnecessarily. Installation shall be completed by the Substantial Completion date and watering shall continue through the Final Completion date.

**Bid Item 246e. - Hydro-Seeding/Mulch (Lump Sum)**

1. Measurement. Measurement for this item shall be on a completed and installed lump sum basis .
2. Payment. Payment for this item shall be on a completed and installed lump sum basis. Payment for hydroseeding and mulching for the surface areas disturbed during the installation of piping, risers, valves, equipment staging and material storage areas within the site not repaired by sod as designated by the Contract Documents. Payment

shall include any necessary surface regrading of equipment disturbed areas and watering and shall constitute full compensation for all material, labor, equipment, and work incidental thereto, necessary to complete this item in accordance with the Contract Document and to the satisfaction of the COUNTY. Payment is for regrading, placing hydro-seed, placing mulch, and watering. In addition, the area shown on the drawings allocated for the equipment staging and material storage areas. Payment will not be made for any needed surface area repaired by the CONTRACTOR that the ENGINEER and COUNTY believes has been disturbed unnecessarily. Installation shall be completed by the Substantial Completion date and watering shall continue through the Final Completion date.

**Section 7. Air Compressor**

**Bid Item 257a. – Air Compressor (Lump Sum)**

1. Measurement. Measurement for this item shall be on a completed and installed lump sum basis.
2. Payment. Payment for this item will be on a lump sum basis and shall constitute full compensation for all material, labor, equipment, and work incidental thereto, necessary to complete this item in accordance with the Contract Documents. This includes, but is not limited to, procurement of air compressor and appurtenances, upgrading electrical wiring, routing and installation of new conduit, installation of surge protector, installation of phase monitor, installation of control panel, installation of air compressor, installation of air pressure regulator, connection to compressed air piping system, startup and testing of the installed equipment, complete in place, meeting code requirements and ready for use by the County.

**Bid Item 26. – Indemnification (Lump Sum)**

1. Measurement. Measurement for this item shall be on a lump sum basis.
2. Payment. Payment for this item will be on a lump sum basis for \$100 as required under Part F – General Conditions, Article 8 – Bonds, Insurance and Indemnification.

**END OF SECTION**

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## SECTION 02221

### TRENCHING AND TRENCH BACKFILLING

#### PART 1 – GENERAL

##### 1.01 DESCRIPTION

- A. Scope of Work: The work included under this Section consists of furnishing all labor, materials, equipment, and incidentals necessary to perform trenching and trench backfilling, removal of unsuitable material, and grading required to complete the work and activities associated with installation of the landfill gas (LFG) header, condensate pump stations, air supply lines, condensate lines, and force main pipelines shown on the Drawings and specified herein. The work shall include, but not necessarily be limited to, all excavation and trenching; all backfilling; embankment and grading; disposal of waste, leachate, and surplus materials; and all related work such as sheeting, bracing, dewatering, all earthwork and all other requirements shown on the drawings and specified herein.
- B. Work under this Section shall include trenching activities both in and outside of Class I and Class III waste, as defined within the Florida Administrative Code. Excavated waste is to be loaded, transported, and uploaded at the designated landfills based on the type of waste.
- C. All Work shall be performed in strict accordance with the Health and Safety requirements set forth in the General Conditions of the Contract Documents and Section 01030.
- D. All Work shall be performed in strict accordance with all local, State of Florida; United States Occupational Safety and Health Administration (OSHA); other applicable Federal regulations regarding trenching operations and trench safety and trench safety guidelines; and as specified by the Landfill Gas Division of the Solid Waste Association of North America (SWANA).
- E. Work shall be performed as to not block or hinder site access, except as authorized by the Owner.
- F. All Work regarding site access and utilities shall be performed in strict accordance with the requirements set forth in the General Conditions of the Contract Documents.

##### 1.02 REFERENCES

- A. American Society of Testing and Materials (ASTM):
  - 1. C33 - Concrete Aggregates.
  - 2. D442 - Particle Size Analysis of Soils.
  - 3. D698 - Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (Standard Proctor Method). (12400ft-lbf/ft)
  - 4. D1556 - Density and Unit Weight of Soil in Place by the Sand Cone Method.
  - 5. D1557 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort.
  - 6. D2434 - Permeability of Granular ~~soils~~-Soils (Constant Head).
  - 7. D2937 - Density of Soil in Place by the Drive Cylinder Method.



8. D4318 - Liquid Limit, Plastic Limit (Atterberg Limits) and Plasticity Index of Soils.
  9. D5084 - Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter.
- B. U.S. Army Corps of Engineers / U.S. Department of Interior:
1. Unified Soil Classification System (USCS).
- C. Related Work
1. Section 01030 - Special Provisions
  2. Section 01720 - Project Record Documents
  3. Section 01669 – Testing HDPE Piping Systems
  4. Section 02422 - Landfill Gas, Airline, and Forcemain Piping
  5. Section 15103 – Butterfly Valves

### 1.03 SUBMITTALS

- A. Health and Safety Plan, as described in Section 01030 of the Technical Specifications.
- B. Borrow Source or ~~Source of Backfill Materials~~ for Pipe Bedding and General Backfill Soil Materials.
- C. Independent testing laboratory name and qualifications.
- D. Results of sieve analysis and calcium carbonate test for stone backfill.
- E. Pipe slope calculations and survey notes for pre-construction layout, including header routes, lateral routes, horizontal collector layout (including transition point of solid wall to perforated pipe) and air supply/~~dewatering~~ condensate discharge lines.
- F. Pipe survey notes for installed pipe pursuant to Part 3.06 of this Section.
- G. Proposed stationing and pipeline identification procedures. Prior to the start of any pipe installation, Contractor shall supply an example layout drawing showing how the header and laterals will be marked with stations for the conformance surveys.
- H. Contractor daily logs detailing the length of trench excavated and backfilled, with reference to pipe stationing and details sufficient to properly describe the Work completed to date.
- I. The Contractor shall notify the Engineer, in writing, of the material source for each of the soils specified within Part 2 of this Section at least 14 calendar days prior to the date of the anticipated use of such material. Notification shall include:
  1. Supplier's name.
  2. Borrow location.
  3. Documentation confirming adequate quantities are available to complete the work.
  4. Soil field-moisture, laboratory proctor-density tests, and field compaction test results as required within Part 2 of this Section.
  5. Certification from the independent testing laboratory that the soil is not: a) petroleum-contaminated, and b) contaminated with other chemicals, compounds, or a pH that may be deemed hazardous or harmful to human health or the environment.

## PART 2 – PRODUCTS

### 2.01 ~~GENERAL~~ PIPE BEDDING MATERIAL

- A. Contractor to provide pipe bedding material ~~and backfill~~, from an offsite borrow source, to at least 6 inches above the top of the largest installed pipe. Material shall be free of sticks, roots, organic matter, and stones larger than 1-inch in any dimension. Pipe bedding material can be imported natural sand or sand produced from crushed gravel or crushed rock, maximum size 3/8-inch; 95 percent shall pass a No. 4 sieve, free from clay, shell, limestone and organic material, with a maximum of 8 percent passing the No. 200 sieve.

### 2.02 GENERAL BACKFILL SOIL

- A. For excavations outside the limits of refuse, Contractor shall reuse excavated soils from trenching for backfilling ~~around installed pipe~~ above the piping bedding material to the required final grade, unless directed otherwise by Engineer. Reused soils shall conform to Part 2.01 C. and D. of this Section.
- B. Beyond the reusable quantities of soil described above, the Contractor shall use Contractor ~~provided bedding and soil~~ general backfill soil material from an offsite borrow source.
- C. General backfill soil shall be free of sticks, roots, organic matter, and stones larger than 1-inch in any dimension. Remove material that cannot be made to compact readily and replace with suitable material. Soil shall be free of MSW, as determined by the Engineer.
- D. General backfill soils shall be well graded or poorly-graded sand (SW-SP), silty sand (SM), clayey sand or sandy clay (SC) as classified by the Unified Soil Classification System, or other soils as approved by the Engineer.
- E. Soil materials excessively wet or dry are unsuitable. Allow such material to dry, or moisten, as required, to bring material within plus 3 percent of optimum moisture content range for specified compaction.

### 2.03 NON-CALCAREOUS STONE

- A. Stone backfill in a trench, borehole, under a structure, or any else as designated in the Documents shall be hard, durable non-calcareous rock. Stone shall be washed as a component of the manufacturing process and be free of organics, lumps or balls of clay, and other deleterious materials. Stone shall be Florida Department of Transportation (FDOT) No. 4 and conform to the following gradation requirements:

<u>Sieve Size</u>	<u>% Passing (by Weight)</u>
2-inch	100
1½-inch	90
1-inch	35
¾-inch	5
⅜-inch	0

## PART 3 – EXECUTION

### 3.01 PRE-CONSTRUCTION ALIGNMENT SURVEY

- A. A survey shall be performed ~~of~~ on the proposed trench alignment. The alignment shall be staked in the field, and an inspection of the proposed alignment shall be performed by the Engineer. The field stakes shall include the location of the alignment at each location staked. The survey shall identify conflicts

between the proposed work and all existing features. The Engineer shall accept the proposed alignment prior to the Contractor beginning excavation activities.

### **3.02 FIELD QUALITY CONTROL**

- A. The Contractor shall place backfill and fill materials to achieve an equal or “higher” degree of compaction than undisturbed materials adjacent to the work; however, in no case shall the degree of compaction fall below minimum compaction specified in this Section.
- B. Where laboratory or field testing is specified herein to verify that the constructed, in-place work meets the specifications and quality control requirements herein, the Contractor shall employ and bear the expense for an independent testing laboratory to conduct such tests. The Contractor shall pay for the costs of all retests required due to the initial testing not passing the requirements herein. Laboratory shall be on the approved vendor's list of the County.

Where laboratory testing is specified to verify that any individual material of construction or product meets certain quality control requirements (i.e. size, gradation, mix formula, hardness, shape, inherent strength, etc.), the Contractor shall employ and bear all expenses for an independent testing laboratory to sample the material or product and to conduct such tests and retests if necessary or required by the County.

- C. The minimum frequency of quality control testing is as provided in this specification, or as set during construction by the Owner. Frequency of testing for field Quality Control shall be the same as defined for conformance testing.
- D. Sampling locations may be selected by the Engineer. If necessary, the location of routine in-place moisture content and dry density test shall be determined using a non-biased sampling plan.
- E. An increased testing frequency shall be used at the discretion of the Engineer when visual observations of construction performance indicate a potential problem.

- F. All perforations resulting from testing the subgrade or embankment shall be filled by the Contractor with soil compacted to the satisfaction of the Engineer.
- G. If a defective area is discovered in the earthwork, the Engineer will determine the extent and nature of the defect and notify the Contractor. If the defect is indicated by an unsatisfactory test result, the Engineer shall determine the extent of the defective area by additional tests, observations, a review of record, or other means. The Contractor shall be responsible for the cost of these additional tests. If the defect is related to material, and/or adverse site conditions, such as overly wet soils or surface desiccation, the Engineer shall define the limits and nature of the defect.
- H. After determining the extent and nature of a defect, the Contractor shall correct the deficiency to the satisfaction of the Engineer. The cost of corrective actions shall be borne by the Contractor.
- I. Additional testing shall be performed to verify that the defect has been corrected before any additional work is performed by the Contractor in the area of the deficiency. The Contractor shall be responsible for the cost of these additional tests.

### 3.03 EXCAVATION

- A. Prior to starting main excavations, the Contractor shall remove from those areas that require a change of contours, existing topsoil, general fill, and clay cover material to a practical extent. These materials shall be removed in a manner to separate it clearly from underlying material and shall be properly stockpiled.
- B. Excavated cover material shall be separated from excavated refuse wherever possible and any cover material free of refuse ~~shall~~ may be used as general backfill material but is not to be used as pipe bedding material.
- C. Waste materials that have been excavated from the trench excavations, pump station installations, header tie-ins, well borings, or any other type of excavation shall be direct loaded ~~into~~ onto Contractor provided transport vehicles and hauled by the Contractor to the operating portion of the designated landfills for unloading and disposal as directed by the Owner during normal landfill operating hours. As delineated on the drawings, excavations will generate Class I and Class III waste requiring disposal. No excavated waste shall be left overnight at any excavation at any time. At no time, shall excavated waste be stockpiled adjacent to the excavations. Excavated waste ~~is~~ that is considered Class I waste, which should be is to be disposed of in the Class I Landfill; which will require weighing at the scalehouse prior to being directed to the Class I Landfill at no cost to the Contractor. All other excavated waste may be disposed of within the Class III landfill without being weighed at no cost to the Contractor.
- D. Excavate to lines, grades, and dimensions necessary to complete the work.
- E. Trenching Tolerances:
  - 1. Excavate to install pipes in straight runs at a uniform grade, without sags or humps, between vertical and horizontal control points in accordance with the Construction Drawings.
  - 2. Maintain the minimum landfill cover depth, protective sand over the top of the pipe, and minimum trench width as detailed in the project design drawings.
- F. Contractor may not excavate more trench daily than can be completely backfilled after installation of the pipe. Excavations shall not be left open overnight. In the event that a trench must be left open overnight, the Contractor must get permission from the Owner to leave the trench open and trench must be encircled in safety/warning tape attached to stakes placed along the perimeter on all edges of the trench. In the event that the trench has exposed refuse, all refuse must be covered with a tarp that is secured on all corners and along its perimeter.

- G. Excavation may be made without sheeting and bracing if the Contractor is conducting the work within the limitations and requirements of the governmental agencies having jurisdiction. Failure of the Engineer to order the use of bracing or sheeting and shoring or direct changes to systems in place, shall not in any way or to any extent relieve the Contractor of any responsibility concerning the condition of excavations or of his obligations under the Contract. The Contractor shall be responsible for the condition of all excavations. All slides and caves shall be removed without extra compensation, at whatever time and under whatever circumstances that they may occur.

### **3.04 DEWATERING**

- A. Contractor shall provide and maintain all pumps, well points, sumps, equipment, piping, suction and discharge lines, labor, facilities and other dewatering system components necessary to convey water away from excavations and trenching.
- B. Contractor shall take every precaution to prevent water from entering an open trench. Should water enter the trench the water shall be removed so as to return the trench bottom to a firm, dry condition. Contractor shall keep such excavations dry so as to obtain a satisfactory foundation condition for all work. Subgrade soils which become soft, loose, “quick”, or otherwise unsatisfactory for support of structure as a result of inadequate dewatering or other construction methods shall be removed and replaced by crushed stone or gravel as required by the Engineer at the Contractor’s expense. The bottom of excavations shall be firm and without standing water before placing structures or pipes. Provide and maintain pumps, well points, sumps, suction and discharge lines, and other dewatering system components necessary to convey water away from excavations.
- D. Liquids pumped from excavations inside the limits of refuse must be pumped via pipeline or tank truck to a location as designated by the Owner.
- E. Groundwater pumped from excavations outside the limits of the landfill may be discharged into the existing stormwater management system. Pumping and discharge methods shall minimize suspension of fine-grained soils while facilitating settling of soil particles suspended in the water as a result of the trenching activities.
- F. Protect adjacent properties, areas, and structures from damage resulting from dewatering operations or from uplift pressures resulting from dewatering activities.
- G. If pipe trench becomes watered-in after placement of pipe, but before backfilling, Contractor shall dewater the trench, demonstrate that the pipe bedding and pipe slope remain satisfactory, and upon approval by the Engineer, backfill the pipe with clean dry soil in accordance with Part 2.01 of this Section.

### **3.05 ROAD CROSSING**

- A. Contractor shall schedule all road crossings with Owner to minimize disruption to waste disposal operations.
- B. Before excavation is started on any paved road the pavement shall be saw cut by means of a power saw, to the width of the trench and so as to minimize damage to pavement outside of the trench limits. The cost of this removing of pavement shall be included in the price bid for excavation.
- C. Corrugated Metal Pipe (CMP) shall be used as a casing to protect the gas pipe. The inner diameter of the CMP shall be a minimum of two (2) inches larger than the outside diameter of the gas pipe. For multiple pipe crossings adjust CMP size to accommodate all conduits within one CMP casing with the inner diameter of the casing shall be a minimum of 6 inches larger than the cumulative outside diameters of the HDPE pipes encased. Detail and material requirements are shown on the drawings.

### 3.06 PIPE SURVEY

- A. At the time of pipe placement, Contractor shall verify that pipe slope meets the requirements specified in this Section and on the Plans at no greater than 10-foot intervals along LFG laterals and header and record such information in the project notes. Station numbering shall be used and marked on the pipe.
1. Contractor shall measure each length of installed pipe and mark the 10-foot stations.
  2. Survey equipment shall be used to measure the change in relative elevation between each 10-foot station.
  3. The change in elevation and slope for each 10-foot section shall be recorded in the Contractor's project notes.
  4. A trench laser may be used by the Contractor for installing the pipe at the correct grades but will not be considered acceptable survey equipment for the purpose of verifying pipe slope.
  5. The project notes detailing the required pipe slope confirmation, station location, type of pipe, location of fittings, etc. shall be provided daily to and be checked by the Engineer prior to proceeding with backfilling.
- B. A conformance survey shall be conducted on all installed pipe prior to backfilling the trench.
1. The survey shall document the horizontal and vertical location of the top of the landfill gas header, laterals, air supply lines, condensate discharge line pipes at minimum 50-foot intervals and at each change in pipe direction, ground surface grade break, change in pipe grade, fitting, connection, pipe crossover, and tie-in along the entire pipeline routes.
  2. If a run of pipe is 100 feet or less in length, Contractor shall provide survey shots at a 20-foot interval or less. For a run of pipe of 50 feet or less, Contractor shall provide survey shots at a 10-foot interval or less to document the pipe as-built conditions.
  3. The survey shall also document the type of pipe, location (horizontal and vertical coordinate) of structures and appurtenances such as, but not limited to road crossing casing, pipe crossing, and tie-ins.
  4. Conformation survey must be sealed by a Professional Land Surveyor registered in the State of Florida. The survey information shall be incorporated into the record drawings described in Section 01720 - Project Record Documents.

### 3.07 BACKFILLING PROCEDURES

- A. Backfill shall meet the requirements of Part 2, this Section.
- B. Contractor shall notify Engineer prior to beginning backfilling operations. The Engineer shall inspect all pipe, fittings, and connections prior to approving backfilling. If Contractor backfills pipe without inspection of the pipe while the pipe is installed in the open trench, Contractor shall uncover all uninspected buried pipe so that it may be properly inspected. This shall be done at no additional cost to the Owner.
- C. Pipe Bedding and ~~Cover Material~~ General Soil Backfill Placement:
1. Bedding material shall be granular fill, as described in Part 2, this Section.
  2. Place bedding material in the trench to the lines and grades shown on the Drawings.
  3. Bedding material shall be placed in the trench ensuring material is placed under the haunches of the pipe. The bedding shall be placed and compacted using a mechanical compaction device such as a walk behind vibratory compactor or equal, in a loose lift not to exceed six (6) inches above the top of the pipe. Compaction shall be to a density where subsequent passes with the mechanical compaction device will not reduce the surface elevation of the bedding material by more than three-quarters of an inch.

4. Backfilling procedures shall be modified as necessary to not displace (either horizontally or vertically) piping installed in a trench during backfill or bedding placement.
5. Place pipe bedding and compact to a height of 6 inches above the top of the pipe.
6. Place general backfill soil in maximum 12-inch lifts above pipe bedding to the final grade to 2.5 feet below final grade.
- ~~7. Place landfill cover to equal existing landfill cover compaction and thickness.~~
- ~~7. Remove all excess material.~~
- ~~8. After backfilling, Contractor to place flagging every 100 feet to provide the location of piping to County.~~

### **3.08 GRADING AND RE-ESTABLISHMENT OF DISTURBED AREAS**

- A. Contractor shall regrade and return to their original condition, as determined by Owner, all areas disturbed by the Contractor's work. This includes but is not limited to ruts caused by construction equipment; soil stockpile areas; landfill benches, terraces, and surfaces used for access and construction; and surface impact to existing vegetation requiring replacement or repair with new grass. All work must be completed by the Contractor to the Owner's satisfaction at no additional costs.

**END OF SECTION**