

SECTION 01 11 00 - SUMMARY OF WORK

PART 1 - GENERAL

1.01 SUMMARY:

- A. This Section summarizes the Work covered in detail in the complete Contract Documents.
- B. Owner: The Unified Government of Wyandotte County / Kansas City, Kansas is contracting for Work described in the Contract Documents.
 - 1. Contract Identification: John Garland Park Landfill Gas System Improvements/Expansion, PRJ-010156.
 - 2. Work Site Location: NE corner of 5th Street and Cleveland Avenue, Kansas City, KS 66101.
- C. Engineer: The Contract Documents were prepared by Burns & McDonnell Engineering Company, Inc., 9400 Ward Parkway, Kansas City, Missouri 64114.

1.02 PROJECT DESCRIPTION:

- A. Work Covered by Contract Documents:
 - 1. The work by the Contractor includes but is not limited to, furnishing and paying for all materials not borrowed from Site, labor, transportation, and services necessary to complete the construction of the Project.

G-1 Mobilization

G-1 Mobilization shall include all costs associated with:

Contractor's mobilization to and demobilization from the site including all health and safety related costs; temporary barriers, temporary controls, temporary utilities, temporary field offices, and other structures required for office and storage space required by the Contractor; attending all of Engineer and Owner required meetings and submitting all required submittals, insurance, bonds, all items not specified herein but required under the Contract Documents, and all other incidental and associated costs required to complete the work of G-1 Mobilization.

G-2 Utility Locate, Survey, and Record Drawings

G-2 Utility Locate and Survey shall include all costs associated with:

Utility locate of all areas with earthworks to confirm location of known utilities and identify unknown locations, survey after locating, surveys associated with unit price adjustment items, provide locations on as-built drawings, protection of utilities, monitoring wells, control points, and existing site structures, all items not specified herein but required under the Contract Documents, and all other incidental and associated costs required to complete the work of G-2 Utility Locate and Survey.

G-3 Gas Recovery Well Drilling & Install (Unit Price Adjustment)

G-3 shall include all costs associated with:

Drilling the borehole for new gas recovery wells, furnishing and installing the well screen, perforated pipe, solid pipe and stick up, fittings, filter pack material, geocomposite isolation ring, bentonite seal, and soil backfill as detailed in the Contract Drawings and Section 02 66 60 Gas Recovery Well. This item includes all items not specified herein but required under the Contract Documents, and all other incidental and associated costs required to complete the work of G-3 Gas Recovery Well Drilling & Install. Payment for this item shall be made on a unit rate basis for the "Gas Recovery Well Drilling" unit price adjustment rate provided by the bidder. Confirmation of the total linear feet of well installed shall be based on total well depth below ground surface provided by the drillers well logs and confirmed by the Engineer.

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G-4 Well Drilling Refusal and Abandonment (Unit Price Adjustment)

G-4 Well Drilling Refusal shall include all costs associated with:

An attempted but unsuccessful drilling of a gas recovery well due to subsurface obstructions that prevent reaching the design depth, as determined by the Engineer and described in Section 02 66 60 Gas Recovery Well. Payment will be made per vertical foot drilled and will cover the costs of mobilizing the drill rig to the location, the drilling attempt, and proper abandonment of the borehole in accordance with the Contract Documents. Payment for this item shall be made on a unit rate basis for the "Gas Recovery Well Refusal" unit price adjustment rate provided by the bidder. Confirmation of the total linear feet of refusal shall be based on total drilling depth below ground surface provided by the drillers well logs and confirmed by the Engineer.

G-5 Soil Trenching Excavation (Unit Price Adjustment)

G-5 Soil Excavation shall include all costs associated with:

The removal and appropriate relocation of soil material onsite associated with the trenching and excavation of landfill gas collection and conveyance features as indicated in the Contract Drawings. ***This bid item shall also include installation of excavated material back into trench (Amendment 1).*** Trenching soil volume (in cubic yards) shall be measured by the difference of the Existing Conditions Survey within the approximate Work area and the Intermediate Trenching Survey, minus the Waste Trenching Excavation Volume described below. Payment for Item G-5 shall be made based on the "Pipe Trenching up to 5' depth" and "Pipe Trenching 5' to 10' depth" unit rates provided by the bidder.

G-6 Waste Trenching Excavation (Unit Price Adjustment)

G-6 Waste Relocation shall include all costs associated with:

The removal of waste material from the existing landfill associated with the excavation, trenching, segregation of waste materials from clean soils on site, and drilling of landfill gas collection and conveyance features as indicated in the Contract Drawings and Section 32 92 00 – Waste Relocation. ***This bid item shall also include placement of waste excavated from trenching back into trench (Amendment 1).*** If waste is encountered during trenching efforts, the Contractor shall pause excavation in this area and notify Engineer for confirmation of waste encountered. Contractor will then survey elevation and extent of waste (Intermediate Top of Waste Survey). Waste trenching excavation volume (in cubic yards) shall be measured by the difference of the Intermediate Top of Waste Survey within the approximate Work area and the Bottom of Trench Survey. Payment for Item G-6 shall be as per "Waste Excavation" unit rates provided by bidder.

G-7 Waste Disposal (Unit Price Adjustment)

G-7 Waste Relocation shall include all costs associated with:

The appropriate ***storage (Amendment 1)***, hauling and disposal of waste material from the existing landfill associated with the excavation, trenching and drilling of landfill gas collection and conveyance features as indicated in the Contract Drawings and Section 32 92 00 – Waste Relocation. This item includes ***storage (Amendment 1)***, trailers or trucks necessary for waste hauling to approved waste disposal facility. Contractor shall obtain Engineer's approval of proposed disposal site prior to removing waste material from the landfill. Disposal quantity (in short tons) shall be measured via scale tickets provided by

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Contractor. Payment for this item shall be as per “Waste Disposal” unit rate provided by bidder.

G-8 Replace Existing 4-Inch HDPE Header with 6-Inch HDPE SDR 17 Header (Remove, Furnish & Install)

G-8 Replace Existing 4-Inch HDPE Header with 6-Inch HDPE SDR 17 Header (Remove, Furnish & Install) shall include all costs associated with:

All labor, materials, and equipment required to remove and dispose of the existing 4-inch HDPE header specified in the Contract Drawings, furnish and install the new 6-inch HDPE SDR 17 header pipe and associated fittings. This includes but is not limited to pipe bedding, backfill of trenches; HDPE pipe fusion, placement, and connection to new and existing wells; installation of lateral tees, and all necessary fittings as shown in the Contract Drawings and detailed in Section 02 66 25 Gas and Condensate Conveyance Pipe. This item includes all items not specified herein but required under the Contract Documents, and all other incidental and associated costs required to complete the work of G-8 Replace Existing 4-Inch HDPE Header with 6-Inch HDPE SDR 17 Header (Remove, Furnish & Install). Payment for this item shall be on a lump sum basis.

G-9 New 6-Inch HDPE SDR 17 Header (Furnish & Install)

G-9 New 6-Inch HDPE SDR 17 Header (Furnish & Install) shall include all costs associated with:

All labor, materials, and equipment required to furnish and install new segments of 6-inch HDPE SDR 17 header pipe and associated fittings. This includes but is not limited to pipe bedding, backfill of trenches; HDPE pipe fusion, placement, and connection to new and existing wells; installation of lateral tees, and all necessary fittings as shown in the Contract Drawings and detailed in Section 02 66 25 Gas and Condensate Conveyance Pipe. This item includes all items not specified herein but required under the Contract Documents, and all other incidental and associated costs required to complete the work of G-9 New 6-Inch HDPE SDR 17 Header (Furnish & Install). Payment for this item shall be per linear foot made on unit rate basis for the “HDPE 6” SDR 17 Pipe Furnish and Install (includes bedding)” rate provided by the bidder. Confirmation of the total 6” SDR 17 Pipe shall be as per the as-built survey provided by the Contractor.

G-10 New 4-Inch HDPE SDR 17 Laterals (Furnish & Install)

G-10 New 4-Inch HDPE SDR 17 Laterals (Furnish & Install) shall include all costs associated with:

All labor, materials, and equipment required to furnish and install the new 4-inch HDPE SDR 17 lateral pipe and associated fittings. This includes but is not limited to pipe bedding, backfill of trenches; HDPE pipe fusion, placement, and connection to new and existing wells; installation of lateral tees, and all necessary fittings as shown in the Contract Drawings and detailed in Section 02 66 25 Gas and Condensate Conveyance Pipe. This item includes all items not specified herein but required under the Contract Documents, and all other incidental and associated costs required to complete the work of G-10 New 4-Inch HDPE SDR 17 Laterals (Furnish & Install). Payment for this item shall be per linear foot made on unit rate basis for the “HDPE 4” SDR 17 Pipe Furnish and Install (includes bedding)” rate provided by the bidder. Confirmation of the total 4” SDR 17 Pipe shall be as per the as-built survey provided by the Contractor.

G-11 Self-Draining Drip Legs (Furnish & Install)

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G-11 Self-Draining Drip Legs (Furnish & Install) shall include all costs associated with:

All labor, materials, and equipment required to furnish and install the new self-draining drip legs. This includes but is not limited to HDPE pipe fusion, installation of J-trap condensate sumps, and all necessary fittings as shown in the Contract Drawings and detailed in Section 02 66 25 Gas and Condensate Conveyance Pipe. This item includes all items not specified herein but required under the Contract Documents, and all other incidental and associated costs required to complete the work of G-11 Self-Draining Drip Legs (Furnish & Install). Payment for this item shall be on a lump sum basis to furnish and install three drip legs at the locations shown on the Contracts Drawings.

G-12 Gas Collection Cleanouts (Furnish & Install)

G-12 Gas Collection Cleanouts (Furnish & Install) shall include all costs associated with:

All labor, materials, and equipment required to furnish and install the new gas collection cleanouts. This includes but is not limited to HDPE pipe fusion, installation of gas collection cleanouts, and all necessary fittings as shown in the Contract Drawings and detailed in Section 02 66 25 Gas and Condensate Conveyance Pipe. This item includes all items not specified herein but required under the Contract Documents, and all other incidental and associated costs required to complete the work of G-12 Gas Collection Cleanouts (Furnish & Install). Payment for this item shall be on a lump sum basis to furnish and install three drip legs at locations shown on the Contracts Drawings.

G-13 New Manhole 5 (Furnish & Install)

G-13 New Manhole 5 (Furnish & Install) shall include all costs associated with:

All labor, materials, and equipment required to furnish and install the new MH-5 and associated features. This includes but is not limited to the manhole, end plug, and all necessary fittings as shown in the Contract Drawings and detailed in Section 02 66 25 Gas and Condensate Conveyance Pipe. Note that the isolation valve is included in item G-14 below. This item includes all items not specified herein but required under the Contract Documents, and all other incidental and associated costs required to complete the work of G-13 New Manhole 5 (Furnish & Install). Payment for this item shall be on a lump sum basis.

G-14 Isolation Valve (Furnish & Install)

G-14 Isolation Valve (Furnish & Install) shall include all costs associated with:

All labor, materials, and equipment required to furnish and install the new isolation valve associated with MH-5 described above. This includes but is not limited to HDPE pipe fusion, placement, and connection to new and existing wells; installation of all necessary fittings and valves as shown in the Contract Drawings and detailed in Section 02 66 25 Gas and Condensate Conveyance Pipe and Section 33 12 16 Landfill Gas System Valves. This item includes all items not specified herein but required under the Contract Documents, and all other incidental and associated costs required to complete the work of G-14 Isolation Valve (Furnish & Install). Payment for this item shall be on a lump sum basis.

G-15 New Manhole 6 (Furnish & Install)

G-15 New Manhole 6 (Furnish & Install) shall include all costs associated with:

All labor, materials, and equipment required to furnish and install the new MH-6 and associated features. This includes but is not limited to the manhole, end plug, and all necessary fittings as shown in the Contract Drawings and detailed in Section 02 66 25

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Gas and Condensate Conveyance Pipe. This item includes all items not specified herein but required under the Contract Documents, and all other incidental and associated costs required to complete the work of G-15 New Manhole 6 (Furnish & Install). Payment for this item shall be on a lump sum basis.

G-16 Existing Wellhead Refurbishment

G-16 Existing Wellhead Refurbishment shall include all costs associated with:

The removal of existing wellheads and replacement of the wellheads, flexible hoses, and clamps on all designated existing gas recovery wells as detailed in the Contract Drawings and Section 35 51 23 Vertical Wellhead Assembly as well as cutting down the existing well casings to the elevations specified in the Contract Drawings. This item includes all items not specified herein but required under the Contract Documents, and all other incidental and associated costs required to complete the work of G-16 Existing Wellhead Refurbishment. Payment for this item shall be on a lump sum basis.

G-17 New Wellhead Assemblies (Furnish & Install)

G-17 New Wellhead Assemblies (Furnish & Install) shall include all costs associated with:

Furnishing and installing all vertical wellheads, valves, flexible hoses, clamps and fittings which correspond to new gas recovery wells as detailed in the Contract Drawings, Section 33 12 16 Landfill Gas System Valves and Section 33 51 23 Vertical Wellhead Assembly. This item includes all items not specified herein but required under the Contract Documents, and all other incidental and associated costs required to complete the work of G-17 New Wellhead Assemblies (Furnish & Install). Payment for this item shall be on a lump sum basis.

G-18 Pavement and Concrete Work

G-18 Pavement shall include all costs associated with:

The complete installation of concrete casings for lateral piping beneath existing driveways as detailed in the Contract Drawings. This work includes excavation, forming, reinforcement, concrete placement, and backfill. This item also includes all costs for the full-depth repair of existing asphalt or concrete walking paths damaged by trenching operations, restoring them to their original condition or better. This item includes all items not specified herein but required under the Contract Documents, and all other incidental and associated costs required to complete the work of G-18 Pavement and Concrete Work. Payment for this item shall be on a lump sum basis.

G-19 Chain Link Fencing

G-19 Chain Link Fencing shall include all costs associated with:

Furnishing all materials, labor, and equipment for the complete installation of new chain link fence and gates as shown on the Contract Drawings and detailed in Section 32 31 00 Chain-Link Fences and Gates. This includes posts, mesh, top rail, hardware, gates, and any required concrete footings. Repair of existing fence damaged in trenching and existing wellhead refurbishment efforts is also included in this item. This item includes all items not specified herein but required under the Contract Documents, and all other incidental and associated costs required to complete the work of G-19 Chain Link Fencing. Payment for this item shall be per linear foot made on unit rate basis for the "Chain Link Fencing" rate provided by the bidder. Confirmation of the total Chain Link Fence shall be as per the as-built survey provided by the Contractor

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G-20 Site Restoration

G-20 Site Restoration shall include all costs associated with:

Restoring all areas disturbed by construction activities to their original or better condition. This work includes, but is not limited to, final grading of surfaces, placement of topsoil, seeding, fertilizing, mulching, and erosion control measures as required to establish permanent vegetative cover as specified in the Contract Documents (see Section 32 92 00 Lawns). Repairs to the Site's running track shall be made using Stobitan© Base Mat System. This item includes all items not specified herein but required under the Contract Documents, and all other incidental and associated costs required to complete the work of G-20 Site Restoration. Payment for this item shall be on a lump sum basis.

G-21 Supply of GEM5000 to Owner

G-21 Supply of GEM5000 to Owner shall include all costs associated with:

Purchase and supply to owner of QED GEM5000 landfill gas analyzer. Purchase shall include 1L – 0% Methane v/v% calibration gas, 1L – 50% Methane v/v% calibration gas, 1L – 15% Methane v/v% calibration gas and a demand feed regulator for calibration gas cannisters. Payment for this item shall be on a lump sum basis.

Storage and Spreading of Clean Drilling Spoils On Site (Amendment 1)

This unit rate adjustment item shall include all costs associated with the storage of drilling spoils during testing of materials, and then spreading of material on site at locations designated by the UG. This unit rate adjustment item will include stripping of existing topsoil, placement of materials, and replacement of topsoil and seeding. Payment for this item shall be made based on survey of ground prior to and after placement of material.

Supply and Install of Clean General Fill Placed in Localized Settlement Areas (Amendment 1)

This unit rate adjustment item shall include all costs associated with the supply and install of clean general fill placed in localized settlement areas as established by the Owner. This unit rate adjustment item will include stripping of existing topsoil, placement of materials, and replacement of topsoil and seeding. Payment for this item shall be made based on survey of ground prior to and after placement of material.

1.03 WORK BY OTHERS:

- A. Work Under Other Contracts:
- B. Work by Owner: Closure of Park to the Public
- C. Other Activities:

1.04 CONTRACTOR'S USE OF PREMISES:

- A. Limited Use:
 - 1. Limit use of the premises for storage and execution of the Work to allow for Owner occupancy. Confine operations to areas within Contract limits indicated. Portions of Site outside the Contract limits shall not be disturbed.
 - 2. Coordinate with other separate contractors and Owner to avoid interference of operations.
 - 3. Conduct operations so as to ensure the least inconvenience to Owner and the general public.

SECTION 01 11 00 - SUMMARY OF WORK: continued

1.05 WORK SEQUENCE:

- A. General: Construction sequence shall be determined by Contractor subject to Owner's need for continuous operation of existing facilities.
- B. Continuous Service of Existing Facilities: Exercise caution and schedule operations to ensure that functioning of present facilities will not be disrupted. Shutdown of Owner's operating facilities to perform the Work shall be held to a minimum length of time and shall be coordinated with Owner who shall have control over the timing and schedules of such shutdowns.

1.06 MEASUREMENT AND PAYMENT:

- A. Lump Sum with Adjustment Unit Price Contracts: All Work indicated and specified in the Contract Documents shall be included in the Lump Sum Contract Price, with adjustments to that price made upon final determination of measurements and in accordance with items and prices stated in "Schedule of Adjustment Unit Prices" in the Bid Form.

1.07 COPIES OF DOCUMENTS:

- A. Furnished Copies: After execution of Agreement, Contractor will be furnished at no cost, a maximum of 4 sets of Contract Documents consisting of full-size Contract Drawings including revised Drawings (and schedules), and the Project Manual, in addition to those used in execution of the Agreement.
- B. Additional Copies: Additional copies of above documents will be supplied by Engineer upon request at printing and delivery cost.

1.08 LIST OF DRAWINGS:

- A. Contract Drawings:
 - 1. Each sheet of the Contract Drawings bears the following general title: EPA Model Landfill / John Garland Park Landfill Gas System Improvements / Expansion.
 - 2. Individual sheet numbers and titles are as stated on index sheet under "List of Drawings".

PART 2 - PRODUCTS - NOT APPLICABLE.

PART 3 - EXECUTION – NOT APPLICABLE.

END OF SECTION 01 11 00