ADDENDUM NO. 2

Belle View Pump Station Rehabilitation
CONTRACT NO. CN1000013739
PROJECT NO. WW-000001-006

This addendum consists of five (5) pages and one (1) attachment.

This addendum is supplementary to the contract documents for the Belle View Pump Station Rehabilitation Project.

All revisions, additions or deletions included herein as Addendum No. 2 shall become a part of the Contract Documents as if originally called for in the Drawings, Specifications and Form of Bid.

Contents of Addendum No.2:

	DOCUMENT	DESCRIPTION
	SPECIFICATIONS	
2.1	Section B, Major Equipment/System Schedule	**REPLACE** Major Equipment/System Schedule (following Section B) in its entirety with the revised "Major Equipment/System Schedule" shown in **Attachment 1**.
2.2	Section E Supplemental/Special Conditions, Item 6.	**REPLACE** the phrase **"Attachment 5**" with **"Attachment 4"** at the end of the paragraph.
2.3	Section E Supplemental/Special Conditions, Item 14.	**REPLACE** the paragraph and the table in Item 14 with: "See Section B, Major Equipment/System Schedule." A revised Major Equipment/system Schedule is included in this Addendum.
2.4	Section 11250 Part 1.07 G	**REPLACE** Item G in its entirety with the following: Operating Conditions Number of units - 1 Type - Upflow, Single Bed Vessel diameter, maximum (feet) - 10 Vessel height, maximum (feet) - 10 Carbon capacity, minimum (lbs.) - 5,997 Empty Bed Contact Time (EBCT), minimum (sec) - 3.0 Carbon Depth, minimum (feet) - 3.0 Air velocity through absorber, maximum (fpm) - 60 H_2S Removal efficiency, minimum (%) - 99.0 Pressure drop through vessel, maximum (inches W.C.) - 6
2.5	Section 11250 Part	**REPLACE** Item S in its entirety with:

	DOCUMENT	DESCRIPTION
	2.03.S	"Discharge Stack: One (1) FRP goose necked discharge stack designed for lowest stack height, while fulfilling performance parameters."
2.6	Section 11250 Part 2.04.A	**REPLACE** Item A in its entirety with the following: A. The activated carbon shall be Calgon Carbon Corporation Minotaur OC, Siemens/ Evoqua Water Technologies Midas OCM, or equal.
2.7	Section 11250 Part 2.04.C	**REPLACE** Item C in its entirety with the following: C. The activated carbon shall be of a pelletized or granular, non-impregnated, agglomerated bituminous coal base. Direct activated, broken pellet, and mixed media carbon shall not be acceptable.
2.8	Section 11250 Part 2.04.D	**REPLACE** "0.09" in the "H_2S Capacity g H_2S removed per cc Carbon (min)" row with "0.3". **ADD** the following note at the bottom of the table: "The determination of H_2S breakthrough capacity will be made by passing a moist (85% R.H.) air stream containing 1% H_2S at a rate of 1,450 cc/min through one inch diameter by nine inch deep bed of uniformly packed activated carbon and monitored to 50 ppm breakthrough."
2.9	Section 11250 Part 2.04.F	**DELETE** Item F in its entirety.
2.10	Section 11250 Part 3.03.C	**DELETE** Item C in its entirety.
2.11	Section 11431 Part 3.03 B.	**ADD I**tem 4 4. Demonstrate trouble free grinder operation for two hours under normal pump station flow.
2.13	Section 15000, Part 2.12 A	**DELETE** the last two sentences of paragraph 2.12 A.
2.14	Section 15390 Part 1.06.C	**REPLACE** the 2 in the "No. of Gates" column with "4" for the influent channel discharge.
2.15	Section 16495 Part 2.01 C	**REPLACE** first sentence of the second paragraph of item C in with the following: "The VFD's shall be Allen Bradley PowerFlex 750 Series, for 6-pule drives. No substitutions shall be allowed."
2.16	Section 16620 Part 2.10.	**REPLACE** Items A through E in their entirety with the following: A. Furnish and install an exhaust silencer mounted on the exterior of the pump station building. The exhaust silencer shall be suitable for mounting to the top of the roof. The silencer shall be designed for 115 mph sustained wind loading. 1. Silencers shall be critical grade type and sized to produce a high degree of silencing. The silencer shall be sized for the provided generator and in accordance with manufacturer standards. The silencer shall be manufactured by GT Exhaust, or equal. 2. The silencer system shall be designed, furnished, and

	DOCUMENT	DESCRIPTION
		installed to prevent moisture and condensation from corroding the silencer. 3. Silencers shall be 316 stainless steel interior and exterior with stainless steel flanges for connection to the stainless steel exhaust piping system. 4. Silencer shall be internally insulated or externally insulated with non-combustible calcium silicate insulation capable of withstanding 1200°F continuously covered by 316 stainless steel jacketing with stainless steel banding and seals. The calcium silicate insulation shall be custom fabricated to fit the contours of the exhaust system and shall be Hitco, Industrial Insulation Group, or equal. B. Connect the silencer to the engine exhaust manifold with a high corrosion and temperature resistant stainless steel flexible convoluted exhaust pipe with flange-type connections. The turbo-chargers, exhaust pipe, expansion fittings including collector box shall be completely covered with a removable insulation to protect operating personnel and to reduce noise. Insulation shall be non-combustible calcium silicate insulation capable of withstanding 1200°F continuously covered by stainless steel jacketing with stainless banding and seals. The insulation shall be custom fabricated to fit the contours of the exhaust system. Insulation shall be Hitco, Industrial Insulation Group, or equal. Expansion fittings shall be as manufactured by US Bellows or equal. C. The exhaust manifold including but not limited to exhaust piping, fitting, roof thimble, supports, guides, bellow type expansion joints, and taper-cut tail pipe complete with rain cap shall be factory build and tested exhaust system with UL listed components provided by a single manufacturer. 1. The exhaust system shall be a double walled system with 316 stainless steel inner liner (min 20 gauge), ceramic fiber insulation (min 2 inches thickness), and 316 outer stainless steel lines. Inner pipe joint shall be connected with factory supplied over-lapping V-bands and appropriate high temperature sealants to create a gas tight system. 2. The exhaust system shall be designed and sized per generator manufacturer requirements to minimize back pressure and compensate for all exhaust thermal expansion. 3. The exhaust system shall be provided with a 15-year warranty and be as manufactured by Selkirk Commercial/Industrial or equal. D. Provide exhaust piping support to secure the piping and fittings and silencer to the roof. The exhaust piping shall be anchored in accordance with Section 01350, Seismic Anchorage and Bracing.
2.17	Section 17000 Part	**REPLACE** “or Optimum Control Corp.” with “Optimum control Corp;

	DOCUMENT	DESCRIPTION
	1.04.A.	or Micro-Tech."
2.18	Section 17749 Part 2.01.E.	**REPLACE** paragraph 2.01 E in its entirety with: E. Submersible level (pressure) sensors shall be suitable for wastewater lift station applications and shall be Endress & Hauser Model Waterpilot FMX-167 (42 mm O.D.) or equal.
	DRAWINGS	
2.19	M103	**REPLACE** note 4 with the following: 4. Provide 316 stainless steel insulted exhaust piping system per Section 16620. The exhaust system shall be sized in accordance with manufacturer's requirements.
2.20	M102	**ADD** note 7: 7. The 4-inch drain flap valves shall be Hub Inlet, Swing-Check Type for 4 inch diameter pipe, Josam 67724, or equal.
2.21	M102	**ADD** the following to note 4: The fuel tank vents shall be schedule 40 welded black steel pipe.
2.22	M104	**REPLACE** label "1/2" hydraulic lines to power pack (power pack not shown for clarity)" with label "3/4-inch hydraulic lines to power pack (power pack not shown for clarity)".
2.23	A1	**ADD** the following text to Detail 2: Lightweight insulating concrete shall be Zonocel by Siplast, Elastizell by Elastizell or equal. Installation requirement: 1. Existing concrete topping slopes to two individual internal roof drains on the south end of the building that will be abandoned during demolition. 2. Pour/install lightweight concrete topping over existing concrete topping, to fill in sump/slope directed to abandoned drains, to provide level surface for installation of tapered insulation. 3. New roof drain configuration requires a continuous slope to south, without indentations at abandoned drains. New smooth surface will support tapered insulation and crickets to divert water to through parapet scuppers on south and west parapet.
2.24	A103	**ADD** the following text to label on east elevation: Roof Screen shall be Wire Mesh Railing System, by Sterling Dula "Railings + Fencing by Kane Architectural Innovations", Erie PA with wire mesh railing with 3/16" diameter woven wire infill or equal.
2.25	A105 Detail 45	**REPLACE** note "Insulated roof thimble by GT Exhaust, Inc or approved equal. See mech." With "Insulated roof thimble per Section 16620, see mechanical drawings"
2.26	E106	**REPLACE** model number listed in note 1 with the following: "DT365URKNLC".

Bidders are required to acknowledge receipt of all addenda on Page B-2 of the Form of Bid, Section B. Failure to indicate receipt of any addenda may be cause for rejection of Bid.

COUNTY OF FAIRFAX, VIRGINIA

By: _____

Brad Melton, Director, Utilities Design and Construction Division
Department of Public Works and Environmental Services

END OF ADDENDUM NO. 2

MAJOR EQUIPMENT/SYSTEM SCHEDULE

BELL VIEW PUMP STATION REHABILITATION
CONTRACT NO. CN1000013739
PROJECT NO. WW-000001-006

(See Instructions following the Schedule)

Spec Section Number	Equipment Type	Manufacturer	Name of "Equal Product" Manufacturer
09800	MIC Coating	A. Warren Environmental	
11130	Dry-Pit Submersible Non-Clog Pumps	A. Flygt B. ABS C. Flowserve	
11133	Submersible Sump Pump	A. Hydromatic	
11250	Odor Control System	A. Siemens/Evoqua Water Technologies, LLC B. Enduro Composites C. Engineered Composite Systems	
11431	Open Channel Sewage Grinders	A. JWC Environmental	No Substitution Allowed.
15206	Sluice Gates	A. Rodney Hunt-Fontaine, Inc. B. Hydrogate	
15950	HVAC Electric Control System	A. Honeywell B. Johnson Controls C. Allen Bradley	
16440	Disconnect Switches	A. Square D Company B. Eaton Corporation C. General Electric	
16461	Dry Type Distribution Transformers	A. Square D Company B. General Electric C. Eaton Corporation	
16482	Motor Control Centers	A. Eaton Corporation B. Square D Company C. General Electric	
16495	Variable Frequency Drive Systems	A. Allen Bradley	No Substitution Allowed.
16496	Automatic Transfer Switch	A. Eaton Corporation B. ASCO	
16620	Packaged Engine Generator Systems	A. Cummins/ONAN	No Substitution Allowed.
17670	Level Switches (Suspended Float Type)	A. Flygt	

Spec Section Number	Equipment Type	Manufacturer	Name of “Equal Product” Manufacturer
17701	Magnetic Flow Meters	A. Rosemount B. ABB/Fischer & Porter C. Endress & Hauser D. Foxboro E. Krohne Siemens F. Toshiba	
17749	Submersible Level (Pressure) Sensors	A. Endress & Hauser	
17851	Single Point Gas Monitoring Systems	A. MSA Instruments B. Draeger C. Scott	
DRWG E106 Note 1	Portable Generator Switch and Termination Cabinet	A. Eaton Corporation	No Substitution Allowed.

INSTRUCTIONS TO COMPLETE MAJOR EQUIPMENT/SYSTEM SCHEDULE

A. All major equipment and systems listed shall be bid in accordance with the "Major Equipment/System Schedule" that is included in this section. Other equipment and systems not listed here shall be provided as required by Contract Document.

B. The BIDDER shall indicate, by circling, which of the listed manufacturers of equipment or systems it will provide. **This information shall be due within Two (2) business days after bid submission.** Should the BIDDER fail to indicate which listed manufacturer and equipment its bid is based on, the BIDDER shall provide the item noted as "A" in the "Major Equipment/System Schedule." Should the BIDDER circle more than one named equipment or system manufacturer, the BIDDER shall provide the equipment or system of the *first* of the circled items.

C. The BIDDER may propose by writing in another manufacturer and product for equipment where "Equal Product by Other Manufacturer" is listed.

D. If the BIDDER desires to write in another manufacturer, the BIDDER must clearly write the name of the "Manufacturer" in the "Equal Product" column and shall also circle one (1) of the listed manufacturers. Should the write-in be determined "not equal" by the ENGINEER and be rejected by the OWNER, then the BIDDER shall provide the circled equipment or system at no additional cost. Should the BIDDER fail to circle a listed manufacturer, and the write-in is determined not equal by the ENGINEER and rejected by the OWNER, the BIDDER shall provide the item noted as "A" in the "Major Equipment/System Schedule." Any ambiguities, including listing two or more write-in manufacturers or equal products, shall also be cause for rejecting an alternative proposal.

E. Write-in equipment or systems will be deemed equal provided that the "equal" equipment or system is the same or better than the equipment or system named in function, performance, reliability, quality, and general configuration. Determination of equality will be made by the ENGINEER in accordance with Contract Documents.

F. No write-in equipment or system will be considered unless, in the opinion of the ENGINEER, it

conforms to the Contract Documents in all respects, except for make and manufacturer and minor details.

G. Design of this project is based upon the specified equipment or system of the manufacturer listed as "A" in the "Major Equipment/System Schedule." When "B" or "C", etc., manufacturers are named, the equipment or systems of these manufacturers are deemed equal in quality. However, should a BIDDER propose furnishing the equipment or system of a "B" or "C" etc., manufacturer, or a write-in equipment or system, the BIDDER shall comply with the following:

1. Notify the ENGINEER in writing within 30 days after Notice to Proceed of all dimensional, mechanical, electrical, and structural changes and/or requirements for the equipment or system's use and conform to all requirements of Article 4.15, Section 0, of the Contract Documents.

2. The CONTRACTOR shall retain the services of a Professional Engineer registered in the Commonwealth of Virginia to provide any and all redesign documents that may be required to accommodate the project requirements and accepted product. All redesign and construction costs resulting from selection of a manufacturer other than Manufacturer "A" shall be the responsibility of the CONTRACTOR.

3. Reimburse the OWNER for any costs attributable to determination of equal product, *review* of the redesign documents prepared by the CONTRACTOR and any *supplemental* costs that are included by the ENGINEER associated with the equipment or system.

4. Include in the Bid all additional construction costs (mechanical, plumbing, architectural, structural, electrical, instrumentation and controls, and engineering redesign and construction costs) associated with that alternative equipment or system. The Bid shall also include any fees for permits, inspections, or licenses necessary for the acceptance and use of the equipment or system if required by the manufacturer or regulatory agencies.

5. BIDDER may obtain approval of equal products prior to bidding in accordance with requirements of Article A-17, Section A of the Contract Documents.