



HENEGHAN AND ASSOCIATES, P.C.

CIVIL ENGINEERS • LAND SURVEYORS

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Addendum No. 2

for

Lift Station #14 Replacement

For City of Mt. Vernon
Jefferson County, Illinois

H&A File No. 40039-500
October 21, 2020

The Contract Documents prepared by Heneghan & Associates, P.C., Bartlett & West and MECO Engineering Co., Inc. for the Lift Station #14 Replacement for the City of Mt. Vernon, Illinois, are hereby amended or clarified as follows:

GENERAL

Questions will be allowed until 4:30 P.M. on Thursday, October 22, 2020. The final addendum will be issued on Friday, October 23, 2020.

PROJECT SPECIFICATIONS

Changes/additions/clarifications to the project specifications are as listed below:

Table of Contents: revised as attached and shall supersede all other versions in the contract documents.

Technical Provisions:

1. Section 012200 Part 1.08.A.3: the yard hydrant to be included in the project shall be freezeless, minimum 3-foot burial depth, Woodford Y1 yard hydrant, or equal.
2. Section 133400 – Fabricated Engineered Structures shall be added to the project specifications and applies to the Premanufactured FRP Building referenced throughout the project documents. This item shall be the contractor’s responsibility to provide with the work of the project, and included in his BID in accordance with Section 012200 Part 1.03 – Electrical.
3. Section 263213 – Engine Generators shall be revised as follows:
 - Part 1.03.B.5. shall be added as follows:
 5. Generator Pad Structural Design: Signed and sealed by a Structural Engineer licensed in the State of Illinois. Detail to include reinforcing.
 - Part 2.01.A. – CAT shall be considered an approved equal.

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4. Section 400530 – Miscellaneous Valves shall be revised as follows:

- Part 2.03.C, the fourth sentence shall be revised as follows: “The body shall be constructed of 316 Stainless Steel or glass reinforce nylon.”
- Part 2.03.D.1 shall be replaced by the following:
 1. ARI Flow Control Accessories Model D-26.
- Part 2.03.E shall be deleted.
- Part 2.03.F. the table shall be modified as follows:

Valve Number	Location	Size (inches)	Connection	Series Designation
ARV-1	18-inch discharge header	3	Flanged	D-26

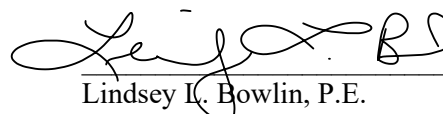
- Part 2.03.G. shall be added as follows:
 - Non-Slam – The combination air valve shall be fitted with an external non-slam device on the valve outlet to avoid pre-mature valve closure, per manufacturer’s recommendation. The device shall be composite or stainless steel.

PROJECT DRAWINGS

Changes/additions/clarifications to the project drawings are as listed below:

1. C-107, Detail 7 – The piping, ball valve and air/vacuum valve shown above the tee in the detail shall be 3-inch diameter.

End of Addendum.

 10/21/2020
Lindsey L. Bowlin, P.E.
Project Manager

Technical Specifications

<u>Section</u>	<u>Title</u>	<u>Company</u>
011100	Summary	HA
012200	Unit Prices	HA
033000	Portland Cement Concrete	HA
050800	Miscellaneous Metals	HA
055320	Access Doors and Hatches	BW
099100	Painting	BW
099610	Structural Corrosion Barrier	BW
133400	Fabricated Engineered Structures	HA
230500	Common Work Result for HVAC	BW
230529	Hangers and Supports for HVAC Piping and Equipment	BW
230553	Identification for HVAC Piping and Equipment	BW
233113	Metal Ducts	BW
233713	Diffusers, Register and Grilles	BW
238113	Packaged Terminal Air Conditioner	BW
260500	Common Work Results for Electrical	BW
260510	Common Motor Requirements	BW
260519	Low-Voltage Electrical Power Conductors and Cables	BW
260523	Control-Voltage Electrical Power Cables	BW
260526	Grounding and Bonding for Electrical Systems	BW
260529	Hangers and Supports for Electrical Systems	BW
260533	Raceway and Boxes for Electrical Systems	BW
260553	Identification for Electrical Systems	BW
262200	Low-Voltage Transformers	BW
262416	Panelboards	BW
262713	Electricity Metering	BW
262726	Wiring Devices	BW
262816	Enclosed Switches and Circuit Breakers	BW
262923	Variable-Frequency Motor Controllers	BW
263213	Engine Generators	BW
263600	Transfer Switches	BW
265119	LED Interior Lighting	BW
311000	Site Clearing	HA
312300	Excavating, Filling and Grading	HA
329000	Fertilizing, Seeding and Mulching	HA
333913	Manholes, Frames and Lids	HA
400513	Piping, General	BW
400514	Ductile Iron Pipe	BW
400517	PVC Pressure Pipe	BW
400520	Miscellaneous Piping	BW

400521	Process Piping Supports and Hangers	BW
400522	Pipeline Testing	BW
400524	Valves, General	BW
400526	Check Valves	BW
400529	Eccentric Plug Valves	BW
400530	Miscellaneous Valves	BW
409513	Control Panels and Hardware	BW
409605	Process Control Schedules	BW
411920	Pressure Gauges	BW
432105	Pumps, General	BW
432140	Submersible Sewage Pumps	BW

IEPA Construction Permit

USACE Permit

DIVISION 13 – SPECIAL CONSTRUCTION
SECTION 133400 – FABRICATED ENGINEERED STRUCTURES

PART 1 – GENERAL

1.00 RELATED DOCUMENTS:

- A. Drawings and general provisions of Contract apply to work of this section.

1.01 SUMMARY:

- A. This section includes the FRP Products & Fabrications for FRP Foam Core Building Panels.

1.02 SCOPE OF WORK:

- A. Furnish all labor, materials, equipment and incidentals governed by this section necessary to install the fiberglass reinforced polymer (FRP) products as specified herein.

1.03 QUALITY ASSURANCE:

- A. The material covered by these specifications shall be furnished by an ISO-9001 certified manufacturer of proven ability who is regularly engaged in the manufacture, fabrication and installation of FRP systems.
- B. Substitution of any component or modification of system shall be made only when approved by the Owner.
- C. Fabricator Qualifications: Firm experienced in regularly, successfully producing FRP fabrications similar to that indicated for this project, with sufficient production capacity to produce required units without causing delay in the work.
- D. In addition to requirements of these specifications, comply with manufacturer's instructions and recommendations for work.

1.04 DESIGN CRITERIA:

- A. Design live loads shall be in accordance with the governing building code and ASCE 7 including the effects of ponding.
- B. Structural connections shall be designed to transfer the design loads.
- C. Reinforce and stiffen penetrations in foam core panels in accordance with the manufacturer's recommendations.
- D. The building shall be designed to withstand a 125 MPH wind load and 30#/S.F. snow load.

1.05 SUBMITTALS:

- A. Shop drawings of all fabricated foam core building panels shall be submitted to the Engineer for review.
- B. Manufacturer's catalog data showing:
 - 1. Materials of construction
 - 2. Dimensions, spacings, and construction of foam core building panels.
- C. Detail shop drawings showing:
 - 1. Dimensions
 - 2. Sectional assembly
 - 3. Location and identification mark
 - 4. Size and type of supporting frames required

1.06 SHIPPING AND STORAGE INSTRUCTIONS:

- A. All systems, sub-systems and structures shall be shop fabricated and assembled into the largest practical size suitable for transporting.
- B. All materials and equipment necessary for the fabrication and installation of foam core building panels and appurtenances shall be stored before, during, and after shipment in a manner to prevent cracking, twisting, bending, breaking, chipping or damage of any kind to the materials or equipment, including damage due to over exposure to the sun. Any material which, in the opinion of the Design Engineer, has become damaged as to be unfit for use, shall be promptly removed from the site of work, and the Contractor shall receive no compensation for the damaged material or its removal.
- C. Identify and match-mark all materials, items and fabrications for installation and field assembly.

PART 2 – PRODUCTS

2.01 FRP BUILDING

- A. An all-weather, modular type, fiberglass reinforced plastic building shall be furnished and installed as shown on the drawings. The building shall house the electrical and control equipment.
- B. The building dimensions shall be compatible with the overall dimensions shown on the drawings. The building shall be at least 7'-4" tall at the peak and 7'-0" at the walls.
- C. The building shall be of laminated double wall, insulated construction with no visible joints and mounting flanges suitable for direct bolting to the top of the valve vault walls. The walls and roof shall be insulated with polyurethane and have a minimum R-value of 7. The use of dead air space as an insulator will not be acceptable.

- D. The plastic laminate shall be constructed of fiberglass reinforced isophthalic polyester resin with UV inhibitors. The outer surfaces shall have a resin rich, white colored layer, 5 mils minimum thickness. The laminate shall have at least 25% fiberglass content with a flame spread rating of 25 or less.
- E. Field cutting of the plastic laminate layer will be permitted only when acceptable to the Engineer. Cut or trimmed edges and all penetrations shall be thoroughly coated with a compatible resin to prevent wicking and protect the fiberglass reinforcement.
- F. The access door shall be constructed of insulated fiberglass reinforced plastic or insulated all-aluminum with a full length stainless steel piano hinge, stainless steel door lock, stainless steel threshold, galvanized stop chain with mounting accessories, closed cell neoprene rubber perimeter gasket and stainless steel fasteners.
- G. All interior, ceiling mounted, fluorescent lights controlled by an interior light switch shall be installed in the building.
 - 1. Fixtures shall be enclosed and gasketed type LED light fixture. Four foot long, based on H.E. Williams 96-4-L62/835. See plans for Lighting Fixture Schedule.
- H. An exterior wall fixture shall be provided as shown in the Lighting Fixture Schedule.
- I. A minimum of two roof mounted lifting eyes shall be provided. Lifting eyes and all associated hardware shall be stainless steel.
- J. Mounting channels and/or 5/8" (min.) plywood reinforcement in the walls shall be provided for installing the main distribution panel, control panel, transfer switch, external terminal box and other appurtenances as required.
- K. Complete penetration of the FRP building walls for the purpose of mounting appurtenances is not acceptable. Only conduits shall be allowed to completely penetrate the FRP building wall.
- L. The building shall be as manufactured by Engineered Fiberglass Composites, Tomah, Wisconsin; Kenco Plastics Co., Necedah, Wisconsin or Warminster Fiberglass, Southampton, Pennsylvania, or approved equal.

PART 3 – EXECUTION

3.01 PREPARATION:

- A. Coordinate and furnish anchorages, setting drawings, diagrams, templates, instructions and directions for installation of anchorages, including concrete inserts, sleeves, anchor bolts and miscellaneous items having integral anchors that are to be embedded in concrete or masonry construction.
- B. Coordinate delivery of such items to project site.

3.02 INSPECTION AND TESTING:

- A. The Design Engineer shall have the right to inspect and test all materials to be furnished under these specifications prior to their shipment from the point of manufacture.
- B. All labor, power, materials, equipment and appurtenances required for testing shall be furnished by the Contractor at no cost to the Owner.

3.03 INSTALLATION, GENERAL:

- A. Fastening to in-place construction: Provide anchorage devices and fasteners where necessary for securing miscellaneous FRP fabrications to in-place construction; include threaded fasteners for concrete, toggle bolts, through-bolts, lag bolts and other connectors as indicated by the Panel Manufacturer.
- B. Cutting, fitting and placement: Perform cutting, drilling and fitting required for installation of miscellaneous FRP fabrications. Set FRP fabrication accurately in location, alignment and elevation; with edges and surfaces level, plumb, true and free of rack; measured from established lines and levels.
- C. Provide temporary bracing or anchors in form work for items that are to be built into concrete masonry or similar construction.

3.04 ALL FRP INSTALLATION:

- A. If required, all field cut and drilled edges, holes and abrasions shall be sealed with a catalyzed resin compatible with the original resin as recommended by the manufacturer.
- B. Install items specified as indicated and in accordance with manufacturer's instructions.

END OF SECTION