©2024 CDM Smith
All Rights Reserved

SECTION 009113.04 – ADDENDUM NO. 04

1.1 PROJECT INFORMATION

A. Project Name: Horn Pond Water Treatment Plant PFAS Upgrade Project.

B. Owner: City of Woburn, MA.

C. Owner Project Number: IFB 24-15.

D. Engineer: CDM Smith.

E. Engineer Project Number: 0230-266219.

F. Date of Addendum: April 4, 2024.

1.2 NOTICE TO BIDDERS

A. This Addendum is issued to all registered plan holders pursuant to the Instructions to Bidders and Conditions of the Contract. This Addendum serves to clarify, revise, and supersede information in the Project Manual, Drawings, and previously issued Addenda. Portions of the Addendum affecting the Contract Documents will be incorporated into the Contract by enumeration of the Addendum in the Owner/Contractor Agreement.

B. The Bidder shall acknowledge receipt of this Addendum in the appropriate space on the Bid Form.

C. The date for receipt of General Bids is **unchanged** by this Addendum, at same time and location. The date of receipt of Sub-Contracts is **unchanged** by this Addendum, at same time and location.

1. Sub-Contract Bid Date: 11:00 AM, Wednesday, April 10, 2024 (no change)

2. General Contract Bid Date: 11:00 AM, Wednesday, April 24, 2024 (no change)

1.3 ATTACHMENTS

A. This Addendum includes no attachments.

©2024 CDM Smith
All Rights Reserved

1.4 REVISIONS TO PREVIOUS ADDENDA (NOT USED)

1.5 REVISIONS TO DIVISION 00 PROCUREMENT REQUIREMENTS AND CONTRACTING REQUIREMENTS (NOT USED)

1.6 REVISIONS TO DIVISION 01 GENERAL REQUIREMENTS (NOT USED)

1.7 REVISIONS TO DIVISIONS 02 - 49 SPECIFICATION SECTIONS

A. Specification Section 040001 “Masonry Work (Filed Sub-Bid Required)”, (not reissued).
   1. DELETE: Article 1.2.B, INSERT: Articles 1.2.B, 1.2.C, and 1.2.D, below:
      a. B. Items To Be Installed Only: Install the following items by the designated Sections. (new)
         1) Section 034500 “Precast Architectural Concrete”:
            a) Precast architectural concrete profiles: PAC-1, PAC-2, PAC-3, PAC-4, PAC-8, PAC-9, PAC-10, and PAC-13.
      b. C. Items To Be Furnished Only: Furnish the following items by the designated Sections. (new)
         1) Section 034500 “Precast Architectural Concrete”:
            a) Precast architectural concrete profiles: PAC-5, PAC-6, PAC-7, PAC-11, and PAC-12.
      c. D. Alternatives: Not Applicable.

B. Specification Section 042000 “Unit Masonry (Filed Sub-Bid Required)”, (not reissued).
   1. DELETE: Article 1.2.B, INSERT: Article 1.2.B, below:
      a. B. Products Installed but not Furnished under This Section:
         1) Steel lintels in unit masonry.
         2) Steel shelf angles for supporting unit masonry.
         3) Precast architectural concrete profiles: PAC-1, PAC-2, PAC-3, PAC-4, PAC-8, PAC-9, PAC-10 and PAC-13. (new)

   2. INSERT: Article 3.18, below:
      a. 3.18 INSTALLATION OF PRECAST ARCHITECTURAL CONCRETE

         A. Install clips, hangers, bearing pads, and other accessories required for connecting architectural precast concrete units to supporting members and backup materials.

         B. Erect architectural precast concrete level, plumb, and square within specified allowable tolerances. Provide temporary supports and bracing as required to maintain position, stability, and alignment of units until permanent connections are completed.
            1. Install temporary steel or plastic spacing shims as precast concrete units are being erected. Tack weld steel shims to each other to prevent shims from separating.
            2. Maintain horizontal and vertical joint alignment and uniform joint width as erection progresses.

3. Remove projecting lifting devices and grout fill voids within recessed lifting devices flush with surface of adjacent precast surfaces when recess is exposed.
4. Unless otherwise indicated, maintain uniform joint widths of 3/4 inch (19 mm).

C. Connect architectural precast concrete units in position by bolting, welding, grouting, or as otherwise indicated on Shop Drawings. Remove temporary shims, wedges, and spacers as soon as practical after connecting and grouting are completed.
1. Do not permit connections to disrupt continuity of roof flashing.

D. Welding: Comply with applicable requirements in AWS D1.1/D1.1M and AWS D1.4/D1.4M for welding, welding electrodes, appearance, quality of welds, and methods used in correcting welding work.
1. Protect architectural precast concrete units and bearing pads from damage by field welding or cutting operations, and provide noncombustible shields as required.
2. Welds not specified shall be continuous fillet welds, using no less than the minimum fillet as specified by AWS.
3. Clean weld-affected metal surfaces with chipping hammer followed by brushing, and apply a minimum 4.0-mil- (0.1-mm-) thick coat of galvanized repair paint to galvanized surfaces according to ASTM A 780/A 780M.
4. Clean weld-affected metal surfaces with chipping hammer followed by brushing, and reprime damaged painted surfaces.
5. Visually inspect welds and remove, reweld, or repair incomplete and defective welds.

E. At bolted connections, use lock washers, tack welding, or other approved means to prevent loosening of nuts after final adjustment.
1. Where slotted connections are used, verify bolt position and tightness. For sliding connections, properly secure bolt but allow bolt to move within connection slot.
2. For slip-critical connections, use one of the following methods to assure proper bolt pretension:
    a. Turn-of-Nut: According to RCSC's "Specification for Structural Joints Using ASTM A 325 or A 490 Bolts."
    b. Calibrated Wrench: According to RCSC's "Specification for Structural Joints Using ASTM A 325 or A 490 Bolts."
    c. Twist-off Tension Control Bolt: ASTM F 1852.
    d. Direct-Tension Control Bolt: ASTM F 1852.
3. For slip-critical connections, use method and inspection procedure approved by Engineer and coordinated with inspection agency.

F. Grouting or Dry-Packing Connections and Joints: Grout connections where required or indicated. Retain flowable grout in place until hard enough to support itself. Alternatively, pack spaces with stiff dry-pack grout material, tamping until voids are completely filled. Place grout and finish smooth, level, and plumb with adjacent concrete surfaces. Promptly remove grout material from exposed

surfaces before it affects finishes or hardens. Keep grouted joints damp for not less than 24 hours after initial set.

C. Specification Section 099673.13 “Water Treatment and Purification System Coatings”, (not reissued).
1. DELETE: Article 3.6.A, INSERT: Article 3.6.A, below:
a. A. Concrete Substrates, Submerged and Unsubmerged Surfaces: Protection from raw water contact on building slabs and in treatment tanks, and similar tanks.

D. Specification Section 230001 “Heating, Ventilating, and Air Conditioning (Filed Sub-Bid Required)”, (not reissued).
1. DELETE: Article 1.2.A, INSERT: Article 1.2.A, below:
a. A. Work Included: Provide labor, materials and equipment necessary to complete the work of this Section, including but not limited to the following:
1) All the Work of Section 230001 “Heating Ventilating and Air Conditioning (Massachusetts Field Sub-Bid Preamble).”
2) All the Work in Section 230513 “Common Motor Requirements for HVAC Equipment.”
3) All the Work in Section 230517 “Sleeves and Sleeve Seals for HVAC Piping.”
4) All the Work in Section 230518 “Escutcheons for HVAC Piping” (new).
5) All the Work in Section 230529 “Hangers and Supports for HVAC Piping and Equipment.”
6) All the Work in Section 230548.13 “Vibration Controls for HVAC.”
7) All the Work in Section 230553 “Identification for HVAC Piping and Equipment.”
8) All the Work in Section 230593 “Testing, Adjusting, and Balancing for HVAC.”
9) All the Work in Section 230713 “Duct Insulation.”
10) All the Work in Section 230719 “HVAC Piping Insulation.”
11) All the Work in Section 230923 “Direct Digital Control (DDC) System for HVAC.”
12) All the Work in Section 230923.11 “Control Valves.”
13) All the Work in Section 230923.12 “Control Dampers.”
14) All the Work in Section 230923.27 “Temperature Instruments.”
15) All the Work in Section 232300 “Refrigerant Piping.”
16) All the Work in Section 235533.16 “Gas-Fired Unit Heaters.”
17) All the Work in Section 233113 “Metal Ducts.”
18) All the Work in Section 233300 “Air Duct Accessories.”
19) All the Work in Section 233423 “HVAC Power Ventilators.”
20) All the Work in Section 233713.23 “Registers and Grilles.”
21) All the Work in Section 238126 “Split-System Air-Conditioners.”
22) All the Work in Section 238239.13 “Cabinet Unit Heaters” (new).
23) All the Work in Section 238239.16 “Propeller Unit Heaters.”
24) All the Work in Section 238416 “Mechanical Dehumidification Units.”

2. DELETE: Article 1.2.B in its entirety.

E. Specification Section 260001 “Electrical Work (Filed Sub-Bid Required)”, (not reissued).
1. DELETE: Article 1.2.A, INSERT: Article 1.2.A, below:
a. A. Work Included: Provide labor, materials and equipment necessary to complete the work of this Section, including but not limited to the following:
1) All the Work of Section 111136 “Vehicle Charging Equipment”
2) 260001 “Electrical Work”
3) 260010 “Supplemental Requirements for Electrical”
4) 260011 “Facility Performance Requirements for Electrical”
5) 260505 “Selective Demolition for Electrical”
6) 260519 “Low-Voltage Electrical Power Conductors and Cables”
7) 260523 “Control-Voltage Electrical Power Cables”
8) 260526 “Grounding and Bonding for Electrical Systems”
9) 260529 “Hangers and Supports for Electrical Systems”
10) 260533.13 “Conduits for Electrical Systems”
11) 260533.16 “Boxes and Covers for Electrical Systems”
12) 260543 “Underground Ducts and Raceways for Electrical Systems”
13) 260544 “Sleeves and Sleeve Seals for Electrical Raceways and Cabling”
14) 260548 “Vibration and Seismic Controls for Electrical Systems”
15) 260553 “Identification for Electrical Systems”
16) 260573 “Power System Studies”
17) 260800 “Commissioning of Electrical Systems”
18) 262200 “Low-Voltage Transformers”
19) 262416 “Panelboards”
20) 262726 “Wiring Devices”
21) 262816 “Enclosed Switches and Circuit Breakers” (revised Section number)
22) 262913.03 “Manual and Magnetic Motor Controllers”
23) 262923 “Variable-Frequency Motor Controllers”
24) 263100 “Photovoltaic Collectors” (revised Section number and title)
25) 264113 “Lightning Protection for Structures”
26) 265119 “LED Interior Lighting”
27) 265213 “Emergency and Exit Lighting”
28) 265619 “LED Exterior Lighting”
29) 283100 “Intrusion Detection”
30) 284621.11 “Addressable Fire-Alarm Systems”

2. DELETE: Article 1.2.G, INSERT: Article 1.2.G, below:
a. G. Items to be Installed Only: Install the following items as furnished by the designated Sections:
1) Section 210001 “Fire Protection:”
a) Connections to fire alarm system for water flow switches and tamper switches.
2) Section 220001 “Plumbing:”
a) Power connections for water heaters.
3) Section 230001 “Heating, Ventilating and Air Conditioning:”
a) Power connections for pumps, fans, electric unit heaters.
b) Magnetic starters.
4) Section 271523 “Communications Optical Fiber Horizontal Cabling:” (new)
a) Optical fiber cable

F. Specification Section 262923 “Variable-Frequency Motor Controllers”, (not reissued).
1. DELETE: Article 2.1.A, INSERT: Article 2.1.A, below:
a. A. Manufacturer:
1) Yaskawa Electric America, Inc.
2) Or Equal.

THIS IS A PROPRIETARY ITEM.

1.8 REVISIONS TO DRAWING SHEETS (NOT USED)

1.9 QUESTIONS AND ANSWERS

A. **Question:** As you may be aware, there is a high volume of projects bidding within the same time frame as Woburn, causing significant strain on contractors, vendors, and suppliers. Given the current circumstances, would an extension of the bid dates by two weeks be considered?

Response: The Filed Sub-Bid Contract bid opening and General Contract bid opening dates and times will not be extended in this Addendum.

B. **Question:** Confirm Yaskawa Electric America, Inc or equal products are acceptable for the Variable-Frequency Motor Controllers.

Response: Yaskawa Electric America, Inc. Variable-Frequency Motor Controllers (VFDs) are listed as a proprietary item, as the City uses this manufacturer for VFDs on the other well pumps in their system. The City prefers to maintain a single supplier for an efficient maintenance program. However, as required by Massachusetts General Law, 'Or Equal' products could be reviewed during the Submittal Shop Drawing review process. Please refer to Article 1.7.F of this Addendum for revisions to the Project Manual.

C. **Question**: Confirm if the Power System Study is to only include new equipment installed as part of the Division 26 Electrical scope of work and not include existing equipment.

Response: A partial Power System Studies that is coordinated with the existing equipment upstream shall be provided.

D. **Question**: Confirm that the HVAC Filed Sub Bid is responsible for Section 230518 “Escutcheon for HVAC Piping” and Section 238239.13 “Cabinet Heater Units,” as they were not listed under Section 230001 “Heating Ventilating and Air Conditioning.”

Response: Confirmed. The HVAC Filed Sub Bid (FSB) is responsible for both Specification Section 230518 "Escutcheons for HVAC Piping" and Section 238239.13 "Cabinet Unit Heaters." Please refer to Article 1.7.D of this Addendum for revisions to the Project Manual.

E. **Question**: Confirm that the Electrical Filed Sub Bid is responsible for Section 262816 “Enclosed Switches and Circuit Breakers,” Section 263100 “Photovoltaic Collectors,” Section 271116 “Communications Racks, Frames, and Enclosures.” Section 271513 “Communications Copper Horizontal Cabling,” and Section 271523 “Communications Optical Fiber Horizontal Cabling,” as they were not listed under Section 260001 “Electrical Work.”

Response: The Electrical FSB is responsible for Section 262816 "Enclosed Switches and Circuit Breakers" and Section 263100 "Photovoltaic Collectors," which were incorrectly listed in Part 1.2.A of Section 260001 "Electrical Work." Electrical FSB is also responsible for install only of Fiber Optic Cable specified in Section 271523 "Communications Optical Fiber Horizontal Cabling." Please refer to Article 1.7.E of this Addendum for revisions to the Project Manual.

F. **Question**: Confirm piping connections under the slab and in the pipe trench at the GAC Treatment Building.

Response: Pipe connections within the pipe trench of the GAC Treatment Building shall be flanged. Pipe connections for concrete encased pipe below the slab of the GAC Treatment Building shall have restrained mechanical joints.

G. **Question**: Confirm that Specification Section 034500 “Precast Architectural Concrete” should be included with the Filed Sub-bid Mason scope of work. The precast pieces would need to be installed with their masonry work and should be included in their scope.

Response: Confirmed. Specification Section 034500 "Precast Architectural Concrete" should be included with the FSB Mason scope of work. Please refer to Articles 1.7.A and 1.7.B of this Addendum for revisions to the Project Manual.

H. **Question**: Confirm Filed Sub-bid Roofer is to install all wood blocking required in the roof for hatches, snow guards, photovoltaic panels, and any other required blocking on the roof.

Response: Wood blocking and other miscellaneous rough carpentry covered in Specification Section 061053 “Miscellaneous Rough Carpentry” is <u>not</u> included under the FSB Roofer scope of work.

I. **Question**: Confirm Filed Sub-bid Roofer will set roof hatches on Well A3 and GAC Treatment Building.

Response: Confirmed. FSB Roofer will set roof hatches on the Well A3 and GAC Treatment Building.

J. **Question**: Confirm all work required with the photovoltaic panel system is work of the Filed Sub-bid trades, either Electrical or Roofing.

Response: The Electrical FSB is responsible for the photovoltaic system specified in Section 263100 "Photovoltaic Collectors" (as noted in Question E, above) and the FSB Roofer is responsible for any specialty roof accessories required by the photovoltaic system (excluding blocking, as noted in Question H, above).

K. **Question**: Provide specification for access and roof hatches.

Response: Access hatches for Reclaim Tank No. 3 are specified in Part 2.13.A of Specification Section 055000 "Metal Fabrications." Roof hatches for Well A3 and the GAC Treatment Building are specified in Part 2.3 of Section 077200 "Roof Accessories."

L. **Question**: Confirm FSB Roofer is to furnish and install composite nail base insulated wall and roof sheathing.

Response: Composite nail base insulated wall and roof sheathing covered under Specification Section 061600 is not included under the FSB Roofer scope of work.

M. **Question**: Confirm that the Filed Sub-bid trades are responsible for their respective demolition, both removal and disposal.

Response: Confirmed. FSB trades are responsible for any demolition, as required by their respective Specifications and Drawings, including both removal and disposal.

N. **Question**: Clarify if Filed Sub-bid Miscellaneous Metals is responsible for the Special Joists for Well A3 structure, or just the connecting metal.

Response: The special joists for the Well A3 roof are not part of the Miscellaneous Metals FSB. The connecting metals for the Well A3 building that are indicated with "(MM)" on Sheet S-8, Sheet S-9 and Sheet S-10 of the Drawings are part of the Miscellaneous Metals FSB.

O. **Question**: There are 3/8” plates on the roof edge of Well A3 that are indicated as Filed Sub-bid Miscellaneous Metals (Sheet S-8, Sheet S-9, and Sheet S-10), but the same material shown on the GAC Treatment Building (Sheet S-3 and Sheet S-4) are not labeled as Miscellaneous Metals. Confirm all 3/8” bent or welded plates on roof edges of all buildings are to be carried with the Filed Sub-bid Miscellaneous Metals.

Response: The bent plates and welded plates at the edge of the GAC Treatment Building roof are shop welded to the structural steel roof beams, so they are part of the structural steel scope; they are not part of the Miscellaneous Metals FSB. The bent plates and welded plates at the edge of the Well A3 roof are part of the Miscellaneous Metals FSB, as indicated on the Drawings.

P. **Question**: The Finish Schedule on Sheet A-14 lists all but Electrical Room E 101 to have ‘PTD CONC Floor Finish’. Please advise as there is no concrete floor coating specified in Section 099673.13 “Water Treatment and Purification System Coatings.” Is the intent to have the Painting FSB paint all concrete floors?

Response: Refer to Part 3.6.A of Specification Section 099673.13 "Water Treatment and Purification System Coatings" for concrete substrate coating schedule. Painting of concrete floors is responsibility of the FSB Painting. Please refer to Article 1.7.C of this Addendum for revisions to the Project Manual.

Q. **Question**: The Finish Schedule on Sheet A-14 lists Vehicle Storage B-107 within the Existing Water Treatment Support Building to have a ‘PTD CONC Floor Finish’. This room is not shown or called out on the drawings. Please advise and confirm limits of PTD CONC Floor finish. Is the intent to have the Painting FSB fully remove existing coatings for new PTD CONC Floor finish?

Response: Refer to Part 3.6.A of Specification Section 099673.13 "Water Treatment and Purification System Coatings" for concrete substrate coating schedule. Refer to Note 3 of the "Finish Schedule Notes" on Sheet A-14 of the Drawings for information on the limits of work in the existing Water Treatment Support Building. The connection point between the GAC Treatment Building and the Existing Water Treatment Support Building is shown on Sheet A-8. It is not the intent to have the Painting FSB fully remove the existing coating, refer to Note 3 of

the "Finish Schedule Notes" on Sheet A-14 for information on limit of work. Please refer to Article 1.7.C of this Addendum for revisions to the Project Manual.

R. **Question**: The Finish Schedule on Sheet A-14 lists Filtration Area A-100 within the Existing Water Treatment Plant to have a 'PTD CONC Floor Finish'. This room is not shown or called out on the drawings. Please advise and confirm limits of PTD CONC Floor finish. Is the intent to have the Painting FSB fully remove existing coatings for new PTD CONC Floor finish?

Response: Refer to Part 3.6.A of Specification Section 099673.13 "Water Treatment and Purification System Coatings" for concrete substrate coating schedule. Refer to Note 2 of the "Finish Schedule Notes" on Sheet A-14 of the Drawings for information on the limits of work in the existing Water Treatment Plant. Work in the existing Water Treatment Plant is depicted on Sheet M-2 of the Drawings. It is not the intent to have the Painting FSB fully remove the existing coating, refer to Note 2 of the "Finish Schedule Notes" on Sheet A-14 for information on limit of work. Please refer to Article 1.7.C of this Addendum for revisions to the Project Manual.

S. **Question**: Please verify that the excavation, backfill, concrete removal, and conduit removal of ductbanks scope of work is by the GC/Civil Contractor as indicated on Sheet C-8, C-9, and C-10 of the Drawings. Electrical FSB shall own disconnect and make safe, as required.

Response: Refer to Notes 1 through 5 of the 'Keyed Notes' on Sheet E-4 of the Drawings for the Electrical FSB demolition responsibilities for the electrical service to existing Well A2 and Well B buildings. Electrical FSB to disconnect and make safe, as required. Other demolition work associated with the existing Well A2 and Well B buildings shown on Sheet C-8, Sheet C-9, and Sheet C-10 shall be the responsibility of the General Contractor.

T. **Question**: Confirm ductbank schedules, as shown on Sheet E-6 of the Drawings, that include a light line weight for the concrete encasement are to indicate re-use of existing conduits.

Response: The following light line weights on Sheet E-6 shall be represented as such:

1. Demolition:

    a. Where demolition hatch is shown over the entire ductbank section, ductbank to be completely demolished (reference Sheet E-4 Demolition Site Plan).

    b. Where demolition hatch is shown over partial ductbank section, ductbank to be re-used with existing conduit (reference Sheet E-4 Demolition Site Plan).

2. New Work:

    a. Light line ductbanks represent existing ductbank to re-use. Light line conduit represents existing conduits to remain.

U. **Question**: Confirm ductbank schedules, as shown on Sheet E-6 of the Drawings, that include a bold line weight for the concrete encasement are to indicate new conduits.

Response:

1. The dark line weight ductbank sections represent new concrete encased ductbank.

2. The dark line weight conduit in ductbank sections represents as follows:

    a. Where the ductbank is light line weight, dark conduits represent existing conditions to be re-used.

    b. Where the ductbank is dark line weight, dark conduits represent new conduits.

V. **Question**: Verify that conduit designation "Sx" refers to spare conduit and size of the conduit (For instance, a designation of ‘S2’ would indicate a spare 2” conduit).

Response: Confirmed; however, all new spares shall be 4”. Any existing spares shall be repurposed for the same size.

W. **Question**: Will an allowance for the Electrical utility fees be considered?

Response: Per the Legal Requirements, Recommended Practices, and Sources of Assistance published by the Office of the Inspector General (November 2023 Edition), the use of allowances is not permitted for projects bid in accordance with Massachusetts General Laws (M.G.L.) c. 149. An allowance for Electrical utility fees will not be provided.

END OF DOCUMENT 009113.04