Addendum #1
Bid 21-0293
Steam to Hot Water Building Conversion
Phase 3, Group D (Wells Fargo Bldg)

This addendum serves to notify all bidders of the attached changes to the solicitation documents.

Please acknowledge receipt of this Addendum by checking the acknowledgment box within the www.bidexpress.com solicitation.

Posted: 4/9/21
Date of issuance: April 09, 2021

Duluth Energy Services
Hot Water Conversion Wells Fargo Building

Addendum. One

TO: ALL PLAN HOLDERS

FROM: VAA, LLC
Project. No. 210057

SUBJECT: Revision to Mechanical Bid Set

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This Revision is to a Issued for Bid Package Document (IFB) and may apply to any or all Contracts and Subcontracts. Unless otherwise specified herein or shown on the attached drawings (if any), all work required by this Revision shall be in complete accordance with the IFB and subsequent Revisions thereto.

Please attach this Revision to your copy of the IFB package dated 3-30-2021.

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1. LIST DOCUMENTS
1.1. Updates to Rev levels to originally issued Drawing MEC-000 Rev C dated 3-30-2021 is attached to this addendum.
1.2. Changes to originally issued Drawing MEC-100 Rev C dated 3-30-2021 is attached to this addendum to provide clarification for the replacement of the steam coils serving existing air handling unit A.C. Unit No. 1.
1.3. Corrections to originally issued Drawing MEC-200 Rev C dated 3-30-2021 is attached to this addendum and indicates corrected size of steam lines serving stair tower heaters.
1.4. Corrections to originally issued Drawing MEC-210 Rev C dated 3-30-2021 is attached to this addendum and indicates addition of tie point TP-32.

End of Addendum
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**MEC-100**

**DISTRICT HEAT PIPING SD - SUB-BASEMENT PLAN**

**SCALE:** 1/4"=1'-0" DRAWING IS APPROXIMATE

**PRELIMINARY NOT FOR CONSTRUCTION**

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**KEYED NOTES:**

1. REMOVE EXISTING CONDENSATE RETURN LINE PIPE, FITTINGS, VALVES AND SUPPORTS FROM STAIRWELL CONVECTOR UNITS.

2. REPLACE LINE WITH 1" HOT WATER RETURN LINE.

3. PROVIDE BYPASS WITH SHUTOFF VALVE FROM CHILLER INLET TO CHILLER OUTLET AS SHOWN.

4. CUT IN ELBOW AFTER EXISTING VALVE FOR NEW AS-01.

5. PROVIDE 4" WELDOLET CONNECTION BEFORE EXISTING ELBOW INTO PUMP.

6. REMOVE EXISTING DHW HEAT EXCHANGER AND PIPING BACK TO ELBOWS AS SHOWN. CONNECT HHS AND HHWR TO REMAINING PIPE AS SHOWN.

7. REMOVE EXISTING UNIT COIL AND REPLACE WITH NEW DUAL HEATING AND COOLING COIL. SEE DETAIL 6/MEC-110

8. REMOVE STEAM AND CONDENSATE PIPE, FITTINGS, VALVES AND SUPPORTS OF EXISTING PIPE AND CAP AT BRANCH TAKEOFF.

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**CONTINUED ON MEC-101**
### Duluth Hot Water Conversion Schedules

**Schedule 2:**

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<td>Duluth Hot Water Conversion Schedules</td>
<td>03/30/21</td>
<td>DGJ</td>
<td>WFD</td>
<td>VJD</td>
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**Project Information:**

- **Client:** [Client Name]
- **Project:** [Project Name]
- **Issue/Revision Date:** [Date]
- **Project No.:** [Project Number]
- **Certification:** [Certification Information]

**Contact Information:**

- **VAA, LLC**
  - 763.559.9100
  - www.vaaeng.com
  - 2300 Berkshire Lane N, Suite 200
  - Plymouth, MN 55441
  - WA Firm Registration No. 3035205013

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**Table:**

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**Project Details:**

- **Date Plotted:** Friday, April 09, 2021

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**Notice:**

- VAA, LLC reserves the right to update or modify the technical specifications as necessary during the course of the project.
## Product Data: PHBC - HBC Models

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### Tag(s):

**Item Tag(s):**

**Selected Options**

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<td>Motor Option : PSC</td>
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<td>Coil : 2 Pipe 3-Row</td>
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<td>RH</td>
<td>Handing : Right Hand</td>
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<td>S</td>
<td>Drain Pan : Stainless Steel</td>
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<td>M</td>
<td>Control Voltage : 120V/24V</td>
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<tr>
<td>X</td>
<td>Foil Option : None</td>
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**Fan Performance**

- **Fan Speed:** High
- **Fan Motor BHP:** 0.00 BHP
- **Fan RPM:** 0 RPM
- **External Static Pressure:** 0.01 in. H2O

**Motor Data**

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<th>Description</th>
<th>Qty</th>
<th>HP (ea.)</th>
<th>FLA (ea.)</th>
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<td>1/5</td>
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**General Information**

- **Air Flow:** 919 CFM
- **ESP:** 0.01 in. H2O
- **Altitude:** 0 Feet

**Electrical Data**

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<tr>
<th>Unit Voltage</th>
<th>Unit Amps - FLA</th>
<th>Min. Cir. Amps - MCA</th>
<th>Max. Fuse Size - MOP</th>
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<td>4</td>
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**Hot Water**

- **Total Capacity:** 27.2 MBH
- **Entering Air Temp:** 68.00 °F
- **Leaving Air Temp:** 94.6 °F
- **Entering Fluid Temp:** 180.00 °F
- **Fluid Flow:** 1.0 GPM
- **Leaving Fluid Temp:** 122.4 °F
- **Coil Rows:** 3
- **Fluid Pressure Drop:** 0.42 ft. H2O
- **Air Pressure Drop:** 0.31 ft. H2O

**Fan Curve**

- **PHBC Fan Performance Curves**
- **Unit Size 08 - PSC Motor**

**Horizontal Fan Coil with Plenum - Chilled / Hot Water**

VAA FCU 1500 CFM

Tag:
NOTE:
1. RIGHT HAND UNIT SHOWN, LEFT HAND OPPOSITE. HAND IS DETERMINED BY FACING THE BLOWER END.
2. RETURN PLENUMS HAVE 1/2" INSULATION.
3. ALL PLENUMS INCLUDE A THROW-AWAY FILTER.
4. STANDARD PLENUMS ARE END RETURN AND CAN BE FIELD CONVERTED TO BOTTOM RETURN
5. FILTER HAS SEPARATE ACCESS PANEL.
Mechanical Specification: HBC - HBC Models

System Description
Horizontal, 2-pipe or 4-pipe above ceiling furred-in room fan coil unit or above ceiling with plenum for ducting or recessed cabinet for ducting, or with cabinet for exposed ceiling installations.

Quality Assurance
Unit shall be tested and certified in accordance with AHRI Standard 440, latest edition and base unit ETL certified. (Units with special features may not have ETL certification.) Each coil shall be factory tested for leakage at 350 PSIG air pressure with coil submerged under water. Insulation and adhesive shall meet NFPA 90A requirements for flame spread and smoke generation. All equipment wiring shall comply with NEC requirements.

Delivery, Storage and Handling
Each unit shall be individually packaged from point of manufacture. Unit shall be handled and stored in accordance with the manufacturer’s instructions.

General Product Information
Factory-assembled, horizontal, blow-thru type fan coil for furred-in, exposed ceiling or ducted installations. Unit shall be complete with water coil(s), fan(s), motor(s), drain pan, and all required wiring, piping, and special features. Standard insulation shall be dual density 1/2" Tuf-Skin RX™ fiberglass insulation that includes an acrylic coating that is formulated with and EPA registered anti-microbial agent. The insulation meets the erosion requirements of UL 181. It has a flame spread of less than 25 and a smoke developed classification of less than 50 per ASTM E-84 and UL 723. 1” fiberglass air filters are provided and factory installed.

Fans
Direct-driven, double width, double inlet (DWDI), forward curved, centrifugal type. They are statically and dynamically balanced for smooth, quiet operation. The housing is constructed of heavy gauge galvanized steel with die-formed inlet cones. Fan wheels shall be constructed of galvanized steel.

Coil
Coils are staggered tube type construction with seamless copper tubes and headers, and deep corrugated aluminum fins with straight edges. Fins are manufactured with full depth collars, drawn in the fin stock to provide accurate control of fin spacing and completely cover the copper tubes to lengthen coil life. The tubes are to be mechanically expanded into the fins for a permanent primary to secondary surface bond, assuring maximum heat transfer efficiency. The coils are to be tested at 350 PSIG air pressure for operation at 300 PSIG maximum working pressure. Coils include manual air vents.

Motor Option: PSC
Fan motors shall be 3-speed, 120V, single-phase, 60 Hz, permanent split capacitor (PSC), with sleeve type bearings, and oversized oil reservoirs to ensure lubrication.

Coil: 2 Pipe 3-Row
A single circuit-coil unit installed in a 2-pipe system shall be capable of providing heating or cooling as determined by the operating mode of the central water supply system.

Drain Pan: Stainless Steel
The drain pan shall be constructed of stainless steel, extending the entire length and width of the coil(s), and shall be pitched for positive drainage. The inside surface of the drain pan shall be coated with closed-cell fire-retardant foam insulation. Drain pan shall include a secondary drain connection located above the primary drain connection to act as an indicator that the main primary is plugged. Drain pans are removable without removing coils.

Control Voltage: 120V/24V
Fan controls shall include a factory mounted and wired 24V transformer and three speed control board.