

Des Moines Independent Community School District

PROJECT: Brubaker & Hoyt HVAC Improvement

PROJECT NUMBER: 20-061 / 20-063

DATE: February 1, 2021

NOTE { THIS ADDENDUM HAS BEEN ISSUED TO MODIFY AND/OR INTERPRET THE BIDDING DOCUMENTS, INCLUDING THE DRAWINGS AND SPECIFICATIONS. UNLESS OTHERWISE INSTRUCTED. THE INFORMATION CONTAINED ON THE ADDENDUM SHALL TAKE PRECEDENCE OVER ANYTHING CONTRARY ON THE ORIGINAL BIDDING DOCUMENTS AND SHALL BE HEREINAFTER CONSIDERED AS A PARTY OF THE BIDDING DOCUMENTS.

SPECIFICATIONS

SECTION 23 0050 – BASIC HVAC REQUIREMENTS

1. Part 1.21 Scope of Work

- A. **ADD** Item G. to read, "All HVAC equipment manufacturers are required to have a physical sales office and parts support within 150 miles of the Des Moines area or will not be allowed to bid."

SECTION 23 0713 – DUCT INSULATION

1. Part 3.03 Schedules

- A. Fiberglass Rigid Board
a. **REMOVE** Fiberglass Rigid Board for all exterior ducts.
- B. **CLARIFICATION** all exterior ductwork shall be pre-insulated weatherproof exterior ductwork.
- C. **Fiberglass Flexible Duct Wrap**
a. **REVISE** Supply Ducts (Hoyt), 1-1/2" thickness
b. **REMOVE** Outside Air Intake Duct, 2"
- D. Fiberglass Duct Liner
a. **ADD** Heat Pump supply ducts, 1/2" liner thickness to match existing.
- E. **ADD** Note D. to read, "Supply (outside air), return (exhaust) ductwork to/from DOAS units on Brubaker shall not have duct wrap insulation to match existing and will have approximately 20 ft of duct liner from DOAS unit fans."
- F. **ADD** Note E. to read, "Supply ductwork from RTU's on Hoyt shall have duct wrap insulation per schedule and approximately 20 ft of duct liner from DOAS unit fans."

SECTION 23 8147 – GROUND SOURCE HEAT PUMP

1. Part 2.01 Ground Source Heat Pump

- A. **REMOVE** Item P.
B. **REMOVE** Item Q.

PLANS [BRUBAKER]

SHEET MD 1.1 – MAIN LEVEL PLAN – MECHANICAL PIPING DEMOLITION EAST

1. Reference Notes

- A. **REVISE** note #5 to read, "Alternate Bid #1: Remove and replace existing pump and associated accessories after butterfly shut off valves."

SHEET MI.1 – MAIN LEVEL PLAN – MECHANICAL PIPING EAST

1. Reference Notes

- A. **REVISE** note #3 to read, "Base bid: Rebalance heat pump loop piping system to match total flow and head of existing heat pump and well field requirements. Alternate Bid #1: Remove and replace existing pump and associated VFD and accessories after butterfly shut off valves to include a pressure and temperature port and a new suction

diffuser with strainer on the inlet and a pressure and temperature port and check valve on the outlet. Rebalance new pumps to meet new flow and head of new heat pump loop flow and piping requirements.”

SHEET E1.1 – MAIN LEVEL PLAN – ELECTRICAL EAST

1. Reference Notes
 - A. **ADD** note #14. Note shall read, “Heat pump with a 480-volt circuit requires an additional, neutral conductor. Coordinate with mechanical contractor and submitted mechanical equipment for additional information.”
2. Mechanical A143
 - A. **ADD** reference note #14 to heat pump (HP-12-1).

PLANS [HOYT]

SHEET M2.1 – HVAC PLAN – AREA B

1. Classroom 1115
 - A. **REVISE** all (4) four supply diffusers to 270 cfm each.
2. Classroom 1120
 - A. **REVISE** all (4) four supply diffusers to 270 cfm each.
3. Classroom 1125
 - A. **REVISE** all (4) four supply diffusers to 270 cfm each.
4. Mechanical 1137
 - A. **REVISE** supply main from RTU-10 to 30x20. Transition as required up to RTU.
 - B. **REVISE** return main from RTU-10 to 34x20. Transition as required up to RTU.

SHEET M6.1 – MECHANICAL SCHEDULES

1. Roof Top Unit Schedule
 - A. **REVISE** RTU-10 Supply Airflow (CFM) to 5,480.
2. Variable Refrigerant Volume Fan Coil Unit Schedule
 - A. **REVISE** MAU-12 Supply Airflow (CFM) to 400.
3. VAV Box Schedule
 - A. **REVISE** VAV Schedule per attached supplemental drawing M6.1-1 for updated box information for VAV-10-3, VAV-10-4, VAV-10-6, and VAV-10-7.

VENDOR APPROVALS

SECTION 23 0548 – VIBRATION AND SEISMIC CONTROLS FOR HVAC PIPING AND EQUIPMENT

1. Flexible Pump Connector
 - A. Metraflex Company

SECTION 23 2123 – HYDRONIC PUMPS

1. Base Mounted Pumps
 - A. Grundfos

SECTION 23 2133 – HEAT PUMP HOSE KITS

1. Automatic Air Vents
 - A. Spriovent
2. Strainers
 - A. American Wheatley
3. Pump Suction Diffusers

- A. American Wheatley
- 2. Heat Pump Hose Kits
 - B. Hays Fluid Controls
 - C. Hydronic Components, Inc. (HCI)
 - D. Grundfos
- 4. Hydronic Coil Valve Kit
 - A. Hydronic Components, Inc. (HCI)

SECTION 23 3300 – AIR DUCT ACCESSORIES

- 1. Dampers
 - A. Anemostat-Arrow
- 2. Ductwork Flow Sensors
 - A. Anemostat

SECTION 23 3421 – ENERGY RECOVERY VENTILATORS – SMALL CORE

- 1. Loren Cook
- 2. Greenheck
- 3. American Aldes
- 4. MicroMetl
- 5. Ruskin

SECTION 23 3423 – HVAC POWER VENTILATORS

- 1. Soler & Palua

SECTION 23 3600 – AIR TERMINAL UNITS

- 1. Enviro-Tec
- 2. Anemostat

SECTION 23 3700 – AIR OUTLETS AND INLETS

- 1. Diffusers, Registers & Grilles
 - A. Anemostat

SECTION 23 6215 – VARIABLE REFRIGERANT FLOW SYSTEM

- 1. Samsung

SECTION 23 7400 – SMALL PACKAGED ROOFTOP UNITS

- 1. Carrier

SECTION 23 7402 – DEDICATED OUTSIDE AIR PACKAGED ROOFTOP UNITS

- 1. Addison
- 2. Greenheck
- 3. LG
- 4. Valent

SECTION 23 7403 – HIGH FRACTION OUTSIDE AIR PACKAGED ROOFTOP UNITS

- 1. Carrier
- 2. York/JCI

3. Lennox

SECTION 23 88 147 – GROUND SOURCE HEAT PUMPS

1. Carrier

SECTION 23 82 16 – AIR COILS

1. Markel
2. Anemostat-Tutco

ATTACHMENTS

M6.1-1.PDF

VAV BOX SCHEDULE

UNIT TAG	MANUFACTURER	MODEL	ASSOCIATED RTU	SERVES	MAXIMUM COOLING CFM	MAXIMUM HEATING CFM	MINIMUM CFM	AIR PRESSURE DROP (IN WC)	REHEAT COIL CAPACITY (MBH)	REHEAT COIL FLOW RATE (GPM)	COIL PRESSURE DROP (FT H2O)
VAV-8-1	TRANE	VCWF	RTU-8	CLASSROOM 1205	1140	1140	380	0.1	49.5	3.8	4.0
VAV-8-2	TRANE	VCWF	RTU-8	CLASSROOM 1140	360	360	100	0.3	16.5	0.7	0.3
VAV-8-3	TRANE	VCWF	RTU-8	CLASSROOM 1165	800	800	250	0.6	54.2	3.3	1.7
VAV-8-4	TRANE	VCWF	RTU-8	CLASSROOM 1160	450	600	200	0.3	26.0	1.6	0.2
VAV-8-5	TRANE	VCWF	RTU-8	CLASSROOM 1240	1000	1000	350	0.1	43.4	2.6	2.0
VAV-8-6	TRANE	VCWF	RTU-8	CLASSROOM 1245	1000	1000	350	0.1	43.4	2.6	2.0
VAV-8-7	TRANE	VCWF	RTU-8	CLASSROOM 1365	1000	1000	350	0.1	43.4	2.6	2.0
VAV-8-8	TRANE	VCWF	RTU-8	SPED 1230/1235	725	725	250	0.5	31.2	2.4	0.4
VAV-8-9	TRANE	VCWF	RTU-8	CLASSROOM 1225	920	920	300	0.1	39.9	3.2	2.6
VAV-8-10	TRANE	VCWF	RTU-8	SPED 1215, OFFICE 1210	605	605	250	0.5	30.6	2.2	0.4
VAV-8-11	TRANE	VCWF	RTU-8	CLASSROOM 1220	1140	1140	380	0.1	49.5	3.8	4.0
VAV-8-12	TRANE	VCWF	RTU-8	CORRIDOR 1100	1500	1500	500	0.5	65.0	3.6	0.7
VAV-8-13	TRANE	VCWF	RTU-8	CLASSROOM 1175	720	720	250	0.5	31.2	2.3	0.4
VAV-8-14	TRANE	VCWF	RTU-8	CLASSROOM 1180	500	500	150	0.6	22.2	1.2	0.8
VAV-8-15	TRANE	VCWF	RTU-8	CLASSROOM 1170	725	725	250	0.1	31.2	2.4	0.4
VAV-8-16	TRANE	VCWF	RTU-8	MULTIPURPOSE 1150	600	600	150	0.1	26	1.6	0.21
VAV-8-17	TRANE	VCWF	RTU-8	SPED 1145/CONFERENCE 1146	520	520	150	0.3	24.1	1.5	0.2
VAV-8-18	TRANE	VCWF	RTU-8	OFFICE 1152/1153/1154/1155	800	800	200	0.4	19.4	1.0	0.6
VAV-8-19	TRANE	VCWF	RTU-8	CLASSROOM 1185	400	400	150	0.4	19.4	1.0	0.6
VAV-10-1	TRANE	VCWF	RTU-10	OFFICE 1105	360	360	100	0.3	16.5	0.7	0.3
VAV-10-2	TRANE	VCWF	RTU-10	SPED 1110	360	360	100	0.3	16.5	0.7	0.3
VAV-10-3	TRANE	VCWF	RTU-10	CLASSROOM 1115	1080	1080	350	0.1	43.4	2.6	2.0
VAV-10-4	TRANE	VCWF	RTU-10	SPED 1135/CORRIDOR 1102	1160	1160	380	0.1	49.5	3.8	4.0
VAV-10-5	TRANE	VCWF	RTU-10	SPED 1130	360	360	100	0.3	16.5	0.7	0.3
VAV-10-6	TRANE	VCWF	RTU-10	CLASSROOM 1125	1080	1080	350	0.1	43.4	2.6	2.0
VAV-10-7	TRANE	VCWF	RTU-10	CLASSROOM 1120	1080	1080	350	0.1	43.4	2.6	2.0

NOTES:

1. HEATING CAPACITY IS BASED ON 100% WATER WITH EWT/LWT OF 180°F/150°F AND EAT OF 55°F.
2. NOISE CRITERIA (NC) SHALL NOT BE GREATER THAN 25 RADIATED LEVEL WITH MAXIMUM STATIC PRESSURE OF 1" W.G.
3. FIELD VERIFY RIGHT VS. LEFT HAND COIL AND RIGHT VS. LEFT HAND CONTROL BOX CONFIGURATION WITH SITE CONDITIONS.

Project Name: HOYT MIDDLE SCHOOL HVAC UPGRADES

20-063

SHEET: M6.1-1

DATE: 02/01/21

SCALE: NO SCALE

TITLE: MECHANICAL SCHEDULES

