



ADDENDUM #ONE

Date: March 22, 2010
Project: Purdue University Cherry Lane Weather Station Relocation - 2010
TSC Job Number: 7695.001
Client/Owner Project Number: Purdue University 8530
Distribute To: All Bidders of record, Purdue University, and The Schneider Corporation

TO ALL BIDDERS OF RECORD:

The following addendum indicates revisions, additions, and deletions from the original bid information, project manual, and construction drawings, dated March 4, 2010. This addendum forms a part of these documents. Acknowledge receipt of this addendum by inserting its number on your bid proposal form. Failure to do so may subject the bidder to disqualification.

GENERAL	
Item	DESCRIPTION
1	Reminder: The trustees of Purdue University will receive sealed bids for the project until 3:00 (PM) local time, on Thursday, the 1 st day of April 2010 in the Parking Facilities Office, Visitor Information Center, 504 Northwestern Ave., West Lafayette, IN 47907.

CONTRACTOR QUESTIONS	
Item	DESCRIPTION
1	Not Applicable

PROJECT MANUAL					
Item	Section	Page	Paragraph	Subpar	DESCRIPTION
1	23 7002				Delete entire section.
2	23 8116				Insert attached Section 23 8116 (ROOM AIR CONDITIONERS)
3	23 8433				Insert attached Section 23 8433 (ELECTRIC RADIANT HEATERS)

DRAWINGS		
Item	Sheet	DESCRIPTION
1	A102	Replace existing Sheet A102, Mechanical Plan and Details, with attached A102.
2	A103	Replace existing Sheet A103, Exterior Elevations, with attached A103.
3	E001	Replace existing Sheet E001, Electrical One Line, Symbols & Schedules, with attached E001.
4	E101	Replace existing Sheet E101, Demolition Plans, with attached E101.
5	E201	Replace existing Sheet E201, Electrical Site Plan, with attached E201.
6	E301	Replace existing Sheet E301, Wall Elevation Details, with attached E301.

END OF ADDENDUM #ONE

SECTION 23 8116 – ROOM AIR CONDITIONERS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.02 SUMMARY

- A. Section includes room air conditioners and their accessories and controls, in the following configurations:
 - 1. Through-the-wall air conditioners.
 - 2. Cooling-only units.

1.03 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Shop Drawings: For room air conditioners. Include plans, elevations, sections, details for wall penetrations, and attachments to other work.
 - 1. Detail equipment assemblies and indicate dimensions, weights, loads, required clearances, method of field assembly, components, and location and size of each field connection.
 - 2. Wiring Diagrams: For power, signal, and control wiring.
- C. Color Samples: For unit cabinet, discharge grille, and exterior louver, and for each color and texture specified.

1.04 INFORMATIONAL SUBMITTALS

- A. Field quality-control reports.

1.05 CLOSEOUT SUBMITTALS

- A. Operation and maintenance data.

1.06 QUALITY ASSURANCE

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- B. ASHRAE Compliance: Applicable requirements in ASHRAE 62.1, Section 4 - "Outdoor Air Quality," Section 5 - "Systems and Equipment," Section 6 - "Ventilation Rate Procedures," and Section 7 - "Construction and Startup."
- C. ASHRAE/IESNA Compliance: Applicable requirements in ASHRAE/IESNA 90.1.

1.07 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of room air conditioners that fail in materials or workmanship within specified warranty period.
 - 1. Warranty Period for Sealed Refrigeration System: Manufacturer's standard, but not less than five years from date of Substantial Completion, including components and labor.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
- B. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated on Drawings or comparable product by one of the following:
 - 1. Carrier Corporation; a United Technologies company.
 - 2. ClimateMaster, Inc.
 - 3. Friedrich Air Conditioning Co.
 - 4. General Electric Company; GE Consumer & Industrial - Appliances.
 - 5. McQuay International.
 - 6. Trane; a business of American Standard Companies.

2.02 MANUFACTURED UNITS

- A. Description: Factory-assembled and -tested, self-contained, room air conditioners with room cabinet, electric refrigeration system, and temperature controls; fully charged with refrigerant and filled with oil; with cord-connected chassis.

2.03 CHASSIS

- A. Cabinet: 0.052-inch- (1.32-mm-) thick steel with removable front panel with concealed latches.
 - 1. Mounting: Wall with wall sleeve.
 - 2. Discharge Grille: Manufacturer's standard.
 - 3. Louvers Manufacturer's standard.
 - 4. Finish: Baked enamel.
 - 5. Access Door: Hinged door in top of cabinet for access to controls.
 - 6. Finish of Interior Surfaces: Surfaces in contact with the airstream shall comply with requirements in ASHRAE 62.1.
 - 7. Wall Sleeves: Galvanized steel with polyester finish.
- B. Refrigeration System: Direct-expansion indoor coil with capillary restrictor; and hermetically sealed scroll compressor with vibration isolation and overload protection.
 - 1. Indoor and Outdoor Coils: Seamless copper tubes mechanically expanded into aluminum fins.
 - 2. Constant-pressure expansion valve.
 - 3. Reversing valve.

4. Charge: R-407C or R-410A.
- C. Filters: Washable polyurethane in molded plastic frame.
- D. Condensate Drain: Drain pan to direct condensate to outdoor coil for re-evaporation.
 1. Comply with ASHRAE 62.1 for drain pan construction and connections.

2.04 CAPACITIES AND CHARACTERISTICS

- A. Airflow: 286-251 cfm.
- B. Cooling Capacity:
 1. Total: 8000 Btu/h.
 2. Energy-Efficiency Ratio: 9.5.
- C. Electrical Characteristics:
 1. Volts: 115v.
 2. Phase: Single.
 3. Hertz: 60.
 4. Full-Load Amperes: 7.9.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Install units level and plumb, maintaining manufacturer's recommended clearances and tolerances.
- B. Install wall sleeves in finished wall assembly; seal and weatherproof. Joint-sealant materials and applications are specified in Division 7 Section "Joint Sealants."
- C. Install and anchor wall sleeves to withstand, without damage to equipment and structure, seismic forces required by building code.

3.02 FIELD QUALITY CONTROL

- A. Tests and Inspections:
 1. Inspect for and remove shipping bolts, blocks, and tie-down straps.
 2. After installing room air conditioners and after electrical circuitry has been energized, test for compliance with requirements.
 3. Operational Test: After electrical circuitry has been energized, start units to confirm proper motor rotation and unit operation.
 4. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.
- B. Room air conditioners will be considered defective if they do not pass tests and inspections.
- C. Prepare test and inspection reports.

END OF SECTION 23 8116

SECTION 23 8433 – ELECTRIC RADIANT HEATERS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.02 SUMMARY

- A. This Section includes the following:
 - 1. Electric radiant heaters.

1.03 DEFINITIONS

- A. Low Voltage: As defined in NFPA 70 for circuits and equipment operating at less than 50 V or for remote-control, signaling and power-limited circuits.

1.04 ACTION SUBMITTALS

- A. Product Data: Include rated capacities, specialties, and accessories for each product indicated.

1.05 INFORMATIONAL SUBMITTALS

- A. Field quality-control test reports.

1.06 CLOSEOUT SUBMITTALS

- A. Operation and maintenance data.

1.07 QUALITY ASSURANCE

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.

PART 2 - PRODUCTS

2.01 ELECTRIC RADIANT HEATERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
- B. Basis-of-Design Product: Subject to compliance with requirements, provide the product indicated on Drawings or a comparable product by one of the following:
 - 1. Berko Electric Heating; a division of Marley Engineered Products.
 - 2. Chromalox Inc.; a division of Emerson Electric Company.
 - 3. Fostoria Industries, Inc.; a division of TPI Corporation.
 - 4. Markel Products; a division of TPI Corporation.
 - 5. Omega Engineering, Inc.
 - 6. QMark Electric Heating; a division of Marley Engineered Products.

- C. Metal-Sheathed Heating Elements: Nickel-chromium-wire heating element embedded in magnesium oxide powder and enclosed in metal sheath. Comply with UL 1030.
- D. Comply with UL 499.
- E. Enclosures: Painted-steel housing.
 - 1. Finish: Baked-enamel finish in manufacturer's standard paint color as selected by Architect.
- F. Unit Controls:
 - 1. Enclosed contactor for remote thermostat.
- G. Capacities and Characteristics:
 - 1. Unit Type: Ceiling mounted fan forced heater.
 - 2. Mounting Height: Recessed in ceiling.
 - 3. Face Cover: 14 gage louver front cover with ¼ inch mesh screen.
 - 4. Fan: five-bladed aluminum with totally enclosed housing.
 - 5. Back Box: 20 gage galvanized steel with knockouts for power and control leads.
 - 6. Heating Capacity: 3000 kW., 10,200 BUT/HR
 - 7. Electrical Characteristics for Single-Point Connection:
 - a. Volts: 240.
 - b. Phase: single.
 - c. Hertz: 60.
 - d. Full-Load Amperes: 12.5.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Install radiant heating units level and plumb.
- B. Verify locations of thermostats with Drawings and room details before installation. Install devices 60 inches above finished floor.
- C. Ground electric units according to Division 16.
- D. Connect wiring according to Division 16.

3.02 FIELD QUALITY CONTROL

- A. Testing: Perform the following field tests and inspections and prepare test reports:
 - 1. Operate electric heating elements through each stage to verify proper operation and electrical connections.
 - 2. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and units.
- B. Remove and replace malfunctioning units and retest as specified above.

END OF SECTION 23 8433