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Bid Bulletin #05

PROJECT: Baldwin Filters Distribution Facility (Bid Package #01)
Kearney, NE

DATE: October 1, 2013

This Bid Bulletin includes items 1-1 through 1-7. Each item shall be fully incorporated into the Bidding/Contract Documents and have the same force and effect as though originally included. Bidders shall acknowledge receipt of this Bid Bulletin on the bid form.

Item 1-1 **Specification section 000140- Summary of work: #01F- Site Demolition & Earthwork**
As confirmation, site demolition is part of this summary of work and includes removals as noted on sheets C-103, C-104, and C-105.

Item 1-2 **Specification section 000140- Summary of work: #01A- Load bearing precast wall panels**
For alternate #6 (building height), bidders shall assume that the windows shown in the panels north of gridline 9 will be eliminated as part of the height reduction. The thin brick will extend to the top of the panel.

Item 1-3 **Specification section 000140- Summary of work: #01B- Steel Material**
For alternate #6 (building height), the structural plans note that a high and low beam will be required at gridline 8. Bidders shall assume the high and low beam sizes will match the beam sizes shown along gridline 1 of the roof framing plan for area A (sheet S-106a).

Item 1-4 **Specification section 075323- EPDM Roofing**
Protection sheet is not required for this project. Delete specification section 075323, 2.2, C. from the specification book.

Item 1-5 **Drawing sheet C-116 (Rock Surfacing)**
The rock surfacing shown on this page shall be 10" thick. Rock shall be 1-1/2" crushed limestone or crushed concrete. Geofabric is not required under the rock surfacing.

Item 1-6 **Drawing sheet S-101a & S101b (Floor slab thickness)**
Floor slab thickness and below slab granular fill thickness shall be as follows:
Concrete floor slab will be a 10" slab with 12" of rock in the area bounded by grid 8 on the north side, grid 16 on the south side, halfway between grid A&B on the west side and halfway between grid H&J on the east side. All other areas will be an 8" slab with 12" of rock.

Item 1-7 **See attached Addendum #3 from Davis Design dated 10/1/13**

END OF BID BULLETIN #05

DAVIS DESIGN

Architecture · Engineering · Interior Design

ADDENDUM

PROJECT: Baldwin Filters
Main Distribution Center
Pricing Package
Kearney, Nebraska

ADDENDUM NUMBER

AD-3

ISSUED BY:

Mike Wachal, Coordinating Professional
Todd Jedrzejczyk, Mechanical Engineer

PROJECT #: 13-0061

DATE ISSUED: Tuesday, October 1, 2013

This addendum is issued by the Architect to all known bidders before receipt of proposals, for the purpose of explaining, interpreting, or modifying the original plans and specifications. When enumerated by the bidder upon the proposal sheet, the information or instructions given hereon will be equally binding upon all parties as if included in the original plans and specifications.
BIDDER MUST ENTER THE NUMBER OF THIS ADDENDUM ON HIS PROPOSAL SHEET

THE FOLLOWING ITEMS ARE APPLICABLE TO THE SPECIFICATIONS:

AD-3, ITEM 1:

In reference to the Index of Specifications at the front of the specification booklet, add the following under "Facility Services Subgroup, Division 23:"

23 09 93 . Sequence of Operations for HVAC Controls

Section listed above is attached and is to be added to the specification booklet.

END AD-3

SECTION 230993 - SEQUENCE OF OPERATIONS FOR HVAC CONTROLS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes control sequences for HVAC systems, subsystems, and equipment.

B. Related Sections include the following:

1. Section 230900 "Instrumentation and Control for HVAC" for control equipment and devices and for submittal requirements.

1.3 DEFINITIONS

A. DDC: Direct digital control.

B. VAV: Variable air volume.

1.4 GENERAL INFORMATION

A. Control Points: Control point summaries are for reference only. Controls contractor shall provide all necessary points as required for system controls whether listed in the point summaries or not.

1.5 SINGLE ZONE VAV ROOFTOP UNIT (RTU-1)

A. Run Conditions – Scheduled: The unit shall run according to a user definable time schedule in the following modes:

1. Occupied Mode: The unit shall maintain

a. A 75°F (adj.) cooling setpoint
b. A 70°F (adj.) heating setpoint.

2. Unoccupied Mode (night setback): The unit shall maintain:

a. A 85°F (adj.) cooling setpoint.
b. A 55°F (adj.) heating setpoint.

B. Alarms shall be provided as follows:

1. High Zone Temp: If the zone temperature is greater than the cooling setpoint by a user definable amount (adj.).
2. Low Zone Temp: If the zone temperature is less than the heating setpoint by a user definable amount (adj.).

C. Zone Optimal Start: The unit shall use an optimal start algorithm for morning start-up. This algorithm shall minimize the unoccupied warm-up or cool-down period while still achieving comfort conditions by the start of scheduled occupied period.

D. Freeze Protection: The unit shall shut down and generate an alarm upon receiving a freezestat status.

E. Supply Air Smoke Detection: The unit shall shut down and generate an alarm upon receiving a supply air smoke detector status.

F. Supply Fan: The supply fan shall run anytime the unit is commanded to run, unless shutdown on safeties.

1. Supply fan variable speed drive shall modulate fan speed based on zone cooling or heating demand.
2. Alarms shall be provided as follows:

    a. Supply Fan Failure: Commanded on, but the status is off.
    b. Supply Fan in Hand: Commanded off, but the status is on.

G. Return Fan: The return fan shall run whenever the supply fan runs.

1. Return fan variable speed drive shall modulate fan speed to track with supply fan speed.
2. Alarms shall be provided as follows:

    a. Return Fan Failure: Commanded on, but the status is off.
    b. Return Fan in Hand: Commanded off, but the status is on.

H. Variable Speed Cooling Stages: The controller shall measure the supply air temperature and modulate the variable speed compressors to maintain cooling supply air temperature setpoint (adj.).

1. The cooling shall be enabled whenever:

    a. Outside air temperature is greater than 60°F (adj.).
    b. AND the economizer (if present) is disabled or fully open.
    c. AND the zone temperature is above cooling setpoint.
    d. AND the supply fan status is on.
    e. AND the heating is not active.

I. Modulating Gas Heating: The controller shall measure the supply air temperature and modulate the heating to maintain heating supply air temperature setpoint (adj.).

1. The heating shall be enabled whenever:

a. Outside air temperature is less than 65°F (adj.).
b. AND the zone temperature is below heating setpoint.
c. AND the supply fan status is on.
d. AND the cooling is not active.

J. Economizer: The controller shall measure the zone temperature and modulate the economizer dampers in sequence to maintain a setpoint 2°F less than the zone cooling setpoint. The outside air dampers shall maintain a minimum adjustable position of 20% (adj.) open whenever occupied.

1. The economizer shall be enabled whenever:

a. Outside air temperature is less than 65°F (adj.).
b. AND the outside air enthalpy is less than 22% (adj.).
c. AND the outside air temperature is less than the return air temperature.
d. AND the outside air enthalpy is less than the return air enthalpy.
e. AND the supply fan status is on.

2. The economizer shall close whenever:

a. Mixed air temperature drops from 45°F to 40°F (adj.).
b. OR on loss of supply fan status.
c. OR freezestat (if present) is on.

3. The outside and exhaust air dampers shall close and the return air damper shall open when the unit is off. If Optimal Start Up is available, the mixed air damper shall operate as described in the occupied mode except that the outside air damper shall modulate to fully closed.

K. Minimum Outside Air Ventilation - Fixed Percentage: The outside air dampers shall maintain a minimum position (adj.) during building occupied hours and be closed during unoccupied hours.

L. Mixed Air Temperature: The controller shall monitor the mixed air temperature and use as required for economizer control.

1. Alarms shall be provided as follows:

a. High Mixed Air Temp: If the mixed air temperature is greater than 90°F (adj.).
b. Low Mixed Air Temp: If the mixed air temperature is less than 45°F (adj.).

M. Return Air Humidity: The controller shall monitor the return air humidity and use as required for economizer control (if present) or humidity control (if present).

1. Alarms shall be provided as follows:

a. High Return Air Humidity: If the return air humidity is greater than 70% (adj.).
b. Low Return Air Humidity: If the return air humidity is less than 35% (adj.).

N. Return Air Temperature: The controller shall monitor the return air temperature and use as required for economizer control (if present).

1. Alarms shall be provided as follows:

a. High Return Air Temp: If the return air temperature is greater than 90°F (adj.).
b. Low Return Air Temp: If the return air temperature is less than 45°F (adj.).

1.6 1.6 HEATING AND VENTILATING UNIT (HVU-1 THRU HVU-8)

A. Run Conditions – Scheduled: The unit shall run according to a user definable time schedule in the following modes:

1. Occupied Mode: The unit shall maintain a zone temperature of 70°F (adj.).
2. Unoccupied Mode (night setback): The unit shall maintain a zone temperature of 55°F (adj.).

B. Alarms shall be provided as follows:

1. High Zone Temp: If the zone temperature is greater than the maximum setpoint by a user definable amount (adj.).
2. Low Zone Temp: If the zone temperature is less than the minumim setpoint by a user definable amount (adj.).

C. Return Air Smoke Detection: The unit shall shut down and generate an alarm upon receiving a return air smoke detector status.

D. Supply Air Smoke Detection: The unit shall shut down and generate an alarm upon receiving a supply air smoke detector status.

E. Supply Fan: The supply fan shall run anytime the unit is commanded to run, unless shutdown on safeties. To prevent short cycling, the supply fan shall have a user definable (adj.) minimum runtime.

1. Alarms shall be provided as follows:
2. Supply Fan Failure: Commanded on, but the status is off.
3. Supply Fan in Hand: Commanded off, but the status is on.
4. Supply Fan Runtime Exceeded: Status runtime exceeds a user definable limit (adj.).

F. Modulating Gas Heating: The controller shall measure the zone temperature and modulate the heating to maintain zone temperature setpoint.

1. The heating shall be enabled whenever:

a. Outside air temperature is less than 65°F (adj.).
b. AND the zone temperature is below heating setpoint
c. AND the supply fan status is on.

G. Mixed Air Dampers: The mixed air dampers shall open to provide minimum outside air ventilation anytime the unit is occupied. The mixed air dampers shall close 5sec (adj.) after the supply fan stops.

H. Minimum Outside Air Ventilation - Fixed Percentage: The outside air dampers shall maintain a minimum position (adj.) during building occupied hours and be closed during unoccupied hours.

1.7 EXHAUST FAN - ON/OFF (EF-1 THRU EF-10)

A. Run Conditions - Scheduled: The fan shall run according to a user definable schedule.

B. Fan: The fan shall have a user definable (adj.) minimum runtime.

C. Exhaust Air Motorized Damper: The exhaust air damper shall open anytime the unit runs and shall close anytime the unit stops. The exhaust air damper shall be proven open before the fan runs, and shall close 30 sec (adj.) after the fan stops.

D. Intake Air Motorized Damper: The intake air dampers shall be interlocked with the exhaust fan as shown on the drawings. The intake air dampers shall be proven open before the fan runs, and shall close 30 sec (adj.) after the fan stops.

E. Alarms shall be provided as follows:

1. Damper Failure: Commanded open, but the status is closed.
2. Damper in Hand: Commanded closed, but the status is open.

F. Fan Status: The controller shall monitor the fan status.

1. Alarms shall be provided as follows:

a. Fan Failure: Commanded on, but the status is off.
b. Fan in Hand: Commanded off, but the status is on.
c. Fan Runtime Exceeded: Fan status runtime exceeds a user definable limit (adj.).

1.8 EXHAUST FAN - ON/OFF (EF-11 THRU EF-12)

A. Run Conditions - Scheduled: The fan shall run according to a user definable schedule.

B. Fan: The fan shall have a user definable (adj.) minimum runtime.

C. Fan Status: The controller shall monitor the fan status.

D. Alarms shall be provided as follows:

1. Fan Failure: Commanded on, but the status is off.
2. Fan in Hand: Commanded off, but the status is on.
3. Fan Runtime Exceeded: Fan status runtime exceeds a user definable limit (adj.).

1.9 HIGH VOLUME CEILING FANS (CF-1 THRU CF-7)

A. Run Conditions: The fan shall run according to a user definable schedule.

B. Fan: The fan shall have a user definable (adj.) minimum runtime.

C. Fan speed: The controller shall be capable of varying the fan motor variable speed drive from a minimum 33% speed (adj.) to a maximum 100% speed (adj.).

D. Fan Status: The controller shall monitor the fan status.

E. Alarms shall be provided as follows:

1. Fan Failure: Commanded on, but status is off
2. Fan in Hand: Commanded off, but fan status is on.
3. Fan Runtime Exceeded: Fan status runtime exceeds a user definable limit (adj.).

1.10 UNIT HEATER (UH-1 THRU UH-3)

A. Run Conditions - Scheduled: The unit shall run according to a user definable time schedule in the following modes:

1. Occupied Mode: The unit shall maintain a heating setpoint of 70°F (adj.).
2. Unoccupied Mode (night setback): The unit shall maintain a heating setpoint of 55°F (adj.).

B. Alarms shall be provided as follows:

1. Low Zone Temp: If the zone temperature is less than the heating setpoint by a user definable amount (adj.).

C. Zone Setpoint Adjust: The zone temperature setpoint (adj.) shall be definable by the controller only.

D. Fan: The fan shall run anytime the zone temperature drops below heating setpoint, unless shutdown on safeties.

E. Heating: The heating shall be enabled whenever:

1. Outside air temperature is less than 65°F (adj.).
2. AND the zone temperature is below heating setpoint.
3. AND the fan is on.

F. Fan Status: The controller shall monitor the fan status.

G. Alarms shall be provided as follows:

1. Fan Failure: Commanded on, but the status is off.
2. Fan in Hand: Commanded off, but the status is on.
3. Fan Runtime Exceeded: Fan status runtime exceeds a user definable limit (adj.).

1.11 INFRARED RADIANT HEATER (IRH-1 THRU IRH-22)

A. Run Conditions - Scheduled: The unit shall run according to a user definable time schedule in the following modes:

1. Occupied Mode: The unit shall maintain a heating setpoint of 70°F (adj.).
2. Unoccupied Mode (night setback): The unit shall be off in Unoccupied Mode.

B. Alarms shall be provided as follows:

1. Low Zone Temp: If the zone temperature is less than the heating setpoint by a user definable amount (adj.).

C. Zone Setpoint Adjust: The zone temperature setpoint (adj.) shall be definable by the controller only.

D. Heating: The heating shall be enabled whenever:

1. Outside air temperature is less than 65°F (adj.).
2. AND the zone temperature is below heating setpoint.
3. AND the fan is on.

E. Unit Status: The controller shall monitor the unit status.

F. Alarms shall be provided as follows:

1. Low Zone Temp: If the zone temperature is less than the heating setpoint by a user definable amount (adj.).

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 230993