

Boyd, Ray

From: Russell Knuth <rpknuth@cesct.com>
Sent: Monday, July 10, 2017 3:00 PM
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Cc: Boyd, Ray
Subject: RE: Bolton boiler NOTE #2 MONDAY 7-10-17
Attachments: Spec SS Chimney.pdf

All,

I have had email confirmation on all attendees with return email.

Questions end of day Monday 7-10-17:

- 1- Viessmann boilers are in stock in RI and have been accepted as an alternate:
 - a. Qty (3) Vitocrossal CM2-500 boiler package, each consisting of the following: (1) Vitocrossal CM2-500 - a high efficiency gas-fired, fully condensing boiler with Inox-Crossal 316 Ti reinforced stainless steel heat exchanger. The input is 1,800,000 BTU's and the output depends on return water temperatures. (1) Cylinder burner - CSA approved, pre-mix, fully modulating cylinder burner. (1) Vitotronic GW6B boiler control - digital, NR2 Lon-based boiler control with outdoor reset, boiler, and heating system control with integral cascade control.
 - b. Qty (1) Sensor # 2 / 17, NTC 10k oHms, common supply sensor. Only one sensor is required for systems with 2-8 boilers. Viessmann Part #7832365
 - c. Qty (3) Condensate neutralization tank for use with Vitocrossal 200 CM2, Vitocrossal 300 CT3 boilers or (3) or more Vitodens boilers. This tank includes 18 lbs (8 kg) of neutralization pellets.
 - d. Qty (1) Versatronik 505, NR2/BACIP Building Management System Communication Gateway. For use with multiple boiler applications for Vitocrossal-200 CM2, Vitocrossal-300 CT3, and Vitorond 200 VD2A and VD2 boilers. Viessmann Part #7521347
 - e. Qty (1) 120 USG VITOCELL-V 300 316 Ti stainless steel domestic hot water tank with built-in stainless steel heat exchanger coil, with 2 5/32 mineral wool, hand hole for cleaning access, powder coated, sheet metal enclosure, threaded domestic water connections and coil connections, stainless steel well with sensing bulb retention spring and temperature gauge. Conversion couplings supplied. Viessmann Part #Z014342
- 2- FYI-Camus boilers have a 4 to 5 week lead time. Other boilers will be reviewed on a mfg by mfg basis.
- 3- New bid opening date: The 20 th of July. Time at 3:30.
- 4- Bond amount: Page 2 of 50, section C for the full contract value.
- 5- Roofing warrantee is through: Eagle Rivet Roofing Corporation, 15 Britton Drive, Bloomfield CT, 860-953-1231.
 - a. Coordinate "dunnage" for gas piping with roofing contractor/warrantee.
- 6- A 24" x 42" motorized damper will be installed in the existing fresh air return duct. Controlled from the burner(s).
- 7- Gas pressure is sized as shown in the spec at 2 psi.
- 8- Prevailing wage rate does apply.
- 9- Stainless Steel (SS) chimney: Shall be individually vented via existing chimney and shall be:
 - a. Double wall FCS for flue within the boiler room. The FCSSW single wall is for the vertical chimney - from the base to 2ft +/- above the existing chimney. On top of the existing chimney, an architectural chimney flashing will be supplied by the contractor. Top and bottom of chimney will be sealed and weather tight with flashing provided by chimney supplier.
 - b. Sloped to boiler for proper drainage.
 - c. See attached specifications.
 - d. The combustion air will be drawn from the room and coordinated with item #6 above.
- 10- The existing coil 3 way valves as noted in 2.10 C page 37 will be capped to function as 2 way valves with modification to the controls as required. There are 18 HVAC units with this requirement. This price was included with the control add alternate.

- 11- Specification indicates to paint mechanical equipment. It was the intent for the new work to receive paint if not already factory painted. No other equipment is requiring paint at this time.
- 12- 2 year warrantee and service is specified and confirmed. It will start when the boilers are started.
- 13- Make up water is extended with new pipe from the existing feed located in the boiler room. Sizing is in accord with mfg instructions.
- 14- No breeching will penetrate the roof.
- 15- Temporary heat will only be required after October 15, 2017.

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FLANGED SINGLE and DOUBLE WALL CHIMNEY FOR CONDENSING BOILERS

PART 1- GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Venting for the removal of products of combustion for Category II, III, IV gas burning appliances

1.2 REFERENCES

- A. Underwriters Laboratories (UL):
 - 1. UL1738
- B. National Fire Protection Association (NFPA):
 - 1. NFPA 54 - National Fuel Gas Code
 - 2. NFPA 211 – Standard for Chimneys, fireplaces, Vents, and Solid Fuel-Burning Appliances.

1.3 QUALITY ASSURANCE

- A. Comply with NFPA 54
- B. Must install duct in accordance to manufacturer's listings and installation instructions.
- C. Components coming in contact with the products of combustion shall carry the appropriate UL or cUL listing, mark or label.

1.4 WARRANTY

- A. Condensing Appliance vent listed to UL1738 shall have a limited lifetime warranty to begin at the date of installation. Any portion of the vent repaired or replaced under warranty shall be warranted for the remainder of the original warranty period.

PART 2- PRODUCTS

2.1 AVAILABLE MANUFACTURERS

- A. Listed Double-Wall vent in boiler room condensing appliances, Model "FCS" as manufactured by Metal-Fab, Inc.
- B. Listed Single-Wall vent for condensing appliances, Model "FCSSW" as manufactured by Metal-Fab, Inc.

2.2 LISTED VENTING FOR CONDENSING APPLIANCES

- A. The condensing appliance vent shall be double-wall for use with Category II natural draft appliances and Category III or IV positive pressure appliances. Double wall inside boiler room. Single wall inside chimney.
- B. Maximum temperature shall not exceed 550° F (288° C).
- C. Vent shall be listed for an internal static pressure of 6 inch w.g. and tested to 15 inch w.g. for diameters 6 inch - 36 inch.
- D. Vent shall be constructed of AL29-4C material tested to UL1738, .015 thickness for 6 inch - 12 inch diameters, .024 thickness for 14 inch to 24 inch diameters with 1-1/2" long internal sleeve on one end with 1/2" flanges on both ends.
- E. Double wall chimney in boiler room - Outer casing shall be constructed of aluminized steel of .018 inch thickness for 6 inch to 12 inch diameters, .024 inch thickness for 14 inch to 24 inch diameters.

PART 3-EXECUTION

3.1 STORAGE AND CONSTRUCTION

- A. Protect materials from accidental damage.
- B. All supports, roof or wall penetrations, terminations, appliance connectors and drain fittings required to install the vent system shall be included.
- C. Joint assembly utilizes flange & 1-1/2" long internal sleeve connection for diameters 6 inch -24 inch. P070 sealant will be used on the flange surface. Flanges are joined with a vee band secured by tightening draw bolts.
- D. Where exposed to weather, the outer closure band shall be sealed to prevent moisture from entering the space between the walls.
- E. Vent shall terminate in accordance with installation instructions and local codes.
- F. Installation shall conform to manufacturers installation instructions.