

SCOPE: Project A: RFP 1138

Base Bid:

Installation of New 700 HP Boiler, 60 HP Boiler, condensate receiver, reconnection of steam piping, electrical, refrigeration monitor controls and re-assembly of components removed in demolition.

Alternate 1:

Insulate existing 1000-gallon condensate receiver and de-aerator (DA), fittings and valves with 3” mineral fiber insulation with ASJ outer wrap.

Alternate 2:

Installed, connect and test new dedicated Boiler Feeder System (BFS) for Boiler No. 3. 100 gallon condensate receiver and reconnection to remainder of system in lieu of operating DA when 60 HP boiler is in operation.

Bid Date: Friday, 11 October 2013, 2:00 PM.

Direct the Proposal to:

Jeannine Horton

Oral Roberts University

Director of Purchasing jhorton@oru.edu (918) 495-7577

Additional Contact Information:

Steve Smith: 918-493-8191 ssmith@cityplextowers.com,

Probable Schedule: Pending contractual agreement:

Earliest movement of the new boiler will begin only after completion and transfer of operation of the medical gas system and relocation and demolition of the equipment.

A. Earliest expected dates of completion of work by others:

Medical gas systems expected completion: Monday, 18 November 2013.

Existing boiler demolition and equipment relocation: Friday, 15 November 2013.

B. Latest expected dates of completion of work by others:

Medical gas systems expected completion: Monday, 30 November 2013.

Existing boiler demolition and equipment relocation: Friday, 15 November 2013.

Some of the work in preparation for the new boiler(s) can begin after Friday, 15 November 2013 and include the following:

- (1) Removal of the west side of the office and new temporary enclosure can start Monday, 18 November 2013.
- (2) Removal of the loading dock electric lift can start Monday, 18 November 2013. The lift must be re-installed within 48 hours after the new boilers are in place.
- (3) Installation of house-keeping and support pads that do not interfere with the movement of the 700 HP boiler. The large boiler house-keeping pad shall not be loaded for a minimum of 7-days based on high-early strength concrete. The contractor shall plan the pad-pour accordingly.

Refer to the plan of page nine (9) of this document for location of items:

The following request for proposal (RFP) is for the installation of the boiler(s), reconnection of steam piping, connection to existing economizer, reconnection of gas piping, electrical system, interface with refrigerant detection system and boiler shut-down.

Item 1: Prior Boiler Demolition provided by others:

This includes the salvage and packaging of combustion fan assembly, gas train, controls, fittings and gauges and delivery to the owner. The boiler width is approximately 120” and will require a path through the aisle requiring demolition or relocation of equipment on the east side of the mechanical room.

The building experiences excessive pressurization during strong southerly winds that will inject unmanaged smoke, fumes and odors into the corridor to the west and consequently into the tenant areas of the building. The contractor shall provide for positive removal of smoke, fumes, and odors from the boiler room on all days including windy days. Describe the mechanisms in the proposal for managing this condition.

Exterior support area: Describe the amount of lay-off area required for material coming out of the building.

Significant debris and pipe shall be removed within 48-hours of deposit in the lay-off area.

Item 2: 10” Overhead Piping for future connection:

Demolition will include removal of overhead 10” un-insulated piping running east-west above the aisle between the boilers and chiller. The piping shall be prepared with flanges for re-installation after the new boiler has been installed. Demolition contractor shall re-install the piping and strobe after the new 700 HP boiler is in place. (Approximately 10 December 2013).

Item 3: South Air Compressor in work by others

Disconnect and store control-air compressor frame to the east out of the path. The compressor will not be re-installed. Cap piping and permanently secure electrical boxes.

Item 4: West-End of Office Wall Removal Scope for the plug-in number:

Remove bulletin boards, window frames, doors and hardware and other appurtenances and provide to owner for storage. The office wall is to be removed 12” to the east of a north-south that lines up with the east edge of the freight door frame. The opening shall be enclosed with an insulated sheet rock wall and door frame. Provide a temporary hollow-core door with lockset in the frame for passage. Furnish keys to the operating engineer.

Removal of approximately 30” of west end of engineer’s office on east side of mechanical room will be handled by SubCon Construction. The installation contractor shall plug in **\$3,434** for demolition of the west end of the operating engineer’s office.

Item 5: Motorized Lift:

Remove the motorized lift at the freight door and re-locate to the loading dock for storage. Label all removed attachment hardware and electrical connections and attach to lift in clear plastic bags or cardboard boxes with external labels. Note wiring connections in a schematic for re-installation by others. Label existing wiring connections that remain.

Re-setting other equipment:

The following were relocated in a demolition contract others. This contract requires re-setting equipment and reconnecting piping, electrical and control systems including the testing.

Item 6: Chemical Feed Tank and System Controls

Relocate chemical feed tank control components approximately 4’ to the north. Note the arrangement of the work prior to demolition which will commence by Monday, 15 October 2013.

Item 7: Work bench.

Relocate work-bench to original position with new epoxy anchors in the original bolt positions.

Item 8: Relocation/Installation of New Medical Air System by others.

Item 9: Relocate Two Air Dryers back to original position in this contract.

Dryers relocated in two (2) air dryers shall be disconnected and moved north clear of the boiler-path. Reconnect the air dryers.

Item 10: Condensate Cooling Heat Exchanger.

Install heat exchanger assembly on new service pad and re-connect to the boiler header system. The assembly is stored in the loading dock area to the west. Reconnect, test and operate with the new boiler(s).

Item 11: Existing Chart Box (In demolition contract by others, not in this project.)

Disconnect and remove existing chart box. Coordinate with the owner on the disposal of equipment.

Item 12.

Alternate 1:

Add 3” mineral fiber flexible insulation with ASJ outer wrap to existing lagging (insulated casing) on the 1000-gallon condensate tank and existing de-aerator tank including insulated access panels.

Insulation shall meet or exceed RigidFlex™-1,000 as follows:

1. Maximum Service Temperature: 1,000°F. (ASTM C411)
2. Jacket Temperature Limitation: 150° F. (ASTM 1136)
3. In-service Shrinkage: 0%. (ASTM 356)
4. Water Vapor Absorption: Less than 1%. (ASTM C1104)
5. Compressive Strength at 10% deformation: 125 lb. ft². (ASTM C165)
6. Shot Content: Less than 10%. (ASTM C1335)
7. Flame Spread: 25 based on ASJ jacket. (ASTM C1335)
8. Smoke Developed 50 based on ASJ jacket. (ASTM E136, ASTM E84)
9. **Thermal Conductivity: Maximum k-value: .40 BTU-in/hour-ft²-°F. Based on 160° F. Temperature differential between vessel fluid of 220° F (5 PSI steam) and room ambient of 80° F.**

Note: Equipment lagging surface temperatures on existing run between 125°F and 140° F. and will not be shut off for work. Exposed metal surfaces on exposed pipe underneath the D.A. unit can be as hot as 220° F. Insulation contractor shall take precautions of avoid injury while insulating the tanks.

Insulation: Application of materials.

1. Clean and scrub down existing lagging (insulated casing) with soapy water (Dawn dishwasher detergent) to remove dirt and debris. Remove soap residue with additional scrubbing with water.
2. Apply insulation close to equipment by grooving, scoring and beveling insulation. Fasten insulation to equipment with studs, pins, clips, high-temperature adhesive or bands.
3. Insulate flanges and unions with removable sections and jackets.
4. Finish insulation at supports, protrusions and interruptions with a minimum “leg” of 6” from vessel or to first coupling.
5. Nameplates and ASME Stamps. Bevel and seal insulation around nameplates and ASME stamps. Provide a Velcro-attached cover with an exterior label in engraved PVC plates with ½” high letters identifying label underneath.
6. Access for service and inspection: Provide separate lagging with removable covers (Velcro or metal hinges with epoxy attachments) so covers can be removed and replaced without damaging insulation and jacket.

Item 13:**60 HP Vertical Boiler Feed System (BFS)**

Based on AERO model 315AERCST

Minimum Reservoir: 100-gallons to over-flow.

Vessel: 25" x 48" 304 stainless steel on 24" steel frame primed and painted with industrial grade paint.

Features:

1. Stainless steel site-gauge assembly.
2. 3" stainless steel thermometer
3. MM25A external make-up feeder and associated piping.
4. Openings: return, overflow, vent and drain.
5. Two (2) Aero Model 315AERCS5 stainless steel regenerative turbine close-coupled to 1.5 HP 480 Volt TEFC motor(s) with a minimum capacity of 8.2 GPM at 210' THD.
6. Stainless steel interconnecting piping including isolation valves and strainers.
7. Self-actuated steam preheat assembly consisting of a SS steam sparge tube, 3/4" directing temperature control valve with capillary piping to elevate TCV above tank flow opening.
8. NEMA 1 Duplex control panel with NEMA rated motor starters, class 10 solid state adjustable overloads.
9. Phase loss/reversal protection
10. HOA Selector switches.
11. Electric pump alternator.
12. Control circuit transformer.
13. Pump Run indicator lights.
14. UL/CUL approved panel.
15. Pumps and accessories wired to control panel in liquid-tite conduit.
16. Three copies of installation, operation and service manuals.
17. Vessel and Hardware Warranty: three (3) years beginning from 90 days after delivery or three-years after start-up, which every period is shorter. Warranty covers vessel, piping, pumps and related mechanical hardware.
18. Controls Warranty: five (5) years beginning from 90 days after delivery or three-years after start-up, which every period is shorter. Controls Warranty covers electronics and electrical components.

SCOPE: Project B: RFP 1138 Boiler Installation

The following request for proposal (**RFP**) is for the installation of one (1) 700 HP (24,150 lbs/hr. at 85 PSI) steam boiler at 10:1 turn-down and (1) 60 HP (2,008 lbs./hrs at 85 PSI) steam boiler to replace an existing 2,500 Horsepower boiler.

Operating Changes: Existing boiler No. 1 will remain and be exercised once each month to ensure proper operation in the event of an issue with the new boiler(s). The first distinction is that the new boiler(s) displace the use of the existing boilers and will be operated separately.

The new boilers are not added load. Peak load based on weather and hourly data from ONG on Wednesday, 26 December 2012: 28 MCF per hour.

Per the following partial plan, the area designated as the boiler room will accommodate the new boiler(s) with an extension of the existing refrigerant monitor control. This plan is schematic and intended only for guidance in the RFP.

BNFT: The RFP process is a confidential **best-number-first-time (BNFT)** request for complete equipment including coordination with the boiler manufacturer and providing start-up services as listed.

Bid Form:

Description of smoke and fume management:

Description of exterior lay-off requirements for tools & management of debris.

Time Required:

(Calendar days:) Written _____ (Number:) _____

BASE BID:

(Written) \$ _____ Dollars

(Number) \$ _____

ALTERNATE 1:

INSULATE EXISTING DA AND CONDESATE STORAGE:

(ADD/SUBTRACT) – *Mark one*

(Written) \$ _____ Dollars

(Number) \$ _____

ALTERNATE 2

FURNISH, INSTALLED, CONNECT AND TEST DEDICATED BOILER FEED SYSTEM

(ADD/SUBTRACT) – *Mark one*

(Written) \$ _____ Dollars

(Number) \$ _____

(Signed) _____

(Title: _____

(Title: _____

Company Contact Information including address, office and cell phone number(s) and internet address:

Name _____

Company _____

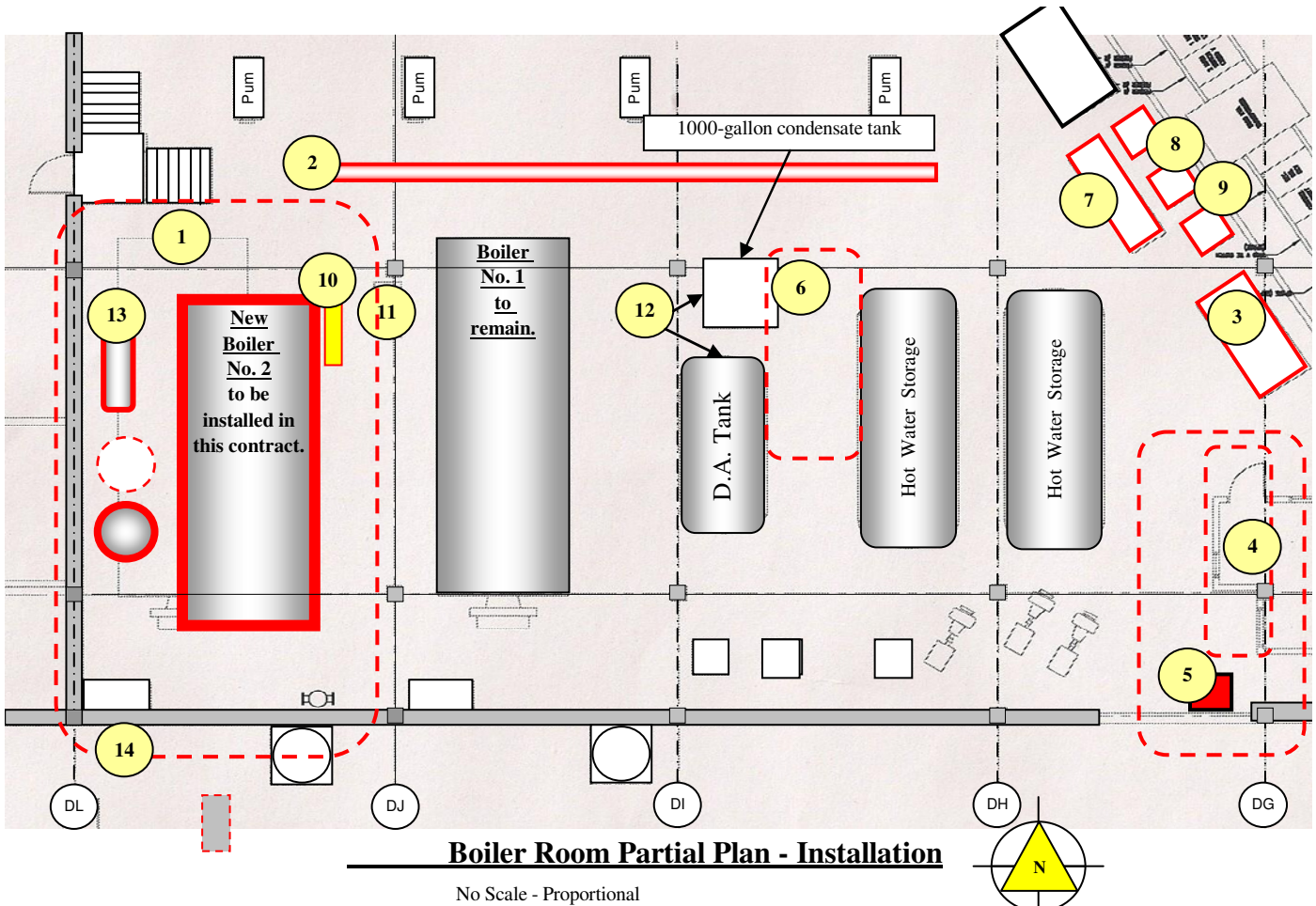
Address _____

Address _____

Phone , E-mail: _____

REFERENCE PLANS AND DOCUMENT: **BI-1 3 October 2013**

The above information is considered confidential and privileged:



Boiler Room Partial Plan - Installation

No Scale - Proportional



- 1 Prior Boiler Demolition provided by others: 2 10" Overhead Piping for future connection:
- 3 South Air Compressor in work by others 4 West-End of Office Removal Scope (plug-in number:)
- 5 Motorized Lift: Re-setting other equipment: 6 Chemical Feed Tank and System Controls
- 7 Work bench. 8 Relocation/Installation of New Medical Air System by others.
- 9 Relocate Two Air Dryers back to original position in this contract.
- 10 Condensate Cooling Heat Exchanger. 11 Existing Chart Box (Demolition by others, not in this project.)
- 12 **Alternate 1:** Insulate Deaerator (D.A.) and condensate storage with aluminum jacket.
- 13 **Alternate 2:** Install dedicated Boiler Feed System (BFS) for New 60 HP Boiler.
- 14 Refer to Plans **BI-1** and **BI-2** for details of boiler connections.