



State of Utah

JON M. HUNTSMAN, JR.
Governor

GARY R. HERBERT
Lieutenant Governor

Department of Administrative Services

D'ARCY DIXON PIGNANELLI
Executive Director

Division of Facilities Construction and Management

F. KEITH STEPAN
Director

MEMORANDUM

Date: 9 May 2005

To: Consultants

From: Vic Middleton, DFCM

Reference: Department of Corrections
Draper Prison Vocational Training Center
DFCM Project No. 04256100

Subject: **Addendum No. 3**

Pages Addendum (Section 15188) 3 pages

Note: This Addendum shall be included as part of the Contract Documents. Items in this Addendum apply to all drawings and specification sections whether referenced or not involving the portion of the work added, deleted, modified, or otherwise addressed in the Addendum. Acknowledge receipt of this Addendum in the space provided on the Bid Form. Failure to do so may subject the Bidder to disqualification.

3.1.1 The bid date for this project was scheduled for Tuesday, May 10, 2005 at 3:00 pm. This Addendum is to reflect the **new bid date on Wednesday, May 18, 2005 at 3:30 pm** located at DFCM, 4110 State Office Building, Salt Lake City, Utah. Sub Contractors list will be due **Thursday, May 19, 2005 at 3:30 pm** at DFCM, 4110 State Office Building.

3.2.1 **SECTION 15188 – UNDERGROUND STEAM AND CONDENSATE PIPING**

PART 1 - GENERAL

1.1 SCOPE:

- A. Includes -
1. Installation of underground steam and condensate piping, and fittings including connections to existing steam and condensate piping.

PART 2 - PRODUCTS

2.1 PIPING: (Underground Piping System)

- A. The underground steam and condensate return piping as shown on the drawings, shall be installed in an insulated underground piping system to enclose and provide mechanical and waterproofing protection for free unrestricted movement of piping specified and shown on the drawings. The system supplier shall have at least five years experience fabricating systems on this kind. All components of this system shall be made in the USA and shall be so stamped or labeled.
1. General
 - a. All underground steam and condensate return lines as indicated on contract drawings shall be the drainable and dryable type.
 - b. All straight sections, fittings, anchors and other accessories shall be factory prefabricated to job dimensions and designed to minimize the number of field welds.
 - c. Each system layout shall be computer analyzed by the piping system manufacturer to determine stresses on the carrier pipe and anticipated thermal movement of the service pipe.
 - d. The system design shall be in strict conformance with ANSI B31.1, latest edition. Factory trained field technical assistance shall be provided for the critical periods of installation, i.e., unloading, field joint instruction and testing.
 2. Service Pipe
 - a. Internal steam piping shall be standard weight Schedule 40 carbon steel. Condensate piping, shall be Schedule 80 carbon steel.
 - b. All joints shall be butt-welded for sizes 2-1/2 inches and greater, and socket welded for 2 inches and below.
 - c. Where possible, provide straight sections in 40 foot random lengths with 6 inches of piping exposed at each end for field joint fabrication. See details in the Contract Documents.
 3. Sub-Assemblies
 - a. End seals, gland seals, and anchors shall be designed and factory prefabricated to prevent the ingress of moisture into the system.
 - b. All sub-assemblies shall be designed to allow for complete draining and drying of the conduit system.
 4. Insulation
 - a. Service pipe insulation shall be rated for high pressure steam and condensate.
 - b. The insulation shall have passed the most recent boiling test and other requirements specified in the Federal Agency Guidelines Specifications.
 7. Pipe Supports
 - a. All pipes within the outer casing shall be supported at not more than 10 foot intervals. These supports shall be designed to allow for continuous airflow and drainage of the conduit in place. The straight supports shall be designed to occupy not more than 10% of the annular air space.
 - b. The surface of the insulation shall be protected at the support by a sleeve not less than 12 inches long, fitted with traverse and where required, rotational arresters.
- B. Approved Manufacturers -

1. Thermacore HT406 or equal by
2. Ricwill
3. Perma-pipe

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Below Grade
 1. Before connecting into the existing high pressure steam system, Contractor shall have approval from the owner.
 2. Installation
 - a. The installing contractor shall handle the system in accordance with the directions furnished by the manufacturer and as approved by the Engineer.
 - b. The service piping shall be hydrostatically hammer tested to 150 psig or 1 1/2 times the operating pressure. The test pressure shall be held for not less than one hour.
 - c. The contractor shall holiday test the entire conduit system at 5,000 volts. All holidays shall be repaired and tested.
 3. Backfill
 - a. A 4 inch layer of sand or fine gravel shall be placed and tamped in the trench to provide a uniform bedding for the conduit.
 - b. The entire trench shall be evenly backfilled with a similar material as the bedding in 6 inch compacted layers to a minimum height of 6 inches above the top of the insulated piping system. The remaining trench shall be evenly and continuously backfilled in uniform layers with suitable excavated soil.

3.2 TESTING:

- A. Conduct tests in presence of Engineer or Owner's Representative.

END OF SECTION 15188

End of Addendum