

Mechanical Addendum Two

April 21, 2015

NOTE: The following amendments, additions, and deletions shall be made to the Construction Documents and Contract Documents. Insofar as those documents are at variance with this Addendum, this Addendum shall govern.

Specifications

- | <u>Item No.</u> | <u>Description</u> |
|-----------------|---|
| 1. | <u>Revision:</u> Reference Section 15650 HVAC Piping. Reference Part 2 – Products, Expansion Joints. The expansion joints shall accommodate up to 8” axial movement for pipe expansion. |
| 2. | <u>Revision:</u> Reference Section 15650 HVAC Piping. Reference Part 2 – Products, Expansion Joints. The standard design operating pressure shall be revised to 300 PSIG. All expansion joint construction and flanges shall be rated for 300 PSIG. |

Clarifications

- | <u>Item No.</u> | <u>Description</u> |
|-----------------|--|
| 3. | <u>Clarification:</u> The tunnel is classified as a permit required confined space and USC will be enforcing all OSHA regulations. |
| 4. | <u>Clarification:</u> The Asbestos Abatement Guidelines have been attached as prepared by F&ME Consultants. |
| 5. | <u>Clarification:</u> Disregard Clarification 10 from Addendum 1. The operating pressure for the expansion joints shall be 300 PSIG per the specification revision item 3 above. |

END OF ADDENDUM

Attachments

East Tunnel Condensate Abatement Guidelines

**ABATEMENT GUIDELINES FOR THERMAL SYSTEM INSULATION (TSI)
ASSOCIATED WITH EAST TUNNEL CONDENSATE LINE REPLACEMENT PROJECT
UNIVERSITY OF SOUTH CAROLINA PROJECT NO: CP00422861**

As a component to the planned condensate line and expansion joint replacement project for the University of South Carolina's East Tunnel, abatement of asbestos containing materials (ACM) in the form of thermal systems insulation (TSI) will be required. The abatement will take place in various locations within the east tunnel. The abatement contractor (Contractor) shall be required to coordinate access to all areas where abatement is to occur with the mechanical contractor (GC). Contractor and GC are to ensure that all activities which will impact existing ACM thermal systems insulation (TSI) found within the east tunnel shall be completed by the Contractor.

The project involves the removal and replacement 570 LF of an existing 2 inch condensate line, along with the associated pipe hangers and expansions joints. This work will occur from utility vault G2-3D running east to vault H2-1D and will include the excavation, repair and replacement an approximate ten foot section of condensate line associated with an existing leak found in the area of vault G2-5D located on the east side of Gambrell Hall. The primary portion of the existing tunnel where the condensate line is to be replaced is located adjacent to and to the north of Gambrell Hall running generally east to west. The condensate line to be replaced within these areas is insulated with and ACM TSI pipe insulation. All existing fittings and hangers are covered with an ACM mudding compound. Varying amounts of TSI and mudding compound is found on piping and on the ground surface of the east tunnel. Contractor shall refer to the mechanical plans prepared by Swygert & Associated for locations and limits of the proposed project.

Contractor shall conduct a general clean-up of all loose ACM (including contaminated debris directly adjacent to the existing condensate line coming out) dirt and debris found within the interior portions of the tunnel where the mechanical up fits are to occur. This work shall include tops of existing pipes and hangers. This work activity shall be performed by an SCDHEC-licensed Abatement Contractor (Contractor) only. The Contractor shall provide all appropriate supervision, personnel, equipment, labor and materials; the disposal of contaminated materials; removal of the waste from the premises; and incidentals necessary to perform abatement of ACM as described.

The contractor shall coordinate with the GC for either: (i) the removal of the TSI pipe insulation only via glove bag removal leaving the existing condensate line intact or (ii) the removal of the TSI pipe insulation along with the associated piping in sections. Should the Contractor choose the later it will only require intermittent sections of glove bag abatement to facilitate the wrapping and cutting of the condensate line to be removed from the east tunnel. All glove bags utilized during the abatement activities shall be inspected, smoke tested and approved by the Owners Representative.

The Contractor shall be responsible to coordinate with the GC all removal as required for the installation of new mechanical components and connections to be made within the interior of the existing vaults. Access to the tunnel and vaults shall coordinated with the GC and be in accordance with all OSHA guidelines for confined spaces.

Additionally, the following performance guidelines are provided to the Contractor to establish minimum standards and compliance. Furthermore, if any of the guidelines need to be altered, all parties involved should be consulted and must consent to such changes. Should there be any difference between the requirements specified within these guidelines and the regulations, the regulations shall take precedence.

Abatement Preparation - Contractor shall cordon off entry points leading into the east tunnel where the abatement is to take place. Only personnel authorized and certified to enter the tunnel during abatement activities shall be allowed to enter during the abatement activities through to final clearance of the space. Contractor shall prepare and remove all designated thermal ACM using acceptable removal methods in accordance with SCDHEC regulations. ACM debris shall be removed from the top surfaces of all pipes and pipe hangers in which the GC will come in contact with during the reinstallation of the new proposed condensate line. The tops of all pipes and pipe hangers shall be wet wiped to remove loose ACM, dirt and debris. All loose debris found on the floor surface of the tunnel shall be removed utilizing wet methods. Once gross abatement of TSI within the tunnel is completed, Contractor shall clean all affected area again, to include HEPA vacuuming and wet wiping, to ensure that no asbestos-fibers remain in this space.

Limits of, Removal of Asbestos-Containing Materials - GC shall coordinate with the Contractor so as to designate the limits and locations of the condensate line to be abated. Additionally, Contractor shall be responsible to clean loose ACM, contaminated dirt and debris within these limits and dispose of them as ACM. Contractor shall utilize appropriate wet methods during removal/ clean up activities.

Limits of Repair to Existing Condensate Line - GC and Contractor shall coordinate the location of abatement work requiring excavation and removal of dirt to gain access and to expose the section of condensate line to repair and existing leak at vault G2-5D located on the east side of Gambrell Hall. Contractor shall coordinate with GC regarding specific requirements relative to abatement tasks (i.e. size of excavation to allow appropriate working space). In preparing the excavated area, GC shall provide appropriate stabilization of the excavation to ensure worker safety requirements are met prior to start of abatement activities. Contractor shall be prepared to abate any suspect ACM materials exposed during the excavation that are found. All suspect materials encountered in the excavation associated with the condensate line requiring repairs shall be assumed positive and shall be abated utilizing appropriate means and methods (i.e. friable or non-friable) and within SCDHEC regulations for such materials.

Abatement Clearance Once all dirt, debris and TSI have been removed from the affected space and final clean-up (i.e., wet wipe, HEPA vacuum) has been performed, Contractor shall coordinate with the University's Representative regarding final clearance sampling. Final clearance samples shall be collected from the East Tunnel and shall be analyzed via phase contrast microscopy (PCM). In the event that clearance samples fail to meet the standard, Contractor shall return to the space to perform additional clean-up at no additional cost to the University.