



HVAC and Electrical Service Upgrade

September 21, 2005

District 1 Office Building
Missouri Department of Transportation
3602 North Belt Highway
St. Joseph, Missouri

Addendum No.1

1. A bid alternate is hereby established that will require work in the following areas indicated below to be completed after 5:00PM but prior to 7:00AM each Monday through Friday. Work in other work areas may still be completed during normal working hours, Monday through Friday, but must be coordinated with the MoDOT representative in advance so as to maintain reasonable conditions and circumstances that will allow MoDOT employees in the building to continue with their daily ongoing function. The work to be completed outside of the normal daytime working hour time period is:
 - A. The removal of existing ceiling materials. The existing ceiling materials will still have to be removed in a manner that will allow their reinstallation once the work above the ceiling level, in the contract, in a particular area is completed. The lay-in acoustical ceiling tiles will have to be stored in a conditioned space with both heating and cooling available that will maintain temperatures that match those in the MoDOT space. The ceiling tiles and the support tees will have to be reasonably protected from all physical damage. The contractor shall be responsible, at their own expense, for the replacement of any metal ceiling grid or ceiling tiles visibly damaged in the removal, storage and reinstallation process. All replacement materials shall match in brand, style, size and model, the materials being replaced.
 - B. The removal of existing ductwork.
 - C. The installation of new ductwork.
 - D. The installation of new fan-powered boxes.
 - E. The installation of heating hot water piping.
 - F. The removal of existing electrical conduit and the wire conductors within it.
 - G. The installation of new electrical conduit and the pulling of new wire conductors through it.

- H. The installation of new floor drain piping.
- I. The testing, adjusting and balancing of the new air and heating hot water systems.

The work identified in the list above shall take place after 5:00PM but prior to 7:00AM the next morning, Monday through Friday, in the rooms identified in the list below:

Lower Level

- a. 001 Safety Office
- b. 002 Project Managers
- c. 012 Office
- d. 013 Corridor
- e. 019 Office

Main Level

- a. 101 Office
- b. 102 Office
- c. 103 Office
- d. 106 Business & Benefits
- e. 107 Women's Restroom
- f. 113 Customer Service
- g. 116 Human Resources
- h. 118 Credit Union(A MoDOT REP. MUST BE PRESENT)
- i. 119 Credit Union(A MoDOT REP. MUST BE PRESENT)
- j. 121 Secretary to the District Engineer
- k. 122 Building Entrance

Upper Level

- a. 201 Office
- b. 212 Office
- c. 213 Office
- d. 214 Office
- e. 215 Office
- f. 216 Office
- g. 217 Office
- h. 218 Office
- i. 219 Hall
- j. 223 Office

- 2. All existing light fixtures in areas where ceiling materials are temporarily removed shall be temporarily hung or supported in a secure manner, acceptable to the MoDOT representative onsite, from the building structure above. In those portions of the building where a plaster-on-lath ceiling is still in place above the current, exposed lay-in acoustical tile ceiling, the plaster-on-lath shall be considered the building structure only for the purpose of temporarily supporting light fixtures.

3. The ceiling in the Customer Service area, Room 113, shall not be left out of place more than a total of 48 hours (2 days) longer than the time duration for the work above it to be completed.
4. All telephone and data wiring throughout and around the building must be protected while the completing the work defined by the specifications, drawings and all addendums issued. The contractor shall replace, test and confirm the proper operation of any telephone and data wiring damaged or pulled loose in the performance of this contract as required by all applicable standards and codes and to the satisfaction of the Missouri Department of Transportation representative at the work site.
5. **Missouri Highways and Transportation Commission Section 00301 Bid Form** – An Alternate #2 shall be added that provides an allowance for unforeseen asbestos abatement in any form. The monetary value of Alternate #2 is hereby provided by the Missouri Department of Transportation in the amount of **\$5,000.00**. Unforeseen asbestos abatement shall be that which is necessary outside of the areas or rooms identified below in Addendum Item No. 12 and the asbestos abatement specification section. The cost to the Missouri Department of Transportation of any unforeseen asbestos abatement shall be determined on a time and materials basis with documented evidence of the value of the labor, materials or subcontracted effort to be provided by the contractor. A change order to the construction contract shall be issued at the completion of construction to return any of the \$5,000.00 amount not used to the Missouri Department of Transportation.
6. **Drawing Sheet M-2.1** – Drawing Sheet M-2.1 shall be replaced with the attached revised Sheet M2.1.
7. **Drawing Sheet M-2.2** – In the Sequence of Operation for the Heating Mode, Item No. 6 shall also include the following sentence: A variable frequency drive(VFD) shall be used to power the secondary heating hot water pumps, HWP-3 and HWP-4. The operation of the VFD shall be controlled using the new Direct Digital Control (DDC) system based on input from a differential pressure sensor located in the ceiling plenum on the Main Level.
8. **Drawing Sheet P-1.1** – The drain for the new double-check backflow preventer to be installed in Service Hall 011 shall drain to the funnel section of the new floor drain to be installed near that location.
9. **Drawing Sheet P-1.1** – The electric domestic water heater, DWH-1, shall be deleted. All of the domestic cold and hot water piping associated with the installation of DWH-1 shall also be deleted. The domestic hot water circulating pump, P-1, shall also be deleted. New electric instantaneous water heaters as scheduled below shall be added and installed in the Men’s Restroom, Room 007, on the Lower Level; the Men’s and Women’s Restrooms, Room’s 108 and 107, on the Main Level; and the Men’s Restroom on the Upper Level.

Electric Tankless Instantaneous Water Heater			
Volts	KW	Ph	Reference Manufacturer and Model No. or equal
240	3.5	1	Eemax-SP/EX-35

The following are the required electrical changes for the deletion of DWH-1 and the installation of the new instantaneous water heaters:

Drawing Sheet's E-2.1 and E-2.2

- 1) Omit electrical connections and homerun for electric water heater "EWH-1" in room 011.
- 2) Omit electrical connections and homerun for water circulation pump "P-1" in room 011.
- 3) Add 20A, 2P disconnect switch and electrical connections for instantaneous water heater in room 007, sheet E2.1, and homerun to 20A, 2P breaker #21,#23, panel "PL-1" in room 104, sheet E2.2.
- 4) Add 20A, 2P disconnect switch and electrical connections for instantaneous water heater in room 006, sheet E2.1, and homerun to 20A, 2P breaker #25,#27, panel "PL-1" in room 104, sheet E2.2.
- 5) Add 20A, 1P disconnect switch and electrical connections for instantaneous water heater in room 107, sheet E2.2, and homerun to 20A, 2P breaker #22,#24, panel "PL-1" in room 104, sheet E2.2.
- 6) Add 20A, 1P disconnect switch and electrical connections for instantaneous water heater in room 108, sheet E2.2, and homerun to 20A, 2P breaker #26,#28, panel "PL-1" in room 104, sheet E2.2.

Drawing Sheet E-2.3

- 1) Add 20A, 2P disconnect switch and electrical connections for instantaneous water heater in the men's room, sheet E-2.3, and homerun to 20A, 2P breaker #17,#19, panel "PS-1" in room 204, sheet E2.3.

Drawing Sheet E-4.1

- 1) Add four (4) 20A, 2P breakers to panel "PL-1".
 - 2) Add one (1) 20A, 2p breaker to panel "PS-1" and move spare 1P breaker from space #17 to space #20.
10. **Drawing Sheet E-0.1** – The General Electrical Note, Note 14, shall be deleted from the drawing in its entirety.
 11. **Specification Section 01039, Paragraph 3.1** – All core drilling in concrete floors and walls as well as all hammer drilling shall take place at the contractor's expense between the hours of 5:00PM and 7:00AM, Monday through Friday, or on Saturday, if scheduled at least 7 calendar days in advance.
 12. **Specification Division 10** – The attached asbestos abatement specification section entitled *Asbestos Abatement* is to be added to and considered a part of the bound project specifications. Asbestos is known to be present in the floor tile in Corridor 013 and Boiler Room 016. Asbestos is also known to be present in the pipe insulation used to insulate water and steam piping present in Boiler Room 016 and Service Hall 011.

13. **Specification Section 15082, Paragraph 3.03** – The following schedule for pipe insulation shall be added.

<u>Heating Hot Water Pipe Dia</u>	<u>Glass Fiber Insulation</u>
½" through 2"	1"
2-1/2" through 3"	1-1/2"
<u>Condensate Drain Pipe Dia</u>	<u>Glass Fiber Insulation</u>
½" through 1"	1"

14. **Specification Section 15082, Paragraph 3.03** – The following schedule for duct insulation shall be added.

Rectangular Supply Air and Outdoor Air Ductwork - 1/2" thick Duct Liner
Combustion Air Ductwork - 2" thick Fiberglass insulation.

15. **Specification Section 15514, Paragraph 2.01** – RBI (Dominator Series), a Mestek Company, shall be added to the list of acceptable manufacturers.
16. **Specification Section 15735, Paragraph 2.02** – The rooftop unit controls integral to the new rooftop air conditioning unit and provided by the rooftop unit manufacturer, must be compatible with the new HVAC controls system provided separately in accordance with Specification Section's 15908 and 15926.
17. **Specification Section 15926, Paragraph 2.04** – The new Direct Digital Control(DDC) system cannot be a proprietary system but shall rely upon components using the open BACnet protocol. Controllers used in the DDC system shall communicate using the BACnet protocol as standardized by the American Society of Heating, Refrigerating and Air Conditioning Engineers.
18. **Specification Section 15950, Paragraph 1.04** – The testing, adjusting and balancing may also be completed by a company that is NEBB-certified.
19. **Specification Section 01500, Paragraph 1.6.A** – All waste materials, debris, rubbish and uninstalled new materials and equipment must be removed from the work site on a daily basis. The construction contractor must maintain the site on a daily basis to a level that allows the Missouri Department of Transportation office to function as required each day.

All other terms and conditions remain unchanged.

END OF SECTION