

Addendum No. 01

TO: PLANS AND SPECIFICATIONS FOR:

**HVAC REPAIRS, MULTIPLE ASSESTS
MSHP GENERAL HEADQUARTERS
JEFFERSON CITY, MISSOURI
PROJECT NO. R2110-01**

Bidders are hereby informed that the construction plans and/or specifications are modified as follows:

GENERAL COMMENTS:

- The Pre-Bid meeting was held Tuesday 10/5/2021.
- Bid due date remains 10/21/2021 by 1:30 p.m. via Missouri Buys.

SPECIFICATION CHANGES:

1. SECTION 013200 – SCHEDULE (CPM)

DELETE in its entirety the complete spec section and REPLACE with the attached specification section identified as 013200 – SCHEDULE – BAR CHART.

2. Section 015000 - CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS, section 2.2;

ADD to Section 2.2, the following subsection: Temporary Toilet Units: Provide self-contained, single-occupant toilet units of the chemical, aerated re-circulation, or combustion type. Provide units properly vented and fully enclosed with a glass-fiber-reinforced polyester shell or similar nonabsorbent material.

3. Section 237313.19 - INDOOR, CUSTOM UNITS

DELETE Section 2.13, Subsection A in its entirety and ADD the following: Provide and install differential pressure gauge across filter bank of each unit. do not connect to bas.

4. Section 237343.16 - OUTDOOR, SEMI -CUSTOM AIR -HANDLING UNITS

DELETE: Section 2.1, subsection G in its entirety and ADD the following: Seismic Performance: Air-handling units shall withstand the effects of earthquake motions determined according to ASCE/SEI 7. See Section 230548 "Vibration and Seismic Controls for HVAC."

1. The term "withstand" means "the unit will remain in place without separation of any parts from the device when subjected to the seismic forces specified.

2. Component Importance factor: 1.0.

ADD to section 2.2, G 2 item as follows: d. NEMA 4 rating required

5. Section 237343.16 - OUTDOOR, SEMI-CUSTOM AIR-HANDLING UNITS

DELETE 2.1 performance requirements, subsection G in its entirety and ADD the following: Seismic Performance: Air-handling units shall withstand the effects of earthquake motions determined according to ASCE/SEI 7. See Section 230548 "Vibration and Seismic Controls for HVAC."

3. The term "withstand" means "the unit will remain in place without separation of any parts from the device when subjected to the seismic forces specified.
4. Component Importance factor: 1.0.

6. Section 230523 - GENERAL DUTY VALVES FOR HVAC PIPING

ADD to Section 2.3 Bronze Ball Valves the following to the end of item A: "Ball valves are acceptable on hydronic piping with a diameter of 2" or less.

DRAWING CHANGES:

1. Drawing M-601:

- a. ADD note 23 to GENERAL NOTES as follows:

23. WHILE THE AHU IS DOWN FOR CONSTRUCTION, CONTRACTOR SHALL PROVIDE TEMPORARY HEATING AND COOLING TO MEET NEEDS OF SYSTEM THAT IS DOWN. CONNECTIONS SHALL BE PERFORMED OVER THE WEEKEND/AFTERHOURS AS MUCH AS POSSIBLE TO MINIMIZE DOWNTIME IN FACILITY. CONTRACTOR SHALL INFORM OWNER OF TEMPERATURE CONSTRAINTS WITH TEMPORARY SYSTEM. CONTRACTOR SHALL ALSO COORDINATE SYSTEM DOWNTIME WITH OWNER.

2. Drawing M-602:

- a. DELETE the following accessories note from the MIXING BOX SCHEDULE:

6. MULTIPOINT TOTAL AIR FLOW SENSOR ON DISCHARGE OF BOX

3. Drawing M-604:

- a. DELETE in the points list under AIR COOLED CHILLER AND CHILLED WATER PUMPS, the second entry of "Chilled Water Supply Temp" in its entirety.
- b. DELETE in the points list for DUAL DUCT MIXING TERMINAL UNITS, the mixed airflow sensor from the control schematic and

4. Drawing E-101:

- a. ADD the following general note:

H. CONTRACTOR MAY RE-USE EXISTING POWER SOURCE AND WIRING ALONG WITH N2 BUS

5. Drawing M-108:

- a. ADD the following to the end of KEYED NOTE #5

EXISTING COIL DATA IS NOT AVAILABLE. CONTRACTOR SHALL FIELD VERIFY COIL GPM PRIOR TO CONSTRUCTION START.

6. Drawing M-601:

- a. ADD the following note under GENERAL NOTES:

24. CONTRACTOR SHALL PROVIDE AND/OR INSTALL ALL DAMPERS NOT PROVIDED OR INSTALLED BY AHU MANUFACTURERS. COORDINATE ALL WORK WITH MANUFACTURERS.

7. Drawing M-104:

- a. ADD the following general note to detail 4:

GENERAL CONTRACTOR SHALL COORDINATE WITH ALL TRADES FOR THE SUCCESSFUL AND FULL COMPLETION OF THE CHILLER CONNECTION, REFERENCE SPECIFICATION SECTION 013100 FOR COORDINATION REQUIREMENTS.

8. Drawing M-601:

- a. ADD the following GENERAL NOTES:

25. CONTROL VALVES FOR COILS SHALL FAIL IN A WAY TO ALLOW WATER TO FLOW THROUGH COIL.

26. BRASS TRIM SHALL BE AN ACCEPTABLE EQUIVALENT TO BRONZE TRIM FOR ALL VALVES.

ATTACHMENTS:

Pre-Bid Sign-in sheet

Specification Section 013200 – Schedule – Bar Chart

END OF ADDENDUM 01

October 14, 2021



Project #R2110-01
MSHP General HQs HVAC Repairs
1510 E. Elm Street
Jefferson City, Missouri
Prebid Meeting
Date: 10/05/2021

Sign-In Sheet

Initial Here	Name	Company	Phone	Email
	Cathy Brown	DPS/MSHP	573-751-2161 573-508-2788	Catherine.brown@mshp.mo.gov
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Name	Company	Phone	Email
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Name	Company	Phone	Email
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SECTION 013200 – SCHEDULE – BAR CHART

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract including General and Supplementary Conditions, Bid Form, and other Division 1 Specification Sections apply to this Section.

1.2 SUMMARY

- A. This Section includes requirements for a Bar Chart Schedule for the project construction activities, schedule of submittals, and schedule for testing.

PART 2 - PRODUCTS – (Not Applicable)

PART 3 - EXECUTION

3.1 SUBMITTAL PROCEDURES

- A. The Contractor shall submit to the Designer, within ten (10) working days following the Notice to Proceed, a Progress Schedule including Schedule of Values showing the rate of progress the Contractor agrees to maintain and the order in which he proposed to carry out the various phases of Work. No payments shall be made to the Contractor until the Progress Schedule has been approved by the Owner.
 - 1. The Schedule of Values must have the following line items included with the value of the item as indicated below:
 - a. O&M's (Owner's Manual)
 - 1) \$1,000,000.00 (One million) and under – 2% of the total contract amount
 - 2) Over \$1,000,000.00 (One million) – 1% of the total contract amount
 - b. Close Out Documents
 - 1) \$1,000,000.00 (One million) and under – 2% of the total contract amount
 - 2) Over \$1,000,000.00 (One million) – 1% of the total contract amount
 - c. General Conditions
 - 1) No more than 10%
- B. The Contractor shall submit an updated Schedule for presentation at each Monthly Progress Meeting. The Schedule shall be updated by the Contractor as necessary to reflect the current Schedule and its relationship to the original Schedule. The updated Schedule shall reflect any changes in the logic, sequence, durations, or completion date.

Payments to the Contractor shall be suspended if the Progress Schedule is not adequately updated to reflect actual conditions.

- C. The Contractor shall submit Progress Schedules to Subcontractors to permit coordinating their Progress Schedules to the general construction Work. The Contractor shall coordinate preparation and processing of Schedules and reports with performance of other construction activities.

3.2 CONSTRUCTION PROGRESS SCHEDULE – BAR CHART SCHEDULE

- A. Bar-Chart Schedule: The Contractor shall prepare a comprehensive, fully developed, horizontal bar chart-type Contractor's Construction Schedule. The Contractor for general construction shall prepare the Construction Schedule for the entire Project. The Schedule shall show the percentage of work to be completed at any time, anticipated monthly payments by Owner, as well as significant dates (such as completion of excavation, concrete foundation work, underground lines, superstructure, rough-ins, enclosure, hanging of fixtures, etc.) which shall serve as check points to determine compliance with the approved Schedule. The Schedule shall also include an activity for the number of "bad" weather days specified in Section 012100 – Allowances.
1. The Contractor shall provide a separate time bar for each significant construction activity. Provide a continuous vertical line to identify the first working day of each week.
 - a. If practical, use the same Schedule of Values breakdown for schedule time bars.
 2. The Contractor shall provide a base activity time bar showing duration for each construction activity. Each bar is to indicate start and completion dates for the activity. The Contractor is to place a contrasting bar below each original schedule activity time for indicating actual progress and planned remaining duration for the activity.
 3. The Contractor shall prepare the Schedule on a minimal number of separate sheets to readily show the data for the entire construction period.
 4. Secure time commitments for performing critical elements of the Work from parties involved. Coordinate each element on schedule with other construction activities. Include minor elements involved in the overall sequence of the Work. Show each activity in proper sequence. Indicate graphically the sequences necessary for completion of related portions of the Work.
 5. Coordinate the Contractor's Construction Schedule with the Schedule of Values, list of subcontracts, Submittal Schedule, progress reports, payment requests, and other required schedules and reports.
 6. Indicate the Intent to Award and the Contract Substantial Completion dates on the schedule.
- B. Phasing: Provide notations on the schedule to show how the sequence of the Work is affected by the following:
1. Requirement for Phased completion
 2. Work by separate Contractors

3. Work by the Owner
 4. Pre-purchased materials
 5. Coordination with existing construction
 6. Limitations of continued occupancies
 7. Un-interruptible services
 8. Partial Occupancy prior to Substantial Completion
 9. Site restrictions
 10. Provisions for future construction
 11. Seasonal variations
 12. Environmental control
- C. Work Stages: Use crosshatched bars to indicate important stages of construction for each major portion of the Work. Such stages include, but are not necessarily limited to, the following:
1. Subcontract awards
 2. Submittals
 3. Purchases
 4. Mockups
 5. Fabrication
 6. Sample testing
 7. Deliveries
 8. Installation
 9. Testing
 10. Adjusting
 11. Curing
 12. Startup and placement into final use and operation
- D. Area Separations: Provide a separate time bar to identify each major area of construction for each major portion of the Work. For the purposes of this Article, a “major area” is a story of construction, a separate building, or a similar significant construction element.
1. Indicate where each construction activity within a major area must be sequenced or integrated with other construction activities to provide for the following:
 - a. Structural completion.
 - b. Permanent space enclosure
 - c. Completion of mechanical installation
 - d. Completion of the electrical portion of the Work
 - e. Substantial Completion

3.3 SCHEDULE OF SUBMITTALS

- A. Upon acceptance of the Construction Progress Schedule, prepare and submit a complete schedule of submittals. Coordinate the submittal schedule with Section 013300 SUBMITTALS, the approved Construction Progress Schedule, list of subcontracts, Schedule of Values and the list of products.
- B. Prepare the schedule in chronological order. Provide the following information
 - 1. Scheduled date for the first submittal
 - 2. Related Section number
 - 3. Submittal category
 - 4. Name of the Subcontractor
 - 5. Description of the part of the Work covered
 - 6. Scheduled date for resubmittal
 - 7. Scheduled date for the Designer's final release or approval
- C. Distribution: Following the Designer's response to the initial submittal schedule, print and distribute copies to the Designer, Owner, subcontractors, and other parties required to comply with submittal dates indicated.
 - 1. Post copies in the Project meeting room and temporary field office.
 - 2. When revisions are made, distribute to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned part of the Work and are no longer involved in construction activities.
- D. Schedule Updating: Revise the schedule after each meeting or other activity where revisions have been recognized or made. Issue the updated schedule concurrently with the report of each meeting.

3.4 SCHEDULE OF INSPECTIONS AND TESTS

- A. Prepare a schedule of inspections, tests, and similar services required by the Contract Documents. Submit the schedule with (15) days of the date established for commencement of the Contract Work. The Contractor is to notify the testing agency at least (5) working days in advance of the required tests unless otherwise specified.
- B. Form: This schedule shall be in tabular form and shall include, but not be limited to, the following:
 - 1. Specification Section number
 - 2. Description of the test
 - 3. Identification of applicable standards
 - 4. Identification of test methods
 - 5. Number of tests required
 - 6. Time schedule or time span for tests

7. Entity responsible for performing tests
 8. Requirements for taking samples
 9. Unique characteristics of each service
- C. Distribution: Distribute the schedule to the Owner, Architect, and each party involved in performance of portions of the Work where inspections and tests are required.

END OF SECTION 013200