

ADDENDUM

Project: Science Building Research Wing Expansion

Project No. 03049

Owner: University of Southern Maine
Portland, Maine

Architect: Symmes Maini and McKee Associates
1000 Massachusetts Avenue
Cambridge, MA 02138
(617) 547-5400; FAX (617) 354-5758

Addendum: No. 1

Date: April 28, 2004

This addendum forms a part of the Contract Documents and modifies the original Bidding Documents dated February 20, 2004. Portions of the Bidding and Contract Documents not altered by this addendum remain in full force.

Acknowledge receipt of this addendum in the space provided on the Bid Form. Failure to do so may subject the Bidder to disqualification.

ATTACHMENTS

Table of Contents.

Section 00300, Proposal Form

Section 00310, Maine Construction Bid Depository Proposal Form for Subcontractor.

Sketches: SKA-1 through SKA-8, SKS-1 through SKS-9, SKE-01 through SKE-06.

Note that Section 13080, "Rooftop Equipment Screens," listed in the revised Table of Contents, has not been issued yet. It will be issued with Addendum No. 2, along with appropriate sketches. HVAC sub-bidders may assume that work under section 13080 will not affect their bid.

CHANGES TO SPECIFICATIONS

Replace Table of Contents with revised version, dated April 28, 2004.

00300, Proposal Form

1. Replace with revised form dated April 28, 2004.

00310, Maine Construction Bid Depository Proposal Form for Subcontractor

1. Replace with revised form dated April 28, 2004.

01230, Alternates

1. 3.01 B: Delete Alternate No. 2.
2. 3.01: Add Paragraph H, Alternate No. 8, as follows:

H. Alternate 8: Rooftop Acoustical Screens:

1. Base Bid: No rooftop acoustical screens.
2. Alternate: Acoustical panels on structural supports at roof perimeter and acoustical panels mounted on exterior walls, as specified in Section 13080; refer to Drawings for extent. Alternate includes cutting and patching of existing roofing.

01400, Quality Requirements

1. 1.07 E: Change "Commonwealth of Massachusetts" to "State of Maine."

03310, Cast-In-Place Concrete

1. Section 03310.2.05D: Change the wording of "normal weight" concrete to read "lightweight concrete." The term lightweight concrete applies to all slab on metal deck concrete. Concrete fill for steel pan stairs shall be normal weight concrete.

05500, Metal Fabrications

1. 1.02 A: Add subparagraph 5 as follows: "5. Bar grating over elevator pit sump."
2. In Part 2, add new Article 2.12 as follows:

2.12 BAR GRATING FOR ELEVATOR PIT SUMP.

- A. Aluminum Bar Grating: 1/4" x1" aluminum bars with 1/8" clear spacing between bars. Provide a frame of 2"x2" aluminum angles pre drilled for expansion bolts to all 4 sides of sump pit, flush with pit floor. Construct to field measured dimensions. Drill holes as necessary for penetrations for sump pump piping."
3. In Part 3, insert new Article 3.05 as follows, as renumber 3.05 and 3.06 as 3.06 and 3.07, respectively.

3.05 INSTALLATION OF BAR GRATING

- A Set bar grating flush with adjacent floor surface. Install with expansion bolts into concrete wall.

08710, Door Hardware

1. 3.07: Make the following changes to the Hardware Sets:
 - 1a. Add to Set No. 5, 1 - Closer.
 - 1b. Add to Set No. 6, 2 - Kick Plates

15050, Basic Mechanical Materials and Methods

1. 1.00: Add new paragraph D, as follows:
 - D. The HVAC filed sub-bid shall include all the work specified in Division 15 and shown on Drawings M0.1 through M2.2 and P.01 through P2.2, inclusive.

15910, Control Systems

1. 1.02: Change paragraph B to read as follows:
 - B. The direct digital control system is an extension of the existing system. This existing system has an open system architecture by means of ANSI/ASHRAE standard 135-1995 BACnet protocol.
2. 1.02 C.13: Change this subparagraph to read as follows:
 13. New controls for existing equipment:
 - a. Constant Volume Reheat Terminal Unit Control
 - b. Air Conditioning Unit Control #1 (AC-6 & 7)
 - c. Air Conditioning Unit Control #2 (AC-5)
 - d. Reset Hot Water Control
 - e. Air Handling Unit Control System (AH-2)
 - f. Hood Exhaust Fans
 - g. General Exhaust
3. 1.02 D: Change paragraph D to read as follows:
 - D. Provide complete, effective and efficient control of the following:
 1. Revisions to existing systems and equipment as indicated.
 2. New HVAC systems and equipment added as work of this contract.
4. 2.01: Add new paragraphs as follows:
 - E. Building Automation System: IB Controls – Delta native BACNET system.
 - F. Variable Frequency Drives: Delta/Omron P5
5. 2.02: Change paragraph A to read as follows:
 - A. The direct digital control system is an extension of the existing system. This existing system has an open system architecture by means of ANSI/ASHRAE standard 135-1995 BACnet protocol.

6. 2.03 B: Change the subparagraphs to read as follows:
 1. Second tier networks shall provide Native BACnet MS/TP communications, and shall operate at a minimum communication speed of 78,000 baud.
 2. DDC System Controllers shall reside on the second tier and be certified as native BACnet (plug & play technology).
7. 3.05 F.1: Change Room No. 352A to 352.
8. 3.08: Add new paragraph B, as follows:
 - B. Comply with USM IDAT requirements.

15950, Testing Adjusting and Balancing

1. 3.11 A: Change "01400" to "Section 01450."
2. 3.12 A: Change "01400" to "Section 01450."
3. 3.12: Add new paragraphs as follows:
 - J. Fan Test Reports (Supply and exhaust):
 1. Fan Data: Include the following:
 - a. System identification.
 - b. Location.
 - c. Make and type.
 - d. Model number and size.
 - e. Manufacturer's serial number.
 - f. Arrangement and class.
 - g. Sheave make, size in inches, and bore.
 - h. Sheave dimensions, center-to-center and amount of adjustments in inches.
 2. Motor Data: Include the following:
 - a. Make and frame type and size.
 - b. Horsepower and rpm.
 - c. Volts, phase, and hertz.
 - d. Full-load amperage and service factor.
 - e. Sheave make, size in inches, and bore.
 - f. Sheave dimensions, center-to-center and amount of adjustments in inches.
 - g. Number of belts, make, and size.
 3. Test Data: Include design and actual values for the following:
 - a. Total airflow rate in cfm.
 - b. Total system static pressure in inches wg.
 - c. Fan rpm.
 - d. Discharge static pressure in inches wg.
 - e. Suction static pressure in inches wg.

K. Duct Traverse Reports: Include a diagram with a grid representing the duct cross-section and record the following:

1. Report Data: Include the following:
 - a. System and air-handling unit number.
 - b. Location and zone.
 - c. Traverse air temperature in deg F.
 - d. Duct static pressure in inches wg.
 - e. Duct size in inches.
 - f. Duct area in sq. ft.
 - g. Design airflow rate in cfm.
 - h. Design velocity in fpm.
 - i. Actual airflow rate in cfm.
 - j. Actual average velocity in fpm.
 - k. Barometric pressure in psig.

L. System-Coil Reports (Energy Recovery Unit):

1. Unit Data: Include the following:
 - a. System identification.
 - b. Location and zone.
 - c. Coil make and size.
 - e. Flow meter type.
2. Test Data: Include design and actual values for the following:
 - a. Airflow rate in cfm.
 - b. Entering-water temperature in deg F.
 - c. Leaving-water temperature in deg F.
 - d. Water pressure drop in feet of head or psig.
 - e. Entering-air temperature in deg F.
 - f. Leaving-air temperature in deg F.

M. Existing Air-Terminal-Device Reports including hot water coils:

1. Unit Data: Include the following:
 - a. System and air-handling unit identification.
 - b. Location and zone.
 - c. Test apparatus used.
 - d. Area served.
 - e. Air-terminal-device make.
 - f. Air-terminal-device number from system diagram.
 - g. Air-terminal-device type and model number.
 - h. Air-terminal-device size.
 - i. Air-terminal-device effective area in sq. ft.
 - j. Coil make and size.
 - k. Flow meter type.

2. Test Data: Include design and actual values for the following:
 - a. Airflow rate in cfm.
 - b. Air velocity in fpm.
 - c. Preliminary airflow rate as needed in cfm.
 - d. Preliminary velocity as needed in fpm.
 - e. Final airflow rate in cfm.
 - f. Final velocity in fpm.
 - g. Space temperature in deg F.
 - h. Entering-water temperature in deg F.
 - i. Leaving-water temperature in deg F.
 - j. Water pressure drop in feet of head or psig.
 - k. Entering-air temperature in deg F.
 - l. Leaving-air temperature in deg F.

N. Hot Water Unit Heaters:

1. Unit Data: Include the following:
 - a. Unit identification.
 - b. Location and area served.
 - c. Test apparatus used.
 - e. Make and model number.
 - f. Device number from plans.
 - g. Flow meter type.
2. Test Data: Include design and actual values for the following:
 - a. Space temperature in deg F.
 - b. Entering-water temperature in deg F.
 - c. Leaving-water temperature in deg F.
 - d. Water pressure drop in feet of head or psig.
 - e. Entering-air temperature in deg F.
 - f. Leaving-air temperature in deg F.

4. 3.13: Add new paragraph B, as follows:

B. Existing Fume Hood Test Reports:

1. Unit Data: Include the following:
 - a. Unit identification.
 - b. Location.
 - c. Fume hood manufacturer
 - d. Make and size.
 - e. Model and serial numbers.
 - f. Attach a label on the lower right hand corner of the sash on each hood clearly and legibly marked with the following information: Test and balance agency, Hood No., Date, Maximum sash opening, average face velocity, lowest velocity reading, CFM, TBE, Instrument and Instrument calibration date.

2. Exhaust fan and motor
 - a. Fan manufacturer, model and serial number
 - b. Fan description: such as fan type, size, arrangement, class, discharge, type sheave and drive, speed (RPM), specified design total exhaust CFM
 - c. Motor manufacturer, model and serial number. Motor description such as: HP, voltage, phase, cycles, rated amperes, running amperes – each phase, speed (RPM).

3. Performance Test Data:
 - a. Position of operable sash – percent full open
 - b. Exhaust volume rate (CFM) – measured in exhaust duct. Include average duct velocity and cross sectional area of duct used for calculations
 - c. Exhaust volume rate (CFM) measured at hood duct opening. Include average duct velocity and cross sectional area of duct used for calculations
 - d. Sketch of hood sash opening showing center point areas and corresponding velocity readings
 - e. Average face velocity. Compare with specified design face velocity.
 - f. Exhaust volume rate (CFM) calculated from face velocity measurements. Compare with exhaust volumes of 2. b. & c.
 - g. Whether reverse flows or dead air spaces were observed at hood face. (titanium tetrachloride test)
 - h. Whether reverse flows were observed at each end of the working surface and across the working surface of hood. (titanium tetrachloride test).
 - i. Observation and results of hood smoke test with hood door open and door closed.
 - j. Observations and results of hood dry-ice test.
 - k. Average face velocity with hood sash open 3 inches. Compare with specific limitations.
 - l. Brief summary of tests.

CHANGES TO DRAWINGS

A0.3, Schedules and Legends

1. In Door Types, change Door Type F from “Flush wood Door” to “Flush HM door.”

A1.6, Roof Plan

1. Add detail key to detail 3/A1.6 as shown on sketch SKA-1.
2. Add detail key to detail 6/A1.6 as shown on sketch SKA-2.
3. Add detail key to detail 7/A1.6 as shown on sketch SKA-3.
4. Add new detail 8/A1.6 as shown on sketch SKA-4.
5. Add new detail 9/A1.6 as shown on sketch SKA-5.

A4.4, Details

1. Add new detail 17/A4.4 showing typical framing of stair landing at Stair #6 exterior wall, as shown on sketch SKA-8.

A4.5, Details

1. Add new detail 4/A4.5 showing flashing and expansion joint at intersection of Stair #6 to roof, as shown on sketch SKA-6.
2. Add new detail 5/A4.5 showing flashing, expansion joint and threshold at door #601, as shown on sketch SKA-7.

A5.1, Stair and Elevator Plans and Sections

1. On enlarged plan 6/A5.1, add a detail key to new detail "4/A4.5 (typ.)", at the exterior wall to the west of door #601.
2. On enlarged plan 6/A5.1, add a detail key to new detail "5/A4.5", at the threshold of door #601.
3. On enlarged plan 6/A5.1, add a detail key to new detail "17/A4.4(typ.)", at the north wall of stair #6.

S0.02, General Notes and Typical Details

1. Change the second note under Concrete to read, "Concrete slab on metal deck 3500psi Lightweight Concrete." This applies to all concrete on metal deck at the new fourth, fifth, and roof levels.

S1.11, Existing First Floor Framing Plan

1. Increase size of existing area way, and add grating as shown on sketch ADD-1/SKS-1

S1.41, New Fourth Floor Framing Plan

1. Revise mechanical shaft dimensions and remove existing steel girts as shown on sketch ADD-1/SKS-2.
2. Omit sawcut opening note at section 15/S4.01 in the area of gridline 4.3 and F. Locate the opening in the same area on the third floor. Refer to the architectural drawings for size and location.

S1.51, New Fifth Floor Framing Plan

1. Revise mechanical shaft dimensions as shown on sketch ADD-1/SKS-3.

S1.61, New Roof Framing Plan

1. Provide additional C6 Hangers for extended roof parapet support as shown on sketches ADD1/SKS-4 and ADD-1/SKS-5.
2. At Stair No. 6, make the top of the steel tubes at the exterior/perimeter of the stair tower equal to 123-7".

S2.03, Bracing Elevations and Details

1. Revise Brace Frame no. 7 as shown on sketch ADD-1/SKS-6.
2. Revise the top of steel elevation at the roof level at Braces 4, 5, 6, and 7.

S4.01, Sections and Details

1. Add new Section 2a as shown on sketch ADD-1/SKS-7.
2. Add new Section 20a as shown on sketch ADD-1/SKS-8.

S4.02, Sections and Details

1. Revise Section 13 as shown on sketch ADD-1/SKS-9.
2. In Sections 11 and 12 make the top of steel elevation at the stair landing equal to 123'-7".

M2.1 Second Floor and Penthouse Plans

1. Change note at EF/22 to read "Extend 4" ERS7R across roof I connect to coil in EF-22-ERU. Provide shut-off and balance valves."

M2.2 Part Plans, Section and Details

1. Refer to Detail 4/M2.2. Change note to read "Extend 1" chilled water horizontally for cross connection to Science Wing CHWS&R."

E0.1 Legend, Details and Schedules

1. Make changes shown on SKE-01.

E1.3 Third and Fourth Floors, Power and Lighting

1. Make changes shown on SKE-02 and SKE-03.

E1.4 Fifth Floor and Roof Plan, Power and Lighting

1. Make changes shown on SKE-04.

E1.5 Penthouse Plan and Basement Partial Plan

1. Make changes shown on SKE-05.

E4.1 Power One-Line Diagram, Phase 2

1. Make changes shown on SKE-06.

END OF ADDENDUM