SSME
Spring Stoops McCullen Engineering

Addendum #1

November 18, 2025

NC Department of Natural & Cultural Resources
Archives & History / State Library Building – Chiller Replacement
Raleigh, NC
SCO #23-27063-01A
SSME #23023

Refer to the attached meeting minutes and attendance sign-in sheet from the Pre-Bid Conference held at the Archives & History Building on Wednesday, November 12, 2025.

The following addendum items shall be incorporated into the Contract Documents:

1. **Refer to Construction Documents – Specifications, Section 012300 "Alternates":** Incorporate the following changes to paragraph 1.4 "PROCEDURES":

    a. Subparagraph 1.4.A.1.: Revise the paragraph to read as follows: "Include as part of each alternate, miscellaneous devices, accessory objects, modifications to existing piping and electrical infrastructure, general building construction, and similar items incidental to or required for a complete installation whether or not indicated as part of the base bid or alternate."
    b. Subparagraph 1.4.F.: Revise the paragraph to read as follows: "Water-cooled Chiller Life Cycle Bid Alternates: When considering the purchase price of the chiller to enter on the Bid Form, the Contractor shall include the cost for any and all modifications related to the installation of existing piping, electrical, etc. where it may differ from what has been shown on the Contract Documents."

2. **Refer to Construction Documents – Specifications, Section 230523 "General Duty Valves for HVAC Piping":** Refer to the attached specification section 230523 for the following revisions:

    a. Paragraph 2.4: Deleted paragraph in its entirety.
    b. Paragraph 3.5: Changed paragraph heading to read "CHILLED- AND CONDENSER-WATER VALVE SCHEDULE."
    c. Paragraph 3.6 : Deleted paragraph in its entirety.

3. **Refer to Construction Documents – Specifications, Section 236426.16 "Water-Cooled, Rotary-Screw Water Chillers":** Incorporate the following change:

    a. Paragraph 2.2.H.2.: Revise paragraph as follows: "Refrigerant Type: R-513a. Classified as Safety Group A1 according to ASHRAE 34."

4. **Refer to Construction Documents – Drawings, Sheet M1.1:** Refer to the attached drawing for the following revision:

    a. Keyed Note "9" has been added to read: "Remove section of existing wall feature in Corridor G07 for installation of temporary chilled water piping. Replace removed section of wall feature upon demolition of temporary chilled water piping, matching existing construction and finishes."

END OF ADDENDUM #1

NC Department of Natural & Cultural Resources
Archives & History / State Library Building – Chiller Replacement
Raleigh, NC
SCO #23-27063-01A
SSME #23023

Pre-Bid Conference Meeting Minutes

Date: Wednesday, November 12, 2025
Time: 3:00 P.M.
Location: Archives & History Building, Conference Room G01A

1. **Introduction:**

   a. **Distribution of Sign-In Sheet:** See attached sign-in sheet for attendance and contact information.

   b. **Form of Bid:** Project will be bid as a Single Prime Mechanical Construction contract – lump sum

   c. **Key Project Personnel and Roles:**

   - **Owner/Agency:** NC Dept. of Natural & Cultural Resources
   - **Owner's Rep/Project Manager:** Steven Miller, Project Manager, Capital Projects
   - **Building Contact(s):** Sequoyah Winston – (919) 814-6730
   - **Design Team/Project Manager:** David Stoops – Spring Stoops McCullen Engineering, PA

   d. **Bid and Award Schedule:**

   - **Bid Date/Time:** Tuesday, November 25 at 3:00 P.M.
   - **Bid Opening Location:** Archives & History Building Auditorium, Raleigh, NC
   - **Construction Duration:** 330 consecutive calendar days from Notice to Proceed (NTP)

2. **Review of Owner General Requirements/Comments:**

   a. **Full Occupancy:** Owner will fully occupy building during construction. Building requires near year-round cooling and dehumidification for preservation of archival storage materials.

   b. **Protection of Existing:** Existing equipment and facilities in the project construction area are to be protected. Schedule all required shutdowns/outages with owner minimum of 72 hours in advance.

   c. **Working Hours:** Normal work hours shall be limited to 8:00 a.m. to 5:00 p.m. Monday through Friday. Notify Designer and Owner of any deviations in advance.

3. **Designer Overview/Comments:**

   a. **Review Scope of Work:** Scope of work includes replacement of existing water-cooled chiller with a new water-cooled rotary-screw chiller and associated piping, mechanical room exhaust ductwork, electrical connections and temperature controls. A 250-ton temporary chiller will be installed on the

north plaza during replacement of the existing chiller. Work also includes demolition of existing process chiller and installation of a new electric instantaneous water heater serving the film process lab.

b. **Communication During Bid Phase:** All questions shall be in writing (via email) to SSME Attn: David Stoops. Answers and/or clarifications will be issued via addendum.

c. **Bid Proposal Form:**

- Only use standard form "Form of Proposal" included in backend of the Project Manual.
- Base bid and (5) Alternate Bids (refer to Section 012300 of Project Manual).
- One preferred alternate for temperature controls manufacturer (Siemens).
- A complete form of proposal will be required at bid opening, including all alternate bid information blanks filled out. A delay in providing bid form with the required life cycle cost information after the bid opening day and time will be considered non-responsive and bid will be rejected.
- Bid bond (security) will be required for project.
- Performance and payment bonds will be required for project.

d. **Addenda:** Last addendum for changing/revising bid documents will be issued no later than 5 p.m. on Tuesday, November 18, 2025 (~7 calendar days prior to bid opening).

4. **Questions/Comments:**

a. **Existing Floor Protection:** The existing terrazzo floor in Corridor G07 shall be protected from damage due to the weight of the existing and replacement chillers. Refer to Article 11 – "Protection of Work, Property and the Public" in the General Conditions of the Contract.

b. **Chiller Breakdown:** The replacement chiller shall be installed without disassembly/reassembly into individual components to in order to fit along the path of installation and within the mechanical room. The existing chiller to be demolished may be disassembled into smaller components for removal from the building.

MEETING SIGN-IN SHEET

SSME
Spring Stoops McCullen Engineering
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Fax: (919) 403-9030

PROJECT: NC Dept. of Natural & Cultural Resources
Archives & History / State Library Building – Chiller Replacement
SCO ID #23-27063-01A
SSME Project #23023

MEETING: Pre-Bid Conference

DATE: Wednesday, November 12, 2025
TIME: 3:00 P.M.
LOCATION: Archives & History Building, Conference Rm. G01A, Raleigh, NC

NAME	COMPANY	PHONE #	EMAIL ADDRESS
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SECTION 230523 - GENERAL-DUTY VALVES FOR HVAC PIPING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Bronze ball valves.
2. High-performance butterfly valves.

B. Related Sections:

1. Section 230553 "Identification for HVAC Piping and Equipment" for valve tags and schedules.

1.3 DEFINITIONS

A. CWP: Cold working pressure.

B. EPDM: Ethylene propylene copolymer rubber.

C. NBR: Acrylonitrile-butadiene, Buna-N, or nitrile rubber.

1.4 ACTION SUBMITTALS

A. Product Data: For each type of valve indicated.

1.5 QUALITY ASSURANCE

A. Source Limitations for Valves: Obtain each type of valve from single source from single manufacturer.

B. ASME Compliance:

1. ASME B16.10 and ASME B16.34 for ferrous valve dimensions and design criteria.
2. ASME B31.1 for power piping valves.
3. ASME B31.9 for building services piping valves.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Prepare valves for shipping as follows:

1. Protect internal parts against rust and corrosion.
2. Protect threads, flange faces, grooves, and weld ends.
3. Set ball open to minimize exposure of functional surfaces.
4. Set butterfly valves closed or slightly open.

B. Use the following precautions during storage:

1. Maintain valve end protection.
2. Store valves indoors and maintain at higher than ambient dew point temperature. If outdoor storage is necessary, store valves off the ground in watertight enclosures.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. In other Part 2 articles where subparagraph titles below introduce lists, the following requirements apply for product selection:

1. Manufacturers: Subject to compliance with requirements, provide products by the manufacturers specified.

2.2 GENERAL REQUIREMENTS FOR VALVES

A. Refer to HVAC valve schedule articles for applications of valves.

B. Source Limitations for Valves: Obtain each type of valve from single source from single manufacturer.

C. ASME Compliance:

1. ASME B16.1 for flanges on iron valves.
2. ASME B16.5 for pipe flanges and flanged fittings, NPS 1/2 through NPS 24.
3. ASME B16.10 and ASME B16.34 for ferrous valve dimensions and design criteria.
4. ASME B31.9 for building services piping valves.

D. Valve Pressure and Temperature Ratings: Not less than indicated and as required for system pressures and temperatures.

E. Valve Sizes: Same as upstream piping unless otherwise indicated.

F. Valve Actuator Types:

1. Handwheel: For valves other than quarter-turn types.

2. Hand Lever: For quarter-turn valves NPS 6 and smaller.

G. Valves in Insulated Piping: With 2-inch stem extensions and the following features:

1. Ball Valves: With extended operating handle of non-thermal-conductive material, and protective sleeve that allows operation of valve without breaking the vapor seal or disturbing insulation.
2. Butterfly Valves: With extended neck.

H. Valve-End Connections:

1. Flanged: With flanges according to ASME B16.1 for iron valves.
2. Threaded: With threads according to ASME B1.20.1.

I. Valve Bypass and Drain Connections: MSS SP-45.

2.3 BRONZE BALL VALVES

A. Two-Piece, Full-Port, Bronze Ball Valves with Bronze Trim:

1. Manufacturers:

a. American Valve, Inc.
b. Conbraco Industries, Inc.; Apollo Valves.
c. Crane Co.; Crane Valve Group; Crane Valves.
d. Hammond Valve.
e. Lance Valves; a division of Advanced Thermal Systems, Inc.
f. Legend Valve.
g. Milwaukee Valve Company.
h. NIBCO Inc.
i. Red-White Valve Corporation.
j. Watts Regulator Co.; a division of Watts Water Technologies, Inc.

2. Description:

a. Standard: MSS SP-110.
b. SWP Rating: 150 psig.
c. CWP Rating: 600 psig.
d. Body Design: Two-piece.
e. Body Material: Bronze.
f. Ends: Threaded or soldered.
g. Seats: PTFE or TFE.
h. Stem: Bronze.
i. Ball: Chrome-plated brass.
j. Port: Full.

2.4 HIGH-PERFORMANCE BUTTERFLY VALVES

A. Class 150, Single-Flange, High-Performance Butterfly Valves:

1. Manufacturers:

a. Milwaukee Valve Company.
b. NIBCO Inc.
c. Watts Regulator Co.; a division of Watts Water Technologies, Inc.
d. Hammond.

2. Description:

a. Standard: MSS SP-68.
b. CWP Rating: 285 psig at 100 deg F.
c. Body Design: Lug type; suitable for bidirectional dead-end service at rated pressure without use of downstream flange.
d. Body Material: Carbon steel, cast iron, ductile iron, or stainless steel.
e. Seat: Reinforced PTFE or metal.
f. Stem: Stainless steel; offset from seat plane.
g. Disc: Carbon steel.
h. Service: Bidirectional.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine valve interior for cleanliness, freedom from foreign matter, and corrosion. Remove special packing materials, such as blocks, used to prevent disc movement during shipping and handling.

B. Operate valves in positions from fully open to fully closed. Examine guides and seats made accessible by such operations.

C. Examine threads on valve and mating pipe for form and cleanliness.

D. Examine mating flange faces for damage or conditions that might cause leakage. Check bolting for proper size, length, and material. Verify that gasket is of proper size, that its material composition is suitable for service, and that it is free from defects and damage.

E. Do not attempt to repair defective valves; replace with new valves.

3.2 VALVE INSTALLATION

A. Install valves with unions or flanges at each piece of equipment arranged to allow service, maintenance, and equipment removal without system shutdown.

B. Locate valves for easy access and provide separate support where necessary.

C. Install valves in horizontal piping with stem at or above center of pipe.

D. Install valves in position to allow full stem movement.

E. Install valve tags. Comply with requirements in Section 230553 "Identification for HVAC Piping and Equipment" for valve tags and schedules.

3.3 ADJUSTING

A. Adjust or replace valve packing after piping systems have been tested and put into service but before final adjusting and balancing. Replace valves if persistent leaking occurs.

3.4 GENERAL REQUIREMENTS FOR VALVE APPLICATIONS

A. If valve applications are not indicated, use the following:

1. Shutoff Service: Ball valves.

B. If valves with specified SWP classes or CWP ratings are not available, the same types of valves with higher SWP classes or CWP ratings may be substituted.

C. Select valves, except wafer types, with the following end connections:

1. For Copper Tubing, NPS 2 and Smaller: Threaded ends except where solder-joint valve-end option is indicated in valve schedules below.

3.5 CHILLED- AND CONDENSER-WATER VALVE SCHEDULE

A. Pipe NPS 2 and Smaller:

1. Bronze Valves: May be provided with solder-joint ends instead of threaded ends.
2. Ball Valves: Two-piece, full port, bronze with bronze trim.

B. Pipe NPS 2-1/2 and Larger:

1. High-Performance Butterfly Valves: Class 150, single flange.

END OF SECTION 230523

WALL RATING LEGEND

1 HOUR FIRE PARTITION

2 HOUR FIRE PARTITION

PARTIAL GROUND FLOOR DEMOLITION PLAN - MECHANICAL

SCALE: 1/4" = 1'-0" PIPING

0 1 4 8

KEYED NOTES

1. DISCONNECT AND REMOVE EXISTING CHILLED AND CONDENSER WATER PIPING AND ASSOCIATED BUTTERFLY VALVES FROM CHILLER CONNECTIONS TO POINTS INDICATED. PROVIDE TEMPORARY CONNECTIONS WITH BUTTERFLY VALVES TO CHILLED WATER SUPPLY AND RETURN FOR CONNECTION TO RENTAL CHILLER.
2. REMOVE EXISTING 3" REFRIGERANT RELIEF PIPING FROM CHILLER TO TERMINATION POINT ON THE EXTERIOR OF THE BUILDING IN ITS ENTIRETY.
3. REMOVE EXISTING WALL-MOUNTED REFRIGERANT DETECTION AND ALARM PANEL AND ASSOCIATED TUBING AND SENSORS.
4. REMOVE EXISTING DOUBLE DOOR AND FRAME, AND STORE FRONT FRAMES AND GLASS FOR REMOVAL OF EXISTING CHILLER AND INSTALLATION OF NEW CHILLER. STORE AND PROTECT FOR REINSTALLATION.
5. EXISTING AUDIBLE AND VISUAL HORNS / STROBES FOR REFRIGERANT LEAK DETECTION AND ALARM SYSTEM TO REMAIN.
6. EXISTING EMERGENCY START SWITCH FOR MECHANICAL REFRIGERATION ROOM EXHAUST FAN EF-16 TO OPERATE AT HIGH SPEED.
7. EXISTING COMPRESSION TANK AT CEILING TO REMAIN.
8. EXISTING MAKE-UP WATER ASSEMBLY TO REMAIN.
9. REMOVE SECTION OF EXISTING WALL FEATURE IN CORRIDOR G07 FOR INSTALLATION OF TEMPORARY CHILLED WATER PIPING. REPLACE REMOVED SECTION OF WALL FEATURE UPON DEMOLITION OF TEMPORARY CHILLED WATER PIPING, MATCHING EXISTING CONSTRUCTION AND FINISHES.

GROUND FLOOR

KEY PLAN
NO SCALE

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 19269 DAVID A. STOOPS 11/18/25

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PARTIAL GROUND FLOOR DEMOLITION
PLAN - MECHANICAL - PIPING

NO.	REVISIONS	BY
1	ADDENDUM #1 11/18/25	DAS

DATE	SCALE
10/24/25	AS SHOWN
DRAWN	CHECKED
DAS	DAS
CLIENT JOB NO.	SSME JOB NO.
	23023
SHEET	
M1.1	
OF SHEETS	

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