ADDENDUM

ADDENDUM NO: 03

PROJECT: Stout Field Building 9 Latrine Transformation

PROJECT NO: 2025004 DATE: 08/19/2025 BY: CSO Architects

This Addendum is issued in accordance with the provisions of "The General Conditions of the Contract for Construction," Article 1, "Contract Documents" and becomes a part of the Contract Documents as provided therein. This Addendum includes:

Addendum pages: ADD 1 of 2 thru ADD 2 of 2

Specification Sections: Section 230593

Drawing Sheets: N/A

PART 1 - CLARIFICATIONS

1.1 N/A

PART 2 - QUESTIONS AND ANSWERS

2.1 Question: Where is the 2000a Main Distribution Panel (MP-3) located?

Reply: See attached Electrical sheets

2.2 Question: What is the manufacturer's name of the existing panels

Reply: See attached Electrical sheets

2.3 Question: Fire Alarm: What is the manufacturer's name of the existing FA system

Reply: See attached Electrical sheets

PART 3 - BIDDING REQUIREMENTS,

N/A

PART 4 - SPECIFICATIONS

ARCHITECTURE

N/A

MECHANICAL

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4.1 SECTION 230593 TESTING, ADJUSTING AND BALANCING FOR HVAC

A. Replace Section 230593 with attached Section 230593 Testing, Adjusting and Balancing For HVAC

PLUMBING

N/A

ELECTRICAL

N/A

PART 5 - DRAWINGS

ARCHITECTURAL

N/A

PLUMBING

N/A

MECHANICAL

N/A

ELECTRICAL

N/A

END BUILDING 9 - ADDENDUM 03

PART 1 - GENERAL

1.1 Provide air balancing of the new systems and existing systems affected by the new work. Balancing work shall be performed by qualified personnel of a member firm of the National Environmental Balancing Bureau (NEBB) who has no affiliation with the Contractor or any of its Sub-Contractors. Include a certification sheet signed and sealed by the certified testing and balancing authority. Include a list of instruments to be used for procedures, along with proof of calibration.

1.2 Methods, procedures, equipment, certifications, report forms and reporting information shall be in accordance with the standards of NEBB and latest edition of the SMACNA TAB Procedural Guide and industry practice.

1.3 During the bid period, call to attention any requirements for additional balancing dampers, test ports, gage cocks, thermometer wells, flow control devices, valves, balancing valves and fittings and manual volume dampers which are deemed necessary in addition to those shown on the drawings, and provide such so that proper balancing can be performed. Prior to installation of the systems, verify that the proper number and location of balancing devices are adequate for completion of the balancing work.

1.4 Refer to Section 23 05 31 HVAC Equipment Drives and other Sections of Division 23 for requirements related to the balancing work.

1.5 Verify that all equipment start-up services have been completed before the beginning of any balancing work. After initial start-up has been completed, inform the balancer that the systems are operating properly, that all safety interlocks and protective devices are functioning, and the systems are ready to be balanced.

PART 2 - PRODUCTS – NOT USED

PART 3 - EXECUTION

3.1 Air Balance

A. Obtain job specific fan curves for each fan being balanced, new and existing, and include in report.

B. Record nameplate data from fan, motor, and air handling cabinet.

C. Record and measure fan and motor sheaves indicating number and size of belts along with center-to-center distances.

D. Test and record actual operating fan rpm.

E. Measure and record actual running amperage.

F. Each air supply, return, and exhaust system, when installation is completed, including the installation of clean filters, shall be set in operation for balancing. Determine the best location in main and branch ducts for accurate duct airflow measurements. Each air outlet and inlet device, item of equipment (fan coils, air control units, etc.), shall be balanced to the quantities listed on the drawings within plus or minus 10 percent. Central fan systems (AHU’s, exhaust

fan systems, etc.) shall be balanced to within plus or minus 5%. Intended pressure relationships in areas required by recognized standards and practice shall be attained.

G. Adjust drive pulleys to attain fan speed required for the installed condition. Pulleys and belts of fixed drives and of adjustable drives not having sufficient adjustment range shall be changed out, at the direction of the balancer or Engineer, to obtain fan speed required for the installed condition. Labor /or materials required to make the recommended changes shall be included in Division 23.

H. Measure velocity reading across coils, filters, and dampers on the intake side of the fan. Include data in the report.

I. Coordinate with the Temperature Controls Installer in setting supply and return fan variable frequency drives and outside air, and vent air dampers. Supply air systems shall have ampere reading measured in the full heating, full cooling and economizer modes to determine the maximum brake horsepower.

J. Witness all duct pressure and leakage tests. Refer to 23 31 13 and coordinate accordingly.

K. Total air quantities of the supply fan, and, exhaust fan shall be determined by pitot tube traverse. Where impossible to take good pitot tube traverses of duct system, use total sum of terminal device air volume readings. Final settings of fan speeds shall be determined with automatic volume control devices at the fans fully open / variable speed drives at full speed. Refer to item F. above for drive changeout requirements and the items below.

L. For variable-air-volume systems, develop and implement a plan to simulate diversity.

M. Check airflow patterns from the outside-air louvers and dampers and the return and exhaust-air dampers, through the supply-fan discharge and mixing damper. Report any issues with stratification, poor mixing or short circuiting from one air stream to the other.

N. Check for airflow blockages.

O. Check for proper sealing of air-handling unit components. Report all issues in balancing report.

P. Check for proper sealing of air duct systems. Minor issues shall be reported in the balancing report. If a major issue is found, stop balancing work and report issue to the Construction Manager.

Q. The report shall include, but not be limited to, fan curves, both actual and design fan cfm, rpm, brake HP, entering and leaving static pressures, motor data, voltage and amperage and drive information. System air flows by device, terminal, branch and system shall be reported.

In addition, a sketch shall be provided for each air system balanced or surveyed, depicting exact location that fan static pressure and fan CFM readings were taken, relative to fan inlet and discharge, and what duct accessories were in place near the reading location and between the reading location and the fan. The sketch shall also depict elbows and other duct transitions in place near the reading location and between the reading location and the fan. Air handling unit sketches shall depict all air path components with-in the unit, and static pressure readings across each item. Balance reports will be rejected without this information.

R. Mark equipment and balancing device setting with paint or other suitable, permanent identification material, including damper-control positions, valve position indicators, fan-speed-controls levers, and similar controls and devices, to show final setting.

3.2 After completion of the balancing work, a full report shall be prepared in pencil and two copies (only) submitted to the Engineer for preliminary review. After review, additional balancing, adjustments, drive replacements, readings and recordings deemed necessary shall be done and the report revised. Six typed copies of the final report shall be submitted to the Engineer for review and approval. An approved copy of the report shall be included in each set of operating and maintenance manuals.

3.3 Final Report contents: In addition to certified field report data, include the following:

A. Table of Contents with total number of pages defined for each section of the report.

B. Summary of Contents - include the following:

1. Indicated versus final performance.
2. Notable characteristics of systems.
3. Description of system operation sequence if it varies from the contract documents.

C. Nomenclature sheets for each item of equipment.

D. Notes to explain why certain final data in the body of reports varies from indicated values.

E. Fan Curves.

F. Manufacturers' test data.

3.4 Inspection after testing and balancing are complete, operate each system and randomly check measurements to verify that the system is operating according to the final test and balance reading documented in the final report. Submit random sampling percentages and results.

3.5 Balancing Verification: Construction Manager shall randomly select measurements documents in the final report to be rechecked. The rechecking shall be limited to 5 percent of the total measurements recorded or what can be measured in (1) eight-hour period.

3.6 Seasonal Testing: If initial balancing procedures were not performed during near peak summer and winter conditions, perform additional testing, inspecting and adjusting during near peak summer or winter conditions.

3.7 10 Month Warranty Walk: Perform additional testing and balancing to verify that balanced conditions are being maintained throughout and to report unusual conditions with recommendation of adjustments. Allow two (2) days for this work.

END OF SECTION