

Bluff City Elementary School Cooling Tower Replacement

Oct 20, 2022

ADDENDUM 1

The Bid Documents dated September 13, 2022 are amended as follows:

CLARIFICATION

- 1.) The question was asked in the pre-bid meeting “Can the county maintenance department take care of reattaching the existing cooling tower on off signal wire to the new tower control system”

Answer:

Yes, Sullivan county school’s maintenance will reconnect the cooling tower on off control wiring. It will be the mechanical contractor’s responsibility to ensure that the new tower is compatible with the existing on off signal.

- 2.) With as much corrosion that is in the system can the cleaning be a gentle clean to try to avoid piping leaks and clogged unit strainers.

Answer:

Yes, we have changed the chemical feeder to a chemical bypass feeder with a filter along with one year’s service to change out the filter when it gets dirty. We have also eliminated the test and balance from the existing HVAC units and limited the test and balance scope to just the cooling tower.

PROJECT MANUAL

1. **Table of Contents**

- a. Inset the revised Table of Contents with revision 1 dated 10/20/22.

2. **Section 15040**

- a. Inset the revised Section 15040 revision 1 dated 10/20/22.

PROJECT DRAWINGS

1. Drawings

- a. Insert revised drawing ME-1 Revision 1 Dated 10/20/22.

END OF ADDENDUM 1

**BLUFF CITY ELEMENTARY SCHOOL COOLING TOWER REPLACEMENT
BLUFF CITY, TENNESSEE - R1 - 10/20/2022**

TABLE OF CONTENTS

COVER SHEET
TABLE OF CONTENTS

BIDDING REQUIREMENTS, CONTRACT FORMS, AND CONDITIONS OF THE CONTRACT

	PAGES
Letter to Prospective Bidders	1 page
Invitation to Bid	1 page
Instruction to Bidders	5 pages
Sullivan County Bid Envelope Cover	1 page
Sullivan County Bid Form	3 pages
Sullivan County Affidavits Form	2 pages
Buy American Certification	1 page
Certification Regarding Lobbying	1 page
Certification Regarding Debarment	1 page

DIVISION 1 -GENERAL REQUIREMENTS

00501 - Agreement - AIA With AIA A101, A201, and supplementary conditions attached	00501-53
01010 - Summary of Work	01010-2
01019 - Contract Considerations	01019-4
01039 - Coordination and Meetings	01039-3
01300 - Submittals	01300-5
01400 - Quality Control	01400-2
01500 - Construction Facilities and Temporary Controls	01500-3
01600 - Material and Equipment	01600-2
01700 - Contract Closeout	01700-3

DIVISION 2 - SITEWORK (NOT USED)

DIVISION 3 - CONCRETE (NOT USED)

DIVISION 4 - MASONRY (NOT USED)

DIVISION 5 - METALS (NOT USED)

DIVISION 6 - WOOD AND PLASTIC (NOT USED)

DIVISION 7 - THERMAL AND MOISTURE PROTECTION (NOT USED)

TABLE OF CONTENTS

DIVISION 8 - DOORS AND WINDOWS (NOT USED)

DIVISION 9 - FINISHES (NOT USED)

DIVISION 10 - SPECIALTIES (NOT USED)

DIVISION 11 - EQUIPMENT (NOT USED)

DIVISION 12 - FURNISHINGS (NOT USED)

DIVISION 13 - SPECIAL CONSTRUCTION (NOT USED)

DIVISION 14 - CONVEYING SYSTEMS (NOT USED)

DIVISION 15 - MECHANICAL

15010 - Mechanical General Provisions	15010-5
15020 - Completion Items	15020-3
15030 - Guarantee and Warranty	15030-1
15040 - Testing and Balancing	15040-4 R1 - 10/20/2022
15050 - Basic Materials and Methods	15050-3
15900 - Controls	15900-2

DIVISION 16 - ELECTRICAL

16100 - General Provisions	16100-6
16200 - Electrical Provisions	16200-3

FEDERAL REQUIREMENTS

Appendix A	Construction Provision Requirements for Federally Funded Projects
Appendix B	Wage Rate Determination
Appendix C	Insurance Limits for Construction Projects up to \$1,000,000

DRAWINGS

Cover Sheet	G1
Mechanical/Electrical Plan	ME-1 R1 - 10/20/2022

END OF TABLE OF CONTENTS

**BLUFF CITY ELEMENTARY SCHOOL COOLING TOWER REPLACEMENT
BLUFF CITY, TENNESSEE**

SECTION 15040 - R1 - 10/20/2022

TESTING AND BALANCING

PART 1 GENERAL

1.1 DESCRIPTION

- A. General:
 - 1. Furnish all labor, materials, tools, equipment, and services to test, balance and adjust all mechanical systems as indicated, in accord with provisions of Contract Documents.
 - 2. Completely coordinate with work of all other trades.
 - 3. Although such work is not specifically indicated, furnish and install all supplementary or miscellaneous items, appurtenances and devices incidental to or necessary for a sound, secure and complete installation.
 - 4. See Section 15010 for general mechanical requirements.
 - 5. See Division 1 for General Requirements.

- B. Test, balance and adjust following mechanical systems:
 - 1. New Cooling Tower

1.2 QUALITY ASSURANCE

- A. Agency qualifications: Independent balance and testing agency, approved by the Engineer.
 - 1. All work supervised by registered mechanical engineer.
 - 2. Show at least 5 successfully completed projects of similar size and scope.

- B. Balancing standards: Associate Air Balance Council requirements and recommendations.

1.3 RESPONSIBILITIES OF TESTING AND BALANCING AGENCY WORK

- A. Schedule work with trades involved.

- B. Check component parts for function and operation in system.

- C. Evaluate operation of systems and advise installer of necessary adjustments and corrective measures.

- D. Prepare and submit reports of all tests.

1.4 RESPONSIBILITIES OF MECHANICAL WORK

- A. Keep in correct operation during balancing operations.

- B. Make adjustments and corrections to systems as directed by balancing agency.

- C. Maintain accessibility to test locations and devices requiring adjustment.
- D. Add dampers required for correct air balance as recommended by the Air Balance Agency Work.

1.5 JOB CONDITIONS

- A. Balance at time directed by Engineer.
 - 1. If balancing is not done during peak cooling season demonstrate satisfactory balancing during next peak cooling season.

1.6 GUARANTEE

- A. Provide extended warranty of 90 days, after completion of test and balance work, during which time the Engineer may at his discretion, request recheck or resetting of any equipment or system which is not performing satisfactorily. Provide technicians to assist as required in making such tests.

1.7 SUBMITTALS

- A. Product data:
 - 1. Qualifications of balancing agency.
 - 2. Balancing reports; include all specified data. Use AABC forms latest edition.

PART 2 PRODUCTS NOT USED

PART 3 EXECUTION

3.1 GENERAL

- A. Accurately calibrate and maintain all test instruments in good working order.
 - 1. If requested, conduct tests of instruments in presence of Engineer.
- B. Do not begin balancing until systems have been completed and are in good working order.
- C. Record all inspections, tests and adjustments.

3.2 WATER BALANCE PROCEDURE - COOLING TOWER WATER:

- A. Open all valves to full open position. Drive all water source heat pumps to full cooling.
- B. Examine water in system and determine if water has been treated and cleaned.
- C. Check pump rotation - Building loop pumps and cooling tower spray pumps
- D. Set temperature controls for all coils at maximum cooling.
- E. Check cooling tower fan rotation.
- F. Set pumps to specified gallons per minute delivery.
- G. Adjust water flow of cooling tower water.

- H. Check cooling tower water temperatures at inlet side of cooling coils. Record temperature difference from source.
- I. After completing tower balancing, test cooling tower water pressures and flows at the pumps and readjust if required.
- J. Check following at each cooling.
 - 1. Inlet water temperatures.
 - 2. Leaving water temperatures.
 - 3. Pressure drop of cooling tower.
 - 4. Pump operating suction and discharge pressures and final total dynamic head.
 - 5. Water metering device readings.
- K. List all mechanical specifications of pumps.
- L. Record nameplate and actual operating amperages of pump motors and fan motors.

3.3 OPERATING TEST

- A. After systems are balanced, conduct operating test of not less than 8 hours duration each for heating and cooling systems to demonstrate to satisfaction of Owner that systems comply with requirements of plans and specifications, and that all equipment and controls are functioning properly.

END OF SECTION 15040