29 April, 2024

Addendum 1

Columbus County 911 Center

The following addendum shall supersede previous information and does hereby become part of the contract documents.

- Please see attached Re-Advertisement for Bids. Note revised Bid date to be May 30, 2024 at 2:00PM and revised Prebid to be May 20, 2024 at 11:00AM.
- See attached Lightning Protection Specifications 264113.

End of Addendum 1

RE-ADVERTISEMENT FOR BIDS

Sealed proposals for the construction of the Columbus County 911 Center will be received until 2:00PM on Thursday May 30, 2024, by the Owner in The Columbus County Admin Building, 3rd floor Commissioners Chambers 127 W. Webster Street Whiteville, NC at which time and place bids will be publicly read and posted.

A non-mandatory pre-bid meeting will be held on site at 11:00am, Monday May 20, 2024.

Complete plans and specifications for this project can be obtained free from www.coastalarchitecture.net after April 12, 2024.

For Plan Purchase Contact Coastal Architecture (252) 247-2127 or Email Lee@coastalarchitecture.net, $300.00 per set.

Signed: Columbus County

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DIVISION 26 - LIGHTNING PROTECTION

SECTION 264113 – LIGHTNING PROTECTION SYSTEM (LPS)

PART 1 – GENERAL

1.1 OBJECTIVE

A. To provide safety for the building and occupants by preventing damage to building structure caused by lightning.

1.2 STANDARDS

A. The following specifications and standards of the latest issue form a part of this specification:

1. Lightning Protection Institute Installation Standard, LPI 175

2. Underwriters Laboratories, Inc. Installation Requirements, UL96A

3. National Fire Protection Association Lightning Protection Standard, NFPA 780

1.3 SYSTEM DESIGN

A. The work covered by this section of the specifications consists of furnishing all labor, materials, and items of service required for the completion of a functional and unobtrusive lightning protection system as approved by the architect, engineer, and in strict accordance with this section of the specifications and the applicable contract drawings.

B. If any departure from the contract drawings or submittal drawings covered below are deemed necessary by the Lightning Protection Contractor, details of such departures and reasons therefore shall be submitted as soon as practical to the architect/engineer for approval.

1.4 SUBMITTALS

A. Complete design drawings shall be prepared by a Lightning Protection Contractor that employs LPI certified Master Installer Designers showing the type, size, and locations of all grounding, down conductors, through roof/through wall assemblies, roof conductors, and air terminals shall be submitted to the architect and engineer for approval.

B. Major system components shall be produced by SEVO Systems (no alternatives) and shall be installed by an authorized SEVO Systems Distributor certified for the design, installation, and service of the fire suppression systems

1.5 QUALITY ASSURANCE:

A. The lightning protection system shall conform to the requirements and standards for lightning protection systems of the LPI, UL, and NFPA. Upon completion, a certification letter and warranty by the installing contractor, i.e: Bonded Lightning Protection Systems, Ltd. shall be delivered to the owner. The certification letter and warranty ensures the system has been installed by a contractor who employs LPI certified Master Installer and UL OWAY certified.

B. Upon completion of the installation, the Lightning Protection Contractor is required to provide a LPI Master Installation Certification, LPI Re-conditioned Certification or LPI Limited Scope Report from the Lightning Protection Institute – Inspection

Program (LPI-IP), or UL master certification, depending on the lightning protection scope of work.

C. The Lightning Protection Contractor shall have a minimum of 10 years lightning protection installation experience, be a current member of the LPI and employ LPI certified Master Installer.

D. Lightning protection components shall be UL listed and labeled.

PART 2 – PRODUCTS

2.1 STANDARDS

A. The system to be furnished under this specification shall be the standard product of manufacturers regularly engaged in the production of lightning protection materials and shall be the manufacturer's latest approved design. The components shall be UL listed and properly UL labeled.

B. All materials shall be new and of a design and construction to suit the application where it is used in accordance with accepted industry standards and LPI, UL, and NFPA standard requirements.

QUALIFIED MANUFATURERS:

1. Advanced Lightning Technology
2. East Coast Lightning Equipment
3. Other approved manufacturers

2.2 LIGHTNING PROTECTION MATERIALS

A. All materials shall be copper/bronze or aluminum and of the size, weight, and construction to suit the application and used in accordance with LPI, UL, and NFPA code requirements. Class I sized components may be utilized on roof levels 75 feet and below in height. Class II sized components are required for roof levels over 75 feet in height. All mounting hardware shall be stainless steel to prevent corrosion.

2.3 ALUMINUM MATERIALS

A. Aluminum components shall be used on roofs that utilize aluminum, galvalume or galvanized metal roofing components. On aluminum, galvalume or galvanized metal roofs or where aluminum, galvalume or galvanized metal roofing components exist, the entire roof lightning protection system shall utilize aluminum components to ensure compatibility. However, the down leads and grounding shall utilize copper with the bimetal transition occurring at the through roof assembly or within 18-inches of earth with an approved bimetal through roof assembly.

2.4 CABLE CONNECTIONS

A. Class I structures shall utilize bolt type connectors for all conductor splices and connections between conductors and other components.

B. Class II structures shall utilize bolt type connectors for all conductor splices and connections between conductors and other components.

C. Crimp/pressure squeeze conductor supports are acceptable for Class I and Class II structures.

2.5 GROUNDING

A. Ground rods shall be copper-clad steel, 5/8 inch in diameter by 10 feet long.

B. If a ground counterpoise is required, it shall be sized according to the largest building grounding electrode conductor (GEC), but minimally per the LPS main sized conductor. The more stringent shall apply.

C. At least one test well shall be provided for testing purposes.

2.6 SURGE PROTECTION DEVICES (SPDS)

A. A surge protection device at the main electrical service entrance is required by lightning protection standards. The surge protection device must comply with the most current version of UL Standard 1449 as a Type 1 or Type 2 lightning rated unit of 160kA or more. It shall be the responsibility of the Electrical Contractor to furnish and install or verify that such surge protection device is installed on the main electrical service.

B. All other cabling, e.g., RF, CATV, CCTV, data, etc., exiting or entering the building shall have SPDs installed. The installation shall meet the project grounding standard, NEC, and manufacturer specifications. The more stringent shall apply.

PART 3 – MATERIALS AND EQUIPMENT

3.1 INSTALLATION:

A. The installation shall be accomplished by a Lightning Protection Contractor with a minimum of 10 years documented experience that is a member of the LPI and an employer of LPI certified Master Installer of lightning protection systems and UL OWAY Listed. For example: Bonded Lightning Protection Systems, Ltd. 1-800-950-7933 with locations in Dallas, Fort Worth, Houston, Austin, San Antonio, Oklahoma, Louisiana, Alabama, Georgia and Tennessee.

B. A LPI Certified Master Installer shall supervise the installation. The product manufacturer shall not supervise nor be the registered LPS contractor.

C. All materials shall be installed in a neat, workmanlike manner. The system shall consist of a complete conductor network at the roof and include air terminals, connectors, splicers, bonds, copper down leads, and proper ground terminals. Copper down lead conductors shall be utilized even when aluminum is required on the roof. Down lead conductors shall not be brought directly through the roof. Through roof assemblies with solid brass, aluminum or stainless steel rods shall be utilized for this purpose. The structural steel framework may be utilized in the installation as outlined by LPI, UL, and NFPA standards.

D. For pitched roofs with eave height exceeding 50 feet, eave level protection shall be addressed as outlined by LPI, UL, and NFPA standards.

E. For structures exceeding 200 feet in height, an intermediate loop (potential equalization) shall be addressed as outlined by LPI, UL, and NFPA standards.

3.2 COORDINATION

A. The Lightning Protection Contractor shall work with other trades to insure a correct, neat and unobtrusive installation. Coordinate installation of lightning protection with installation of other building systems and components, including electrical wiring, supporting structures and building materials, metal bodies requiring bonding to the lightning protection components and building finishes.

B. The Lightning Protection Contractor shall be required to coordinate locations of through roofs and submit details of through roof penetrations as required. The roofing contractor shall be responsible for sealing and flashing all lightning protection roof penetrations as per the roof manufacturer's recommendations.

C. The Lightning Protection Contractor shall use a compatible adhesive to adhere lightning protection components to the roof when required. The Lightning Protection Contractor shall furnish and install the adhesive and installation.

D. Should the roofing contractor/manufacturer require any special walk pads, membrane patches, pavers, etc. under the components of the lightning protection system, it shall be the responsibility of the roofing contractor to furnish and install such items. The Lightning Protection Contractor shall be responsible for marking the roof with all conductor and/or pad locations.

E. It shall be the responsibility of the Lightning Protection Contractor to assure a common bond to all incoming media such as the main water, gas, and electric and to assure interconnection with other ground systems.

3.3 FIELD QUALITY CONTROL

A. The lightning protection installation shall conform to the requirements and standards for lightning protection systems of the LPI, UL, and NFPA. Upon completion, the following certifications shall be delivered to the owner; a certification letter and warranty by the Lightning Protection Contractor, i.e: Bonded Lightning Protection Systems, Ltd., and a LPI Master Installation Certification, LPI Re-conditioned Certification or LPI Limited Scope Report from Lightning Protection Institute – Inspection Program (LPI-IP), depending on the lightning protection scope of work. An equivalent of completion (Master Label) may be obtained in lieu of an LPI-IP certificate.

B. It is recommended the lightning protection system be visually inspected at least annually per NFPA by a Lightning Protection Contractor that is a member of the LPI and UL Listed.

C. Upon completion of the installation, a systems test shall be performed and a written test report provided.

NOTE: FOR CLARIFICATION, USE PART IV IF PROJECT CONNECTS TO AN EXISTING STRUCTURE.

PART 4 – CLARIFICATION

4.1 CLARIFICATION

A. This specification recognizes additions that are attached to an existing structure may not fully comply with current lightning protection standards. Therefore, lightning protection shall be provided for new structures only. Upon completion of the installation, the Lightning Protection Contractor shall furnish a certification letter and warranty for the new structure only.

B. At the owner’s request, the Lightning Protection Contractor shall review the existing structure for compliance with current lightning protection standards. If existing lightning protection system complies with current standards, the completion certification and warranty shall be provided for the entire structure. If repairs are required, a change order shall be provided.

C. All electrical wiring shall be tested for proper connection, continuity and resistance to earth.

D. The complete system shall be functionally tested, in the presence of the owner or his representative, and all functions, including system and equipment interlocks, must be operational at least five days prior to the final acceptance tests.

E. Each detector shall be tested in accordance with the manufacturer's recommended procedures and test values recorded.

F. All system and equipment interlocks, such as door release devices, audible and visual

devices, equipment shutdowns, local and remote alarms, etc. shall function as required and designed.

G. Each control panel circuit shall be tested for trouble by inducing a trouble condition into the system.

4.2 TRAINING REQUIREMENTS

A. Prior to final acceptance, the installing contractor shall provide operational training to each shift of
the owner's personnel. Each training session shall include control panel operation, manual and (optional) abort functions, trouble procedures, supervisory procedures, auxiliary functions and emergency procedures.

4.3 OPERATION AND MAINTENANCE

A. Prior to final acceptance, the installing contractor shall provide four complete operation and maintenance instruction manuals to the owner. All aspects of system operation and maintenance shall be detailed, including piping isometrics, wiring diagrams of all circuits, a written description of the system design, sequence of operation and drawing(s) illustrating control logic and equipment used in the system. Checklists and procedures for emergency situations, troubleshooting techniques, maintenance operations and procedures shall be included in the manual.

4.4 AS-BUILT DRAWINGS

A. Upon completion of each system, the installing contractor shall provide four copies of system as- built drawings to the owner. The drawings shall show actual installation details including all equipment locations (i.e., control panel(s), agent container(s), detectors, alarms, manual pull station(s), and abort switch(s), etc.), as well as piping and conduit routing details. Show all room or facilities modifications, including door and/or damper installations completed. One copy of reproducible engineering drawings shall be provided reflecting all actual installation details.

4.5 ACCEPTANCE TEST

A. At the time As-built drawings and maintenance/operations manuals are submitted, the installing contractor shall submit a "Test Plan" describing procedures to be used to test the control system(s). The Test Plan shall include a step-by-step description of all tests to be performed and shall indicate the type and location of test apparatus to be employed. The tests shall demonstrate that the operational and installation requirements of this specification have been met. All tests shall be conducted in the presence of the owner or owner's representative and shall not be conducted until the Test Plan has been approved.

B. The tests shall demonstrate that the entire control system functions as designed and intended. All circuits shall be tested: automatic actuation and manual actuation, HVAC and power shutdowns, audible and visual alarm devices, and manual override of abort functions. Supervision of all control panel circuits, including AC power and battery power supplies, shall be tested and qualified.

C. A room pressurization test shall be conducted in each protected space to determine the presence of openings, which would affect the agent concentration levels. The test(s) shall be conducted using the Retrotec Inc. Door Fan system, or equivalent, with integrated computer program. All testing shall be in accordance with NFPA 2001.

D. If room pressurization testing indicates that openings exist which would result in leaks and/or loss of the extinguishing agent, the installing contractor shall be responsible for

coordinating the proper sealing of the protected space(s) by the general contractor or his sub-contractor or agent. The general contractor shall be responsible for adequately sealing all protected space(s) against agent loss or leakage. The installing contractor shall inspect all work to ascertain that the protected space(s) have been adequately and properly sealed. THE SUPPRESSION SYSTEM INSTALLING CONTRACTOR SHALL BE RESPONSIBLE FOR THE SUCCESS OF THE ROOM PRESSURIZATION TESTS. If the first room pressurization test is not successful, in accordance with these specifications, the installing contractor shall direct the general contractor to determine, and correct, the cause of the test failure. The installing contractor shall conduct additional room pressurization tests, at no additional cost to the owner, until a successful test is obtained. Copies of successful test results shall be submitted to the owner for his record. Upon acceptance by the owner, the completed system(s) shall be placed into service.

4.6 SYSTEM INSPECTIONS

A. During the one-year warranty period, the installing contractor shall provide two inspections of each system installed under this contract. The first inspection shall be at the 6-month interval, and the second inspection at the 12-month interval. Inspections shall be conducted in accordance with the manufacturer's guidelines and the recommendations of NFPA 2001.

B. Documents certifying satisfactory system(s) inspection shall be submitted to the owner upon completion of each inspection.

END OF SECTION 264113