

SECTION 264113 - LIGHTNING PROTECTION FOR STRUCTURES

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. This Section includes lightning protection for buildings and structures.
- B. Provide all labor, materials, and equipment as necessary to complete all work as indicated on the drawings, and as specified herein.
- C. The Contractor shall furnish and install a complete lightning protection system with all necessary components for a complete system.
- D. The entire lightning protection system shall be manufactured and installed in complete accordance with Underwriters Laboratories, Inc. Pamphlet no. UL96A Master Labeled Lightning Protection Systems. Upon completion the Contractor shall furnish the Owner with the standard brass master label type C plaque for installation within the structure.

Insert a paragraph describing if the system is to be concealed or exposed and use structural steel or down conductors. In general systems are to be concealed where possible in existing buildings, and installed concealed in new buildings.

1.3 DEFINITIONS

- A. LPI: Lightning Protection Institute.

1.4 SUBMITTALS

- A. Product Data: For air terminals and mounting accessories.
- B. Shop Drawings: Detail lightning protection system, including air-terminal locations, conductor routing and connections, and bonding and grounding provisions. Include indications for use of raceway, data on how concealment requirements will be met, and calculations required by NFPA 780 for bonding of grounded and isolated metal bodies.

- C. Qualification data for firms and persons specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include data on listing or certification by LPI.
- D. Certification, signed by Contractor, that the attachment method for air terminals is approved by manufacturers of both the terminal assembly and the roofing manufacturer.
- E. Field inspection reports indicating compliance with specified requirements.

1.5 QUALITY ASSURANCE

- A. Installer Qualifications: Installation of systems shall be performed by fully qualified personnel having had a minimum of five years experience on installing these types of systems. They shall have been certified for installation by a recognized lightning protection school such as the Lightning Protection Institute and recognized by Underwriters Laboratories as a Master Label Lightning Protection System installer.
- B. Listing and Labeling: As defined in NFPA 780, "Definitions" Article.
- C. All materials shall comply in weight size, and composition with the following requirements and whichever is the most stringent shall apply relating to the type of building or structure involved.
 - 1. Lightning Protection Institute
 - 2. National Fire Protection Association
 - 3. Underwriters Laboratories Lightning Protection Master Label System

Use the following paragraph if this is a performance specification and the Contractor is to design and install the system.

- D. The design of the systems shall be performed by fully qualified personnel having had a minimum of five years experience in designing these types of systems. They shall have been certified for design by a recognized lightning protection school such as the Lightning Protection Institute.

1.6 COORDINATION

- A. 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 lightning protection components, and building finishes.
- B. Coordinate installation of air terminals attached to roof systems with roofing manufacturer and Installer.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers and materials shall be in compliance with the project requirements and shall be the standard products of:
 - 1. Heary Bros. Lightning Protection Co. Inc.
 - 2. Independent Protection Co.
 - 3. Michigan Lightning Protection, Inc.
 - 4. Thompson Lightning Protection, Inc.

2.2 LIGHTNING PROTECTION SYSTEM COMPONENTS

- A. Lightning protection system components shall comply with UL 96.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install lightning protection components and systems according to UL96A.
- B. In general the lightning protection system shall be concealed system except for air terminals.

3.2 CORROSION PROTECTION

- A. Do not combine materials that can form an electrolytic couple that will accelerate corrosion in the presence of moisture unless moisture is permanently excluded from junction of such materials.
- B. Use conductors with protective coatings where conditions would cause deterioration or corrosion of conductors.

3.3 FIELD QUALITY CONTROL

- A. UL Inspection: Provide inspections as required to obtain a UL Master Label for system.
- B. Provide an inspection by an inspector certified by LPI to obtain an LPI certification.

END OF SECTION 264113