

## **SECTION 26 67 00 - LIGHTING PROTECTION SYSTEMS**

### **PART 1 - GENERAL**

#### **1.1 RELATED DOCUMENTS**

- A. Requirements of the following Sections apply to this section:
  - 1. Section 260100 - Basic Electrical Requirements.
  - 2. Section 260500 - Basic Electrical Materials and Methods.
  - 3. Section 261100 - Raceways, for raceways used for lightning protection system conductors.

#### **1.2 DESCRIPTION OF WORK**

- A. This section includes lightning protection systems for buildings and associated structures and includes requirements for lightning protection systems components including, but not limited to, the following:
  - 1. Air terminals
  - 2. Bonding plates
  - 3. Conductors
  - 4. Connectors
  - 5. Fasteners
  - 6. Grounding plates
  - 7. Grounding rods
  - 8. Rod clamps
  - 9. Splicers

#### **1.3 SUBMITTALS**

- A. General: Submit the following in accordance with Conditions of Contract, Division 1 and Section 260100 Specification Sections.
- B. Product data for each type of product specified, including roof adhesive where used.
- C. Shop drawings detailing lightning protection system including, but not limited to, air terminal locations, conductor routing, connections and grounding.

#### **1.4 QUALITY ASSURANCE**

- A. Installer Qualifications: Engage an experienced installer to install lightning protection system. Upon request, submit evidence of such qualifications to the Architect.
- B. Electrical Component Standard: Provide work complying with applicable requirements of NFPA 70 "National Electrical Code".

- C. NFPA and UL Compliance: Comply with requirements of NFPA 78, and UL Standard 96 as applicable to lightning protection systems for building projects.
- D. UL Compliance: Comply with UL Standards 96 and 96A.
- E. ANSI Compliance: Comply with applicable requirements of ANSI Standard C2.

## **1.5 SEQUENCE AND SCHEDULING**

- A. Coordinate installation of lightning protection system with the installation of other building systems and components, including electrical wiring, supporting structures and building materials, and metal components requiring interface with lightning protection systems.
- B. Building has an existing system. Extend existing system for coverage on new addition.

## **PART 2 - PRODUCTS**

### **2.1 MANUFACTURERS**

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following
  - 1. Approved Lightning Protection Co., Inc.
  - 2. East Coast Lightning Equipment
  - 3. Heary Bros. Lightning Protection
  - 4. Independent Protection Co., Inc.
  - 5. Robbins Lightning Protection Co.
  - 6. Thompson Lightning Protection, Inc.

### **2.2 LIGHTNING PROTECTION SYSTEM COMPONENTS**

- A. Provide lightning protection system materials and components that comply with manufacturer's standard design, in accordance with published product information. Provide air terminals, bonding plates, conductors, connectors, conductor straps, fasteners, grounding plates, grounding rods, rod clamps, splicers and other components required for a complete system that meets LP!-175, UL 96A or NFPA 78 standards.
- B. Type of Metal for air terminals and cables: copper with solid air terminals.
- C. Air Terminals for roof mounting: Provide units with bases especially designed for roof materials.
- D. Ground rods: ¾-inch minimum diameter by 10 feet long, copper clad steel with minimum 27 percent of the rod weight in the copper cladding.

## **PART 3 - EXECUTION**

### **3.1 INSTALLATION OF LIGHTNING PROTECTION SYSTEMS**

- A. Install lightning protection systems as indicated, in accordance with equipment manufacturer's written instructions, and in compliance with applicable installation standards specified above.
- B. Install conductors with direct paths from air terminals to ground connections avoiding sharp bends and narrow loops. Where indicated, run conductors in non-metallic raceway, type RGE, Schedule 40, minimum.
- C. Conceal down conductors.
- D. Conceal interior wiring.
- E. Conceal wiring from normal view from all exterior locations at grade within 200 feet of building.
- F. Splices and Clamps: Use approved exothermic welded connections for all conductor splices and all connections between conductors and other components.

### **3.2 CORROSION PROTECTION**

- A. Use no combination of materials that may form an electrolytic couple of such nature that corrosion is accelerated in the presence of moisture, unless moisture is permanently excluded from the junction of such metals. Where unusual conditions exist that would cause deterioration or corrosion of conductors, use conductors with suitable protective coatings.

### **3.3 GROUNDING AND BONDING**

- A. Provide equipment grounding and bonding connections sufficiently tight to assure permanent and effective grounds and bonds.

### **3.4 FIELD QUALITY CONTROL**

- A. Perform inspections of the lightning protection system installation in accordance with LPI-177, "Inspection Guide for LPI Certified Systems". Provide Architect with one copy of LPI-177 and retain one copy at the project site throughout construction for reference.
- B. A document inspection on LPI forms LPI-C1-02 and LPI Form 1-R88. Provide one copy of each completed form to the Architect.
- C. Provide advance notice of at least 24 hours to the Architect before concealing lightning protection work.
- D. Provide UL inspection and delivery of UL Master Label "C" to the Architect.

**END OF SECTION 26 67 00**

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