SECTION 16670

LIGHTNING PROTECTION SYSTEMS

PART 1  GENERAL

1.01  SUMMARY

A. Section Includes:

1. Air terminals and interconnecting conductors.

2. Grounding and bonding for lightning protection.

B. Related Sections:

1. Section 16450 - Secondary Grounding

1.02  REFERENCES

A. Specify Underwriters Laboratories (UL) listed equipment, assemblies and materials.

B. Where appropriate, refer to current ANSI and NEMA Standards for material ratings.

C. Lightning Protection Institute (LPI) & NFPA Standard.

1.03  SYSTEM DESCRIPTION

A. Design consultant to do NFPA lightning probability calculation to determine if NFPA recommends a lightning protection system.

B. Specify the features and the requirements for a complete UL master labeled lightning protection system. Indicate the requirement for bonding roof mounted mechanical equipment, structural elements, vents, etc.

1.04  SUBMITTALS

A. Require submittals under the provisions for Section 16010 - Basic Electrical Requirements and 01300 - Submittals.

B. Require that shop drawings show layout of air terminals, grounding electrodes and bonding connections to structure and other metal objects. Information to include terminals, electrodes, conductor sizes and connections and termination details. The shop drawings shall be master labeled stamped.
1.05 QUALIFICATIONS

A. Manufacturer:
   1. Company specializing in lightning protection equipment with minimum three years documented experience and a member of the Lightning Protection Institute.

B. Installer:
   1. Authorized installer of manufacturer with minimum three years documented experience and a member of the Lightning Protection Institute. Require the installer to be a licensed master installer.

PART 2 PRODUCTS

2.01 MATERIALS

A. Air Terminals:
   1. Copper

B. Grounding Rods:
   1. Copper clad steel

C. Ground Plate:
   1. Copper

D. Conductors:
   1. Copper cable

E. Connectors and Splices:
   1. Bronze
   2. Exothermic

F. Ground Well
   1. For accessible connection for testing
PART 3  EXECUTION

3.01  INSTALLATION

A. Require that the complete installation be inspected and certified by Underwriters Laboratories, Inc. to obtain a master label. Label to be attached to building at location directed by Department of Facilities Management.

B. Require that installation be coordinated with Project Architect to provide concealment of down conductors, air terminals, etc., to obtain an acceptable installation.

END OF SECTION 16670