

SECTION 260526 - GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Grounding and bonding components.
- B. Provide all components necessary to complete the grounding system(s) consisting of:
 - 1. Existing metal underground water pipe.
 - 2. Metal underground water pipe.
 - 3. Metal frame of the building.
 - 4. Rod electrodes.

1.2 REFERENCE STANDARDS

- A. NETA STD ATS - Acceptance Testing Specifications for Electrical Power Distribution Equipment and Systems; International Electrical Testing Association; 2009.
- B. NFPA 70 - National Electrical Code; National Fire Protection Association; 2008.

1.3 PERFORMANCE REQUIREMENTS

- A. Grounding System Resistance: 5 ohms.

1.4 SUBMITTALS

- A. See Section 013000 - Administrative Requirements for submittals procedures.
- B. Product Data: Provide for grounding electrodes and connections.
- C. Test Reports: Indicate overall resistance to ground and resistance of each electrode.
- D. Project Record Documents: Record actual locations of components and grounding electrodes.

1.5 QUALITY ASSURANCE

- A. Conform to requirements of NFPA 70.
- B. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years experience.
- C. Products: Listed and classified by Underwriters Laboratories Inc. as suitable for the purpose specified and indicated.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Cooper Power Systems: www.cooperpower.com.
- B. Substitutions: See Section 016000 - Product Requirements.

2.2 ELECTRODES

- A. Manufacturers:
 - 1. Cooper Power Systems: www.cooperpower.com.
 - 2. Substitutions: See Section 016000 - Product Requirements.
- B. Rod Electrodes: Copper.
 - 1. Diameter: 3/4 inch (19 mm).
 - 2. Length: 10 feet (3000 mm).
 - 3. Substitutions: See Section 016000 - Product Requirements.

2.3 CONNECTORS AND ACCESSORIES

- A. Mechanical Connectors: Bronze.
- B. Exothermic Connections:
- C. Wire: Stranded copper.
- D. Grounding Electrode Conductor: Size to meet NFPA 70 requirements.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify existing conditions prior to beginning work.
- B. Verify that final backfill and compaction has been completed before driving rod electrodes.

3.2 INSTALLATION

- A. Install ground electrodes at locations indicated. Install additional rod electrodes as required to achieve specified resistance to ground.
- B. Provide bonding to meet requirements described in Quality Assurance.
- C. Equipment Grounding Conductor: Provide separate, insulated conductor within each feeder and branch circuit raceway. Terminate each end on suitable lug, bus, or bushing.

3.3 FIELD QUALITY CONTROL

- A. Inspect and test in accordance with NETA STD ATS except Section 4.

END OF SECTION