

## PART 1 - GENERAL

### 1.1 RELATED DOCUMENTS

- A. Refer to Section 26 01 26 for maximum resistance to ground requirements.

### 1.2 DESCRIPTION

- A. Grounding systems shall be provided for service neutral power ground and for equipment grounds and bonding as required by code.

## PART 2 - PRODUCTS

### 2.1 GROUNDING CONDUCTORS AND CONNECTORS

- A. Copper only, sized per code. Bare or green insulated in sizes #10 AWG or larger. Green insulated for size #12 AWG.

## PART 3 - EXECUTION

### 3.1 GROUNDING, GENERAL

- A. Provide all grounding for electrical systems and equipment as required by codes and as specified herein.
- B. Branch Circuit Grounding: All branch circuits in patient areas shall include an insulated green ground wire connected between the branch circuit panelboard ground bus and the wiring device (or equipment) ground terminal that the branch circuit serves. One ground wire in each branch circuit raceway, looped between ground terminals, is required. For the purposes of this code requirement, the entire project area on floors 2, 4, & 5 up to a height of eight feet above the floor shall be considered to be a patient occupied area. Green tape identification (in lieu of green insulation) on ground wires is not acceptable.

### 3.2 SIZE OF GROUND WIRE

- A. As required by National Electric Code. Where ground wire is exposed to physical damage protect with rigid non-ferrous conduit as permitted by applicable code.

### 3.3 GROUND CONNECTION OF PIPING

- A. Metal internal piping shall be grounded, as a part of this contract.

### 3.4 CONNECTION TO THE POWER GROUND BUS

- A. Furnish and install connections in accordance with the codes; including but not limited to:
  1. Raceway system
  2. Switchboard
  3. Service neutral
  4. "Separately derived system" (transformer or emergency power supply)
  5. Electrically operated equipment and devices.

- B. No device or equipment shall be connected for electrical service which has a neutral conductor connected to a grounding conductor or to the frame within the device or equipment.

### 3.5 METHOD OF CONNECTIONS

- A. Make all ground connections and ground cable splices by thermal welding or copper compression set type connectors U.L. listed for grounding purposes. Grounding lugs, where provided as standard manufacturer's items on equipment furnished, may be used.

### 3.6 EXPANSION FITTINGS

- A. In conduit runs requiring an expansion fitting, a bonding jumper shall be installed around the fitting to maintain continuous ground continuity.

### 3.7 TESTING

- A. Conform to Section 26 01 26 - Maintenance Testing of Electrical Systems

### 3.8 GROUND CABLE CROSSING EXPANSION JOINTS

- A. Ground cables crossing expansion joints or similar separations in structures or paved areas shall be protected from damage by means of suitable approved devices or methods of installation which will provide the necessary slack in the cable across the joint to permit movement. Stranded or other approved flexible copper run or jumper shall be used across such separations.

### 3.9 GROUNDING FOR PANELBOARD FEEDERS

- A. Provide a grounding bushing with ground conductor sized in accordance with NEC table 250.122 to the grounding bus in the panelboard and switchboards.

### 3.10 PANELBOARD BONDING

- A. Provide a bonding conductor not smaller than #10 AWG between the ground bus in the normal and emergency panels and/ or two or more emergency panelboards fed from separate transfer switches, serving the same individual patient vicinity in accordance with NEC 517.14.

**END OF SECTION**