

**Part 1            General**

**1.1                RELATED SECTIONS**

- .1    Section 26 05 00 - Common Work Results for Electrical.
- .2    Section 26 05 28 - Grounding - Secondary.

**1.2                REFERENCES**

- .1    American National Standards Institute.
  - .1    ANSI J-STD-607-A-2002, Joint Standard - Commercial Building Grounding (Earthing) and Bonding Requirements for Telecommunications.
- .2    Telecommunications Industries Association (TIA)/Electronic Industries Alliance (EIA).
  - .1    TIA/EIA-606-2002, Administration Standard for the Commercial Telecommunications Infrastructure.
- .3    U.S. Department of Labor/Occupational Safety and Health Administration (OSHA).
  - .1    Nationally Recognized Testing Laboratory (NRTL).

**1.3                SYSTEM DESCRIPTION**

- .1    Telecommunications grounding and bonding system consist of grounding busbars, bonding backbones, and other bonding conductors.
- .2    Provides ground reference for telecommunications systems within building and bonding to it of telecommunications rooms.
- .3    Metallic pathways, cable shields, conductors, and hardware within telecommunications spaces are bonded to telecommunications grounding and bonding system.

**1.4                QUALITY ASSURANCE**

- .1    Health and Safety Requirements: do construction occupational health and safety in accordance with Section 01 35 29.06 - Health and Safety Requirements.

**1.5                WASTE MANAGEMENT AND DISPOSAL**

- .1    Separate waste materials for recycling in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.

**1.6                ACCEPTABLE PRODUCTS AND MATERIALS**

- .1    Where a particular brand name is stipulated, see Instructions to Bidders for procedure for requesting approval of substitute materials and products.

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**Part 2            Products**

**2.1                TELECOMMUNICATIONS MAIN GROUNDING BUSBAR (TMGB)**

- .1    Predrilled copper busbar, listed by NRTL, electrotin plated with holes 8 mm diameter for use with standard-sized lugs to: ANSI J-STD-607-A.
- .2    Dimensions: 6 mm thick, 100 mm wide, 500 mm long (or 2 x 250 mm). to: ANSI J-STD-607-A.
- .3    Acceptable Products:
  - .1    CT-GIBB4X10X12 of Cable Talk.
  - .2    Replacement materials or products: approved by addendum according to Instructions to bidders.

**2.2                TELECOMMUNICATIONS GROUNDING BUSBAR (TGB)**

- .1    Predrilled copper busbar, listed by NRTL, electrotin plated with holes 8 mm diameter for use with standard-sized lugs to: ANSI J-STD-607-A.
- .2    Dimensions: 6 mm thick, 50 mm wide, 500 mm long (or 2 x 250 mm). to: ANSI J-STD-607-A.
- .3    Acceptable Products:
  - .1    CT-GIBB2X10X12 of Cable Talk.
  - .2    Replacement materials or products: approved by addendum according to Instructions to bidders.

**2.3                BONDING CONDUCTOR FOR TELECOMMUNICATIONS**

- .1    3/0 AWG copper conductor, green insulated to: ANSI J-STD-607-A.

**2.4                TELECOMMUNICATIONS BONDING BACKBONE (TBB)**

- .1    3/0 AWG copper conductor, green insulated to: ANSI J-STD-607-A.

**2.5                TELECOMMUNICATION SECONDARY BONDING CONDUCTORS**

- .1    6 AWG copper conductor, green insulated to: ANSI J-STD-607-A.

**2.6                WARNING LABELS**

- .1    Non-metallic warning labels in English and French to: ANSI J-STD-607-A.
- .2    Identify labels with wording "If this connector is loose or must be removed, please call the building telecommunications manager".

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**Part 3 Execution**

**3.1 TELECOMMUNICATIONS MAIN GROUNDING BUSBAR (TMGB)**

- .1 Install TMGB in telecommunications entrance room on insulated supports 50 mm high at location close to electrical power panel if one is installed in same room as indicated.

**3.2 TELECOMMUNICATIONS GROUNDING BUSBAR (TGB)**

- .1 Install TGB in main terminal/equipment room and each telecommunications room.

**3.3 BONDING CONDUCTORS GENERAL**

- .1 When placed in ferrous metallic conduit or EMT longer than 1 m, bond to each end of conduit or EMT using 6 AWG copper conductor.

**3.4 BONDING CONDUCTOR FOR TELECOMMUNICATIONS**

- .1 Install bonding conductor for telecommunications from TMGB to service equipment (power) ground.
- .2 Use approved 2-hole compression lugs for connection to TMGB.

**3.5 TELECOMMUNICATIONS BONDING BACKBONE (TBB)**

- .1 Install TBBs from TMGB to each TGB as indicated.
- .2 Use approved 2-hole compression lugs for connection to TMGB and TGBs.

**3.6 BONDING TO TMGB**

- .1 Bond metallic raceways in telecommunications entrance room to TMGB using No. 6 AWG green insulated copper conductor.
- .2 For cables within telecommunications entrance room having shield or metallic member, bond shield or metallic member to TMGB using No. 6 AWG green insulated copper conductor.
- .3 Bond equipment rack cabinet located in telecommunications entrance room to TMGB using No. 6 AWG green insulated copper conductor.

**3.7 BONDING TO TGB**

- .1 Bond metallic raceways in telecommunications room and telecommunications equipment room to TGB using No. 6 AWG green insulated copper conductor.
- .2 For cables within telecommunications room and equipment room having shield or metallic member, bond shield or metallic member to TGB using No. 6 AWG green insulated copper conductor.
- .3 Bond equipment racks and cabinets located in telecommunications room and equipment room to TGB using No. 6 AWG green insulated copper conductor.

**3.8 LABELLING**

- .1 Apply warning labels to telecommunications bonding and grounding conductors.
- .2 Apply additional administrative labels to: TIA/EIA-606.

**END OF SECTION**