
PART 1 GENERAL

1.1 RELATED REQUIREMENTS

- .1 Section 27 11 19 – Structured Cabling for Communications Systems.

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 of telecommunications rooms.
- .3 Metallic pathways, cable shields, conductors, and hardware within telecommunications spaces are bonded to telecommunications grounding and bonding system.

1.4 DELIVERY, STORAGE AND HANDLING

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

PART 2 PRODUCTS

2.1 TELECOMMUNICATION MAIN GROUNDING BUSBAR (TMGB)

- .1 Predrilled copper busbar, listed approved 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 to: ANSI J-STD-607-A.

2.2 TELECOMMUNICATION GROUNDING BUSBAR (TGB)

- .1 Predrilled copper busbar, listed approved 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 to: ANSI J-STD-607-A.

2.3 BONDING CONDUCTOR FOR TELECOMMUNICATIONS

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

2.4 TELECOMMUNICATIONS BONDING BACKBONE (TBB)

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

2.5 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".

PART 3 EXECUTION

3.1 TELECOMMUNICATIONS MAIN GROUNDING BUSBAR (TMGB)

- .1 Install TMGB in entrance room on insulated supports 50 mm high at location as indicated.
- .2 Install 3/0 AWG copper bonding conductor from TMGB to main ground busbar in main electrical room.

3.2 TELECOMMUNICATIONS GROUNDING BUSBAR (TGB)

- .1 Install TGB in main terminal/equipment room and each telecommunications room.
- .2 Install 3/0 AWG copper bonding conductor from TGB to TMGB.

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 grounding bushing 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 1 hole non-twisting lugs for connection to TMGB.

3.5 TELECOMMUNICATIONS BONDING BACKBONE (TBB)

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

3.6 GROUNDING EQUILIZER (EG)

- .1 Install GE between TBBs in multi-storey building by bonding TGBs with GE on top floor and every third floor in between top and bottom floors.

3.7 BONDING TO TMGB

- .1 Bond metallic raceways in telecommunications entrance room to TMGB using #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 #6 AWG green insulated copper conductor.
- .3 Bond equipment rack or cabinet located in telecommunications entrance room to TMGB using #6 AWG green insulated copper conductor.

3.8 BONDING TO TGB

- .1 Bond metallic raceways in telecommunications room to TGB using #6 AWG green insulated copper conductor.
- .2 For cables within telecommunications room having shield or metallic member, bond shield or metallic member to TGB using #6 AWG green insulated copper conductor.
- .3 Bond equipment rack or cabinet located in telecommunications room to TGB using #6 AWG green insulated copper conductor.

3.9 LABELING

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