

Part 1 General**1.1 RELATED REQUIREMENTS**

- .1 Section 26 05 00 Common Work Results for Electrical.
- .2 Section 27 05 28 Pathways for Communications Systems.

1.2 REFERENCE STANDARDS

- .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.

Part 2 Products**2.1 TELECOMMUNICATIONS GROUNDING BUSBAR (TGB)**

- .1 Predrilled copper busbar, listed by NRTL, complete with holes 8mm diameter for use with standard-sized lugs to: ANSI J-STD-607-A.
- .2 Dimensions 6mm thick, 100mm wide, 1000mm long. ANSI J-STD-607-A.

2.2 BONDING CONDUCTOR FOR TELECOMMUNICATIONS

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

2.3 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". Verify the label verbiage with the PWGSC SCC representative prior to printing.

Part 3 Execution**3.1 TELECOMMUNICATIONS GROUNDING BUSBAR (TGB)**

- .1 Install TGB in telecommunications room.

3.2 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 and a 6AWG copper conductor.

3.3 BONDING CONDUCTOR FOR TELECOMMUNICATIONS

- .1 Install bonding conductor for telecommunications from the telecommunication main ground bus bar (TMGB) to service equipment ground.
- .2 Use exothermic welding or approved 2 hole compression lugs for connection to TMGB.

3.4 TELECOMMUNICATIONS BONDING BACKBONE (TBB)

- .1 Install TBB from TMGB to TGB.
- .2 Use exothermic welding or approved 2 hole compression lugs for connection to TMGB and TGBs.

3.5 BONDING TO TGB

- .1 Bond metallic raceways in communications room to TGB using #6AWG green insulated copper conductor.
- .2 For cables within communications room having shield or metallic member, bond shield or metallic member to TGB using #18AWG copper conductor.
- .3 Bond equipment rack and cabinets located in communications room to TGB using #6AWG green insulated copper conductor.

3.6 LABELLING

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

END OF SECTION

Part 1 General**1.1 RELATED REQUIREMENTS**

- .1 Section 26 05 00 Common Work Results for Electrical.
- .2 Section 27 05 26 Grounding and Bonding for Communication Systems.

1.2 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Submit in accordance with Section 01 33 00- Submittal Procedures.
- .2 Product Data:
 - .1 Submit manufacturer's instructions, printed product literature and data sheets for communication raceway systems and include product characteristics, performance criteria, physical size, finish and limitations.

1.3 DELIVERY, STORAGE AND HANDLING

- .1 Deliver, store and handle materials in accordance with Section 01 61 00- Common Product Requirements.
- .2 Delivery and Acceptance Requirements: deliver materials to site in original factory packaging, labelled with manufacturer's name and address.
- .3 Storage and Handling Requirements:
 - .1 Store materials indoors and in accordance with manufacturer's recommendations in clean, dry, well-ventilated area.
 - .2 Replace defective or damaged materials with new.

Part 2 Products**2.1 SYSTEM DESCRIPTION**

- .1 Empty telecommunications raceways system consists of outlet boxes, cover plates, conduits, cable trays, pull boxes, sleeves and caps, fish wires, service poles, service fittings.
- .2 Basket cable tray distribution system.

2.2 MATERIAL

- .1 Conduits: 26 05 34- Conduits, Conduit Fastenings and Conduit Fittings.
- .2 Cable trays: Basket cable tray, as indicated on the drawings.
- .3 Overhead distribution system: J-hooks.
- .4 Junction boxes, outlet boxes: in accordance with Section 26 05 31- Splitters, Junction, Pull Boxes and Cabinets.
- .5 Indoor service poles: in accordance with Section 26 27 23- Indoor Service Poles.
- .6 Fish wire: polypropylene type.

Part 3 Execution**3.1 INSTALLATION**

- .1 Install empty raceway system, including the overhead distribution system, fish wire, terminal cabinets, outlet boxes, floor boxes, pull boxes, cover plates, conduit, sleeves and caps, cable tray, service poles, miscellaneous and positioning material to constitute complete system.
- .2 Vertical drops to recessed voice/data outlets in walls shall be using EMT conduit, terminated with a 103x103mm recessed junction box and a reducer ring, as required. Stub out conduit in the accessible ceiling space. Bend conduit at a 45 degree angle. Each conduit end shall be complete with a protective nylon bushing.
- .3 Where distance between the cable tray and the vertical drop exceeds 400mm, provide j-hook support(s) between the cable tray and the drop. Distance between j-hooks shall not exceed 1200mm.

3.2 PROTECTION

- .1 Protect installed products and components from damage during construction.
- .2 Repair damage to adjacent materials caused by pathways for communications systems installation.

END OF SECTION