

**Part 1        General**

**1.1           RELATED SECTIONS**

- .1        Section 26 05 00 - Common Work Results - Electrical.

**1.2           REFERENCES**

- .1        Canadian Standards Association, (CSA International)

**1.3           WASTE MANAGEMENT AND DISPOSAL**

- .1        Separate and recycle waste materials.
- .2        Remove from site and dispose of all packaging materials at appropriate recycling facilities.
- .3        Collect and separate for disposal paper, plastic, polystyrene, corrugated cardboard packaging material in appropriate on-site bins for recycling.
- .4        Divert unused metal materials from landfill to metal recycling facility.
- .5        Fold up metal banding, flatten and place in designated area for recycling.

**Part 2        Products**

**2.1           EQUIPMENT**

- .1        Grounding conductors: bare stranded copper, soft annealed, size as indicated.
- .2        Insulated grounding conductors: green, type RW90.
- .3        Ground bus: copper, size as indicated, complete with insulated supports, fastenings, connectors.
- .4        Non-corroding accessories necessary for grounding system, type, size, material as indicated, including but not necessarily limited to:
  - .1        Grounding and bonding bushings.
  - .2        Protective type clamps.
  - .3        Bolted type conductor connectors.
  - .4        Thermit welded type conductor connectors.
  - .5        Bonding jumpers, straps.
  - .6        Pressure wire connectors.

---

**Part 3            Execution**

**3.1                INSTALLATION GENERAL**

- .1      Install complete permanent, continuous grounding system including, electrodes, conductors, connectors, accessories. Where EMT is used, run ground wire in conduit.
- .2      Install connectors in accordance with manufacturer's instructions.
- .3      Protect exposed grounding conductors from mechanical injury.
- .4      Make buried connections, and connections to electrodes, using copper welding by thermit process or permanent mechanical connectors or inspectable wrought copper compression connectors to ANSI/IEEE 837.
- .5      Use mechanical connectors for grounding connections to equipment provided with lugs.
- .6      Soldered joints not permitted.
- .7      Install bonding wire for flexible conduit, connected at both ends to grounding bushing, solderless lug, clamp or cup washer and screw. Neatly cleat bonding wire to exterior of flexible conduit.
- .8      Make grounding connections in radial configuration only, with connections terminating at single grounding point street side of water pipe. Avoid loop connections.
- .9      Ground secondary service pedestals.

**3.2                EQUIPMENT GROUNDING**

- .1      Install grounding connections to typical equipment included in, but not necessarily limited to following list. Service equipment, transformers, switchgear, duct systems, frames of motors, motor control centres, starters, control panels, building steel work, generators, elevators and escalators, distribution panels, outdoor lighting.

**3.3                GROUNDING BUS**

- .1      Install copper grounding bus mounted on insulated supports on wall of electrical room.
- .2      Ground items of electrical equipment in electrical room to ground bus with individual bare stranded copper connections size 2/0AWG.

**3.4                FIELD QUALITY CONTROL**

- .1      Perform tests in accordance with Section 26 05 00 - Common Work Results – Electrical.

- .2 Perform ground continuity and resistance tests using method appropriate to site conditions and to approval of Departmental Representative and local authority having jurisdiction over installation.
- .3 Perform tests before energizing electrical system.
- .4 Disconnect ground fault indicator during tests.