

PART 1 GENERAL

1.1 GENERAL

- .1 This Section covers items common to Sections of Division 26 and supplements requirements of Division 1.

1.2 REFERENCES

- .1 Canadian Standards Association (CSA)
 - .1 Ontario Electrical Safety Code 2018, 27th Edition
 - .2 C22.1-18 - 2018 Canadian Electrical Code, Part I (24th edition), Safety Standard for Electrical Installations.
 - .3 Safety Standard for Electrical Installations.

1.3 SUBMITTALS

- .1 Submit drawings stamped and signed by professional engineer registered or licensed in Ontario, Canada.
- .2 Quality Control:
 - .1 Provide CSA certified equipment and material. Where CSA certified equipment and material is not available, submit such equipment and material to authority having jurisdiction for approval before delivery to site.
 - .2 Submit certificate of acceptance from authority having jurisdiction upon completion of Work to Departmental Representative.

1.4 PERMITS, FEES AND INSPECTION

- .1 Submit to Electrical Inspection Division and Supply Authority necessary number of drawings and specifications for examination and approval prior to commencement of work.
- .2 Pay associated fees.
- .3 Notify Departmental Representative of changes required by Electrical Inspection Division prior to making changes.
- .4 Furnish Certificates of Acceptance from Electrical Inspection Division or authorities having jurisdiction on completion of work to Departmental Representative.

1.5 CO-ORDINATION

- .1 Co-ordinate work with work of other divisions to avoid conflict.

- .2 Where interference occurs, Departmental Representative must approve relocation of equipment and materials regardless of installation order.

1.6 PROTECTION

- .1 Protect exposed live equipment during construction for personnel safety.

1.7 SCHEDULING OF WORK

- .1 Work shall be scheduled in phases as per other divisions of the architectural specifications.

1.8 DELIVERY, STORAGE AND HANDLING

- .1 Material Delivery Schedule: provide Departmental Representative with schedule within 2 weeks after award of Contract.

1.9 WASTE MANAGEMENT & DISPOSAL

- .1 Separate and recycle waste materials in accordance with Division 01.
- .2 Remove from site and dispose of all packaging materials at appropriate recycling facilities.
- .3 Collect and separate for disposal: paper, plastic, polystyrene and corrugated cardboard packaging material for recycling in accordance with Waste Management Plan.

1.10 MATERIALS AND EQUIPMENT

- .1 Provide materials and equipment in accordance with Section 01 61 00 - Common Product Requirements.
- .2 Equipment and material to be CSA certified.

1.11 WIRING TERMINATIONS

- .1 Lugs, terminals, screws used for termination of wiring to be suitable for either copper or aluminum conductors.

1.12 HANGERS AND EQUIPMENT SUPPORTS

- .1 All equipment provided under the Electrical Division shall be complete with all necessary supports and hangers required for a safe and workmanlike installation and to avoid strain on conduit, etc. Auxiliary supports where required shall be provided.

1.13 DRAWINGS, CHANGES, ACCESSIBILITY

- .1 The drawings shall be considered to show the general character and scope of work and not the exact details of the installation.
- .2 The installation shall be complete with all supports and accessories required for a complete operative and satisfactory installation.
- .3 The location, arrangement and connection of equipment and materials as shown on the drawings represent a close approximation to the intent and requirements of the Contract.
- .4 The right is reserved by the Departmental Representative to make reasonable changes required to accommodate conditions arising during the progress of the work. Such changes shall be done at no extra cost unless the location, arrangement or connection is more than 3.0 m from that shown.

1.14 CLEANING

- .1 Complete final cleaning of equipment and work area as acceptable to Departmental Representative.

END OF SECTION

PART 1 GENERAL

1.1 RELATED SECTIONS

- .1 Section 01 33 00 - Submittal Procedures.
- .2 Section 26 05 00 - Common Work Results - Electrical.

1.2 REFERENCES

- .1 American National Standards Institute (ANSI)/Institute of Electrical and Electronics Engineers (IEEE)
 - .1 ANSI/IEEE 837, Standard for Qualifying Permanent Connections Used in Substation Grounding.
- .2 Canadian Standards Association (CSA)
 - .1 CAN/CSA-B72, Installation Code for Lightning Protection Systems.

1.3 DESCRIPTION OF SYSTEM

- .1 System to consist of metallic air terminals, lightning conductors connecting air terminals to ground and interconnected ground electrodes, and/or ground cables.
- .2 Sky wire cone, where sky line elevated at height to protected structure beneath, but having no direct connection to sky line which is connected to system of ground electrodes.

1.4 SUBMITTALS

- .1 Indicate materials and methods of attachment of conductors to air terminals and electrodes.

1.5 REGULATORY REQUIREMENTS

- .1 System subject to: approval by authority having jurisdiction.

PART 2 PRODUCTS

2.1 MATERIALS

- .1 Air terminals: copper, solid rod.
- .2 3/0 AWG, bare copper, stranded conductor.
- .3 Fastenings and attachment straps: copper.
- .4 Electrodes: 3 m x 19 mm diameter copper coated steel.

- .5 Single, two, three or four mast fabricated steel structure as indicated inter-connected with copper cable. With down runs and cable clamps as indicated to form a complete sky-cone system.
- .6 Use aluminum conductors, terminals, connectors and fastenings for aluminum sheathed buildings and copper conductors, terminals, connectors and fastenings for buildings sheathed in other than aluminum.
- .7 Connections: copper connections formed by thermit process.

PART 3 EXECUTION

3.1 INSTALLATION

- .1 Install lightning protection to CAN/CSA-B72.
- .2 Bond discharge conductors to service mast or other non-current-carrying electrical parts.
- .3 Submit certificate of installation to Departmental Representative.

3.2 INSPECTION

- .1 Obtain inspection certificate from Departmental Representative for discharge conductor passing through any fire supporting membrane.

END OF SECTION