

Part 1 General

1.1 RELATED REQUIREMENTS

- .1 Section 26 05 00 - Common Work Results for Electrical.
- .2 Section 26 05 34 - Conduits, Conduit Fastenings and Conduit Fittings.
- .3 Section 26 05 43.01 - Installation of Cables in Trenches and in Ducts.

1.2 REFERENCE STANDARDS

- .1 American National Standards Institute (ANSI)
 - .1 ANSI/SCTE 77 2017 Specification for Underground Enclosure Integrity.
- .2 Canadian Standards Association (CSA International)
 - .1 CSA C22.2 No. 211.2-06(R2016), Rigid PVC (Unplasticized) Conduit.

Part 2 Products

2.1 PVC DUCTS AND FITTINGS

- .1 Rigid PVC conduit. Refer to Section 26 05 34 - Conduits, Conduit Fastenings and Conduit Fittings.
 - .1 Nominal length: 3 m plus or minus 12 mm.
- .2 Rigid PVC bends, couplings, reducers, bell end fittings, plugs, caps, adaptors same product material as duct, to make a complete installation.
- .3 Rigid PVC 90 degrees, 45 degrees bends and 5 degrees angle couplings as required.

2.2 PULL-PITS

- .1 FRP enclosure.
- .2 Straight or flared walls.
- .3 Solid bottom.
- .4 Bolt-down water-tight cover.
- .5 Knock-outs to accommodate quantity and size of conduits as indicated on drawings.
- .6 Interior volume to meet CSA C22.1 standard.
- .7 Minimum ANSI/SCTE 77 Tier 15 rating.
- .8 Standard of acceptance: Hubbell Quazite FRP enclosure and heavy-duty cover.

2.3 SOLVENT WELD COMPOUND

- .1 Solvent cement for PVC duct joints.

2.4 CABLE PULLING EQUIPMENT

- .1 6 mm stranded nylon pull rope tensile strength 5 kN.

2.5 CABLE DUCT PROTECTION

- .1 38 x 140 mm (trade size 2 in. x 6 in.) wood planks, pressure treated.

2.6 CABLE DUCT IDENTIFICATION

- .1 Mesh-type, detectable, marker system. The mesh shall have the following minimum specifications:
 - .1 Colour: red.
 - .2 Central longitudinal cord to provide visible element indicating the presence of the buried hazard.
 - .3 Integrated stainless-steel tracer wire, 0.8mm diameter, coated in black polypropylene. 1.3mm overall diameter.
 - .4 Mesh: five support elements,
 - .5 Exterior tapes: two, longitudinal.
 - .6 Overall width: 200mm minimum.
 - .7 Standard of acceptance: TechnoConso Plyage HzD, or equivalent.

Part 3 Execution

3.1 MANUFACTURER'S INSTRUCTIONS

- .1 Compliance: comply with manufacturer's written recommendations or specifications, including product technical bulletins, handling, storage and installation instructions, and datasheets.

3.2 INSTALLATION

- .1 Install duct, fittings and pull-pits in accordance with manufacturer's instructions and at elevations as indicated.
- .2 Clean inside of ducts and pull-pits before laying.
- .3 Install plastic duct spacers and ensure full, even support every 1.5 m and smooth transition throughout duct length.
- .4 Slope ducts with 1 to 400 minimum slope.
- .5 Install plugs and cap both ends of ducts to prevent entrance of foreign materials during and after construction.
- .6 Pull through each duct wooden mandrel not less than 300 mm long and of diameter 6 mm less than internal diameter of duct, followed by stiff bristle brush to remove sand, earth and other foreign material.
 - .1 Pull stiff bristle brush through each duct immediately before pulling-in cables.
- .7 Install a pull rope continuous throughout each duct run with 3 m spare rope at each end.

- .8 Notify the Departmental Representative for field review upon completion of direct buried ducts and obtain acceptance prior to backfill.

3.3 CABLE DUCT PROTECTION

- .1 For ducts in vehicular traffic areas and elsewhere as shown on the drawings install continuous row of pressure treated wood planks to cover length of run.
 - .1 The wood planks shall extend no less than 50 mm beyond the edge of the outermost cable on each side of the trench. Additional wood planks shall be installed as required.
 - .2 The wood planks shall be located no less than 300 mm below the surface of the trench (as measured from the underside of the planks to the surface of the land immediately surrounding the trench) and in accordance with CSA 22.1.

3.4 CABLE DUCT IDENTIFICATION

- .1 Install mesh-type, detectable, marker system above the wood planks to extend the entire length of the duct run.

END OF SECTION