

## PART 1 - GENERAL

### 1.1 RELATED SECTIONS

- .1 Section 01 33 00 - Submittal Procedures.
- .2 Section 01 74 21 - Construction/Demolition Waste Management and Disposal.
- .3 Section 26 05 01 - Common Work Results - Electrical.

### 1.2 REFERENCES

- .1 CSA C22.1-2012, Canadian Electrical Code, Part 1.
  - .1 CSA C22.2 No. 211.1, Rigid Types EBI and DB2/ES2 PVC Conduit.
  - .2 CSA C22.2 No. 211.3, Reinforced Thermosetting Resin Conduit RTRC and Fittings (Bi-national standard, with UL 1684).

### 1.3 SUBMITTALS

- .1 Submit WHMIS MSDS - Material Safety Data Sheets acceptable to Labour Canada, and Health and Welfare Canada for solvent cement. Indicate VOC content.
- .2 Submit manufacturer's data and certification at least 2 weeks prior to commencing work.
- .3 Submit manufacturer's information data sheets and instructions.

### 1.4 DELIVERY, STORAGE AND HANDLING

- .1 Deliver, store and Handle materials in accordance with Section 01 61 00 - Common Product Requirements.

### 1.5 RECORD DRAWINGS

- .1 Provide record drawings, including details of pipe and cable duct materials, maintenance and operating instructions.

## PART 2 - PRODUCTS

### 2.1 PVC DUCTS AND FITTINGS

- .1 Rigid PVC duct: to CSA C22.2 No. 211.1, type rigid PVC for direct burial with minimum wall thickness at any point of 2.8 mm. Nominal length: 3.0 m plus or minus 12 mm. Type DB2 (thinwall) PVC conduits unacceptable.
- .2 Rigid PVC split ducts as required.
- .3 Rigid PVC bends, couplings, reducers, bell end fittings, plugs, caps, adaptors same product material as duct, to make complete installation.
- .4 Rigid PVC 90° and 45° bends as required.
- .5 Rigid PVC 5° angle couplings as required.
- .6 Expansion joints as required.
- .7 Preformed, interlocking intermediate duct spacers for duct size as indicated.
- .8 Use epoxy coated galvanized steel conduit for sections extending above finished grade as indicated.

### 2.2 SOLVENT WELD COMPOUND

- .1 Solvent cement for PVC duct joints.

### 2.3 CABLE PULLING EQUIPMENT

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

### 2.4 MARKERS

- .1 150 mm wide, 4 mil, polyethylene marker tape in all trenches. Use red colored tape. Install at depth as per drawings.

### PART 3 - EXECUTION

#### 3.1 INSTALLATION

- .1 Install duct in accordance with manufacturer's instructions.
- .2 Clean inside of ducts before laying.
- .3 Ensure full, even support every 1.5 m throughout duct length.
- .4 Slope ducts with 1 to 400 minimum slope.
- .5 During construction, cap ends of ducts to prevent entrance of foreign materials.
- .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 matter. Pull stiff bristle brush through each duct immediately before pulling-in cables.
- .7 In each duct install pull rope continuous throughout each duct run with 3 m spare rope at each end.
- .8 Install markers as required.