

**PART 1**      **GENERAL**

**1.1**            **REFERENCES**

- .1 Canadian Standards Association (CSA)
  - .1 CAN/CSA C22.2 No. 18, Outlet Boxes, Conduit Boxes, and Fittings and Associated Hardware, a National Standard of Canada.
  - .2 CSA C22.2 No. 45, Rigid Metal Conduit.
  - .3 CSA C22.2 No. 211.2, Rigid PVC (Unplasticized) Conduit.

**1.2**            **SUBMITTALS**

- .1 Product data: submit manufacturer's printed product literature, specifications and datasheets.
  - .1 Submit cable manufacturing data.
- .2 Quality assurance submittals:
  - .1 Test reports: submit certified test reports.
  - .2 Certificates: submit certificates signed by manufacturer certifying that materials comply with specified performance characteristics and physical properties.
  - .3 Instructions: submit manufacturer's installation instructions.

**1.3**            **LOCATION OF CONDUIT**

- .1 Drawings show all conduits in their approximate locations only.

**1.4**            **APPROVALS, CODES AND PERMITS**

- .1 All work shall be done in accordance with latest edition of the Canadian Electrical Code C22.1-2015.
- .2 Contractor shall present the drawings to the Electrical Inspection Authority for approval and obtain a permit before starting work.
- .3 Notify the Departmental Representative of any changes required before proceeding.

**PART 2**      **PRODUCTS**

**2.1**            **CONDUITS**

- .1 Liquid tight flexible conduit to CSA C22.2 No. 56. To be used for final connection to lighting fixtures.
- .2 Rigid PVC conduit: to CSA C22.2 No. 211.2. To be used below grade unless noted otherwise.

- .3 Rigid PVC conduit: to CSA C22.2 No. 211.2 to be used on new wooden pole as indicated.
- .4 Epoxy coated conduit: to CSA C22.2 No. 45 with zinc coating and corrosion resistant epoxy finish inside and outside. To be used for electrical service. See drawing details.

## **2.2 CONDUIT FASTENINGS**

- .1 One hole PVC straps to secure surface conduits 50 mm and smaller. Two hole PVC straps for conduits larger than 50 mm.
- .2 Beam clamps to secure conduits to exposed steel work.
- .3 Channel type supports for two or more conduits at 1 m oc.
- .4 Threaded rods, 6 mm dia., to support suspended channels.

## **2.3 CONDUIT FITTINGS**

- .1 Fittings for raceways: to CSA C22.2 No. 18-M1987.
- .2 Factory 90° bends are required for 25 mm and larger conduits.
- .3 Fittings manufactured for use with conduit specified, approved for encasement in slab.

## **2.4 EXPANSION FITTINGS FOR RIGID CONDUIT**

- .1 Weatherproof expansion fittings with internal bonding jumper suitable for linear expansion and 19mm deflection in all directions as required.
- .2 Watertight expansion fittings with integral bonding jumper suitable for linear expansion and 19mm deflection in all directions as required.
- .3 Weatherproof expansion fittings for linear expansion at entry to panel as required.

## **2.5 FISH CORD**

- .1 Polypropylene.

# **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 conduit in centre one-third of concrete slab in location as shown for conduits in deck.
- .2 Ensure conduit has a minimum concrete cover of 35 mm all around except where noted otherwise on drawings.
- .3 Place conduit between mats of steel and secure in position with tye wire.
- .4 Install sleeves where conduits pass through timber.
- .5 Install junction boxes for lighting on sides of poles in locations shown. Secure in place and fill with packing to be removed after concrete is placed.
- .6 Ensure system is intact and clear after concrete is poured. Remove and replace any blocked conduit.
- .7 Install pull rope in empty conduit before pouring concrete.
- .8 Swab conduits when system is complete.
- .9 Dry conduits out before installing wire.
- .10 Install rigid PVC conduit except where noted otherwise on drawings.
- .11 Install epoxy coated rigid galvanized steel conduit for electrical service as indicated.
- .12 Install surface mounted rigid PVC conduit in shed.

**3.3 CONDUITS UNDERGROUND**

- .1 Slope conduits to provide drainage.
- .2 Waterproof joints (PVC excepted) with heavy coat of bituminous paint.

**3.4 CLEANING**

- .1 Proceed in accordance with Section 01 74 11 – Cleaning.
- .2 On Completion and verification of performance of installation, remove surplus materials, excess materials rubbish, tools and equipment.

**END OF SECTION**