

PART 1 - GENERAL

1.1 REFERENCES

- .1 Canadian Standards Association (CSA International):
 - .1 CAN/CSA C22.2 No.18 - Conduit Boxes, and Fittings
 - .2 CSAC22.2 No.38-M - Thermoset Insulated Wires and Cables
 - .3 CSAC22.2 No.40-M - Junction and Pull Boxes
 - .4 CSAC22.2 No.65 - Wire Connectors
 - .5 CSAC22.2 No.75-M - Thermoplastic Insulated Wires and Cables
 - .6 CAN/CSA-C22.2 No.8-M - Rigid PVC Boxes and Fittings
 - .7 CSAC22.2 No.211.2-M - Rigid PVC (Unplasticized) Conduit
 - .8 CSAC22.2 No. 45.1-07 - Electrical Rigid Metal Conduit - Steel

1.2 SUBMITTALS

- .1 Departmental Representative reserves the right to require Contractor to submit samples of any materials to be used in this project.
- .2 Submit shop drawings for the following:
 - .1 Water Proof Splice kit

PART 2 - PRODUCTS

2.1 WIRE LOW VOLTAGE UP TO 1000V SERVICE

- .1 Conductors
 - .1 ASTM Class B, soft drawn, electrolytic copper
 - .2 Stranded
- .2 Insulation
 - .1 CSA type RW90 XLPE (-40'C)
 - .1 Heat and moisture resistant
 - .2 Low temperature, chemically cross-linked thermosetting polyethylene material
 - .3 1000V rated
 - .4 For maximum 90'C conductor temperature
 - .5 For installation at minimum 40oC temperature
 - .6 To CSA C22.2 No.38
 - .2 CSA type RWU90 XLPE (-40'C):
 - .1 Heat and moisture resistant
 - .2 Low temperature, chemically cross-linked thermosetting polyethylene material
 - .3 1000V rated
 - .4 For maximum 90"C conductor temperature
 - .5 For installation at minimum -40oC
 - .6 To CSA C22.2 No.38

- .3 Acceptable Manufacturers
 - .1 Alcan Cable
 - .2 Alcatel Canada Wire
 - .3 Pirelli Cables

2.2 WIRE AND CABLE CONNECTORS

- .1 Copper compression type wire and cable terminations for #8 AWG and larger conductors, colour keyed, sized to suit. Long barrel NEMA 2 hole lugs for sizes #1/0 AWG and larger.
 - .1 Acceptable Manufacturers
 - .1 Thomas & Betts series 54000
 - .2 Ideal Powr-Connect
 - .3 Burndy Hylug
 - .4
 - .2 Twist type splicing connectors, copper, sized to suit, with nylon or plastic shroud for tee connections in #10 AWG and smaller conductors.
 - .1 Acceptable Manufacturers
 - .1 Thomas & Betts spring type
 - .2 Ideal Twister
 - .3 Marr Marrette
- .3 Conductor compression splice for #10 AWG or smaller.
 - .1 Acceptable Manufacturers
 - .1 Thomas & Betts STA-Kon series
 - .2 Ideal Splices
 - .3 Burndy

2.3 Conduit And Fittings

- .1 Rigid PVC Conduit
 - .1 To CSA C22.2No.211.2-M Rigid PVC conduit
- .2 PVC Coated Rigid Steel Conduit & Fittings
 - .1 To CSA C22.2No.45.1-07 Electrical Rigid Metal Conduit - Steel
- .3 Electrical Non-Metallic Tubing
 - .1 To CAN/CSA C22.2 No. 227.1
- .4 Rigid PVC Conduit Fittings
 - .1 To CSA C22.2 No.85-M
 - .2 Rigid PVC fittings of same manufacture as rigid PVC conduit

PART 3 - EXECUTION

3.1 WIRE AND CABLE

- .1 Install wiring in duct unless noted otherwise.

- .2 Minimum wire sizes:
 - .1 Power and lighting - No. 6 AWG AND No. 2AWG

- .3 Wire and cable application and type:

Application	Type
Equipment feeders, circuits	RW90
Underground duct	RWU90

3.2 CONNECTORS

- .1 Make splices in junction boxes and pole handholes. Underground splices shall be permitted only with water proof splice kit.
- .2 Make connections in lighting circuits with compression connectors protected with insulating covers.
- .3 Seal terminations and splices exposed to moisture, corrosive conditions or mechanical abrasions with heavy wall heat shrinkable insulation.

3.3 CONDUIT GENERAL

- .1 Run parallel or perpendicular to building lines.
- .2 Group conduits wherever possible.
- .3 Install expansion joints as required.
- .4 Do not drill structural members to pass through.
- .5 PVC conduits to contain insulated green ground wire.
- .6 Install 6 mm diameter nylon pull cord in empty conduits.

3.4 CONDUIT AND FITTINGS

- .1 Minimum conduit sizes:
 - .1 Directly buried (Concrete Encase): 53 mm trade size conduit

***** END OF SECTION *****