

PART 1 **GENERAL**

1.1 **SECTION INCLUDES**

- .1 Equipment and installation for ground fault circuit interrupters (GFCI).

1.2 **RELATED REQUIREMENTS**

- .1 Section 01 33 00 - Submittal Procedures.
- .2 Section 01 74 21 Construction Waste Management and Disposal.
- .3 Section 01 45 00 - Quality Control.
- .4 Section 26 05 00 - Common Work Results - Electrical.

1.3 **REFERENCES**

- .1 Canadian Standards Association (CSA International)
 - .1 CAN/CSA-C22.2 No.144-M91(R2001), Ground Fault Circuit Interrupters.
- .2 National Electrical Manufacturers Association (NEMA)
 - .1 NEMA PG 2.2-1999, Application Guide for Ground Fault Protection Devices for Equipment.

1.4 **ACTIONS AND INFORMATIONAL SUBMITTALS**

- .1 Submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Submit product data and shop drawings.
- .3 Submit test report for field testing of ground fault equipment to Department Representative and a certificate that system as installed meets criteria specified herein.

1.5 **WASTE MANAGEMENT AND DISPOSAL**

- .1 Separate and recycle waste materials in accordance with Section 01 74 21 - Construction/Demolition Waste Management And Disposal.
- .2 Remove from site and dispose of all packaging materials at appropriate recycling facilities.
- .3 Collect and separate for disposal paper plastic polystyrene corrugated cardboard packaging material in appropriate on-site bins for recycling in accordance with Waste Management Plan.

- .4 Divert unused metal and wiring materials from landfill to metal recycling facility approved by Departmental Representative.
- .5 Fold up metal banding, flatten and place in designated area for recycling.

PART 2 **PRODUCTS**

2.1 MATERIALS

- .1 Equipment and components for ground fault circuit interrupters (GFCI): to CAN/CSA-C22.2 No.144 NEMA PG 2.2.
- .2 Components comprising ground fault protective system to be of same manufacturer.

2.2 BREAKER TYPE GROUND FAULT INTERRUPTER

- .1 Single or Two pole ground fault circuit interrupter for 15 A, 120 V, 1 phase circuit c/w test and reset facilities.

2.3 GROUND FAULT LIFE PROTECTOR

- .1 Self contained with 15 A, 120 V, circuit interrupter and duplex receptacle complete with:
 - .1 Solid state ground sensing device.
 - .2 Automatic shunt trip breaker.
 - .3 Zero sequence current sensor.
 - .4 Facilities for testing and reset.
 - .5 CSA Enclosure 1, surface or surface mounted with stainless steel face plate.
 - .6 Ground fault trip indicator light.

2.4 GROUND FAULT PROTECTOR UNIT

- .1 Self-contained with 15 A, 120 V circuit interrupter and duplex single receptacle complete with:
 - .1 Solid state ground sensing device.
 - .2 Facility for testing and reset.
 - .3 CSA Enclosure 1, surface flush mounted with stainless steel painted face plate.

PART 3 **EXECUTION**

3.1 INSTALLATION

- .1 Do not ground neutral on load side of ground fault relay.
- .2 Pass phase conductors including neutral through zero sequence transformers.

- .3 Connect supply and load wiring to equipment in accordance with manufacturer's recommendations.

3.2 FIELD QUALITY CONTROL

- .1 Perform tests in accordance with Section 26 05 01 - Common Work Results - Electrical and co-ordinate with Section 01 45 00 - Quality Control if required.
- .2 Arrange for field testing of ground fault equipment by independent testing laboratory ground fault equipment manufacturer Contractor before commissioning service.
- .3 Demonstrate simulated ground fault tests.

END OF SECTION