

PART 1 - GENERAL

- 1.1 REFERENCES
- .1 Canada Green Building Council (CaGBC)
    - .1 LEED Canada-NC-2009, LEED (Leadership in Energy and Environmental Design): Green Building Rating System Reference Package For New Construction and Major Renovations.
  - .2 CSA International
    - .1 CAN/CSA C22.2 No.144-M91(R2006), Ground Fault Circuit Interrupters.
  - .3 National Electrical Manufacturers Association (NEMA)
    - .1 NEMA PG 2.2-1999(R2009), Application Guide for Ground Fault Protection Devices for Equipment.
- 1.2 ACTION AND INFORMATIONAL SUBMITTALS
- .1 Submit in accordance with Section 01 33 00 - Submittal Procedures.
  - .2 Product Data:
    - .1 Submit manufacturer's instructions, printed product literature and data sheets for ground fault circuit interrupters and include product characteristics, performance criteria, physical size, finish and limitations.
  - .3 Test and Evaluation Reports: submit test report for field testing of ground fault equipment to Departmental Representative and certificate that system as installed meets criteria specified.
  - .4 Sustainable Design Submittals:
    - .1 LEED Canada submittals: in accordance with Section 01 35 21 - LEED Requirements.
    - .2 Construction Waste Management:
      - .1 Submit project Waste Management Plan highlighting recycling and salvage requirements.
      - .2 Submit calculations on end-of-project recycling rates, salvage rates, and landfill rates demonstrating that 75% of construction wastes were recycled or salvaged.

1.3 CLOSEOUT  
SUBMITTALS .1 Submit in accordance with Section 01 78 00 -  
Closeout Submittals.

.2 Operation and Maintenance Data: submit  
operation and maintenance data for ground  
fault circuit interrupters for incorporation  
into manual.

1.4 DELIVERY,  
STORAGE AND  
HANDLING .1 Deliver, store and handle materials in  
accordance with Section 01 61 00 - Common  
Product Requirements and with manufacturer's  
written instructions.

.2 Develop Construction Waste Management Plan  
related to Work of this Section and in  
accordance with Section 01 35 21 - LEED  
Requirements.

.3 Packaging Waste Management: remove for reuse  
or return of pallets, crates, padding,  
banding, and packaging materials as specified  
in Construction Waste Management Plan in  
accordance with Section 01 74 21 -  
Construction/Demolition Waste Management and  
Disposal and Section 01 35 21 - LEED  
Requirements.

## PART 2 - PRODUCTS

2.1 MATERIALS .1 Equipment and components for ground fault  
circuit interrupters (GFCI): to CAN/CSA C22.2  
No.144 and 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 pole ground fault circuit interrupter  
for 15 or 20 A, 120 V, 1 phase circuit c/w  
test and reset facilities.

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- 2.3 GROUND FAULT PROTECTOR UNIT .1 Self-contained with 15 A, 120 V circuit interrupter and duplex receptacle complete with:
- .1 Solid state ground sensing device.
  - .2 Facility for testing and reset.
  - .3 CSA Enclosure 1, flush mounted with stainless steel 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 00 - Common Work Results for Electrical and co-ordinate with Section 01 45 00 - Quality Control if required.
- .2 Arrange for field testing of ground fault equipment by ground fault equipment manufacturer before commissioning service.
  - .3 Demonstrate simulated ground fault tests.

- 3.3 CLEANING .1 Progress Cleaning: clean in accordance with Section 01 74 11 - Cleaning.
- .2 Waste Management: separate waste materials for reuse and recycling in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal and Section 01 35 21 - LEED Requirements.
    - .1 Remove recycling containers and bins from site and dispose of materials at appropriate facility.