

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 for New Construction and Major Renovations.
 - .2 CSA International
 - .1 CSA C22.2 No.29-11, Panelboards and Enclosed Panelboards.

- 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 panelboards and include product characteristics, performance criteria, physical size, finish and limitations.
 - .3 Shop Drawings:
 - .1 Include on drawings:
 - .1 Electrical detail of panel, branch breaker type, quantity, ampacity and enclosure dimension.
 - .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 panelboards
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 PANELBOARDS .1 Panelboards: commercial grade to CSA
C22.2 No.29 and product of one manufacturer.
.1 Install circuit breakers in panelboards
before shipment.
.2 In addition to CSA requirements
manufacturer's nameplate must show fault
current that panel including breakers has been
built to withstand.

.2 250 and 600 V panelboards: bus and breakers
rated for 22 A (symmetrical) interrupting
capacity or as indicated.

.3 Sequence phase bussing with odd numbered
breakers on left and even on right, with each
breaker identified by permanent number
identification as to circuit number and phase.

2.1 PANELBOARDS
(Cont'd)

- .4 Panelboards: mains, number of circuits, and number and size of branch circuit breakers as indicated.
- .5 Flush locks for each panel board.
- .6 Two keys for each panelboard and key panelboards alike.
- .7 Aluminum bus with neutral of same ampere rating of mains.
- .8 Mains: suitable for bolt-on breakers.
- .9 Trim with concealed front bolts and hinges.
- .10 Trim and door finish: baked enamel standard colour.

2.2 BREAKERS

- .1 Breakers: to Section 26 28 16.02 - Moulded Case Circuit Breakers.
- .2 Breakers with thermal and magnetic tripping in panelboards except as indicated otherwise.
- .3 Main breaker: separately mounted on top or bottom of panel to suit cable entry. When mounted vertically, down position should open breaker.
- .4 Lock-on devices for breakers installed as indicated. Turn over unused lock-on devices to Departmental Representative.
- .5 Lock-on devices for fire alarm, clock outlet, emergency, battery units, door access system, exit light circuits, CCTV and as indicated.

2.3 EQUIPMENT
IDENTIFICATION

- .1 Provide equipment identification in accordance with Section 26 05 00 - Common Work Results for Electrical.
 - .2 Nameplate for each panelboard size 4 engraved as indicated.
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2.3 EQUIPMENT
IDENTIFICATION
(Cont'd)

- .3 Nameplate for each circuit in distribution panelboards size 2 engraved as indicated.
- .4 Complete circuit directory with typewritten legend showing location and load of each circuit, mounted in plastic envelope at inside of panel door. Use the directory card provided by the manufacturer.

PART 3 - EXECUTION

3.1 INSTALLATION

- .1 Locate panelboards as indicated and mount securely, plumb, true and square, to adjoining surfaces.
- .2 Install surface mounted panelboards on plywood backboards in accordance with Section 06 08 99 - Rough Carpentry for Minor Works. Where practical, group panelboards on common backboard.
- .3 Mount panelboards to height specified in Section 26 05 00 - Common Work Results for Electrical or as indicated.
- .4 Connect loads to circuits.
- .5 Connect neutral conductors to common neutral bus with respective neutral identified.

3.2 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.
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- 3.3 PROTECTION .1 Protect installed products and components from damage during construction.
- .2 Repair damage to adjacent materials caused by panelboards installation.