

PART 1 - General

1.1 SECTION INCLUDES

- .1 Materials and installation for standard and custom breaker type panelboards.

1.2 RELATED SECTIONS

- .1 Section 01 33 00 - Submittal Procedures.
- .2 Section 26 05 01 - Common Work Results - Electrical.
- .3 Section 26 28 21 - Moulded Case Circuit Breakers.
- .4 Section 26 28 18 - Ground Fault Equipment Protection.

1.3 REFERENCES

- .1 Canadian Standards Association (CSA International)
 - .1 CSA C22.2No.29-11, Panelboards and enclosed Panelboards.

1.4 SHOP DRAWINGS

- .1 Submit shop drawings in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Drawings to include electrical detail of panel, branch breaker type, quantity, ampacity, voltage and phase characteristics, and enclosure dimensions, as well as any special options called for on the drawings.

1.5 WASTE MANAGEMENT AND DISPOSAL

- .1 Collect and separate plastic, paper packaging and corrugated cardboard in accordance with Waste Management Plan.
- .2 Fold up metal banding, flatten and place in designated area for recycling.

PART 2 - Products

2.1 PANELBOARDS

- .1 Panelboards with Isolated Ground Bus: to CSA C22.2No.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 208V and 600V panelboards: bus and breakers rated for 10,000 A (symmetrical) interrupting capacities minimum or as indicated.

- .3 Isolated Ground Bus: copper, isolated in total from panel neutral and enclosure c/w lugs.
- .4 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.
- .5 Panelboards: mains, number of circuits, and number and size of branch circuit breakers as indicated.
- .6 Two keys for each panelboard and key panelboards alike.
- .7 All bussing shall be copper, tin plated, with a full capacity neutral, with an ampere rating as per the drawings.
- .8 Mains: suitable for bolt-on breakers.
- .9 All panelboard trims and door finishes are to be baked grey enamel.
- .10 All enclosures to be CSA Type 1 or as indicated on the drawing, suitable for flush or surface mounting as indicated on the drawings. All surface mounted tubs to be sprinkler proof in accordance with C.E.C. 26-008.
- .11 All panelboard tubs shall be minimum 14 gauge galvanized steel, minimum 26" wide.

2.2 BREAKERS

- .1 Breakers: to Section 26 28 21 - Moulded Case Circuit Breakers.
- .2 Breakers with thermal and magnetic tripping in panelboards except as indicated otherwise.
- .3 Lock-on devices installed as indicated on panel schedules.

2.3 EQUIPMENT IDENTIFICATION

- .1 Provide equipment identification in accordance with Section 26 05 01 - Common Work Results - Electrical.
- .2 Nameplate for each panelboard size 4 engraved indicating:
 - .1 Panel number as per the drawings.
 - .2 Voltage and phase characteristics of panel.
 - .3 Amperage of panel.
 - .4 Where panel is fed from.
- .3 Nameplate for each circuit in distribution panelboards size 2 engraved.
- .4 A typed directory under transparent cover shall be provided on the inside of each panel showing the location and load connected to each circuit.

2.4 MANUFACTURERS

- .1 Standard of acceptability:
 - .1 Siemens, Eaton, Square D.

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. Where practical, group panelboards on common backboard.
- .3 Mount panelboards to height specified in Section 26 05 01 - Common Work Results - Electrical or as indicated.
- .4 Connect loads to circuits.
- .5 Connect neutral conductors to common neutral bus with respective neutral identified.
- .6 Emergency, exit, fire alarm, sprinkler excess pressure pump and bells, and night lighting, circuit breakers shall have locking devices on the handles to prevent unauthorized operation.
- .7 Wiring in panelboards shall extend beyond the respective breakers, forming a 150mm loop before returning to connect to the breaker terminals, so there will be flexibility for reconnecting within the panel. Wiring shall be secured with Ty-wraps or equivalent means to present a neat workmanlike appearance.
- .8 Rigidly anchor floor mounted panels to the floor and wall.

END OF SECTION