

DIVISION 26 20 00

LOW VOLTAGE ELECTRICAL DISTRIBUTION



26 20 00 Low Voltage Electrical Distribution

1. Buried Services and Duct Banks

- 1.1. All buried services shall be installed within concrete-encased duct banks except for power feeds to devices such as light poles, etc. In those cases, underground services can be direct buried. Buried services shall be installed according to the latest Ontario Electrical Safety Code and Ontario Provincial Standard Drawings (whichever is stricter).
- 1.2. New or changed underground services shall be recorded on the digital campus map as well as on the design drawings associated with the project (if applicable).

2. Secondary Switchgear

- 2.1. The transformer main secondary switchgear shall contain draw-out type air circuit breakers. All equipment shall be of Canadian manufacture or with parts readily available to PPS.
- 2.2. An appropriately-sized spare air circuit breaker shall be provided to allow for maintenance servicing and testing with minimal interruption of service.
- 2.3. Secondary switchgear shall have copper bus and surge protection. As well, switchgear shall contain arc fault reduction technology.
- 2.4. Infrared windows (minimum 4" diameter) shall be provided and adequately positioned on the enclosure to allow thermal inspection on key components and cable terminations.
- 2.5. Approved manufacturers are Schneider (Square D), Siemens, and Eaton (Cutler-Hammer).
- 2.6. Documentation shall include manufacturer's shop drawings, catalogue cuts, data sheets, operation instructions and maintenance instructions.
- 2.7. Circuit identification shall conform to Queen's standards. Nameplates shall be reviewed with PPS prior to manufacture.

3. Fused Disconnects

- 3.1. Heavy duty safety switches shall be specified.
- 3.2. Disconnects shall accommodate CSA certified HRC1-J (Class J) fuses.
- 3.3. Preferred manufacturers are Schneider (Square D), Siemens, and Eaton (Cutler-Hammer).

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3.4. Documentation shall include catalogue cuts clearly indicating specified products and options.

4. Transformers – Dry Type 600V

4.1. Primary windings shall normally be copper conductor, delta connected, 1.2 kV class insulation, standard BIL complete with four 2½% taps, 2FCAN and 2FCBN.

4.2. Secondary windings shall normally be copper conductor, wye connected.

4.3. 80°C temperature rise above 40°C ambient shall be specified.

4.4. Approved manufacturers: Hammond and Delta.