

September, 2013
BUILDING DIVISION

ELECTRICAL PLAN REVIEW

This pamphlet is for general guidance only. It does not replace by-laws or other legal documents.

Building Permit Application

Electrical drawings shall be submitted for the following types of building permits:

- New multi-family, commercial, industrial, or institutional buildings, including additions to existing buildings.
- Tenant improvements that involve one or more of the following:
 - Food service facility (restaurant, fast food take-out, cafe, etc.)
 - Patient care area (medical clinic, dental clinic, physiotherapist, etc.)
 - Laboratory (medical, dental, trade school, etc.)
 - High voltage installation (exceeding 750 volts) *
 - Alternative energy systems (solar voltaic, wind generation, etc.) *
 - Electric vehicle charging station
 - Electrical service upgrades
 - Hazardous locations (as defined by the Canadian Electrical Code) such as:
 - Spray booth and dust collector
 - Automotive repair/service facility *
 - Wood processing facility *
 - Fuel dispensary *
 - Grain storage/processing facility *
- Other permit types where requested by the Electrical Section.

Where denoted by an asterisk (*), or when requested by the Electrical Section, electrical drawings must be sealed, signed and dated by a Professional Engineer in good standing with the Association of Professional Engineers and Geoscientists of BC. The Schedule B Letter of Assurance must accompany any sealed electrical drawings.

Electrical Permit Application

Unless specifically requested, or if the installation involves high voltage, electrical drawings are not required to be submitted with an electrical permit application.

What to Submit

Electrical drawings should be separate from other drawing types and must be legible paper copies. All electrical drawings must include the correct civic address of the project and the name and contact information of the designer, including an email address.

Electrical drawings submitted for building permit applications must include the information listed below:

- Single line diagram of the distribution system showing all proposed components clearly differentiated from existing components and which clearly identifies:
 - Grounding system details
 - Conductor types and ratings
 - Overcurrent device types and ratings
 - Distribution equipment types and ratings (transformer, panel board, etc.)
 - Calculated fault current levels at all distribution points
- Load calculations performed as per Section 8 of the Canadian Electrical Code
- Indicate if overcurrent device system is series rated or fully rated
- Floor plans, equipment layout and area classification (**Hazardous Locations only**)
- Floor plans and area classification as per Z-32-09 Standard (**Patient Care Areas only**). Additional documentation may be required to support the finished layout if requested by the Electrical Section.
- All plans and specifications outlined and approved as per BC Safety Authority Directive Number D-E3 090313 1 (**High Voltage Installations only**)

For more details and clarifications on the required electrical information to be submitted, please contact the Electrical Section at 604-591-4240 or email electrical@surrey.ca.

Electrical Plan Review Process

All electrical drawings will be circulated to the Electrical Section for review. Electrical drawings submitted for building permit applications are typically preliminary in nature, lack detail and will not be used as construction documents. The Electrical Section will review submitted drawings for the purpose of auditing the design to ensure it is suitable for building permit issuance only. The Electrical Section review will only address the minimum requirements outlined in BCSA Bulletin Number IB-EL- 2012-05. Upon completion of the electrical plan review, the Electrical Section will identify outstanding issues and may place these as Electrical Section conditions on the building permit.

If the submitted electrical drawings are not deemed acceptable for building permit issuance, the following individuals will be notified as such by the Electrical Plan Reviewer:

CP Projects: Certified Professional and Electrical Consultant

Non-CP Projects: Applicant and Electrical Consultant (if applicable)

If revised electrical drawings are required, they shall be submitted to the following Commercial Section staff:

Tenant Improvements: Tenant Improvement Permit coordinator

New Buildings/Additions: Building Permit coordinator

Responsibilities

Due to the dynamic nature between design documentation and final installation, it is the responsibility of the Field Safety Representative (FSR) named on the electrical permit to ensure that the installation is performed in compliance with the Safety Standards Act and Regulations of BC and to request all required inspections prior to covering and/or energizing regulated work. Where there are discrepancies between design and code compliance, the current Canadian Electrical Code and Safety Standards Act will prevail. Once the electrical permit has been issued, the Electrical Section will perform audit inspections of the installation to confirm compliance by both the Licensed Electrical Contractor and the FSR.