EB 0901 EB

Information contained in this bulletin does not negate the responsibility of the Electrical Contractor to comply with the Canadian Electrical Code, the Public Safety Act, the Electrical Regulations or the requirements of the supply authority.

- 1. An Electrical Permit must be purchased BEFORE electrical work is carried out. Permits are good for one year or two inspections, whichever comes first. (Roughin/Service inspection and Final.) If additional visits are required the appropriate fee is to be paid. One additional inspection will be conducted if deficiencies are to be corrected from previous inspections. If additional visits are required, the appropriate fee is to be paid. Requested inspection permits are for one inspection only. Commercial permits may be extended to completion of large projects with permission of the Chief Electrical Inspector(CEI).
- 2. First inspection (FOR ALL CONTRACTORS) for new or residential rewire and upgrade, requires that rough wire and service be complete (as much as possible) and that the second inspection is for the final. The third visit is reserved for verification of compliance with Field Orders.
- 3. Services are not to be energized (unless an additional permit has been purchased for temporary wiring) until all splices are complete, wiring 100% roughed in, and in all cases the outside fixtures and/or receptacles or box covers must be installed, leaving no exposed wiring.
- 4. Contractors who are required to submit Electrical Contractor Representative Reports must ensure the reports are complete and accurate, or such reports will be returned to the contractor resulting in connections or audit inspections being delayed.
- 5. In accordance with the Electrical Regulations Part 2, Section 7(9), Code 1 Contractor Representative Reports will be required at the rough wire/service complete stage. Electrical work must remain accessible and not obstructed by any building construction for two working days to allow the audit inspections to be performed. The Technical Inspector in the area may waive this requirement if it is requested, and if the inspector cannot carry out the inspection in the time allotted. Final inspection reports must be submitted upon completion.
- 6. Final Inspections are mandatory under the Electrical Regulations. Contractors failing to either have final inspections carried out, or have final reports submitted for work completed will not have additional permits issued to them, until final reports are received or otherwise dealt with to the satisfaction of the GSC electrical inspector.



- 7. Contractors are required to give a minimum of two working days notice to arrange an inspection. Time frames will be longer in remote areas, contact the Government Service Centre office in your area to arrange an appointment. Code 2 contractors may be asked to submit a representative report for connections processed without inspection (PWI) when the inspector is not in the area. In these situations the contractor must arrange access for inspection at a time convenient to the inspector or the authorization may be withdrawn.
- 8. Electrical Permits and lot or civic numbers must be prominently displayed on site for inspections to be carried out.
- 9. Safe access must be provided for inspectors. Permanently installed stairs, approved ladders or scaffolds only will be acceptable. Inspectors are not permitted to use makeshift ladders or planks in violation of Occupational Health and Safety Regulations.
- 10. Outlets for combination microwave oven/exhaust fan shall be supplied from a 20 amp, AFCI circuit, fed with #12 wire and protected by a 20 amp breaker.
- 11. An "electrical upgrade" applies to any existing premises, trailer or relocated structure previously wired that had been connected to a power grid. Existing wiring in good condition may be reused with the approval of an inspector. New Construction includes any extension to an existing structure. For a rewire, the electrical service and all wiring shall meet the requirements of the current edition of the CEC. **Note:** any property that has never been connected to the Utility's Electrical Grid and was previously wired for generator power will require a complete re-wire.
- 12. GFCI/AFCI protected receptacles required for each patio, exterior porch (Veranda) and balcony, with or without a roof or enclosure, within 2.5 M of finished grade.
- 13. CEC section 10-700, Grounding electrodes. Due to soil conditions in most areas three 1.8 M ground rods spaced 3 M apart with bare conductor buried between them will be acceptable in lieu of two 3 M rods.
- 14. For service grounding purposes a copper water main, if present, will be the ground point with an artesian well as second choice and ground electrodes third. Where two or more systems are present they shall be bonded together.
- 15. Satellite dish, propane lines and metal piping systems shall be bonded in accordance with the requirements of the current edition of the CEC.
- 16. Neutral wires shall be identified by approved marking tape properly wound on all exposed wire outdoors and where visible in meter socket and service equipment.
- 17. Lighting fixtures sold and used or installed in the province on branch circuits with voltages exceeding 150 volts-to-ground shall be
 - (a) provided with a disconnecting means integral with the luminaire that simultaneously opens all circuit conductors between the branch circuit conductors and the conductors supplying the ballast(s); and
 - (b) marked in a conspicuous, legible, and permanent manner adjacent to the disconnecting means, identifying the specific purpose.

Field kits used as the disconnecting means will only be acceptable as replacements or retrofits.



Electrical Bulletin UPGRADING SERVICE

Requirements for Upgrading of Electrical Service for a Single Family Dwelling



Newfoundland Labrador

SERVICE UPGRADE REQUIREMENTS:

The following requirements will be applied to service upgrades for domestic services and will also include any residence or structures not yet connected, which were previously wired for generators or pre-wired for power.

in the case of a residence or structure wired with a permit, which had not been connected, rough wire will be accepted upon confirmation of inspection.

Where sheeting is complete and no electrical inspection can be verified or was not carried out, the wiring may be accepted if it can be shown to the satisfactory of GSC electrical inspections that installation of the wiring meets acceptable standards. (e.g.: type of wire, boxes, bonding, grounding, minimum CEC requirements, as indicated below, and workmanship.)

All service entrance equipment shall be installed in accordance with the latest edition of the Canadian Electrical Code (CEC) Section 6, and the requirements of the supply authority:

Two Meters headroom required for access to service entrance equipment. Rule 6-206

Switch or combination panel to be installed as close as practical to point of entry of service conductors. Rule 6-206

Grounding and bonding to be complete as per CEC Section 10

Smoke alarms to be installed in all bedrooms and within five meters of any bedroom as per the requirements of the NBC and Fire and Emergency Services (NL) and a minimum of one smoke alarm to be located on each level of a residence. All smoke alarms are to be interconnected and come with battery backup.

Wireless connectivity of smoke alarms, certified for use in Canada, will be accepted, in an upgrade only. Each unit must be hardwired into the dwellings electrical system while the interconnection of smoke/CO2 alarms throughout the home can be wireless. The alarm system must come with battery backup and interconnectivity (one alarm sounds and they all sound).

If additional circuits are being installed they shall meet the requirements of the current edition of the CEC. (AFCI and GFCI requirements.)

Kitchen:

There shall be a sufficient number of kitchen counter receptacles as per Section 26 of the CEC, so that no point on a counter is more than 900 mm from a receptacle or 1.8 M apart.

Where there are sufficient numbers of receptacles and circuits existing (15 amp split or 20 amp receptacles), no changes will have to be made.

UPGRADING SERVICE

Requirements for Upgrading of Electrical Service for a Single Family Dwelling

Outdoors:

Install a separate GFCI/AFCI protected circuit for outside receptacles below 2.5 m. CEC 26-704(2), 26-656(g), 26-658(1)

Bathroom:

Install a GFCI protected receptacle for each bathroom.

Bedrooms:

Adequate receptacles are to be provided (2 minimum). If additional circuits are required they shall be AFCI protected.

Appliances:

Install range and dryer receptacles, and appliance cords if not so equipped. Rule 26-744 (Only required if there is an electric range or laundry room in the dwelling).

General:

A safety switch is required for fuel burning furnaces. Rule 26 - 806 (Switch to be installed between furnace and exit).

Correct any hazardous wiring present (including the removal of abandoned wiring, boxes, panels and knob and tube wiring where accessible) Rule 2-022

Existing wiring in good condition can be reused, (including knob and tube wiring that is properly installed in free air and not readily accessible), the requirements of Rule 26-702 requiring ground fault protection of ungrounded receptacles shall apply.

Bond metal systems and metal water lines to ground if there is no copper water main present. Rule 10-406

Repairs, such as repair or replace meter sockets, panels, main switch or circuit breaker, service wire and/or conduits, with equipment of the same size, in most cases will not require an upgrade to wiring, EXCEPT, in the case of potentially dangerous situations, and grounding and bonding.

A registered Electrical Contractor must purchase an installation and repair permit before carrying out electrical work.



Electrical Bulletin KITCHEN COUNTER RECEPTACLES



Summary of some of the Canadian Electrical Code minimum requirements for kitchen outlets as of the 2015 edition:

26-700

Receptacles installed within 1.5m of sinks (wash basins complete with drainpipe), bathtubs or shower stalls be protected by a ground fault circuit interrupter of the Class A type.

26-710

Receptacles shall not be mounted facing up in the work surfaces or counters in the kitchen or dining room.

- A sufficient number of receptacles (15 A split or 20 A T-slot) installed at each permanently fixed island counter space with a long dimension of 600 mm or greater and a short dimension of 300 mm or greater. 26-712(d)(iv)
- At least one receptacle (15 A split or 20 A T-slot) installed at each peninsular counter space with a long dimension of 600 mm or greater and a short dimension of 300 mm or greater. 26-722

NOTE: If the island counter or the peninsular are long enough, or the island is divided by a sink creating two isolated surfaces over 300 mm, two receptacles may be required to meet the requirements indicated.



TCHEN COUNTER RECEPTAC







Electrical Bulletin SERVICE EQUIPMENT LOCATION

2021 Canadian Electrical Code

Canadian Electrical Code (CEC) - 6-206

Service boxes or other consumer's service equipment shall be located:

(e) as close as practical to the point where the consumer's service conductors enter the building. For the purpose of enforcing this rule a maximum of 3m of conduit may enter the building.

This rule will be strictly enforced. Only conduits for conductors as indicated in Rule 6-208 (those conductors considered outside the building) will be permitted on or under a building.

Consumer service conductors in conduit, that are un-fused, are unprotected until they enter the main service box. Since unprotected conductors can be the cause of a fire or shock hazard, the distance between the outside wall and the service box must be kept as short as possible.

The location of the service box must meet the supply authority's requirements, be readily accessible and not located in undesirable locations.

Undesirable locations include, but are not limited to:

- clothes closets (access can be difficult, and the contents of a closet can present a fire hazard);
- bathrooms (moisture can cause shock hazards and deterioration of equipment);
- areas where footing is not level, e.g. stairways;
- high temperature areas (heat can cause nuisance tripping of over current devices and deterioration of insulation);
- areas where the ceiling height is less than 2m (such areas are not easily accessible); and
- any other undesirable location that presents a potential threat to the equipment or to personnel servicing the equipment.

Service Entrance

Service location, drop wire heights, service head and meter location shall be in accordance with the Canadian Electrical Code 6-116 "To the requirements of the supply authority."





INFORMATION FOR CONTRACTORS

NOTE:

Contractors/owners requiring a service disconnect must make arrangements with the power company in the area.

If a reconnect is required, and electrical work is being carried out, an electrical permit must be in place and previous arrangements have to be made with the Power Company and GSC electrical inspection. (The GSC does not request or approve disconnects.)

Only Electrical Inspectors employed by Service NL and appointed by the Minister are authorized to carry out and issue reports on electrical inspections.

Code 1 contractors may certify their own work. Electrical contractors and consultants can issue condition reports on any installation in the normal course of business, but are not authorized to carry out electrical inspections.

It is an offence for any unauthorized person to interfere with an electrical installation in violation of the Public Safety Act and the Electrical Regulations.

Electrical Contractors, who feel they have any problems/concerns complying with these requirements, or any particular installation, should consult with Technical Inspector II (Electrical) in the area for further advice before proceeding with the job.

Contractors may also send a detailed drawing, together with an explanation, to the Chief Electrical Inspector at the address below if they wish to apply for a deviation in accordance with the Canadian Electrical Code Section 2, Rule 2-030.

DAVID MAYNE

Manager of Electrical Safety Services Chief Electrical Inspector Service NL Program and Support Services Division Mount Pearl, NL Telephone: (709) 729-3517 Email: davidmayne@gov.nl.ca

