

HOMEOWNERS WIRING GUIDE*

- 1) When designing the basement or renovating existing areas, panelboards shall not be located in closets, bathrooms or undesirable locations.
- 2) Maximum breaker size for general purpose circuits (lights/receptacles) is 15 amps.
- 3) Receptacles must be installed along finished walls so that no point is more than 1.8 meters (6 feet) horizontally from a receptacle i.e. a maximum of 3.6 meters (12 feet) between plugs. Exceptions of this are: bathrooms, kitchens hallways, laundry rooms, utility rooms, closets and walls less than 900 mm (3 feet) wide. No point in the hallway to be more than 4.5 meters (15 feet) from receptacle.
- 4) For kitchens a sufficient number of receptacles (5-15 split or 5-20R) along the wall at counter work surfaces so that no point along the wall line is more than 900mm from a receptacle measured horizontally along the wall line. At least one receptacle (5-15 split or 5-20R) installed at each permanently fixed island counter space and each peninsula counter space.
- 5) Split receptacles installed along the wall of kitchen counter work surfaces shall be fed with 3-wire cables. No more than two split receptacles shall be connected to a 3-wire circuit. No other outlets shall be connected to these circuits. A 2 pole 15 amp breaker is required for split receptacles.
- 6) Vapour hats are required on all boxes, potlights and bath fans where wall or ceiling vapour barrier is required.
- 7) Maximum of 12 outlets is permitted on general purpose circuits.
- 8) Where cables pass through holes in joists or studs the holes must be at least 32mm (1.25 inches) back from the joist or stud face. If not the cable must be protected by metal protection plates or cylindrical bushings. **DO NOT DRILL HOLES IN ROOF TRUSSES.**
- 9) Cables are to be secured within 300mm (1 foot) of every box and at intervals of no more than 1.5 meters (5 feet) throughout the run.
- 10) At least 150mm (6 inches) of wire from each loomex must be at each outlet box for splicing, terminating and connection of equipment.
- 11) Maximum numbers of conductors permitted in boxes.

Box Type	Dimensions	#14 (Conductor Size)	General Usage
Octagon (15 cu. in.)	4 X 1 ½	9	Light or junction box
#1104 (12.5 cu. in.)	3 X 2 X 2 ½	5	Switch or plug
#1004 (15 cu. in.)	3 X 2 X 3	7	Switch or plug

Note: when a dimmer switch, timer, or GFCI receptacle is used in an outlet box, reduce the number of permitted conductors by three.

- 12) All boxes must be accessible after installation is complete.
- 13) Furnace switch needs to be brought down to an accessible height and located between the furnace and on the way out of room or basement.
- 14) Recessed lighting fixtures shall not be installed in insulated ceilings unless the fixtures are designed and approved for such installations i.e. marked with "Suitable for use with Thermal Insulation" or "IC" Rated.
- 15) Separate circuits are required for the following: refrigerators, receptacles in laundry room, microwaves installed in a wall cabinet/shelf, outdoor receptacles, furnace and central vacuum systems. Some other loads may require a separate circuit.
- 16) All 15 and 20 amp receptacles located within 1.5 meters (5 feet) of any sink must be ground fault protected. Exceptions to this would be receptacles installed behind and intended for stationary appliances such as fridge, microwave on its own shelf, washing machine etc.
- 17) Receptacles in bathrooms must be ground fault protected and located within 1 meter (39") of the wash basin. They are to be located 1 meter (39") from tub or shower or at least 500mm if 1 meter is not possible.
- 18) At least one separate circuit is required for a garage and at least one receptacle for each car space.
- 19) Outdoor receptacles must be installed on a separate circuit and more than one can be on the same circuit. Outdoor receptacles must be arc fault and ground fault protected and require wet location covers marked for "Extra Duty."
- 20) At least one receptacle shall be installed on a balcony or porch that is not classified as a finished room.
- 21) As per Building Requirements - Smoke/Carbon Monoxide detectors are required to be installed on every floor level, a smoke detector in each bedroom and all need to be interconnected electrically. They need to be installed on a general lighting circuit and not on a separate, Arc-fault or Ground-fault circuit.
- 22) All 15 and 20 amp receptacles must be arcfault protected. Some exceptions are bathroom, kitchen counters, fridge receptacles and sump receptacles with a single receptacle.
- 23) All 15 and 20 amp receptacles must be tamper resistant. Some exceptions are receptacles rendered inaccessible and located above 2 meters from the floor.

***This is not a complete list of all code requirements but just basic information only.**

Electrical permits may be applied for by owners of single family dwellings who reside on the property and will be doing the wiring themselves.

Homeowner permits may not be taken out to cover work done by others. The homeowner should have some basic knowledge of electrical wiring and code rules.

Persons without this knowledge should hire a qualified, licensed Electrical Contractor who will then be responsible for obtaining an electrical permit.

HOMEOWNER PERMITS CANNOT BE ISSUED FOR THE FOLLOWING:

1. Wiring in a new home or existing home for resale or rental purposes.
2. Installation of the main electrical service unless the owner is a certified journeyman electrician.

FREQUENTLY ASKED QUESTIONS

Do I require a building permit?

Depending on the work you are doing, you may require a building permit. Please check with Building Safety & Inspection Services at **(403) 320-3920** to see if this applies to you.

How much will a permit cost?

Please refer to the application form to calculate the fee for your project. The minimum permit fee is non-refundable and non transferable.

Where do I find the complete Electrical Code?

A partial list of guidelines is included in this pamphlet. The work must comply with the regulations adopted from the Alberta Safety Codes Act. Please contact Building Safety & Inspection Services for additional information.

How long is my permit valid?

Permits can expire and become null and void:

- if the work is not started within 90 days of issuance
- if the work is suspended or abandoned for 120 days after it was started.

Permits can be closed if there is no entry arranged for or permitted.

Work covered by the permit must be completed within **365 days**.

When should I call for an inspection?

Inspections are required when:

1. Rough wiring is complete and:
 - All cables and outlet boxes have been installed and secured in place.
 - Grounding conductors have been terminated in outlet boxes.
 - Splices have been completed.
 - Rough wiring is visible i.e. walls are open with no insulation or vapour barrier installed.
 - All corrections to be completed and inspections "Passed" before
2. Finish wiring is complete and ready for inspection when:
 - Switches, plugs etc are connected and secured to outlet boxes with covers on.
 - Branch circuits are installed in breaker panel, connected to breakers, and labelled.
 - Corrections (if any) from rough wiring inspection have been completed.

How do I request an inspection?

Inspections are requested by phoning **(403) 320-3830**. Requests received before **1:00 pm** will normally be inspected the next business day.

Planning and Development Services Department

1ST Floor, City Hall
910 - 4 Avenue South
Lethbridge, AB T1J 0P6
Telephone: (403) 320-3920
Fax: (403) 327-6571

INSPECTION LINE: (403) 320-3830

Note: This is a general guide only. Additional information may be required. When you apply, personal information may be collected under the authority of Section 33© of the Alberta Freedom of Information and Protection of Privacy Act (FOIPP), Section 642 of the Municipal Government Act and/or Section 63 of the Safety Codes Act. The information will be used to process your application(s) and your name and address may be included on reports that are available to the public. If you have any questions, please contact our office.

Revised July 16, 2018

ELECTRICAL HOMEOWNER PERMIT



**PLANNING AND DEVELOPMENT
SERVICES DEPARTMENT**



CITY OF
Lethbridge