

City of Ottawa Department of Planning and Codes Administration

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PLEASE READ

Residential Plan Review Requirements
(REVISED January 22, 2009)

(MAKE SURE ALL TRADESMEN/CONTRACTORS HAVE READ THE FOLLOWING CODES AND REGULATIONS BEFORE BEGINNING PROJECT)

The following items are commonly overlooked items that have resulted in rejection of project or delayed occupancy.

Date: _____

Structure: _____

Address: _____

Signature

Date

FOOTINGS & FOUNDATIONS

1. Footings shall be a minimum of 8 inches thick and 16 inches wide for 1 story and 10 inches thick and 20 inches wide for 2 stories, with 3 #4' horizontal rebar on chairs. Foundation wall minimum is 8 inches thick. If brick ledge is required, foundation wall shall be 10 inches thick. (Ask for foundation supplement for further details) IRC R-403 Amendments.
2. Foundation drains shall be provided and installed on a minimum of 2 inches of washed rock, covered with a minimum of 6 inches of the same material, and be covered with a filter membrane material. IRC R-405.
3. Minimum 1/2" x 10" anchor bolts required 12" from each end, 6 feet on center thereafter, and as per braced wall requirements. IRC R-403.
4. Bottom of footing shall be a minimum of 30 inches below finished grade. IRC R-403 Amendments.
5. Foundation walls of habitable rooms located below grade shall be waterproofed as required by Section IRC R-406.

6. Foundation insulation required by Section 502.2.1.4 of the IEC. Insulation must extend from top of slab downward minimum 24" and extend horizontally to the interior for a distance of 24". Minimum R-6.

STAIRS & GUARDRAILS

7. Stairs shall have 7 3/4" maximum rise with 10" minimum run. IRC.R-311.
8. Guardrails shall be **minimum of 36" high** with intermediate rails spaced such that a **4" diameter sphere cannot pass through**. **Guardrails shall be built to this standard whether required or not.** Guardrails are **required** when any floor or raised area is over 30 inches above floor level or finish grade. In addition, guardrails are required on the open sides of stairways including basement stairways with a total rise of more than 30 inches above floor or grade below. Guardrails shall be a minimum of 34 inches above nosing of treads. IRC.R-312.
9. Handrails are required on stairs with two or more risers. 34-38" above nosing of treads. IRC.R-315.1.
10. Guardrails are required on both sides of basement stairs if left open. Minimum height is 34 inches above nosing of stair treads. Handrail is required on one side of the guardrail system. Handrail shall not be less than 1 1/4" or more than 2 5/8" in cross-section. IRC R-311.

ENGINEERED SYSTEMS

11. All trusses or rafters shall have roof tie-downs installed. IRC R-802.11.
12. Wood trusses shall be designed in accordance with accepted engineering practice. Design drawings shall be submitted to the inspection department. ICRC-802.10.1 and 802.10.2 or R502.11.

EGRESS

13. Emergency egress windows in bedrooms shall have a clear height opening of 24" with a clear width of 20". The minimum net clear opening shall be 5.7 square feet. Sill height shall not be more than 44" above floor. Windows shall be operational from the inside of the room without the use of keys or tools. Grade floor openings may be reduced to 5.0 sq. ft. net opening. IRC-310.

ELECTRICAL

14. Electrically wired smoke detectors with battery backup shall be installed in all bedrooms, hallway adjacent to bedrooms and basement. All detectors shall be interconnected so that actuation of one will actuate all detectors. IRC R-313.
15. Ground fault receptacles required in all receptacle locations serving the kitchen counter top, all outdoor receptacles, basement receptacles, some laundry room receptacles and garage receptacles except for dedicated receptacles. IRC E 3802.

16. Arc-fault circuit interrupters are required for all bedroom outlets. E3802 and 12.
17. Bathrooms shall be served by a minimum of one 20 Amp circuit. Such circuits shall have no other outlets. Bathrooms may be grouped together on a single 20 Amp circuit.
18. A minimum of one 20 Amp laundry branch circuit shall be provided and shall have no other outlets. IRC E3603.
19. Minimum two - 20 Amp small appliance kitchen circuits required. NEC 220 and IRC E-3603.
20. Electrical boxes shall not be located in cold air return spaces. NEC 300-22 and IRC E-3804.7.
21. End of island or peninsula counter in kitchen shall have an electrical outlet installed. NEC 210-52 and IRC E-3801.
22. Each wall space 2 ft. or more wide shall have at least one receptacle provided. NEC 210.52, IRC.E 3801.

PLUMBING

23. All plumbing pipes extending through concrete floor shall be protected by protective coating or wrapping. IRC.P-2603.3.
24. Plumbing water lines shall be air tested at a minimum 50 PSI for a period of 30 minutes. IRC.P-2503.6.
25. Plumbing drain lines shall be tested with water column minimum 10 feet above the highest fitting connection and held for a minimum period of 15 minutes. Air testing, as an alternate, shall be at minimum 5 PSI held for at least 15 minutes. IRC.P-2503.5.1.
26. Drainage piping serving fixtures which has flood level rims located below the elevation of the next upstream manhole cover of the public sewer serving such drainage piping shall be protected from backflow of sewage by installing an approved type backwater valve. Valve shall be accessible with a bolted access cover. Examples of fixtures that may fall under this requirement are, but not limited to, floor drains in basement floors and clothes washer standpipes located in the basement level. IRC.P-3008.

HVAC/MECHANICAL

27. Hearth shall extend a minimum of 8" past each side of fireplace opening and shall extend a minimum of 16" in front of fireplace opening that is less than 6 square feet. If opening is six square feet larger, contact Building Department. IRC R-1001.9 and 10.
28. Heating supply vents terminating under cabinets or vanities shall have continuous metal boot from furnace to the register. (Flame spread index cannot exceed 200). IRC.M-1601.
29. Exterior air supply to assure proper fuel combustion required for fireplace. The exterior intake shall be capable of providing all combustion air from the exterior of the dwelling or

from ventilated attic or crawl spaces the intake shall be covered with a corrosion resistant screen of 1/4" mesh. The air intake passage way shall be not less than 6 square inches and not more than 55 square inches. The inlet can be located in the sides of the firebox chamber or within 24" of the firebox opening on or near the floor. Inlet shall be closeable and designed to prevent burning material from dropping into inlet. IRC.R-1005.

30. Outside combustion air for fuel burning appliances shall be supplied through openings or ducts extending from appliance room to the outdoors. One opening shall be within 12" of the top and one within 12" of the bottom of the space. Vertical duct openings shall have a free area of not less than one square inch per 4,000 BTU/HR of the total input rating of all equipment in the space. Horizontal ducts require one square inch per 2,000 BTU. IRC.M-1703.
31. Combustion air obtained from an attic that shall have attic ventilation sufficient to provide the required volume of air. IRC.M-1703.

GENERAL BUILDING DESIGN

32. Setbacks from property lines shall be as per Zoning Regulations.
33. All wood in contact with concrete masonry or exposed to weathering shall be treated or naturally decay resistant. Wood joists closer than 18 inches or wood girders closer than 12 inches to exposed ground shall be treated. IRC.R-319.
34. Landings are required on each side of an exterior door. Exterior landing maybe 7 3/4" below if main door does not swing out. Width of landing shall not be less than the door served and shall extend minimum 3 feet in direction of travel. IRC-311.4.3.
35. Lot shall be graded so that the grade away from the foundation falls a minimum of 6" within the first 10 feet. Distance from top foundation to grade shall not be less than 6 inches. IRC.R-401.3.

EXCEPTION: Where lot lines, walls, slopes or other physical barriers prohibit 6 inches (152mm) of fall within 10 feet (3048mm), the final grade shall slope away from the foundation at a minimum slope of 5 percent and the water shall be directed to drains or swales to ensure drainage away from the structure. Swales shall be sloped a minimum of 2 percent when located within 10 feet (3048mm) of the building foundation. Impervious surfaces within 10 feet (3048mm) of the building foundation shall be sloped a minimum of 2 percent away from the building.

36. Ground shall be chemically treated prior to pouring any concrete or termite shield is required. IRC.R-320.
37. All concealed spaces, openings around vents, pipes, wiring, ducts, chimneys and fireplaces shall be fire stopped at the ceiling and floor level with non-combustible materials. IRC.R-602.8.
38. Attic ventilation required with an area of not less than 1-150 of the area of the space ventilated or see exceptions in IRC. IRC.R-806.

39. Attic access shall be provided not less than 22" by 30" with a clear height above opening greater than 30". Attic access shall be located in hallway or other readily accessible area. IRC.R-807
40. Windows with bottom edge less than 18 inches above the floor with the top edge more than 36 inches above the floor and with an exposed area of an individual pane great than 9 sq. ft. shall be safety glazed. Glazing in bathing areas – the bottom edge of which is less than 60 inches above the drain inlet shall be safety glazed. IRC R-308.
41. 6-mil moisture barrier required under occupied slabs. IRC R-506.
42. Approved corrosion-resistive flashing shall be provided at top and sides of all exterior window and door openings in such a manner as to be leak-proof. Flashings shall be installed at the intersection of chimneys or other masonry construction with frame or stucco walls with projecting lips on both sides under stucco copings under and at the ends of masonry, wood or metal copings and sills; continuously above all projecting wood trim; where exterior porches, decks or stairs attach to a wall or floor assembly of wood-frame construction; at wall and roof intersections; under built-in gutters; at junction of chimneys and roofs; in all roof valleys and around all roof openings. IRC R-703.8.
43. If any Stucco System is to be used as exterior wall cover, contractors licensed and trained by the manufacture of the Stucco System must install such system. A separate permit may be required. The licensed contractor shall contact the City Inspection Division **PRIOR** to installing stucco system. IRC R-703.9.
44. Exterior walls located less than 3 ft. from the property lines shall have not less than 1-hour fire-resistive rating. The fire-resistive rating of exterior walls located less than 3 ft. from property line shall be rated for exposure from both sides. Projections beyond the exterior wall shall not extend more than 12 inches into areas where openings are prohibited, see Table R-302.1. IRC R-302.
45. Openings shall not be permitted in exterior walls of buildings located less than 3 ft. from the property line. This distance shall be measured perpendicular to the vertical plane of the wall, see Table R-302.1. IRC R 302.

ROOFS

46. See Roof Assembly handout. IRC Chapter 9.

GENERAL

47. Contractors properly licensed by the City of Ottawa shall perform all electrical, plumbing and/or HVAC work on new construction or unoccupied remodels.

***The code requirements listed herein are not all inclusive and do not relieve the contractor, builder or owner from the requirement to comply with other codes and ordinances not listed herein or when required by the Inspection Department.**

Section R 313 of the 2006 International Residential Code Smoke Alarms

R313.3 Power source. In new construction, the required smoke alarms shall receive their primary power from the building wiring when such wiring is served from a commercial source, and when primary power is interrupted, shall receive power from a battery. Wiring shall be permanent and without a disconnecting switch other than those required for overcurrent protection. Smoke alarms shall be permitted to be battery operated when installed in buildings without commercial power or in buildings that undergo alterations, repairs or additions regulated by Section R313.2.1.

R313.2 Location. Smoke alarms shall be installed in the following locations:

1. In each sleeping room.
2. Outside each separate sleeping area in the immediate vicinity of the bedrooms.
3. On each additional story of the dwelling, including basements but not including crawl spaces and uninhabitable attics. In dwellings or dwelling units with split levels and without an intervening door between the adjacent levels, a smoke alarm installed on the upper level shall suffice for the adjacent lower level provided that the lower level is less than one full story below the upper level.

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R313.2.1 Alterations, repairs and additions. When alterations, repairs or additions requiring a permit occur, or when one or more sleeping rooms are added or created in existing dwellings, the individual dwelling unit shall be equipped with smoke alarms located as required for new dwellings; the smoke alarms shall be interconnected and hard wired.

Exceptions:

1. Interconnection and hard-wiring of smoke alarms in existing areas shall not be required where the alterations or repairs do not result in the removal of interior wall or ceiling finishes exposing the structure, unless there is an attic, crawl space or basement available which could provide access for hard wiring and interconnection without the removal of interior finishes.
2. Work involving the exterior surfaces of dwellings, such as the replacement of roofing or siding, or the addition or replacement of windows or doors, or the addition of a porch or deck, are exempt from the requirements of this section.

Installation of City Utility Services

New Water, Electric or Sanitary Sewer Services.

This service is provided where utilities are available and the customer has requested to connect to the City utility. This service would include a cut off of services due to demolitions.

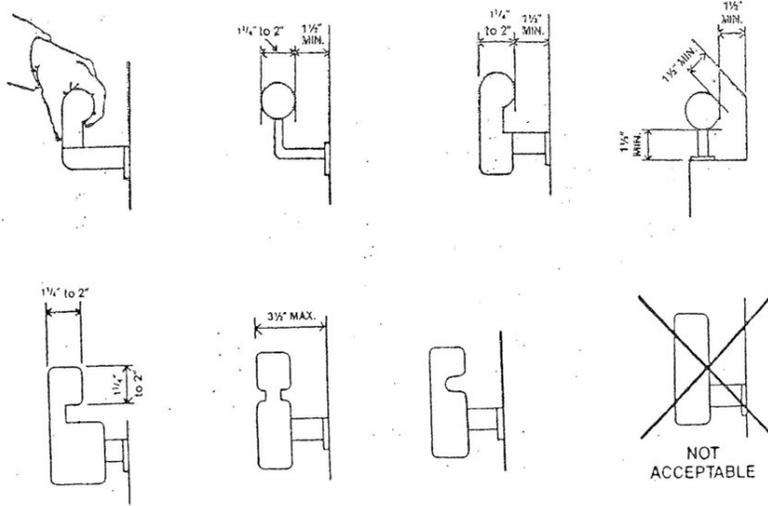
1. The customer should request this service from the Inspection Department at City Hall.
2. The Inspection Department shall collect the necessary permit, tap, or impact fees at the time of the request for service.
3. The customer should allow up to eleven working days for completion of the installation of the new services.

Request for Turn on/off of Services

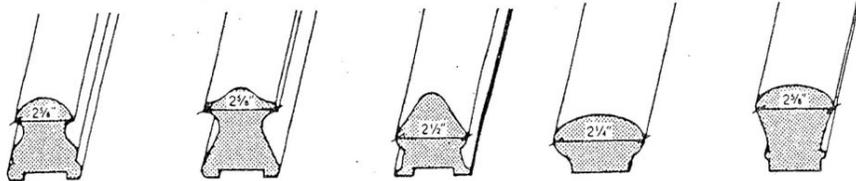
This service is where a new owner is requesting that an existing service be turned on or the prior owner has requested that a service be turned off.

1. The customer should apply for this service at the Finance Department at City Hall.
2. The Finance Department will collect necessary fees at the time of the request.
3. Commercial buildings require a scheduled inspection. Call or see the Inspection Department.
4. The customer should allow two days for this service to be completed.

Handrails



NOTE:
OTHER SHAPES MAY BE ACCEPTABLE
IF THEY PROVIDE AN EQUIVALENT
GRIPPING SERVICE. SEE THIRD
PARAGRAPH OF SECTION 1006.9.



For SI: 1 inch = 25.4 mm.