

CODE SPECIFICATIONS FOR RESIDENTIAL BASEMENT FINISHING

Plan: Only a basic plan need be submitted. The plan should show the type of room (bedroom, family room, etc.) to be finished, including the location of lights, outlets, smoke detectors, the dimension of each room, location and sizes of doors & windows, the location of the utility / mechanical room and the location of the electrical panel.

Please read through all of the following items carefully. The following items are minimum code requirements that you will need to be aware of for proper compliance. This list is not all inclusive and other code requirements may apply. Owner and/or contractor are responsible for compliance with all minimum codes and City ordinances.
(Adopted Codes are: 2009 International Residential Code)

Minimum room and space sizes

- Bedrooms: min. 70 sq. ft. with a min. 7' dimension.
- Ceiling height: 7'0" min. measured from the finished floor to the finished ceiling.
- Water closet: 21" clear space in front and 15" to each side from center of closet bowl.
- Lavatory: 21" clear space in front.
- Showers: 900 sq. inch shower floor area, 30" least min. dimension, temp. glass, door shall swing out. The shower opening shall have a finished width of 22".
- Hallways: 36" min. finished width.

Stairway Minimums

- 36" min. finished width.
- 6'8" min. finished headroom (measured from tread nosing straight up to ceiling or fixture).
- Minimum tread length measured from nose to nose is 9".
- Maximum riser height is 8".
- Maximum variation allowed on rise and run shall not exceed 3/8".
- Handrails shall be installed on at least one side of stairs with more than three risers. Height of railing shall be 34" – 38" measured from the nose of the treads.
- Guardrails required shall be 36" min. height with spindle design set such that a 4" sphere cannot pass through at any point along the rail. Elevations more than 30" in height require a guardrail.
- Enclosed, usable space under stairways are to be 1/2" sheetrock for the full inside walls and ceiling of the enclosed usable space.

Construction Materials

- All sole plates resting on concrete slabs must be redwood or pressure treated.
- All beams to be properly sized and supported for loads carried.
- Insulation shall be at least R-10 continuous or R-13 between studs. Above grade framed exterior walls shall have a vapor barrier on the warm-in-winter side. Below grade walls are not required to have a vapor barrier.
- Maximum stud spacing is 24" o.c. for non-bearing walls.

Window Requirements

- Size of windows must be 8% of room area from natural light unless specifically approved otherwise.
- Each bedroom window must have a min. net opening of 5.7 sq. ft. with 24" min. height & 20" min. width. The sill height shall not be more than 44" off the floor.
- Bedroom window wells must extend a minimum of 36" out from the building.
- Bedroom window wells greater than 44" deep require a permanently affixed ladder.
- Tempered glass required when windows are within 18" of floor level or within 24" of door.

Plumbing

- All fixtures must be plumbed to meet the current International Residential Code.
- No lead or acid bearing solders are allowed
- Tubs, showers sinks and lavatories must have P-traps.
- Water closet: 21" clear space in front and 15" to each side from center of closet bowl.
- Lavatory: 21" clear space in front.
- Showers: 900 sq. inch shower floor area, 30" least min. dimension, temp. glass, door shall swing out. The shower opening shall have a finished width of 22".

Gas Furnaces and Water Heaters

- Furnaces or water heaters shall not be located in bedrooms, bathrooms or similar confined rooms.
- Access to furnace and water heater shall not be through bedrooms or bathrooms.
- The furnace or water heater must be removable without disrupting services.
- The furnace must have 30" of clearing working space in front, 6" to combustible from the front and as per attached specifications plate for side and back clearances to combustibles.
- Mechanical equipment must be provided with outside combustion air. Size all ducting per current International Residential Code.

Wood Stove and Fireplaces

- Must be installed with clearances to combustibles as specified in their listing requirements. All wood stoves and fireplaces must be listed and labeled units. Consult with building inspector for special circumstances or requirements.

Electrical

- Tamper-Resistant Receptacles are required on all 15 and 20 amp receptacles.
- Receptacle outlets must be provided so that any point along a wall is not over 12' in distance measured from one outlet to another. Outlets also need to be within 6' of door opening or end of wall.
- Wall sections 2' and wider (i.e. between doors) require an outlet.
- Basement shall have GFCI protection in bathrooms, on kitchen countertops, for jetted tubs, and for all outlets in unfinished rooms in basements.
- Label all circuits in panel box.
- Panel box shall not be located in clothes closets or similar spaces where easily ignitable materials may be present.
- The electrical panel must have a 36" deep and 30" wide clear working space in front of the electrical equipment.
- Combination Arc fault breakers required for all bedroom circuits.

- A switch controlled lighting outlet must be provided at hallways, stairways, exits, and in each room.
- Provide a smoke detector for each bedroom, guest room, in access area to all bedrooms, and at least one smoke detector on each floor. C.O. detectors required on each level of home. Detectors shall be placed in existing bedrooms when any work is being done that requires a permit for the remodel. Smoke detectors shall be hard wired with battery back up and shall be on an Arc Fault Breaker. Exception: If finish wall or ceiling materials would have to be removed to install wiring for smoke detectors, a battery detector will be allowed.
- Provide GFCI outlet on kitchen countertops 12" or more. There must be at least two (2) dedicated 20 Amp circuits for countertop outlets (min.).
- Bathrooms, water closet compartments and other similar rooms shall have not less the 3 sq. ft. of window with 1.5 sq. ft. of openable area or an exhaust fan capable of 50 cfm. Fan must be exhausted directly to the outside.
- Bathrooms, provide one GFCI outlet within 3' of lavatory. The outlet needs to be on a dedicated 20 amp circuit or a dedicated 20amp circuit for the whole bathroom.

Framing

- All wood sole plates that are placed on concrete slabs must be pressure treated or redwood.
- Provide fire stopping as required by the 2006 International Residential Code. (Note: details sheet included on last page.)
- All framing shall be plumb and true.
- Non-bearing stud walls shall not exceed 24" o.c.
- Sheetrock backing required on ceiling corners and wall corners as required.
- Holes shall not be drilled in the top or bottom 2" of floor joists.
- Do not notch floor joists.
- Holes drilled in studs closer than 1 1/4" to edge for piping or wiring must have nail guards installed.
- Holes shall not exceed 40% of stud for bearing wall.
- Holes shall not exceed 60% of stud for non-bearing walls.
- All beams to be properly sized and supported for loads carried.

Insulation

- Approved insulation shall be properly installed in all exterior walls.
- Insulation shall be at least R-10 continuous or R-13 between studs. Above grade framed exterior walls shall have a vapor barrier on the warm-in-winter side. Below grade walls are not required to have a vapor barrier.
- Insulation should be neatly fit into place with minimum amount of compression.

Sheetrock

- All sheetrock joints shall be properly backed.
- DensShield or cementitious backer for tile shall be used in tub and shower compartments follow manufacturer specs.
- Enclosed usable space under stairways shall be 1/2" sheetrock.
- Sheetrock shall be properly attached to the studs. Screws shall be placed not to exceed 12" max. spacing and should penetrate the stud 5/8" min.