



Building Code Requirements

Single Family Dwelling – Basement

Building Inspections | City of Eden Prairie | 8080 Mitchell Road | Office: 952-949-8342

➤ Foundations/Framing:

- All work shall be done to comply with the provisions of the 2020 IRC.
- Interior foundation wall insulation must be separated from the foundation wall by means of a moisture/air barrier.
- A vapor retarder must also be installed between the wall insulation and the gypsum board to prevent inside moisture from penetrating the wall cavity.
- Exposed foam insulation shall have a flame-spread index not to exceed 25 and a smoke-developed index not to exceed 450 or be covered with ½-inch gypsum. **(IRC R302.10.1)**

➤ Furring Strips/Plates: Wood furring strips and plates installed on concrete shall be treated wood or resistant to decay. **(IRC R307.1)**

➤ Concealed Spaces:

- Enclosed usable storage space under stairways shall be covered with ½-inch gypsum on all walls and ceilings. **(R302.7)**
- Concealed open space of a floor-ceiling assembly shall be draft stopped. (Not to exceed 1000 sq. ft.) **(IRC R302.12)**
- Fireblocking shall be provided at all soffits, ceilings and concealed spaces. **(IRC R302.11)**

➤ All Sleeping Rooms/Basements With Habitable Space:

- Shall be provided with an approved means of egress. **(MN Rules 1309.0310 & R310.1)**

➤ Egress Windows Shall Have: **(MN Rules 1309.0310 & R310.1)**

- A sill height of not more than 44 inches above the floor.
- A minimum net clear opening of 5.7-square-feet. **Exception:** Grade floor openings shall have a minimum net clear opening of 5-square-feet.
- A minimum net clear opening height of 24 inches.
- A minimum net clear opening width of 20 inches.

➤ Egress Windows Under Decks And Porches Shall Have: A path of not less than 36 inches in height to a yard or court.

➤ Egress Window Wells Shall Have: **(IRC R310.2)**

- A minimum net clear area of 9-square-feet.
- A minimum horizontal projection and width of 36 inches.
- A permanently affixed ladder or steps, (if the well has a vertical depth greater than 44 inches) ladder shall have an inside width of 12 inches, shall project at least 3 inches from the wall and shall be spaced not more than 18 inches O.C. vertically for the full height of the window well.
- Window wells shall provide a drainage system connected to the main structure's drainage system. **(IRC R310.2.2 & R405.1)**

➤ Stairways/Landings/Guardrails Shall: **(R311.7)**

- Be illuminated per IRC R311.7.9
- Width shall not be less than 36 inches.
- Have a maximum riser height of 7-3/4 inches.
- Have a minimum tread depth of 10 inches.
- Open risers and guardrail shall not permit the passage of a 4-inch diameter sphere.
- Have a minimum headroom of not less than 6 feet, 4 inches for existing dwellings and 6 feet, 8 inches for new dwellings.
- Shall not allow passage of a 6-inch sphere through the triangular opening formed by the riser, tread and bottom.

➤ Handrails Shall: **(R311.7)**

- Have a circular cross section of 1-1/4-inch minimum to a maximum of 2 inches.

- Have maximum heights of 34 inches and 38 inches above the front edge of tread nosing.
 - Be continuous the full length of the stairs with four or more risers and shall have a space of not less than 1-1/2 inches between the wall and the handrail with ends returned to wall or newel post.
- **Automatic Fire Sprinkler Requirements: (IRC R313)**
- New one- and two-family dwelling units **4,500 square feet or greater** will now require sprinkler systems. Square footage measured will include all floor areas and basement floor areas (finished or unfinished).
Note: Garage square footage is not included in square footage measurement
- **Floor Assembly Fire Protection (IRC R501.3)**
- New homes shall provide floor assembly fire protection in accordance with IRC R501.3.
- **Smoke Detector/CO Detector: (IRC R314 & R315)**
- Provide a smoke detector connected to sound the alarm in each sleeping room, outside of each separate sleeping area in the immediate vicinity of the bedrooms, and on each additional story of the dwelling, including basements and cellars.
 - Dwelling units where work that requires a building permit valued more than \$1,000 is issued shall have smoke detectors installed as previously outlined.
 - All newly constructed single-family homes and multifamily dwelling units shall have a carbon monoxide alarm located within ten feet of each room lawfully used for sleeping purposes and be either hardwired or the plug-in type.
- **Safety Glazing Shall Be: (IRC R308.1.1)**
- Acid etched, sandblasted, ceramic-fired, or embossed marked with manufacturer's or installer's label designating type and thickness of glass and safety glazing standard 16CFR1201.
- **Access Panels: (MN Plumbing Code Chapter 4715.0900 & IRC R807.1)**
- Provide a plumbing access for concealed p-traps, whirlpool tub pumps and cleanouts.
- **Crawl Spaces Shall Have:**
- The ground surface covered with an approved vapor retarder material. **(IRC R506.1 & 506.2.3)**
 - The space supplied with conditioned air. **(IRC R408.2)**
 - The perimeter walls insulated. **(MN Energy Code)**
 - An unobstructed access opening 18 inches by 24 inches to the under-floor space. **(IRC R408.4)**
- **Mechanical Rooms:**
- Gas fired appliances shall have a minimum working space clearance of 3 inches along the sides, back, and top of the appliance or to manufacturers recommendations.
 - A service area opening of 30 inches shall be provided at the front of the gas fired appliance and if the appliance is enclosed a door measuring not less than 36 inches wide and 80 inches high shall be provided.
 - Clearances and working space to electrical panels shall be 30-inch minimum width (front) and 36-inch minimum depth (sides).
 - In all mechanical rooms provide combustion/ventilation/dilution air to code. **(IFGC MN Amendments 1346.5304)**
- **Gas Fireplaces:**
- Gas line must be installed by a licensed gasfitter.
 - Installed per manufacturers installation instructions.
 - Approved and listed by a nationally recognized testing agency.
- **Sump Basket:**
- Shall be provided with approved access.
 - Shall be solid piped to the exterior of the building.
 - Shall have secured (sealed) covers to prevent entry by children.
- **Bathrooms**
- Shower control valves to be of the anti-scald type. **(MN Plumbing Code Chapter 4715)**
 - Bathrooms without openable windows shall be provided with a mechanical ventilation system. **(IRC R303.3)**
 - Floors and walls of bathtub and shower stalls shall be finished with a nonabsorbent surface to a height of 6 feet.

- If using tile backerboard on exterior walls a cement board product shall be used and installed to manufacture's specifications.
- Toilets shall have a clear space of 30 inches minimum and shall not be set closer than 15 inches from the toilet center to any side wall or other fixture. Toilets shall also have minimum of 21 inches of clear space in front of the toilet.

03/15/2022 (SFD 2020 IRC)