Emergency Escape and Rescue Opening (EGRESS) Requirements 2015 MSBC Chapter 1309.R310

2015 Minnesota State Building Code Chapter 1309.310

This portion of the Minnesota State Building Code includes the requirement for the installation of emergency escape and rescue openings in all new residential construction projects with basements, habitable attics and sleeping rooms.

The following code excerpt outlines the construction materials and installations that are required for a code compliant emergency escape and rescue opening:

1309.0310 SECTION R310, EMERGENCY ESCAPE AND RESCUE OPENINGS.

R310.1 Emergency escape and rescue required. Basements, habitable attics, and every sleeping room shall have at least one operable emergency escape and rescue opening. Where basements contain one or more sleeping rooms, emergency egress and rescue openings shall be required in each sleeping room, but not be required in adjoining areas of the basement. Where emergency escape and rescue openings are provided they shall have a sill height of not more than 44 inches (1118 mm) measured from the finished floor to the bottom of the clear opening. Where a door opening having a threshold below the adjacent ground elevation serves as an emergency escape and rescue opening and is provided with a bulkhead enclosure, the bulkhead enclosure shall comply with section R310.3. The net clear opening dimensions required by this section shall be obtained by the normal operation of the emergency escape and rescue opening from the inside. Emergency escape and rescue openings with a finished sill height below the adjacent ground elevation shall be provided with a window well in accordance with section R310.2. Emergency escape and rescue openings shall open directly into a public way, or to a yard or court that opens to a public way.

Exceptions:

1. Basements used only to house mechanical equipment and not exceeding total floor area of 200 square feet (18.58 m²).
2. Basements or basement bedrooms when the building is protected with an automatic sprinkler system installed in accordance with IRC section P2904 or NFPA 13D.

3. Basements or basement bedrooms that comply with all of the following conditions:
   A. constructed prior to August 1, 2008;
   B. undergoing an alteration or repair; and
   C. the entire basement area, when all portions of the means of egress to the level of exit discharge, and all areas on the level of exit discharge that are open to the means of egress is protected with an automatic sprinkler system in accordance with IRC section P2904 or NFPA 13D.

R310.1.1 Minimum opening area. All emergency escape and rescue openings shall have a minimum net clear opening of 5.7 square feet (0.530 m²).

   **Exception:** Grade floor openings shall have a minimum net clear opening of 5 square feet (0.465 m²).

R310.1.2 Minimum opening height. The minimum net clear opening height shall be 24 inches (610 mm).

R310.1.3 Minimum opening width. The minimum net clear opening width shall be 20 inches (508 mm).

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**Requirements for an Emergency Escape Window**

*How to figure size of egress windows: measure clear opening in inches and use the formula shown (length times width divided by 144 equals square footage)*

**Example #1** a 20 inch wide by a 24 inch high window only Equals 3.33 square feet therefore does not meet egress requirements.

**Example #2** if a window is at the minimum width of 20 inches it must be more than 41 inches high to meet the 5.7 square foot requirement.

**Example #3** if a window is at the minimum height of 24 inches it must be a minimum of 34 ½ inches wide to meet the 5.7 square foot requirement.
R310.1.4 Operational constraints. Emergency escape and rescue openings shall be operational from the inside of the room without the use of keys, tools, or special knowledge.

**Exception:** Windows with approved window opening control devices and installed in accordance with ASTM F 2090. The devices shall not require the use of keys or tools to operate.

R310.1.5 Replacement windows. Replacement windows installed in buildings regulated by the International Residential Code shall be exempt from the maximum sill height requirements of section R310.1, including subsections R310.1.1, R310.1.2, and R310.1.3, if the replacement window is the manufacturer’s largest standard size window that will fit within the existing frame or existing rough opening. The replacement window shall be the same operating style as the existing window or a style that provides for an equal or greater window opening area than the existing window.

R310.1.5.1 Licensed facilities. Windows in rooms used for foster care or day care licensed or registered by the state of Minnesota shall comply with the provisions of section R310.1.5, or all of the following conditions, whichever is more restrictive:

1. Minimum of 20 inches in clear opening width;
2. Minimum of 20 inches in clear opening height;
3. Minimum of 648 square inches (4.5 square feet) clear opening; and
4. Maximum of 48 inches from the floor to the sill height.

R310.2 Window wells. The minimum horizontal area of the window well shall be 9 square feet (0.9 m²), with a minimum horizontal projection and width of 36 inches (914 mm). The area of the window well shall allow the emergency escape and rescue opening to be fully opened.

**Exception:** The ladder or steps required by Section R310.2.1 shall be permitted to encroach a maximum of 6 inches (152 mm) into the required dimensions of the window well.

R310.2.1 Ladder and steps. Window wells with a vertical depth greater than 44 inches (1118 mm) shall be equipped with a permanently affixed ladder or steps usable with the window in the fully open position. Ladders or steps required by this section shall not be required to comply with Sections R311.7 and R311.8. Ladders or rungs shall have an inside width of at least 12 inches (305 mm), shall project at least 3 inches (76 mm) from the wall and shall be spaced not more than 18 inches (457 mm) on center vertically for the full height of the window well.
R310.2.2 Drainage. Window wells shall be designed for proper drainage by connecting to the building’s foundation drainage system required by Section R405.1 or by an approved alternative method.

Exception: A drainage system for window wells is not required when the foundation is on well-drained soil or sand-gravel mixture soils according to the United Soil Classification System, Group I Soils, as detailed in Table R405.1

R310.3 Bulkhead enclosures. Bulkhead enclosures shall provide direct access to the basement. The bulkhead enclosure with the door panels in the fully open position shall provide the minimum net clear opening required by Section R310.1.1. Bulkhead enclosures shall also comply with Section R311.7.8.2.

R310.4 Bars, grilles, covers and screens. Bars, grilles, covers, screens or similar devices are permitted to be placed over emergency escape and rescue openings, bulkhead enclosures, or window wells that serve such openings, provided the minimum net clear opening size complies with Sections R310.1.1 to R310.1.3, and such devices shall be releasable or removable from the inside without the use of a key, tool, special knowledge or force greater than that which is required for the normal operation of the escape and rescue opening.

R310.5 Emergency escape windows under decks and porches. Emergency escape windows are allowed to be installed under decks and porches provided the location of the deck allows the emergency escape window to be fully opened and provides a path not less than 36 inches (914 mm) in height to a yard or court.

![Diagram of Egress Windows](image)