

CODE CHANGE PROPOSAL FORM

(Must be submitted electronically)

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Date: 03/25/2025- revised 4/4/25

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Model Code: 2024 IRC

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Code or Rule Section: R319.5, R319.6, R309.7 and R319.7.1

Firm/Association affiliation, if any: DLI/CCLD

Topic of proposal: EERO

Code or rule section to be changed: R319.5, ~~R319.6, R309.7 and R319.7.1~~

Intended for Technical Advisory Group ("TAG"):

General Information

Yes No

- | | | |
|--|-------------------------------------|-------------------------------------|
| A. Is the proposed change unique to the State of Minnesota? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| B. Is the proposed change required due to climatic conditions of Minnesota? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| C. Will the proposed change encourage more uniform enforcement? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| D. Will the proposed change remedy a problem? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| E. Does the proposal delete a current Minnesota Rule, chapter amendment? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| F. Would this proposed change be appropriate through the ICC code development process? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Proposed Language

1. The proposed code change is meant to:

- change language contained the model code book? If so, list section(s). ~~R319.5, R319.6, R309.7 and R319.7.1~~
- change language contained in an existing amendment in Minnesota Rule? If so, list Rule part(s).
- delete language contained in the model code book? If so, list section(s).
- delete language contained in an existing amendment in Minnesota Rule? If so, list Rule part(s).
- add new language that is not found in the model code book or in Minnesota Rule. ~~R319.5, R319.6, R309.7 and R319.7.1~~

2. Is this proposed code change required by Minnesota Statute? If so, please provide the citation.

No

3. Provide *specific* language you would like to see changed. Indicate proposed new words with underlining and ~~strikethrough~~ words proposed for deletion. Include the entire code (sub) section or rule subpart that contains your proposed changes.

R319.5 Replacement windows for emergency escape and rescue openings.

Replacement for *emergency escape and rescue openings* installed in *buildings* meeting the scope of this code shall be exempt from Sections R319.2 and R319.4.4, provided that the replacement window meets the following conditions:

1. Replacement windows of the same operating style shall be ~~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 permitted to be of the same operating style as the existing window a style that provides for an equal or greater window opening area than the existing window.~~
2. Replacement windows of a different operating style shall comply with a minimum clear vertical dimension of 24 inches, a minimum clear horizontal dimension of 20 inches, a minimum net clear area of 4.0 square feet, and a maximum sill height of 44 inches above the finished floor.
3. The replacement window is not part of a *change of occupancy* or a change of use of a space to a use that requires emergency escape and rescue openings.

4. Will this proposed code change impact other sections of a model code book or an amendment in Minnesota Rule? If so, please list the affected sections or rule parts.

No

Need and Reason

1. Why is the proposed code change needed? Please provide a general explanation as well as a specific explanation for any changes to numerical values (heights, area, etc.)

Because EERO's were not required in Minnesota until 1972 the current language allows for existing unsafe conditions to be continued when there are reasonable options for correcting them. The basis of the original model code language comes from a study conducted by the San Diego Fire Department which determined that the minimum width should not be less than 20 inches and the minimum height not less than 24 inches and the minimum overall size to be not less than 5.7 square feet in open area.

Copied from the 2015 ICC Code Commentary:

Because so many fire deaths occur as a result of occupants being asleep in a residential building during a fire, the code requires that all basements, habitable attics and sleeping rooms have windows or doors that may be used for emergency escape or rescue. The requirement for emergency escape and rescue openings in sleeping rooms exists because a fire will usually have spread before the occupants are aware of the problem, and the normal exit channels may be blocked. The requirement for basements and habitable attics exists because they are so often used as sleeping rooms. A fire in a mechanical room adjacent to a stairway could engulf the only means of egress for the basement without the egress window or door.

Openings required for emergency escape or rescue must be located on the exterior of the building so that rescue can be performed from the exterior and so that occupants may escape through that opening to the exterior of the building without having to travel through the building itself. Therefore, where openings are required, they should open directly into a public street, public alley, yard or court. After the occupants pass through the emergency escape and rescue opening, their continued egress is essential. Where a basement

contains sleeping rooms and a habitable space, an emergency escape and rescue opening is required in each sleeping room, but is not required in adjoining areas of the basement. There is an exception for storm shelters and basements used only to house mechanical equipment with a total floor area not exceeding 200 square feet (18.58 m²). The dimensions prescribed in the code for emergency escape and rescue openings in [Sections R310.2 through R310.2.2](#), and as illustrated in [Commentary Figure R310.2.1](#), are based, in part, on extensive testing by the San Diego Building and Fire Departments to determine the proper relationships of the height and width of window openings to adequately serve for both rescue and escape. The minimum of 20 inches (508 mm) for the width is based on two criteria: the width necessary to place a ladder within the window opening and the width necessary to admit a fire fighter with full rescue equipment, including a breathing apparatus. The minimum 24-inch (610 mm) height is based on the minimum size necessary to admit a fire fighter with full rescue equipment. By requiring a minimum net clear opening size of at least 5.7 square feet (0.53 m²), the code provides for an opening of adequate dimensions. To be accessible from the interior of the sleeping room, attic or basement, [Section R310.2.2](#) requires that the emergency escape and rescue opening be located not more than 44 inches (1118 mm) above the floor. The measurement is to be taken from the floor to the bottom of the clear opening. [Section R310.1.1](#) requires that the required opening dimensions be achieved by the normal operation of the window, door or hatch from the inside without the use of keys, tools or special knowledge. [Section R310.1.1](#) also allows window opening control devices to be used on windows that serve as required emergency escape and rescue openings, provided that such devices comply with [ASTM F2090](#). The window industry is a highly competitive market. Manufacturers are constantly developing new products that are easier to clean and possess higher thermal protection properties. It is important to keep in mind that no special knowledge for operation of the egress window is a key operational constraint. It is impractical to assume that all occupants can operate a window that requires a special sequence of operations to achieve the required opening size. Although most occupants are familiar with the normal operation to open the window, children and guests are frequently unfamiliar with special procedures necessary to remove the sashes. The time spent comprehending special operations unnecessarily delays egress from the bedroom and could lead to panic and further confusion. Thus, windows that achieve the required opening dimensions only by performing a special sequence of operations, such as the removal of sashes or mullions, are not permitted. For example, if a specific area of the window has to be depressed or manipulated to allow the sash to be removed or released to achieve the open area requirement of 5.7 square feet (0.53 m²), the window does not qualify as an egress window.

2. Why is the proposed code change a reasonable solution?

The code changes allow for modified conditions to facilitate use of existing openings when there is only a change in use and no alterations. When alterations occur such as window replacement, it allows the existing conditions to perpetuate, but if the window style is changed, the egress size must be improved. ~~When additions or alterations involve a use that requires an EERO, then the full sized EERO is required because there is already an alteration taking place.~~

3. What other factors should the TAG consider?

The foundational study conducted by San Diego Fire and Building Departments established minimum sizes using empirical data.

Cost/Benefit Analysis

1. Will the proposed code change increase or decrease costs? Please explain and provide estimates if possible.

This change would not impact projects which are solely window replacement ~~and would only marginally increase the cost of remodeling projects.~~

2. If there is an increased cost, will this cost be offset by a safety or other benefit? Please explain. If the benefit is quantifiable (for example energy savings), provide an estimate if possible.
The increased cost will improve fire safety in homes by requiring emergency escape and rescue openings that are large enough to actually use to escape a fire.
3. If there is a cost increase, who will bear the costs? This can include government units, businesses, and individuals.
Building owners.
4. Are there any enforcement or compliance cost increases or decreases with the proposed code change? Please explain.
No
5. Will the cost of complying with the proposed code change in the first year after the rule takes effect exceed \$25,000 for any one small business or small city ([Minn. Stat. § 14.127](#))? A small business is any business that has less than 50 full-time employees. A small city is any statutory or home rule charter city that has less than ten full-time employees. Please explain.
No

Regulatory Analysis

1. What parties or segments of industry are affected by this proposed code change?
Architects, Residential Contractors, Developers, Homeowners, Building Officials, Building Inspectors
2. Can you think of other means or methods to achieve the purpose of the proposed code change? What might someone opposed to this code change suggest instead? Please explain what the alternatives are and why your proposed change is the preferred method or means to achieve the desired result.
No
3. What are the probable costs or consequences of not adopting the code change, including those costs or consequences borne by identifiable categories of affected parties, such as separate classes of government units, businesses, or individuals?
~~Unfinished spaces such as basements or attics that are renovated into newly habitable space will be provided with EERO too small for escape or firefighter access.~~

Existing windows required to be EERO under new requirements can change styles at replacement and be less compliant with the code than prior to the alteration.
4. Are you aware of any federal or state regulation or requirement related to this proposed code change? If so, please list the federal or state regulation or requirement and your assessment of any differences between the proposed code change and the federal regulation or requirement.
No

***Note: Incomplete forms may be returned to the submitter with instruction to complete the form. Only completed forms can be considered by the TAG.