



CITY OF
GRAND RAPIDS
IT'S IN MINNESOTA'S NATURE

EMERGENCY ESCAPES AND RESCUE OPENINGS

City of Grand Rapids
Building Safety Division

218-326-7601

www.cityofgrandrapidsmn.com



This handout is intended only as a guide and is based in part on the 2015 Minnesota State Building Code, Grand Rapids City ordinances, and good building practice. While every attempt has been made to insure the correctness of this handout, no guarantees are made to its accuracy or completeness. Responsibility for compliance with applicable codes and ordinances falls on the owner or contractor. For specific questions regarding code requirements, refer to the applicable codes or contact your local Building Safety Division.

WHAT IS AN EMERGENCY ESCAPE AND RESCUE OPENING?

An emergency escape and rescue opening is a window or door that is required in specific locations of a dwelling and is intended to provide emergency exiting of a dwelling or an access for rescue. These openings must meet specific size requirements.

WHERE ARE EMERGENCY ESCAPE AND RESCUE OPENINGS REQUIRED?

If you are constructing a new home, the code requires that you put an emergency escape and rescue opening in each bedroom and one in every basement.

In existing homes, you must provide an emergency escape and rescue opening if you create a new bedroom, finish an attic into habitable space, or expand your basement existing square footage. If you have a bedroom in the basement, the emergency escape and rescue opening in that bedroom suffices for the basement.

Exceptions:

1. Basements used only to house mechanical equipment and not exceeding 200 sq.ft.
2. Basements or basement bedrooms where the building is protected with an automatic sprinkler system in accordance with IRC Section P2904 or NFPA 13D.
3. 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.

WHAT ARE THE SIZE REQUIREMENTS FOR WINDOWS USED AS EMERGENCY ESCAPE AND RESCUE OPENINGS?

A window used as an emergency escape and rescue opening must satisfy four Minnesota Residential Code criteria:

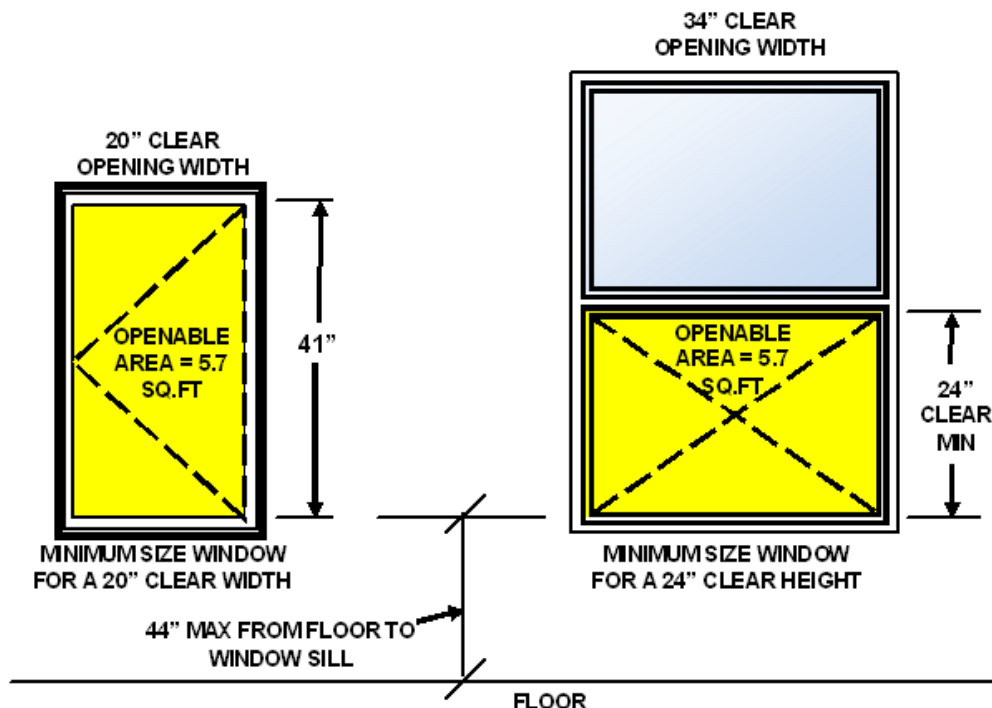
- Minimum width of opening: 20 in.
- Minimum height of opening: 24 in.
- Minimum net clear opening: 5.7 sq. ft. (5.0 sq. ft. for ground floor).
- Maximum sill height above floor: 44 in.

The window must have a minimum net clear opening of 5.7 sq. ft. Net clear opening refers to the actual free and clear space that exists when the window is open. It is not the rough opening size or the glass panel size, but the actual opening a person can crawl through.

Bars, grilles and grates may be installed over windows but must still allow the minimum clear opening and the window opening must be operational from the inside without keys, tools or special knowledge.

Do the math

At first glance, you might assume that a 20-in. by 24-in. window would be acceptable for emergency escape or rescue. However, those dimensions would yield a net clear opening of only 3.3 sq. ft. To achieve the required net clear opening of 5.7 sq. ft., a 20-in. wide window would have to be 42 in. high. Likewise, a 24-in. high window would have to be 34 in. wide.



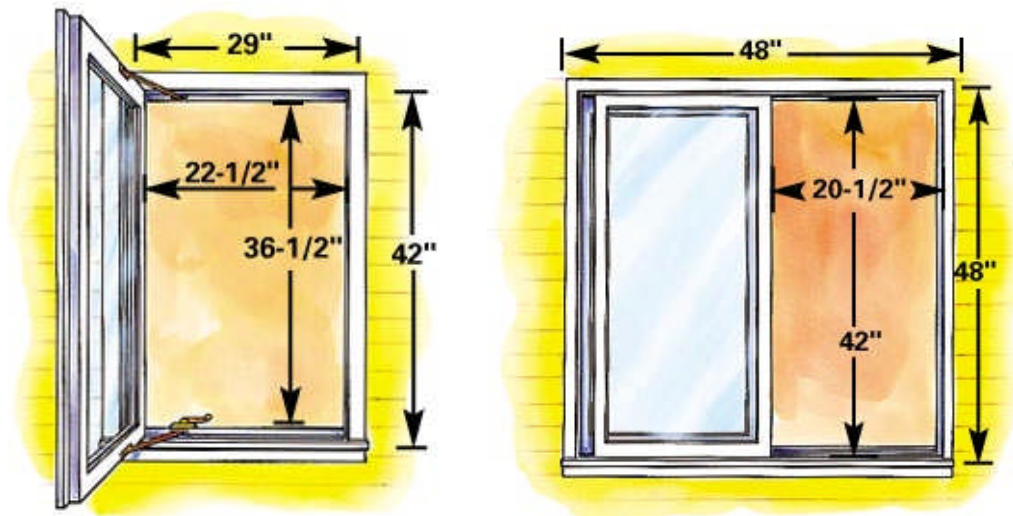
Because Minnesota uses a national model residential code, nearly all window manufacturers specify which of their windows meet these standards. This should take the guesswork out of selecting a window for your addition or remodeling project. If you are unaware if the window you need to purchase, please contact the Building Safety Division to discuss your options.

MUST I USE A SPECIAL TYPE OF WINDOW?

A wide variety of window designs can be used for emergency escape or rescue openings. You should select a window design that meets your architectural, aesthetic, space, and financial needs.

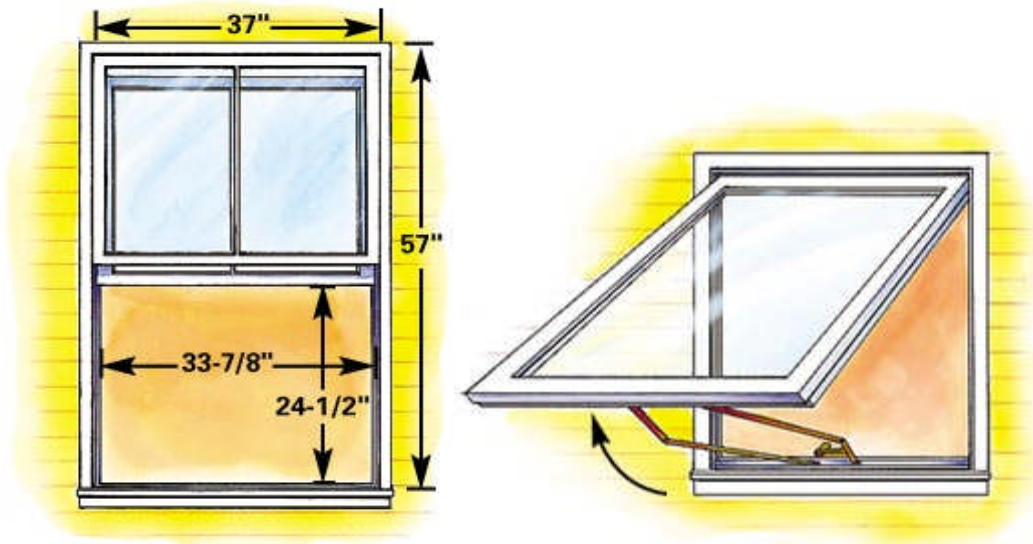
Casement windows with hinged sashes that swing free and clear of the opening can be relatively small and still meet code requirements. This makes them ideal for basements and other areas where space is limited. Some manufacturers can install a special operator arm that allows the window to open wider than the standard operating arm to meet opening requirements. Others have an operator arm that can be pushed to open the window wider in an emergency. These meet egress requirements as long as you leave the "PUSH HERE" label in place.

Glider or slider windows have sashes that fill nearly half the possible window opening when the window is opened. They require a window nearly twice the size of a casement window.



Note: Dimensions shown only for illustration purposes.

Even when it's fully open, more than half of a **double-hung window's** overall area is blocked by glass. To meet height requirements, a window must be nearly 4 ft. 9 in. in overall height. This height requirement makes it undesirable for most basement situations.



Note: Dimensions shown only for illustration purposes.

Awning windows are problematic. Since the opened sash prevents escape from most window wells, they're unsuitable for basement use. And with most awning windows, the center opening hardware and height don't meet opening requirements.

WHY DON'T MY WINDOWS MEET EGRESS REQUIREMENTS?

Older homes were built before there were emergency escape and rescue opening requirements. Also, some homeowners or contractors engage in work without permits that results in noncompliance.

BASEMENT WINDOWS USED FOR EMERGENCY ESCAPE OR RESCUE OPENINGS

Because of their location below grade, basement windows present an added challenge. Below grade windows must have a window well that permits the window to function as an emergency escape or rescue opening. Window wells must:

- Allow the rescue window opening to be fully opened.
- Provide 9 sq. ft. of "floor area," with a minimum dimension of 36" in width and length.
- If the window well depth exceeds 44 inches, the well must contain a permanently affixed ladder or steps. The ladder must be at least 12" wide and project no less than 3" from the window well wall. Ladders may not obstruct the operation of the window or project more than 6 inches into the required window well dimensions.

Window wells may be made of rust resistant metal, treated wood, wood naturally resistant to decay, concrete, masonry, or plastic. Some window well designs have steps built or molded into them.

If an egress window is located under a deck or porch, the code requires at least 36 inches between the top of the window well and the bottom of the deck or porch joists.

