

Why Escape Windows?

Numerous fire-related deaths occur as a result of occupants being asleep, whether that be in a bedroom, on a couch in the living room or in a basement. Because of this, the International Residential Code (IRC) specifically requires that all basements, habitable attics and sleeping rooms have windows or doors that can be used for emergency escape or rescue. If one or more bedrooms are proposed in the basement, then the emergency escape and rescue openings must be placed in each bedroom.

The requirement for emergency escape and rescue openings exists because a fire will usually have spread before the occupants are aware of the problem and normal exit paths may be blocked. For example, a fire on the first floor can easily prohibit safe exiting from a basement. Therefore utilizing the emergency escape and rescue windows is of paramount importance. There is only one exception for basements used only to house mechanical equipment with a total floor area not to exceed 200 square feet. In addition, attics which only house mechanical equipment would not be considered habitable attics.



Where Should Windows Be Located?

The windows, required for emergency escape or rescue, should be located on the exterior of the building so rescue can be more effective. Likewise, occupants may escape from the window to the exterior of the building without having to travel through the building itself. If windows open into an interior court, the court must have an exit passageway which provides access to the public way.

What Size Is Needed?

The dimensions prescribed in the code for exterior wall openings used in emergency situations are based on extensive testing.

The minimum width is 20 inches, the minimum height is 24 inches, the minimum square feet is 5.7 (820.8 square inches) and the maximum sill height from the floor is 44 inches. Grade floor openings may have a minimum opening size of 5 square feet. Egress windows with a sill height below grade will require a window well that is at least 36" x 36". Window wells require permanent ladders if they are over 44" deep.

The dimensions as prescribed in the code for the emergency escape and rescue openings are based on the proper relationship of the height and area to adequately serve for both rescue and escape.

The minimum of 20 inches in width (41 inches in height) is based on the width necessary to place a ladder within the window opening and the width necessary to admit a firefighter with full rescue equipment, including a breathing apparatus. The minimum 24 inch height (34 inches in width) is based on the minimum size necessary to admit a fire fighter with full rescue equipment, including a breathing apparatus.

By providing a minimum opening size of 5.7 square feet, the code provides for an opening of adequate dimensions.

To be accessible from the interior of the sleeping room, basement or attic, the emergency escape and rescue opening cannot be located more than 44 inches above the floor, measured to the bottom of the clear opening.



What If I have Security Devices?

The increasing concern for security, particularly in residential buildings, has created a demand for security devices such as grilles, bars and steel shutter. Unless properly designed and constructed, these security devices over bedroom windows can completely defeat the purpose of the emergency escape and rescue window.

Therefore, the IRC makes provisions for security devices, provided the release mechanism has been approved and is operable from the inside without the use of a key or special knowledge. The code also requires, in this case, that buildings be equipped with smoke detectors.



The requirements for emergency escape/rescue windows greatly increases the chances for escape or rescue in a short period of time. Because a fire can quickly spread and block the normal exit routes, time cannot be wasted by the occupant trapped by the fire in trying to open a rescue window. Any impediment to escape or rescue caused by security devices, inadequate window size, difficult operating mechanisms, etc., is a code violation.



What Types of Windows Are Required?

Windows used for emergency escape or rescue must be operable windows. They should be double hung, horizontal sliding or casement windows operated by the turn of a crank.

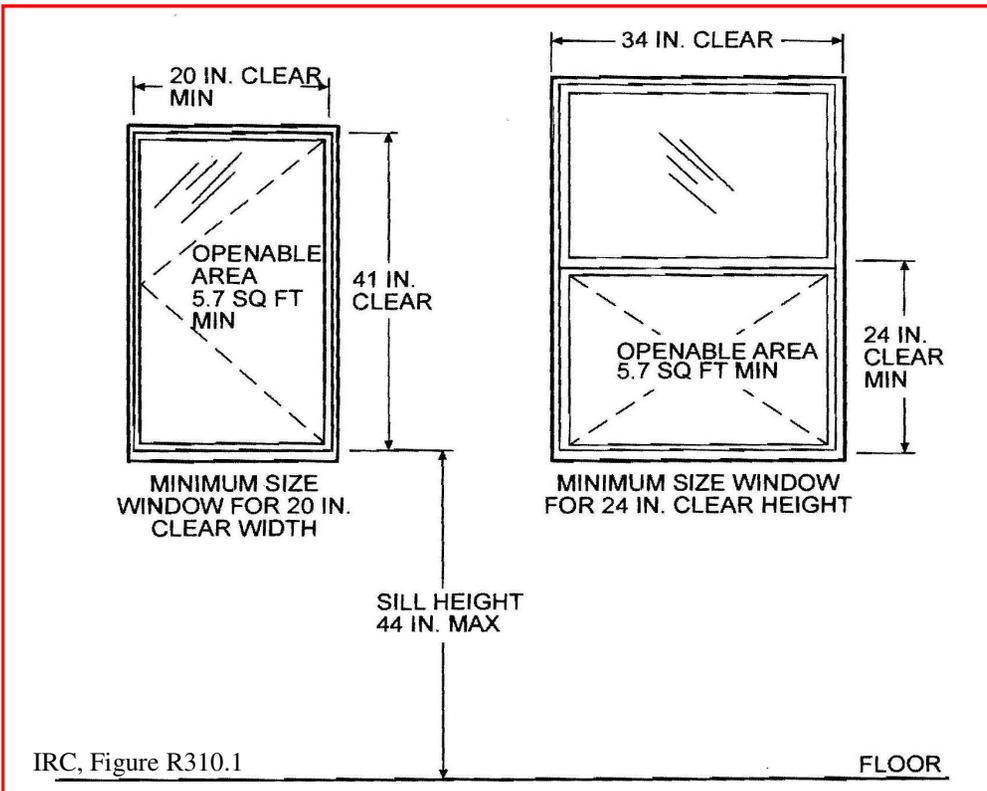
Window Well Drainage

2012 IRC 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.

One approved alternative method is to install a sump pump pit with an electrical outlet. Contact the Building Official if you would like to propose another alternative for consideration that meets the intent of this code section.

Can my emergency escape window be under my deck?

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 in height to a yard or court.

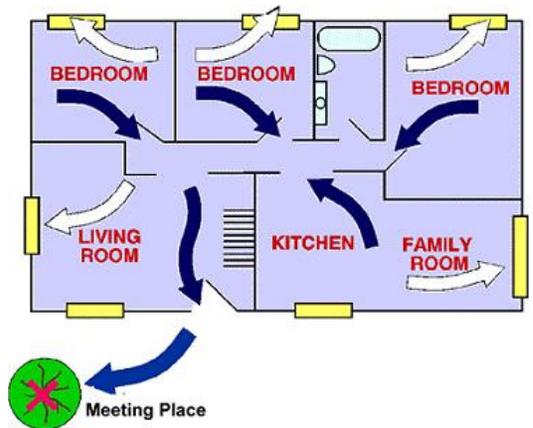


Are Ladders Required?

Ladders are required when window well is deeper than 44 inches. The ladder shall comply with the following:

1. Shall be permanently affixed and useable when the window is in fully open position.
2. Rungs shall have an inside width of at least 12", shall project at least 3" from wall, and shall be spaced not more than 18" for the full height

EXITS AND EMERGENCY ESCAPE WINDOWS



Requirements for Windows as Specified by the International Residential Code

