

# TOWN OF ELLINGTON

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## WINDOW INFORMATIONAL HANDOUT

### Excerpt from the 2009 International Residential Code with Connecticut Amendments:

#### Section R310 Emergency escape and rescue openings

(Amd) **R310.1 Emergency escape and rescue openings required.** Habitable spaces located within basements, and habitable spaces within attics, and every sleeping room within the dwelling shall have at least one operable emergency escape and rescue opening. Where basements and attics contain one or more sleeping rooms, emergency egress and rescue openings shall be required in each sleeping room, but shall not be required in adjoining habitable areas of the basement or attic. Where emergency escape and rescue openings are provided, they shall have a sill height of not more than 44 inches above the floor. 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. Habitable basements without sleeping rooms are not required to have emergency escape and rescue openings when they are provided with two remote, code-compliant stairways.
2. In existing buildings, basements being converted to habitable space without sleeping rooms are not required to have emergency escape and rescue openings.
3. The 44" maximum sill height shall be permitted to be measured vertically above a fixed, permanent platform, step or steps whose minimum width shall equal or exceed the operable width of the opening and shall be centered on such opening and which shall comply with sections R311.7.4.1 and R311.7.4.2.

#### **R310.1.1 Minimum opening area.**

All emergency escape and rescue openings shall have a minimum clear opening of 5.7 square feet (0.530 m<sup>2</sup>).

**Exception:** Grade floor openings (when sill is within 44" from the adjacent grade) shall have a minimum net clear opening of 5 square feet (0.465 m<sup>2</sup>).

#### **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).

(Amd) **R310.1.4 Operational constraints.** Emergency escape and rescue openings shall be operational from the inside of the room without the use of a key or tool and the net clear opening dimensions shall be obtained by the normal operation of the opening from the inside.

**Exception:** *Existing buildings undergoing alterations or installation of replacement windows shall be permitted to utilize removable sash to achieve the required minimum net clear openings. Such removable sash shall be capable of being removed without the use of a key or tool.*

#### **R310.2 Window wells.**

The minimum horizontal area of the window well shall be 9 square feet (0.84 m<sup>2</sup>), 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.

# DIMENSIONS FOR EMERGENCY ESCAPE AND RESCUE OPENINGS

The IRC prescribes minimum opening dimensions and a maximum sill height for emergency escape and rescue openings to effectively serve their intended purpose. The minimum opening size accommodates a fully equipped fire fighter or other rescuer as well as providing an adequate escape route for the occupant. The limitation on sill height allows a child or adult access to the escape opening. Width and height may be any number of combinations to achieve the minimum required opening area provided the minimum net dimensions are maintained (Table 1). The emergency escape and rescue opening may be a swinging or sliding door, a window or any other device that provides the required dimensions.

**Minimum net clear opening dimensions (Figures 3 and 4)**

- Minimum opening area - 5.7 square feet
- Minimum opening width - 20 inches
- Minimum opening height - 24 inches

The following combinations of width and height will provide a net clear opening of 5.7 square feet (820.8 square inches):

width (in.)	height (in.)	width (in.)	height (in.)
20	X	41	27.5
20.5	X	40	28
21	X	39.1	28.6
21.5	X	38.2	29
22	X	37.3	29.5
22.5	X	36.5	30
23	X	35.7	30.5
23.5	X	34.9	31
24	X	34.2	31.5
24.5	X	33.5	32
25	X	32.8	32.5
25.5	X	32.2	33
26	X	31.6	33.5
26.5	X	31	34
27	X	30.4	34.5

**Maximum sill height above floor (Figures 3 to 5)**

Maximum sill height - 44 inches

**Table 1**

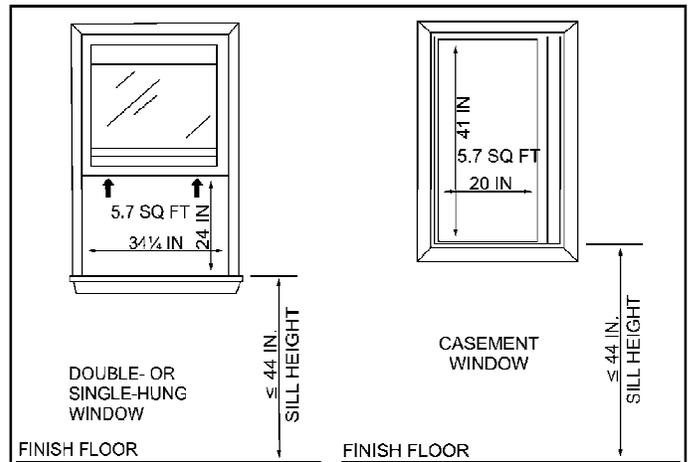
**Exception for grade floor openings (Figure 5)**

**GRADE FLOOR OPENING.** A window or other opening located such that the sill height of the opening is not more than 44 inches above or below the finished ground level adjacent to the opening.

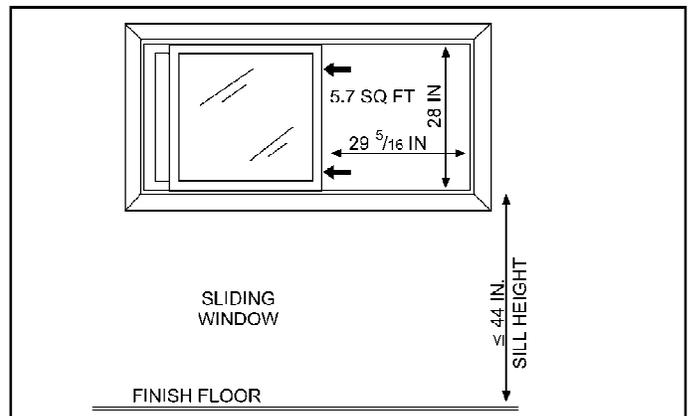
Minimum net clear opening dimensions for grade floor openings

Minimum opening area - 5.0 square feet

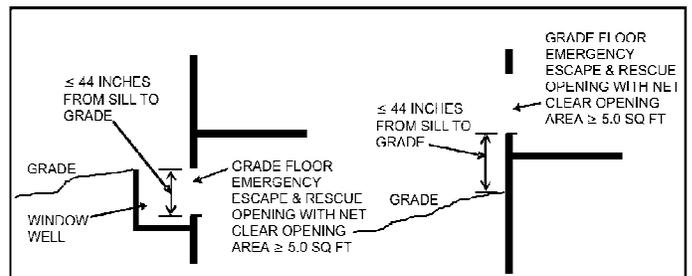
Note: Minimum opening width and height are the same as above—20 inches and 24 inches, respectively.



**Figure 3 Single- or double-hung or casement window**



**Figure 4 Sliding window**



**Figure 5 Grade floor opening – minimum net clear opening area**