



**EGRESS WINDOWS and WINDOW WELLS**

The following building code requirements are the current minimum code standards, as taken from the IRC Code & Commentary, required for Egress Windows in One and Two family dwellings, and based on Kentucky Amendments to the 2018 Kentucky Residential Code, Second Edition, April 2019. Chapter 11, Energy Efficiency.

**Disclaimer:** This is not a listing of all code sections involving building or utilities, which involve this subject, but only the sections most often questioned. Refer to the 2018 Kentucky Residential Code book for information not listed in this handout and for other requirements of the building code.

**A. Emergency Escape and Rescue Openings. (R310.1).** Emergency escape and rescue. **Every sleeping room shall have at least one operable emergency escape and rescue opening.** Where basements contain one or more sleeping rooms, emergency escape and rescue openings shall be required in each sleeping room, but shall 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 an 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. (KY Amendments Second Edition, April 2019).

1. **Minimum opening area.**

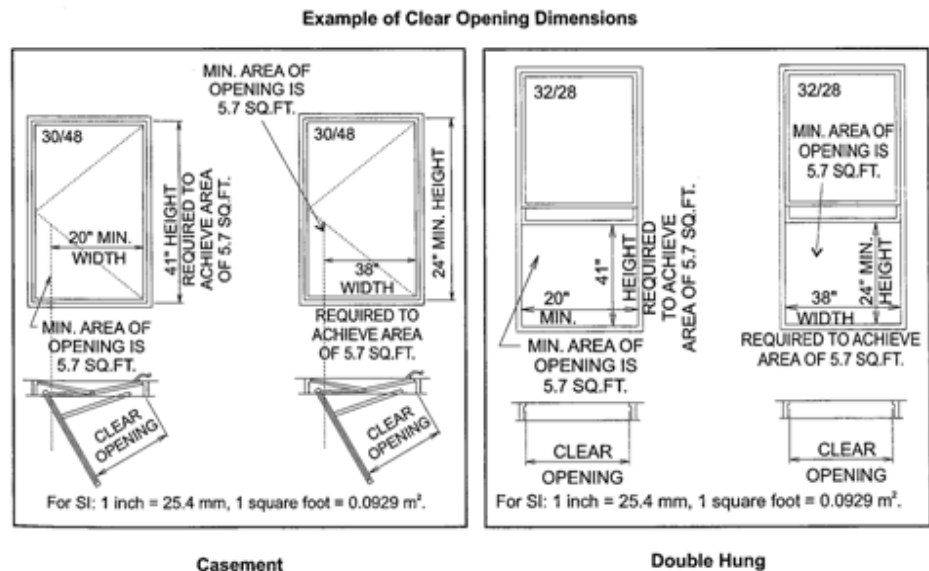
Emergency escape and rescue openings shall have a minimum net clear opening of not less than **5.7 square feet**. **Exception: Grade floor or below grade openings shall have a minimum net clear opening of not less than 5 square feet.** (R310.2.1)

2. **Minimum opening height.**

The minimum net clear opening height shall be not less than **24 inches**. (R310.2.1) *The minimum height is based on the height necessary to admit a firefighter with full rescue equipment including breathing apparatus.*

3. **Minimum opening width.**

The minimum net clear opening width shall be not less than **20 inches**. (R310.2.1) *The minimum width is based on 2 criteria: the width necessary to place a ladder within the window opening and the width necessary to admit a firefighter with full rescue equipment including breathing apparatus.*



**Egress Windows and Window Wells**

**Bedroom Egress Window: Minimum width and height requirements [in inches]**

<i>width</i>	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
<i>height</i>	41	39.25	37.5	35.25	34.25	33	31.75	30.50	29.5	28.5	27.5	26.5	25.75	25	24

9. **Operational constraints and opening control devices.** Emergency escape and rescue openings shall be operational from the inside of the room without the use of keys, tools or special knowledge. Window opening control devices complying with ASTM F 2090 shall be permitted for use on windows serving as a required emergency escape and rescue opening. **(R310.1.1)**

10. **Flashing Required. (R703.4).** Approved corrosion resistant flashing shall be applied **shingle-fashion** in such a manner to prevent entry of water into a wall cavity or penetration of water to the building structural framing components. Self-adhered membranes used as flashing shall comply with AAMA 711. Fluid applied membranes used as flashing in exterior walls shall comply with AAMA 714. The flashing shall extend to the surface of the exterior wall finish. [RB] SHINGLE FASHION. A method of installing roof or wall coverings, water-resistive barriers, flashing or other building components such that upper layers of material are placed overlapping lower layers of material to provide drainage and protect against water intrusion at unsealed penetrations and joints or in combination with sealed joints.

11. **Emergency escape windows under decks and porches (R310.2.4)** Emergency escape and rescue openings shall be permitted to be installed under decks and porches provided that the location of the deck allows the emergency escape and rescue openings to be fully opened and provides a path not less than 36 inches in height to a yard or court.

**Sections R310.1 through R310.1.4 Emergency Escape and Rescue Openings**

Item	Requirement
Nongrade floor windows	<ul style="list-style-type: none"> <li>• Maximum 44 inches from the floor to top of sill.</li> <li>• Minimum net clear height equals 24 inches and minimum net clear width equals 20 inches.</li> <li>• Minimum net clear opening equals 5.7 square feet.</li> <li>• Operable from inside to the required full clear opening without use of a key or tool.</li> </ul>
Grade floor windows	<ul style="list-style-type: none"> <li>• Maximum top of 44 inches above the finished grade to top of sill.</li> <li>• Minimum net clear height equals 24 inches and minimum net clear width equals 20 inches.</li> <li>• Minimum net clear opening equals 5 square feet.</li> <li>• Operable from inside to the required full clear opening without use of a key or tool.</li> <li>• Window openings with a finished sill height below the adjacent grade shall be provided with a window well in accordance with Section R310.2.</li> </ul>
Doors may be used as the emergency egress if	<ul style="list-style-type: none"> <li>• Occupants can exit to the exterior.</li> <li>• Operable from inside to the required full clear opening without use of a key or tool.</li> </ul>

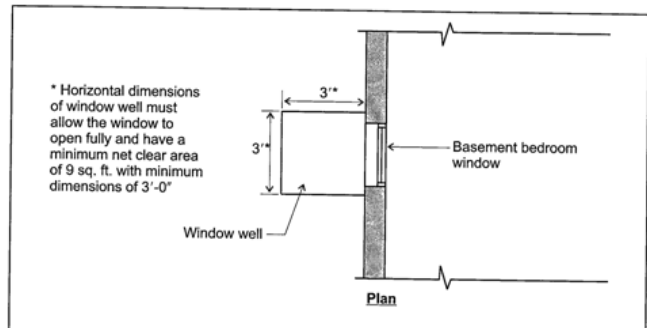
For SI: 1 inch = 25.4 mm, 1 square foot = 0.0929m<sup>2</sup>.

**B. Window Wells.**

1. **Window wells.** R310.2.3 The horizontal area of the window well shall be not less than 9 square feet (0.9 m<sup>2</sup>), with a horizontal projection and width of not less than 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 R310.2.3.1 shall be permitted to encroach not more than 6 inches (152 mm) into the required dimensions of the window well.

**R310.2.3.2 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.



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Exception: A drainage system for window wells is not required where the foundation is on well-drained soil or sand-gravel mixture soils in accordance with the United Soil Classification System, Group I Soils, as detailed in Table R405.1. *(Note: Window wells are required when the emergency rescue opening window is in a basement wall that is not a walkout basement wall.)*

**Ladders and steps.** R310.2.3.1 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 not less than 12 inches (305 mm), shall project not less than 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.

**C. ENERGY CODE REQUIREMENTS, Windows and Doors**

1. **Location by Climate Zone:** Hardin County per Table N1101.2, and the entire state of Kentucky, is located in Climate Zone 4, the HDD is 4,000 to 4,999.
2. **Chapter 11, Energy Efficiency.** Per N1101.2.1, The energy efficiency for the design and construction of buildings shall comply by either meeting the requirements of the 2009 *International Energy Conservation Code* or meeting the requirements of this chapter.
3. **Insulation and fenestration criteria. (N1102.1)** The building thermal envelope shall meet the requirements based on Climate Zone 4 as specified in Table N1101.2. **The term fenestration refers to** opaque doors and the light-transmitting areas of a residential building's wall, floor or roof, generally window, skylight, and non-opaque door products.
4. **Fenestration U-Factor. (Table N1102.1) (For glass in Windows & Doors.)** Provide Fenestration not exceeding a Maximum U-Factor 0.35. (2009 IECC)

Bibliography.

The code references and graphics pictured are found in the following resources.

1. [Figure 41, Example of Clear Opening Dimensions, 2003 IRC Performing Residential Building Inspections, this handout pg. 1 of 3.](#)
2. [Figure, Emergency Escape and Rescue Openings Chart, 2003 IRC Performing Residential Building Inspections, this handout pg. 2 of 3.](#)
3. [Figure 42, Example of Window Well, Plan, 2003 IRC Performing Residential Building Inspections, this handout pg. 2 of 3.](#)