



TOWN OF WELLS

Wells, Maine

Answers to common questions on the 2021 IRC/IECC

This handout summarizes commonly referenced construction requirements under the **2021 International Residential Code (IRC)**. It is intended to guide property owners and contractors during planning and construction. Always consult the full code for complete requirements.

2021 International Residential Code - <https://codes.iccsafe.org/content/IRC2021P3>

2021 International Energy Conservation Code - <https://codes.iccsafe.org/content/IECC2021V1.0>

1. Egress Window (Emergency Escape & Rescue Opening) Requirements – R310

- Required in **all sleeping rooms**
 - **Minimum net clear opening:** 5.7 sq. ft.
 - **Minimum clear opening height:** 24 inches.
 - **Minimum clear opening width:** 20 inches.
 - **Maximum sill height:** 44 inches above the finished floor.
 - Must be operable from the inside **without keys, tools, or special knowledge**.
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2. Stair Requirements – R311.7

Stair Rise and Run

- **Maximum riser height:** 7 3/4 inches.
- **Minimum tread depth:** 10 inches.
- Risers must be **uniform** within the stairway (max variation 3/8 inch). Openings in risers must not allow for passage of a 4 inch sphere.

Stair Width

- Minimum **36 inches** above handrail height.
- Handrails may project into required width up to **4 1/2 inches**.

Headroom

- Minimum **6 feet 8 inches**.

3. Handrail Requirements – R311.7.8

- Required on **at least one side** of stairs with **4 or more risers**.
 - **Height:** 34–38 inches measured vertically from the tread nosing.
 - **Continuity:** Must be continuous for the full flight.
 - **Grip size:**
 - Circular: 1 1/4 to 2 inches in diameter.
 - Non-circular: Perimeter 4–6 1/4 inches.
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4. Guard Requirements – R312

- Required along **open-sided walking surfaces**, stairs, porches, decks, ramps, and landings **over 30 inches** above grade.
 - **Height:** Minimum **36 inches** at decks and floors.
 - **Openings:** Must not allow passage of a **4-inch sphere**.
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5. Ceiling Height Requirements – R305

- **Habitable spaces:** Minimum **7 feet**.
 - **Stairways:** 6 feet 8 inches
 - **Bathrooms, laundry rooms, and toilet rooms:** Minimum **6 feet 8 inches**.
 - **Finished basements:** 7 feet with projections of beams, ducts, or other obstructions no less than 6 feet 4 inches
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6. Smoke & Carbon Monoxide Alarms – R314 & R315

- Required **inside each bedroom, outside each sleeping area**, and on **each story**.
 - Must be **hard-wired with battery backup**.
 - CO alarms required where fuel-fired appliances or attached garages exist.
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7. Safety Glazing Requirements – R308

Safety glazing is required in:

- Windows near doors (within 24 inches of door edge).
 - Where the bottom edge of the glazing is within 18 inches of the floor.
 - Stair enclosures and guards.
 - Shower and bathtub enclosures.
 - Windows within 60 inches horizontally from the waters edge of a tub or shower.
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8. Foundation Anchorage – R403.1.6

- Sill plates must be anchored with **1/2-inch bolts**, minimum **7 inches** embedment.
 - Spacing: **6 feet** maximum.
 - Minimum **two anchors per plate**, placed within **12 inches** of each end.
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9. Insulation & Energy Requirements – Per 2021 IECC

(May vary if Maine amendments apply.) - **Attic:** R-60 - **Walls:** R-30 or R-20 + R-10 continuous insulation - **Floors:** R-30 - **Basement walls:** R-15 continuous or R-19 cavity or R-13 + R-5 continuous insulation

Always refer to the full 2021 IRC for detailed requirements. This handout is for guidance only and does not replace code language.
