

2006 IRC Code – Selected Tempered Glass Requirements

Glazing in nearby existing windows and doors (i.e. windows and doors installed when the house was built) may need to be replaced with tempered glass when building an addition, porch or deck onto an existing house. The code references listed below can be used as a guideline to determine when safety glazing is required. Please check with your residential plan reviewer or building inspector if you have a question about these requirements by calling 501-4360.

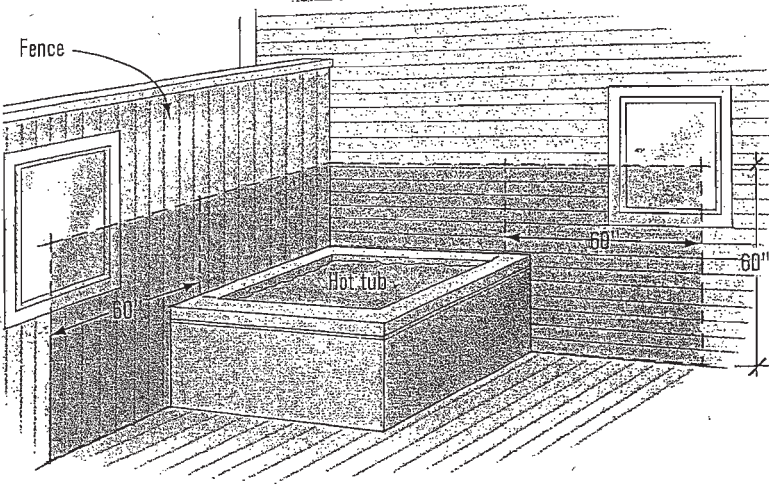
R308.4 Hazardous locations: The following shall be considered specific hazardous locations for the purposes of glazing:

2. Glazing in fixed and sliding panels of sliding door assemblies and panels in sliding and bifold closet door assemblies.
3. Glazing in storm doors.
5. Glazing in doors and enclosures for hot tubs, whirlpools, saunas, steam rooms, and showers. Glazing in any part of a building wall enclosing these compartments where the bottom exposed edge of the glazing is less than 60" measured vertically above any standing or walking surface.
6. Glazing, in an individual fixed or operable panel adjacent to a door where the nearest vertical edge is within a 24" arc of the door in a closed position and whose bottom edge is less than 60" above the floor or walking surface.
7. Glazing in an individual fixed or operable panel, other than those locations described in items 5 and 6 above, that meets all the following conditions:
 - 7.1. Exposed area of an individual pane is greater than 9 square feet.
 - 7.2. Bottom edge is less than 18" above the floor.
 - 7.3. Top edge greater than 36" above the floor.
 - 7.4. One or more walking surfaces within 36" horizontally of the glazing.
9. Glazing in walls and fences enclosing indoor and outdoor swimming pools, hot tubs and spas where the bottom edge of the glazing is less than 60" above the walking surface and within 60" horizontally of the water's edge. This shall apply to single glazing and all panes in multiple glazing.
10. Glazing adjacent to stairways, landing and ramps within 36" horizontally of a walking surface when the exposed surface of the glass is less than 60" above the plane of the adjacent walking surface.
11. Glazing adjacent to stairways within 60" of the bottom tread of the stairway in any direction when the exposed surface of the glass is less than 60" above the nose of the tread.

Exception: The following products, materials and uses are exempt from the above hazardous locations:

1. Openings in doors through which a 3" sphere is unable to pass.
2. Decorative glass in items 1, 6 or 7.
3. Glazing in section R308.4, item 6, when there is an intervening wall or other permanent barrier between the door and the glazing.
4. Glazing in section R308.4, item 6, in walls perpendicular to the plane of the door in a closed position, other than the wall toward which the door swings when opened, or where access through the door is to a closet or storage area 3' or less in depth. Glazing in these applications shall comply with section R308.4, item 7.
5. Glazing in section R308.4, items 7 and 10, when a protective bar is installed on the accessible side(s) of the glazing 36" above the floor. The bar shall be capable of withstanding a horizontal load of 50-pounds per linear foot without contacting the glass and be a minimum of 1 1/2" in height.
9. Safety glazing in R308.4, item 10 and 11 is not required where:
 - 9.1. The side of the stairway, landing or ramp has a guardrail or handrail, including balusters or fill-in panels.
 - 9.2. The plane of the glass is greater than 18" from the railing.
 - 9.3. When a solid wall or panel extends from the plane of the adjacent walking surface to 34" to 36" above the floor and the construction at the top of that wall or panel is capable of withstanding the same horizontal load as the protective bar.

Pools, Hot Tubs, and Spas Need Safe Glass

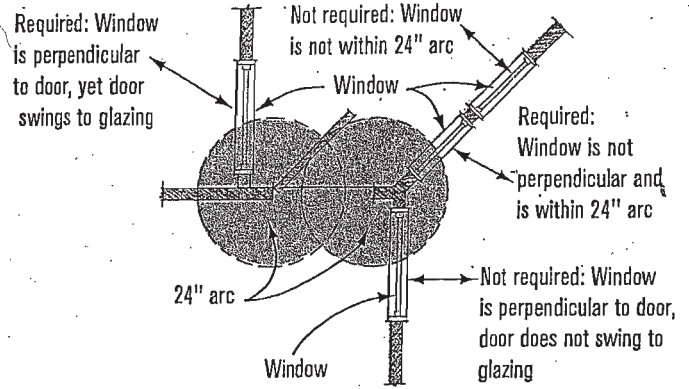


The 2006 IRC calls for safety glazing when glazing is "in walls and fences enclosing indoor and outdoor swimming pools, hot tubs and spas where the bottom edge of the glazing is less than 60 inches above a walking surface and within 60 inches horizontally of the water's edge. This shall apply to single glazing and all panes in multiple glazing."

This is probably the simplest section. There are no exceptions – glass near wet areas must be safety glazing.

R308.4 #9

Adding a Door? Check Nearby Windows



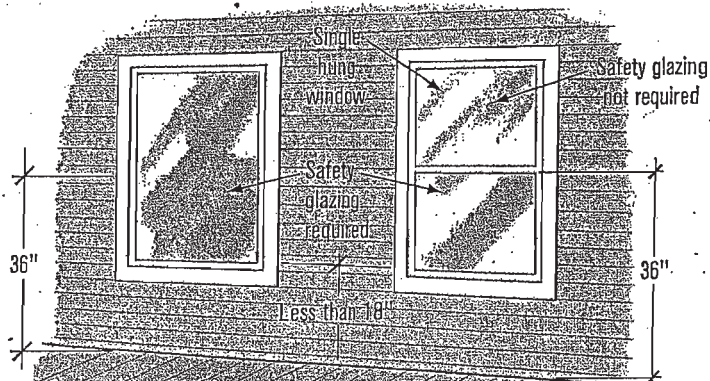
The 2006 IRC calls for safety glazing when glazing "is in an individual fixed or operable panel adjacent to a door where the nearest vertical edge is within a 24-inch arc of the door in a closed position and whose bottom edge is less than 60 inches above the floor or walking surface."

This section is not easily understood. Imagine attaching one end of a 24-inch-long string to the corner of the door jamb, then pulling the free end in a horizontal arc. Any glass less than 60 inches above the floor and within the reach of the string would need to be safety glazed.

Arcs are measured from both door jambs, on the inside and outside – four places. In the case of a sliding glass door, the whole assembly is considered the "door": You would not measure from the edges of only the operable panel, but from the edge of the inoperable panel as well – in other words, the edge of the door assembly.

R308.4 #6 and Exception #4

Adding a Deck Might Require Changing the Windows

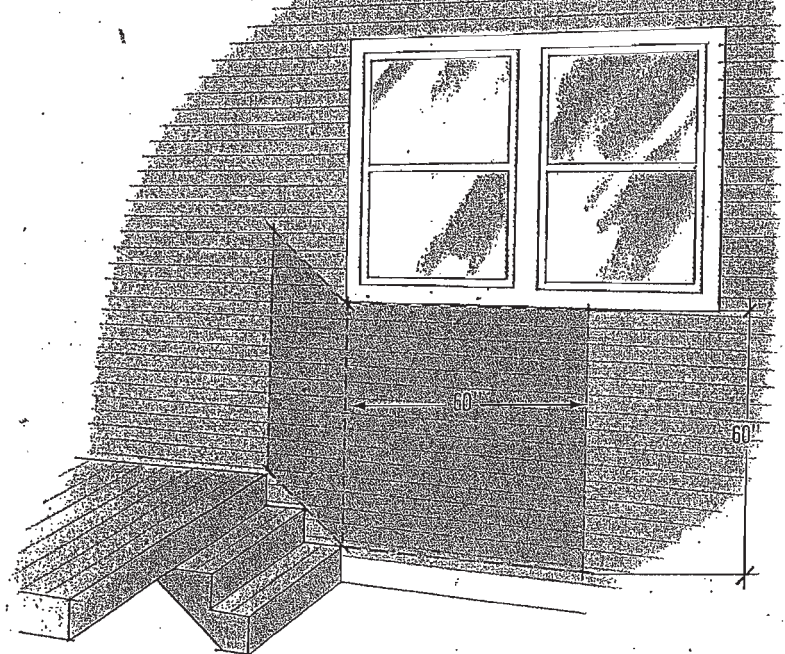


The 2006 IRC requires safety glazing when all four of these criteria are met:

1. Exposed area of an individual pane larger than 9 square feet.
2. Bottom edge less than 18 inches above the floor.
3. Top edge more than 36 inches above the floor.
4. One or more walking surfaces within 36 inches horizontally of the glazing.

R308.4 #7

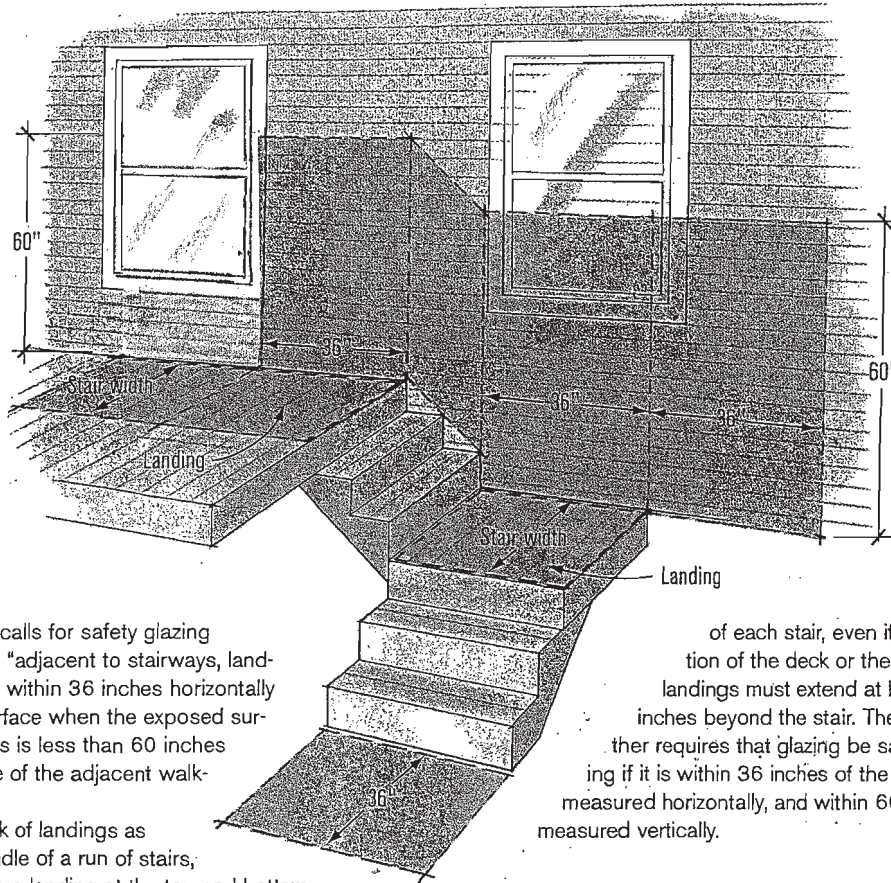
Bottoms of Stairways Have Their Own Requirements



The 2006 IRC calls for safety glazing when glazing is "adjacent to stairways within 60 inches horizontally of the bottom tread of a stairway in any direction when the exposed surface of the glass is less than 60 inches above the nose of the tread."

R308.4 #11

Safety Glazing Required Near Stairs



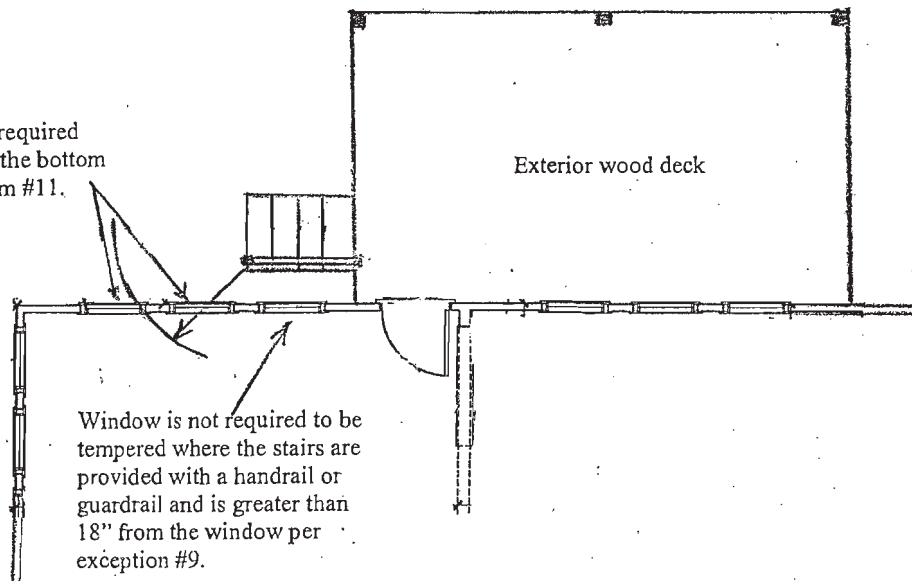
The 2006 IRC calls for safety glazing when glazing is "adjacent to stairways, landings and ramps within 36 inches horizontally of a walking surface when the exposed surface of the glass is less than 60 inches above the plane of the adjacent walking surface."

While we think of landings as being in the middle of a run of stairs, the IRC requires a landing at the top and bottom

of each stair, even if it's a portion of the deck or the lawn. Such landings must extend at least 36 inches beyond the stair. The code further requires that glazing be safety glazing if it is within 36 inches of the landing, measured horizontally, and within 60 inches measured vertically.

R308.4 #10 and #11

Tempered glass is required within 60" arch of the bottom of the stairs per item #11.



Window is not required to be tempered where the stairs are provided with a handrail or guardrail and is greater than 18" from the window per exception #9.

R308.4 Exception #9