

Proposed Code Modification to FBC 8th Edition (2023)

By: John Barrios, CBO, Hillsborough County

Revise Section 1015.8 of the FBC-B as follows:

1015.8 Window openings. Windows in Group R-2 and R-3 buildings including *dwelling units*, where the top of the sill of an operable window opening is located less than ~~24~~ 36 inches above the finished floor and more than 72 inches (1829 mm) above the finished grade or other surface below on the exterior of the building, shall comply with one of the following:

1. Operable windows where the top of the sill of the opening is located more than 75 feet (22 860 mm) above the finished grade or other surface below and that are provided with window fall prevention devices that comply with ASTM F2006.
2. Operable windows where the openings will not allow a 4-inch-diameter (102 mm) sphere to pass through the opening when the window is in its largest opened position.
3. Operable windows where the openings are provided with window fall prevention devices that comply with ASTM F2090.
4. Operable windows that are provided with window opening control devices that comply with Section 1015.8.1.

Reason:

In the current edition of the IBC and previous editions of the FBC-Building volume, section 1015.8 required fall protection for windows with a sill height of **36"** or below in R-2 occupancies when the window is located more than 72" above the ground or other surface on the outside. This was presumably to prevent small children from falling out of windows. FBC-EB (Existing Buildings), section 505.2 stipulated the same.

In the current 7th edition of the FBC-B, section 1015.8 was amended by Code Mod F7213 to change to a sill height of **24"** or below for R-2 occupancies but there was no corresponding change to the same provision in the FBC-EB section 505.2 for existing apartment buildings. The net result is a situation where a brand new apartment building that is completed today that has windows with a sill height below 36" would automatically be in violation of the FBC-EB regarding fall protection. We don't believe this was the intent of the Florida Building Commission.

We checked the last few editions of the IBC and IEBC codes, and the fall protection provisions in both codes are consistent.... fall protection is required when the window sill height is 36" or below in new and existing R-2 occupancies. The following is an excerpt from the IBC Code Commentary for section 1015.8:

The window limitations specified here are intended for Group R-2 and R-3 units. These facilities have the highest potential for infants and toddlers being present for an extended period of time. The requirement is intended to provide a level of protection to children and to help limit the chances of them falling through window openings. In most cases, these provisions are not applicable to first-floor windows. Typically, the 72 inches (1829 mm) to finished grade would make these provisions applicable for windows starting at the second floor. For windows in bedrooms that may also be required to serve as emergency escape and rescue openings, see Section 1030.

There are basically five options offered:

*One option is to locate the window so that any opening is at least 36 inches (915 mm) above the floor. By raising the lowest operable portion of a window to 36 inches (915 mm) or more, the sill height is above the center of gravity of smaller children. The National Ornamental & Miscellaneous Metals Association (NOMMA) commissioned a paper on child safety related to falls. The report indicates that the standing center of gravity of children aged 2 to 3.5 years is 24.1 inches (612 mm) [50th percentile is 22.2 inches (564 mm)] and of children aged 3.5 to 4.5 years is 25.2 inches (640 mm) [50th percentile is 23.6 inches (599 mm)]. **The 36-inch (915 mm) sill height was chosen to reduce the ability of a child to climb onto the sill, enabling the fall through the opening.** Windows that are also to serve as emergency escape windows must also comply with Section 10309.3 sill height requirements for 44 inches (1118 mm) maximum. Note that Section R312.2 of the IRC requires a minimum sill height of 24 inches (610 mm).*

The balance of the code commentary explains the 4 other options for providing window fall protection, which is not germane to this issue. In summary, we don't believe it was the intent to create an internal conflict between the FBC -B and FBC-EB volumes of the Code and by restoring the 36" height above the finish floor criteria, the entire FBC will be in sync within itself and the IBC.