E81-18

IBC: 1015.8, (IFC[BE] 1015.8)

Proponent: Jim Tidwell, Tidwell Code Consulting, representing Self (jimtidwell@tccfire.com); Jim Graham, Self, representing National Association for Child Window Safety (jgraham@childwindowsafety.org)

2018 International Building Code

Revise 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 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.

   Exception: Windows over counters, plumbing fixtures or doors.

Reason:

This code change is intended to address the ongoing problem of children climbing onto and falling from windows. According to a report published in the Journal Pediatrics®, Official Journal of the American Academy of Pediatrics, "From 1990 through 2008, an estimated 98,415 children (95% CI: 82 416– 114 414 children) were treated in US hospital EDs for injuries attributable to a fall from a window, with an average of 5,180 patients (95% CI: 4828 –5531 patients) per year." This report is the most recent, comprehensive study to date on the problem.

There is a viable, inexpensive solution to this problem that has proven effective in the largest city in the United States, New York City. In the mid 1970's, New York City implemented a program they called "Children Can't Fly" in an effort to reduce injuries resulting from window falls. A center piece of that effort was a Local Law requiring window guards in every building with three or more apartments where children under 10 resided. Since then, injuries and deaths from window falls have been dramatically reduced. According to Barbara Barlow, MD, Chief of Pediatric Surgery, Harlem Hospital Center, "The 96% decrease in accidental falls from windows since 1979 demonstrates that the "Children Can't Fly" program in New York City has almost eliminated accidental falls from windows in our hospital population" [quote from report titled "Ten years of experience with falls from a height in children, Barlow B, Niemirska M, Gandhi R, Leblanc W (1983)].

Note that the New York City statute does not stipulate a minimum sill height, as they recognized the fact that children climb on windows; furniture placed near a window can provide a means to climb to the window; and children are inherently curious and will explore areas, such as windows, that have proven dangerous when not properly protected by child window fall protection devices. Using a sill height as a threshold to require fall protection is fallacious because the fall protection is necessary for climbing, exploring children, not just a child who happens to trip and fall near a window.

Also, New York City did not accept limiting devices as a solution. There is another proposal to address this issue separately.

This proposal is simple and straightforward. It removes the reference to a minimum sill height measured inside the room. The current 36" threshold isn't high enough to prevent many children from accidentally falling from a window even if the child is at floor level. For children climbing on the window or adjacent furniture (a significant portion of the problem), any sill height is simply a way around solving the problem, and will not have the desired effect.

Approving this code change will undoubtedly save thousands of children from serious injuries or death at a very low cost.

Cost Impact

The code change proposal will increase the cost of construction .

Increased cost include the addition fall protection for windows not currently required to be equipped with such protection.

Internal ID: 587

E82-18

IBC: 1015.8, 1015.8.1, (IFC[BE] 1015.8, 1015.8.1)

Proponent: Jim Tidwell, Tidwell Code Consulting, representing Self (jimtidwell@tccfire.com); Jim Graham, Self, representing National Association for Child Window Safety (jgraham@childwindowsafety.org)

2018 International Building Code

Revise 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 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.~~1. 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.~~

2. Operable windows equipped with corrosion resistant screen capable of withstanding a minimum force of 60 pounds (27 kg) as a concentrated load applied to the center of the screen.

3. Operable windows equipped with barriers with openings that do not allow the passage of a sphere 4 inches (102 mm) in diameter and are capable of withstanding a minimum force of 60 pounds (27 kg) as a concentrated load applied at an location on the barrier.

Delete and substitute as follows:

~~**1015.8.1 Window opening control devices.** Window opening control devices shall comply with ASTM F2090. The window opening control device, after operation to release the control device allowing the window to fully open, shall not reduce the minimum net clear opening area of the window unit to less than the area required by Section 1030.2.~~

1015.8.1 Operation during emergencies. Windows provided for emergency escape and rescue shall comply with Section 1015.8 and Section 1030.2 for operation during emergencies.

Reason:

This code change is intended to address the ongoing problem of children climbing onto and falling from windows. According to a report published in the Journal Pediatrics®, Official Journal of the American Academy of Pediatrics, "From 1990 through 2008, an estimated 98,415 children (95% CI: 82 416– 114 414 children) were treated in US hospital EDs for injuries attributable to a fall from a window, with an average of 5,180 patients (95% CI: 4828 –5531 patients) per year." This report is the most recent, comprehensive study to date on the problem.

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Note that the New York City statute does not stipulate a minimum sill height, as they recognized the fact that children climb on windows; furniture placed near a window can provide a means to climb to the window; and children are inherently curious and will explore areas, such as windows, that have proven dangerous when not properly protected by child window fall protection devices. Using a sill height as a threshold to require fall protection is fallacious because the fall protection is necessary for climbing, exploring children, not just a child who happens to trip and fall near a window.

Also, New York City did not accept limiting devices as a solution. While those devices meet the criteria of ASTM standards, it is widely recognized that the devices are easily and regularly defeated by occupants in need of ventilation, especially during warm weather. When engaged, the limiting devices only allow the window to be opened four inches; however, they are intentionally constructed to allow an adult to easily override the safety feature to fully open the window, thus exposing the child to the fall risk they're intended to address. There is no available data to indicate these devices are having the intended effect, thus the need for a passive physical barrier that allows the window to open to provide necessary ventilation in a space. Allowing these devices in lieu of a physical barrier as described in this proposal places those with the greatest need – the lower socioeconomic strata of our society who depend upon natural ventilation for comfort in warm weather – at the greatest risk.

This proposal is simple and straightforward. It will require all operable windows in residential occupancies to have passive barriers – either window screens or window guards – that meet the ASTM standards for fall protection (60 lbs. concentrated load). It does not recognize limiting devices, as these have shown to be easily overridden, and of limited value.

There is another proposal that addresses the sill height.

Approving this code change will undoubtedly save thousands of children from serious injuries or death at a very low cost.

Cost Impact
The code change proposal will increase the cost of construction .

Potential increase in cost due to the difference in the cost of guards or screens in lieu of vent stops.

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