

Window Fall Protection

This tip sheet reflects code requirements of the 2021 International Residential Code (IRC) and the 2021 International Building Code (IBC) with Washington State Amendments.

Requirements

- Where the sill height above finished grade on the exterior side of an operable window opening is greater than **72 inches**, and the sill height above the finished floor on the interior side of the operable window opening is less than 24 inches (or 36 inches in dwelling units regulated by the IBC) (see Figure 1), then window fall protection shall be provided by one of the following (R312.2.1, R312.2.2; IBC 1015.8):
 1. Operable windows with openings that, when in their largest opened position, will not allow the passage of a 4-inch sphere (see Figure 2).
 2. Operable windows that are provided with opening control or fall prevention devices that comply with ASTM F 2090 (see Figure 2) (IBC 1015.8.1).
 3. In dwelling units regulated by the IBC where the sill height of an operable window above exterior finished grade is more than **75 feet**, provide window fall prevention devices complying with ASTM F 2006 (see Figure 2).
- Where operable windows serve as emergency escape and rescue openings, any window opening control or fall prevention devices, after operation to release the devices allowing the windows to fully open, shall not reduce the net clear opening area of the window units to less than the area required by R310.2.1 and R310.2.2 (R312.2.2) (IBC 1015.8.1). See Egress Windows below.

Standards

- ASTM F 2006: Standard Safety Specification for Window Fall Prevention Devices for Non-Emergency Escape (Egress) and Rescue (Ingress) Windows
- ASTM F 2090: Specification for Window Fall Prevention Devices with Emergency Escape (Egress) Release Mechanisms.

Egress Windows

- Egress windows must meet minimum size requirements. Minimum clear opening size of 5.7 square feet (5 square feet on the grade level) with minimum clear height of 24 inches and minimum clear width of 20 inches.
- For additional emergency egress window requirements refer to Tip Sheet 10.

Safety Glazing

- For additional safety glazing requirements refer to Tip Sheet 19.

Guard or limiting device is required when exterior height above finished grade is greater than 72 inches and the window's height above finished floor is less than 24 inches (IRC) or 36 inches (IBC).

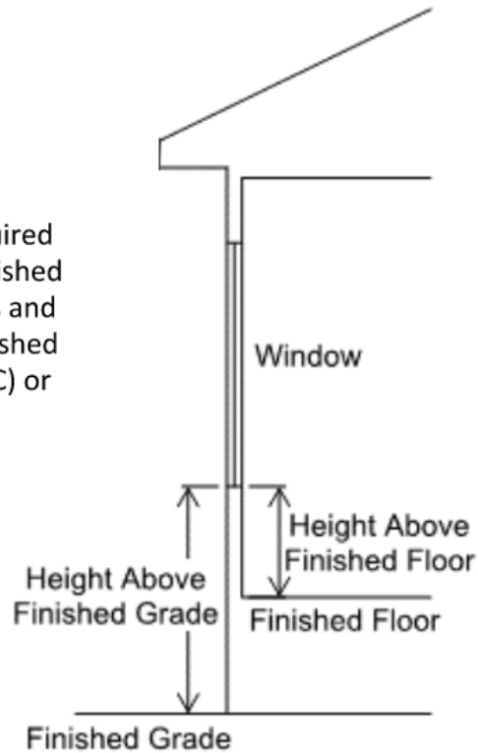


Figure 1: Sill height above finished grade on the exterior side of an operable window opening.

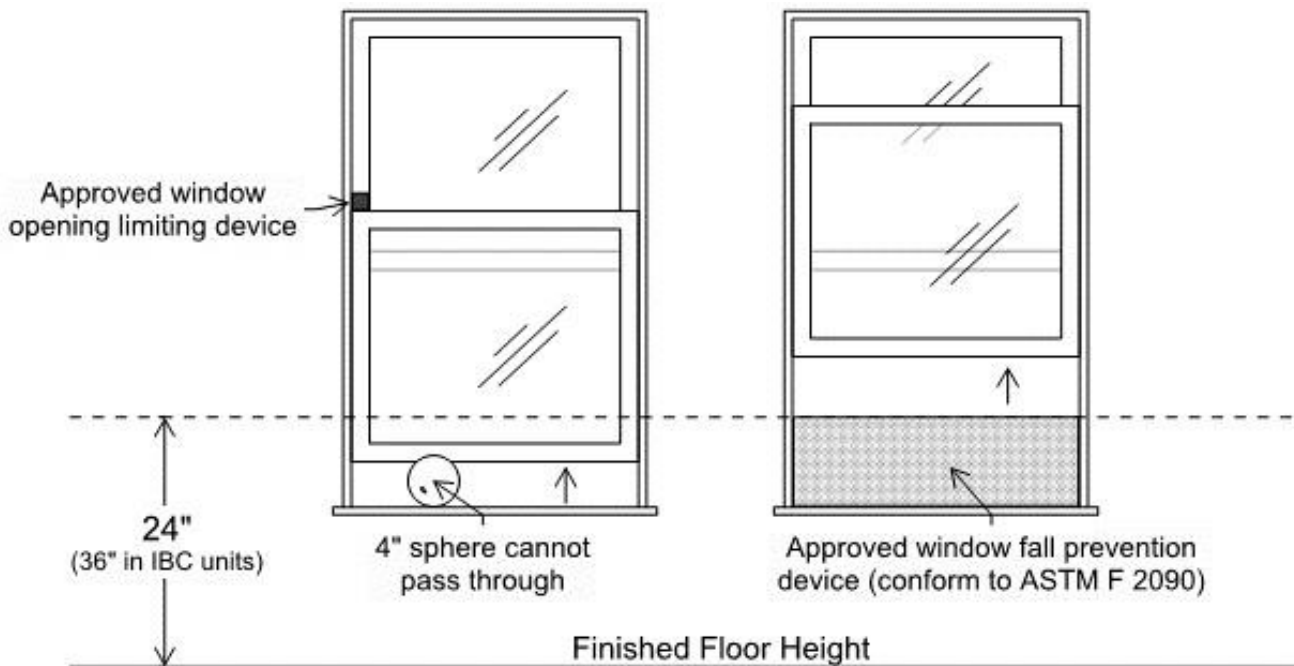


Figure 2: Window fall protection

Table 1: Summary of Requirements

Exterior Sill Height Above Finished Grade	Interior Sill Height Above Finished Floor	Can be used for Egress	Safety Glazing Required	Fall Protection Required
72 inches or less	Greater than 44 inches	No	-	No
	Between 18 and 44 inches	Yes	-	No
	Sill below 18 inches, top of window above 36 inches, and individual pane of glass is greater than 9 square feet	Yes	Yes	No
Greater than 72 inches	Greater than 44 inches	No	-	No
	Between 24 and 44 inches (IRC dwelling units)	Yes	-	No
	Less than 24 inches (IRC dwelling units)	Yes	-	Yes
	Between 36 and 44 inches (IBC dwelling units)	Yes	-	No
	Less than 36 inches (IBC dwelling units)	Yes	-	Yes
	Sill below 18 inches, top of window above 36 inches, and individual pane of glass is greater than 9 square feet	Yes	Yes	Yes
Greater than 75 feet	Less than 36 inches (IBC dwelling units)	No	-	Yes