

How to Retro-Fit an Egress Window System into a basement

A step-by step guide on how to install a basement egress window system into an existing basement foundation. See products that will make the installation easier and meet the IRC codes for Egress.







I

Why Egress?	3
The Steps Explained	4
Recommended Products for Retro-Fits	7
The 2015 IRC Code	8

T

I.



How to Retro-Fit an Egress Window System into a basement

Chapter 1 Why Egress?

Window well systems add natural daylight and ventilation to basement rooms. Not only do they make basement rooms more livable and comfortable, they meet IRC 2015 building code requirements for emergency Egress. In the case of a fire, an Egress window system will allow for a quick and safe evacuation. Depending on your needs, Egress Solutions has an egress window system that is right for you.

A house fire gives no warning. It just happens. And when it does, you have to get out fast.

Basements are no longer used for just storage. They are our playrooms, entertainment centers, and more often now than before, bedrooms for expanding families.

A safety solution is needed, one that ensures quick entry to provide help if needed, and quick exit in an emergency.

The phrase, "means of egress", refers to the ability to exit the structure, primarily in the event of an emergency, such as a fire. Specifically, a means of egress is broken into three parts:

The path of travel to an exit, The exit itself, and the exit route (the path to a safe area outside). All three count.

Chapter 2 The Steps Explained



Determine where window system is going and mark the area. Dig the hole. Clean any loose dirt off of the foundation and mark the outline of the window on the foundation wall. Use a concrete saw or angle grinder with a diamond blade to cut along the outline marked. Once the initial pass is made all the way around, you can now connect the water supply to the diamond blade saw. The window opening can now be cut through the total thickness of the foundation. Once completed, the concrete or block can be removed from the opening and discarded.





Next, determine where the top of the well will be on the wall (ideally you want the top of the well about 3" above finished grade). Mark the correct spacing between the top two holes making sure they are level to each other and that the well will be centered on the window opening. Drill the holes and install an anchor in each location. Tighten the anchors and then back the nut and washer off of each.





Lower the well into the hole and "hang" it on the two anchors. Reinstall the corresponding nuts and washers and tighten. Now you can finish drilling and installing all remaining well anchors. Be sure to tighten all bolts. On the inside of the well, you will want to apply a bead of urethane sealant where the well meets the foundation on both sides.



The Finishing Touches...

Gravel is now poured into the bottom of the well and the fill dirt can be pushed back around the outside of the well to complete the earth work. Any surplus dirt will be removed from the area.

A ladder is then installed on the inside of the well with a safety grate or safety grate and cover placed on top of the well. Clean up any excess debris and the job is complete.



Clean And Complete.

The Job done right will have a lasting impact on your clients.

• Lower your clients utility bills by building down vs up and out. The earth is a constant temperature and natural insulator.

• Lower your clients tax bill per square foot by building down vs. up and out. Basement spaces are taxed lower than above grade spaces.

• Offer your client more high end finishes vs. the competition at the same price per square foot but at a lower cost to you.

• Save money on building materials by needing less siding, fewer windows, less insulation by building down.

• Be earth sensitive and have less of an environmental impact by building on a smaller footprint. Same goes for using fewer materials, less energy, etc while both building and maintaining the home.





How to Retro-Fit an Egress Window System into a basement

Recommended Products for Retro-Fits

Boman Kemp

Boman Kemp offers window systems, landing bucks, landing wells, windows, safety grates, plastic covers, and ladders. Boman Kempwas founded in 1967 and is based in Ogden, Utah. These basement windows are not only appealing to look at, provide light and ventilation, but they also meet the requirements of the International Residential Code (IRC) for egress. The Boman Kemp Window Wells are designed to keep earth away from basement windows, allowing natural light to enter the room. The well bolts directly to the Easy Buck, or can be bolted directly to the foundation wall. Boman Kemp, also offers a stylish alternative to expensive concrete composite wells. Manufactured from the same 18 Gauge steel as the standard well, the Stacked Stone™ Window Well combines beauty and strength that will please even the most discerning homeowners.

Rockwell

RockWell egress window wells have a stone texture that looks and feels like real stone. These add great curb appeal and an aesthetically pleasing view both inside the house and outside. The metal grates and the polycarbonate covers are engineered to hold up to 500 pounds. Established in 2004, RockWell, provides window wells that are among the most used in the country, thanks to their exceptional quality, beauty, and versatility. RockWell, LLC continues to expand its product line to fit the needs of homeowners and contractors across the US and Canada with various types of basement window coverings and window well ladders, among other products.

THE ASTRO WINDOW:

- +40 Low-E Argon.
- Swings-in to exit in an emergency
- Vents like a standard single hung window.
- One hand operation for quick exit.
- Sash is double-weatherstripped to protect from outside weather infiltration.
- Half fiberglass bug screen.
- Fully braced and wrapped.

Available in Left or Right swing.

THE FREEDOM WINDOW:

- Swings-in to exit in an emergency
- 3/4' Low-E glass for added thermal efficiency.
 Welded sash with powder coated handles for
- ease of operation.
- Full screen is removable from the inside.
- Fully braced and wrapped.
- Swings left or right.
- Available in Left or Right swing.

How to Retro-Fit an Egress Window System into a basement









Building Planning Codes IRC Code Section R310 SECTION R310

The 2015 IRC Code **For Egress**

EMERGENCY ESCAPE AND RESCUE OPENINGS

R310.1 Emergency escape and rescue required. Basements and every sleeping room shall have at least one operable emergency and rescue opening. Such opening shall open directly into a public street, public alley, yard or court. Where basements contain one or more sleeping rooms, emergency egress and rescue openings shall be required in each sleeping room, but shall not be required in adjoining areas of the basement. Where emergency escape and rescue openings are provided they shall have a sill height of not more than 44 inches (1118 mm) above the floor. Where a door opening having a threshold below the adjacent ground elevation serves as an emergency escape and rescue opening and is provided with a bulkhead enclosure, the bulkhead enclosure shall comply with Section R310.3. The net clear opening dimensions required by this section shall be obtained by the normal operation of the emergency escape and rescue opening from the inside. Emergency escape and rescue openings with a finished sill height below the adjacent ground elevation shall be provided with a window well in accordance with Section R310.2. Emergency escape 52 2006 INTERNATIONAL RESIDENTIAL CODE® and rescue openings shall open directly into a public way, or to a yard or court that opens to a public way.

R310.1.1 Minimum opening area. All emergency escape and rescue openings shall have a minimum net clear opening of 5.7 square feet (0.530 m2).

Exception: Grade floor openings shall have a minimum net clear opening of 5 square feet (0.465 m2).

R310.1.2 Minimum opening height. The minimum net clear opening height shall be 24 inches (610 mm).

R310.1.3 Minimum opening width. The minimum net clear opening width shall be 20 inches (508 mm).

R310.1.4 Operational constraints. Emergency escape and rescue openings shall be operational from the inside of the room without the use of keys, tools or special knowledge.

R310.2 Window wells. The minimum horizontal area of the window well shall be 9 square feet (0.9 m2), with a minimum horizontal projection and width of 36 inches (914 mm). The area of the window well shall allow the emergency escape and rescue opening to be fully opened.

Exception: The ladder or steps required by SectionR310.2.1 shall be permitted to encroach a maximum of 6 inches (152 mm) into the required dimensions of the window well.

R310.2.1 Ladder and steps. Window wells with a vertical depth greater than 44 inches (1118 mm) shall be equipped with a permanently affixed ladder or steps usable with the window in the fully open position. Ladders or steps required by this section shall not be required to comply with Sections R311.5 and R311.6. Ladders or rungs shall have an inside width of at least 12 inches (305 mm), shall project at least 3 inches (76 mm) from the wall and shall be spaced not more than 18 inches (457 mm) on center vertically for the full height of the window well.

How to Retro-Fit an Egress Window System into a basement