

Building Window Openings with Spec-Brik Half-High Units



Window openings are easy to build with Spec-Brik WCT. The first design consideration is to keep the modular dimensions of masonry in mind when choosing dimensions for the window opening. With Spec-Brik WCT from CPG, the modular height (CMU plus mortar joint) will be 4". That needs to be taken into account when selecting the dimensions of the complete window assembly, including sills, lintels, anchorage, flashing, weeps, insulation, reinforcement, nearby movement joints, and sealants, that are to be installed.

Bond Beam Below the Window Sill

To build a windowsill in a single wythe Spec-Brik wall, a bond beam needs to be built below the sill location first. The bond beam will be composed of half-high Spec-Brik bond beam units.

To build the bond beam two courses of half-high Spec-Brik units are used. The bottom course will be bond beam units, which may be pre-manufactured as bond beam units or conventional Spec-Brik units with the webs partially saw cut to serve as knock-out bond beam units. The cuts allow removal of the top portion of the webs to reduce the height of the webs to accommodate horizontal reinforcement rebar.

A layer of mesh to support the grout in the bond beam is placed on the course below by rolling it out below where the bond beam will be located.

QUICK POINTS

- Spec-Brik units can be used to form a bond beam below the windowsill to support the window opening.
- The windowsill assembly should include precast or masonry sill units, flashing and weeps, and a drip edge.
- Spec-Brik units can form a composite masonry lintel above the window opening by using a temporary form to support the lintel during construction



At this point, the bond beam units course is laid. After placement of the rebar in the bond beam units, the second course of Spec-Brik WCT units is laid, and the entire assembly is then grouted.

The two layers of Spec-Brik units will serve the same purpose as a single course of 8" masonry bond beam units would.

Window Jamb

The window jambs that will encase the sides of the window assembly are built next using Spec-Brik units. BlockFlash flashing and weeps are first placed above the bond beam supporting the sill at the location below where the jambs are built. Half-length jamb fittings are placed on alternate courses. The jambs are built to the designed height for the opening.

Flashing and Window Sill

Flashing and weeps is placed immediately below where the windowsill will rest. The sill is composed of solid masonry backing units to the interior of the opening and masonry sill units to the exterior. The backing units are laid first to provide support for the adhesive flashing material.

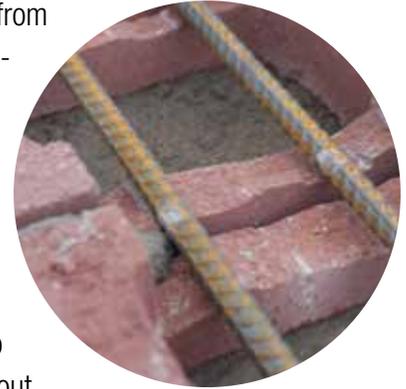
To flash the sill, a stainless steel drip edge corner flashing boots are placed first. Next the adhesive flashing material is cut to size, the backing is removed, and then the adhesive material is adhered to the backing units and the bottom of the window opening over the drip edge and flashing boots. Finally, the sill units, which have a drip channel on their bottom side, are laid to complete the sill. Weeps are placed along the bottom of the sill to allow any moisture that collects on the flashing to drain to the exterior.



Composite Masonry Lintel

To build a lintel above the window opening, a composite masonry lintel can be built from Spec-Brik units. This is a design feature that would typically be outlined in the structural engineer's notes in the plan set.

In this example, we are using typical Spec-Brik units to form a bond beam, using the same technique to build the bond beam that was outlined above with respect to the bond beam below the windowsill. Since the bond beam will span the top of the window opening, a form must be first constructed to support the lintel during construction. The form is built by placing vertical supports in the window opening to the correct height to support a cross member that will support the Spec-Brik units, grout and reinforcement during construction until it fully cures. The height of the form can either be set to be level with the bottom of the masonry units as they come off the window jambs, or can be set slightly below that so that a leveling pad of sand can be used above the form.



Conclusion

Spec-Brik units easily accommodate window openings. The Spec-Brik units are suitable for building the bond beam below the opening, the jambs of the opening and the lintel above the opening. Using flashing and weeps at the sill location and above the lintel, along with properly sealing the window assembly at its juncture with the opening, will assure weather protection.

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Questions?

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