



Flashing

Recessed Windows

For years now, recessed windows — which mimic the appearance of traditional Southwestern adobe architecture — have been popular in Western states like California, Colorado, Arizona, Nevada, and Utah. Now the trend is moving eastward. Unfortunately, a recessed window — which is typically set anywhere from 2 to 12 inches into the framing — is very difficult to flash properly. I know because my company has been investigating and repairing leaky recessed window openings in Southern California

A properly prepared opening, preformed corners, and layered flashing prevent leaks

by Gene Summy

ever since they started showing up on new construction projects 10 years ago.

To understand why recessed windows are so difficult to flash, I find it helpful to look at flush-mounted units. With a traditional installation, water hits the siding (or gets behind it) and travels straight

down until it reaches the top of the window, where it hits a watertight head flashing. It then travels horizontally for a short distance, turns downward, and ultimately exits the building either by dripping off the head flashing or continuing down the siding or drainage plane.

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Compare that with a recessed wall condition. When the water hits an inset window, it must make six or eight 90-degree turns before it can exit. Surface tension directs the water inward toward the building envelope, while the horizontal surface below the window obstructs the water's flow. If the flashing around the window isn't continuous, properly lapped, and free of damage, water will follow a path of least resistance — generally into the wall cavity directly below the window.

By 2001 my company had responded to so many leaks around recessed windows we decided we needed a standard approach to flashing these areas. What follows is our method for flashing inset windows. We use widely available flashing membranes as well as preformed corners that I developed.

Originally we used the “origami method” for the corners, which meant painstakingly folding peel-and-stick into three-sided corners. But our preformed corners — which I've dubbed the Corner Flash system — make the job go a lot quicker. Although I devised them for my own jobs, I received frequent inquiries and requests from contractors who saw them in the field, and now I sell them (800/310-7673, tllabs.com).



Framing the Opening

Before we install and flash the window, we start with a properly prepared opening. A good first step is to confirm the rough-opening dimensions, because if you end up having to make changes, the flashing steps will be a complete waste of time.

We also always check that there's a minimum of 3 inches between the window opening and the framed recess (see illustration, right). Anything less will prevent proper layering of materials and

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may result in the nail fin cutting into the flashing.

In addition, we make sure that solid backing (either uninterrupted framing or sheathing) forms the recess. This may sound obvious to builders east of the Rockies, where fully sheathed homes are the norm, but in the West, where homes are not routinely fully sheathed, this step needs to be specified.

Finally, we put a little slope to the horizontal backing immediately under the window. One inch of slope for 12 inches of run (8 degrees) is the minimum — more is better. I like 2 inches in 12 inches.

Prepping the Opening

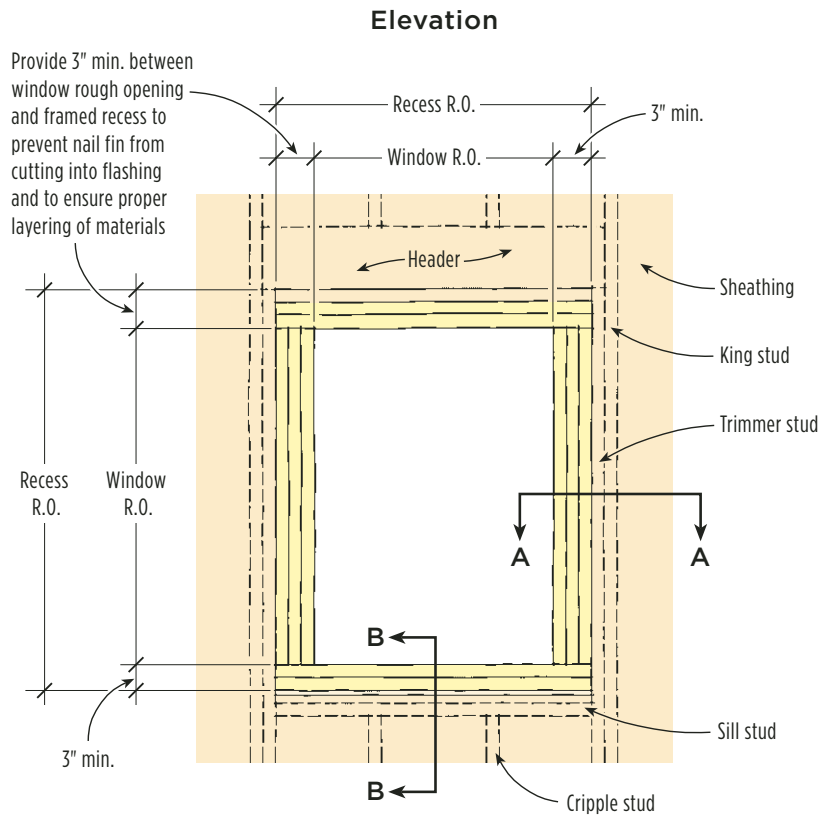
The first flashing layer to be installed is the bib or apron. It's a critical piece, because it allows the housewrap or building paper to be slipped under the window flashing later, so we don't end up with a reversed lap.

For the apron we use Fortifiber's Moistop Next (800/773-4777, www.fortifiber.com), a flexible flashing with fiber reinforcement. We extend it 6 to 12 inches past the sides of the window and staple it at the top. If there are two or more windows in close proximity, we use one continuous apron. We're careful not to staple below the recess, because that would make it impossible to insert the building paper when the time comes (1, page 2).

Next we fill the bottom recess corners with a healthy dose of sealant (2, page 2). We like Fortifiber's Moistop Sealant, a polyurethane-based sealant that's a little easier to tool than other polyurethanes we've tried. Then we stick in a Corner Flash outside corner, followed by an inside corner, pressing them into the sealant.

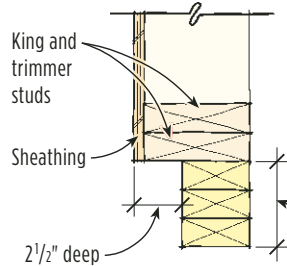
Both flashing pieces are sized large enough for a 6-inch recess, so when we use them with narrower framing — like

Framing for Recessed Windows

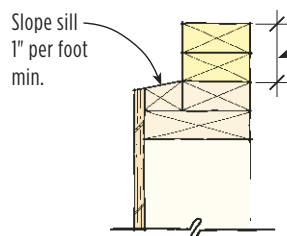


2x6 Option

Section A

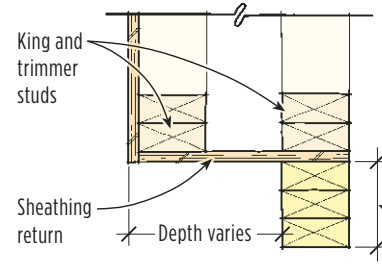


Section B

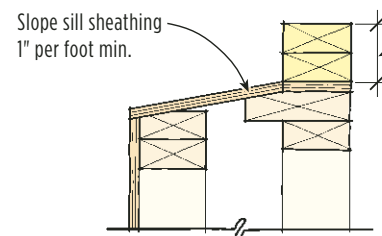


Double 2x4 Option

Section A



Section B



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this 2x4 recess — I cut between the vertical and horizontal legs and fold the excess over the sides. For insets deeper than 6 inches, we extend the legs with a piece of peel-and-stick membrane placed underneath. We ensure that the corner flashing stays in place by stapling through the vertical legs. It's good policy to never staple through horizontal flashing (3, 4).

After the Corner Flash corners and the apron are in place, we install a flashing pan. We make our own pans with a continuous piece of peel-and-stick flashing that's at least 40 mils thick; I like Fortifiber's FortiFlash. (We choose to make our own because we can tailor them to any size and they work just as well as the manufactured ones.)

We cover the bottom of the inset and the subsill with a continuous piece of FortiFlash, which spans the opening from one side to the other. It's a lot easier to do this job — and to prevent wrinkles in the membrane that could trap water — with two people. One stands inside and guides the top of the flashing piece while the other positions the bottom (5).

We apply a bead of sealant at the inside corners for

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extra insurance (6), then install a piece of Grade D building paper over the peel-and-stick membrane to prevent UV damage and act as a slip sheet between the stucco and the flashing materials (7).

It's worth mentioning that this horizontal layer of peel-and-stick membrane can be easily damaged by tears and punctures. My guess is that most damage is caused by workers climbing in and out or passing materials through the opening. I make it a policy to install the flashing as part of the window installation — not before — and to discuss with crew members the importance of reporting any damage right away.

Flashing the Window

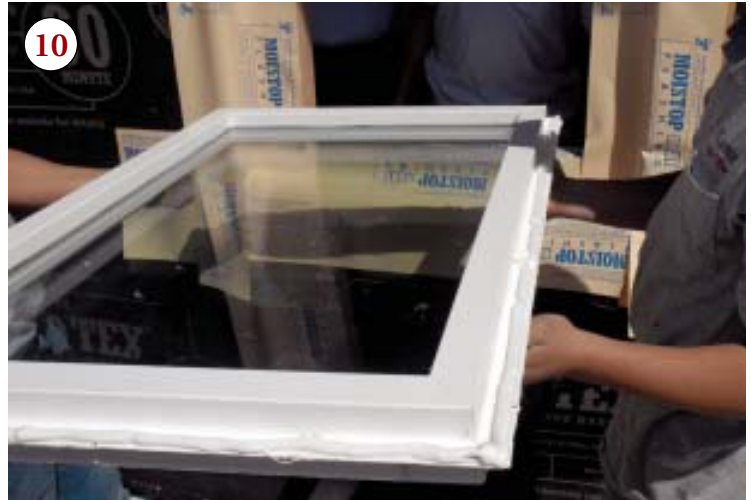
With the bottom of the recess and the subsill prepared, we move on to flashing and installing the window. We install a layer of Fortifiber Moistop Next (the same material we used for the apron) from one side of the opening to the other (8). Then we install vertical flashing up the sides of the window opening, overlapping the piece across the bottom. We staple these side pieces to both the face of



the trimmer studs and the sides of the recess.

I've seen some installers use peel-and-stick membranes for flashing the sides and tops of recessed windows, but I think peel-and-stick is too difficult to work with; it forms wrinkles that can impede the

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flow of water. Nonadhesive products like Moistop Next are a better choice.

We run the vertical flashing pieces of Next past the bottom of the inset so we can match its slope. One of the advantages of my flashing method is that there are no fancy cuts or folds. The most difficult cut is matching the slope on the bottom recess: We just crease the flashing into the corner and cut it with a utility knife or scissors, being careful not to cut into the preceding layers (9).

Installing the Window

For the actual installation, we apply a heavy bead of sealant to the nailing flange, then place the window into the opening, checking the reveal from the

inside. We fasten through the flange according to the window manufacturer's instructions. And we tool sealant over the nails and over every nail hole (10).

We install the top flashing corners the same way that we did the bottom ones. First we staple a Corner Flash inside corner in place, then an outside corner. Just as I did at the bottom, I shorten the corners by cutting along the fold, wrapping the legs onto the sheathing, and stapling the legs in place.

We install the corners over the vertical flashing legs (11), then cover the top nailing fin with a final layer of Next flashing (12).

Gene Summy owns TLS Laboratories in Laguna Niguel, Calif.