New Window in an Old Wall

Five steps, four hours, one window, zero mess

Upgrade with minimal mess. *A new window improved the look and let in light. Working from the outside controlled the mess.*

BY RICK ARNOLD

A friend of mine recently had his appendix removed. Three tiny incisions, the right tools and the right procedures, and he was back on his feet just hours after an operation that used to send a patient into weeks of recovery. Home-remodeling projects can be similar. Careful planning can keep cutting and demolition to a minimum with little disruption to the living environment and the lives of the clients. And the job takes less time.

One such project is putting a new window into an existing home (photo facing page). I try to perform most of the work from the outside, leaving the wallboard intact as an interior barrier against the mess, right up until the window goes in.

Peel back the skin

The first step is to remove the siding in the area where the window is going to be located (photos right). If another window is on the same wall, I use it to gauge the head height for the new window. I also check around the corner to make sure that the new window will be at the same elevation as any existing window that's in the same room (because you never know).

I remove the siding, starting with the course above the window location and moving down to a course or two below the window. Because this particular house had vinyl siding, I knew I'd be removing full lengths of siding and exposing a large horizontal area, so I didn't have to be to fussy about the horizontal location at this point. If I had been working with sidewall shingles or with clapboards, I would have needed to be more precise about locating the window and removing just a small area of siding around the spot of the new window.

To unlock the top row of vinyl, I use a tool called a zipper, basically a flat hook that is inserted behind the interlocking edges of two adjacent pieces. The tool grabs the lip of the top piece of vinyl and bends it out, unlocking it from the lower piece. Once the work has started, pulling the tool along the length of

1 STRIP OFF THE SIDING

You'll be happy if the house has vinyl siding: It comes off easily.

Siding in the window area comes off first. With the tool below, vinyl siding is one of the easiest types to remove and replace.

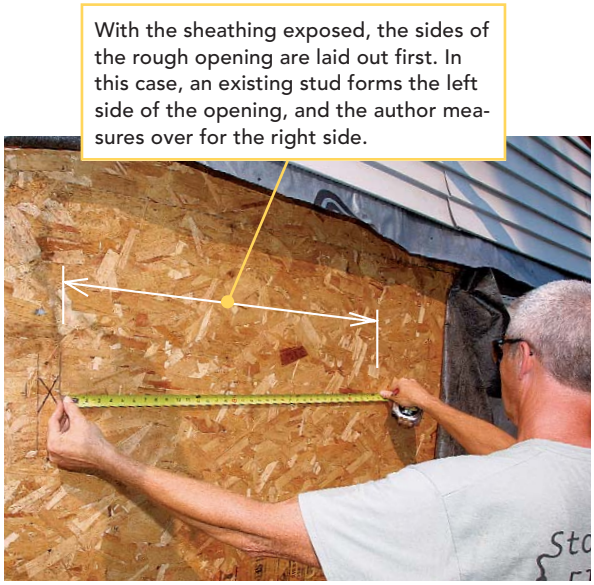
Available at most hardware stores, a zipper slips between siding panels to separate them.

After lifting the upper panel, a flat bar pops the nails of the siding panel below.

With all the siding removed, the housewrap is peeled back to reveal the wall sheathing underneath.

2 LAY OUT THE NEW WINDOW OPENING

Use existing framing if possible for part of the rough opening.



the siding separates the two pieces, opening them up like a zipper.

With the top piece of vinyl lifted up, I pull out the nails from the lower one. When all the nails are removed, I grasp the length of siding and push down, unsnapping it from the next course. The remainder of the siding is removed easily in the same fashion. Next, I carefully cut the housewrap and tack it out of the way until the opening is framed.

Mark the opening on the sheathing

With the wall sheathing exposed, I now can locate and mark the rough opening precisely (photos above). The existing stud locations are easy to determine by the nail patterns, and on this job the rough opening fell about 2 in. away from the edge of a stud.

To make life a little easier, I try to use existing studs for the sides of the rough opening, as long as the studs are close to plumb. (If they are way out of plumb, I adjust the opening to miss them completely and insert new plumb studs for both sides.) To land the opening on a stud, I had permission from the owner to move the window one way or the other, up to 6 in. In this case, I moved the opening about 2 in. until it fell along the edge of a stud. Using that edge as a starting point, I drew the rest of the rough opening on the sheathing.

Cut the sheathing first, then the studs

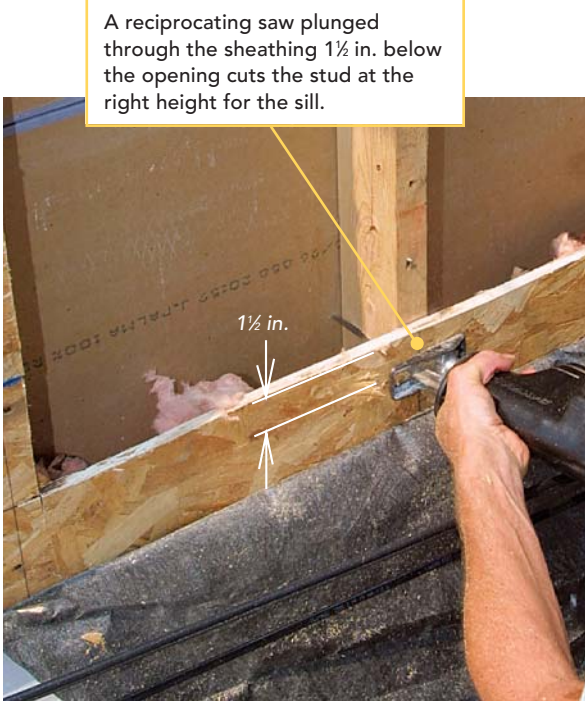
Because this wall happened to be a gable end, I didn't have to install a load-bearing header and jack studs, which meant that I didn't have to take out a large section of sheathing. Using a circular saw with the blade set slightly deeper than the thickness of the sheathing, I cut and remove the sheathing from the opening. I set the blade shallow to avoid hitting anything that may be buried in the wall.

With the sheathing removed, I cut the exposed insulation just below the sill height and remove it from the bays, except the bay where I'm going to add a full-height stud. For that bay, I remove the full batt of insulation, cut it to be about an inch shy of the vertical edge of the sheathing and replace it in the wall cavity.

If the header and sill are just 2x4s on flat, I mark the sheathing 1½ in. up from the top of the opening and 1½ in. down from the bottom at each stud location (photos right, facing page). With a reciprocating saw, I plunge-cut through the sheathing and then through the full depth of the studs at my marks. I don't

3 PREP THE OPENING FROM THE OUTSIDE

Leave room for the sills when you remove the studs.



SAFETY TIP

If your work is anywhere near electrical wires, your local utility company will install a protective covering to keep you safe.

The bottom is measured down from the top point.

A circular saw with the blade set at a shallow depth cuts the sheathing.

With the old studs removed, screws attach the new framing to minimize wall damage inside.

New header and sill pieces go into the recess left by the reciprocating saw.

Nails driven into the corners from the outside transfer the opening to the inside.

4 WALLBOARD COMES OUT

Drywall on the inside protects against construction mess on the outside.

Inside, the corners are connected and the opening is drawn.

A trim saw with a carbide blade cuts the wallboard with minimal mess.

The slow blade speed of the Makita 9.6v circular saw (800-462-5482) lets it cut drywall without making a lot of dust.

The wallboard comes out, making way for the new window.

worry if the blade pokes through the drywall a little. The interior treatment should cover anyplace the blade might pierce through. Once the studs are cut, I knock the pieces out of the opening carefully with a hammer.

New framing slips behind the sheathing

Because I used an existing stud for the left side of the opening, I had to insert a new stud only for the right side. For this stud I cut a length of 2x4 to go from the sole plate to the top plate.

I slide the new stud into the wall cavity, and then, starting at the bottom, I tap the stud gently into position. I fasten the studs in place by driving deck screws through the sheathing, as well as through the stud and into the plates if I can reach. Driving screws causes less vibration than nailing and minimizes the chance for drywall cracks inside. With the stud fastened securely, I replace any pieces of sheathing that had been removed for sliding the stud into the wall.

The next step is cutting and replacing the insulation in the newly formed stud bays above the 2x4 header and below the sill. After that, I measure, cut and install the header and sill. As with the new stud, I screw the header and sill to the sheathing and toe-screw them into the support studs.

With the framing complete, I can take out the wallboard that has been protecting the inside of the house (photos left). To mark the wallboard for cutting, I drive a nail through each corner of the framed opening from the outside. Inside the house, I draw lines connecting the nail holes to outline the opening.

To keep the gypsum dust to a minimum, I use my cordless trim saw with an old carbide blade to cut right through the wallboard with little effort. Its relatively slow blade speed creates no more gypsum dust than cutting by hand. After I cut and remove the wallboard, I screw the perimeter of the opening to the new framing.

Installing the window and buttoning up

With the rough opening complete inside and out, my attention turns to the window itself. The installation and flashing are the same as with a normal window ("Installing Vinyl-Clad Windows," *FHB* #129, pp. 64-69). For this window, I cut and bent aluminum flashing for the sill and used flashing membrane to seal the corners.

5 INSTALL THE WINDOW AND WRAP UP

If you've done your work carefully, putting in the window is the easiest part.

Installing the window is an anticlimax after all the careful prep work. The window height again is measured down from the siding course to match the neighboring window.

Flashing and housewrap are woven back around the window and under the siding.

The siding is reinstalled and zipped back in place.

Making sure the head of the window lines up with its neighbor down the wall is easier with a helper (photo above). The crew member inside simply shims the window to the right height, while the outside crew member measures down from the siding course above.

After the window is nailed in place, one crew member tackles the inside finish around the window. The crew member outside completes the flashing around the window and then reinstalls the siding ("Installing Vinyl Siding," *FHB* #149, pp. 82-88). When the last row of siding has been nailed on, the zipper tool is used in reverse to mate together the rows of siding, and after four hours' work, the window looks as if it has always been there. □

Fine Homebuilding contributing editor Rick Arnold is a contractor and residential consultant in Wickford, RI. Photos by Roe A. Osborn.

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