Q How was the exterior window trim handled on the Passive House featured in "Building a Passive House for the First Time" (Jul/14)?

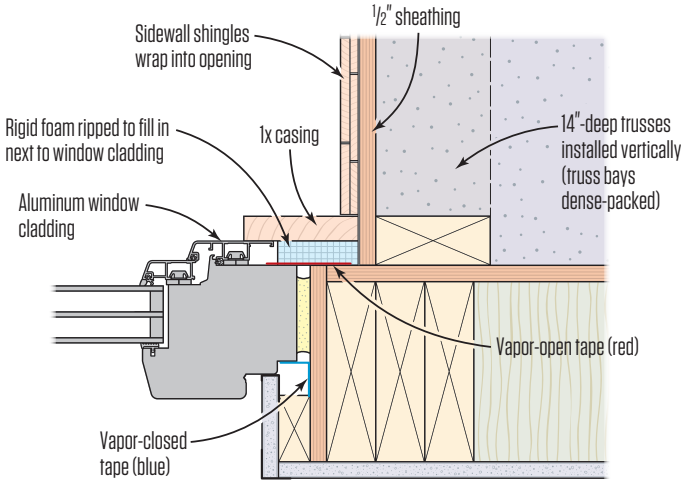
A Farley Pedler, the article's author and a home builder from Tisbury, Martha's Vineyard, Mass., responds: Because the wall construction differed on the upper and lower sections of the house, we used two approaches for applying the exterior window trim.

The core structure for the house was 2x6 balloon-framing with a skin of 1/2-inch Zip System sheathing. We used European-style aluminum-clad windows on which the cladding is spaced off the frame by approximately 5/8 inch. On both levels, we installed the windows with the wood frame in plane with the outside of the sheathing.

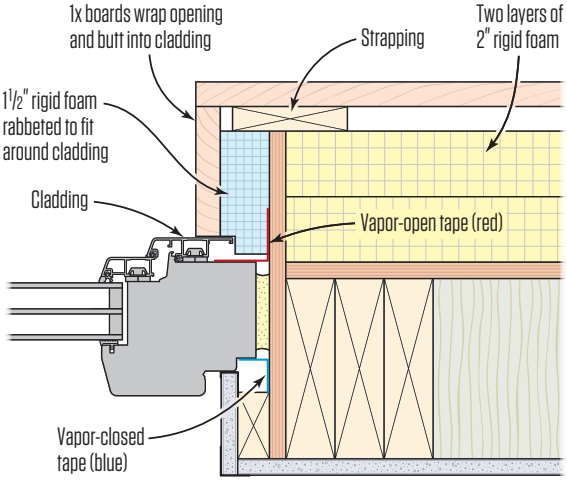
On the lower level, we built a superinsulated wall by attaching 14-inch-deep trusses over the sheathing and fastening them to the framing behind. This created a deep window well (also clad in sheathing) around each opening. The framing stepped the openings in a few inches on all sides, which allowed us to use more traditional-looking flat casing. After sealing the window frames to the sheathing with vapor-open flashing tape, we had to fill the space created by the aluminum cladding sitting proud of the sheathing. We inserted a layer of rigid foam ripped to a 5/8-inch

Photo by Roe Osborn; illustration by Tim Healey

Lower-Level Jamb Casing



Upper-Level Jamb Casing



thickness, which added a layer of insulation over the frame while padding out the wall to keep the casing flat. We finished the opening by returning the sidewall shingles into the opening and butting them against the trim.

The upper windows were much easier. These walls had a double layer of rigid insulation over the wall sheathing, and a layer of sheathing to box in each window opening. After the windows were installed and sealed to the opening, we installed 1 1/2-inch rigid foam that acted essentially as an exterior extension jamb. Because the space between the cladding and the window buck was only an inch wide, we rabbeted the foam so that it could slip past the cladding and be in contact with the window frame. The siding on that level consisted of horizontal 1x4 yellow-cedar boards attached to vertical furring strips over the rigid foam. Instead of casing each window, we simply returned the siding into each opening and let it terminate on the window cladding. Because of the built-up insulation, we attached the siding returns with 3 1/2-inch nails.

Q Precut studs obviously save labor and material, but how was their length determined?

A **West Coast**: Tim Uhler, lead framer for Pioneer Builders in Port Orchard, Wash., responds: Here, precut studs for 8-foot walls are 92 5/8 inches, which makes the overall height of the wall framing roughly 97 1/4 inches with three plates (two top and one bottom). I've always been told that this stud length was meant to accommodate 5/8-inch drywall on the ceiling. You could butt two 4-foot-wide sheets up against the lid and still keep the drywall about 1/2 inch off the floor. The bottom edge of the drywall would roughly split the bottom plate. But even with the stronger, lighter 1/2-inch drywall, the bottom edge still has plenty of nailing on the bottom plate.

With 9-foot ceilings, the precuts are 104 5/8 inches, which gives us an overall height of 109 1/4 inches. (In my experience, the precut studs for 9-foot ceilings always seem to come a hair long for some reason). In this case, we butt two 54-inch-wide sheets of drywall against the ceiling, which gives us the same clearance at the bottom. Beyond that, the precuts do save us and the drywall installers a significant amount of time and energy.

A **East Coast:** John Spier, owner of Spier Construction, a building and remodeling company on Block Island, R.I., responds: In my opinion, the best thing about precuts is they come off the pile in a usable (and reliable) length (92 5/8 inches), and you don't have to take time to cut them all to length. Whereas if you buy a stack of so-called 8-foot lumber, the lengths always seem to vary a bit and you have to cut every one to length.

If you strap your ceilings, as many East Coast carpenters do (see "Strapping Ceilings," Sep/14), while using standard precut studs, you usually have to rip a bit off the edge of one of the sheets of drywall before putting it on the wall. This obviously defeats the purpose of the precuts but is still better than cutting a couple of inches off every stud in the house. One way around that problem is to add a third top plate layer made from rips of subfloor sheathing that are wider than the wall plates. The extra width becomes the perimeter strapping, and the precuts can work as they're supposed to. (This perimeter detail also becomes a good place to transition an air barrier from the outside of the walls to the interior of the ceiling.)

I've heard carpenters from other parts of the country mention different precut stud lengths; for example, 93 inches (in parts of the South) or 92 1/4 (in parts of California). There must be local reasons why this makes sense. Anyone know?