Letters

Insulating Knee Walls

I enjoyed the article "Building an Energy-Efficient Spec House" (8/07). I am happy to see that the insulation was kept in the rafters, rather than following the knee walls to the floor. We've tried to insulate knee walls many different ways, with little success.

I also long ago stopped attaching knee-wall studs directly to the sides of the rafters as shown in one of the story's photos [reprinted below] because it was so hard to insulate and seal around the studs. Instead I run

a top plate, which eliminates the twisting in the studs and helps to distribute the flexing that rafters are prone to. Before building the knee wall, I first insulate the rafters with fiberglass, then install a poly vapor retarder before attaching the knee-wall top plate.

I also think that it's generally a good idea in accessible knee-wall spaces to cover the insulation with drywall or plywood. The 1x3s shown in the article's photos might not be as effective in 15 years' time, and even reinforced poly can tear or sag over time.

Timm Weiss
Brooklyn Park, Minn.

Author Paul Huijing responds: While I agree that using a top plate on the angled knee wall will result in a stronger wall, the air-sealing problems you mention are more likely with fiberglass batts than with blown-in cellulose.

As for omitting the drywall on insulated rafter bays behind the knee walls, my insulator has been doing this for about 10 years and has never had a problem. He uses a very strong reinforced plastic held to the rafters with 1x3 furring strips nailed on 16-inch centers.

Step Flashings Not the Culprit

I would like to take exception to the claim in "Rain-Screen Retrofit" (9/07) that step flashings contributed to the house's problems. Looking at the pictures, what I see is that the water damage was concentrated across the first floor — the most lived-in part of the house. But I don't see any telltale signs of water drips below the first step flashing off the bay window.

As a third-generation roofer, I can tell you that we are taught never to violate the housewrap in any way. The key is to make sure that the step flashings are tall enough to accommodate the siding chosen for the house. If builders or siding contractors are worried about water behind the siding, then all they need to do is use the corresponding tape provided by the housewrap manufacturer and seal the tops of the flashings to the wrap above. If the tape is good enough to use at laps and cuts, it should be good enough to use there.

One problem I've seen over the years is the first step flashing hasn't been put in front of the siding coming up the wall from below. This is especially an issue with EIFS, which are sometimes as much as 3 inches thick. If the EIFS are installed after the roofing is completed, water that runs down the step flashings will run behind the siding into the wall. Many contractors resort to caulking the bottom flashing to try to dam the water, but we all know how long caulking lasts under these conditions.

Chris Skrzynecki
via e-mail

KEEP 'EM COMING!

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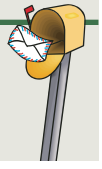

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Homeowner Safety Should Come First

While I respect the comments made by Mr. Holt in "Expanded AFCI Requirements Spark Controversy" (*In the News,* 9/07), the key issue at hand is safety, which is what AFCIs were designed to provide.

Homeowner safety needs to be a priority in the home-building process, but it seems builders are too hung up on cost. Electrical fires kill and destroy property; the Consumer Product Safety Commission (CPSC) believes that AFCIs could stop up to 50 percent of these devastating fires, yet many builders are opposed to them.

Whether you use the CPSC cost estimate of $15 to $20 per AFCI or the street cost of $30 to $35 (not including installation), it's still relatively insignificant compared with the deaths, injuries, and hundreds of millions of dollars of property loss caused by electrical fires annually.

According to the story, Mr. Holt's belief is that "few electrical contractors ... have experience with the new combination AFCIs." To the trained eye of the contractor, installation of the combination AFCI is essentially the same as the standard version, which the NEC has required for years.

The difference, and what the NEC has recognized in its expansion of the AFCI requirement, is that the combination AFCI detects both parallel and series arcing — a technological leap forward in homeowner protection. It's also important to note that the expanded NEC requirements have the support of the National Electrical Contractors Association (NECA) and other prominent organizations.

AFCIs are a major benefit to the homeowner and a safety measure that builders and others involved in the home construction process should not overlook. They are certainly well worth the small investment.

Gerard Winstanley
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