## Installing Deck Boards Without Ripping the Last to Fit

**Q A client wants me to build his deck so that only full-width deck boards are used. He doesn't want the last board to be ripped to fit — either at the house or at the outside. Given the normal variance in board width, how would you approach this problem?**

A Andy Engel, editor of *Professional Deck Builder*, responds: Back when all decks were floored with pressure-treated decking that varied in width as much as 3/8 inch from board to board, I built all my decks this way. The trick is in not cutting the joists to their final length until late in the game.

I'd attach the uncut joists to the ledger and then start installing the deck boards at the house. When I'd get near the edge of the deck, I'd measure the installed width of three boards and deduct from that number the width of the rim material and whatever overhang I intended to have. Then I'd measure this dimension out from the last installed deck board and snap a chalk line across the ends of the joists. Squaring down from the chalk-line-provided cut lines, I'd zip off the ends of the joists with a circular saw.

After the joists were cut to length, I'd install any needed blocking, followed by the outer rim. Then, before installing the final deck boards, I'd bolt the newels in place, while there was still good access.

The only caveat I have to offer is this: If you promise the customer a deck that's 16 feet deep, they may not get exactly that. I always erred on the side of making the deck, say, 16 feet 2 inches deep rather than 15 feet 8 inches. Very few customers complain about getting more deck than they contracted for.

## Code-Approved Flashing

**Q I've been told that I have to use metal flashing at deck ledgers, but recently at DeckExpo, I noticed many other flashing materials being displayed. What gives? Can I use products other than metal?**

A Glenn Mathewson, a building inspector in Westminster, Colo., responds: Requirements for deck ledger flashing can be found in the 2006 International Residential Code (IRC), section R703.8 Flashing: "Approved corrosion-resistant flashing shall be applied shingle-fashion in such a manner to prevent entry of water into the wall cavity or penetration of water to the building structural framing components. The flashing shall extend to the surface of the exterior wall finish. Approved corrosion-resistant flashings shall be installed at all of the following locations ..."

This section then lists seven locations where flashing would be required — one of them being deck ledgers. The only descriptive terms provided for the flashing material are "approved" and "corrosion-resistant"; there lies the answer to your question.

So, can you use products other than metal? Yes ... and no. There is no single answer. When the IRC uses the term "approved," it means "acceptable to the building official" — that is, the building official of wherever you happen to be working. In the Denver metro area, for example, there are over 30 jurisdictions, and they don't all approve the same thing.

The approval of the building official should be based on the "intent" and "purpose" of the code. The remaining sentences in R703.8 explain the purpose of flashing and provide limited guidance for its installation. It must be installed in "shingle fashion," which basically means layers placed over layers below in such a way that gravity and physics will naturally shed the water to the surface of the exterior wall finish. The use of caulk or sealants would not be considered "shingle fashion." Other than this, the flashing must "prevent the entry of water into the building cavity."

When it is left up to the local jurisdiction, aluminum, galvanized steel, copper, vinyl, or self-adhering polymer modified bitumen sheets (ice and water membrane) may be either allowed or disallowed. Even products with an International Code Council Evaluation Service Report don't have to be accepted by the building official. This refusal isn't common, but it does occur.

Flashing material must also be "corrosion-resistant," a term meant to define the flashing. However, the material the flashing is placed against also must be considered. Aluminum and galvanized steel are both considered "corrosion-resistant," but not when placed in contact with copper-treated lumber (ACQ, copper azole, perhaps MCQ). Then the only metal flashing that's corrosion resistant is copper, an expensive choice; materials such as vinyl may provide greater service and affordability than metal flashing.

Bottom line: Don't guess — ask the local inspector.

## Use a Slab for Footings?

**Q I'm considering building a deck over an existing concrete slab. The slab is at least 20 years old and has no major cracks. Can I set the deck posts right on the slab?**

A Andy Engel, editor of *Professional Deck Builder,* responds: No. Even though the slab is in good shape, it's likely that the point loads from the deck posts would crack it.

Loads spread out through a footing (the slab would act as a footing) in the shape of a cone whose sides slope at about 45 degrees. This distributes the load over an area of soil that should be large enough to carry the expected weight. Thicker footings spread loads over larger areas, and most footings are at least 12 inches thick and 2 feet square. Slabs typically are only 4 inches thick, which won't create a wide enough cone to distribute the loads over a very large area of soil. If the added weight from the deck compresses the soil under these points, the slab would crack and probably subside.

Also, the IRC requires that footings be a minimum of 12 inches below grade, even where frost is not an issue. Unless it's a very thick slab, this portion of the code isn't satisfied.

One solution is to cut away the slab to allow for full-size footings. They can be made level with the slab so that there's no elevation difference, but there should be no concrete-to-concrete contact. The slab has to be able to move around the new footings to accommodate thermal expansion and contraction, or else it will crack. To allow for this movement, line the edges of the saw cuts in the slab with foam sill sealer. Use mastic to hold it in place during the pour. Once the concrete sets up, tear out the topmost half inch or so of the sill sealer, and fill the joint with polyurethane caulk to keep out water. ❖

**GOT A QUESTION FOR OUR EXPERTS?**
Send it to *Professional Deck Builder*, 186 Allen Brook Lane, Williston, VT 05495; or e-mail it to prodeck@hanleywood.com.