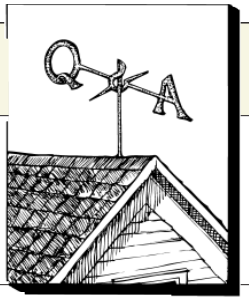


Wood Trim with Stucco

Q. *We will soon be building a stuccoed Tudor-style home. Standard practice in our area is to fasten the wood trim directly to the sheathing, then apply a three-coat stucco to the areas formed by the applied trim. How can the trim-stucco joint be detailed to prevent water infiltration?*

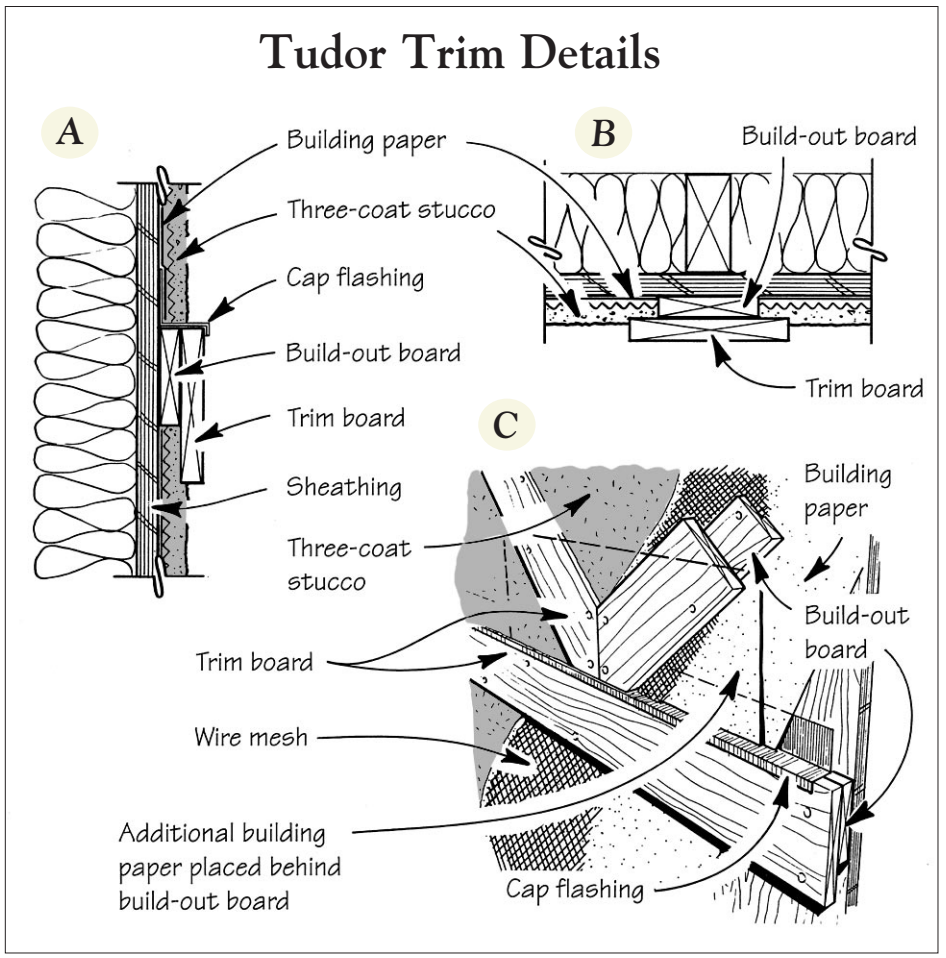
A. *Steve Thomas responds:* The key to leak-free details is to install "build-out boards" behind the trim. In our area, 1x6 cedar is commonly used for Tudor trim. We center the vertical and angled trim boards over a 1x4 build-out board (see illustration, below). The smaller width build-out board allows the two stucco base coats to be troweled in behind the 1x6. The finish stucco coat is run tight to the edge of the overlapping 1x6 trim board, which discourages water from working its way behind the base coats.

Unlike vertical trim, horizontal trim is held flush with the upper edges of the build-out boards, and a galvanized cap flashing is installed to prevent water infiltration.

It's important to follow the proper sequence when installing these Tudor trim assemblies. Horizontal assemblies and cap flashings are installed first, housewrap or Class D building paper is stapled to the sheathing, then vertical and angled trim assemblies are installed.

If cedar trim is used, insist that it be prestained on all sides before installation, and that all site-cut ends have stain applied to them. Cedar contains extractives that can "bleed out" if not properly sealed.

Formerly in the stucco trade, Steve Thomas is now a sales representative for The Columbus Coal & Lime Co., a brick manufacturer in Columbus, Ohio.



Horizontal trim (1x6 cedar over a 1x4 build-out board) and cap flashing are installed first, directly over the sheathing, followed by cap flashing (A). Next, housewrap or Class D building paper is installed, lapped carefully over the cap flashing. Vertical (B) and diagonal (C) trim assemblies follow. An extra layer of building paper behind the bottoms of diagonal trim protects against the additional water that funnels to those spots.

Should I Set Siding Nails?

Q. *When beveled wood siding is going to be painted, should the nails be set below the surface of the siding and filled, or driven flush with the surface of the siding?*

A. *Stephen Jordan responds:* I prefer to see the siding nails driven flush with the surface of the siding. Nails set and filled are very unforgiving of any movement or shrinkage in the wall framing. This movement may cause "nail pops" — the exterior version of the infamous drywall nail pop. Hardboard siding should be fastened so the nail head is drawn "snug" against the siding.

On the other hand, finish nails used to fasten exterior trim (the brick molding around a door unit, for example) *should* be set and filled. DAP's linseed oil-based Painter's Putty (Dap Inc., P.O. Box 277, Dayton, Ohio 45401; 800/543-3840) is my favorite, and it works well under an oil-based primer. I add "whiting" (a thickening powder available through paint suppliers) to this somewhat gooey putty to make it more workable. If a latex primer is used, it's important that the putty be allowed to dry for a few days before the primer is applied.

An exterior spackle, like UGL's 222 Spackling Paste (United Gilsonite Laboratories, P.O. Box 70, Scranton, PA 18501; 800/272-3235) can also be used to fill nail holes. Depending on the weather conditions, either oil or latex primer can generally be applied the same day over this product. Exterior spackle shrinks as it dries, but an experienced

painter will allow for this shrinkage by "overloading" the hole being filled and sanding any proud material flush after it dries.

In situations where a latex primer will be applied *immediately* after the holes are filled, I would use Bondo, or some other quick-hardening two-part automotive body filler.

I recommend hot-dipped galvanized finish nails for all trim work that will be filled. Wood siding should be fastened with stainless steel ring-shanked siding nails. Though more expensive, stainless steel nails are cheap insurance against bleeding and corrosion problems.

Painting contractor Stephen Jordan is the rehabilitation adviser to the Landmark Society of Western New York, in Rochester, N.Y.

Plywood & Radiant Heat

Q. *When installing hydronic radiant heat under a plywood subfloor, is there any danger that heat from the radiant coils will damage the plywood?*

A. *John Siegenthaler responds:* The APA representative I spoke with stated that the use of structural plywood and OSB as part of a radiantly heated floor system is acceptable, and that structural panels used in these systems should not delaminate or outgas, provided that heating temperatures don't exceed 160°F. To lower the required operating temperature of a floor heating system, I recommend using aluminum heat transfer plates or trying a thin-slab floor heating system instead of stapling the tubing directly to the underside of floor deck.

There are some precautions that should be observed, however. First, the plywood or OSB should be kept as dry as possible during construction, and should be dry when the heating system is turned on. If the panels are damp, the veneers closest to the tubing will dry and shrink at a faster rate than the veneers on the opposite side of the panel, causing the plywood to distort and possibly loosening the fasteners.

I would also recommend operating underfloor heating systems for several days before applying any type of finish flooring. This will help drive out any residual moisture and should reveal any potential warpage that could affect the appearance of the finish floor. To minimize potential problems, be sure to follow APA nailing recommendations, using ring- or screw-shank nails spaced 6 inches at the panel edges and 12 inches at intermediate supports. Panels should be installed with a 1/8-inch gap at both edge and end joints, and a quality construction adhesive should be used to glue the panels to the supporting members. ■

John Siegenthaler, P.E., owns Appropriate Designs, a building systems engineering firm in Holland Patent, N.Y. He is author of Modern Hydronic Heating for Residential and Light Commercial Buildings *(Delmar Publishers; 800/347-7707).*

Got a question about a building or renovation project? Send it to On the House, *JLC*, RR 2, Box 146, Richmond, VT 05477.