Q&A

Q. Repairing EIFS

My EIFS sub won't do small repairs — where the siding has been dinged by a homeowner moving patio furniture, for example. Is there some small-scale repair method that I can do myself as a GC?

A. *Barry Jenkins of Southern Stucco in Knoxville, Tenn., responds:* Most minor scuffs, nicks, and surface abrasions can be touched up to match an original EIFS finish. We prefer to use the special paintlike top coats offered by most EIFS manufacturers, which are intended for periodic renewal of weathered acrylic EIFS finishes. Unfortunately, manufacturers don't usually sell these acrylic-based top coats to the general public — and they aren't available in small quantities anyway — so the easiest approach for small repairs is to contact your local EIFS distributor for help in finding a compatible latex or elastomeric paint. With careful color-matching, minor dings should disappear under a high-quality finish.

To fix deeper gouges, we cut out a small rectangle of the EIFS — no bigger than is needed to remove the damaged area — then fill it with a patch made from EPS foam. We glue the foam in place with a "dry base" adhesive consisting of portland cement, sand, and a dry polymer, which can be obtained from most EIFS suppliers. After the patch has dried for 24 hours, we tape off a rectangle around it, allowing about an inch of clearance between the edges of the patch and the tape. We then use at least 40-grit paper to sand the old EIFS finish in the taped-off area down to the base coat. To complete the repair, we apply fiberglass mesh tape and new EIFS base-coat material, troweling the base coat as tightly and smoothly as possible, especially around the repair's perimeter. We allow another 24 hours for the base coat to dry, then apply the acrylic finish, troweling it flat to duplicate the existing texture. While the new acrylic finish is still wet, we remove the perimeter tape and feather in the repair with a damp, soft brush.

If we're lucky, the color of the new finish will match the original EIFS, but most of the time the repair still needs to be painted. Colors that may appear to match at first may fade with age, so for larger repairs, we recoat from stopping point to stopping point — from inside corner to outside corner, for example.

Q. Cleaning Old Beams

What's the best way to clean embedded dirt and stains from an existing post-and-beam frame?

A. *Dan Kolbert, of Kolbert Building in Portland, Maine, responds:* We found the solution to this problem through trial-and-error when, as part of a major gut-rehab project, our company was asked to clean up an existing timber frame in place. The post-and-beam structure had been erected in the 1970s from pieces of other frames, and some of the original members dated back to the 19th century. The wood had a pretty thick layer of dirt and grime, and we were looking for a way to preserve its character while improving its appearance.

We tried a few simple solutions without success. Oxalic acid didn't do much, nor did soap and water. Air hoses didn't touch it, and wire brushes would have taken forever.

Finally, we were referred to Dyers Soda Blasting, a local business about an hour north of Portland. Dyers offers three different types of blast media for different situations: walnut shells, ground glass (which can strip paint off metal while not damaging the metal), and sodium bicarbonate (ordinary kitchen baking soda). We knew walnut shells wouldn't work — we'd wasted a day with a rented sandblaster only to find that the ground walnut shells left the wood surface pitted and removed dramatically different amounts of summer and winter growth.

Jim Dyer, the company owner, came to our site with a blaster and tested the soda on a beam we had removed to build a dormer. The clients liked the look of the sample, and the price was around what we had scheduled for cleaning, so we made the deal. Jim and his crew got the entire house blasted in less than a day, and all that was left behind was a small pile of baking soda and sawdust.

The final results made our clients happy. The beams still look old, but the surfaces are clean and don't make you nervous about leaning on them with clean clothes.

Q. Roof Truss Repair

The previous owner of a house I'm working on cut out several internal webs from three consecutive roof trusses to create storage space in the attic. There's no sign that this has caused any structural problems so far, but I'd like to replace

the missing members and fasten them with plywood gusset plates and construction adhesive. Is this feasible, and does this sort of seat-of-the-pants field repair expose me to any legal liability?

A. JLC *staff responds:* A "seat-of-the-pants field repair" will expose you to liability, should the repair ever fail. That said, field repairs can be made, and they probably would resemble something like what you have suggested. Ideally, an engineer affiliated with the truss manufacturer that produced the trusses would design a suitable repair. But if the truss manufacturer is unknown or no longer in business, you should engage an engineer who would both sign off on the design, and inspect and approve your work afterward.

The best place to start is with the manufacturer of the connector plates used on the original trusses, says Bob Allen, a product manager for U.S. Construction Hardware. "I would advise you to take pictures of the condition, along with close-up pictures of the connector plates on the trusses [for identification], and send them to any truss manufacturer, " he says. "They should be able to point you in the right direction."

A typical repair might call for a combination of dimensional lumber and plywood gussets "scabbed" beside the remaining web members to make up for the lost members. The repair design should include material dimensions for added members, plus a detailed fastener schedule showing the size, number, and placement of fasteners.

Gary Weaver, president of Timber Tech Texas, a manufacturer of roof and floor trusses based in Cibolo, Texas, has been crawling around attics doing truss repairs for 38 years. He says plywood gussets can be more time-consuming and not much more effective than double scabs. He also advises that, to ensure that any sag or deflection in the bottom chord of the truss does not get "locked in" by the repair, the ceiling first be "kicked up" with posts slightly longer than the floor-to-ceiling distance. Two-by plates or 2-foot-square pieces of plywood can be used to distribute the pressure and protect the ceiling and floor.

Regardless of the specific design details, under no circumstances should you take responsibility for the repair. The fact that there have been no structural problems yet doesn't mean there won't be some down the road. Chances are good, Weaver says, that interior walls are supporting the load in the situation described. However, this may not be enough in the event of high winds, a record snowfall, or a decision by the homeowners to move all their old college textbooks into the attic.

Richard Feeley of Feeley Mediation & Business Law, a Marietta, Ga., law firm that provides legal counsel to remodeling companies, confirms that a contractor should not attempt a truss repair without engineering support. "If you touch it, you own it," he warns. A contractor who has not partnered with an engineer to make sure that the repair meets code and complies with structural requirements is indeed liable, and the risk could be great. Liability could include not just property damage but personal injury if the truss system fails and someone gets hurt. There can also be licensing implications, Feeley notes — if, for example, the job is permitted and a building inspector finds after the fact that you made an adjustment that required an engineered design.

Feeley points out another legal dimension contractors need to address as well: Be sure you cover the issue in your contract. "You need a change-order policy that covers unforeseen circumstances," Feeley says. "If you find something that no one expected, you want to be sure you get paid for the work it'll take to repair it."