



Concrete Addition

by Hank Spies

Tying Into a Slab

Q. *What is the best way to tie the new slab floor of an addition to an existing slab-on-grade foundation?*

A. The best way to tie in a new slab is to drill into the edge of the existing slab at least four inches, and grout in short lengths of rebar, which will extend into the new slab. This will prevent differential movement between the slabs. If there is a vertical wall extending down to a footing under the slab edge, the edge of the new slab should extend down to the old footing, as well.

Water Stains on Wood

Q. *On a recent job we had trouble with rain water getting through the paper wrapping on some architectural grade glulam beams. How can the water stains be removed?*

A. Weathering stains can usually be removed by bleaching with a solution of one pound of oxalic acid crystals dissolved in a gallon of warm water. This bleach may be applied with a cloth swab, brush, or sponge, then rinsed off thoroughly with warm water after the stains disappear. The bleached area will probably have to be refinished, and matching the original finish can be difficult. Prevention, of course, is the best solution.

Painting Over Smoke

Q. *Is there a paint or sealer that will encapsulate the smell of smoke on fire-damaged walls?*

A. Several paint manufacturers have special products for sealing in smoke. One is MAB Lok-Tite, (M.A. Burder Co., P.O. Box 600, Reed Rd., Broomall, PA 19008; 215/353-5100).

Preventing Sags in Ceilings

Q. *I am planning to build with 12 inches or more of blown-in cellulose insulation in the ceilings. How much insulation can you put in a ceiling before the unsupported drywall between joists sags? I usually use 1/2-inch drywall with trusses 24 inches on-center.*

A. According to the USG Gypsum Construction Handbook, cellulose and rock wool insulation weigh about 2.5 to 3 pounds per cubic foot. Fiberglass weighs about 1 pound per cubic foot. With 1/2-inch drywall applied per-

pendicular to the trusses, the allowable weight load is 1.3 pounds per square foot. This is equal to about 6 inches of cellulose insulation. With 5/8-inch drywall, the allowable load is 2.2 pounds per square foot, or about 10 inches of cellulose.

I have seen many ceilings with 5/8-inch drywall over a 24-inch on-center framing with 12 inches of loose fill insulation that did not have problems. But if you are planning to use much more than this, the drywall should be hung on strapping spaced 16 inches on-center.

Most sagging in drywall ceilings is caused by improper nailing or moisture. The primary strength of drywall is in the paper facing. As the paper becomes wet, the strength is drastically reduced. Even condensation on the back of the sheet or excessive use of water-based texture finishes can cause problems.

Copper on Cedar Roofs

Q. *Can copper flashing be used with cedar shingles? I was told the natural oils in the cedar can corrode the copper.*

A. The soluble tannins in cedar can cause corrosion of copper flashing, and the textbooks discourage using copper with cedar. However, I have seen dozens of roofs with a combination of cedar shingles and copper flashings where the flashing has lasted as long as the cedar shingles. In most cases, flow lines or patterns had been etched into the copper, but I have never found one that has corroded through.

Painting Stucco

Q. *What is the best primer and paint for an unpainted stucco exterior?*

A. On new stucco, I recommend a chlorinated rubber paint developed specifically for use on concrete and stucco. Pratt & Lambert *Alka-Tite* is one such product. On weathered stucco where much of the alkali has washed off, a primer such as Sherwin Williams *Masonry Conditioner* (diluted with an equal volume of paint thinner), followed with two coats of exterior latex paint seems to work well. ■

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