Q&A

Q. Upgrading to Three-Prong Outlets

In an older house wired with BX cable, can the original two-prong outlets be upgraded to three-prong grounded outlets, provided they're properly bonded to the original metallic boxes?

A. *George Flach, former chief electrical inspector for New Orleans, responds:* The answer depends on what kind of BX cable you actually have. General Electric's original BX cable was manufactured without a bonding strip — a thin metal strip within the outer metallic jacket that runs the length of the cable — or bonding wire. Even if the cable is properly fastened to the metal box, the spiral metal tape jacket alone can't be considered a reliable equipment-grounding conductor. The only way to upgrade a two-prong outlet to a three-prong outlet with this type of wiring is by providing GFCI protection, either with a GFCI breaker to protect the entire circuit, or with a GFCI receptacle at the junction box. Outlets on the same branch circuit and those connected downstream of the GFCI receptacle would also be protected. (However, be sure to test the GFCI after installation: If the test button doesn't trip, there's no ground-fault protection.) These receptacles must be clearly marked "GFCI protected. No Equipment Ground."

Later versions of BX cable are equipped with a small-gauge, uninsulated conductor; you may also have AC (armored cable) with a bonding wire and interlocked metal jacket. In either case, if the cable is in good shape — and there is a good connection between the outlet, the metallic junction box, and the bonding wire — a standard, properly installed three-prong outlet would be grounded. An alternative would be to install a GFCI receptacle or breaker, as above.

Before doing anything, though, I'd remove the existing receptacle's faceplate and examine the wiring without disturbing it or removing any receptacles. If the rubber insulation on the branch circuit conductors is brittle and falling off, don't remove the existing receptacle unless you intend to replace all of the wiring, too.

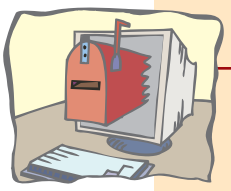
Q. Overdriven Fasteners in ZIP System Sheathing

When fastening ZIP System sheathing to wall and roof framing with our pneumatic nailers, we've found that it's difficult to keep nail heads from penetrating the applied protective barrier on the face of the panels. Won't these holes compromise the moisture barrier's integrity and lead to problems later on? Should they be covered with tape? And what happens if the ZIP tape fails?

A. *Chris Rogers, technology manager at Huber Engineered Woods, the manufacturer of ZIP System wall and roof sheathing, responds:* With a sheet-type water-resistive barrier (like housewrap), any small hole can become an entry point for water, which can then spread to the area between the sheathing and the housewrap. This water has a direct path to the wall cavity through the gaps between the sheathing panels.

The ZIP System panel has a phenol-impregnated kraft-paper overlay laminated to it; for water to get behind this moisture barrier, it would have to migrate around the nail head and flow down the shaft of the nail all the way through the panel.

Our testing has shown that minor penetrations in the moisture barrier caused by overdriven fasteners won't compromise the system's ability to resist moisture, nor will they void the manufacturer's warranty. And unless the fastener creates a hole all the way through the panel, it isn't necessary to apply tape to overdriven fasteners.



GOT A QUESTION?

Send it to Q&A, JLC, 186 Allen Brook Lane, Williston, VT 05495; or e-mail to jlc-editorial@hanleywood.com.

Q&A

Keep in mind, though, that overdriven fasteners can reduce the panel's shear strength, a problem with any wood diaphragm or shear wall constructed with structural OSB or plywood.

Q. Clarifying Liability Coverage

After working for several years as an employee, I recently headed out on my own and began shopping around for liability insurance. Most policies offer "occurrence" coverage, but one company offers a "claims made" policy that provides similar coverage for less money. What's the difference between the two types of policies?

A. *Scott Smith, president of Stanford Insurance in Salem, Ore., and a former builder, responds:* Both policies cover liability loss in the same way during the coverage term; the big difference lies in what happens after your coverage term expires. A claims-made policy only pays claims presented to the insurer during the term of the policy, or within a specific term after its expiration. As long as you keep this type of policy in force, you're covered; as soon as the policy expires or is cancelled, your coverage ends. For additional cost, some companies offer 30-day, 60-day, or 90-day tail coverage to continue coverage for a short time after the policy has expired, but this won't help you if there's a lawsuit two years later.

Not many companies write claims-made policies, which are designed to keep the price of insurance down by limiting an insurance company's liability. Even the ones that do will often decide, after one or two terms, that you qualify as a good risk and will write an occurrence-based policy, which costs slightly more but pays claims for incidents that occur during the policy term even if they're filed many years later.