

BY MIKE GUERTIN

I could spend the rest of my career repairing decay in the homes throughout my town. Pretty good job security, I suppose. Wooden trim, siding, and framing are all susceptible to moisture, fungus, and insect damage.

The worst damage usually occurs where porches, decks, and patios attach to the house because poor or nonexistent flashing details allow water to reach the framing. Mudsills seem to rot faster than other areas, perhaps because the top of the foundation collects water that has leaked into the structure, while more moisture wicks up through the foundation itself.

Replacing a rotten section of mudsill can be tackled from inside an unfinished crawlspace or basement, but I prefer working from outside because by the time signs of water damage are evident, the rot usually has spread into the rim joist and floor joists. Working from the exterior gives me a better view of what's going on and better access to make repairs. In a few hours, I can open up a rim joist to expose the damage; support the floor joists while removing the affected portions of the mudsill; and replace the mudsill and rim joist where necessary.

In my area, houses built after the early 1950s have double-plate 2x6 mudsills, and the house shown here is no exception. Many houses have single-plate mudsills, but the repair technique is the same. Keep in mind that repairing the damage is only part of the solution; protecting against future moisture damage will ensure that your work was not in vain. □

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Replacing a Rotten Mudsill

Let simple wooden wedges do the heavy lifting

OPEN UP REMOVE THE SIDING, SHEATHING, AND RIM JOIST

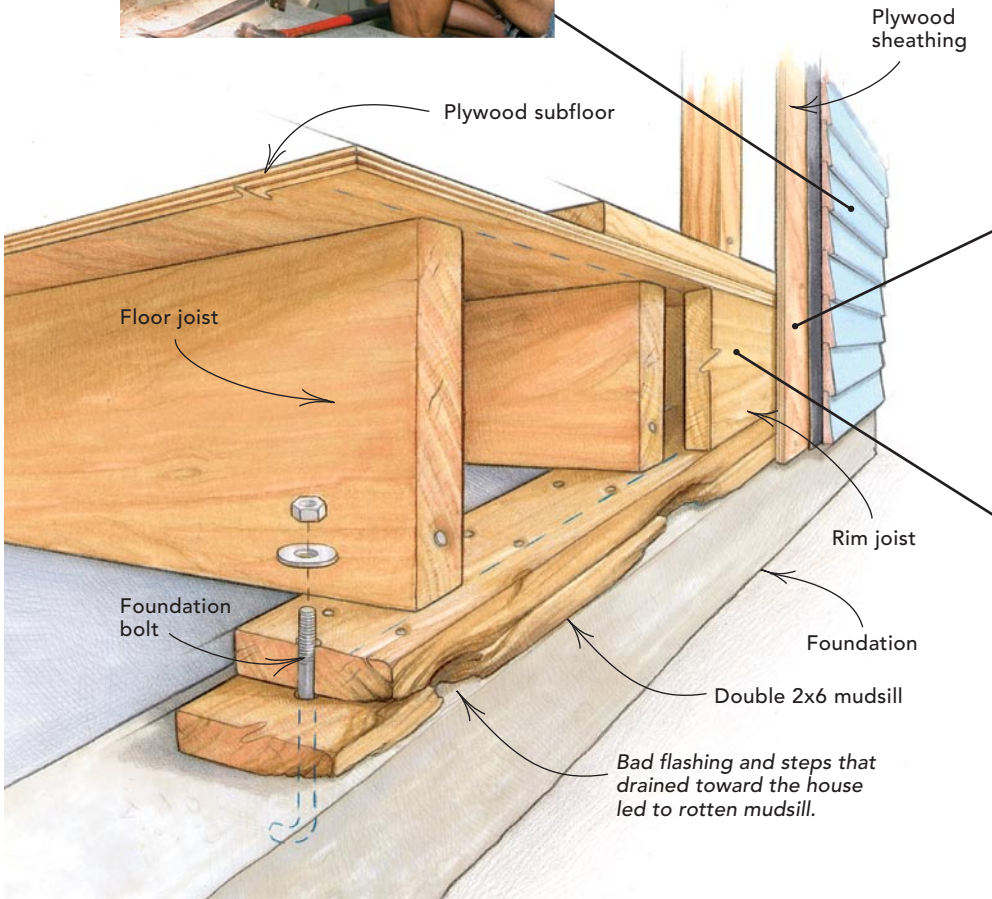
Because I'm working from outside the house, several layers need to be removed before I can access the mudsill and begin repairing the damage.



First, I use the sharp hooked end of a slate ripper to cut nails and remove siding so that I can work on the plywood sheathing.



A circular saw and an accurate depth of cut make it easy to remove the plywood sheathing and expose the rotten section of rim joist.



Drilling a pilot hole through the rim joist makes it easier for me to start the cut with a reciprocating saw.



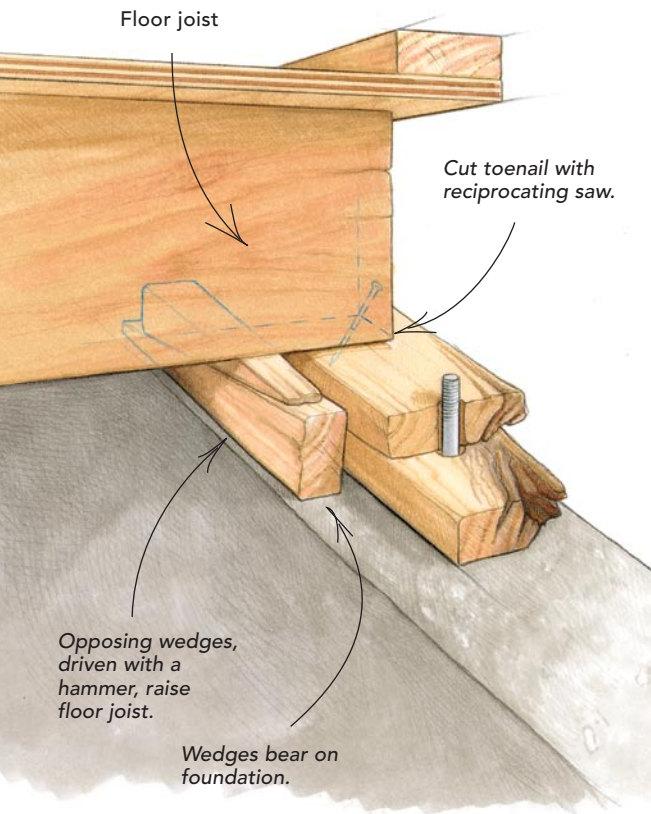
I snap off the tip of a reciprocating-saw blade so that the remaining saw stroke penetrates only to the depth of the rim joist. This helps to prevent damage to hidden utilities running behind the joist.



TEAR OUT

SUPPORT THE FLOOR JOISTS WITH WEDGES

The weight of the house is transferred from the floor joists to the mudsill and then down to the foundation, so the joists must be supported properly while I cut and remove the damaged mudsill.



A flat bar driven between the joist tail and mudsill relieves pressure and makes installing the wedges easier. A reciprocating saw and metal-cutting blade are perfect for cutting the old toenails.

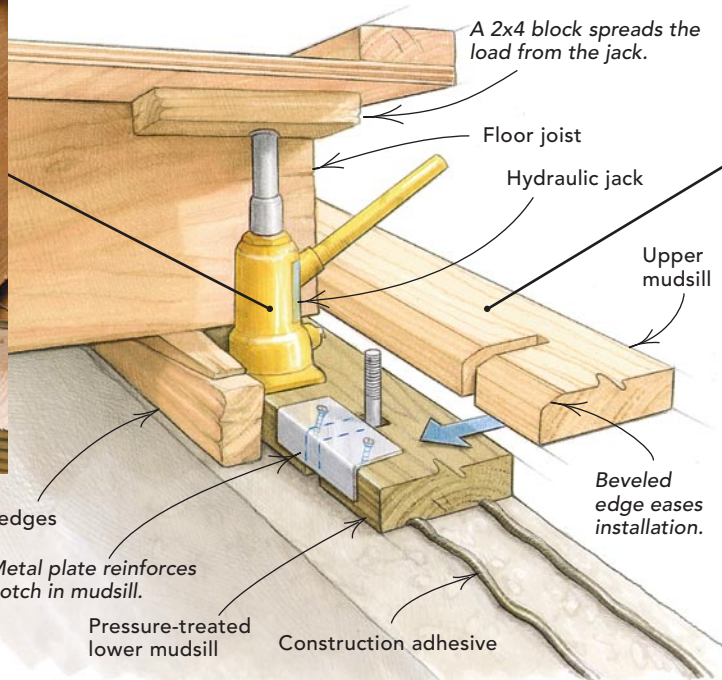


Saw through the mudsill at 2-ft. to 4-ft. intervals to make removal easier. One more cut made on each side of each foundation bolt will allow the mudsill to slide out while the bolts remain intact.

REPLACE

NEW SILLS REQUIRE BOLT SLOTS AND A BEVEL CUT

Because the pressure-treated lumber that I'm installing for the lower plate of the new mudsill is slightly thicker than the dried-out lumber that was removed, I raise the floor joists slightly with a hydraulic jack, then tighten up the wedges.



A scrap of 2x lumber is used to gauge the space needed between the lower mudsill and the floor joist. Be careful: Lifting too high may crack tile floors or shift door jambs.

Coax in the mudsill with a framing hammer or sledgehammer. The slots for foundation bolts leave a weak spot where the plate can crack if either side is driven in unevenly.

CLOSE UP CAREFULLY SEAL THE HOUSE

After the mudsill is in place and the wedges have been removed, it's time to close up the house. Help to prevent future water damage by sealing the framing with sheathing, shingle underlayment, and housewrap before replacing the siding.



When working alone, I use scraps of lumber to support the opposite end of the rim joist at the proper height while it's hammered into place.



Half-inch exterior-grade plywood is cut to fit over the repaired sections of mudsill and rim joist, then fastened in place with screws.



Peel-and-stick shingle underlayment protects areas vulnerable to water damage. Housewrap will become a second line of defense behind the siding.