Water Management for a Deck Attachment

BY TED CUSHMAN

Attaching a deck to a house offers a twofold challenge. You have to make a strong, positive structural connection that resists lateral loads as well as gravity loads, and you have to detail the juncture to manage water from rain, snow, and roof runoff.

Mark Pollard and his crew from Thompson Johnson Woodworks tackled the problem recently using the Maine Deck Bracket (deckbracket.com), a standoff deck attachment component. The Maine Deck Bracket manages the structural problem handily, but it requires the builder to think through the water management details. Here's how Pollard integrated the deck brackets into a building's water control layer.

The manufacturer requires the bracket to be bolted directly to structural framing—you can't sandwich sheathing between the bracket and its attachment point. So Pollard started by protecting the home's doubled LVL band joist with pieces of self-adhered membrane (FortiFlash Butyl from Henry Co.) where the brackets would be installed. He then through-bolted the deck brackets to the band joist with 1/2-inch bolts and spaced them no more than 4 feet apart, as required by the manufacturer. (Attaching the Maine Deck Bracket with lags is approved only if the member being fastened to is 6 inches thick. In this case, the doubled LVLs added up to only 4 inches thick.)

Next, Pollard applied a thick bead of Dowsil 758 Silicone Weather Barrier Sealant to the LVL, going up the sides and over the top of the deck brackets. Then he sheathed over the framing with 1/2-inch plywood, cutting holes in the sheathing to leave about 3/4 inch of room around the brackets.

Below the brackets, Pollard applied small patches of Henry Blueskin VP100 self-adhered air barrier membrane to the plywood. Next, he applied a coating of vapor-permeable Henry Air-Bloc LF Liquid Flashing to the plywood edges, lapping onto the base of the deck brackets and covering the bolt heads. Then he applied Henry

Deck brackets are bolted to the floor frame **(1)** through protective patches of FortiFlash Butyl membrane **(2)**. The brackets and sheathing edges are sealed with Henry Air-Bloc LF **(3, 4)**. The bracket faces are isolated from treated framing with FortiFlash **(5)**.

Photos by Mark Pollard

Blueskin to the entire wall, slitting the Blueskin to fit around the webs of the deck brackets.

Where the bracket webs project through the Blueskin, Pollard sealed the Blueskin to the metal webs using Henry Crystal Clear Sealant. That's the same sealant Henry specifies for situations such as reverse laps over window heads.

Next, Pollard applied FortiFlash Butyl to the faces of the deck brackets. "I used the FortiFlash to act as an isolation membrane between the aluminum bracket and the copper-treated wood," Pollard explains. "We're using MCA (micronized copper azole) treated lumber, and it's got low reactivity. But it couldn't hurt to protect the aluminum. It's good practice."

Finally, the crew attached the doubled 2x12 PT ledger beams and continued on with framing the deck. The deck framing will make the wall a little difficult to access for installing the siding system (a rainscreen with cross-strapping behind 1x5 tongue-and-groove white cedar, run vertically). Pollard's plan was to fasten the ends of the siding boards from below using stainless steel trim-head screws, driven in at an angle.

After working with the Maine Deck Bracket a number of times, Pollard is a fan. "One of the reasons I like them so much is that you're not interrupting the water flow," he says. "When water hits the siding, it continues right down to the bottom of the siding and drops out. It's not coming over the top of a deck ledger flashing, and running down the face of a deck ledger."

Installing the deck brackets takes more time than a traditional ledger, says Pollard, "but I feel that it's a safer, more durable connection. And it also satisfies the lateral load provisions in the code, so you don't have to put on those extra deck tension ties. I think it would be a pretty rare case where I wouldn't want to use these things."

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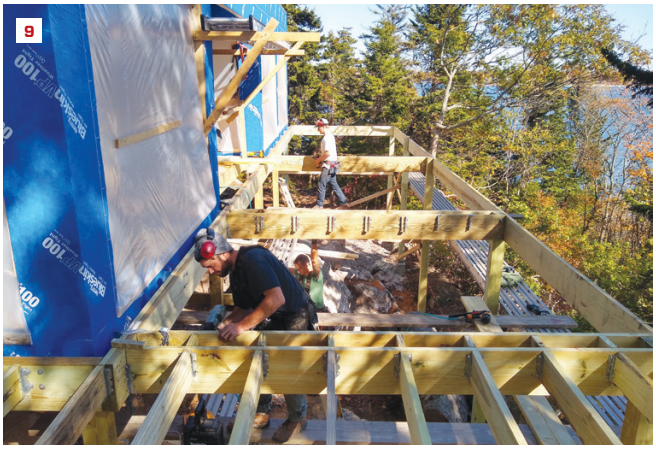

After bolting the double 2x12 standoff deck ledger beam to the deck brackets with hot-dipped galvanized bolts **(6)**, the crew installed galvanized joist hangers **(7)** and hung the deck joists **(8)**. Deck framing continues down the side of the building and around the corner to the rear, facing the ocean **(9)**.