


Flashing a Deck Ledger



A multilayered approach keeps water out of the house at this critical connection

BY MIKE GUERTIN

I've dismantled many old decks in preparation for building new ones. In several cases water that leaked around insufficient ledger flashing or through holes in the flashing caused the rim joists to deteriorate. Fortunately the rot on those homes was limited and didn't lead to any deck collapses. But given more time, the water leaks and decay could have led to the ledgers loosening and not being able to support the deck.

There's no single right way to flash a deck ledger to prevent water from leaking into the house. Because of the different climatic conditions in different regions, the risk can be different. A flashing approach that works

in the arid Southwest that receives less than 12 in. of rain per year—where occasional water that leaks by or through the flashing likely dries quickly—probably won't work in a more humid climate that receives 30 in. to 40 in. of rain.

Ledger flashing and the code

The 2021 International Residential Code (IRC) gives little direct guidance on deck-ledger flashing. Footnote "a" under table R507.9.1.3(1) reads, "Ledgers shall be flashed in accordance with Section R703.4 to prevent water from contacting the house band joist." But the only additional information in sec-

tion R703.4 is this: "... corrosion-resistant flashing shall be applied shingle-fashion in a manner to prevent entry of water into the wall cavity or penetration of water to the building structural framing components."

The IRC goes on to note that self-adhered membranes and fluid-applied membranes shall comply with certain standards. Section R507.2.4 describes the minimum standard for flashing material as corrosion-resistant metal at least 0.019 in. thick, or approved nonmetallic material (meaning approved by the local building official). And the flashing must be compatible with the deck framing and decking materials. These sections of the

STEP 1 PEEL BACK THE LAYERS

I start by removing the siding from the wall in the area where the ledger will be installed, at least 8 in. above the ledger location, 2 in. below, and 3 in. from each end. The steps for removing the siding will vary depending on the type of siding, but the most important factor is taking care not to damage the housewrap or water-resistive barrier (WRB) above the top of the ledger location. This section of the WRB is needed to lap over the ledger flashing near the end of the process.



CUT BACK THE WRB

Snap a chalkline to indicate the position of the ledger and add cap staples around the perimeter to keep the WRB in place prior to cutting. Then cut the WRB about 1/2 in. up from the bottom snapped line and about 2 in. above the top line. Remove that section of WRB.

SNAP A LINE

Slit the WRB as you would a window head flashing, making a head flap about 6 in. high, and tack or tape the flap up and out of the way. Then snap a chalkline an inch up from the top position of the ledger.



code focus on the objective—use flashing to prevent water from entering the wall—but they offer little about how to accomplish it.

A method for a damp climate

In the Northeast where I live and do most of my work, we typically receive over 40 in. of rain annually. My strategy for waterproofing the ledger is installing a redundant flashing system that uses self-adhering flashing tape and rigid cap flashing. This technique prevents water from leaking into the house along the top, sides, and bottom of a deck ledger.

The last line of defense in this system (and the first layer to be applied), is a sheet of self-

adhering flashing tape or roofing underlayment bonded to the wall sheathing behind the ledger position. Next is a second layer of flashing tape that attaches to the wall above the ledger and then wraps over the top of the ledger. Finally, a rigid metal or plastic cap flashing sits on top of the ledger and the flashing tape to shed the bulk of the water.

This rigid flashing protects the flashing tape from UV-light exposure and covers the clearance space between the top of the deck boards and the bottom of the siding. The recommended clearance height for siding above the ledger varies with the type of siding, ranging from 1/2 in. for red-cedar shingles

to 2 in. or more for red-cedar lap siding and some fiber-cement brands.

Importantly, this flashing system integrates with the water-resistive barrier (WRB) of the house. This method works for both new construction and renovation, and it works whether the deck attaches to the house at grade level or above. I recently had the opportunity to install and flash a ledger for an above-grade deck on an existing home, and this is how I did it. □

Editorial advisor Mike Guertin lives and works in East Greenwich, R.I. Photos by Roe Osborne.

STEP 2 PREP AND PROTECT THE WALL

With the WRB out of the way, I apply strips of self-adhering membrane to the wall sheathing behind the ledger. On this ledger I used wide flashing tape; strips from a roll of waterproof roof underlayment work as well. The membrane strips must be at least 3 in. wider than the ledger so they can be installed with at least 1 in. above the top of the ledger and 2 in. below. To make the strips easier to handle by myself, I cut them into 5-ft. to 6-ft. lengths. I leave a portion of the release liner on the bottom strip; at a later stage, the cladding under the ledger will tuck behind this last strip of flashing tape.



1 • SCORE AND PEEL

Score the release liner 2 in. from the bottom of a section of flashing tape, then peel the liner off the wider top section.



2 • FOLLOW THE CHALKLINE

Align the top of the flashing tape with the snapped line and start bonding the flashing tape 3 in. to 4 in. beyond the end position of the ledger.



3 • BURNISH WITH A J-ROLLER

Work down the wall in sections until the entire area of the ledger is covered (but leave the release liner on the lowest flap). Overlap successive pieces of tape by at least 4 in., and use a J-roller to help adhere the tape to the wall. When working in cold temperatures, you may need to coat the sheathing with a bond-improving primer.



Scoring flashing tape

It's easier to work with sticky flashing tape when a portion of the release liner is left on. This keeps the tape from getting stuck to itself or to sur-

faces other than where you want it. Scoring the release liner comes in handy in a couple of places when flashing a ledger: at the inside corner

where the top of the ledger meets the wall and below the ledger where the siding tucks under the flashing tape. In order to remove the release liner in separate sections, it needs to be scored without cutting through the tape itself. The safest way I've found is to use a Top Sheet Cutter made by Olfa (\$15); its blade extends a tiny amount and has a pressure adjustment that controls how deeply it cuts. Alternatively you can use a fresh, sharp

blade in a utility knife using very light, even pressure. In either scenario, run the knife along a straight edge for an accurate cut. After cutting through the release liner, fold the tape along the score line to ensure the liner is cut through cleanly, and rescore any spots that didn't cut through the first time. I recommend making a few test cuts on a scrap of flashing tape until you get a feel for the technique.

—M.G.

STEP 3 INSTALL AND FLASH THE LEDGER

To guide the ledger installation, I re-snap the chalkline for the top edge of the ledger on top of the membrane I just installed. I partially drive a couple of screws under the bottom edge of the ledger to support it temporarily while I drive the attachment screws. To cap the top of the ledger and seal

it to the wall, I use 9-in.- to 12-in.-wide flashing tape. This size lets me extend the tape at least 1/2 in. down the face of the ledger while spanning the 1 1/2-in. top of the ledger and still leaving 7 in. or more to continue up the wall. This wall coverage may seem excessive, but that height is needed for the WRB and

siding to overlap properly. Remember that decking is usually 1 in. thick, and some siding types require at least a 2-in. clearance space between the decking surface and bottom of the siding course. So of the 7-in. wall leg of the flashing tape, only about 4 in. will be covered by the WRB and siding.



1 • ATTACH THE LEDGER

After the flashing tape is adhered to the wall in back of the ledger position, re-snap a chalkline for the top of the ledger. With the ledger sitting on a couple of screws to hold it in position temporarily, drive the fasteners to attach it to the wall as required.



2 • PEEL AND STICK

Working with flashing tape 9 in. to 12 in. wide, score the release sheet about 2 in. from one edge. (I keep the length of the strips 3 ft. to 4 ft. long to make them easier to handle during installation.) Fold the tape at the score line and set the tape on top of the ledger and against the wall. Orient the first strip beyond the end of the ledger, extending about 1 in. past the membrane installed earlier, and peel the release liner off the narrow strip that will extend over the ledger.



3 • GET IN THE CORNER

Using a plastic spreader (a putty knife or the edge of a rafter square work well for this task), press the score line into the corner between the top of the ledger and the wall.



4 • WRAP THE TOP

With the tape tight to the corner, press the tape down to the top of the ledger and wrap the remainder over the face of the ledger.



5 • RELEASE AND PRESS

Fold the upper section of tape down and peel off the release liner, then carefully lift the flashing tape onto the wall. Adhere the tape to the wall starting in the center and working toward each end of the strip. Take care not to pull upward, which can leave an air space at the ledger-to-wall corner and may cause the tape to tear when the cap flashing and decking are installed.



6 • WRAP THE ENDS

Where the flashing tape wraps over the ledger at the ends, start with a diagonal relief cut a short distance from the corner where the top of the ledger meets the wall. Fold the membrane over the end of the ledger, stretching it down to seal the intersecting corner. Use the same technique to apply the additional strips of membrane along the top of the ledger, overlapping each previous piece by about 4 in.



STEP 4 MAKE AND INSTALL RIGID CAP FLASHING

The IRC requires any metal flashing to be at least 26 ga. or 0.019 in. thick. Some of the stock cap flashing sold at box stores and lumberyards is only 0.011 in. thick and won't meet the code

requirements. But standard colored aluminum coil stock is usually 0.019 in. or slightly thicker, so that is my go-to material choice for making flashing. The upper leg of this deck-ledger flashing should

be at least 7 in. wide. Some people just form a simple L-shaped flashing, leaving a wider ledger leg that extends straight out over the top of the deck joists instead of turning down the face of the

ledger. If you choose this alternative, don't let the joist leg extend beyond the gap in the decking planks; otherwise it can trap leaves and other debris that can be difficult to clean out.



1 • BEND THE STOCK

I haven't found preformed metal or plastic cap flashing with a tall enough back leg for my liking (at least 7 in.), so I bend my own on a metal brake.



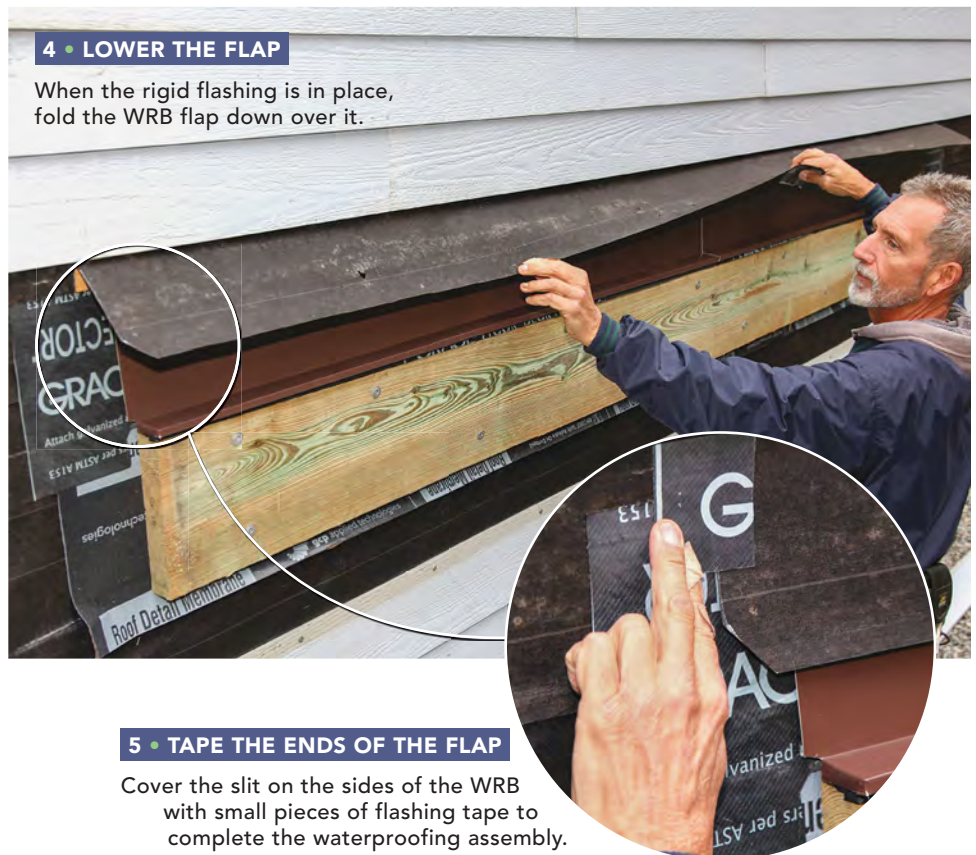
2 • FORM THE RETURN

To create an end return for the cap flashing, make 1/2-in. snips along both corner seams, then fold the end section down to form a corner using a sheet-metal hand seamer.



3 • NAIL THE FLASHING

Attach the rigid flashing in place using roofing or siding nails driven along the top edge.



4 • LOWER THE FLAP

When the rigid flashing is in place, fold the WRB flap down over it.

5 • TAPE THE ENDS OF THE FLAP

Cover the slit on the sides of the WRB with small pieces of flashing tape to complete the waterproofing assembly.

STEP 5 RE-INSTALL THE SIDING

For this project, the deck is above grade level, and siding covers the wall beneath the ledger. I first re-install the lap siding up to the next-to-last course below the ledger, and then fold the bottom flap of flashing tape (left unsecured in step two) down over the top of the siding to direct water away from the wall.



1 • RE-SIDE BELOW THE LEDGER

Reinstall the siding below the ledger, tucking the next-to-last course behind the bottom flap of flashing tape.



2 • FLASH BELOW THE LEDGER

Ordinarily I would remove the release strip and adhere the flashing tape to the siding. In this case the flap did not extend down far enough to lap over the siding adequately, so I removed the release strip from the back of the flap and adhered a narrow strip of WRB to the flap.



3 • LAP UP THE SIDES OF THE LEDGER

Continue installing the siding up the sides and over the top of the flashing.



4 • RE-SIDE ABOVE THE LEDGER

Be mindful that there needs to be proper clearance space above the decking for the first course of siding. Measure up to the starter strip for that course. On this project, omitting a siding course left 3 in. of space, just enough for the 1-in. decking and required 2-in. air space above the decking. Finish installing the siding above the ledger.



5 • TRIM THE WRB ABOVE THE LEDGER

To finish up above the ledger, slice and remove the WRB that extends down below the siding course above the ledger.



6 • TRIM THE WRB BELOW THE LEDGER

Back down below the ledger, tack the last piece of siding or trim in place temporarily over the flap of flashing tape. Draw a line along the bottom of the trim to mark any tape that sticks out below the course.

7 • INSTALL THE LAST PIECE OF SIDING

Remove the trim piece and cut off the excess flashing tape about $\frac{1}{4}$ in. above the drawn line. Then install the trim piece below the ledger.

