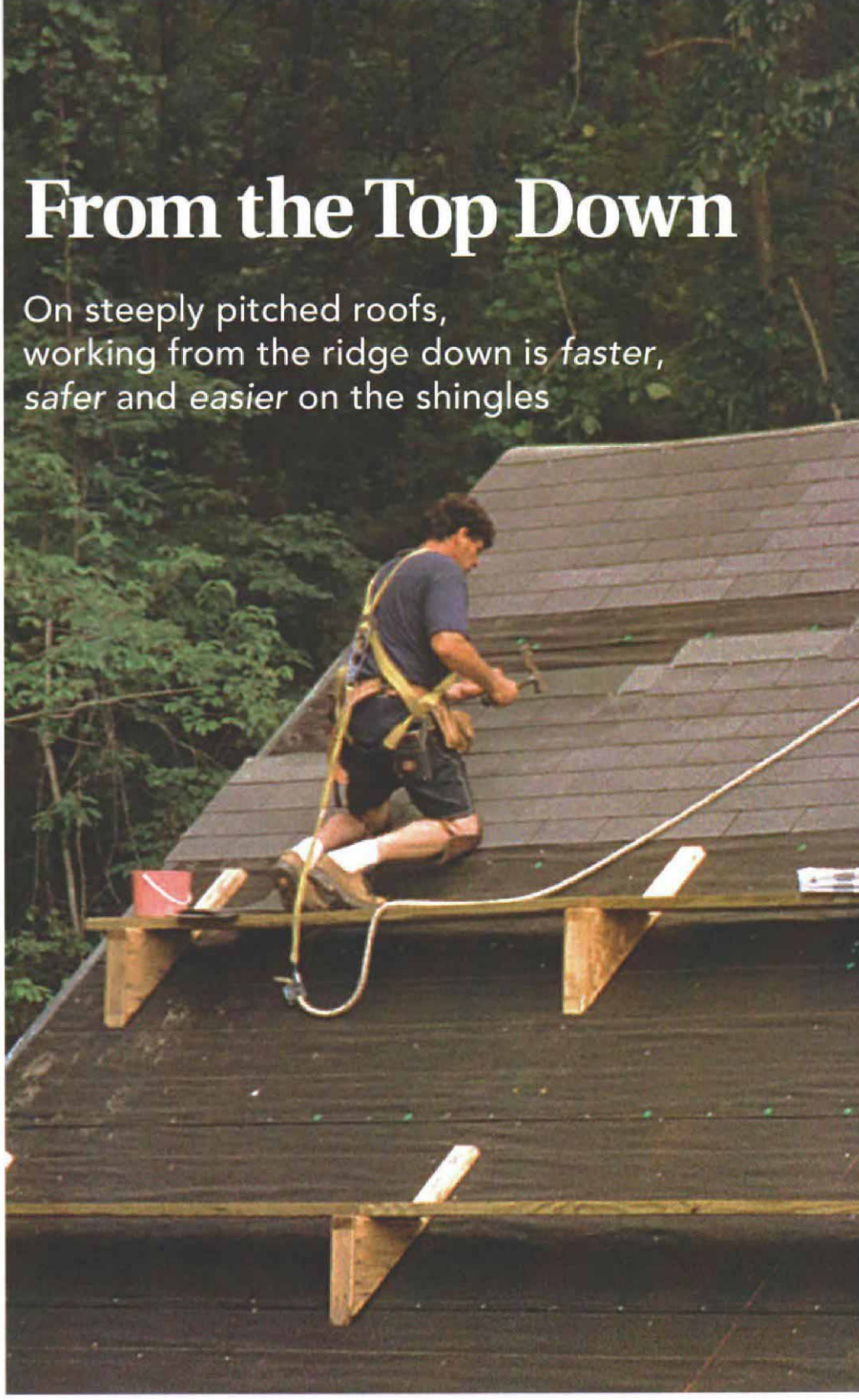
Asphalt Shingling

From the Top Down

On steeply pitched roofs, working from the ridge down is *faster*, *safer* and *easier* on the shingles



BY JOHN CARROLL

Although it may seem like putting on your shoes before your socks, top-down roofing is a safe, effective way to shingle steep roofs. The phrase *top-down roofing* is a little misleading: You don't actually install the shingles from the top down. Instead, you shingle the roof in sections, starting at the top and working your way down (photo right). Each section is shingled from the bottom up, and for the most part, the installation is identical to that of any other roof.

Top-down roofing is possible only because of the flexibility of asphalt shingles, which can be lifted and bent back without being damaged. The top-down method takes a little getting used to and requires more forethought than the conventional approach. But it's not a difficult technique to master, and I'm convinced that it saves time, reduces scuffing of the shingles during installation and is safer than standard shingling techniques.

One set of scaffolding for two jobs

There are two distinct advantages to the top-down roofing method. The first is that you don't have to buy, borrow or rent manufactured roof jacks to support scaffold planks. Instead, you can make your own scaffolding brackets out of scraps (sidebar facing page). Second, the same scaffolding that's used for shingling also can be used for sheathing the roof and for trimming the eaves and rakes.

Building scaffolding once rather than twice not only saves time and money, but it also encourages you to use safer scaffolding. Carpenters typically work off 2x4 toe boards, and then the roofers pry up the toe boards and use their own roof jacks to shingle the roof. Using the top-down method justifies the time spent building scaffolding that most carpenters would consider a luxury because you can use the same scaffolding to do the roofing. Economic issues aside, it's just easier and more enjoyable working off good scaffolding. (For more on safe roofing practices, see the sidebar on p. 71.)

Because both carpenters and roofers can use the same scaffolding, this method works best when the same crew does both jobs, as was the case here. If different crews do the job, the technique still works, but the carpenters need to run the tar paper and install the scaffolding with the needs of the roofers in mind.

Installing the sheathing, tar paper and scaffolding

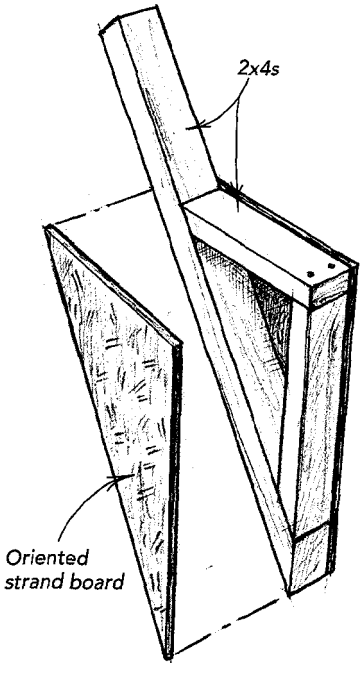
On this job, my crew and I set up pipe scaffolding across the front of the house and installed a 2x6 subfascia along with the first row of roof sheathing. Next, we installed a row of

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SCAFFOLD BRACKETS HELP WITH SHEATHING



Scraps of 2x4 and oriented strand board are recycled into scaffold brackets, the first row of which is nailed on just above the bottom edge of the roof. A 2x10 plank nailed to the brackets creates a safe scaffold for sheathing and roofing. Successive rows of scaffold are installed at 54-in. intervals all the way to the ridge. These rows remain in place until the roofing above has been completed.

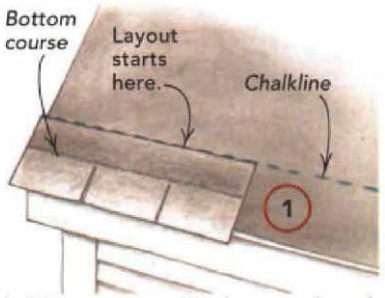


Drawings: Christopher Clapp

THE RIGHT LAYOUT IS KEY TO TOP-DOWN ROOFING

Horizontal course lines spaced 10 in. apart (every other course) and a pair of vertical bond lines spaced 6 in. apart establish the shingle exposure and bond pattern.

Top-down layout begins at the bottom



1 The chalkline representing the top edge of the bottom course also represents the first horizontal layout line. Starting on this line, mark off the roof in 10-in. increments all the way to the ridge.

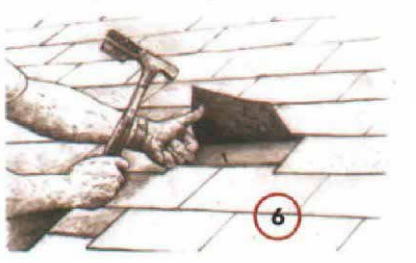
2 Snap two vertical bond lines 6 in. apart, and start the first course of each section at the intersection of a right bond line and a horizontal line. Nail within the top 2 in. of this course to allow the top course of the next section to slide beneath.

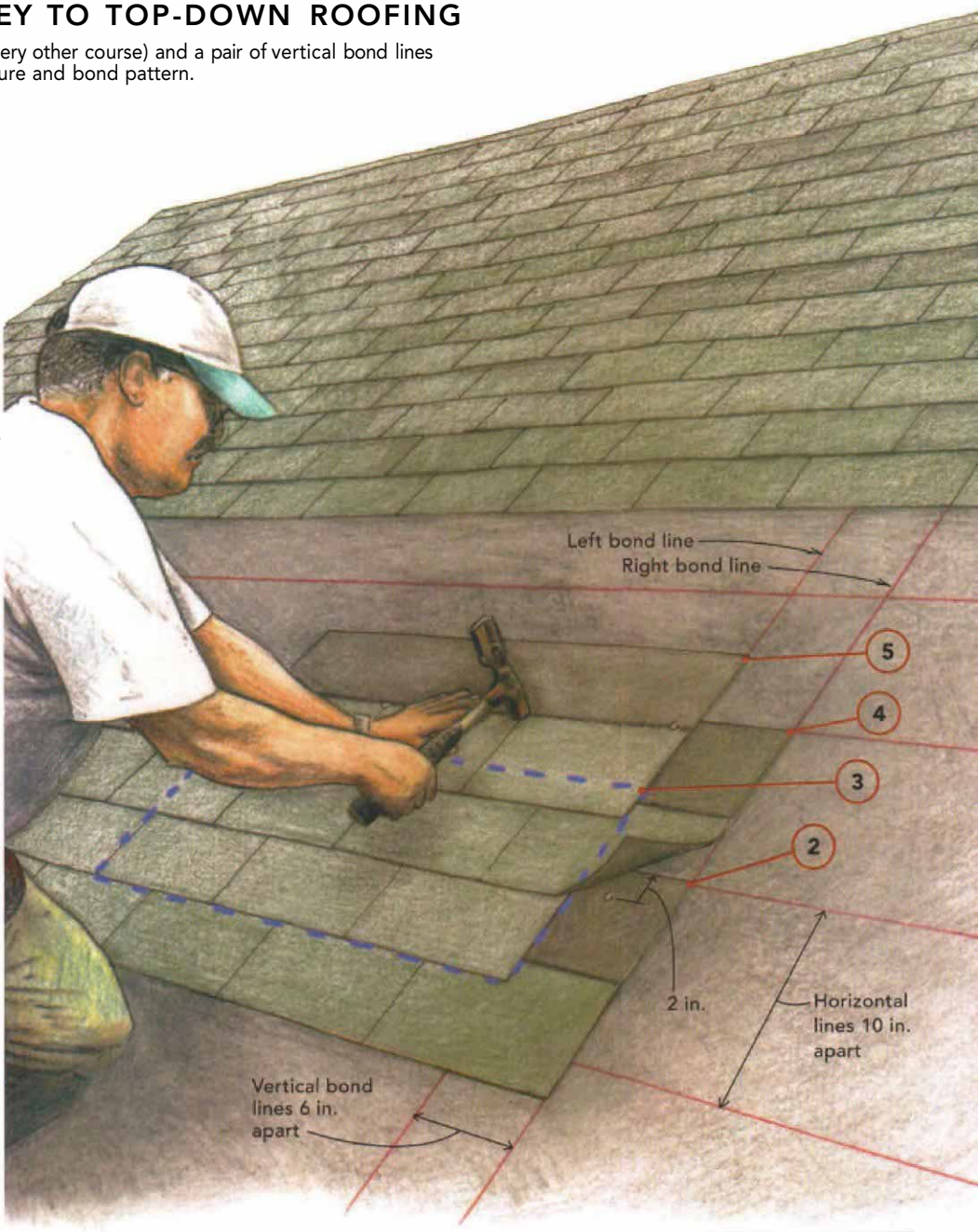
3 Because the shingle courses are marked off in 10-in. increments, there's no horizontal line for the second course. Use the tab notches or a gauged roofing hammer to position the second course 5 in. above the first, this time moving over 6 in. to the left bond line.

4 The third course is similar to the first, moving up to the next horizontal chalkline and starting again at the right bond line.

5 The fourth course returns to the left bond line and is positioned 5 in. above the course below. Repeat this pattern to the bottom of the next section or to the top of the roof.

6 After you slip the last course of each section into place, don't forget to drive in the final nails on the shingles that were nailed high, as in step 2 above.





ONLINE CONNECTION

See John Carroll's previous roofing article from *FHB* #90 on our Web site at www.finehomebuilding.com.

tar paper and then installed our first row of scaffolding brackets. We placed them just above the bottom edge of the roof, about 6 ft. to 8 ft. apart, with the exact spacing determined by the length of our 2x10 scaffolding boards and the layout of the rafters. Using 16d nails, we nailed each bracket through the sheathing to a rafter.

Because the brackets are 3½ in. wide, we can nail the scaffolding boards securely to them, so the boards don't slide around as they sometimes do on metal roof jacks.

After the first row of scaffolding was installed, we climbed up on it and began the second row of sheathing. Then we covered the sheathing with tar paper and installed a second row of scaffolding. Experience has taught me that each succeeding row of scaffolding should be about 54 in. above the one below, which allows me to run shingles without straining to reach the last couple of courses. We made the brackets 30 in. long so that we could install each row 24 in. above the one below.

We marched up the roof, repeating the same pattern: installing a course or two of sheathing, covering it with tar paper and then installing another row of scaffolding. When we had the entire side sheathed, papered and scaffolded, we worked from the scaffolding

to trim the eaves and rakes. Now we were ready to begin installing shingles—at the top.

Ten-in. layout lines are critical

The next day, my helpers, Rick and Brian, installed drip edge around the perimeter of the roof while I laid out the shingle courses (for more on roofing, see *FHB* #90, pp. 50-54, or go to our Web site, www.finehomebuilding.com). With top-down roofing, this step is critical. Do it wrong, and you'll end up with shingle tabs in adjacent courses that line up instead of being offset by 6 in.

First, I established the top of the first shingle course along the eaves (drawing facing page). I like to let the shingles overhang the drip edge 1 in., so the top of the first course is 11 in. up from the drip edge. From there, I marked the horizontal-course lines in 10-in. increments all the way to the ridge. I marked these courses on each end of the roof (and in the middle because it was a big roof). The final step in laying out the horizontal courses was to snap chalklines across the roof. We did that piecemeal, just before we shingled each section of the roof.

In addition to the 10-in. lines that marched up the roof, we snapped two vertical bond lines 6 in. apart. The bond lines, which run parallel to the rakes, serve two purposes: They keep the tab notches straight as we progress up the roof, and they establish the 6-in. offset in the tab notches between adjacent shingle courses. This offset results in the standard bond pattern common in three-tab shingle roofs.

Because three-tab asphalt shingles are installed with a 5-in. exposure, the 10-in. increments represent the top of every other course of shingles. It's important to note that I snap a chalkline for every other course, not for every course or every third course. The 10-in. increments in conjunction with the two bond lines keep me from making a mistake when I'm shingling the roof section by section from the top down.

I always start the bottom, or first, horizontal course on the right bond line. When I begin the second course, I place it 5 in. above the first and line it up with the left bond line. For this second course, there's no horizontal chalkline; instead, I use a gauged roofing hammer to line up the shingle 5 in. above the one below. You can also line up this course by placing it just above the top of the grooves in the shingle below. On the third course, I return to the right bond line and follow the next horizontal chalkline up. On the fourth course, I begin on the left bond line and once again have no horizontal chalkline to follow.

This pattern is repeated, as surely as night follows day, over the entire roof. Every course that begins on a right bond line hits a horizontal line, and every course that begins on a left bond line ends up between the horizontal chalklines. Knowing this pattern takes the guesswork out of deciding where to begin each section.

Nail the first course high, at first

After the bond lines and horizontal course lines were in place, we began shingling the top section. I aligned the top of the first shingle with the lowest horizontal line in this section while at the same time aligning the edge of the shingle with the right bond line.

We nailed the first horizontal course high, in the top 2 in. of the shingle, so that the last course in the section just below could slip under it. Aside from nailing the first course high, we ran the shingles as we would on any roof.

When we finished nailing off shingles, we cut rake shingles on both ends of the roof. Once we remove the scaffolding and jump down to the next section, we can't reach the section above; so it's essential to complete each section as we go. On some roofs, this process includes flashing walls and chimneys, and installing the cap shingles or ridge vent.

As soon as we finished cutting rake shingles, we moved down to the next row of scaffolding and removed the planks and brackets just above us. After clearing away the scaffolding, we struck lines for the second section from the top and began running shingles, placing the first shingle as I had in the section above.

As before, we nailed the first course high and ran the succeeding courses as we would on any roof. When we got to the top of the section, we slipped the last two courses under the shingles we'd installed above. Because of the shingles' flexibility, we were able to bend back the tabs on the shingles directly above the final course to nail it off. We also bent back the tabs of the next course up and finished nailing off the first course in the section above, which originally was nailed high.

As we worked our way down the roof, we followed the same procedure for the next three sections that we worked on. For the bottom section, we worked off the pipe scaffolding we'd set up.

The starter course, which is buried beneath the first course along the bottom edge of the roof, is an anomaly. Because it has to be offset 6 in. from the first course, I set it on the left bond line. Then, as always, I began the first exposed course on the right bond line.

Turning in our time cards

Starting with the rafters in place and ending with a completed roof, we put 17 hours into this job. Installing the scaffolding, sheathing and tar paper and trimming the perimeter of the roof took about nine hours. Laying out and hand-nailing seven squares of shingles, installing the drip edge, and removing and stacking the scaffolding took about eight hours. That's not a bad couple of days' work for two carpenters who have lived for a full century between them: Rick's 49, and I'm 51. And Brian's 24-year-old legs toted the shingles up to the roof from the ground. □

John Carroll is a builder in Durham, NC.
Photos by Bill Phillips.



Make safety a priority

Nowhere is job-site safety more important than when you're working on the roof. It takes extra preparation and time to work safely. Working safely on a roof can improve productivity by letting you focus on the job.

According to "NAHB-OSHA Jobsite Safety Handbook," available from the NAHB bookstore for $10 (800-223-2665; www.builderbooks.com), here's a little common-sense advice on rooftop safety.

- **Wear shoes with slip-resistant soles; inspect the roof for slip hazards.**
- **Cover or install guardrails around skylight openings.**
- **For roof pitches between 4-in-12 and 6-in-12, install slide guards along the eaves.**
- **For roof pitches between 6-in-12 and 8-in-12, install slide guards every 8 ft.**
- **For roofs above 8-in-12 pitch or for ground-to-eave heights greater than 25 ft., use safety harnesses.**
- **Don't work on roofs in high winds.**

—J. C.