

BY ANDREW GRACE

It's tough to improve upon the timeless look of half-round gutters. They were a natural fit for a 1919 farmhouse and garage we recently worked on. Although half-round gutters are also available in galvanized steel (least expensive) and copper (most expensive), my client chose aluminum, which is rust-free and more reasonably priced than copper. The 0.032-in.-thick aluminum gutters on the project are 6 in. wide with a durable, factory-applied finish.

Installing half-round gutters is a little more complicated than installing more conventional K-style gutters because the hangers are visible, so they must be evenly spaced and perfectly straight or the finished product will look terrible. This article, which covers an entire gutter and downspout installation, focuses on the tips and tricks that make the process faster and easier.

The first thing to keep in mind when you're planning a gutter project is that a 5-in. half-round gutter can handle about half as much water as a 5-in. K-style gutter, so you need more downspouts or a larger gutter, and sometimes both. Proper sizing takes into account the roof dimensions and slope, as well as the heaviest rainfall you can expect for the project location. The gutter manufacturer we used, Berger Building Products, has helpful sizing information for both gutters and downspouts on their website (bergerbp.com). Labor and materials for this project came in at about \$10 per ft. □

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Photos by Patrick McCombe.

HOW TO HANG

Half-Round Gutters

This classic look is made even better with modern materials



GET THE HANGERS IN THE RIGHT SPOT

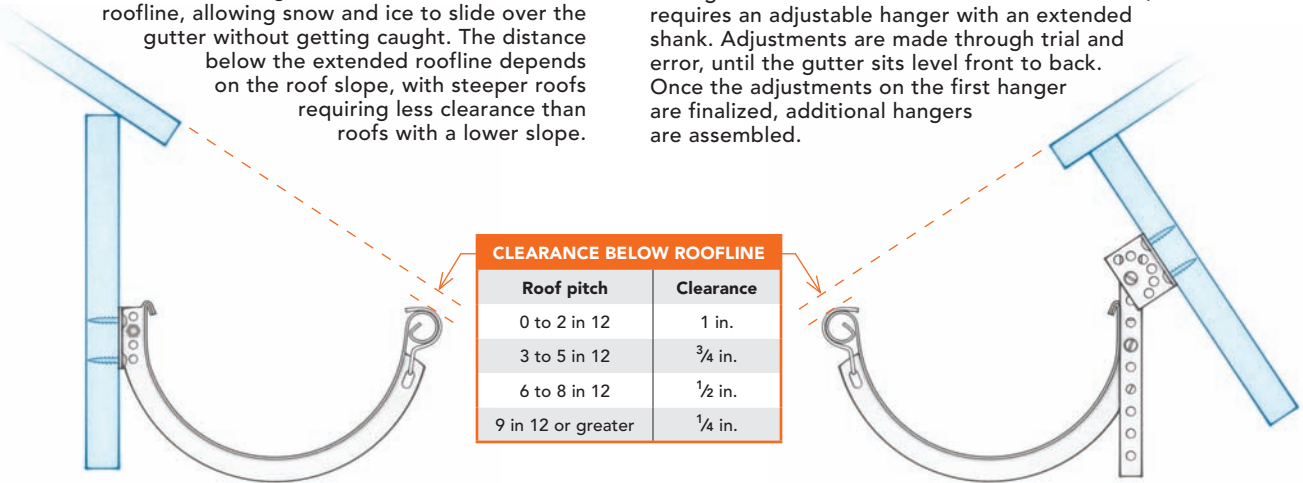
The manufacturer recommends that the gutter hangers be installed at a maximum of 36 in. on center to provide adequate support. In colder climates, where snow and ice could accumulate, they should be closer together. This building's sloped fascia required adjustable hangers to hold the gutter in the right position, but hangers for straight fascia and exposed rafter tails are also available.



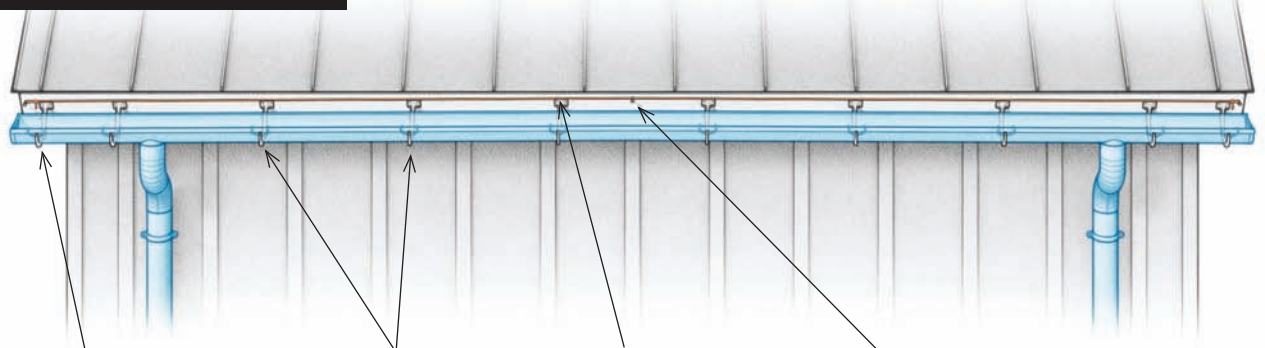
ROOF SLOPE GUIDES MOUNTING HEIGHT

Plumb fascia Half-round gutter hangers should be mounted so that the gutter sits below the extended roofline, allowing snow and ice to slide over the gutter without getting caught. The distance below the extended roofline depends on the roof slope, with steeper roofs requiring less clearance than roofs with a lower slope.

Angled fascia Mounting half-round gutters to an angled fascia follows the same clearance rules, but requires an adjustable hanger with an extended shank. Adjustments are made through trial and error, until the gutter sits level front to back. Once the adjustments on the first hanger are finalized, additional hangers are assembled.



PROPER LAYOUT



Hangers should be 4 in. in from the ends of the gutter and then evenly spaced and arranged so they avoid the outlet tubes that connect the gutter to the downspouts.

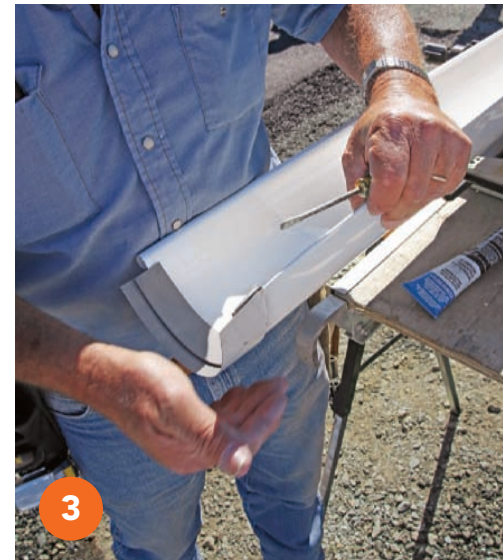
This project is in an area subject to snow and ice, so the hangers are spaced about 2 ft. apart.

The height where each bracket is mounted to the fascia depends on the roof slope and also must factor in a slight pitch (1/16 in. per ft.) for drainage.

Assuming there are downspouts at both ends of the gutter, stretch a string along the fascia and raise it in the center (accounting for the proper slope) using a screw or nail. If there's a single downspout, slope the line in a single direction toward the outlet.

HANG AND JOIN THE SECTIONS

It's impossible to fasten the hangers when the gutter is in place, so all the hangers must be mounted on the fascia before setting the 10-ft. sections of half-round gutter. Aluminum half-round gutter sections are joined with slip-joint connectors, aluminum gutter cement, and pop rivets. Steel and copper half-round gutters can be joined with slip-joint connectors or soldered.



Prep for joints. The straight hem at the rear of the gutter and the rolled edge at the front must be removed so the slip connector can be placed on the end of the gutter. **1** First, notch the edges with aviation snips. **2** Then, cut the pieces free with a miter saw using a carbide-tipped 80-tooth wood-cutting blade. **3** Test-fit

the pieces (If the slip connector doesn't fit, open it slightly with a straight screwdriver), and then place a 1/4-in. bead of aluminized gutter cement inside the connector and slide the pieces together, ensuring they're fully seated with a bump from your hand. Wipe away any excess cement before it dries.

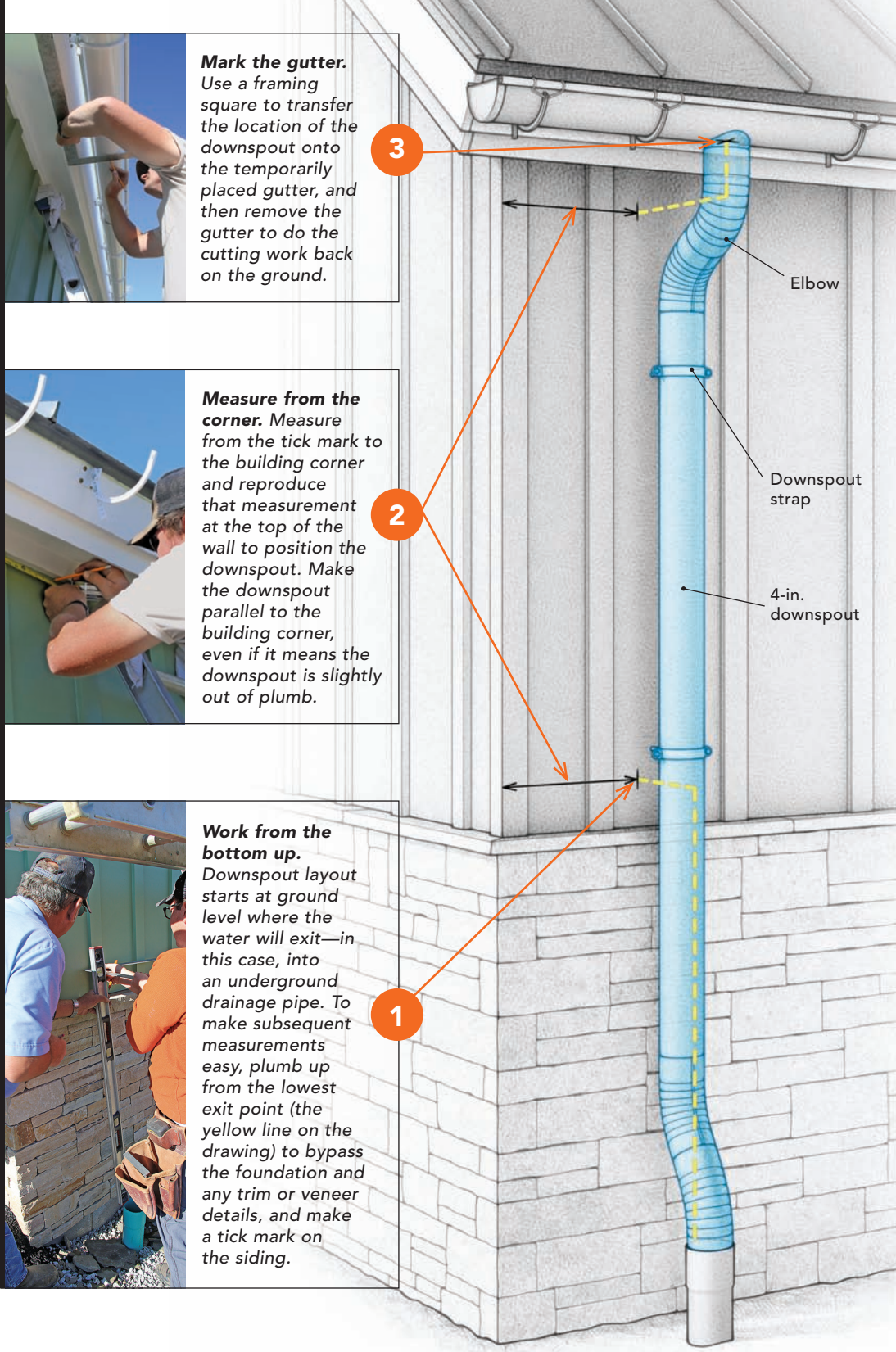


Join the sections. It may be tempting to join all the sections on the ground and then lay in the entire gutter section. Unfortunately, a long run of gutter is easily damaged and it's difficult to lock the rear edge into all of the hangers when the piece is longer than 10 ft. Instead, install one side of the slip connector on the

ground and join the other end with the gutter in the hangers. Connect the pieces permanently with pop rivets, drilling each pilot hole from inside the gutter to ensure the hole goes through the connector, and then pop rivet from the bottom so the color-matched rivets are less visible.

PREP FOR THE DOWNSPOUTS

It's easier to install the outlet tubes that connect the gutter to the downspouts on the ground rather than up in the air, but the most accurate way to locate the holes is by doing a test fit. If the gutters connect to an underground roof-water system, these pipes should dictate the downspout layout in order to minimize offsets and extra fittings. The process starts at the bottom.



3 Mark the gutter. Use a framing square to transfer the location of the downspout onto the temporarily placed gutter, and then remove the gutter to do the cutting work back on the ground.



2 Measure from the corner. Measure from the tick mark to the building corner and reproduce that measurement at the top of the wall to position the downspout. Make the downspout parallel to the building corner, even if it means the downspout is slightly out of plumb.



1 Work from the bottom up. Downspout layout starts at ground level where the water will exit—in this case, into an underground drainage pipe. To make subsequent measurements easy, plumb up from the lowest exit point (the yellow line on the drawing) to bypass the foundation and any trim or veneer details, and make a tick mark on the siding.

LAY OUT & CUT PERFECT HOLES



A scrap of gutter with the edges removed acts as a template for the oval-shaped hole for the outlet tube that joins the downspout to the gutter. Make the template by tracing the inside of the tube onto the scrap and gradually enlarging the hole with aviation snips until the perfect fit is achieved. To use the template, place it on the section of gutter and trace the hole, and drill a starter hole for the aviation snips. Follow the outside of the pencil line with the snips.

CONNECT THE DOWNSPOUTS

Smooth and corrugated downspouts are available in galvanized steel, copper, and aluminum in diameters ranging from 2 in. to 7 in. There are also several types of downspout hangers with mounting options suitable for all types of wall cladding. It's important to have enough downspouts in sufficient diameter to handle all the water expected in a heavy rainfall. Gutter manufacturer websites can help with proper sizing of both gutters and downspouts.



Mount the hangers. Because this garage has stone veneer at the base of the wall, the downspout needs hangers with extended standoffs. The dowel-screw standoff has a coarse thread on one end that screws into the board-and-batten siding, while a machine thread on the other end holds the half-strap that screws into the downspout.

Test-fit first. Always test-fit the assembled downspout before permanently connecting all the parts with pop rivets. This ensures the hanger standoffs are adjusted correctly and the downspout aligns perfectly with the hole for the outlet tube.



CUSTOM-FIT ELBOWS

Because of the building's relatively short overhangs, a pair of elbows proved too long to fit the space between the gutter and the wall. For a proper fit, we trimmed 1½ in. off the elbow using snips. Trimming removes the crimp, so the cut ends must be recrimped with a crimper made for ductwork.





Install the outlet. An outlet tube is used to transition from the horizontal gutter to the vertical downspout. Once it's been confirmed that all the parts fit together, remove the downspout and drop the outlet tube into the hole in the gutter.



Seal the deal. Secure the outlet tube using aluminum gutter cement, applying a thin bead around the seams from the top. The cement creates a strong connection that's ready for handling in about 30 minutes.



Final assembly. Once the outlet tube is in position and the gutter cement is sufficiently set up, install the downspout and secure the straps that hold it. Any pencil marks or dirty fingerprints can be cleaned off with a nonabrasive hand cleaner like Gojo.



Cap the ends. Installing end caps on the gutters is the last part of the job. Half-round gutters with sloped fascia seldom sit perfectly flat, especially on an old building like this one. The solution is to level the end caps, then secure them with pop rivets and seal the joints with more cement.