



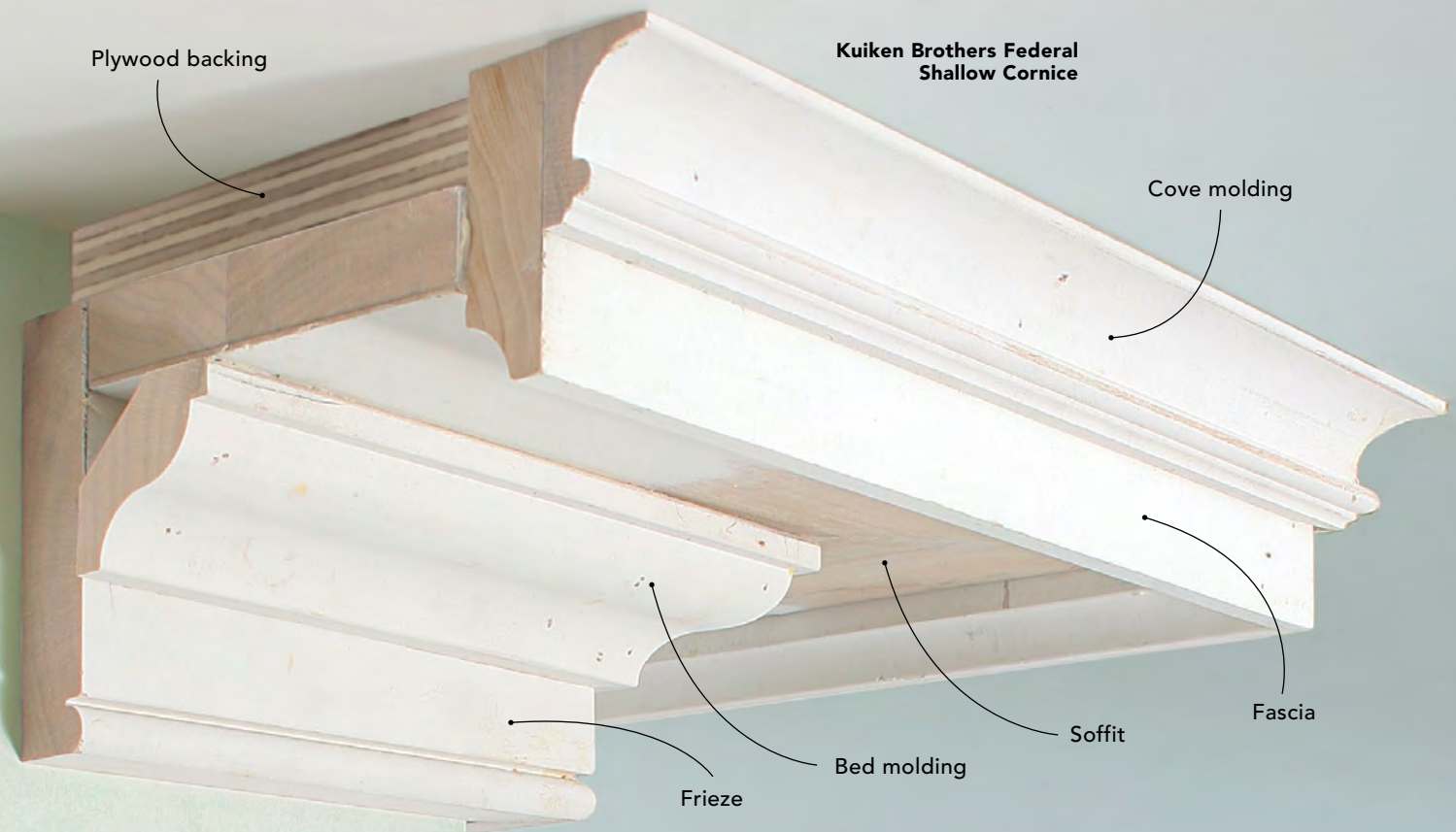
# Installing Built-up Crown

A pro remodeler shares his tips for tackling crown and cornice moldings

BY TYLER GRACE

**A**t first glance, installing a built-up cornice or crown molding assembly may seem complex or daunting for even the most experienced carpenters. Whether it's the layers of profiles, blocking, copes, miters, angles, or existing conditions, you are contending with a lot of variables during planning and installation. The

fact of the matter is that when you break down the assembly, it's all just basic carpentry. The most difficult aspect of the entire job may very well be nailing the proportions (pun intended) and properly layering the profiles. Once you inventory the space, locate your pinch points, and determine the layout, you're basically just circling the room one molding pro-



file at a time. Often, at least some of the layers of the buildup can be downright simple. For example, several of the layers used here are installed on reference lines snapped on just the wall or the ceiling.

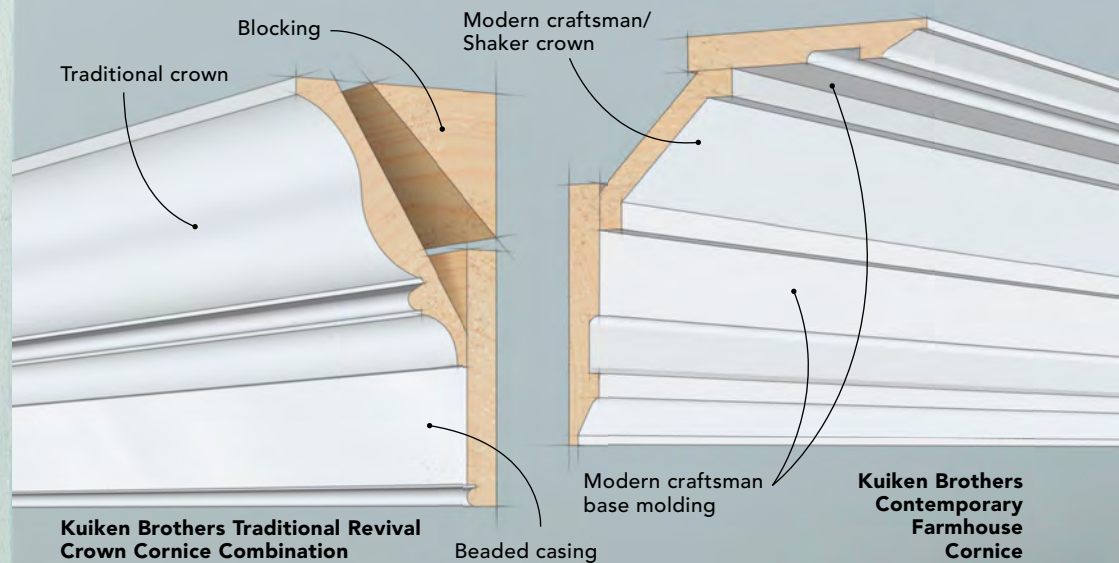
Before touching a saw, take a look at the room, assess what's there and what's going to be there, and figure out what's going to be a problem. Will the molding bump into window or door casing? Will it overlap a can light? In this bathroom, a bath fan near the end of a narrow corridor to a walk-in shower was a potential pinch point. We had to ensure that the buildup wouldn't bump into the fan and that the fan was dead center in the space—otherwise the molding would highlight the asymmetry.

This may be obvious, but is worth noting: As you add layers to built-up moldings, the lengths change. Where you may start with, say, 10 ft. between inside corners, the length will shrink as you add layers to the buildup. Likewise, the lengths between outside corners will grow as you add layers. □

Tyler Grace is owner of TRG Home Concepts in Medford, N.J. Photos by Matthew Millham, except where noted.

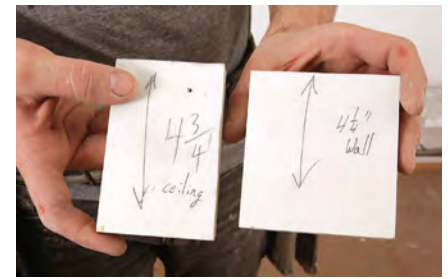
## ARCHITECTURAL PROFILING

Layering trim profiles without an understanding of the orders of architecture can have mixed results. As a starting point, look to traditional Greek and Roman architecture for guidance on profiles and their arrangements, and proportion the buildup to the room. Various buildups are made by arranging pieces from families of related moldings (drawings below). There's no shame in outsourcing the molding design to someone who knows what they're doing. Kuiken Brothers, an East Coast building supplier, created the authentic Federal-style cornice featured here (photo above), and scaled it down to work with the 8-ft. ceilings in our 200-sq.-ft. bathroom.



## PART 1 THE FRIEZE

Lines snapped on the ceiling and walls help keep everything on track. Use gauge blocks to set reference marks at every corner, but don't mark in between corners. Instead, connect the points between corners. This way, you can establish straight lines even if the walls or ceiling are wavy. The bottom of the frieze aligns with the lines on the walls; the lines on the ceiling represent the front of the blocking for the soffit and fascia.



**Gauge down and out.** For accuracy, use a sharp pencil and gauge blocks, rather than a tape or combination square, to mark every corner. Bevel the blocks so they make clean contact with the walls and ceiling rather than the wall-to-ceiling joint, where built-up drywall compound can throw off measurements.



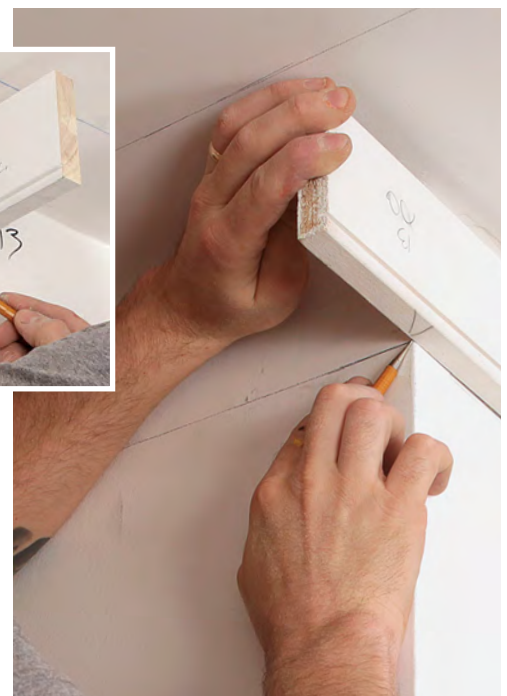
**Connect the dots.** Connect the gauge-block marks at the corners with chalklines or a level and pencil.



**Cope inside corners.** Cut the frieze stock to rough lengths, mark each piece, and cut all of the copes in one shot. I rough-cut the cope with a miter saw and jigsaw, and clean it up with files.



**Miter outside corners.** Mark cuts for outside corners in place, fitting coped joints tightly before marking.





**Line it up.** Dry-fit joints before fastening the pieces. This often requires having the pieces they intersect at the far ends either installed or dry-fit to ensure the lengths and miters are spot on. A helper or two is required for this step.



**Fastened but free.** Apply beads of polyurethane adhesive to the back of the piece and to the coped joint to provide reinforcement. Don't fasten the mitered end to the wall until that joint is assembled.

**Assemble and nail.** Assemble the joints using wood glue and miter clamps, then put two 2½-in. 16-ga. nails in the frieze on both sides of the joint, about 2 in. from the miter. On long runs, continue nailing about halfway down the length, leaving the far end free to fit the next joint.



**Screw it.** If you need to remove clamps before the glue sets, drill a pilot hole and sink a trim screw.



## PART 2 THE SOFFIT

Just as with standard crown, backing and blocking are important elements for a solid installation. If you're able to open up the ceiling, install blocking between joists so you have something solid to nail to on runs parallel to the joists. In the buildup itself, backing fills voids between molding elements and the substrate for a more robust assembly. Moldings that run perpendicular to floor or ceiling joists can usually be fastened to those framing members. Additional backing or blocking is required for some, but not all, buildups on walls parallel to framing.



**Back it up.** Install strips of 3/4-in. plywood to fill the gap between the soffit and the ceiling, creating a solid gluing and nailing surface for both the soffit and the fascia that comes later. Fasten the backer with PL glue and 2 1/2-in. 16-ga. nails.



**Pinch and lever.** Use pinch dogs to draw miters tight where traditional clamps can't reach. A stiff putty knife is useful to adjust pieces into plane and hold them there while hammering in pinch dogs or nailing.



**Reinforce miters.** Biscuit every miter in the soffit, and cut the slots closer to the edge that faces into the room. Glue both slots and the faces of the miters before assembling.



**Clamp combo.** Install all clamps before nailing off either side of the joint. Clamp clamps hold the joint tight and stabilize it; a pinch dog an inch off the back of the miter helps hold the short points tight.

## PART 3 THE BED MOLDING

**Glue and nail.** Fasten the soffit to the plywood backer using beads of PL glue and pairs of 2½-in. 16-ga. finish nails every 12 in. Again, leave the miter end free until the miter is assembled. Note that the backer is slightly narrower than the soffit to ensure it doesn't interfere with the fascia.



Things can get tricky when layers bridge the wall and ceiling planes. If there are irregularities in either surface, you may be tempted to split the difference—don't. Keep reveals between moldings consistent on the wall plane. Here, for instance, the eye will more easily pick up if the bed molding is out of parallel with the frieze than with the back of the fascia. Fasten every 12 in. with pairs of 1½-in. 18-ga. finish nails through the meatier parts of the molding and into the soffit and frieze.

**Set control lines.** Set a combination square to the distance from the bottom of the frieze to the bottom of the bed molding, and mark this reveal on both sides of every corner and every 2 ft. or so along the frieze. Assemble using the same basic procedure used for the frieze, using wood glue and pinch clamps on outside miters, and nailing only after miters are tight.



**Drive to fit.** Use a soft hammer to coax inside miters tight before marking the cut for an outside miter and fastening the free end of the intersecting piece.



**Sand or be sorry.** Make your life (or at least the painter's life) easier by sanding the soffit before installing the next layers. It'll be hard to get in there later.



**Fit and fiddle.** Before fastening, dry-fit to ensure that miters meet cleanly and to see if the top of the molding needs to be scribed to accommodate a wavy ceiling/soffit.

## PART 4 THE FASCIA

When joints are going to get buried behind other moldings, don't waste time getting them perfect.



**Gauge and mark.** Use an L-shaped gauge block set to the reveal below the soffit to establish the height of the fascia, and mark the reveal and the outside miter cut at the same time.

**Rough-cut scribes.** After making a scribe in place, cut it quickly using a tablesaw, a sander with rough-grit paper, or a jigsaw. The cuts don't need to be perfect; they won't show.



**Dab glue.** Apply dabs of PL glue every 12 in. to bolster the fascia's connection to the rest of the assembly.



**Clamp inside and out.** Use wood glue and pinch clamps on both outside and, because they're accessible, inside miters.



**Pin it.** Double-check the reveal, then fasten with 1½-in. 18-ga. finish nails into both the backing and the soffit.

## PART 5 THE COVE MOLDING

The procedure for installing the cove is similar to the bed molding. At this step, though, I add dabs of PL glue at the joint between the ceiling and fascia to bond the cove to both. Rather than rehash more of the same, here are some additional tips that can work just as well with some, if not all, of the preceding layers.



**Wet cleanup.** Use a damp rag and toothbrush to clean wood glue squeeze-out from joints while it's still wet.



**Shim it tight.** When there's not much meat at the top of a molding to scribe it to a wavy ceiling without biting through the profile, shimming above a miter can help bring intersecting moldings into plane. After fastening the moldings, carefully trim the shim in place with a sharp utility knife.



**Drive to the line.** Use a hammer and beater block to nudge moldings to their marks. This technique works even better with the bed molding than with the cove.



**Float it down.** Use a combination of floating, scribing, and caulking to make the buildup look perfect. Floating the ceiling down with all-purpose joint compound in one spot means less scribing in another, leaving a more even profile at the top of the cove.