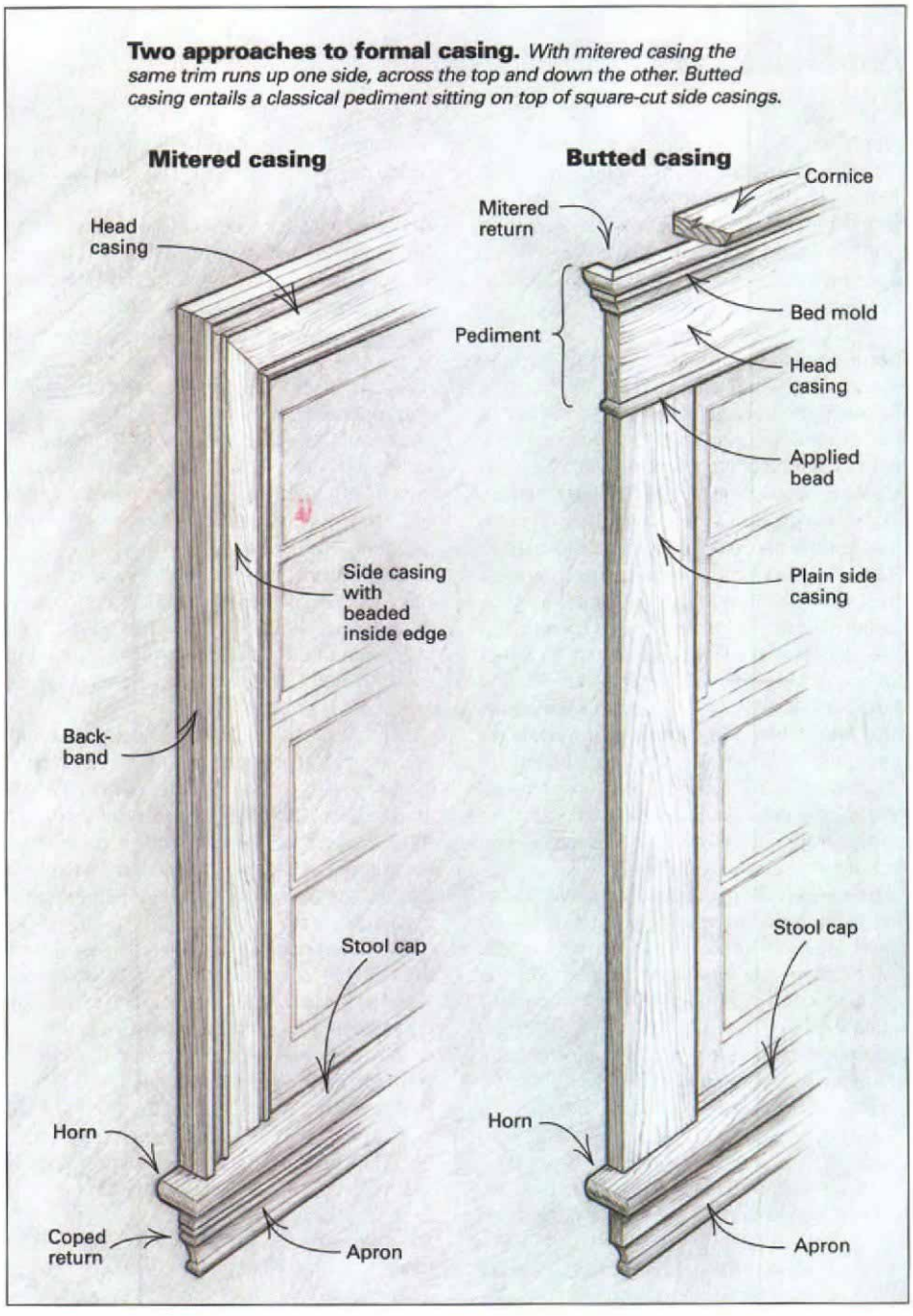
More Than One Way to Case a Window

You can vary the look with simple combinations of flat boards and stock moldings

by Joseph Beals III



Stock trim, such as 1x4 pine or clamshell casing, will always be useful in routine, contemporary construction. But after years of installing these lifeless, standard-issue casings, frustration drove me to cross the frontier. Using as a reference the casings I'd seen in so many period New England houses, I built a simple pediment head casing to surmount square-edge, square-cut side casings. I will not forget that first look back at the result: An ordinary window suddenly had character, grace and purpose; and a client new to classical trim was particularly pleased with a window worth looking at, not just through.

Mitered casings get moldings; butted casings get pediments—In this article, I'll discuss two approaches to formal casing design (drawing left): mitered casings as a stylistic option and butted casings, which employ a pediment head, or architrave, as a classical architectural option. In general, mitered casings are developed by adding layers of moldings to the perimeter of a mitered flat casing. With butted casings, the pediment head sits on the square-cut tops of plain or molded side casings, and architectural detail is developed on the pediment itself.

In a mitered casing the simplest alternative is the use of two or more layers of molding. A bead cut on the inside edge of a casing and a backband applied around the outside perimeter of a flat casing will give a strong, three-dimensional appearance (top right photo, facing page). A thin molding interposed between the flat casing and the backhand adds another element of detail and shadowline to the profile (bottom right photo, facing page).

A formal alternative to mitered casings is the use of a pediment, or architrave, as a head casing with side casings butting into it. The pediment represents an entablature, the lower portion of a classical roof, and its elements are derived from ancient Greek and Roman temples. This style of window trim is commonplace in period architecture, especially in Federal and Greek Revival houses of the 19th century.

All window casings start with the stool cap—Any style of window trim must begin with the stool cap, the piece that finishes the inside

Drawings: Dan Thornton

Six variations on a theme

We asked designer/builder Joseph Beals to show us how to create various styles of window trim without resorting to custom moldings made with a shaper. On a test wall in his shop, Beals mocked up six casing designs, using mostly dimension lumber and stock moldings from the local lumberyard. He cheated occasionally and used his shaper, but where he did, a router would work just as well.

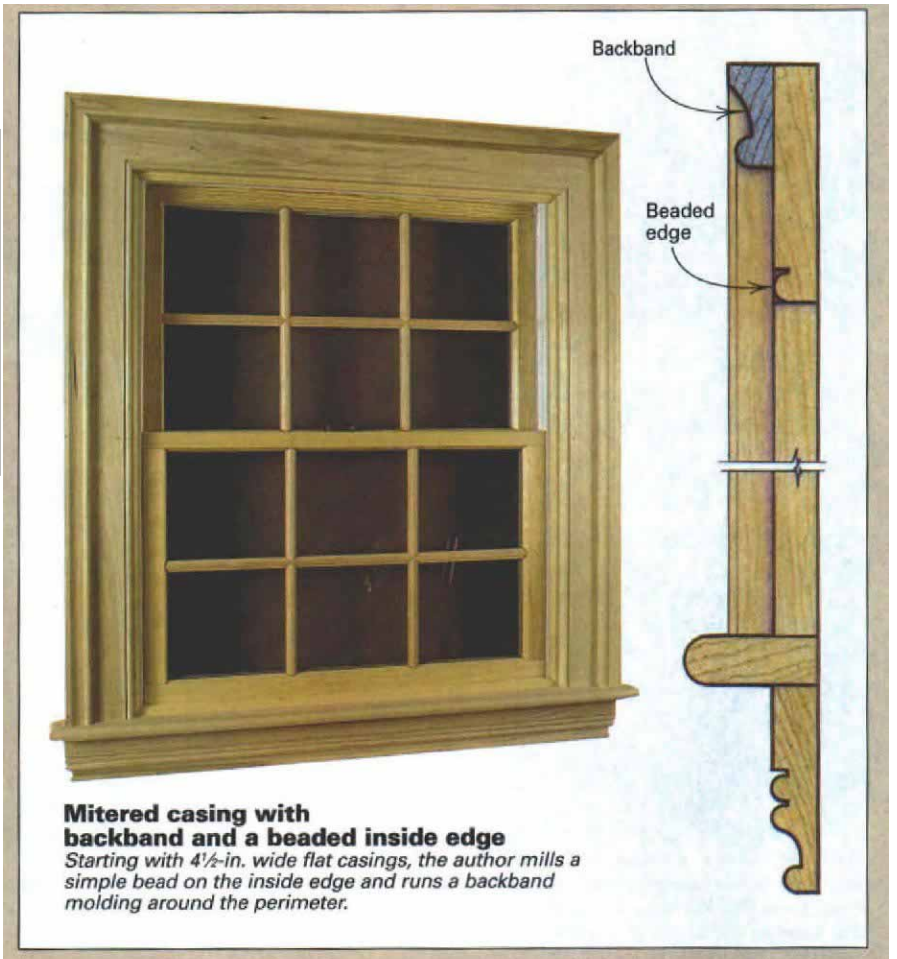
The stool must stay level and perpendicular. The author screws blocks of scrap wood to the wall to hold the stool temporarily.

edge of the windowsill. You can buy stock stool cap at a lumberyard, but you'll spend enough time fitting it to the window that you might as well make your own.

I like the stool to stand proud of the casings about an inch. If you're thinking about a two-piece or three-piece mitered casing, you'll have to figure out the combined thicknesses of the moldings before you cut the stool.

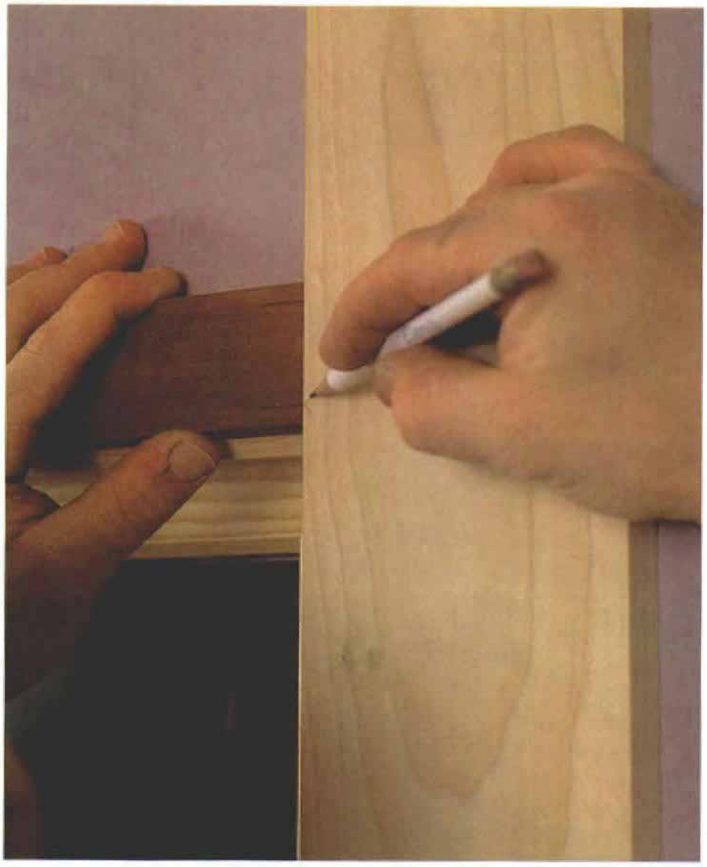
I cut the stool stock long, and I machine a bullnose, or half-round, on the outside edge. I scribe and cut the two horns (horns are the ends of the stool that overlap the drywall on each side), check the fit, then cut the ends to allow about a 1-in. overhang past the outside edges of the side casings. The bullnose returns can be shaped by machine, but I prefer to remove the bulk of the waste with a block plane and finish the job with a sharp file or a piece of cloth-backed sandpaper.

Given the wide variety of window conditions, fastening the stool can be a problem. On the Andersen window used in these photos, the stool is toenailed from the top into the sill. The horns can be face-nailed into the framing studs if nec-



Mitered casing with backband and a beaded inside edge
Starting with 4½-in. wide flat casings, the author mills a simple bead on the inside edge and runs a backband molding around the perimeter.

A third layer adds depth and detail
Interposed between the flat casing and the backband, a thinner (½ in. or less) intermediate molding adds another level of detail and shadowline.



Mark the side casings with a gauge block. The author uses a scrap of wood, marked with the amount of offset between the window jamb and trim, to mark the length of the side casings.

Connect the marks with a straightedge. Using a straightedge to mark the side-casing top cuts will ensure that the head casing fits perfectly. Simply squaring cuts from the marks can result in sloppy joints.

Biscuits register side casings to stool. Common practice is to nail up through the stool into side casings. But biscuits hold better than end-grain nails and won't come out through the exposed surface of the side casing.

essary. Glue or caulk between the stool and the sill can help hold everything together.

To keep the stool square to the window, I screw 2x4 blocks to the rough framing right below the stool (photo left, p. 55). Nothing is worse than getting a window trimmed and realizing that during the course of your work, you've pushed the stool out of square with the wall. The blocks hold the stool square until I add the apron at the end of the job.

Cut the side casings long, fit them to the stool and mark their length—For any casing design, the two side casings are cut long and fitted first to the stool. I cut the casing bottoms square, then hold a casing in position against the window jamb. I judge the reveal by eye (the reveal is the exposed portion of the jamb between the casing and the jamb's inside edge), but if you prefer reference marks, make them with a gauge block of some kind.

In theory, if the bottoms of the side casings are cut square and if the stool is perpendicular to the sides of the window, the casings should fit tight to the stool, but theory doesn't always work. I close any gaps by dressing the casing bottom with a sharp block plane. After both side casings have been fitted to the stool, I tack them in position with a few 4d finish nails.

To mark for the top cuts, I use a gauge block as shown in the photograph (above left). For mitered casings, the mark I make indicates the bottom of the miter. I draw a diagonal reference mark on the casing to remind me of the angle of the cut. This procedure may seem foolish, but it is remarkably easy to forget how things go together in the short walk to the miter saw.

When I mark the two sides of a butted casing, I make tick marks on the inside edges with the gauge block and then connect the two marks with a straightedge (photo above right) and a sharp pencil. In theory, the top cuts should be square to the casings, but this theory may not be true in practice, especially in the case of an old window that you're retrimming. Before nailing the side casings, I cut biscuit slots in the bottom ends and mating slots on the top of the two stool horns (photo bottom right).

Nail the side casings home before you fit the heads—Some people prefer to fit the head casings while the two side casings are only tacked in position on the theory that it's easier to make the joints perfect if both pieces are adjustable. Then, after everything is fitted, you nail the pieces home in one marathon effort. I think this process invites problems because the side casings can shift as they are pulled against the wall when the nails are driven home. Even setting a nail after it has been hammered in can cause the casing to shift, and the joint you thought was perfect opens up again. Adjustments to bad joints are awkward or impossible.

After I fit a side casing to the stool, mark it, cut it to length and cut the biscuit slot, I nail it tight and set all the nails. The side casings now are finished; they have been locked in place so that they can't move.

Other people prefer to install mitered casings by working around the window: up one side, across the top and down the other side. I prefer my method because the two sides are done quickly and easily, and any adjustments are made in the head casing. Only if the window is badly racked would this be impractical, in which event it might be better to fix the window condition first.

Fitting a mitered head casing— I like to cut a bead on the inside edge of all of my mitered window casings. A shaper, router or cutter head-equipped table saw cuts beads equally well. The molded bead mimics the applied sash stop found on a lot of old double-hung windows.

For a mitered head casing, I make the 45° cut on one end and then mark the other end. As the photograph (left photo, facing page) shows, the casing is held upside down with its mitered end perfectly registered on the side casing, and the other end is marked with a utility knife.

I cut the second miter, saving the knife line. I drop the head casing in place, taking care to keep it parallel with the window head jamb. Any deficiencies in fit are apparent, and these flaws are dressed out with a sharp block plane.

I use biscuits to reinforce the mitered joints. The biscuit slots in the side-casing miters can easily be made in place if they weren't done earlier, and the head-casing miters can be slotted on any

For mitered casings nail home the two sides and then fit the head. The author makes a 45° cut on one end of the head casing, holds it upside down on the side casings and marks for the other cut with a utility knife.

flat surface, if all is well, I glue the slots, slide the biscuits in and tap the head casing into place.

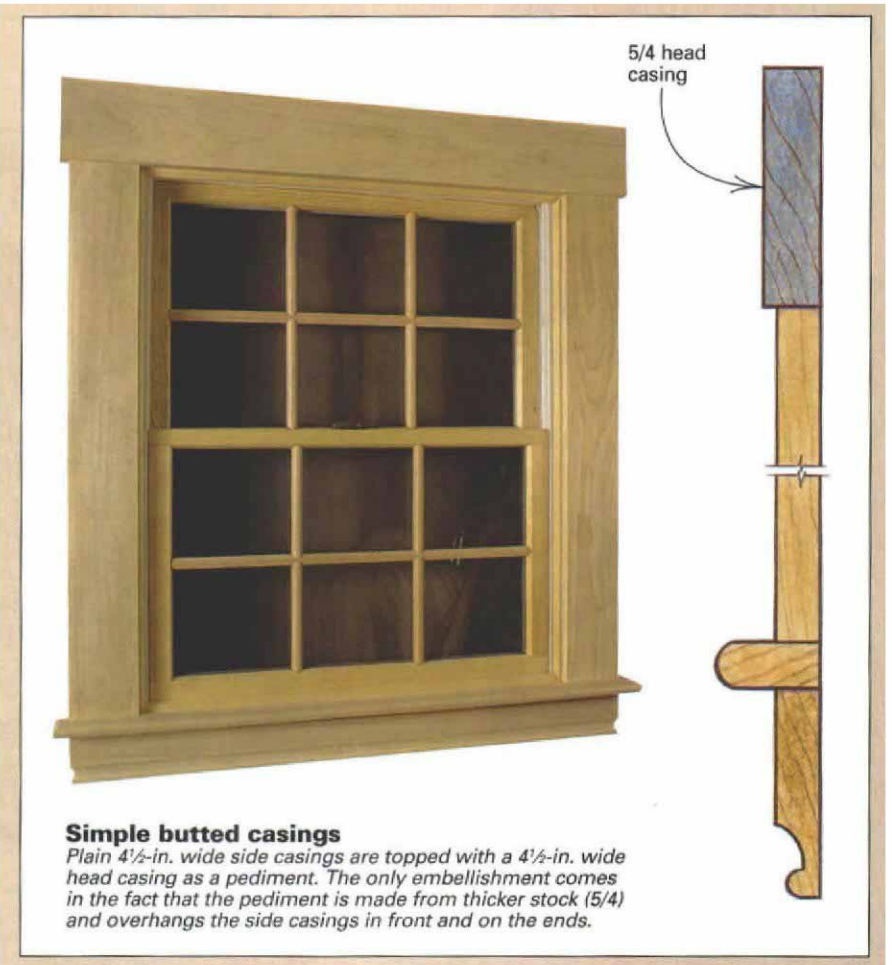
More layers add depth and detail to mitered casings—As the photographs of finished casing styles show (see p. 55), mitered casings can be built up in layers to give a handsome appearance. The tight, solid base offered by the flat casings makes the application of additional components easy.

There are plenty of backhands available at lumberyards, or you can make your own with a table saw and router. I install the backband in a sequence similar to the flat casings: fitting and nailing both sides and then fitting and nailing the head piece.

A three-part casing with an intermediate molding between the backband and flat casing adds another level of detail to the casing. I make the intermediate molding from ½-in. or thinner stock. Making this piece from thicker stock can result in a clunky, heavy casing. A thinner intermediate molding has a more delicate look.

On these multilayered casings, the outside edges may need dressing to present a single, flat surface. I do this with a sharp bench plane (photo to left, p. 58), working as close as I can to the stool horns, and I clean up the last few inches with a sharp chisel.

Pediments dress up butted casings—One of the beauties of adding a pediment to a butted casing-aside from the aesthetic ones—is that all



Simple butted casings
Plain 4½-in. wide side casings are topped with a 4½-in. wide head casing as a pediment. The only embellishment comes in the fact that the pediment is made from thicker stock (5/4) and overhangs the side casings in front and on the ends.

Bed molding above and a bead below dress up the pediment
A slightly wider head casing provides a nailing base for standard bed molding at the top of the pediment. Bullnosed on one edge, a thinner molding (7/16 in. by 1⅛ in.) overhangs the bottom of the head casing.

Plane the edges even. It's possible that the outside edges of all of the built-up moldings of a mitered casing won't be perfectly flush after they're nailed on. A couple of passes with a bench plane makes a flat surface. The last few inches at the bottom are cleaned up with a sharp chisel.

Run mitered returns long; trim them with a handsaw. The author uses one hand to hold the handsaw while he makes the cut.

Nail the head moldings on a flat surface. To align the pediment's components, the author nails the pieces together on a flat surface.

of the pediments can be made on a bench and added as a complete unit to the tops of the two side casings.

A basic pediment is built from 5/4 stock, with an applied bead across the bottom and a bed molding across the top (bottom photo, p. 57). The space between the top of the bead and the bottom of the bed molding should be at least equal to the width of the side casings. You can make the space wider for a bolder appearance, but beware of overdoing it. Make a trial pediment if there is doubt about the aesthetic effect.

To provide a base for nailing on the bed molding, I make the height of the head stock at least in. taller than the width of the side casings. The length of the head stock is equal to the distance between the outside edges of the side casings.

I draw a pencil line along the length of the head stock to indicate the bottom edge of the bed molding. With a square, I mark the bottom edge of each bed-molding return around the corner at each end of the head. This step is important because it's easy to cock a short return, and even a small misalignment will be brutally obvious once the pediment is installed.

The long piece of bed molding is mitered at each end. For convenience and safety, I cut the mitered returns long. I check the miters for a tight fit, then fasten the returns with glue and a few brads. To avoid nail holes, you can use masking tape to secure the returns while the glue dries. But this task is a slippery, three-handed job, and it won't make much difference in the final result. I use a handsaw to trim each return flush with the backside of the head (photo above right).

To make the bead, I resaw a piece of stock 7/16 in. thick by 1⅛ in. wide, but these dimensions are not critical. I cut a bullnose along one edge with my shaper (also an easy router job). The bead overhangs the casings by about ⅜ in. at each end. I shape the returns with a block plane, then finish the radius with a sharp file or a strip of cloth-backed sandpaper. The bead is applied to the head stock with glue and 4d finish nails. You can do the application free hand, but working on a flat surface like a table saw makes it easy to keep the back of the bead flush with the back of the head stock (photo bottom right).

Before installing the pediment, I cut biscuit slots on each side of the bottom, aligned with the centerlines of the two side casings. The slots in the side casings can be made before the casings are installed, but if you have enough ceiling height, it's just as easy to make them in place. Be aware of where you nail the bead onto the head stock so as not to put nails where they will interfere with cutting biscuit slots.

Pediments can range from simple to complex—As the photographs of casing styles show (see facing page), the pediment can be varied to increase the level of architectural detail. The simplest pediment is a plain piece of 5/4 stock, cut to a length that overhangs the side casings at each end, as the bead does on the pediment described above (photo top right, p. 57). Adding a bed or cornice molding to the 5/4 stock begins to echo the lines of a true entablature.

The next evolution is a 6/4 head with a bed molding, surmounting a square-cut 5/4 fascia or lower molding (photo top right, facing page). Each element overhangs the face and ends of the element below, in the same style as the classical Greek and Roman entablature.

Adding a cornice molding above the bed molding in any pediment completes the basic elements for the full entablature (bottom photo, facing page). For interior cornices, I use 4/4 or 5/4 stock, and I machine the curve on my shaper with a knife I ground for the purpose. I shape the returns by hand, as described above for stool and bead returns, because machine work on short, end-grain sections is usually awkward.

If you choose to include a cornice, you should increase the height of the head stock by the full height of the bed or cornice molding and install the cornice molding first. Remember to make the cornice long enough to incorporate the bed molding returns. Install the bed molding tight to the cornice, and take care to seat it properly. It's easy to cock the long molding in rotation, which will make fitting the mitered returns frustrating.

Aprons complete the casings—An apron is nailed to the wall below the stool and is the lowest component of a window casing. On a lot of

Cope the apron returns. Rather than miter returns, the author draws an outline on the molding profile and cuts it with a coping saw.

Different aprons fit different casing styles. The author adds the apron after the rest of the window is cased, experimenting with the apron design to find one he thinks works best with a particular window-casing style.

windows, a piece of casing stock serves as the apron, with its ends cut square, angled or returned, according to the whim of the carpenter or designer. There is no equivalent to the apron in classical architecture, which is why aprons in neoclassical window trim exhibit such a variety of profiles.

The apron has a specific aesthetic function, and there are several profiles that I use (bottom photo above). The apron visually returns the window to the plane of the wall below. About 3½ in. of height works well; if the apron stock is wider, it will look boxy and unbalanced, but narrower sections can be successful. I mill the profiles on the shaper and table saw, but a router will also handle this job easily. The simplest pattern echoes the backhand that is used on the mitered casings. I make this piece out of solid stock, but a cove cut with an applied bead on the bottom is a simple alternative.

The apron returns are coped rather than mitered. I sketch the profile free hand, but you might prefer to use a paper or flexible plastic template. I remove the waste with a coping saw (top photo above), and I dress the return with a sharp file. This work goes quickly in contrast to mitered, glued returns, which are awkward and generally are not worth the effort, even on bright finished trim. ❑

Joseph Beals III is a designer and builder in Marshfield Hills, Mass. Photos by Jefferson Kolle.

Layers of successively thicker stock look elegant
Here, the ¾-in. side casings support a pediment composed of 5/4 square stock and 6/4 head casing, again capped with a bed molding. Each element overhangs the face and end of the element below.

A cornice is the crowning touch
Adding a simple cornice piece above the bed molding and head casing completes the basic elements for a formal entablature.