Cutting casings for ten doors at a time greatly speeds production.

Fast, Accurate Interior TRIM

Precutting all of the trim at the same time speeds the installation of baseboard and door and window casings

by Byron Beck

I began my construction career working in the trenches — literally — since the crew I was on formed foundations as well as framed and finished houses. Being a laborer was hard, dirty work, and I quickly decided that if I was going to stay in construction, I needed to learn to do something that was easier on my body. One winter, when work was scarce, I managed to get assigned to a trim crew. I soon realized I'd found my calling.

That was 15 years ago; now I run a company that does nothing but finish work. Our crews trim everything from commercial buildings to high-end residences. We're constantly looking for ways to simplify procedures so we can cut labor costs. It's a tribute to the skill and organization of our carpenters that we can compete over such a wide range of projects. As a subcontractor, the success of my business also depends on forming relationships with builders. Fortunately, I've worked with many of the same contractors for years. I try to touch base with them before they order trim,

Figure 1. The author's crew use special workbenches to assemble jambs and hang doors on site. The benches hold door panels on edge at a convenient working height, and are equipped with all the tools and jigs needed to hang doors and install hardware.

because starting out with the right materials on hand increases our chances of making money.

Hanging Doors

We rarely use prehung door units, preferring instead to hang the doors ourselves (see Figure 1). Factory prehung units are cheap and easy to get, but the quality is just not there. Mortises are often poorly cut, and you're stuck with someone else's idea of what the margins should be. Many door-hanging companies also clip hinge screws so the units will fit into rough openings, but there's always the chance hinges will work loose when they're secured by fasteners that haven't got much bite. As for shop-hung doors, even though many of the houses we trim have custom-made doors, little is gained by letting shop guys put them in jambs. There's not much cost savings, and it delays delivery of the doors. By hanging the doors ourselves, we can also determine the number of hinges to use. Standard-height doors get three hinges; those that are taller than 6 feet 8 inches get four hinges.

Jamb details. The single best way to ensure that door casings go on quickly is to put them on jambs that are the right width. Mathematically, 2x4 walls with 5/8-inch rock should be 4 3/4 inches thick. But walls always end up thicker than they're supposed to be, so I ask the GC to supply jambs that are 1/8 inch wider than the wall. That way, we don't have to chop drywall to get casing miters to lay flat. This is a minor point on real production jobs, but something you can't afford to overlook when trim has to be just so.

Around here, Mediterranean-style houses are very popular. Most are detailed without interior casings — the drywall laps right onto the jambs, and reveal lines are created by L-bead or bullnose-bead around the openings. This means that door and window jambs are narrower than usual because they land flush with the edge of the studs instead of projecting 1/2 inch. It's also important to remember that in these buildings, all windows and doors must be installed before drywall.

The GC usually gives us knockdown jamb units, which we assemble by gluing and screwing the heads into rabbets in the side jambs. We've hung plenty of doors on jambs made from 4/4 stock, but we prefer 5/4 jambs because they're stiffer and there's more landing area for casings. The extra-wide edge is especially important on Mediterranean-style houses because we cut shallow kerfs along the edges of the jambs to ensure that the drywall reveals come out even (Figure 2). When the rocker applies beads around the opening, he tucks one leg of the bead into this slot. The buildings we work on usually get 1/2-inch drywall, so we make 1/8-inch-deep kerfs and instruct the rocker to use 5/8-inch bead. It's important to mill the right size kerf; if it's too deep the bead will flop around because it doesn't bottom out.

Fitting hinges. We use a router and a Bosch hinge mortising jig to cut in hinges. One carpenter routs while his partner drills screw holes and attaches hinges. If there's a large centrally located area to work in and the building is compact, we machine all the doors and jambs at once. But if there are a lot of doors (say 50 or more) and

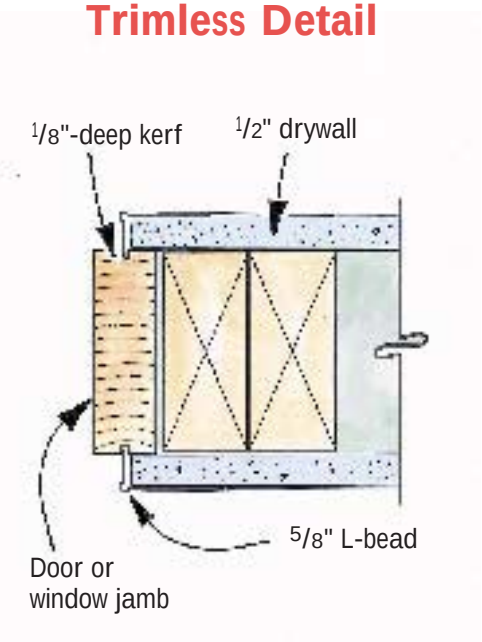

Figure 2. The author uses either L-bead or bullnose corner bead (photo) for a trimless, Mediterranean look. To ensure a clean reveal, he cuts a shallow kerf in the edges of the jambs, into which one leg of the bead is inserted (illustration).

they are spread out over a large area, there's a good chance someone will get confused about which way some of them swing. So we find we make fewer mistakes when we hang doors five or ten at a time. Working with smaller batches also reduces the chances that a single error will ruin all of the doors.

Installing Jambs and Doors

After a jamb is assembled, we put it in the opening and plumb the hinge side both side to side and front to back. Next, we level the head by squaring off the hinge jamb with a framing square, and fasten it in place. Then we tack the strike side so it's roughly parallel to the hinge jamb. Finally, we hang the door, shimming the strike side till the margins are straight and even all around. This is easy to do by eye. On stain-grade work, we aim for margins the thickness of a dime; for painted trim, gaps are the thickness of a nickel, ensuring that the door still fits after a few coats of paint.

We use 15-gauge pneumatic-driven nails (most of the guys on the crew use Senco SFN40s) to hold jambs in place. Typically, we use five pairs of $2^1/_2$-inch nails per side. The strike side gets them high, low, then evenly spaced between; we nail the hinge side high, low, and at each hinge. To keep heavy doors from sagging, we shoot a couple of long screws through the jamb behind the upper hinge. If we can find long screws that match the hardware finish, we'll send them through the hinge itself.

Installing Jambs Without Doors

I prefer to install jambs and doors at the same time, but if the door delivery is delayed, I put the jambs in without them rather than bring the whole project to a grinding halt. And in a Mediterranean-style house, it's impossible to drywall until the jambs are in.

One problem with installing jambs before you have doors is that it's hard to know exactly what size to make the finish openings. An oversize door can always be planed to fit, but if the door is slightly undersized, you have three

Installing Jambs Without Doors

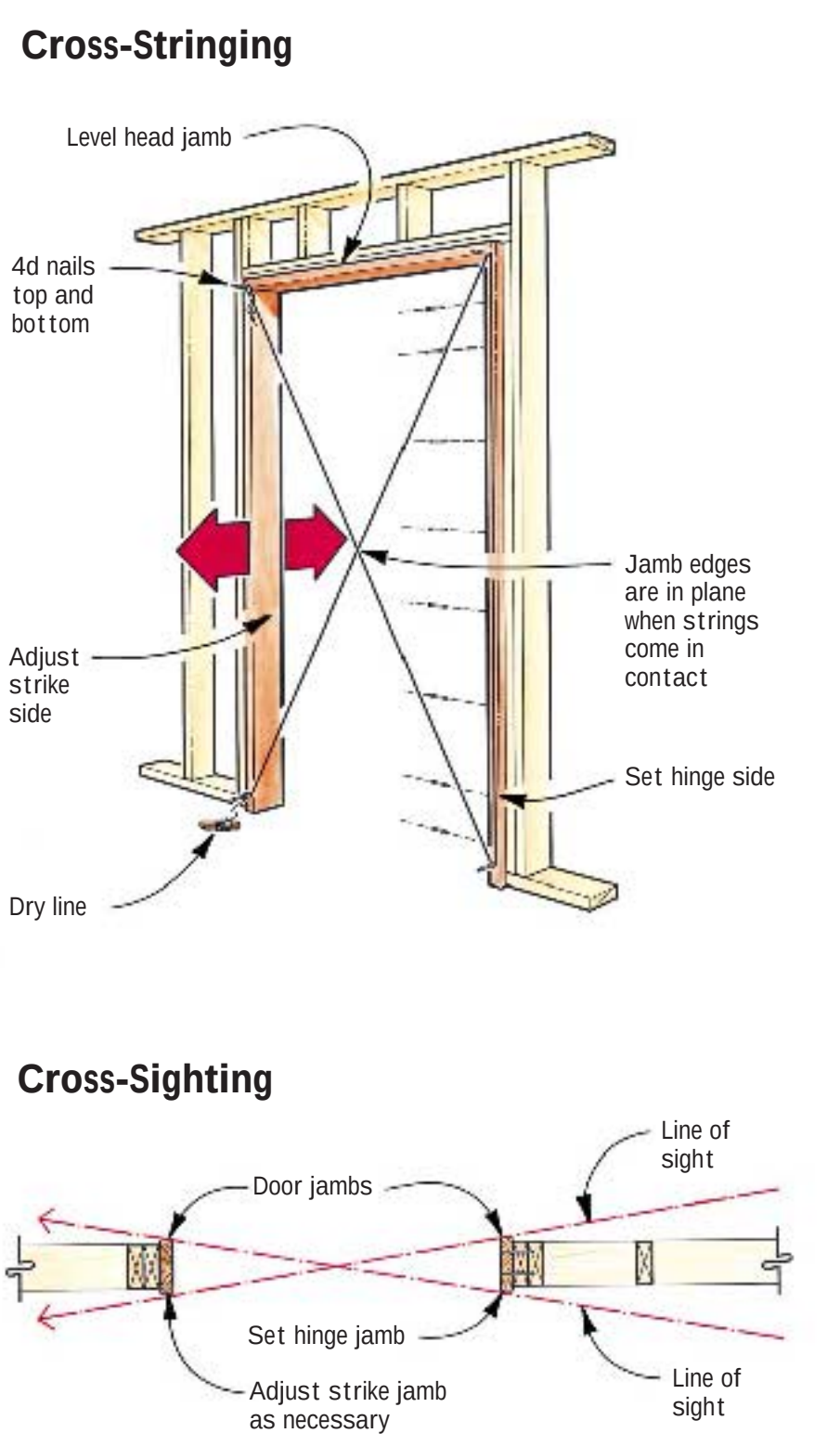

Figure 3. After fastening the hinge-side and top jambs, stretch strings diagonally across the opening (top). Adjust the bottom of the strike-side jamb in or out until the strings just touch. To check the jambs by eye (above), move about 5 feet diagonally away from the doorway and sight along the edge of the hinge jamb through the opening to the far side of the strike jamb. Adjust the strike jamb as necessary. When the edges align, the strike jamb is in plane with the hinge jamb.

Figure 4. To speed installation of extension jambs, preassemble them on a workbench, then shim and nail to the jack studs just like a door jamb.

equally undesirable choices: You can hope no one notices the oversized strike-side margin; you can split the difference by shimming behind the hinges; or you can remove, cut down, and reinstall the jamb unit. If the doors aren't on site, we avoid the problem altogether by making jamb openings slightly undersized. That way, we're covered if the blanks are a little small.

Cross-stringing. Even if you haven't got the doors, it's not hard to install jambs so they're straight and plumb. But few walls are perfectly flat, so setting jambs parallel to the studs doesn't guarantee doors will lie flush when closed. One technique we use to ensure that jamb components are in the same plane is called "cross-stringing." Here's how it works (Figure 3, page 29).

Fasten the hinge and head jambs in the usual way, but don't fasten the strike-side jamb yet. Tack 4d finish nails high and low into the edges of the side jambs. Working from the hinge side of the opening, stretch a dry line from nail to nail diagonally across the opening, making sure the string touches the jamb at all four locations. The strings should barely touch where they cross each other. If they're in contact, move the lower edge of the strike jamb in or out of the opening, then move the jamb back until the strings just touch. At this point, the strike side is in the correct position relative to the face of the hinge jamb. Plumb and straighten the strike jamb, then double-check it using the string to make sure you didn't move it out of plane.

Cross-sighting. Stringing jambs is foolproof, but it does take some time. Cross-sighting is faster and does just as good a job. Begin by plumbing and leveling the hinge and head jambs. Plumb the strike side, but don't drive the nails home. Now move to a position where you can sight diagonally across the opening — you should be about 5 feet back from the nearest jamb and fairly close to the wall. You're in the right spot when you can sight the edges of the near and far jamb at the same time. Since you know that the hinge jamb is plumb, the strike side is good, too, when it sights parallel. If the edge of the strike-side jamb is not parallel to the edge of the hinge-side jamb, adjust it until it aligns. Double-check by sighting from the other side of the opening. I know it sounds complicated, but once you understand what cross-sighting is all about, it's very easy to do. And you'd be surprised at how accurate it is.

Casing Doors and Windows

We like to cut all of the door casings at one time. The job is often split between a journeyman, who measures and cuts, and an apprentice, who installs. Start by marking the reveal line on the jamb using a pencil and an adjustable square. Make a mark at the corners where casings meet, and every foot or so along the jambs.

To determine the length of side casings, measure the distance from subfloor to horizontal reveal line; this is the distance from the short point of the miter to the square cut at the floor. (We usually cut casings about $^1/_4$ inch short because the finish floor, which is usually installed after we've put up the trim, will cover the gap.) To find the length of the head casing, measure horizontally between your marks in the corners of the head and side jambs; this is the short-point-to-short-point dimension of the head casing. You only need to measure once for the side casings, because they will fit either side.

Windows. We use a similar procedure to measure window casings. For picture-framed trim, measure from reveal to reveal all the way around; for windows with stools, measure stool to reveal for side casings, and reveal to reveal for heads.

The jambs on the windows we case are rarely the full thickness of the wall, so we have to extend them. We make frames out of 4/4 stock and install them as units. They're held in position the same way door jambs are, with shims and finish nails (Figure 4).

This method works well for both production and high-end work. Just make sure you keep track of which casings go on which doors and windows. I can't overstress the importance of this, especially when the guy who installs casings isn't the one who measured them. To avoid confusion, write a number on the back of each casing that matches the number of the door

or window it goes with. Stack the parts for each unit and tape them together so they won't get mixed up. We use painter's masking tape, because it doesn't leave any residue and it's easy to break open the bundle. The installer takes it from there.

Measuring and cutting a large amount of trim at one time can really increase efficiency. You'll eliminate repetitive measuring and spend a lot less time walking back and forth to your saw.

Baseboard

My first job on a finish crew was doing baseboard. The older guys didn't want to spend all day on their knees, plus they probably figured I couldn't do much damage down at floor level. For weeks at a time, I did nothing but baseboard. After a while, I began to look for ways to speed production. One of the techniques I came up with was measuring and cutting all the base in a room at the same time.

Planning and layout. Start by deciding in what order you're going to install pieces. The order of installation determines which ends get coped and which butt the wall. In general, right-handers work counterclockwise around rooms, because the copes are easier to cut that way; left-handers go the other way. Then take a short scrap of base, hold it where the butt end goes, and trace its outline on the adjacent wall (Figure 5). Do this at every corner where a coped joint occurs.

Measuring. Now measure the distance from the unmarked end of the wall to the trace mark at the far corner. The mark represents the short point of the miter we use to guide the cope cut. Measure every wall in the room and write the dimensions on a sketch of the floor plan. Measurements of long walls that require scarf joints will be more accurate if you hook your tape on a nail driven into the trace line and measure back the other way.

Baseboard stock is usually 12 to 16 feet long, which means we can usually do walls in one or two pieces. As long as there's only one scarf joint per wall, we're comfortable cutting everything at once. But if there's more than one scarf joint in a run of trim, install the coped end first, then any pieces in the middle, and save the piece that butts into the corner till last.

Cutting and installing. Once you have a complete list of dimensions, go to the saw and cut all the base. You'll be surprised how little time it takes to make copes when you do them one after another. Our carpenters rarely use their coping saws; instead, they cope with Bosch D-handle jigsaws. It's much faster than hand coping, and what they can't get with the jigsaw they remove with a small Makita angle grinder. As with casings, the cut-man bundles pieces for his partner to install.

We can cut and install all the base in a 20x20-foot room in 30 minutes, about half the time it takes doing it one piece at a time. Normally, we do all the trim before hardwood floors go down, and use shoe molding to cover the gap between base and flooring. We set the height of the base by inserting spacers between the molding and the subfloor. But if the wall is to be paneled, the base has to be dead level. In that case, we use a transit to shoot reference lines.

Mediterranean houses typically have some rooms with stone floors. Since no one wants to see shoe molding or continuous grout joints at the base, we can't install base till after the stone is in. There's no way around having to scribe the base to the floor, but we can still cut all of it at the same time. We'll cut the base to length when we do the rest of the trim, then scribe and install it later on.

Figure 5. Precutting all baseboard speeds installation. To get accurate dimensions, trace the outline of the base molding on the wall (top) and measure to your mark (above). This is the short-point of the miter that will guide the coped corner cut.

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