

## Chapter 19. Interior Finish Work

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### Tools needed by volunteers:

Hammer  
Nail apron  
Tape measure  
Square  
Utility knife  
Pencil

### Materials needed:

Casing material  
Paslode 2½” finish nails  
Wood putty  
Caulk  
Weatherstripping  
Wood glue  
[Weathermate™ Construction tape](#)  
[Weathermate™ Straight Flashing tape](#)

### Tools and equipment needed:

Extension cords  
Chop saw  
[Coping saw](#)  
Paslode nailers  
Drill driver  
6’ Level  
Nail set  
Caulk gun

### Personal Protection Equipment:

Safety glasses (required)

**Safety First! Review the Safety Checklist before performing tasks in this chapter.**

## 19.1. INSTALLING FLOOR TRIM

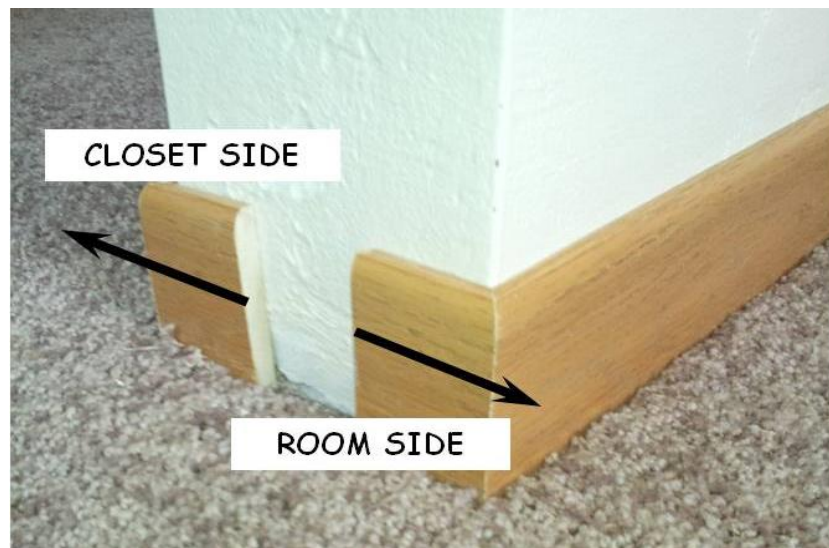
### 19.1.1. Preparation

1. Make sure all door trim has been installed.
2. If the studs are not marked on the floor, use an 8d finishing nail to locate one and then use a tape to locate the others at 24" o.c.
  - a. Start on one side of an electrical box, then the other side if no success. Alternatively, start about 23" from the intersection with an exterior wall, or under a window King stud.
  - b. On basement walls that are unfinished on one side, measure on the back side and transfer to the inside.
  - c. Drive the nail into the wall just below the level of the top of the floor trim (beware of steel posts in the basement).
  - d. If a stud cannot be located, do not nail above the bottom plate.
3. Scrape away excess plaster on walls near the floor. Pay particular attention to inside corners.
4. In carpeted areas, hold floor trim off the floor the thickness of a scrap piece of floor trim ( $\frac{3}{8}$ "). In areas with vinyl, install floor trim touching the vinyl.
5. Do not install floor trim in the kitchen or bathroom until cabinets have been installed.
6. Set all nails and fill holes with putty.

### 19.1.2. General Installation Instructions

1. In each room, start by installing the floor trim on a wall with two inside corners and cut that piece with straight end cuts. Typically, this is the wall opposite the door. Plan the installation to avoid pieces that have both ends coped, or one end coped and the other beveled.
2. Floor trim should not be cut to fit around cold air return vents. Because return vent covers are installed sufficiently high above the floor, the trim will run under the return vent covers.
3. All inside corners must be coped and all outside corners must be mitered. Glue each outside mitered corner.
4. When a splice is required, cut matching 22.5° bevels arranged so the overlap is angled away from the main viewing area of the room.

5. Use the following procedure to measure for sliding closet doors (see Figure 19-1).
  - a. At the top of the door, measure from the door to the front corner of the wall. Transfer that measurement to the floor and mark the plaster (to provide a uniform reveal top to bottom).
  - b. Measure outside that mark  $\frac{1}{8}$ " , mark the plaster at that point and make another mark  $1\frac{3}{8}$ " inside that, toward the back of the closet. This provides sufficient space between the two trim pieces for the front door.
  - c. Place the door guide between the two doors, line up the front door with the first mark from Step b above. Slide the back door to the opposite wall and mark the opposite wall or jamb at that point. From that point, mark the wall  $\frac{1}{8}$ " toward the front of the closet, and another mark  $1\frac{3}{8}$ " toward the back. This provides space between the two trim pieces for the back door.



**Figure 19-1. Sliding Door Floor Trim.**

6. For folding closet doors, measure the trim to also end about  $\frac{1}{8}$ " from each surface of the closed door.

### **19.1.3. Installing Floor Trim**

1. Using  $2\frac{1}{2}$ " Paslode nails, nail about 1" from the top of the floor trim into studs (24" o.c.). Nail into the bottom plate only if necessary. Stay 1" from the bottom of the trim and angle the nail slightly downward to hit the plate.

**NOTE:** Do not nail square cut ends of floor trim at an inside corner. Cut the "coped" piece long enough to hold the square end tight to the wall. (This avoids splitting the square-end piece.)

2. When installing very short pieces, the Paslode nail may split the wood. Use glue to hold in place and if a nail is necessary, drill a pilot hole and nail by hand.

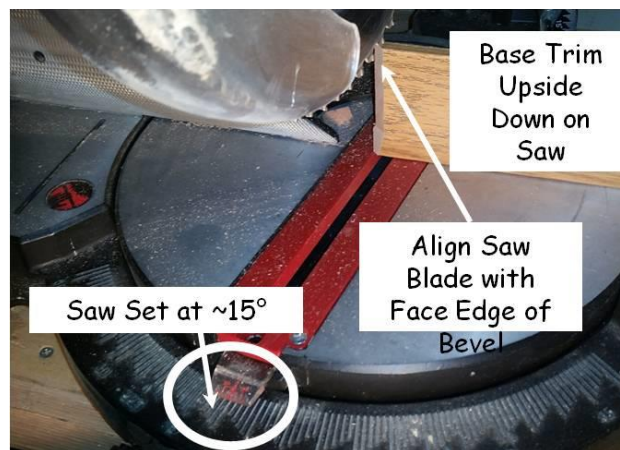
#### 19.1.4. Coping

1. Determine which end of trim needs to be coped based on the preparation from Section 19.1.2.
2. Bevel cut - Using the chop saw, cut a 45° bevel on the end to be coped so that the back side of the trim is longer than the face side. (See Figure 19-2).



**Figure 19-2. Base Trim Bevel Cut.**

3. Relief cut - Turn the trim piece so the bottom edge is up and the face side is toward the front of the saw. Set the saw at 15°. Align the saw blade at the intersection of the 45° beveled edge and the face of the trim. (See Figure 19-3).



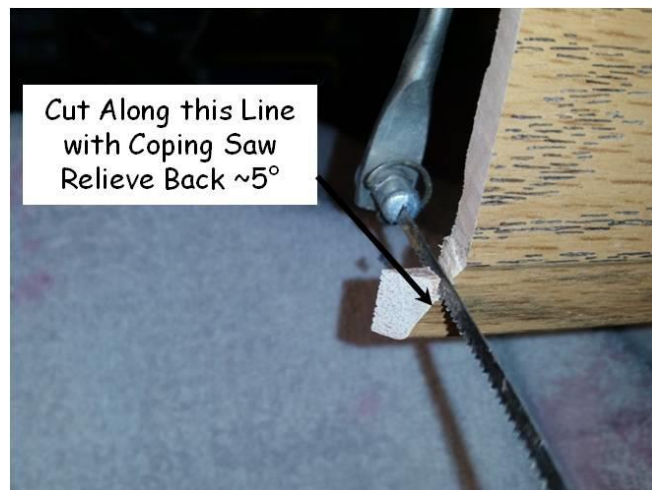
**Figure 19-3. Relief Cut Alignment.**

4. Cut down to the edge of the flat face (about ½” from the bottom) leaving the curved edge in place. (See Figure 19-4).



**Figure 19-4. Relief Cut**

5. Coping saw cut - Hold the trim piece on a flat, stable surface. Use a coping saw with the narrowest blade and finest teeth spacing available. Hold the blade at about a 5° back angle. Cut following the uncut, curved edge of the trim. Smooth as needed with a fine, half-round file. (See Figure 19-5).



**Figure 19-5. Coping Saw Cut**

6. Align the coped trim end tightly against the square cut corner trim end. Nail the coped trim piece. Do not nail the square cut trim piece. The coped end should hold the square cut trim piece in place snugly. (See Figure 19-6).



**Figure 19-6. Finished Coped Joint**

## **19.2. INSTALLING CLOSET SHELVES AND POLES**

### **19.2.1. Installing Clothes Closets**

1. Determine the number of shelf brackets needed - typically, one bracket for each stud, except for any studs within 10" of a corner.
2. Make sure the angles of each bracket for a given closet are identical (i.e., they form the same angle between the wall and the shelf).
3. Cut the shelf and the clothes pole for length:  $\frac{1}{4}$ " less than the wall dimension.
4. Starting with the two end brackets, mark the back wall  $6\frac{9}{4}$ " from the floor to locate the top of the bracket. Using a small finishing nail at a spot that will be hidden by the shelf, verify the presence of blocking about 1" from each corner. Place the top of a bracket at the  $6\frac{9}{4}$ " mark and mark the center of the top hole. (This will allow later adjustments to level the shelf.) Pre-drill and attach the bracket using a 2" white screw in this hole. Do not drive a screw into the bottom hole at this point.
5. The floor should be marked for location of other studs in the closet. If so, using a 6' level, locate and mark the stud locations  $6\frac{9}{4}$ " above the floor. Using a small finishing nail, confirm the stud location just above these marks where it will be hidden by the shelf.

**NOTE:** If the floor is not marked, search for a stud by driving a finish nail into the wall along the floor. (Test at less than 2" above the floor so that any holes will be covered by the floor trim.) Once located, continue as above.

6. Stand the shelf on its long edge on the two corner brackets and against the back wall. Place a level on the top of the shelf and use this “straight edge” to adjust the two corner brackets for level. It can then be used to establish the height of the remaining bracket(s).

**NOTE:** In basement closets, the floor may not be sufficiently level at the back of the closet to allow the above procedure to work. Instead, mark both corners at 69¼” but install only one bracket to start. Using two people, again stand the shelf on edge on that single bracket. Place the level on the shelf as above, hold the second bracket against the wall at the opposite end of the level, and adjust until the shelf is level. Mark and attach intermediate brackets as above.

7. Hold any additional brackets tight against the shelf edge where studs have been located and mark the center of the top hole in each bracket. Attach these additional bracket(s) using a 2” white screw in the middle of the top hole.
8. Lay the shelf down on all the brackets. Step back and look at the shelf to confirm that it is level (e.g., Is it parallel to the door header? Does it have any dips or rises?). Adjust bracket heights as needed and recheck.
9. Use a speed square (NOT a level) against the bottom of the shelf and the vertical edge of the bracket to ensure the bracket is vertical. Secure the bracket to the wall stud with a 2” white screw through the bottom hole of the bracket.
10. Use a speed square against the front edge of the shelf and along the side of the top edge of the bracket to ensure that the bracket is square to the wall/shelf. Secure the bracket to the shelf with two ¾” white screws.
11. Install the clothes pole with a ¾” white screw into the hole in the back side of each bracket. Be sure the “best” side of the pole is facing forward in order to hide any defects or blemishes on the pole.

### 19.2.2. Installing Linen Closet

1. Shelf heights and depths are as follows:

<u>Height of cleat (top)</u>	<u>Shelf Depth</u>
24" (bottom shelf)	23"
40"	23"
56"	23"
72"	12"

2. Cut strips of 2" wide cleats from ¾” pine for both sides and back walls. Bevel the front corners of the side cleats to avoid catching linens, towels, etc.

3. Cut side cleats so they fit the full depth of the closet (ensuring overlap with a stud or blocking on both ends). Cut back cleats to fit snugly between installed side cleats.
4. Find location of side and back wall studs.
5. Measure and mark all cleat heights. Use a level to confirm that shelves will be level from front to back and across the front and back edges.
6. Install side cleats first to ensure they firmly catch the corner studs since these will carry the majority of the weight. Secure with one 2½” screw into each end.
7. Install the back cleat with one 2½” screw into each end. Be sure to drive the screw with enough of an angle to catch the stud.
8. Paint cleats to match wall color
9. Cut shelves for length and install. Do **not** nail the shelves to the cleats.

### **19.3. INSTALLING BATHROOM ACCESSORIES**

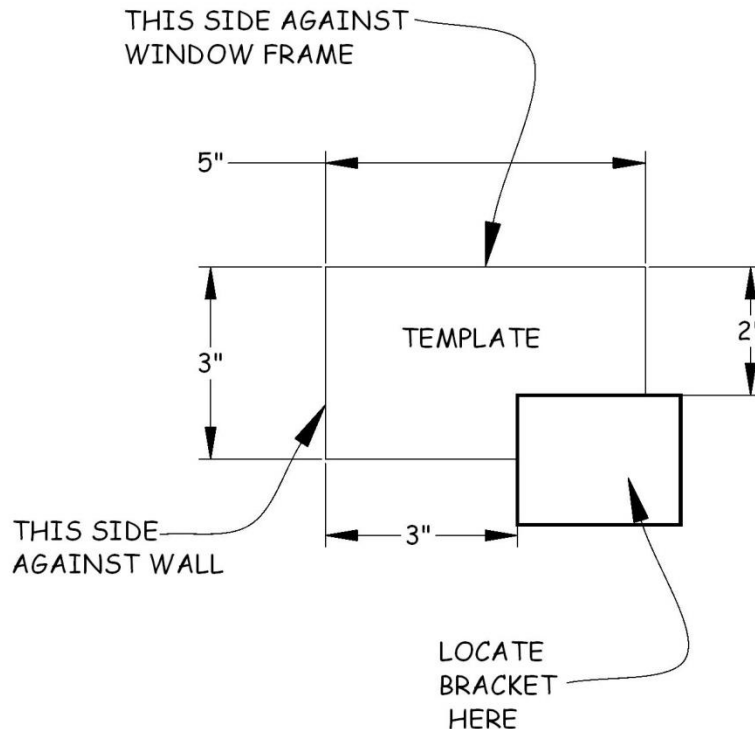
1. If homeowner is present, get their input as to where they want these accessories placed. The following placements are recommended.
2. Install towel bars in bathroom 55” above floor, into studs if possible. If not, use ¼” winged toggle bolt anchors.
3. Install toilet paper holder 22” to 24” above floor, preferably fastened to the bathroom vanity for strength. If toilet paper holder is to be fastened to a plaster wall, locate a stud to hang one end and use a ¼” winged toggle bolt anchor to support the other end.
4. Center the mirror over the vanity with the bottom of the mirror 2” above the counter back splash. Position the short sides of the mirror at the top and bottom. Fasten the top and bottom of the mirror to studs and/or blocking using the plastic clips provided.
5. In bathrooms for handicapped persons, install grab bars adjacent to the shower and toilet by fastening into blocking previously installed. Center the vertical bar 33” off the floor (see the House Plan for the size and specific location of the bars).
6. Install bathrobe holder centered on the backside of the door or on the end of the tub wall.
7. Install shower curtain rod.

### **19.4. HANGING MINI-BLINDS**

1. Create a template from a piece of 3"x5" cardboard as shown in Figure [19-7](#).



2. Hold the template against the top of the window frame (against the header) and install the blind mounting brackets on each side of the window as shown in Figure 19-7.



**Figure 19-7. Miniblind Installation Guide.**

3. Install mini blind by snapping it into the brackets, being sure to center the mini blind in the opening. Secure by tightening the bottom screw to “clamp” the mini blind into the bracket.

## **19.5. COMPLETING CAULKING**

1. Cut only a small opening in the caulk tube and take care not to apply too much caulk. Clean up any excess caulk immediately (acrylic/latex with wet rag, silicone with mineral spirits).
2. Make sure the surface is clean (remove all plaster, paint, dust, etc.) and dry.
3. Caulk all around each window frame where it meets the plaster (acrylic/latex, white).
4. Caulk all around the shower/tub frame where it meets the plaster (silicone, white).

## **19.6. COMPLETING AIR SEALING**

1. Verify that all the following air sealing has been completed. If not, complete it as per the instructions in Section 12.3.

2. Gaps around the top and sides of cold air return boot and duct joints are sealed with Weathermate™ Straight Flashing tape.
3. Gaps between cold air return frames and plaster are sealed with caulk. If needed, use a putty knife to push the caulk into the gaps and smooth the caulk flush to the wall or ceiling surface. See Figure 19-8.



**Figure 19-8. Sealing Plaster Gaps Around Cold Air Returns**

4. Gaps around basement ceiling heat ducts and plaster are sealed with caulk.
5. All holes around electrical boxes on exterior walls and ceiling of main floor are caulked.
6. Caulk or spray foam all penetration areas around the sill box where foam was fully or partially cut out. (Must be completed after all sub-contractor work is done).

### **19.7. INSTALLING HVAC VENT COVERS**

1. Before installing HVAC vent covers on cold air returns and basement ceiling warm air registers be sure all air sealing in Section 19.6 has been completed. Main floor warm air vent covers will be installed after carpeting has been installed.
2. Verify openings for cold air return covers are the correct size and covers will fit. Clear any plaster that prevents cold air return covers from lying flat against the wall. Reshape the metal, if needed. Cold air return vent covers should sit on top of floor trim as shown in Figure 19-9.



**Figure 19-9. Positioning of Cold Air Returns.**

3. Verify openings for basement ceiling heat vent covers are the correct size and the covers will fit properly. Clear any plaster that prevents the covers from fitting flat against the ceiling. Make sure air flow adjusters operate easily.
4. Install HVAC vent covers using the provided installation screws being sure the screws go into studs or blocking.

### **19.8. INSTALLING SCUTTLE COVER.**

1. Verify the scuttle cover has been assembled and finished. If not, refer to Sections 13.5 and 13.6 and complete per the instructions. There should be two sections for the cover: the bottom piece (consisting of sheetrock, OSB, foam, and poly) and the top piece (consisting of foam and poly only). If the piece with the sheetrock has not been painted, paint it the same color as the ceiling.
2. Trim and smooth the ceiling rock and plaster flush with the top of the 2x4 framing of the scuttle opening. Clean the 2x4 framing in preparation for weatherstripping. Install two rows of weatherstripping all around the top edge of the 2x4 scuttle box framing. The first row should be flush with the side of the frame and the second row about ½” away from the first. Make sure there are no gaps in the weather stripping where pieces meet or at corners where pieces meet. This needs to be tightly air sealed.
3. Place the two sections of the scuttle cover into the attic (the two sections are too large to be installed into the attic as one piece). Place the top piece (poly and foamboard only) on top of the bottom piece (sheetrock, OSB, foam and poly) making sure the sheetrock is at the very bottom. Tape all four sides together using Weathermate™ Construction tape, Set the cover onto the frame and weatherstripping as one unit so the attic opening is sealed.