# Chapter 17. Cabinets



**Tools needed by volunteers:**

Nail apron
Tape measure
Hammer
Square
Utility knife
Pencil

**Tools and equipment needed:**
Extension cord
Lighting
Finish nailer
Chop saw
Table saw
Circular saw
Oscillating saw
Jig saw
Belt sander
Drill
Driver
Wood chisel
Framing square
Caulk gun
6’ Level
3’ Level
Cabinet & miscellaneous clamps
Rubber mallet
Cabinet kit
Stepladder

**Materials needed:**

2x4 Lumber, 54” long
1”x4” Pine board
¾”x2-7/8” Plywood variable length strips
¾” Plywood, scrap
Cabinet kit
Cabinets
Countertop
1¼” Collated finish nails
2½” Collated finish nails
Tapered shims
¼”x1” Variable length shims
Wood glue
Wood putty
Weatherstripping
Air sealing caulk
Painter’s tape
Flashing tape

**Personal Protection Equipment:**

Safety glasses (required)

**Reference Materials:**

Cabinet Plan

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

## 17.1. PREPARATION

1. Unpack all cabinets and use the box material to cover all vinyl surfaces in the house to protect against damage.

2. Inspect the units for damage and report any to the Construction Supervisor. Check the kitchen Cabinet Plan and confirm that all required units are available on site. If a microwave is to be installed over the stove, verify the cabinet above the stove is a 12" cabinet. If not, verify that cabinets above the stove and refrigerator are both the same size, either 14" or 15".

3. Set up a temporary work bench to hold materials and tools.

4. Remove the doors on all cabinets by removing the screws from the stiles (leave the hinges on the doors). Collect the hinge screws and all cabinet related hardware in a container and store on the windowsill.

5. Remove all shelves from the cabinets.

## 17.2. LAYING OUT KITCHEN UPPER CABINETS

### 17.2.1. With Blocking Installed.

1. If blocking has been installed behind the sheetrock, upper cabinets will be mounted directly to the wall. Upper cabinets are installed with the bottom 54" above the floor.

2. Proceed to Section 17.4 (Upper Cabinet Installation).

### 17.2.2. Without Blocking Installed.

1. When blocking is not available, the upper kitchen cabinets will be installed by mounting them to 2-7/8" wide strips of ¾" thick plywood. This installation method is used because the screws holding up the cabinets go into the continuous plywood, rather than having to precisely locate the cabinet screws to hit a stud while holding them in place. The cabinets are 30" tall, with the top of the cabinet 84" and the bottom 54" from the floor. The top plywood support strip will be located about 1" down from the top, and the bottom of the lower strip about 1" up from the bottom of the cabinets. The following steps refer to Figure 17-1.

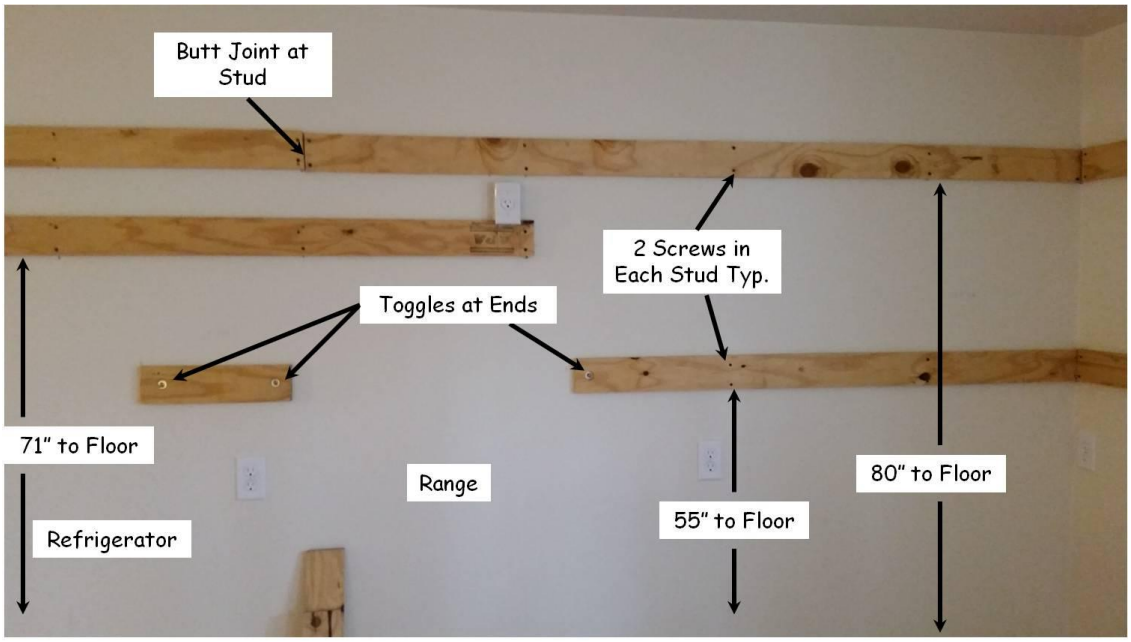


**Figure 17-1. Kitchen Cabinet Support Strips.**

2. Using the Cabinet Plan, mark the position(s) of the upper cabinets on the walls using light pencil lines. The Plan will specify an overall length (OAL) of the cabinets. Using a level, draw a horizontal line 80" up from the floor extending from the corner for the OAL of the cabinets. The OAL lines will be approximately ¾" short of the eventual end of the cabinets, since they will be mounted ¾" off the wall.

3. Do the same with another line 55" up from the floor, except where the range and refrigerator will be located. These areas need lines 71" from the floor for 14" cabinets, 70" for 15" cabinets, or 73" for 12" cabinets.

   **NOTE:** The 71" dimension in Figure 17-1 for the bottom strip location for cabinets above the stove and refrigerator is for 14" cabinets. For other size cabinets, adjust the bottom strip position so the bottom of strip will be 1" above the bottom of the cabinet.

4. Locate all the studs within the cabinet outline, and tack 2½" finish nails into each at the previously drawn lines. These nails will serve to temporarily support the plywood during installation and will aid in locating the support strip installation screws. Also, with pencil, mark the stud locations approximately 38" above the floor. These marks will be handy when installing the base cabinets but will be covered by the countertop backsplash.

## 17.3. INSTALLING KITCHEN CABINET SUPPORT STRIPS

1. Locate suitable lengths of ¾”x2-7/8” plywood strips in the trailer. Determine the lengths required per the Cabinet Plan and cut to length. Many installations have more than 8’ of cabinets, so the plywood strips must be butted together at a stud.

2. Rest the support strips in place on the nails and mark the stud locations. Lower the strips, and drill two 3/16” clearance holes through the plywood strip at each stud location, about ¾” from the edge of the plywood. Where the strip butts up to another strip at a stud, drill the holes ¾” from the edges and the end, at an angle so the screws will hit the stud when installed.

3. If the end of a support strip lands between studs, prepare the end for a ¼"x3" winged toggle bolt before screwing the strip to the wall. With a 1” spade bit, drill a counterbore approximately $^{3}/_{16}$” deep (two plies of the plywood). Then drill a ⅝” through hole in the center of the counterbore.

4. Hold the strip to the wall again and mark the location of the toggle bolt hole on the wall. Lower the strip once more, and carefully drill a ⅝” hole just through the sheet rock. Too deep punctures the poly behind and can wrap the drill bit with insulation.

5. Assemble a $^{5}/_{16}$”x1” fender washer on the ¼"x3" winged toggle bolt, insert the bolt through the ⅝” hole in the plywood strip, then thread the toggle onto the bolt with the wings pointing toward the plywood. Put the strip up in position against the wall, and gently pound the toggle through the sheet rock. To provide an air seal for the hole, put two or three pumps of air sealing caulk into the sheetrock hole behind the support strip, and a bit behind the washer, and tighten the screw. Do not over-tighten!

6. Attach the strips using two 2½” exterior screws into all studs. At the corner, a 3½” sheetrock screw may be necessary, because the screw may need to be driven at an angle to hit the stud.

## 17.4. INSTALLING KITCHEN UPPER CABINETS

1. Assuming a corner countertop arrangement, temporarily assemble the countertop with it supported on sawhorses. Install the countertop toggle bolts and tighten them snugly.

2. Using the Cabinet Plan, make light pencil lines to mark the wall(s) where the countertop will end as well as the vertical end positions of each section of upper cabinets. The end lines represent the alignment positions of the upper and base cabinets and mark the openings for range and refrigerator.

3. Measure the overall length (OAL) from the corner of the countertop splash to each end of the countertop and use the Cabinet Plan to confirm that the upper cabinet(s) will end the required distance from the countertop end(s). If the countertop appears to be too short and there are no filler strips to eliminate, consult with the Construction Supervisor for further direction.

4. Use light pencil lines to mark the centerline of wall studs and the centerline of the window/sink base approximately 38" above the floor. These marks will be handy when installing the base cabinets but will be covered by the countertop backsplash.

5. Check the Cabinet Plan to see if cabinet filler(s) are required between the corner and adjacent units before proceeding. If required, rip cabinet filler strips.

6. Prepare each cabinet for installation by drilling four 3/16" clearance holes in the back, drilling from inside to prevent unsightly breakout inside the cabinet. Holes should be located about 1" from each side, and about 1½" from the cabinet top and bottom. However, if blocking is installed, 12", 14" or 15" cabinets will not need bottom holes. Attaching at the top and to adjacent stiles is sufficient to secure the cabinets; no blocking exists to mount short cabinet bottoms. Double units need six holes, with an additional pair behind the center stile. The corner cabinet will need four holes in each side – two as described above, and two in each side near the beveled section.

7. If using support strips, note the location of cabinet mounting strips located on the back of cabinets. Location can vary with cabinet brand. Drill one hole through the cabinet back and check to make sure the hole is roughly centered on the plywood support strips at the 84" installation height. Holes should be ½" minimum from top or bottom of the plywood edges. Adjust drill hole position as required.

8. Begin the installation with the corner cabinet. Cut a 2x4 54" long and use it to support the cabinet under the front frame as it is held in place. Level across the top front and check each side for plumb. Install cabinets with a wafer head screw in an upper hole on each side. Double check level and plumb, and shim as necessary to make certain this unit is level and plumb, as tightening the screws can pull the cabinet out of plumb. Install the remaining wafer head screws, checking level and plumb as each is installed.

   **NOTE:** For mounting all cabinets to walls, **use 2½" wafer head screws with blocking and 1¼" wafer head screws with support strips.**

9. Verify that the spacing on each side of the window will be equal. If required, adjust the width of the filler strip (if any) to be sure that the window reveal will be equal on both sides, and that the upper cabinets end even with the base cabinets.

10. If filler(s) are required, attach them to the adjacent cabinet stile using cabinet clamps (or quick clamp,s if too wide). Clamp as required, keeping the ends and face flush, and install construction screws the appropriate length through the filler into the stile.

11. Using the 54" long temporary support 2x4 as noted above, start on either side, hold the adjacent upper cabinet next to the corner unit, and clamp the stiles and/or side panels together using quick clamps. Adjust the position until the stiles and/or filler piece are flush.

12. Attach the unit with wafer head screws in the two top holes. Do not fully tighten the screws at this time.

13. Because corner units have angled stiles, the units on each side of the corner unit are attached with 1⅝" construction screws through the top and bottom of the corner unit SIDE PANEL into the stile and/or filler of the adjacent unit. Drill a ⅛" pilot hole through the side panel at an angle into the stile. Be VERY CAREFUL to not drill through the face or out the far side of the stile.

14. Attach the adjacent unit to the corner cabinet with 1⅝" construction screws. Check for level and plumb, adjust as required, and install wafer head screws through the remaining back clearance holes into the wall or support strips, checking for level and plumb as you proceed, and tighten all screws.

15. Repeat on the other side of the corner unit.

16. The next units are attached using the 54" 2x4 temporary support as before and clamping the stiles together using cabinet clamps and/or other clamps as required. Take care not to mar the finish on the stiles when clamping.

17. Get the stiles close to flush, and check that the unit is level, hold it in place by installing wafer head screws through the two top holes. Don't tighten fully at this stage. Once the stiles are screwed together, install the remaining screws into the back.

18. Recheck that the stiles are flush; when complete, drill a ⅛" pilot hole through one stile into the second stile. Be sure the bit is set to the length of the screw so that the screw does not split the wood.

19. Screw the stiles together using 2½" trim screws. USE CARE when tightening - it's easy to break the screws. Turn the screws in until the heads are flush. Repeat as required for the remaining upper units. Two or three screws are usually adequate to ensure the stiles are flush and the joint is tight along the entire length.

20. Use tapered shims as needed to keep adjacent cabinet fronts flush. Recheck for level and tighten the screws into the support strips through the cabinet backs.

21. Follow the Cabinet Plan to complete the installation of all upper cabinets.

22. After the installation of the upper cabinets, disassemble the countertops and glue both edges and the spline. Reassemble the countertops and bolt units together making certain that top surfaces of both countertops are flush. Snug all bolts while checking that the top joined edges are flush along the length of the joint. Use a rubber mallet (NOT THE DEADBLOW HAMMER) to gently tap the countertop to make fine adjustments. Wipe off excess glue with a damp paper towel and verify that joined edges remain flush. Finish tightening the bolts uniformly, then set the countertop aside.

## *17.5. INSTALLING KITCHEN BASE CABINETS*

1. Remove shelves, drawers and doors from the cabinets and store them in an out of the way place.

2. Check for plastic clips (shipping protectors) at the bottom of base cabinets and remove before installation.

3. Set the corner lazy susan unit in place with the faces 36" from each wall (see Figure 17-2).

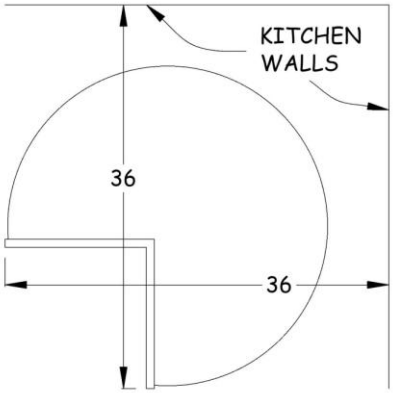


**Figure 17-2. Corner Cabinet Installation**

4. The sink unit may need holes to allow water pipes, drainage pipes and electrical boxes to pass through. Measure the location of the pipes and electrical box, using the window/cabinet centerline and floor as references. Transfer these measurements to the back and/or bottom of the cabinet.

5. The drain piping typically requires a 2½" hole. If that size hole saw is available, use that to make the hole. Otherwise, locate a spray can or similar object to use as a template, draw a round hole that size, then use a jig saw to cut the hole.

6. From inside the cabinet, drill 1" holes at the location of the hot- and cold-water supply lines.

7. Set the sink base in place centered below the window, then measure the space between the lazy susan and sink base frames. Refer to the Cabinet Plan to determine the width of any filler required adjacent to the corner unit. Attach as described for the upper cabinets.

8. Check the countertop length. The range is typically on the opposite side of the corner unit from the sink. The edge of the countertop adjacent to the range should end flush with the cabinet above. Assemble per the Cabinet Plan the required unit(s) located between the range and corner unit. Clamp and screw the stiles together as described for the uppers.

9. Place this assembly next to the corner unit. Locate the end opposite the corner flush with the upper cabinet that is next to the range hood opening above. To align the ends, use a level against the stiles of both upper and lower units.

10. Measure the gap between the corner unit and the one adjacent and rip a filler piece to that width. Attach it to the stile adjacent to the corner unit as described for the upper units, then assemble that cabinet (or assembly) to the corner unit.

11. Repeat Step 10 on the refrigerator end.

12. Check that the top of the assembled cabinets is level, and that the face is straight. Shim under the corners, and/or between the back and wall as required. Attach the assembly to the wall using 2½" wafer head screws into studs. Complete for all base cabinets.

13. If the range, refrigerator or dishwasher are adjacent to the floor corner cabinet, install a cabinet end cap between the appliance and the cabinet. The stile at the front end of the end cap should align with the upper cabinet stile. Cut the front hardwood filler attached to the end cap to width (to allow enough room for the appliance). Notch the front lower corner of the end cap to match the cabinet toe kick. Hold the cut-to-width filler against the cabinet stile, and mark on the floor the location of the inside edge of the panel. With a framing square, draw a line square to the cabinet front from the mark to the wall (check for square to the wall).

14. To fasten the end cap, cut two pieces of 1"x4" pine board to approximately 2" wide x 21" long Align the edge of one of the boards to the line from Step 13, on the corner cabinet side of the line. Screw it to the floor with three 1⅝" sheetrock screws. Place the second piece against the wall, on top of the first piece, with the bottom end flush on the floor piece, plumb it, and anchor it to the wall with two or three 2½" sheetrock screws, one or two into a stud and one into the bottom plate. If no stud is available, use two ¼"x3" winged toggle bolts. Put the end cap in place, anchor it to the cabinet stile in the usual way, and nail the back and bottom of the end cap to the pine boards or plywood with 1¼" collated finish nails.

15. Sometimes there is a standalone cabinet at one end of the lineup. This cabinet will be fastened to a cleat. Determine the location of the cabinet and mark the outside of the front corners on the floor. Turn the cabinet over and measure the inside width of the toe kick base. Cut a cleat from scrap 2x4 or 2x6 1" shorter than that length. Align the cleat on the floor centered between the corner marks and positioned out from the wall so the front of the cleat sits flush to the inside edge of the toe kick. Screw the cleat to the floor using two 2½" sheetrock screws. Set the standalone unit in place over the cleat and verify the position is correct. **Secure the base of the cabinet to the wall first**, then to the cleat, using two 1⅝" drywall screws through each end of the toe kick into the cleat. Countersink the screw heads so they don't interfere with the installation of the toe kick board.

    **NOTE:** The wall stud spacing may be such that that one cannot attach the unit with 2½" wafer head screws into a stud. If so, use a ¼"x3" winged toggle bolt to attach the cabinet to the wall.

16. Install toe kicks with 1¼" collated finish nails, two into each end, and pairs spaced approximately 12" apart along the length.

**NOTE:** If the Cabinet Plan includes a cabinet that may be removed for a future dishwasher, minimize the number of screws during installation. Cut a separate toe kick for this cabinet so the toe kick can then be easily removed without affecting the adjoining toe kicks.

17. Re-install all doors and drawers. Use hinge adjustment screws to plumb and align the doors.

## *17.6. INSTALLING RANGE HOOD*

1. Remove the electrical knockout from the junction box in the range hood.

2. Based on the knockout location, determine a hole location in the cabinet bottom for the cord to be inserted. Use a spade bit to drill a 1¼" hole for the cord. Drill from inside the cabinet.

3. From inside the cabinet above the range, drill four 3/16" clearance holes for the range hood pine strips in the cabinet bottom. The holes should be about 2" from each side, and 2" from the front and back.

4. Glue and screw 1x4 pine strips on the underside of the cabinet over the range to hold the exhaust fan. Screw DOWN into the strips from inside the cabinet with 1¼" wafer-head screws.

5. Remove the screws from the vent extension and re-secure it to the range hood with flashing tape cut to ~2" width. Be sure there are no gaps at the corners.

6. On the wall where the hood will go, draw a 4"x11" rectangle centered ½" below the cabinet.

7. Use an oscillating saw to cut out the sheetrock on the lines from above and remove. Be sure the top edge of the cutout is at least ½" below the bottom of the cabinet to provide for an air sealing surface.

8. Use an oscillating saw with a fine metal cutting blade to carefully cut out the metal of the range plenum at the perimeter of the sheetrock opening.

9. To prevent warm moist air from getting into the wall cavity apply flashing tape around the cutout to completely seal the space between the metal of the plenum and the sheetrock with no gaps. Apply about half of the tape width to the sheetrock, then fold the tape over to seal the cuts and apply to the inside metal surface of the plenum.

   **NOTE:** Thoroughly sealing this area is critical to ensure that warm, moist air from cooking does not enter the wall cavity and cause moisture and mold problems in the future.

10. Lift the range hood into place, sliding the vent extension into the cutout in the range plenum.

11. Install weatherstripping on the face of the sheetrock, around the perimeter of the opening, making sure there are no gaps.

12. Fasten the range hood to the pine strips with 1¼" wafer-head screws.

## *17.7. INSTALLING KITCHEN COUNTERTOP*

### 17.7.1. Preparation

1. The back of the countertop is supported by 2x4s in the corner behind the lazy susan. To determine the position of the top of the 2x4's, draw level lines from the corner for mounting these supports. Lay a piece of 1x4 on top of the base cabinets near the wall corner. Place a 6' level on top of the 1x4 with the level extended into the corner, adjust to level and while holding the level tight to the wall, draw a line on the wall along the bottom of the level. Repeat on the other wall.

2. Attach two pieces of scrap 2x4x about 26" long to the wall corners (see Figure 17-3). Hold the 2x4s even with the lines from step 1 and screw them to the wall using 3½" sheetrock screws into studs at each end.

**Figure 17-3. Showing Countertop 2x4 Corner Supports.**

3. Dry fit the mitered countertop by setting it in place to determine the need for scribing and sanding the back splash. If any gaps are > ⅛", tape the top of the back splash with painter's tape to protect the laminate. With the flat side of a carpenter's pencil against the wall (to match the largest gap between the backsplash and the wall), scribe a pencil line on the backsplash. Use a belt sander to remove excess material and avoid chipping the back splash. Sand leaving half of the pencil mark.

4. Dry fit the countertop by setting it in place to double check the fit is correct. If not, re-scribe and sand again to ensure a snug fit to the wall. The belt sander can be used to do fine adjustments, including putting a bevel (bottom farther from wall) on the edge of the backsplash. Make sure there is 30⅛" clearance for the stove, measured at both the front and back of the base cabinets.

5. Determine which areas of the base cabinets will be used to secure the countertop. With the countertop temporarily in place, draw pencil lines from below along the cabinet walls. There are usually corner blocks pre-installed in every corner of the cabinets that will work. Note the perimeter of the sink base walls for Section 17.7.2.1 below.

6. Remove the countertop, turn it over and set it back on the horses.

7. Cut one 1x4 x 24" board for each one of the areas determined in step 5. Center the 24" pine boards over the wall marks made in step 5 above, **except over the sink base**. Pine boards should rest on top of the cabinet walls and mirror the location of the corner blocks, but should not extend inside the sink base walls, which will interfere with the installation of the sink. Sink base boards should rest on top of the walls only. Drill six 3/16" clearance holes, three per side, about 1" from each edge and secure with 1¼" wafer head screws. Later, screws will be placed through the cabinet corner supports and into the pine boards to hold the countertop to the cabinets.

   **NOTE:** Do not place ANY blocking INSIDE the sink base cabinet.

8. Rip a piece of 1"x4" x approximately 10" long pine board to a ¾"x¾" dimension. Glue and clamp it at the front edge of the top rail of the sink base cabinet, centered on the sink location. This will support the narrow front edge of the countertop that remains after the sink opening is cut out.

9. Measure the cabinet width and cut a 1"x4" pine board to this length. Rip it to about 2" wide and glue and screw this board behind the lip of the countertop where the dishwasher (or future dishwasher) will be installed. Drill four 3/16" clearance holes and secure with four 1¼" wafer head screws.

10. Cut one 1"x4" board about 12" long to support the front end of the countertop on each side of the miter joint. Rip to about a 2" width and glue and screw it behind the lip of the countertop, one piece on each side of the joint. These boards will rest on the lazy susan front framing. Drill two 3/16" clearance holes in each board and secure with 1¼" wafer head screws.

11. If not pre-drilled, drill 3/16" clearance holes through each of the diagonal support blocks in the cabinet corners where a pine board will be located.

## 17.7.2. Installation

1. Use 1¼" wafer-head screws to fasten the countertop to the cabinets from the bottom of the cabinet corner support into the pine strips under the countertop.

   **CAUTION:** Check length of screws to avoid screwing up through the top of the counter, ruining the unit.

2. Fasten the ¾" x ¾" x 10" piece on top of the sink base rail to the board under the countertop lip (where the dishwasher or future dishwasher) is located), and the two pieces under the countertop lip on each side of the miter joint over the lazy susan. Drill ⅛" pilot holes from underneath the front cabinet rails and fasten with trim screws. Check length of screws to avoid screwing through the top surface of the counter.

3. If a pantry cabinet is to be placed next to the countertop, it may be necessary to carefully chisel a notch in the proud edge of the cabinet stile to fit around the countertop.

   **NOTE:** Ensure that the chisel is very sharp before attempting this notch.

4. Once the countertop is installed, reinstall all doors and drawers. Use the hinge adjustment screws as needed to plumb and align the doors. Remove the shipping pins form the lazy susan, and adjust it as required to align the door edges with the stiles and provide a uniform gap.

## *17.8. INSTALLING BATHROOM VANITY*

1. Determine the location of the vanity from the drawing and drill 1" holes from inside the vanity through to allow for water supply lines. Cut a 2½" hole for the drain.

2. Level and fasten the cabinet in place with 2½" wafer head screws to the wall studs (use ¼"x3" winged toggle bolts if studs are not available). Refer to instructions in Section 17.3 Steps 3-5.

3. Dry fit the countertop to determine if scribing and sanding are required. If so, scribe and sand to fit per Sections 17.7.1.3 and 17.7.1.4.

4. Turn countertop over. Glue 1x4 pine strips to the underside of the countertop that will mirror the same location of the corner blocks on the cabinets. Drill six 3/16" clearance holes in each board.

5. Set the countertop in place and fasten to the cabinet to support blocks with 1¼" wafer head screws.

   **CAUTION:** Check length of screws to avoid screwing up through the top of the counter, ruining the unit.

6. If a linen cabinet is to be placed next to the vanity, it may be necessary to carefully chisel a notch in the proud edge of the cabinet stile to fit around the countertop.

# *17.9. INSTALLING OPTIONAL CABINETS*

## 17.9.1. Stairway Cabinets.

1. If there is an opening prepared in the kitchen for a built-in cabinet over the stairway, install a lower and upper cabinet in the opening. Unpack the units and inspect for damage. Report any damage to the Construction Supervisor.

2. Measure the outside dimensions of the two cabinets and verify they will fit into the rough opening. The opening should be 30”x55½”.

3. Remove the drawers from the lower (base) cabinet. Cut off the bottom of the cabinet flush with the top of the toe kick with a circular saw.

4. Remove the shelves and doors from the upper cabinet by removing the screws from the stiles (leave the hinges on the doors). Store the hinge screws in a container and save.

5. Install the lower cabinet first. Drill two 3/16” clearance holes per side from inside the cabinet frame, 1½” inside the frame, about 2” down from the top and 2” up from the bottom.

6. Place the lower cabinet into the opening. Use a 3’ level to verify the cabinet is level and plumb, shim underneath the cabinet, as necessary. Check to ensure the face frame protrudes ¾” out from the wall surface around the entire frame perimeter.

7. Secure the top of each side with 2½” wafer head screws. Tighten gradually and check for level and plumb as each is installed. Repeat with the bottom screws. Re-check for level and plumb and a uniform ¾” frame reveal. Adjust as necessary.

8. Drill two 3/16” clearance holes per side in the upper cabinet at the locations described for the lower cabinet (see Step 5 above).

9. Install the upper cabinet on top of the lower cabinet. Flush the upper and lower frame faces and clamp together. Drill two ⅛” pilot holes 2½” deep through the lower cabinet face frame and partially into the upper cabinet face.

10. Fasten the cabinets together with two 2½" trim screws. Verify reveal is still a consistent ¾” around the frame perimeters. Secure the two sides of the upper cabinet to the framing with 2½” wafer head screws.

11. Install door trim around the perimeter of the cabinet frame to conceal the gap between the cabinet and the opening. Orient the trim with the thicker edge against the cabinet frame. Miter cut and glue the corners and nail with 2½" collated finish nails.

12. Install the shelves and doors in the upper cabinet doors and adjust hinges, if necessary, to align door edges. Insert the drawers into the lower cabinet.

### 17.9.2. Barista Cabinets.

1. Barista cabinets are a modified set of two upper cabinets. For this installation, one has a toe kick added to one of the cabinets. The base cabinet is mounted directly under the upper cabinet. This arrangement is typically centered between the end of a wall and a closet.

2. Remove the shelves, then remove the doors by taking out the screws from the stiles (leave the hinges on the doors). Collect the hinge screws and any related hardware and save.

3. Drill four 3/16" clearance holes in the back of each cabinet per Section 17.4.6. Drill from inside the cabinet to avoid unsightly breakout.

4. Check the Cabinet Plan for location. Determine if there are two wall studs within the width of the cabinet. If there are, install cabinet directly to the wall. Mount 54" off the floor using a 54" long 2x4 for support, and mount per Section 17.4.8. Verify the cabinet is centered left-to-right and mount with 2½" wafer head screws in the top two holes.

5. If studs are not available for mounting, layout and install upper and lower support strips to the wall as instructed in Sections 17.2.2 and 17.3.

6. Attach upper cabinet to the support strips with wafer head screws (refer to instructions in Section 17.4).

7. Build and attach a toe kick base to raise the lower cabinet to the same toe kick height as the other kitchen base cabinets. See Construction Supervisor for details.

8. Make sure the sides of the base cabinet are aligned with the upper cabinet sides and install per base cabinet instructions provided in Section 17.6.

9. Install the toe kick board to the base cabinet per Section 17.5.16.

10. Dry fit the countertop to the wall to determine if scribing and sanding the backsplash are required. If so, scribe and fit per Sections 17.7.1.3 and 17.7.1.4.

11. Turn the countertop over. Drill six 3/16" clearance holes in each board. Glue and screw 1"x4" pine boards to the underside of the countertop that will mirror the locations of the corner blocks on the cabinets. Use 1¼" wafer-head screws to secure the boards to the countertop.

12. If not pre-drilled, drill 3/16" clearance holes through each diagonal corner support block and attach the countertop to the cabinet from the bottom using 1¼" wafer head screws.

**CAUTION:** Check the length of screws to avoid screwing up through the top of the counter, ruining the unit.

13. Install the shelves and doors and adjust hinges as needed to align door edges.

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