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Skirt boards are basically, the baseboards that run the length of a stairway. They are usually about 9" - 9 ½ inches wide.

Note:

A space between the stairs and the wall will be necessary for this project. This space should be no less then 5/8 of an inch wide from the stair treads and risers to the wall. Any less and it would be difficult to slide the skirt boards in between the stairway and the wall. Fitting the skirts before cutting any stair treads and risers is recommended. See Figure 1.



Figure 1: Space between Wall and Stairway

Skirt boards are usually made of pressed wood with a certain species of wood veneer on one side, which may include oak, maple, birch and other species depending on what you prefer. Generally, you can buy skirt boards at the exact length you need whether it is 5' long or onwards up to 20' long and even longer for special orders.

Skirt boards can also be custom as long as you can get the preferred wood wide enough and long enough. Usually going this route poses the problem of width again and cutting the space between the wall and stairway can turn into a lot of work.

To figure the length of your particular skirt boards for your project lets get started with a list of tools necessary for this project.

Tape Measure

Hammer

Carpenter square

Speed square (optional)

Pencil

Stud finder

Skil saw or circular saw

1-2x4 minimum of 4' long

Finish Nail Gun (preferably a 15 or 16 gauge finish nail gun)

Note:

A hammer and finish nails can substitute a nail gun although I recommend a gun for easier, quicker and more precise installation. If a pneumatic or air nail gun is being utilized then an air compressor and air hose will be necessary.

Establishing the Skirt Board Length for Your Stairway

Finding the length of skirt boards for your stair way is very easy. Lay your 2x4 flat on the stairway and slide it over tight to the wall. Slide it up so it goes up past the top stair and past the first riser. See Figure 2.

Using your pencil draw a line on the wall following the 2x4 down, then sliding the 2x4 down continue the line down until you reach the bottom of the stairway all the way to the floor. See Figure 3.



Figure 2: Establishing skirt board length



Figure 3: Establishing the skirt board length

The next step is figuring out how far the skirt board will go in past the top riser when cut properly to fit. On the floor at the top of the stairs measure back ¾ of an inch away from the stairs and back from the front of the riser. Using a speed square or square, draw a line straight up at this mark vertically until you intersect the line drawn previously. See Figure 4.

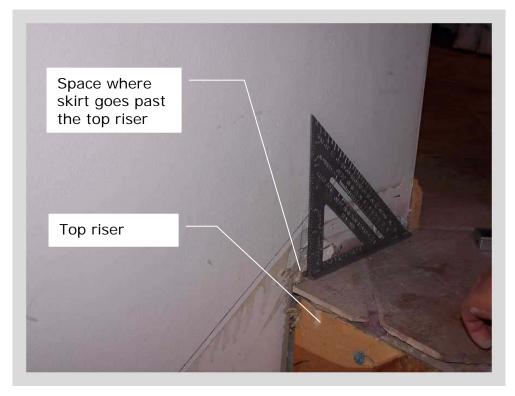


Figure 4: Establishing distance past the top riser

Pound in a nail a ¼ inch in from the vertical line and a ¼ inch down from the diagonal line. Leave the nail stick out, as this nail will be used to hook your tape on for measuring the length of your line down to the floor. This nail does not need to hit any studs behind the sheet rock. The idea here is to put the nail inside the lines where the skirt board will cover the nail hole later. See Figure 5.



Figure 5: Preparation for measuring the length

Hook your tape measure on the nail at the top of the stairs and measure the diagonal line down to the floor at the bottom of the stairs to the floor. Be sure to keep the tape exactly at the line for an exact measurement. Leave the 2x4 slid up to the wall to help support the tape at the line and make it easier for keeping the tape at the line for an accurate measurement of this length.



Figure 6: Measuring the length of the skirt



Figure 7: Length of the skirt

Add about 6 inches to this measurement length. This will be the total length of skirt board you need for one side of your stairway. The other side should be the same so two skirt boards at this length will be needed to complete the project.

Establishing the Angles for Cutting the Skirts to Fit

The next step is transferring the angle of the stairs to the skirts for cutting and fitting the skirt boards in place. Using your tape measure, measure every other riser down the stairs. Do this by measuring the distance from the top of one stair tread to the top of the next stair tread. After you have these measurements, which should be fairly close to being the same, calculate the average of all these measurements. This will give you the correct measurement for the risers to use for this part of calculating the angle of the stairs. See Figure 8.



Figure 8: Measuring the risers

Next measure the stair treads from the riser out to the outer edge of the stair treads. These measurements should be close and somewhat precise. Now most stairways will have an over hang where the stair tread protrudes out past the risers. This overhang is sometimes around an inch or so or close to that. This overhang needs to be subtracted from the total width of the stair treads. See Figure 9.



Figure 9: Measuring the stair treads (close-up)

Example:

If the stair treads measure 10 inches from riser to outer edge and there is an inch overhang the correct measurement to use is 9 inches for this part of calculating the angle of the stairs.

Transferring the Stairway Angle and Cutting the Skirt Boards

This part of the process is difficult to explain although very easy to do once you understand. I will start by explaining what a typical carpenter square is and how we use it in this process.

A typical carpenter square is fairly large and is of course "L" shaped. One part of the carpenter square is skinny in width and one part is longer and wider. The skinny part of the square is used for the riser measurement and the wider, longer part is used for the stair tread measurement.

To get started lets assume you have your skirt boards and they are the correct length for your particular stairway. Stack your two skirt boards together, put them face to face, and match the tops and bottoms together because you will be cutting them both at the same time.

Here is where it gets tough to explain so the pictures and diagrams should help to make it clear. You should be facing your skirt boards with the bottoms of the skirts nearest you with your carpenter square in hands. Put the skinny part of the square in your right hand and the wider part in your left. The point of the square should be down. Start at the right side of your skirt boards. If the riser measurement is 7", I place the square on the far right side of the skirt board, find 7" on the inside of the square, and put the 7" mark at the right side top corner of the skirt. Now holding that in place, I look to the left and move the square to the 9" mark so the inside 9" mark is at the top of the skirt board because my stair treads measured out to 9".

Once you have the square in place, draw a line starting at the right corner down as far as you can on the square, then move the square to the line down so you can carry that line the rest of the way down the bottom of the skirts. Be sure to start as close to the top right corner or right at the corner of the skirt boards so the skirt boards do not end up short. See Figure 10.

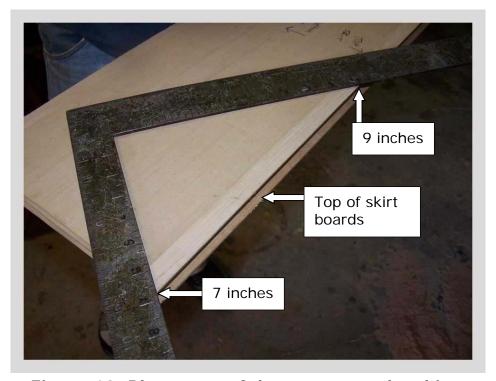


Figure 10: Placement of the square on the skirts



Figure 11: Ready to cut

Now cut this angle with a skil saw or circular saw following your line making sure the skirts are matched together perfectly and clamped so they can't move while you cut.

Hook your tape on the top corner where you just cut and transfer your measurement from the length of the stairs to these skirt boards and make a pencil mark at this measurement to prepare for the cut on the far left end of these skirts. See Figure 12.



Figure 12: Measuring the skirt board

Moving to your left, put the fat part of the square on this mark — at 9" in this case. Look to your right and move the square up to the top of the skirt — 7" in this case. Starting at your pencil mark, draw a line down following the fat part of the square at this angle and move the square down as needed to continue the line to the bottom of the skirts, which will be opposite to the other end, and you are ready to cut. I will always cut this angle about 1" longer than my line just in case and trial fit the skirts before cutting at my line. See Figure 13.



Figure 13: Preparing to cut skirt board

The 9" mark on the square needs to be at the measured distance mark of the skirt board, that is, if your skirt board is 12', then the 9" mark is at the 12' mark.

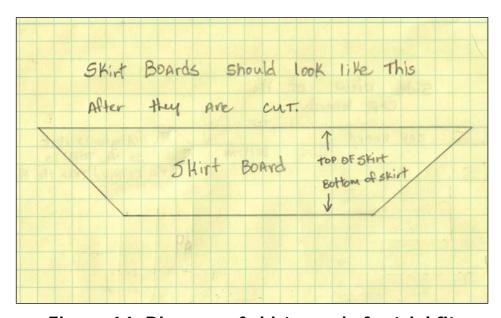


Figure 14: Diagram of skirts ready for trial fit

Final Steps to Installation

To get the skirts both at the same height on both sides of the stairway I will once again use my 2x4 to make a line on the opposite wall at the stairs. Trial fit the skirts in and cut off as necessary for a perfect fit. The skirt boards should follow the line fairly close.

A **special note** here is to know what type of flooring is going in at the bottom of the stairs later if the flooring isn't in yet. If there is carpeting going in later then you will want the skirt boards lifted off the floor 3/8 to a ½ inch, so the new carpeting can be tucked under the skirt boards.

At the bottom of the stairway, the skirt boards will come to a point. These points need to be cut off so the transition to the baseboard can be made smoothly. We do this by making a transition block that goes between the skirt board and the baseboard. This needs to be done before the skirts are nailed in. See Figure 15.



Figure 15: Trial fitting skirt

Depending on what type of baseboard you have, I will generally cut these points off the skirt boards at the bottom end so the bottom end of the skirt boards are the same height as the baseboards. For example, colonial baseboard or ranch baseboard is approximately 3" wide so I will cut the bottom end of the skirt boards at the same height, which is 3". This again is very easy to do and you can cut both skirts at the same time as before.

Using a speed square lay the speed square flat at the bottom of the skirt boards. Slide the square up so it stops and catches squarely at the bottom of the skirts. Slide the square over until the 3" mark is at the top of the skirts. Now just draw a line straight down following the square and cut at the line. When the skirts are installed this line will be really close to being exactly vertical (straight up and down). See Figure 16.

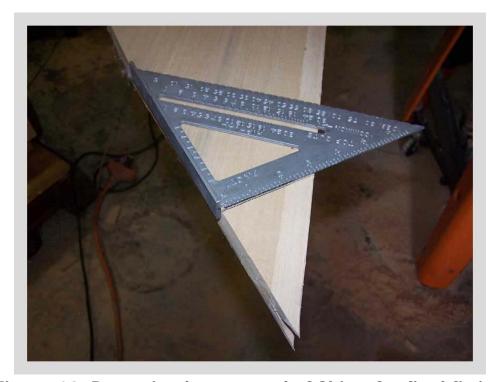


Figure 16: Preparing bottom end of Skirts for final fitting

Once all the cuts are made to the skirt boards it is time to fit them in and permanently nail them in. Slide the skirts in and get them in position and perfectly in place. Using a stud finder find the studs behind the wall and permanently nail the skirts on by shooting the nails in at the stud locations.

Transition Blocks

Transition blocks are installed at the tops and bottoms of the skirt boards to make a smooth transition from the baseboards to the skirt boards. These blocks can be made or can be purchased. I usually just make them and they are easy to make using a miter saw. I will make these transition blocks out of a small piece of 1x4 or 1x and usually make them out of the same species of wood that the baseboard or skirt boards are. There are no special way to make these and you can make them as plain or as fancy as you like.

The Finished Product

On this particular job carpeting is being installed so I held the skirts up off the floor so the carpeting can be tucked under. Also below are some pictures of the finished project and of the transition blocks I made for this project. Again these blocks can be easily made as well as purchased.



Figure 17: Skirt board fitted (bottom)



Figure 18: Skirt board fitted (top)



Figure 19: Skirt board fitted (top)