Stairs 3: Installing a Landing in a Set of Stairs

According to the British Columbia Building Code, a set of stairs requires a landing: where a door swings out over the stairs; at the top of an exterior set of stairs and at a change of direction (except on curved stairs). Installing a landing in a set of stairs changes the direction of those stairs, which can give you more room in a confined space. Let's discuss how to layout a landing in a set of stairs to form a 90 degree change in

You should already have your total rise calculated, giving you the size and number of risers and also the number of steps. (For more info on measuring the total rise see How to Build Stairs.) Remember, there is always one less tread than there are risers.

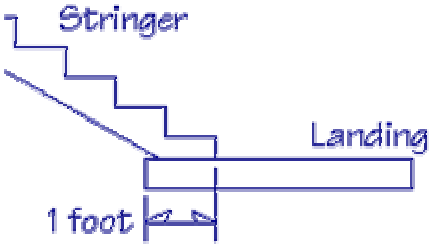

Figure 1

In calculating the number of rises and treads, simply treat the top of the landing as the top of a step. (For more info on calculating the number and sizes of rises and treads see Calculating the Exact Rise or use our easy stair case calculator.) For calculation purposes, it's like the landing is just a very wide step. Adding a landing doesn't change your riser height. If you calculated 13 steps before adding the landing, you will have 14 risers, 12 steps and 1 landing.

For a uniform set of stairs put at least three steps above and below the landing. Build the landing at the exact

finished height of one of the steps and build it as wide as the steps and at least as long as its width. Build the landing long enough so it can support the stair stringer above it. Usually extend the landing 12 inches back from the front edge of the riser to support the stringer. See Figure 1.

To arrive at the placement of the landing determine your run for each step, say 10 1/2". If you are going to place the landing 9 steps from the top and 3 steps from the bottom, multiply the number of steps by each run, in this case 9 x 10.5" = 94 1/2". That means the stairs down to your landing will attach to the landing at 94 1/2" from the edge of your upper floor. Since you want the stringer that supports these stairs to be supported by the landing, you extend the length of the landing by 12" and place the nearer edge of the landing at 84 1/2" from the edge of the upper floor. We'll call this the back edge of the landing.

Now measure from the 94 1/2" mark out the width of the stairs, say 3'. We'll call this the forward edge of the landing. In our example, this forward edge of the landing is the edge of the 11th riser.

The height of the landing will be the same height as the tenth riser from the top or the fourth riser from the bottom, in this example. To get the height of the landing multiply the riser height by the number of steps up to the riser, in our case 7.625" x 4 = 30.5". Measure up from the bottom floor to the finished height of the landing. Build the landing to these measurements. Remember to include as part of the landing's height the thickness of the material you'll be using for sub-flooring on the landing itself, usually 5/8" or 3/4".

Construct the landing of 2 x 4 (or heavier) floor joists at 16" centers (if only 3' x 3'). Put 2 x 4 posts under each

corner of the box frame. When installing the sub-floor, overhang the plywood to form a nosing to match that of the stairs. Layout and install the stringers for above and below the landing.

After installing the landing and installing the upper stringer, which is supported on the landing, continue the bottom stringer as if the landing was a floor, supported off the front of the landing. For details of how to build the rest of the stairs see my article How to Build Stairs. For a complete list of my articles click on **articles** at the very bottom of any web page of Dave's Shop.