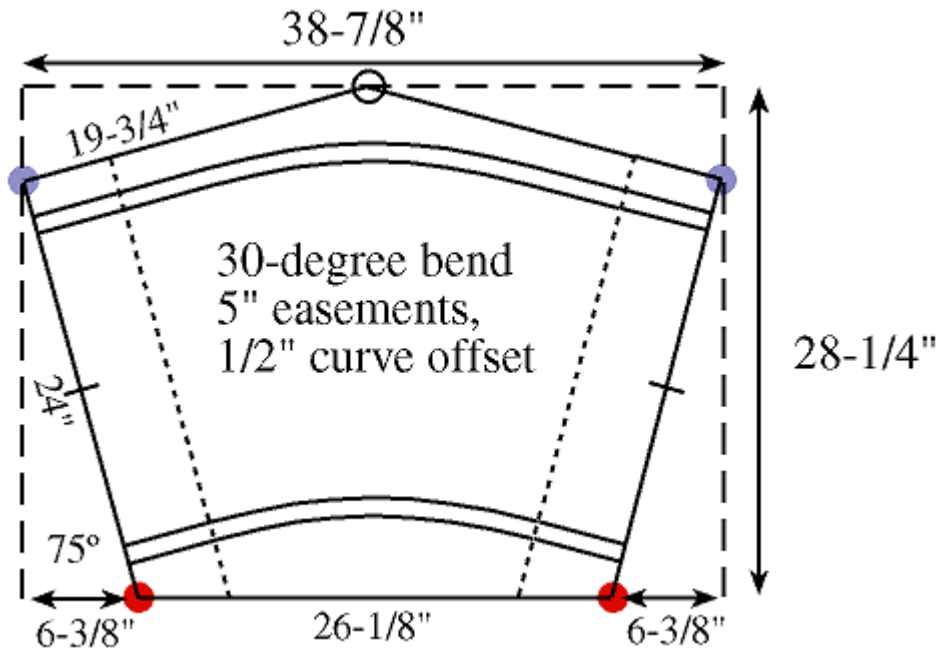


30-Degree and other “Z-Bent” Modules

This is a preliminary plan for the benchwork of a 30-degree bent module. The minimum curve radius is 15 inches, and the track is given easements which turn about 5 inches of tangent (on each end of a curve) into a spiral.

Measurements are approximate to about an eighth of an inch. Some adjustment may be needed to these dimensions after a prototype is built.



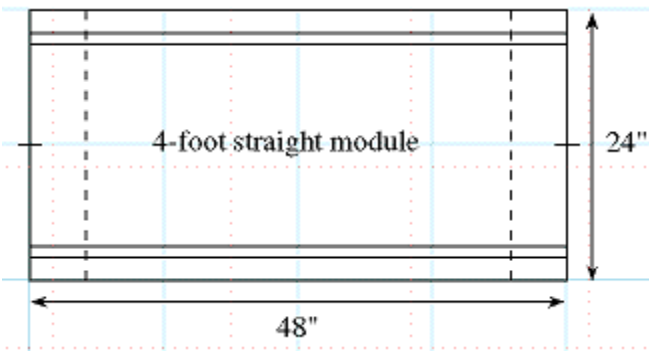
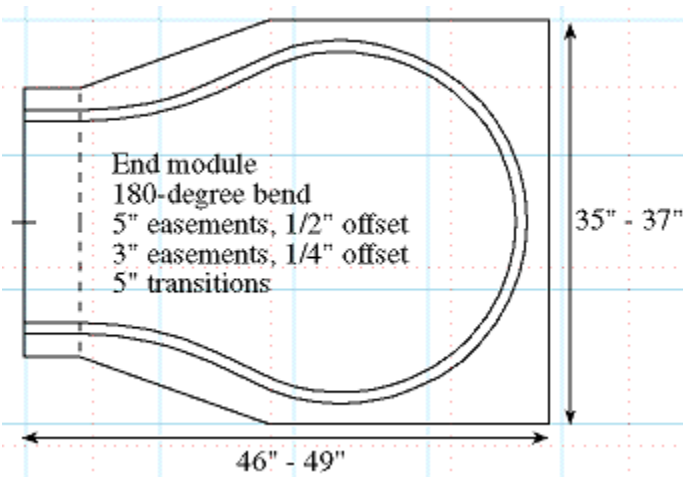
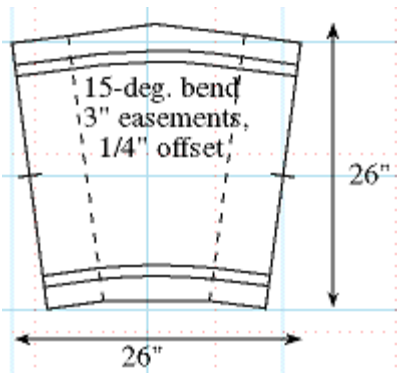
This module is cut from a rectangle of plywood or other material 38-7/8 inches by 28-1/4 inches. To get the other dimensions, do the following.

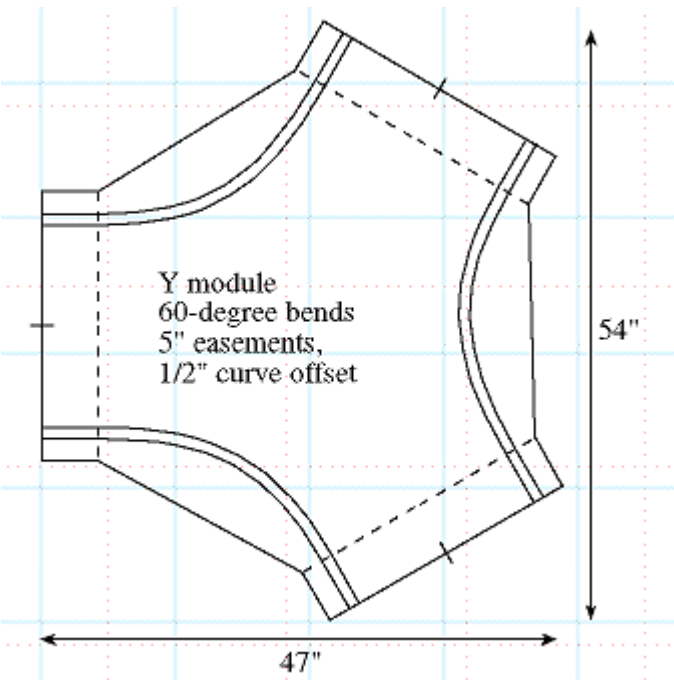
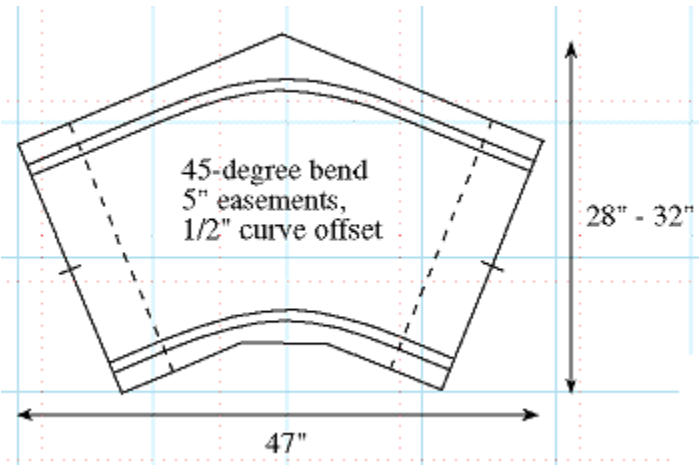
1. Measure 6-3/8" from a corner along one of the long sides of the plywood, and make a mark. This corresponds to one of the red dots in the diagram. Along the same edge of the plywood, measure in 6-3/8" from the other end, and make another mark to correspond to the other red dot in the diagram.
2. Draw a straight line exactly 24 inches long from one mark to the nearest short edge of the plywood. Make a mark where the line intersects the short edge. This mark corresponds to one of the blue dots in the diagram. The distance between the two marks should be exactly 24 inches, and the line should form an angle of 75 degrees with the long side of the plywood, and 15 degrees with the short side. Repeat on the other end of the plywood to get another 24-inch line and a mark to correspond to the other blue dot.
3. Make a mark on the midpoint of the other long edge of the plywood. This is the white dot at the top of the diagram.
4. Draw a line from each of the blue-dot marks to the white-dot mark.
5. Cut out the module's pentagon shape along the lines you've drawn.

If I've measured accurately, the side of the module between the red dots should be $26\frac{1}{8}$ inches, and the two sides between the blue dots and the white dot should be about $19\frac{3}{4}$ inches each. It's no big emergency if these dimensions are not precise, as adjustments can easily be made during tracklaying. It's more important to make sure that the two sides between the red and blue dots are exactly 24 inches.

I'd measure and cut the 1x4 sides after cutting out the pentagon, to make sure they fit. The sides meet at various angles. The red-dot corners should be 105 degrees each. The blue-dot corners should be 90 degrees each. The white-dot corner should be 150 degrees.

Here are some other shapes:





By Andy Hunting