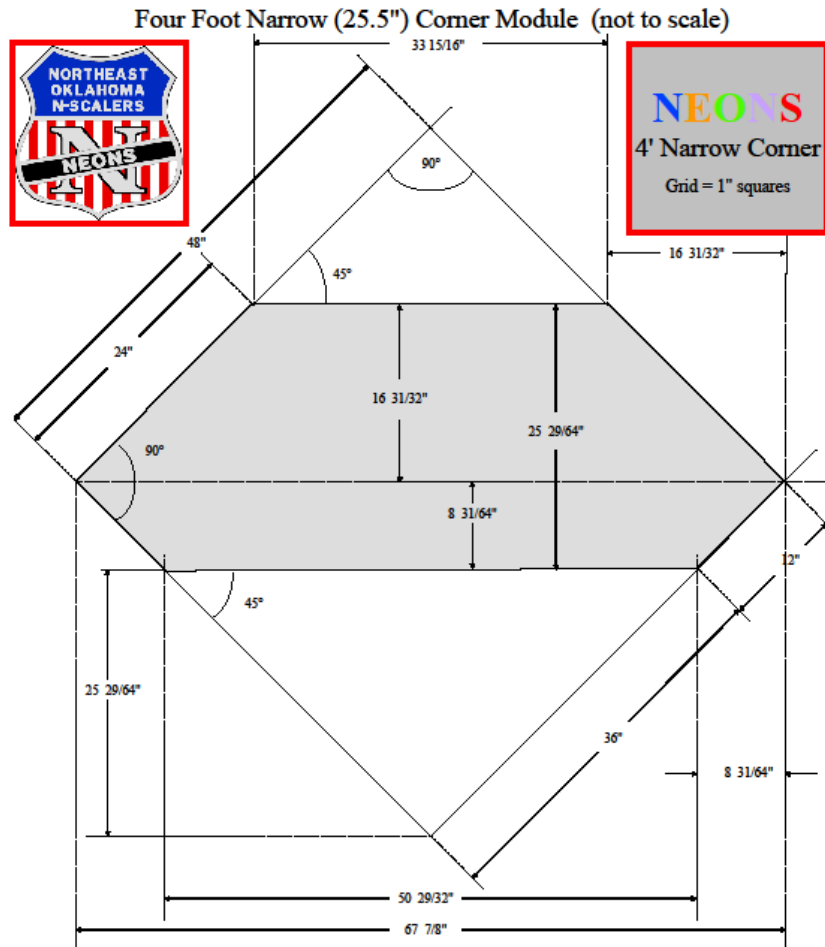


Skinny NTRAK Corner

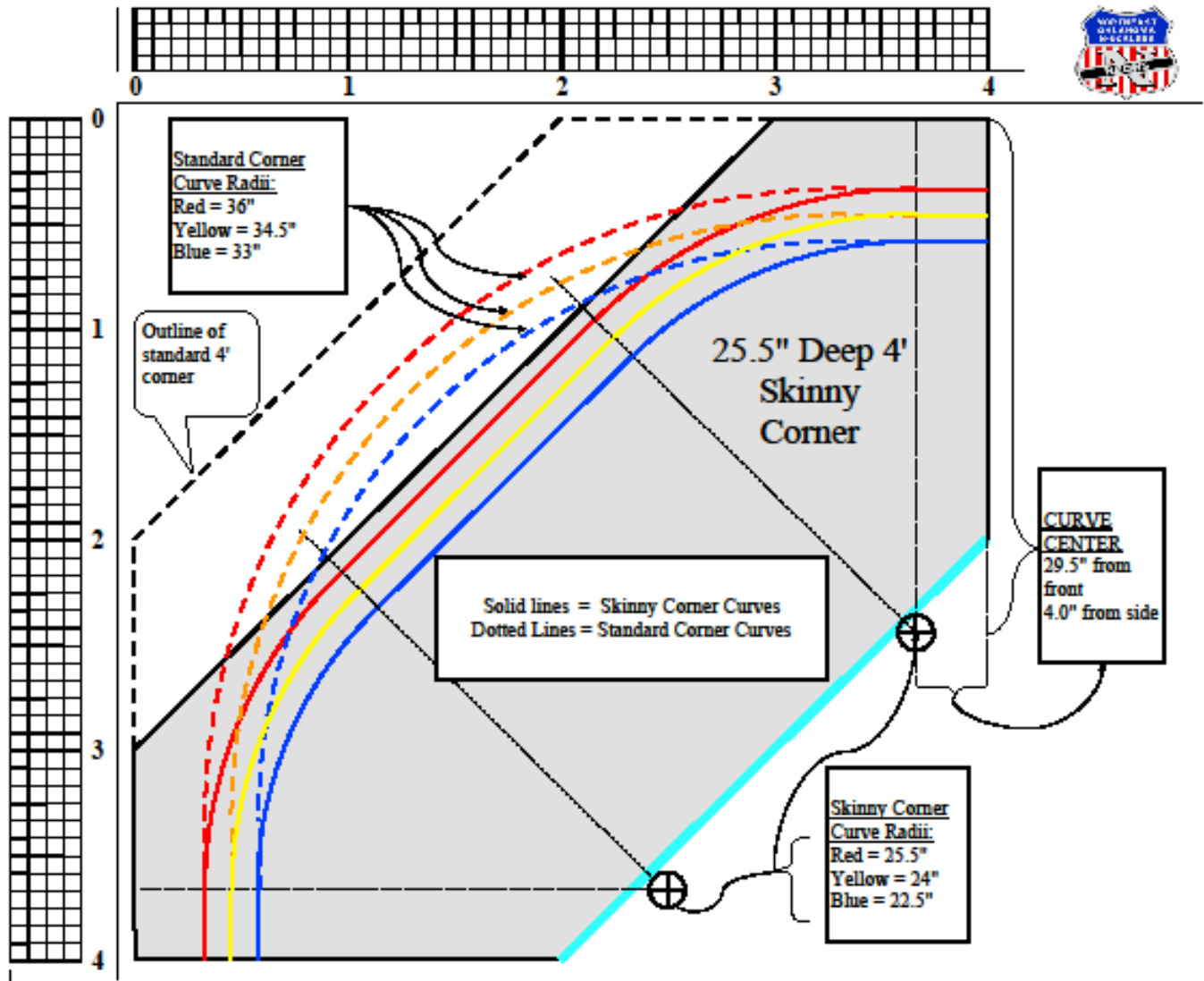
June 1, 2020

A standard NTRAK 4' corner module is 34" deep and 68" wide (tip to tip.) A standard door opening is 28" to 32". If you do the math, you quickly see that a standard 4' corner module will not fit through a standard width door without being rotated onto its back. If, however, you whack 8½" off of the front of the module, (whack being an NTRAK technical term for cut off) you end up with a corner module that is 25½" deep, and one that can easily be moved through a standard door opening without any special lifting or rotating. A normal 4' corner module is six-sided with a 34" x 34" square section sandwiched between two 24" x 24" right triangles. If one 24" side of each triangle is reduced to 12", the center square of the module becomes a 25½" x 34" rectangle and the module's overall depth becomes 25½". (See drawing below)

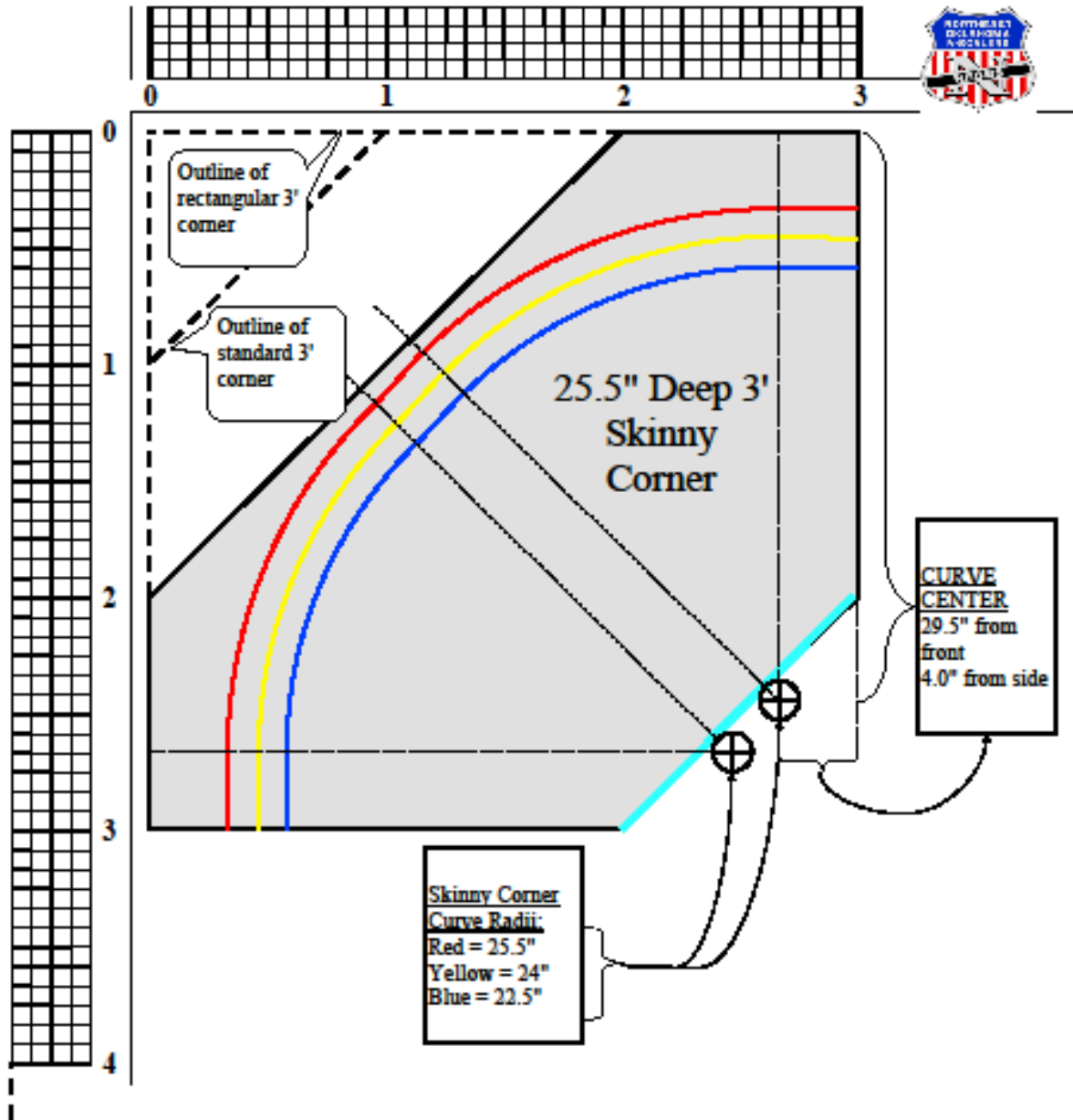


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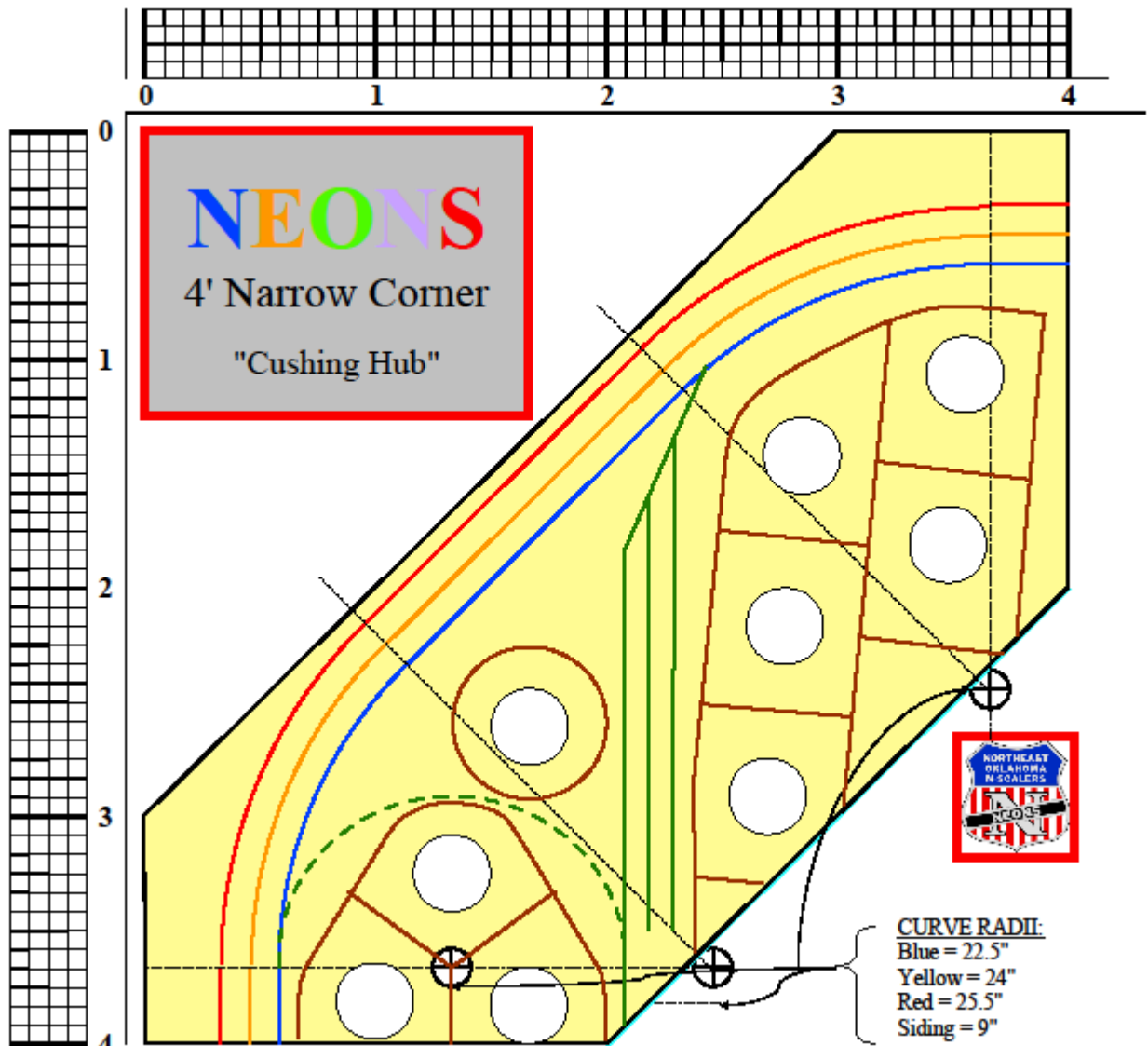
This seems to be basic logic and a no-brainer until you try to lay track and maintain the NTRAK minimum radius curves on the red, yellow and blue lines. I originally attempted to reduce the width of the module to 24" (which is the depth of a standard NTRAK module) but by doing that, the curve radii on the red and yellow lines has to be reduced to something below the 24" minimum NTRAK specification. To maximize the curve radii, the track is laid with a 4" straight section, a 45° curved section, a 20½" long straight section, another 45° curved section, and a final 4" straight section. This yields track curve radii of 25½" on the red line, 24" on the yellow line and 22½" on the blue line, all which meet or exceed NTRAK minimum radius specifications. Unfortunately, there is insufficient space for a transition curve. The focal points for the two curves are 4" in from the clamp ends and 29½" back from the short sides. To draw the curves on the module top, clamp a shelf on the back of the module that temporarily extends the module surface back to the focal points, mark the spot and draw the arcs. (See drawing below)



Note that this technique can also be applied to a 3' corner module. The dimensions are the same except the center rectangle is 25½" x 17" and the straight section of track between the two curves is only 3½" long. Essentially the only difference is that a 17" section has been whacked (there's that technical term again!) out of the center of the module. (See drawing on next page)



In this track design, the red line long straight-a-way is only one inch from the front of the module. It is strongly suggested that a piece of Plexiglas be attached to the module front to protect against any disastrous consequences of a derailment in this area. On the plus side, with the tracks all the way to the front of the module, the room behind the tracks for scenery is maximized. (See drawing at top of next page)

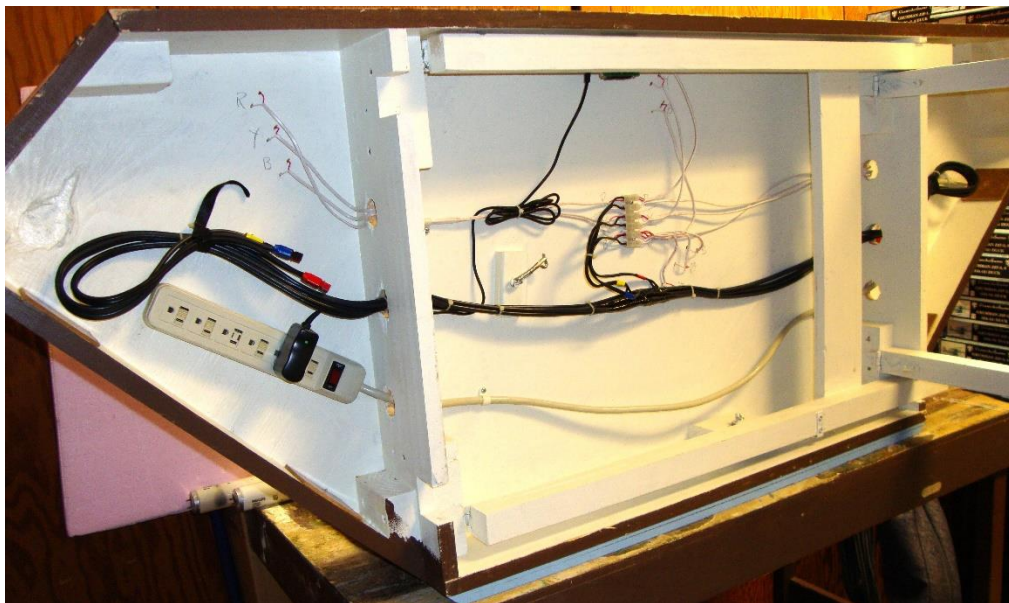
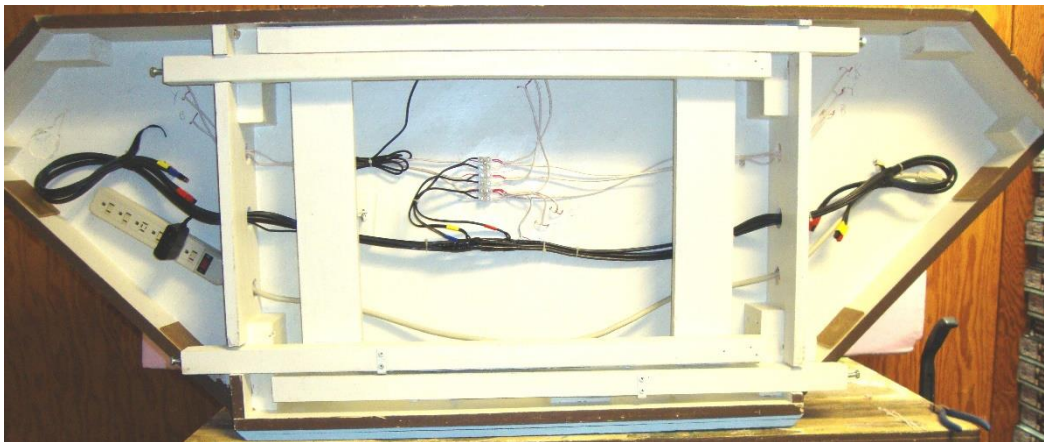


One side benefit of this design is that the skinny module is much lighter than a standard corner module. Pictures of a 4' skinny corner and a 4' standard corner are both shown for comparison. (See pictures below)





The following drawing calls for 1" x 6" fascia boards on the center box of the module frame This is done so that integral legs can be attached that fold up and nest in the bottom two inches of the frame. (See drawing and pictures below)



Four Foot Skinny (25.5") Corner Module (approximately to scale)

Looking up from bottom

#	Description	@	Σ
1	3/4" Foam board 4' x 8'	\$ 12.96	\$ 12.96
1/3	1/8" Hardboard 4' x 8'	\$ 8.48	\$ 1.70
1/3	3/8" Plywood 4' x 8'	\$ 11.97	\$ 2.39
1/2	1/2" Plywood 4' x 8'	\$ 13.67	\$ 6.84
2	2' x 4' x 8'	\$ 3.12	\$ 6.24
	2' x 2' x 8'	\$ 1.87	\$ -
1	1' x 4' x 8'	\$ 3.92	\$ 3.92
2	1' x 6' x 8'	\$ 6.17	\$ 12.34
1	misc hardware	\$ 25.00	\$ 25.00
1/2	box 1.58" screws	\$ 4.40	\$ 2.20
1/4	box 2" screws	\$ 4.40	\$ 1.10
1/2	gal carpenter's glue	\$ 4.00	\$ 2.00
Total			\$ 76.71
Total w/ tax			\$ 83.22

Cuts		
2	1" x 4"	23 1/4" w/ one 45° miter
2	1" x 4"	4" glue block (for beneath rails)
2	1" x 6"	12" w/ one 67.5° miter
1	1" x 6"	33 15/16"
1	1" x 6"	50 29/32" w/ two 67.5° miters
2	1" x 6"	23 61/64" w/ notches for folding legs and holes for wiring
4	2" x 2"	34 1/2" OR 33 3/4" w/ 3/4" foam board on top
6	2" x 2"	3 1/4" glue block
5	2" x 2"	5 1/4" glue block
4	2" x 4"	3" glue block & riser for leg hinges
6	2" x 4"	3 1/4" glue block w/ one 45° miter
2	2" x 4"	5 1/4" glue block w/ one 45° miter
1	2" x 4"	15"
1	2" x 4"	21 3/8" w/ two 45° miters
1	2" x 4"	25 1/2"

Place six Homosote plugs with their horizontal centerline 3 3/8" above the bottom of the fascia board as follows: One centered on each 12" board and four on the 51" front fascia, one w/ centerline 3" from each end of the board and one with centerline 18" from each end of the board.

Rout out holes for two Digitrax UP-5s, one centered on the front fascia and one centered on the back. The bottom of the UP-5 should be 2" from the bottom of the fascia board. Cut a hole in the skyboard to provide access to the rear UP-5.

1/2" Plywood

1" x 6" CUTS

1" x 4" CUTS

2" x 4" CUTS

Laminated 1/8" Mascotte and 3/8" Plywood

3/4" Foam Board

Author

Steve Gillett of the Northeast Oklahoma N Scale (NEONS) club is the author of this TipsNTechniques. It was originally published in the November/December 2014 issue of N Scale Magazine.