

## PART III Trackwork for Split Corner Modules.....

Drawing #4 shows the radii and locations for the standard mainlines and for the trackwork options; inner and outer yard tracks, turnouts and corner adaptor track. Most of these details are the same as shown in our basic corner design as first presented in the Feb. '96 *Dispatch*, Drawing #2. The use of the yard tracks deserves some comment later on in this article. The only thing new and unique here is joining the rails at the 45 degree split joint. Once again, the *idea* is old, but the application is new.

The Cuyahoga valley S Gauger's published this idea in the December, 1986, issue of the *Dispatch*. It is republished with this article. The size tubing that they used for code 148 rail works equally well for our code 125 rail. For we scale people using code 100 rail, smaller tubing and smaller wire keys are required. The important point to remember here is that the tubing must not exceed the rail height to avoid interference with wheels passing over the rail joints. This new application of an idea permits not only quick joining of the rails, but assures smooth curves at the joints of the two sections.

As indicated in Drawing #4, the use of #6 turnouts is an option for the builder. Placing these at both ends of the outer mainline curved track opens a whole new dimension for corner units! It allows the modular layout coordinator to have a junction point on the layout where another modular track system can join it. Moreover, this corner unit, with turnouts at both ends, makes possible takeoffs to other lines in either direction. While not part of this construction article, please note that there is a corner adaptor (triangular module) shown in Drawing #4 that is used to facilitate joining with other modular systems. Our club has used this concept, with many design improvements, since 1988. Construction, track and wiring for this adaptor is another interesting subject for

## CORNER MODULE ENHANCEMENTS PART III

### CONNECTICUT S GAUGERS' 90 DEGREE SPLIT-CORNER CONSTRUCTION GUIDELINES. Revised version July '97 - Bill Krause

some future article if anyone is interested.

If you do elect to add #6 turnouts for these suggested advantages, you should be aware of some interesting track layout challenges that this presents in order to preserve the integrity of the original design. Fortunately, drawing #4 and new drawings 4A and 4B should take out all the guesswork that we faced some eight years ago when the first articles for our club newsletter were written.

"What are the challenges", you ask? The first one is that the #6 turnout frog point must be located EXACTLY 13-1/2" from the end face as shown in Drawing #4A (line OP). Second is the need to connect the 8-1/2" diverging straight section "XA" of the turnout to the outer mainline's 47-1/4" standard radius "BY" using the transition easement "AB". More on this transition easement later in the article. Also, don't forget that this layout process has to be reversed to complete the other half of your split-corner. All of the above details would not be necessary if you can build a turnout that is curved from the points through the frog area having a radius of 47-1/4". I did it, once! Stick to the regular turnouts that have a straight path through the frog areas, as shown in drawing #4A.

Now, let's cover the details for accurately drawing all track center lines (full size) on your new split-corner frame with legs. If your new corner is accurately built according to Parts I and II of this series, then it will be possible to lay out full size curves that conform to Drawings 4, 4A and 4B. Drawing these full size curves is accomplished by the familiar method of using a beam compass or trammel. This is a bar or strip of light wood equipped with a fixed center point at one end and at the other end an adjustable curve marker. Within this past year I've gotten smart by constructing a full size template out of heavy illustration board. By drilling small, 1/16" holes along the track center lines and frame outlines, I will no longer

need to repeat this laborious layout procedure again. Moreover, by flipping my template over, I have the complete guide for the other half of the corner. Why did it take me so many years to get smart?

Paper templates of right hand and left hand "S" gauge, #6 turnouts are really needed for properly locating the turnouts on the outer mainline curve. I use copies issued by the NMRA many years ago. With the aid of a copy machine today by just enlarging any of the HO templates. The important point to remember is that these drawings should show the straight center lines converging to point "X" (the hypothetical intersection point) as shown in Drawing #4A. Again, with our accurately drawn template, we know that point "P" will always be 13-1/2" from end-face, and point "X" will be approximately 8-1/4" from the end-face, depending on the exact construction of your turnouts.

With the turnout center lines in place and the 47-1/4" outside mainline radius drawn, we are ready to draw in the transition easement. Drawing #4B was specifically created to assist in this process along with Drawing #4A. I use a piece of rail to accomplish my "bent stick" method. At one end I spike the rail along the straight path "XA" to point "A". At the other end, the rail is spiked to the 6" section of 47-1/4" radius "BY". Once you have done this, your rail will have a natural transitional bend to it. To be sure that this "natural" bend is not too sharp, I suggest that it never exceed 3/16" from the original 47-1/4" radius as shown in drawing #4B. Again, you must repeat all this for the other half. With all this behind you, the newly built corner should look like full sized Drawing #4.

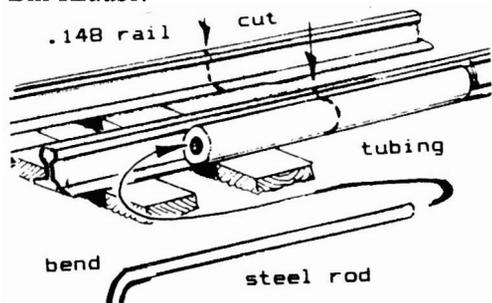
In the interest of brevity, I will not cover details in the use of roadbed, track, turnouts or electrical wiring. I will say that I lay all my rails spiked to Kappler wood ties on Homa-bed. For corners built for "scale only" operation, I use American Models (Old Pullman) #6 turnouts For corners built for club use

where simultaneous running of scale and American Flyer hi-rail equipment is desired, I use code 125NS rail and closed frog turnouts. Because more clearances are desired at the point and frog areas for American Flyer equipment, we are finding it best to build our own turnouts. Again, for club corners we use Caboose hobbies "O" scale hand-throws. These have a maximum throw of .28", so necessary for closed frog turnouts. From experience, we find it best to locate the hand-throws at the outside edge of the module.

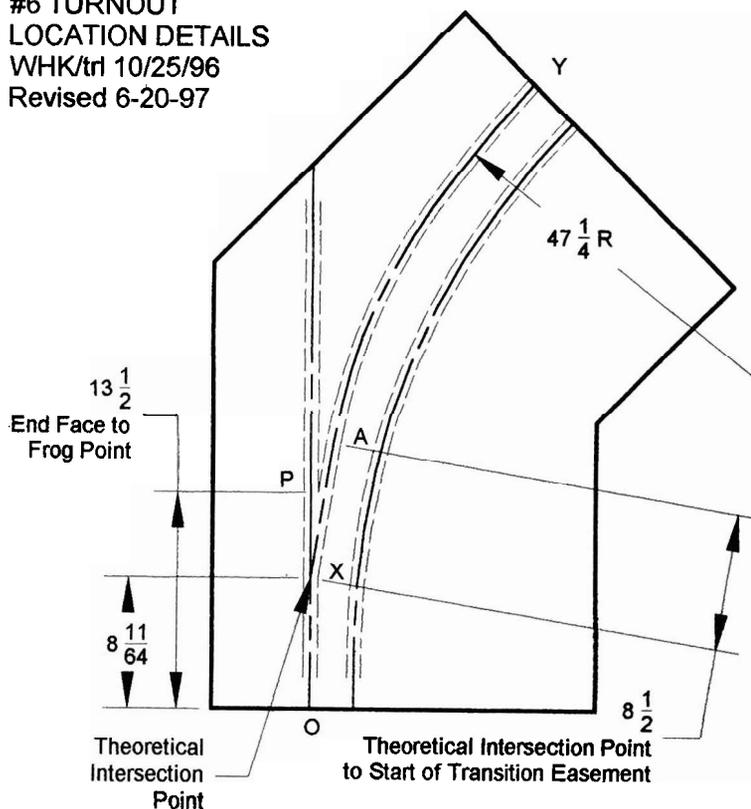
One important track construction detail not mentioned so far is to solder your brass tubing to the outside of each rail, as suggested by the Cuyahoga Valley club. Now, cut each rail with a sharp razor saw along the joint line which separates the the two halves of the split corner. Make sure that your wire keys slip into the tubing. Take your corner apart. Clean up any burrs that couldn't be reached before. Put the module back together with all the keys inserted and you should be in business!

Early on, I mentioned that our club uses yard tracks and even sidings off these corner modules. Why all these extra tracks? During shows, these extra tracks permit all kinds of switching operations to be done while trains are running on both mainlines. All we need are more local cabs to carry on this interesting part of operations. During the past three years, most of our members have seen the advantages of adding an outside yard, or fourth track. That's why Drawing #4 shows an optional outside yard track. Recently, one of our members added a #6 turnout to this optional curve (see note at bottom of Drawing #4). There is no end to creative possibilities.

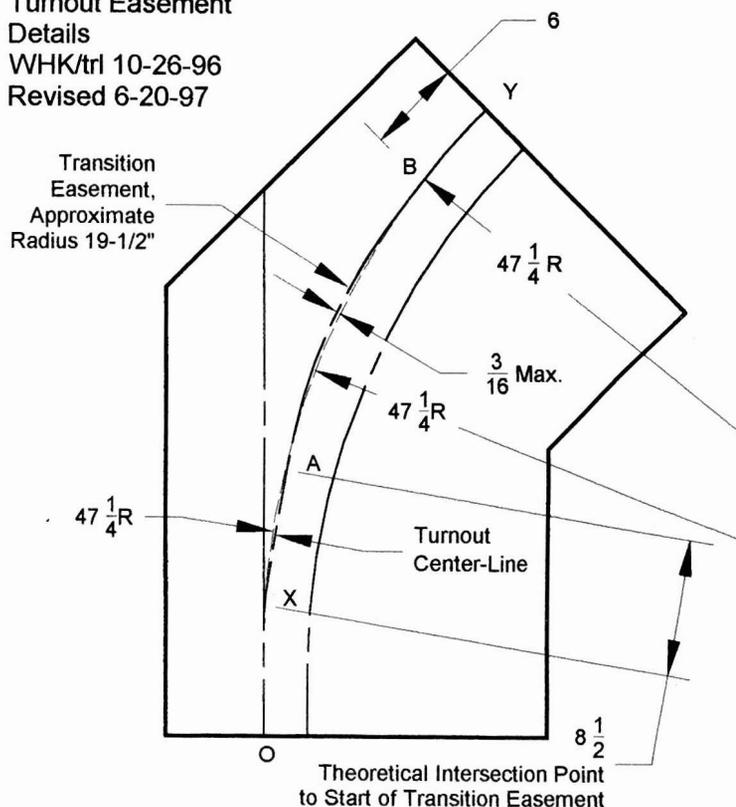
Well, there you have the details for building the best CORNER IN S GAUGE TODAY! I hope that this article will spur many of you to build this corner. I know that this will lead someone to eventually build a better one tomorrow.  
Bill Krause.



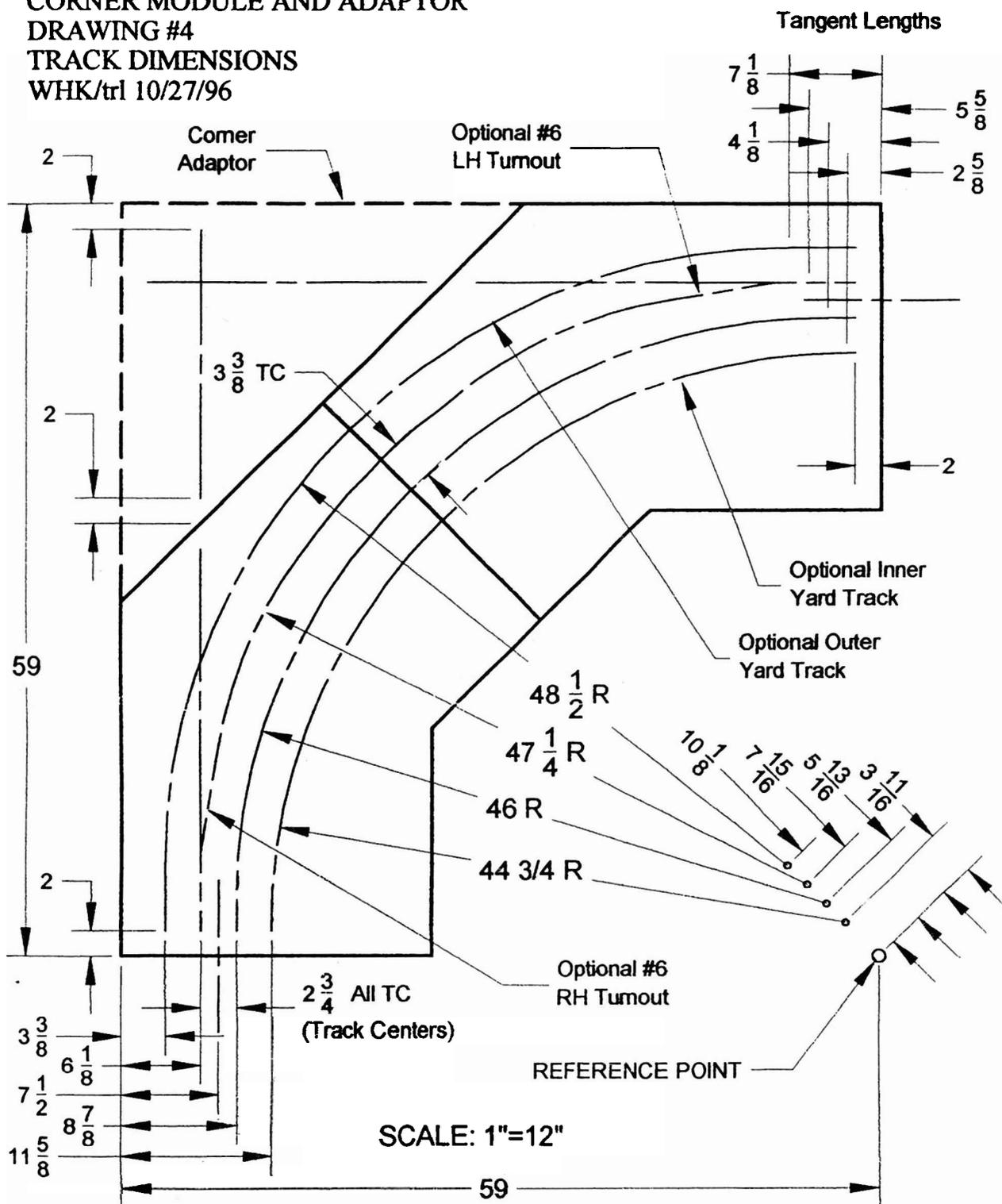
DRAWING 4A  
#6 TURNOUT  
LOCATION DETAILS  
WHK/trl 10/25/96  
Revised 6-20-97



DRAWING 4B  
Turnout Easement  
Details  
WHK/trl 10-26-96  
Revised 6-20-97



CONNECTICUT S GAUGERS 90 DEGREE SPLIT  
 CORNER MODULE AND ADAPTOR  
 DRAWING #4  
 TRACK DIMENSIONS  
 WHK/trl 10/27/96



Optional inner and outer tracks will provide additional operating opportunities when joined with other multi-track modules.

Optional turnouts provide interfacing opportunities with other modules. It is NOT recommended to use the outer optional yard track AND turnouts in the outer main together in the same module.