

TALKIN
TRAK

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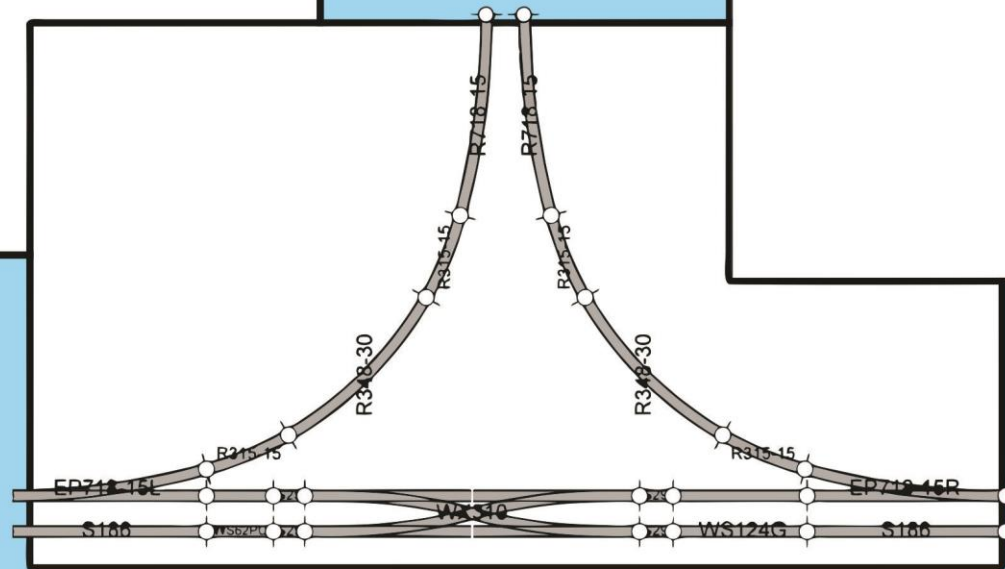
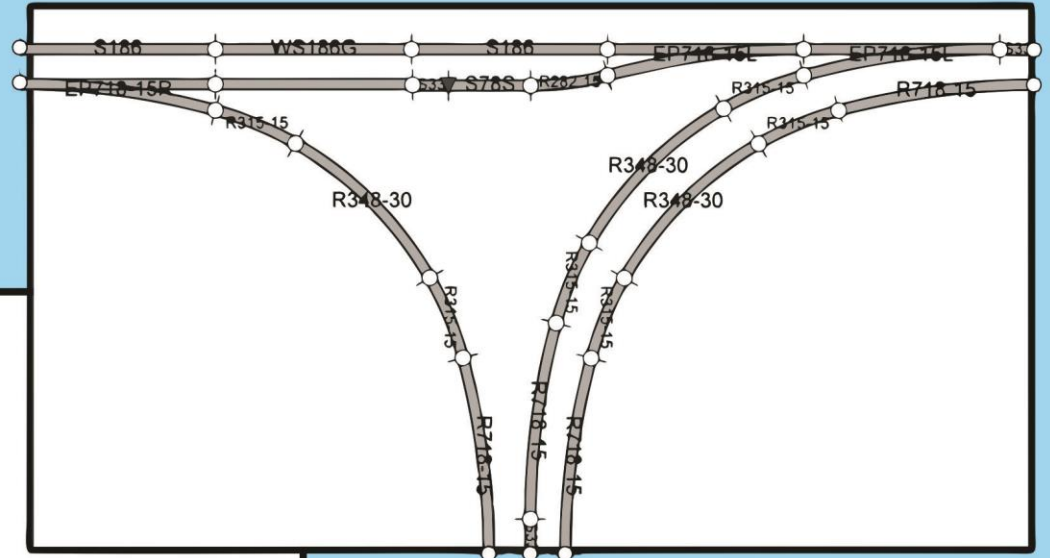
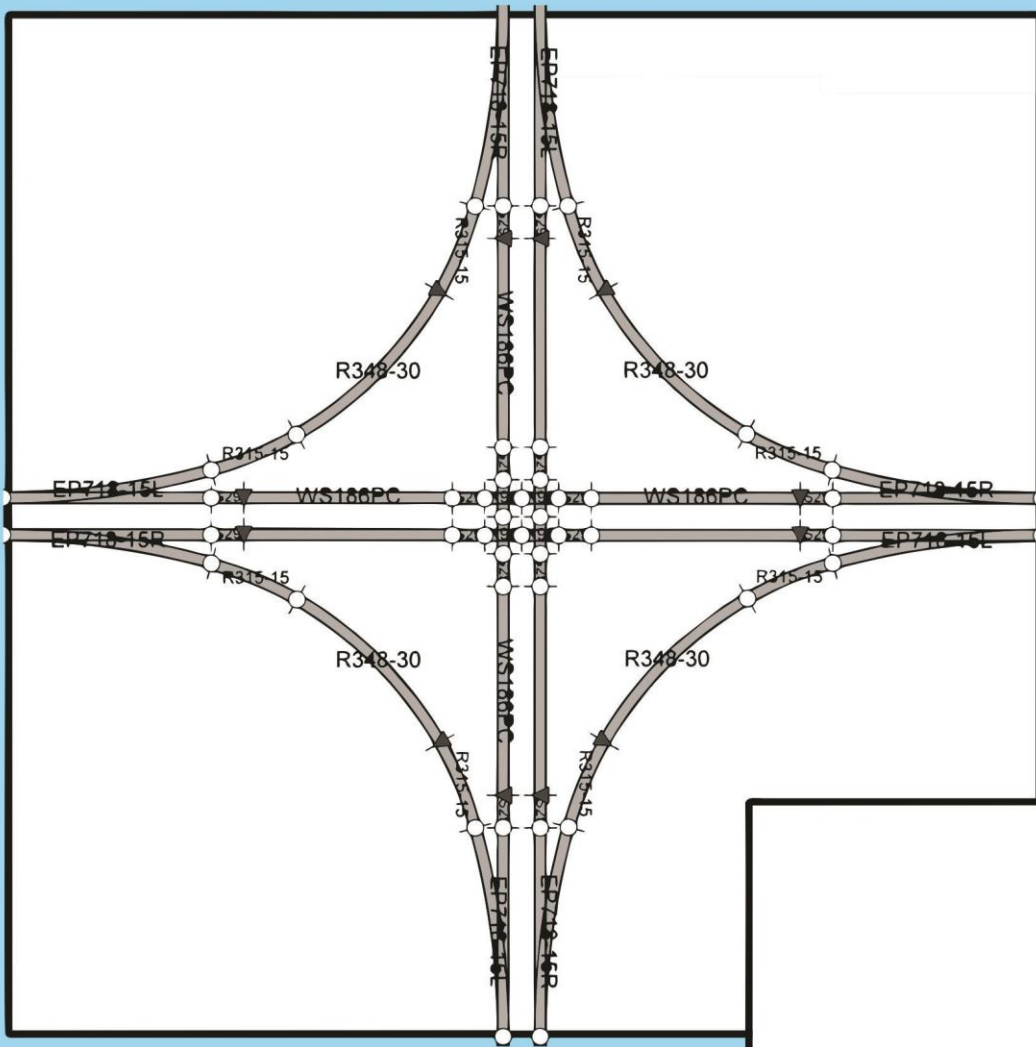
Professor Choo Choo

T-TRAK 101



#6 Turnouts are preferred BUT they have a problem -
49.5 mm
TRACK SPACING!

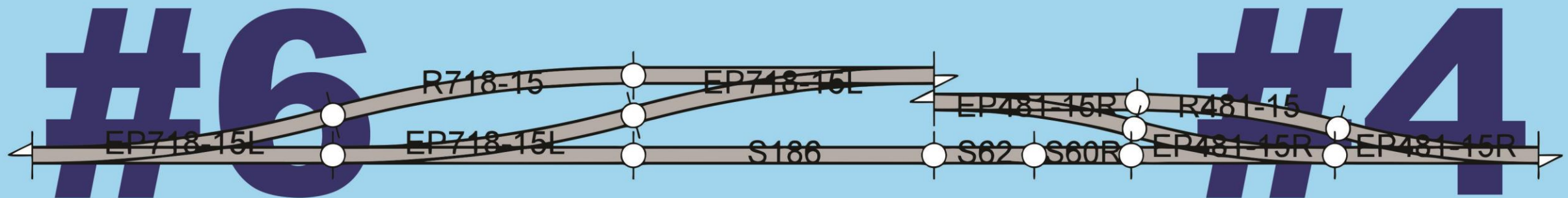
I've been working with #6 turnouts a lot lately with the large junctions, Escape Track Corners and the Diamond Junction so I thought I'd see what I could come up with to make #6 turnouts 33 mm track spacing compatible. My results were used in the Escape Track corner shown below ...



4.8.1. Use Kato Unitrack # 6 turnouts (part #20-202 & 20-203) whenever possible. Their use creates track spacing (49.5mm) that allows for easier placing of rolling stock on the track(s).

4.8.2. When Kato #4 turnouts (part #20-210 & 20-220) are used, they should be modified to provide smooth operation. The modifications are described in a T-TRAK Wiki Tutorial or in a YouTube video.

This Nrail Recommended Practice for T-TRAK addresses the use of KATO #6 turnouts and their resultant 49.5 mm track spacing. This suggests using #6 turnouts in yard construction to provide more track spacing for fingers attending to rolling stock. But, #6 turnouts are not compatible with KATO's double track straight and curved track pieces. That 33 mm spacing requires the use of #4 turnouts that are not well regarded without the suggested modification in Tips N Techniques "What You Need to Know About KATO Unitrack Turnouts". Also, the use of #6 turnouts on the two main lines is recommended for reliability. But, what if a #6 turnout is used to access a track parallel to the main requiring 33 mm track spacing?



The CONFIRMATION TESTING



The Crew: Athearn Big Boy, Bachmann DD40AX, KATO ES44AC

The Consist: 2 Atlas boxes and a Red Caboose auto rack

The track pieces were just laid out on a table, aligned with a metre stick to ensure the track was straight and not "warped" by the track pieces/design being tested.



The HOW and WHY



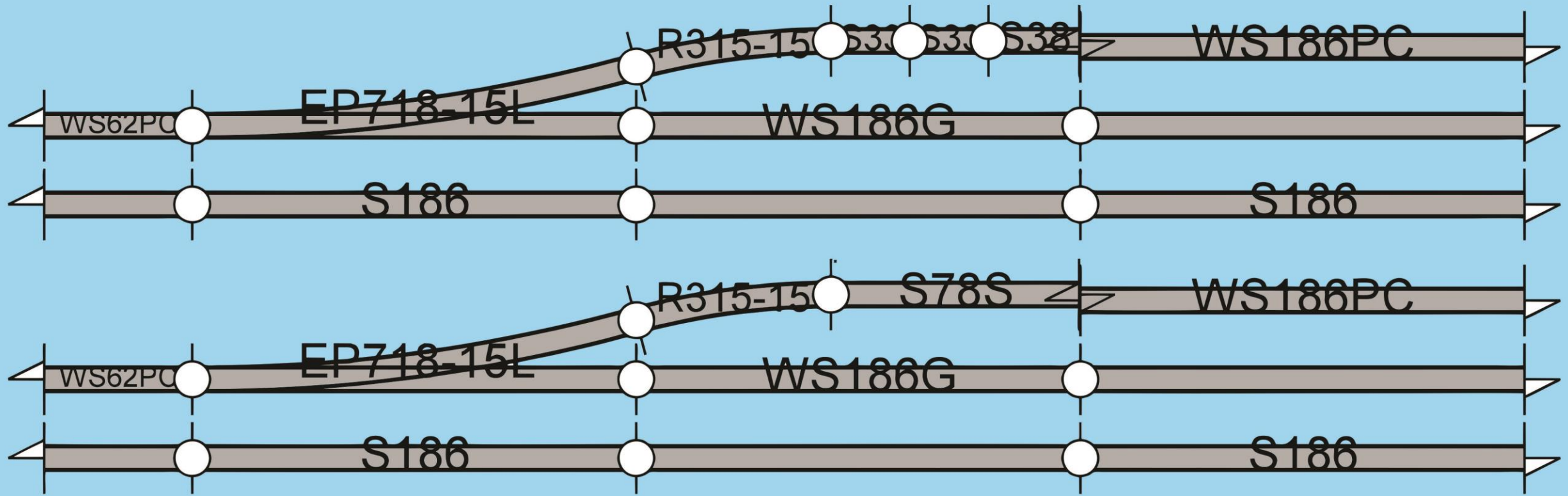
The #6 turnout is actually a 15 degree 718 mm radius curve. Any 15 degree curve will offset the turnout, with varying resultant track spacing dependent on the radius of the curve track used

- sharper curve - less track spacing
- broader curve - more track spacing

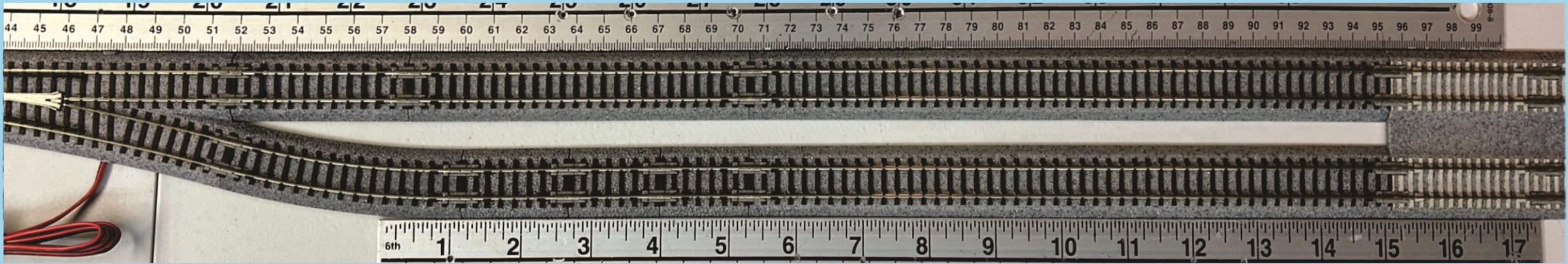
So, playing with Any Rail I came up with these 3 candidates to achieve 33 mm track spacing:
15 degree 249, 282 and 315 mm radius curves.

The 282 and 315 mm radius curves are the standard T-TRAK radii for standard T-TRAK corner modules. As testing progressed I decided not to bother with the 249 mm radius curves due to their tight radius and the success achieved with the 282 and 315 curves.

15 Degree 315 mm Radius Curved Track



Using the 15 degree 315 mm radius curved piece there is a slightly larger than 33 mm track spacing. It is easily adjusted at the end where 33 mm track spacing is established. Since this track design requires a double module, single track 186 mm long straights will allow the correction before the end of the module and the spacing will only be noticed by those in-the-know. During testing neither loco showed signs of difficulty nor did the consist.

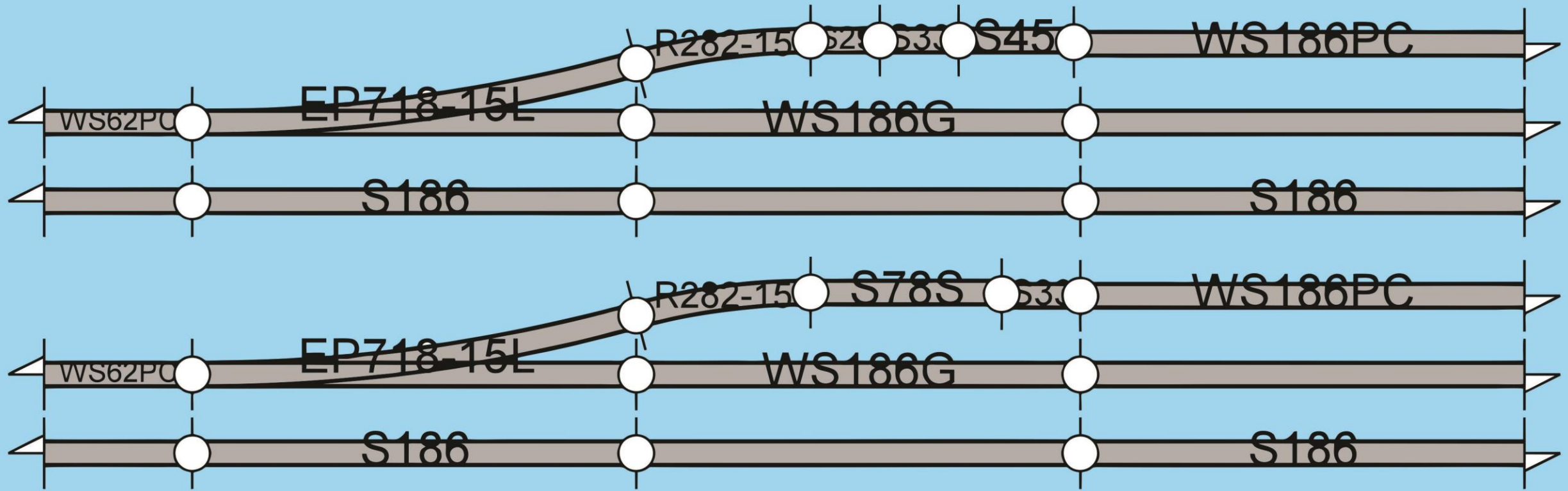


When using the 315 mm curve the correction is minimal and barely noticeable. Rail joiners are not compromised. Add scenery and the 1 or 2 mm correction will totally disappear as it is spread over more than 12 inches!



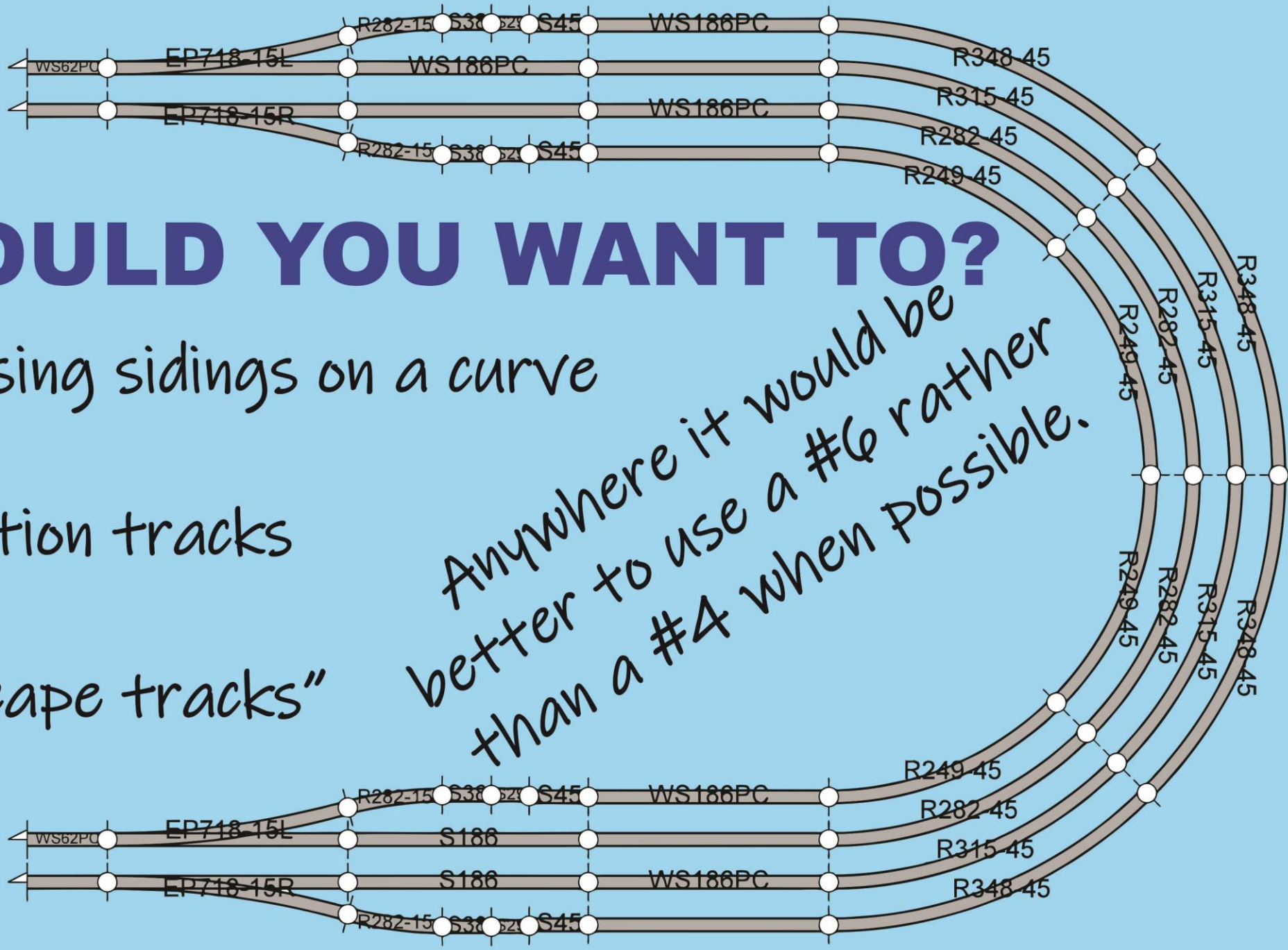
Larger curves were not considered since the required correction would not be advisable with little benefit.

15 Degree 282mm Radius Curved Track



Using the 15 degree 282 mm radius curved piece 33 mm track spacing is achieved. During testing only the Big Boy balked at shoving through the turnout, but successfully completed the move without derailing. It had no trouble drawing through the turnout and 282 mm R curve. The other locos didn't show any concern. The consist had no problems.

(This is a double module. Notice the $\phi 2$ mm straight on the left end rather than a 248 mm straight on the right end. The $\phi 2$ protects the turnout, or longer track pieces, from damage and require less repair work and cheaper track replacements.)



WHY WOULD YOU WANT TO?

Passing sidings on a curve

Station tracks

"Escape tracks"

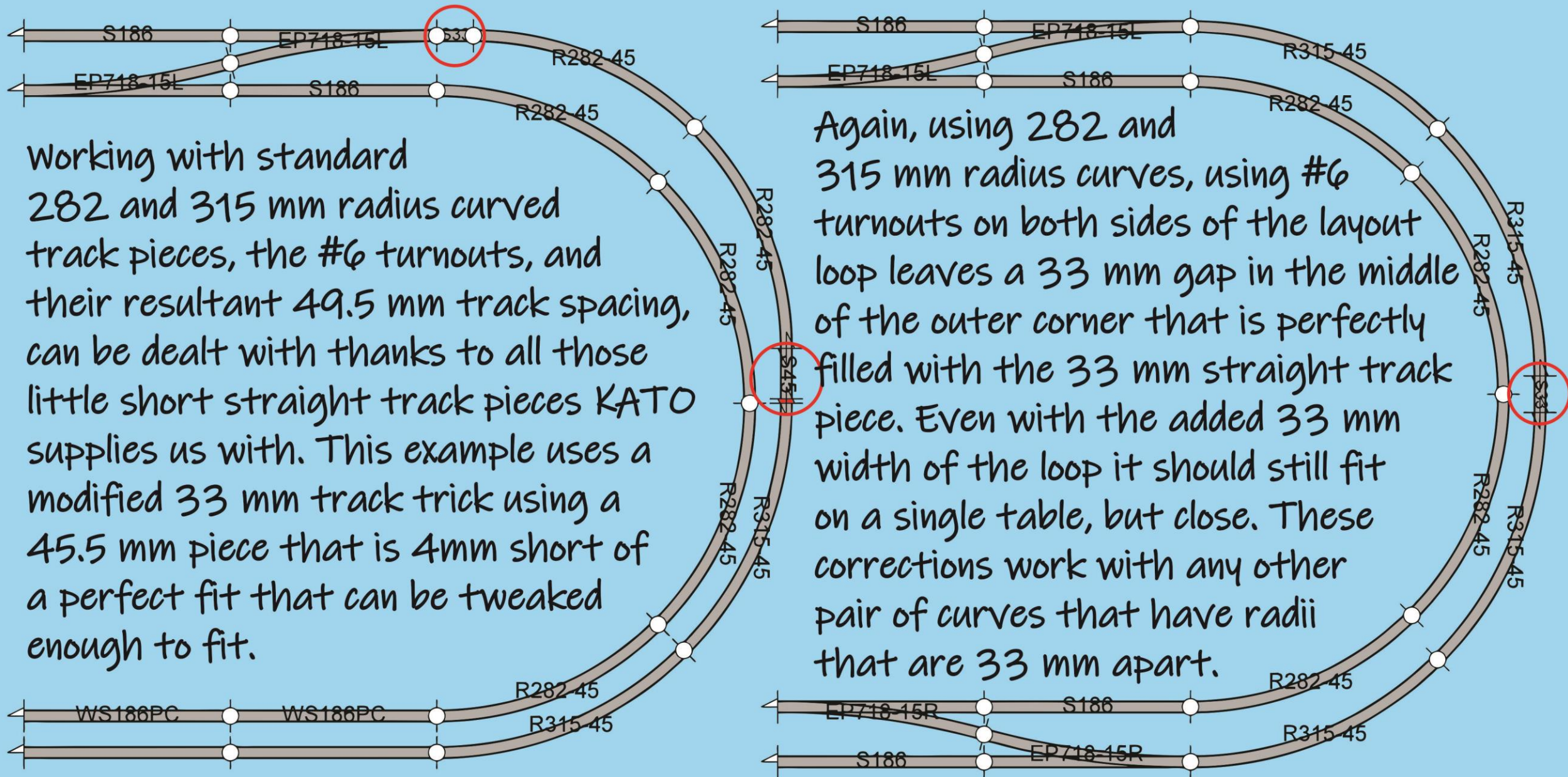
Anywhere it would be better to use a #6 rather than a #4 when possible.



WORKING WITH #6s

Working with standard 282 and 315 mm radius curved track pieces, the #6 turnouts, and their resultant 49.5 mm track spacing, can be dealt with thanks to all those little short straight track pieces KATO supplies us with. This example uses a modified 33 mm track trick using a 45.5 mm piece that is 4mm short of a perfect fit that can be tweaked enough to fit.

Again, using 282 and 315 mm radius curves, using #6 turnouts on both sides of the layout loop leaves a 33 mm gap in the middle of the outer corner that is perfectly filled with the 33 mm straight track piece. Even with the added 33 mm width of the loop it should still fit on a single table, but close. These corrections work with any other pair of curves that have radii that are 33 mm apart.



THANKS
For Watching



A **ZoomTRAK** presentation by **True North Rail**