

TALKIN'

T-TRAK



TM

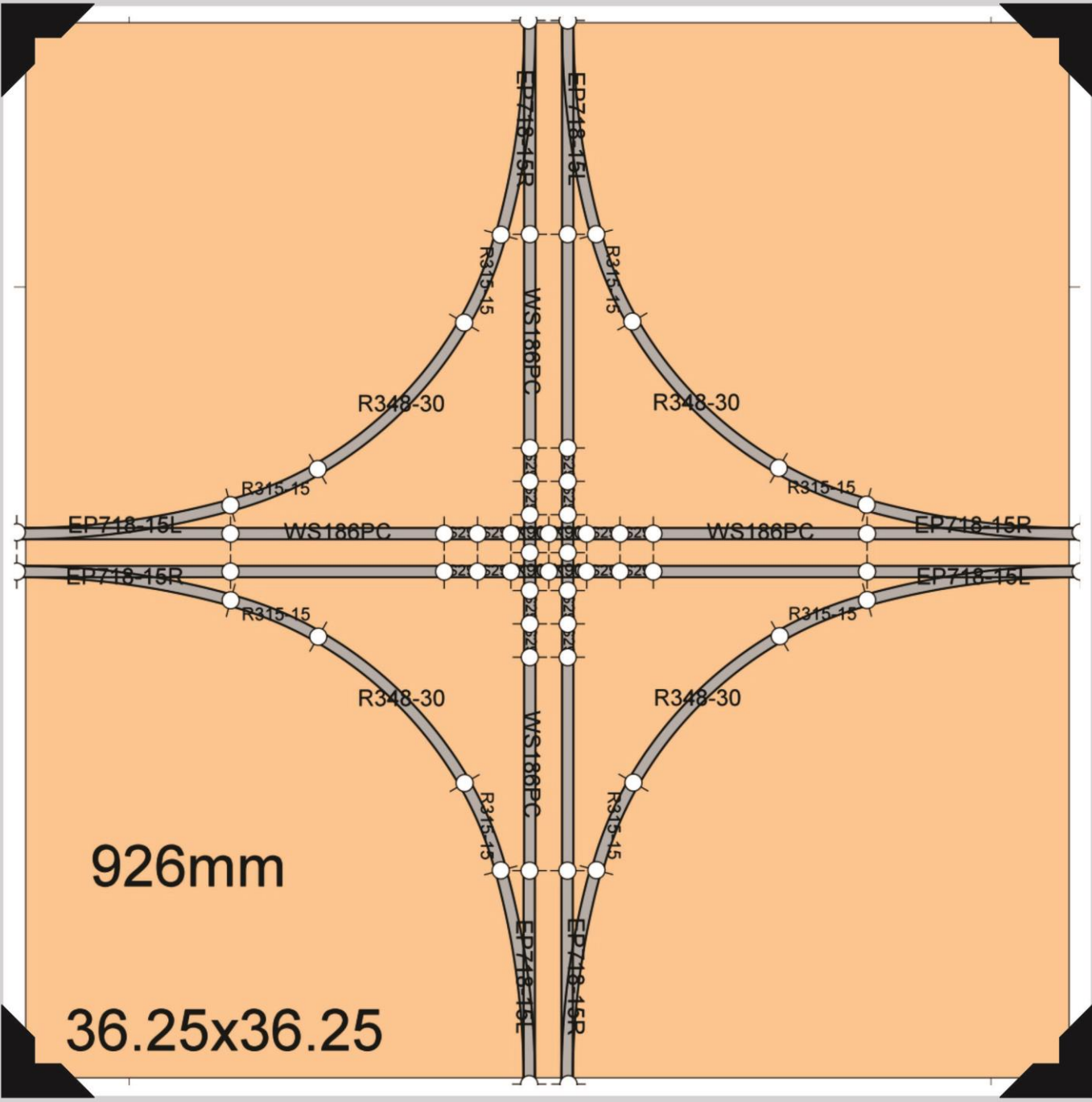
447/480 Track Surgery Alternative

Professor Choo Choo

T-TRAK 101



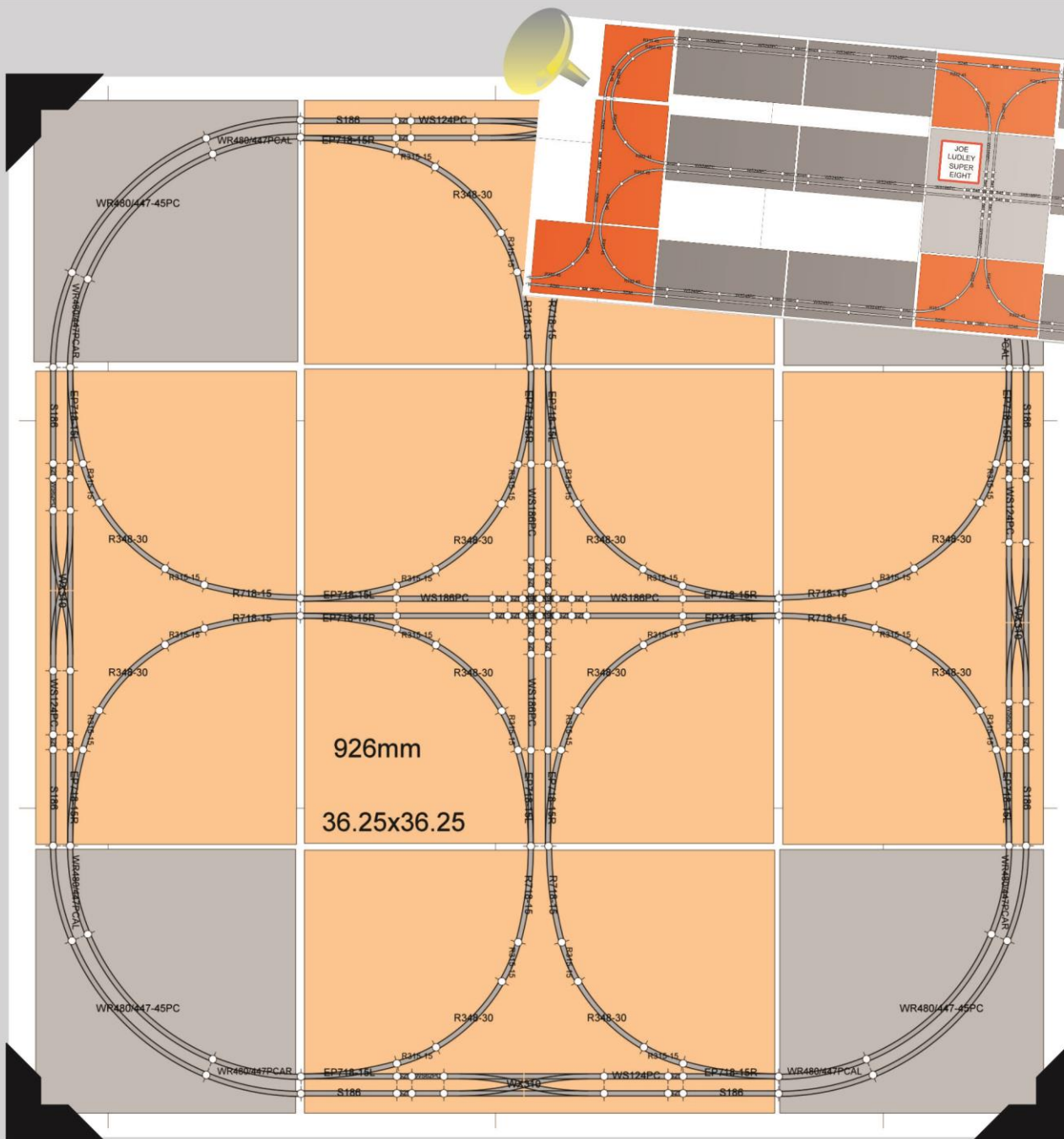
A beneficial accident
may mean track
surgery to create
447mm curves may
not be necessary.



Is This A Junction?

(or a disaster waiting to happen?)

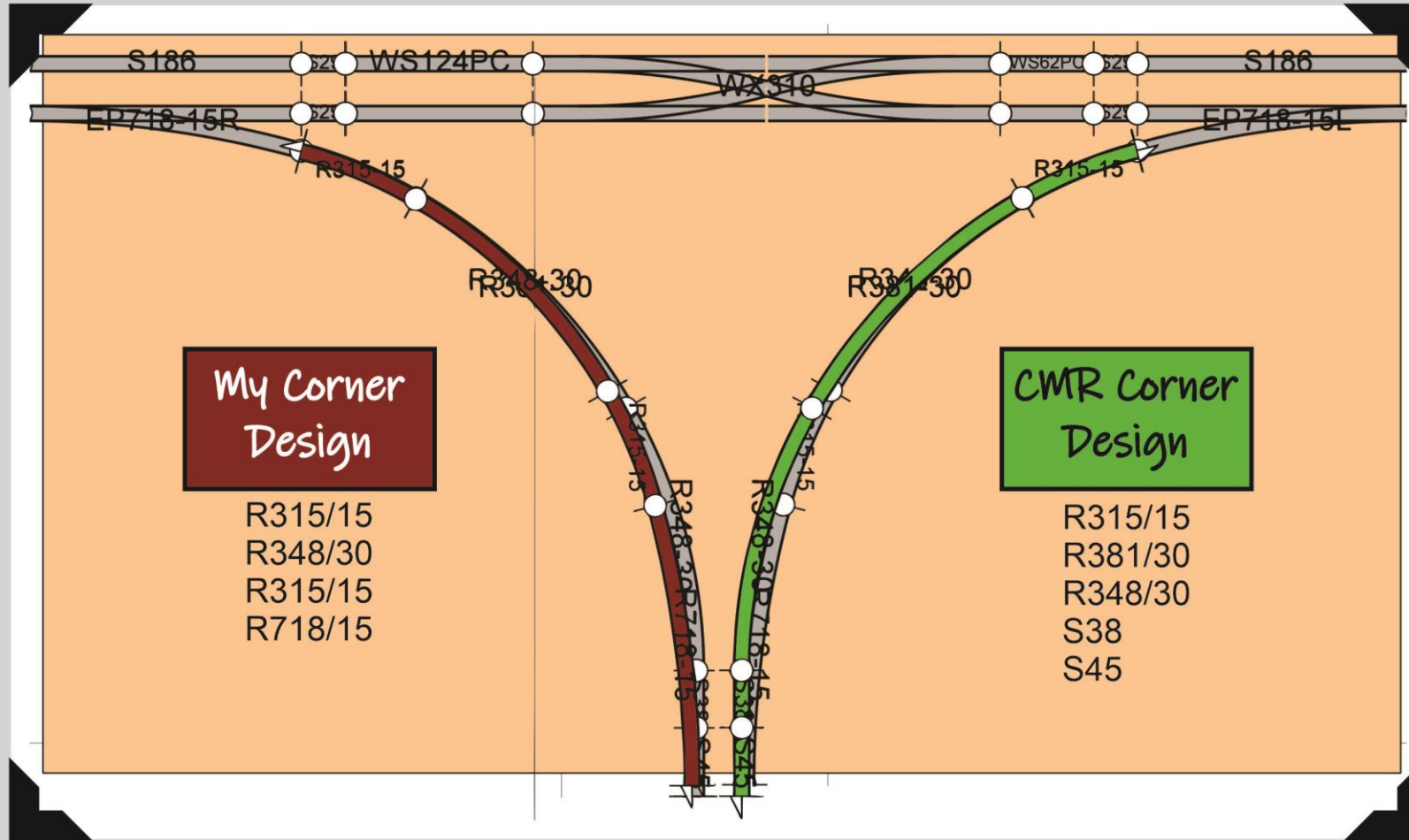
Yes and yes? This is what happens when 2 CMR style junctions are placed back to back and I continue drawing. It was very surprising how simply it came together. The CMR style junction is 926mm long, just 4mm shy of a triple straight module. This "super cross" is 926mm square. As a result it's a perfect companion for "large corners" with 447/480mm radii curves and the CMR junction they mate with. The corners are no sharper than those of the CMR junctions. Now I just need to figure out what is needed for occupancy protection to avoid those possible disasters. Or maybe I won't...



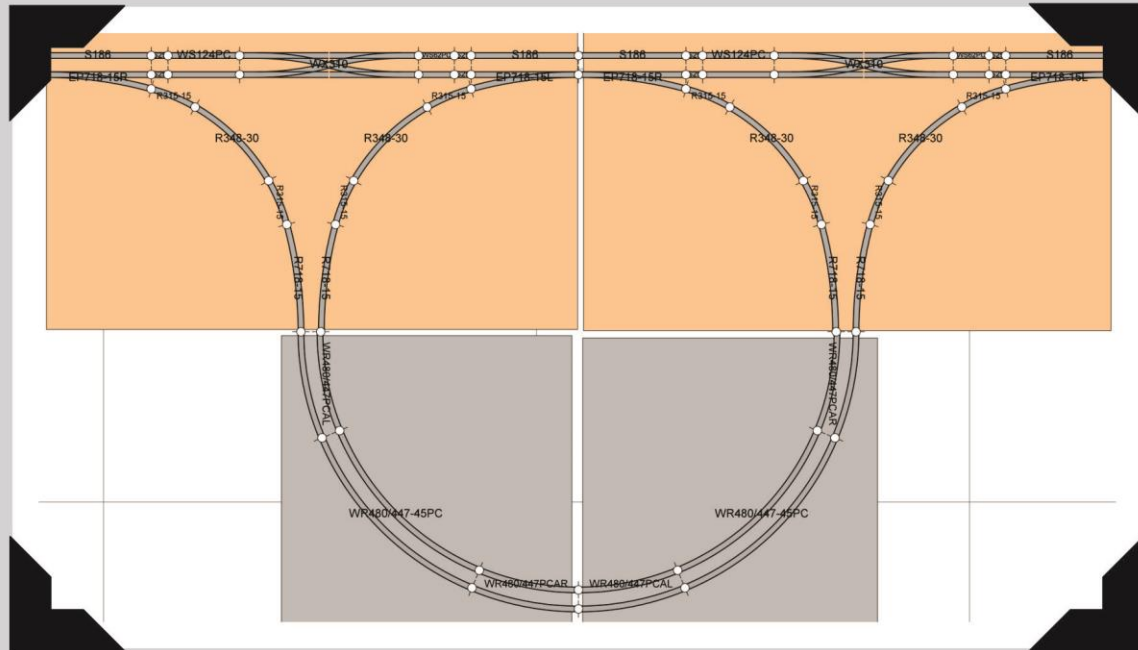
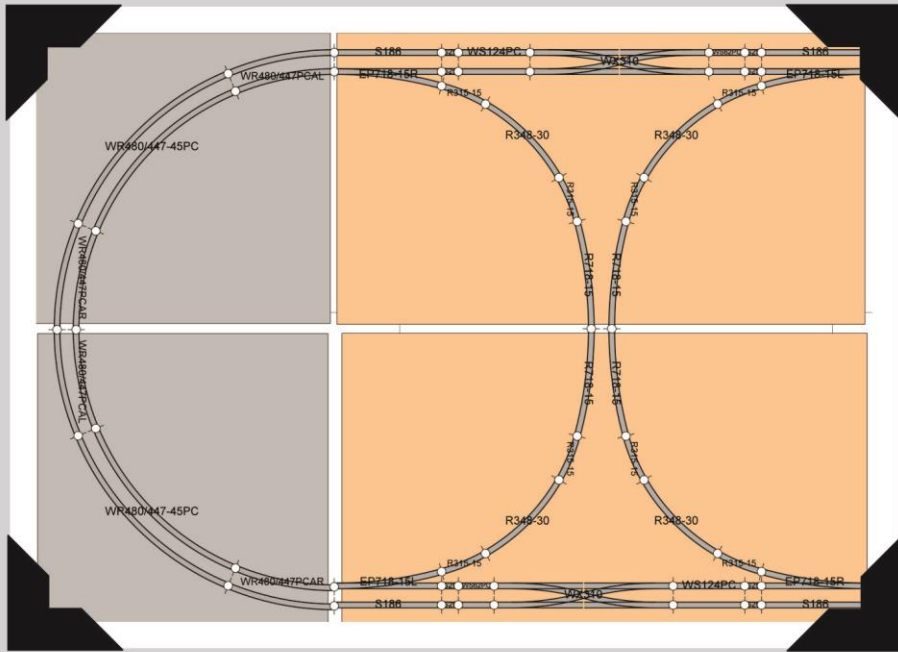
"Super Duper 8"

A friend of mine, Joe Ludley, has a T-TRAK display that uses a double track 90 degree diamond similar to this without the diamond junction corners - just a straight diamond. His "Super 8" is created with standard corners and junctions and is fully controlled by occupancy detection. Any number of straight modules are added creating a long clover leaf with one large outside loop and one corner is replaced with a junction leading to the rest of the layout. It's a great crowd pleaser at shows as spectators wait to see if the trains will crash. I didn't intend to create a "Super Duper 8". The hope is to create a combining junction between four large independent loop layouts.

An Accidental Improvement!

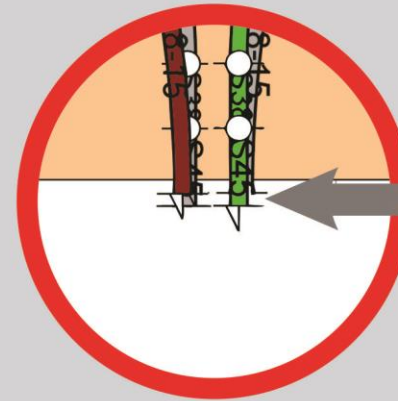


Although the CMR large junction design was the best match yet developed for the large 480 /447mm radius corners I never really liked the corners and the 2 small pieces of straight track required. So I took the curved track from the Super Cross, replaced one #6 turnout with the equivalent 718mm radius 15 degree corner and an accidental improvement resulted.



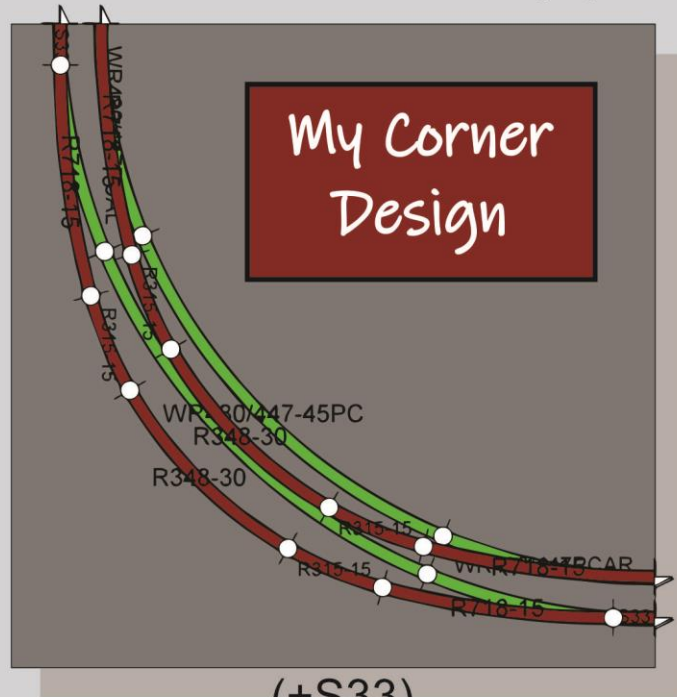
Proof of Concept

Mating the modified CMR junctions with the large 480/447mm radius corners proved the removal of a small fudge factor created in the original design at the nose (end of the curves) of the junction. (the difference can be seen in the graphic on the previous page) In short, ALL three pieces (the large corners, the modified junction and the Super Cross) fit together perfectly!

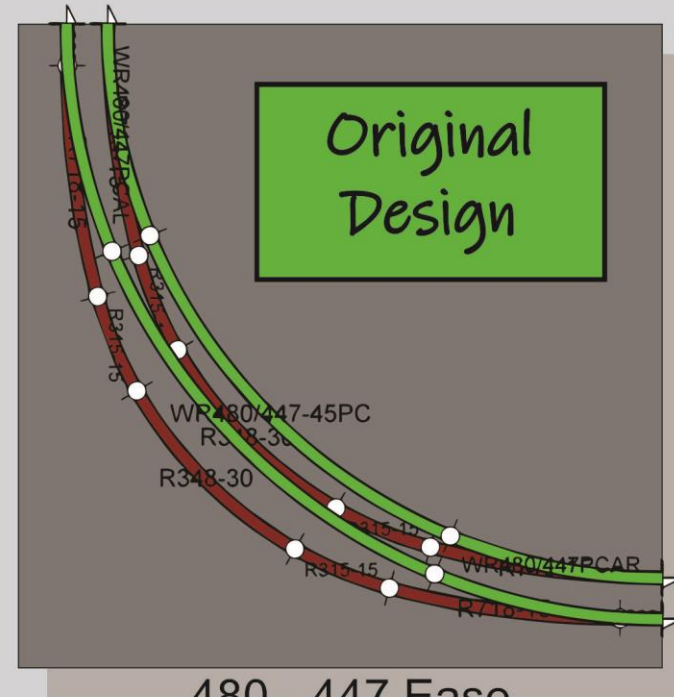


The nose of the junction curves is a few mm too long and the track spacing is narrow in the original design.

As Applied to Corners



(+S33)
 718/15
 315/15
 348/30
 315/15
 718/15
 (+ S33)



480 - 447 Ease
 480 - 447/45
 480 - 447 Ease

Yes the original corners are broader, mine sharper, they equate to the junctions and the super cross and do have a benefit...

These corners use the same track as the junctions except that the #6 turnout is replaced with an equivalent 718/15 curve. Why? Two reasons. One - some folks don't like the super elevated corners. Two - since KATO does not manufacture 447mm curved track...

Large Corner Options . . .

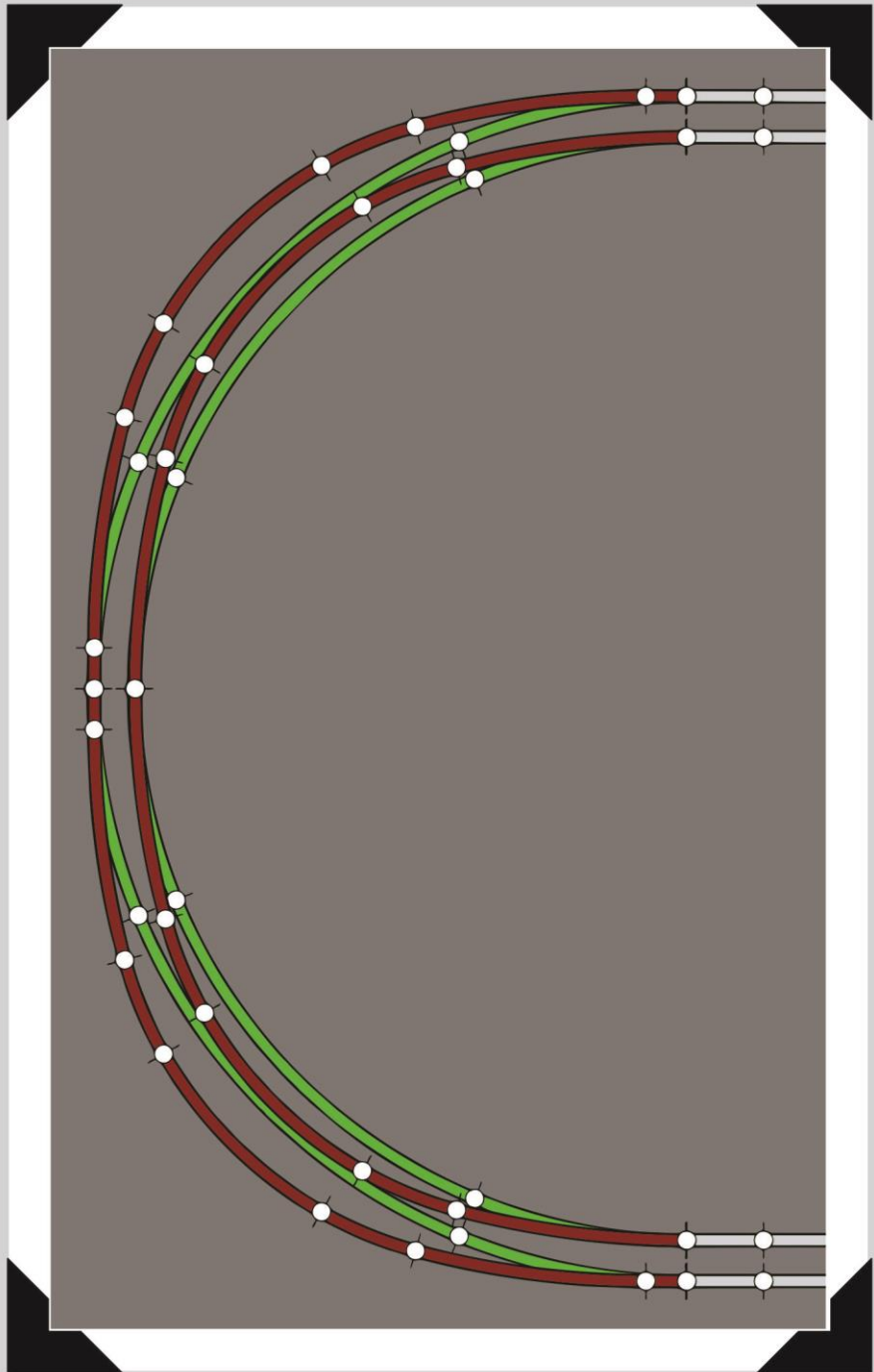
First of all, this new corner design is NOT better, just different. Again, it provides an option to the 447/480 super elevated tracks. They are similar to the large junctions; the same if you accept my junction track changes.

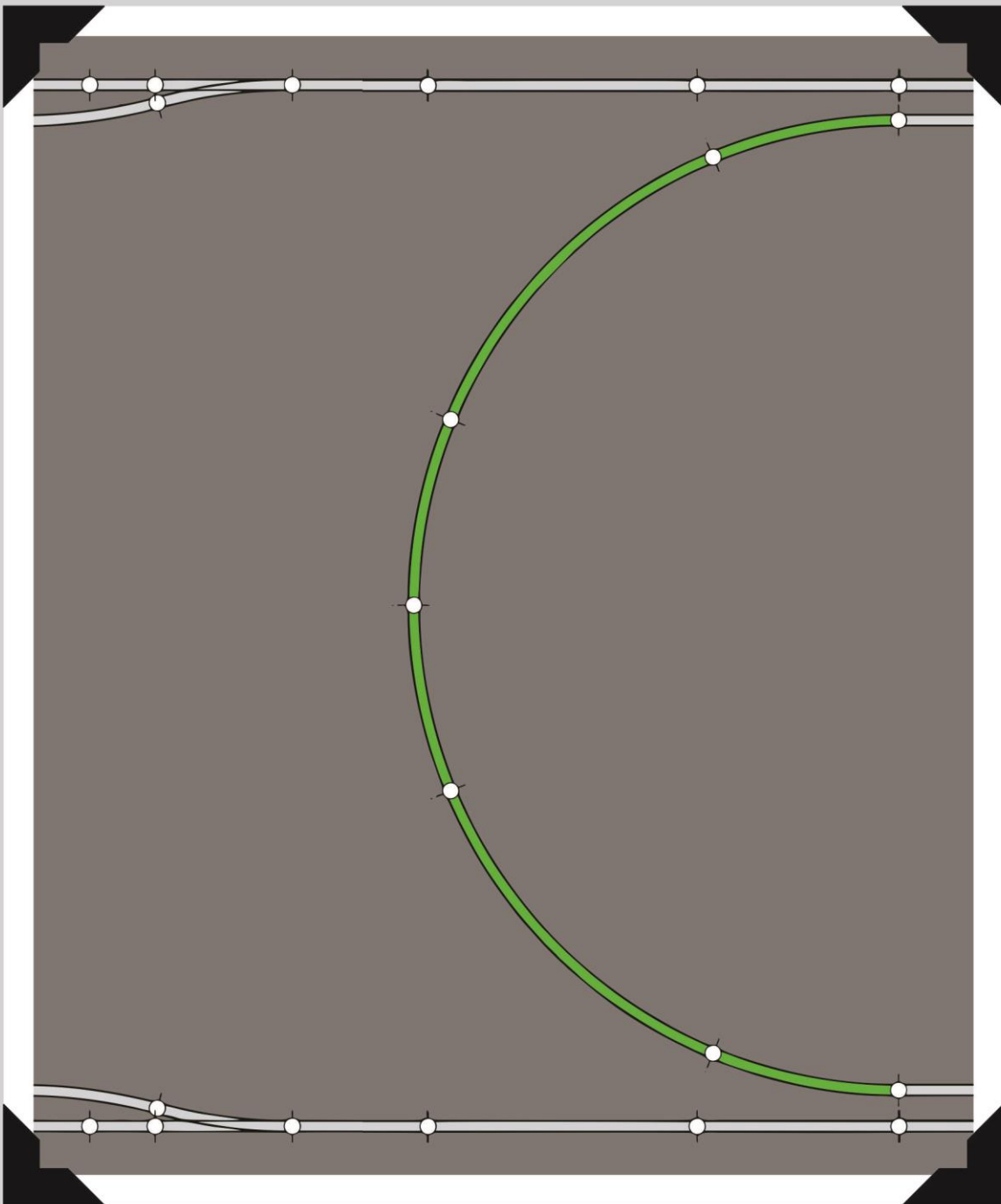
For those who wish to eliminate the super elevated track the 481/15 curves could be used for the outside track BUT KATO does not have 447mm curves. (yet??)

This new design uses the exact same track for both the inner and outer corners. The outside corner uses the 33mm straight track trick to maintain 33mm track spacing.

OK, why apply this design to large corners? Why do we need "options"? Using 480/447s we don't, BUT . . .

(Now for the "Rest of the Story" . . .)

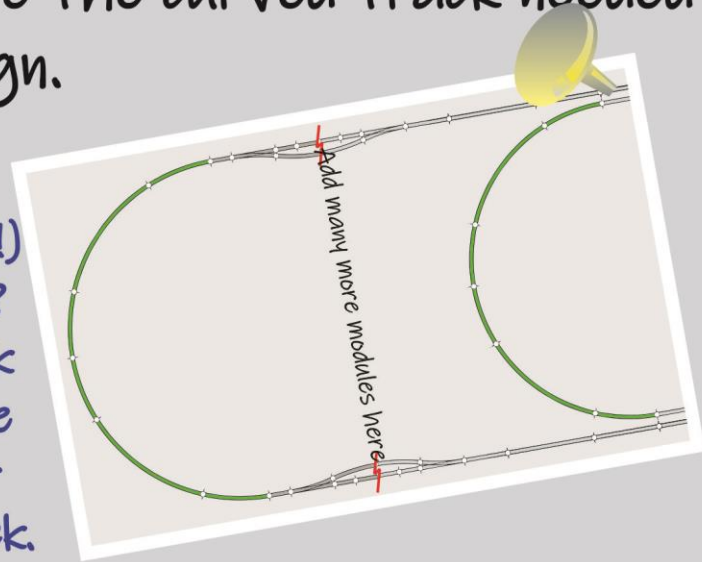


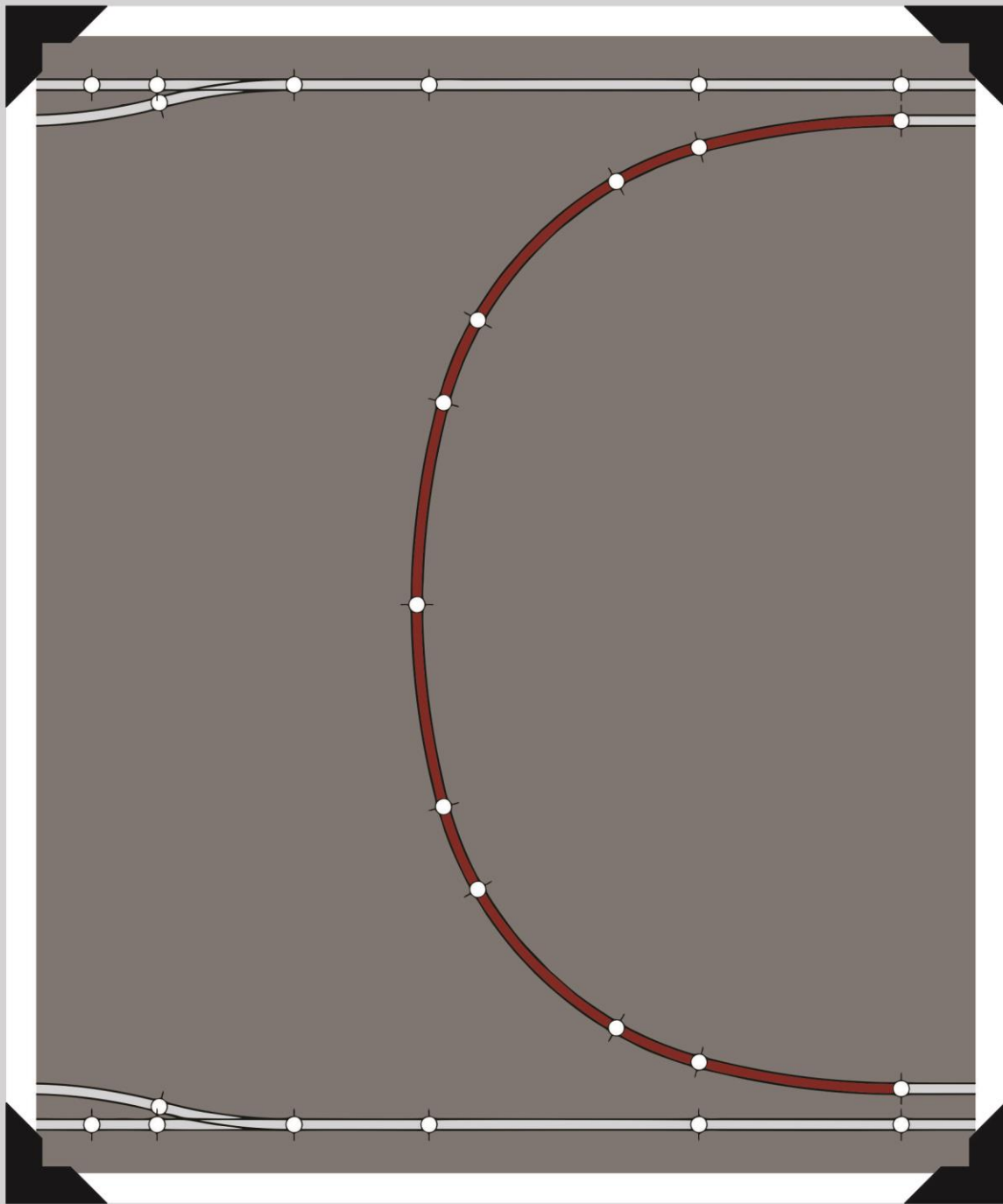


Why? To Create "Escape Tracks"

A past NRail Newsletter article promoted "Escape Tracks" leaving the Yellow inside loop to create a Red line only set of modules for "operations". In order to do that with large corners the 480mm curved track was cut off the 480/447 super elevated curves. Why? Again, KATO does not manufacture 447mm radius curved track pieces. Also, in a past newsletter, the same track surgery was performed to create the curved track needed for a large junction design.

And once the 480mm curved track is cut off (not that easy!) then what .. throw it away?? You could make the single track corner for the other end of the Red track operations loop, but most folks will want double track.

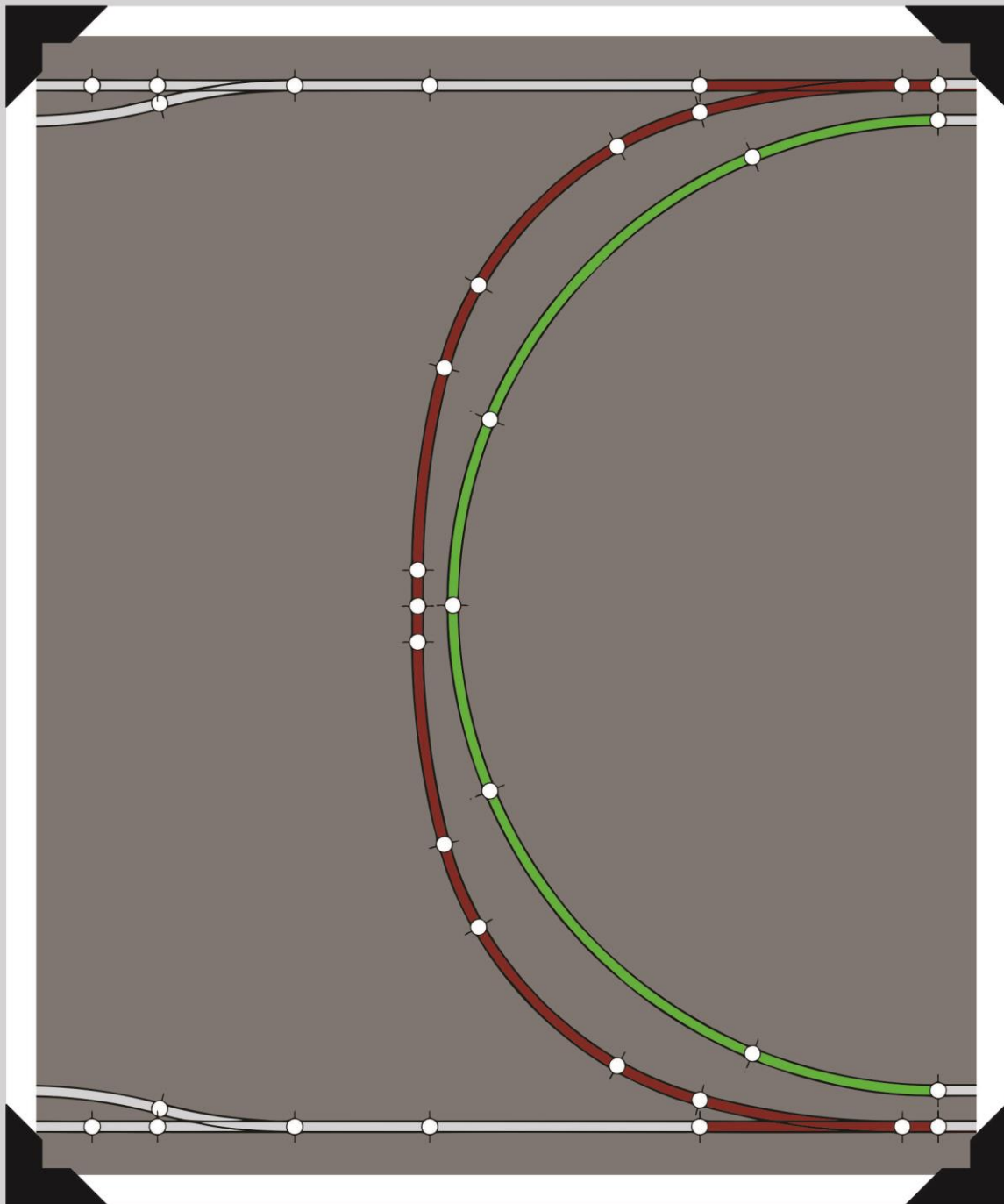




Why? To Save Money!

The 718/15 curved track pieces come in packages of four. You need four for a pair of 90 degree corners. The 315/15 curved track pieces come in packages of four. You need four of them too. The 348/30 track pieces come in packages of four. You only need 2 of them, but you could use the other two to make another pair of corners . . . Using 480/447 super elevated curved track you will need two sets of easements and one package of two 480/447/45 curves (or one set of easements could be replaced with another pkg. of curved track).

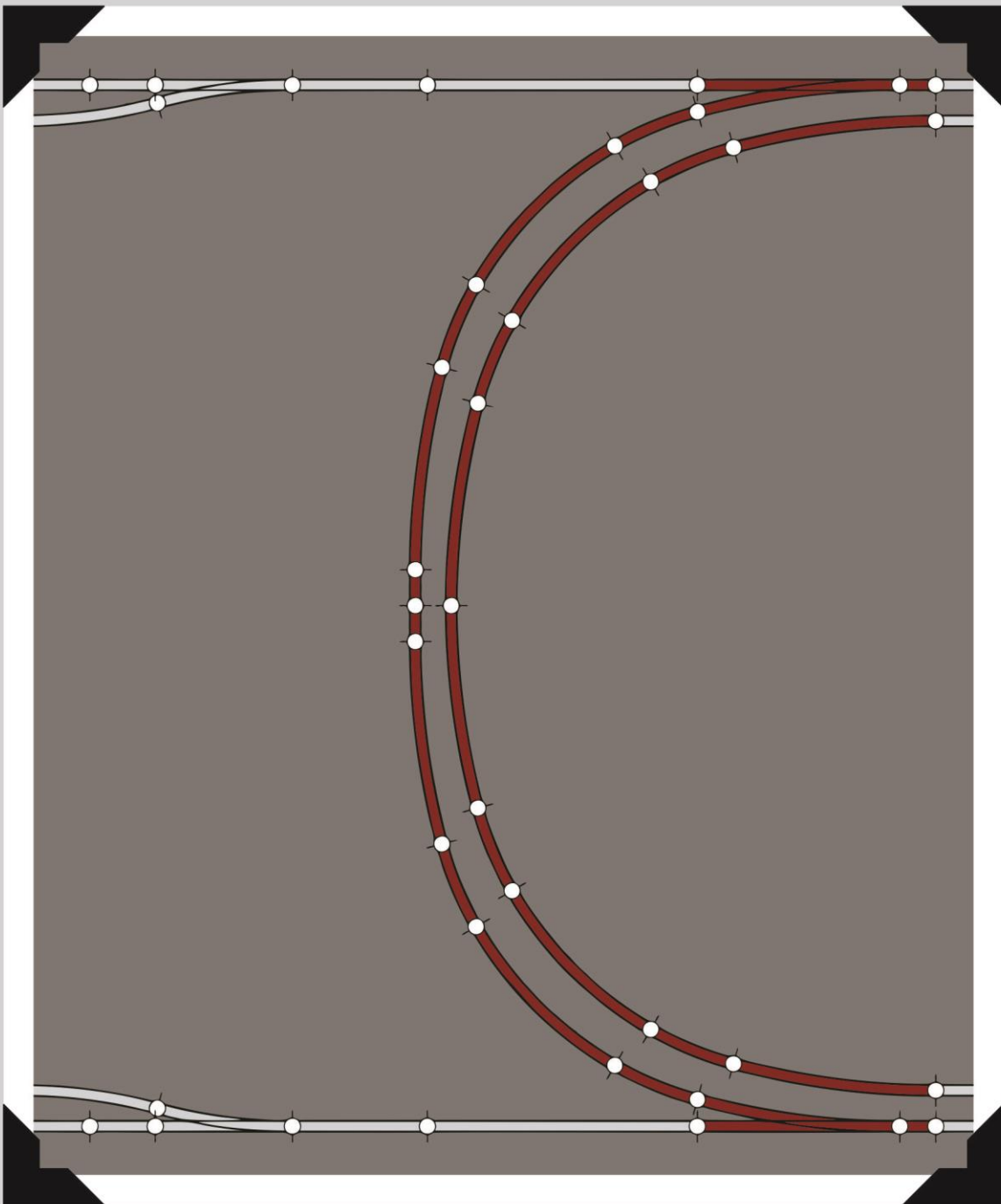
According to a large wholesaler/on line retailer the super elevated track costs more than the other trackage listed here and the 480mm track removed may wind up in the garbage!



Why? To Keep the Outer Curve!

OK, now what? If the inner corner has already been created with the 447s cut off of the 480/447 super elevated track you can add the #6 turnouts and give the Red track an option of "escaping" OR avoiding the Red track extension. Except for the addition of the 33mm straights this mimics the large junction design.

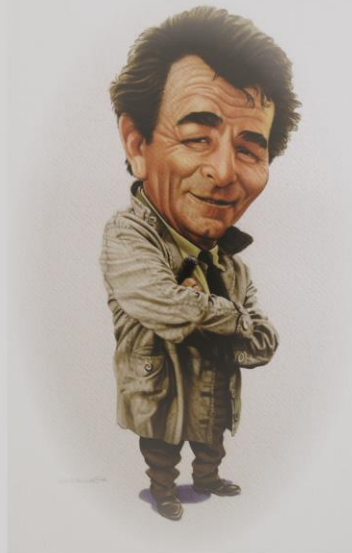
OR, there is an alternative. The #6 turnouts are preferred BUT the #4 turnouts could be used with a bunch (10!) of 481/15 mm curved track pieces mimicking the removed 480mm trackage.



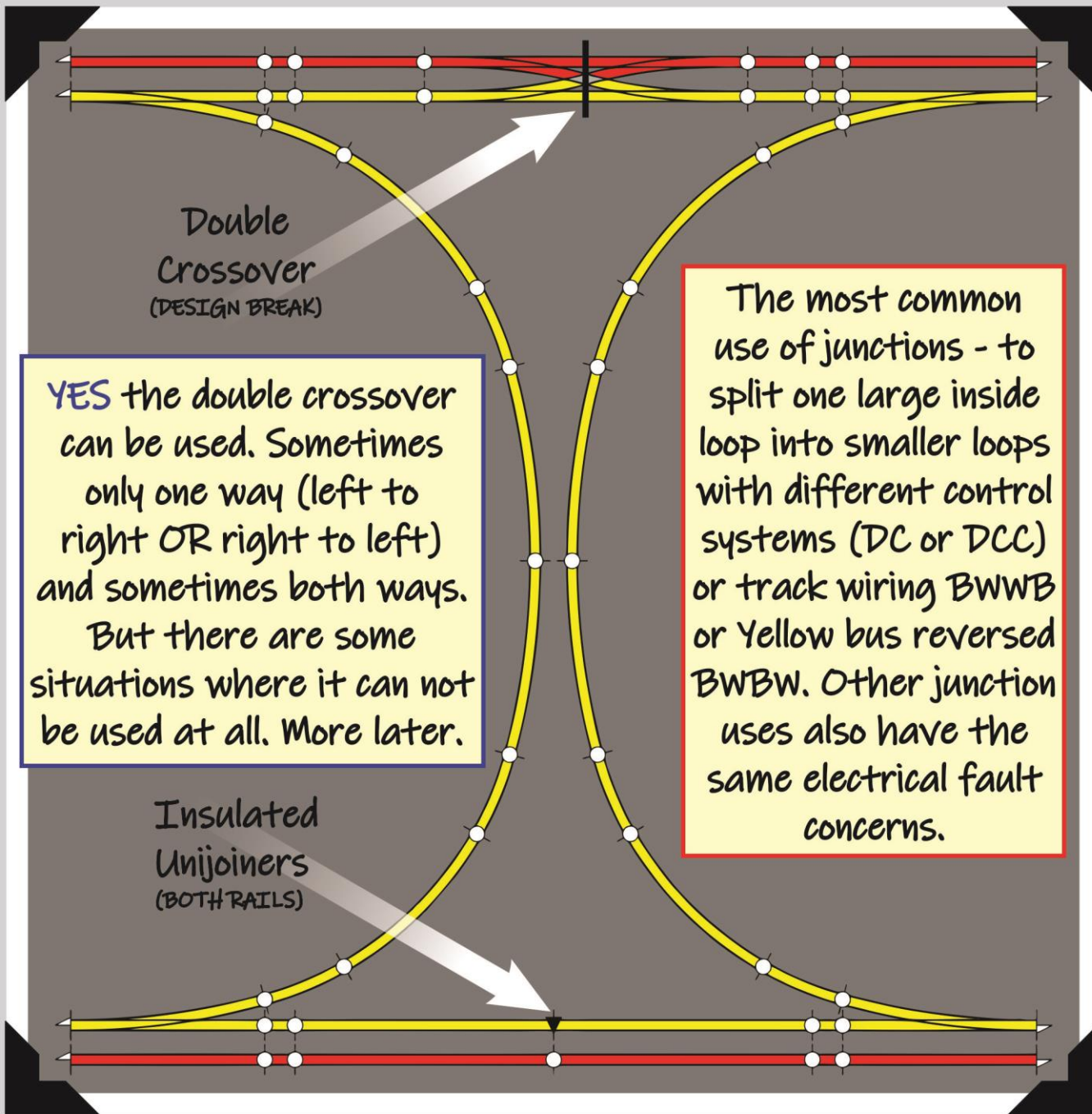
Why? To Keep the Outer Curve!

... With all flat track or without the bother of cutting up and disposing of half of the super elevated track pieces.

No matter what you decide to do, the modules are the same size and there are NO "fudge factors"!



Oh, and just one more thing. . .
About those large junctions
("Branchline" junctions) with
that 2nd "run through"
straight track . . .



YES the double crossover can be used. Sometimes only one way (left to right OR right to left) and sometimes both ways. But there are some situations where it can not be used at all. More later.

To prevent possible electrical faults between two adjacent inner loops the large ("Branchline") junctions with the straight track between the curves **MUST** have a track break in both rails somewhere between the curve turnouts. That can be either a pair of insulated Unijoiners or a double crossover that has a design break in the middle between BOTH left and right tracks.

WHY? Because the inside ("WHITE") rail of the YELLOW track is continuous joining the left and right loops together. As a result BOTH loops would need to be of the same electrical condition (DC, DCC, BWBW or Yellow bus reversed BWBW) to prevent electrical faults.



The Purpose of the Super Cross

To connect four independent loop layouts allowing trains to stay in their home loop OR traverse the other loops as desired. All Red tracks would be DCC. The inner loops could be as desired.

(Concept diagram only)

THANKS
For Watching

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