



# Working **INTER**CHANGES

Live connections with other  
railroads add action and realism

By **Bill Darnaby** • Photos by the author



▲ It might look like the Pennsylvania RR, but this is really Bill Darnaby's HO scale Maume Route. The live interchange here at Sciotovale, Ohio, between the Maume and the PRR, combines the interest of modeling another railroad's structures and equipment with the action of trains visibly exchanging freight cars between the two lines.

use live interchanges on my HO scale Maume Route to add both operating action and modeling interest. A "live" or "working" interchange on a model railroad is one where the connecting line's train appears out of staging tracks, picks up and delivers cars, and goes away again. Instead of just pretending to exchange cars with the other railroad, as on a dummy track dead-ending at the backdrop or edge of the layout, you get to see it happen.

Interchanges are important on the Cleveland, Indianapolis, Cincinnati & St. Louis RR, to use the Maume's formal name. Early in the process of designing my layout, I drew a line representing the First Subdivision of the CIC&St.L.'s Youngstown Division across a railroad map of north central Ohio – see below. It quickly became apparent that my free-lanced road would cross many of my favorite prototype lines, some more than once. That represented opportunity, and one of my goals became to include as many of these crossings and interchanges as possible.

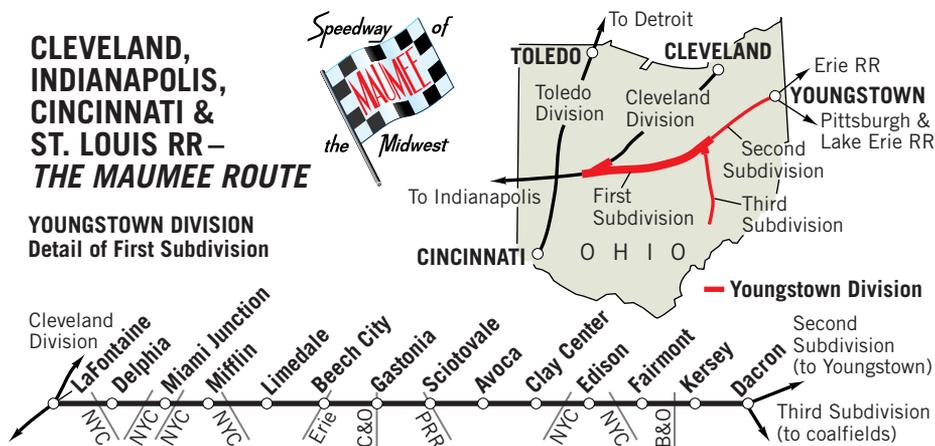
Interchange tracks have been called "universal industries" for model railroads. That's because almost any type of car from any road can appear at an interchange and can logically proceed from there to just about any other destination or connection. In short, interchange traffic can offer remarkable flexibility on a model railroad.

However, that's only part of the reason I wanted a lot of interchanges on the Maume Route. These connections also present wonderful reasons to model the structures of other railroads, if not their equipment. Besides adding to the fun, this helps to locate a free-lanced system in the real world, adding to its overall believability and realism.

As the layout design evolved I saw that some of these interchanges could be more than just dummy tracks. Taking advantage of the shapes of the basement and benchwork, several could be modeled as live interchanges. The examples that follow explain how this works on the Maume, and you can refer to the diagrams on the following pages to see how these connections fit into the track plan.

(For other examples of prototype and model railroad interchanges, see Tony Koester's "The all-important interchange" in the September MR. – Ed.)

Live interchange adds action and realism to Maume Route operations. The concept is an obvious fit for any layout with a Midwestern theme, but it would also be useful in many other locales and settings. ☛





▲ The Pennsylvania RR tracks at Sciotovale form two legs of a wye with the Maumees main line as its base. This allows the Pennsy steam engine to be turned around before it runs back into staging.

◀ The Pennsy staging tracks behind the Sciotovale backdrop are easily accessible in the Maumees fiddle yard/workbench area.

## CROSSING THE PENNSY

The first live interchange I built is at Sciotovale, Ohio. This is a crossing with the Pennsylvania RR's line between Columbus and Sandusky. It's in a corner, which allows for a deeper scene on what is otherwise a narrow shelf layout, and provides a convenient place for the other railroad to go as the general staging and workbench are directly behind the backdrop here.

This crossing gave me the opportunity to research and model a PRR station, interlocking tower, and those distinctive position-light signals, signatures of the Keystone Road.

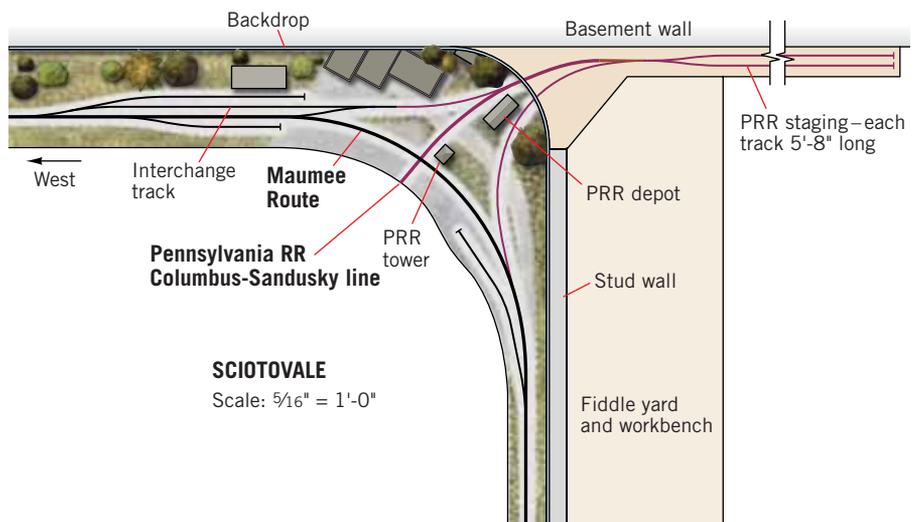
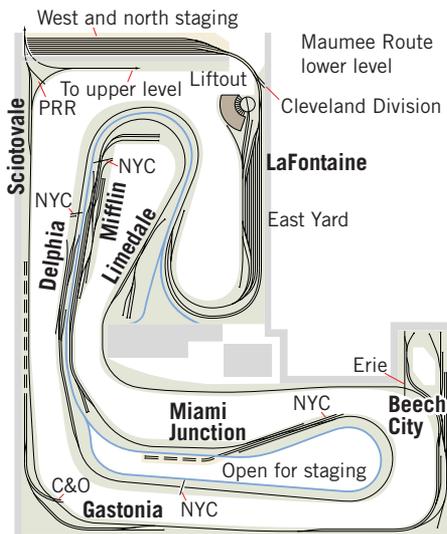
Since it would be a working interchange, I wanted a Pennsy engine and caboose, too. This line was still steam-powered in the year I model, 1955, so I modified a class H10 2-8-0 and an N6b caboose to represent prototypes that books and videos showed working on this line at that time.

The line north from Columbus was a coal conveyor to the docks at Sandusky, with the massive J1 2-10-4s hauling endless strings of hopper cars. However, on my layout it's only practical to model a local train, hence the H10.

During an operating session, the PRR local comes out of staging with

cars for the Maumees plus others ostensibly for other places on its own line, which the local will keep. The Pennsy train picks up cars the Maumees has left for it on either leg of the wye, leaves cars for the CIC&St.L, and returns to staging after turning on the wye to head back north towards Sandusky.

Sciotovale has the advantage of having the interchange staging out in the open for easy fiddling on the far side of the backdrop. The disadvantage of this location is that the PRR crew has to start from the staging side of the backdrop, walk around to the layout side, and then return to the staging side.



**SCIOTOVALE**  
Scale: 5/16" = 1'-0"

## COAL FROM THE C&O

My second live interchange is at the crossing with the Chesapeake & Ohio at Gastonia. In 1955 this was still a double-track railroad that mainly funneled coal from Kentucky to its own docks in Toledo. The interchange serves as an outlet for the C&O to the north and east, and it delivers metallurgical coal destined for mills in Massillon, Youngstown, and beyond in Pennsylvania, to be forwarded by the Maumees.

Like Sciotovale, this scene is also in a corner for greater depth. Envisioning that the C&O would set out complete trainloads of coal to go east, I built two long interchange tracks with a combined capacity for 24 hoppers, and connecting to the Maumees west of the crossing. This interchange gave me an opportunity to model C&O engines and cabooses, lots of C&O cars, and a depot in the style of the C&O's predecessor in this area, the Hocking Valley RR.

To make this a live interchange I had to compromise the geography of the C&O and bend it around so it's parallel to the Maumees. According to the map, the C&O line to Toledo should run straight into the corner of the basement, but that would leave little opportunity for a working interchange.

As it rounds the corner the Maumees is climbing towards the upper level of the layout, while the C&O descends to its two staging tracks. This allows enough vertical separation for the Maumees to go over the C&O at a place where the benchwork narrows to allow for a wider aisle. The entrance to the C&O staging is hidden by foliage and the rising contour of the ground.

There's 10 feet of staging hidden below foam scenery sections made to lift out for emergency access. Between operating sessions I run the C&O trains out onto the layout, fiddle them where I can see them, and run them back into their staging tracks.

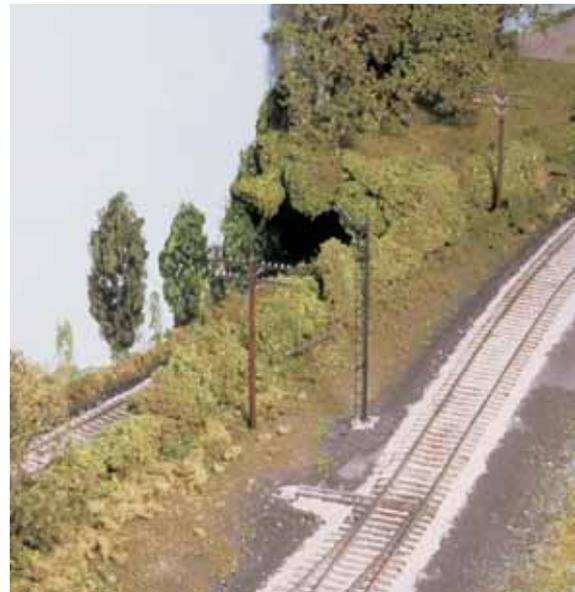
The Maumees has two industry tracks that diverge from the interchange tracks to reach a grain elevator and a power plant, and the C&O also has its own spur to a cannery. When the C&O local arrives it works this industry as well as interchanging cars with the Maumees. The C&O local is treated as a southbound train, arriving in Gastonia on the southbound track. After its work is finished it backs north on the southbound track, as if to wait for a signal to continue on its way south, and parks so the engines are visible just out of its staging tracks.

The C&O coal trains are treated as northbounds and back into Gastonia

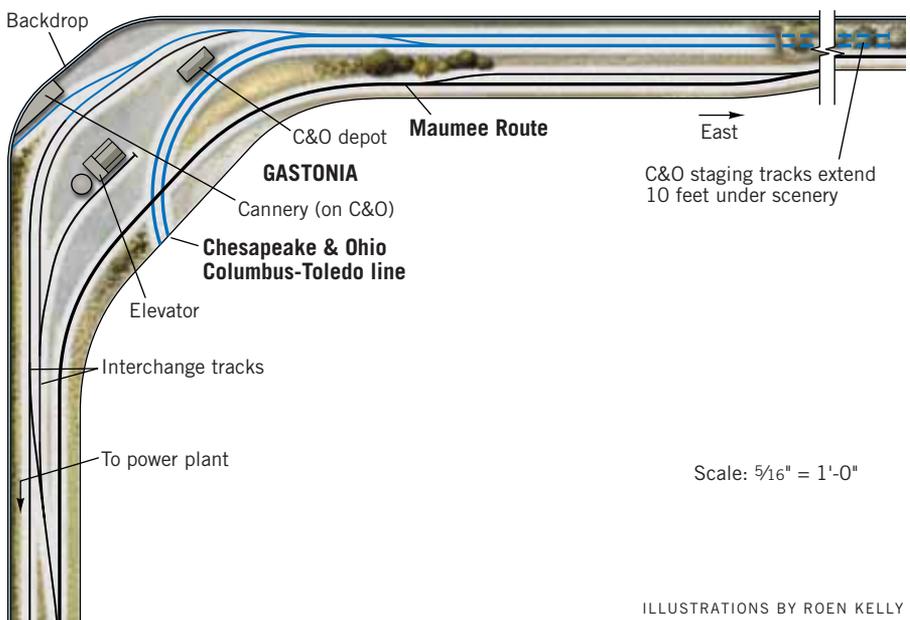


▲ At Gastonia, Ohio, Chesapeake & Ohio Geeps set out metallurgical coal on the interchange tracks for the Maumees route to forward to Youngstown. The Maumees' main line is the single track in the left foreground.

▶ To conceal the C&O interchange tracks, Bill ran them down a grade behind the Maumees, which at this point is climbing toward the layout's upper level. The hidden tracks extend for 10 feet below removable foam scenery.



from the northbound track and through the crossover. The coal is set over on the interchange tracks, and the engines and cabooses continue north back into staging. The Maumees calls an extra engine to run cabooses light out of either LaFontaine or Dacron to pick up the coal and take it east.



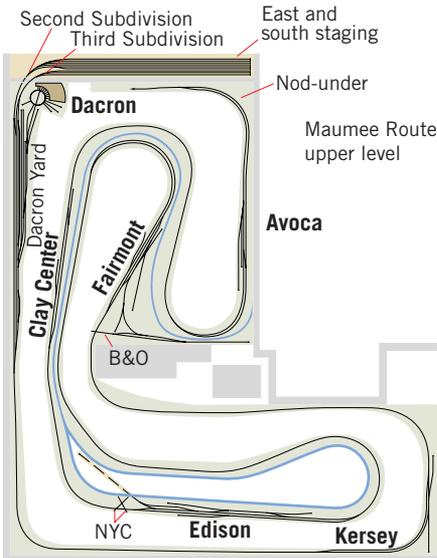
ILLUSTRATIONS BY ROEN KELLY

## CENTRAL JUNCTIONS

At least one, possibly two, of the New York Central crossings will have live interchanges. The layout's single peninsula was built with a 21" open space left in the center near the turn-back end. I planned all along to use this area for interchange staging tracks.

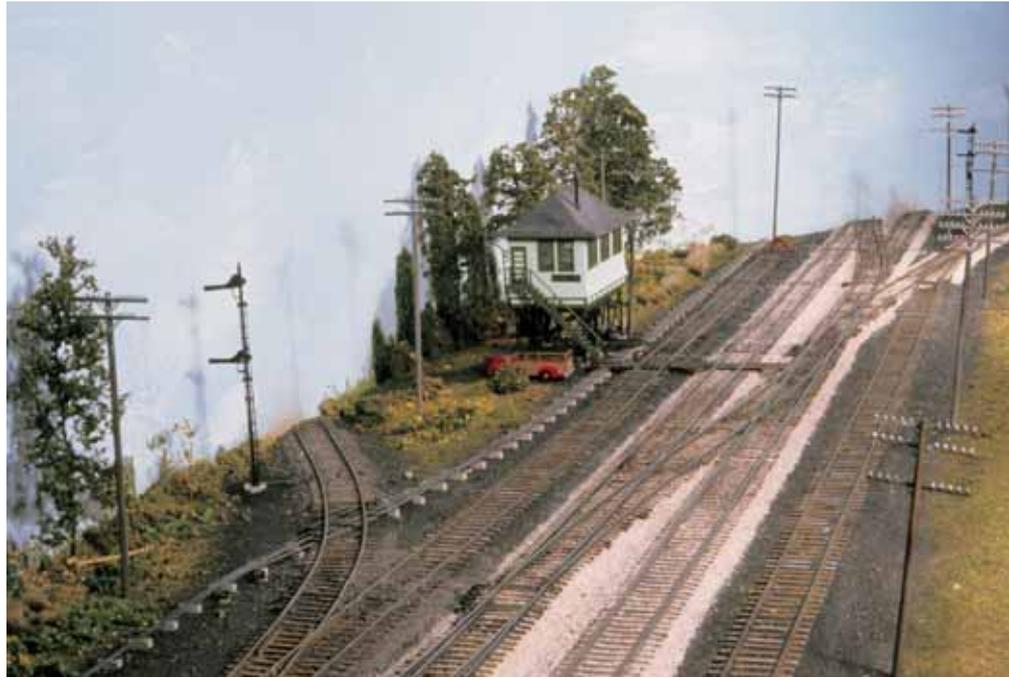
On the upper level there's a crossing at Edison with two NYC routes, with an interchange off the Central's subsidiary Toledo & Ohio Central line. Currently this is a dummy connection. The T&OC track will be extended through the backdrop as in the upper illustration below, into the open space. The interchange track will also be extended to connect with the T&OC main and developed into a two-track staging yard. Staged NYC trains will back out into Edison to work the interchange, then head back into staging.

The other possible live NYC interchange is at Miami Junction on the lower level. The double-track NYC main toward Cleveland can be extended east through the backdrop as in the lower illustration, and curved around into the open space for staging within the peninsula. The NYC trains could come out of staging and work the interchange off the westbound main. This would realistically block the Maumee's route through the junction, adding an operational challenge. I'm still thinking about this one, and for now the interchange cars are still staged by hand.

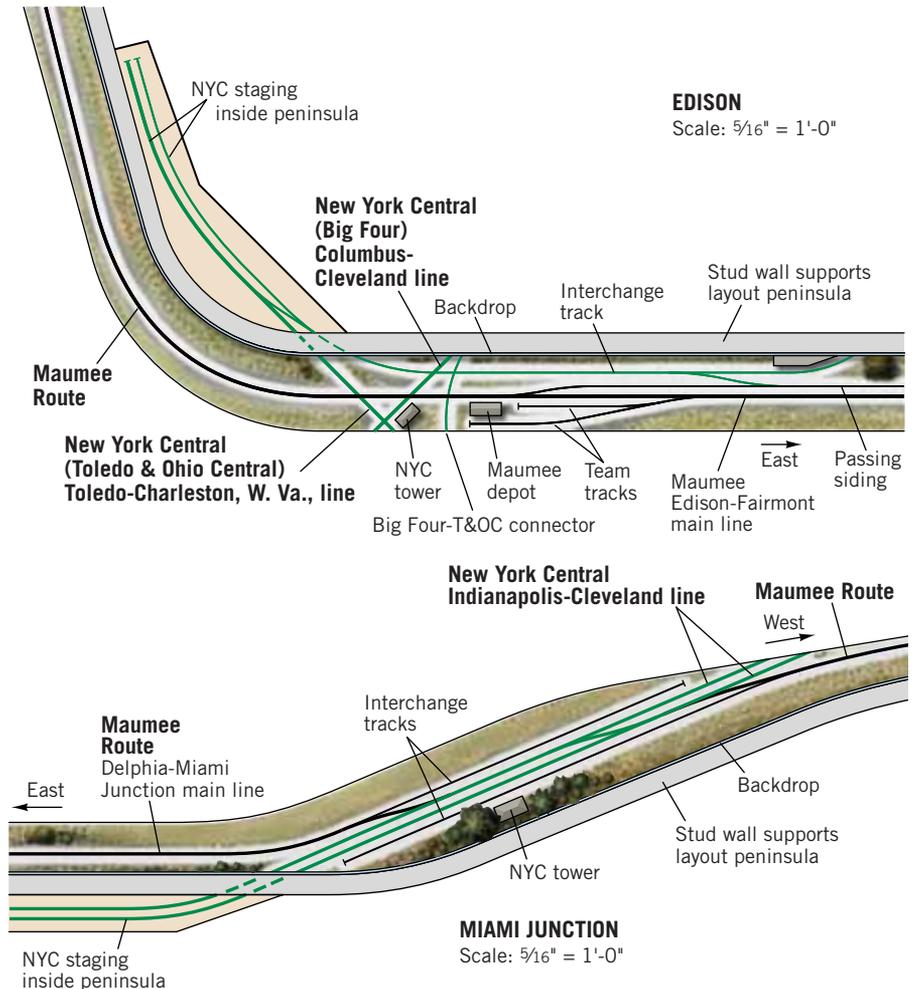


### More on our Web site

Bill Darnaby also has plans for a working interchange with the Baltimore & Ohio at Fairmont, Ohio, and you can read about it at [www.modelrailroader.com](http://www.modelrailroader.com)



▲ At Miami Junction the Maumee, coming in from the upper right, crosses a double track New York Central main line on crossovers instead of diamonds. The interchange tracks are the tracks with darker ballast on either side of the NYC main tracks in front of the tower. To develop this junction as a live interchange, Bill plans to extend the Central tracks through the backdrop to staging in the center of the layout peninsula.

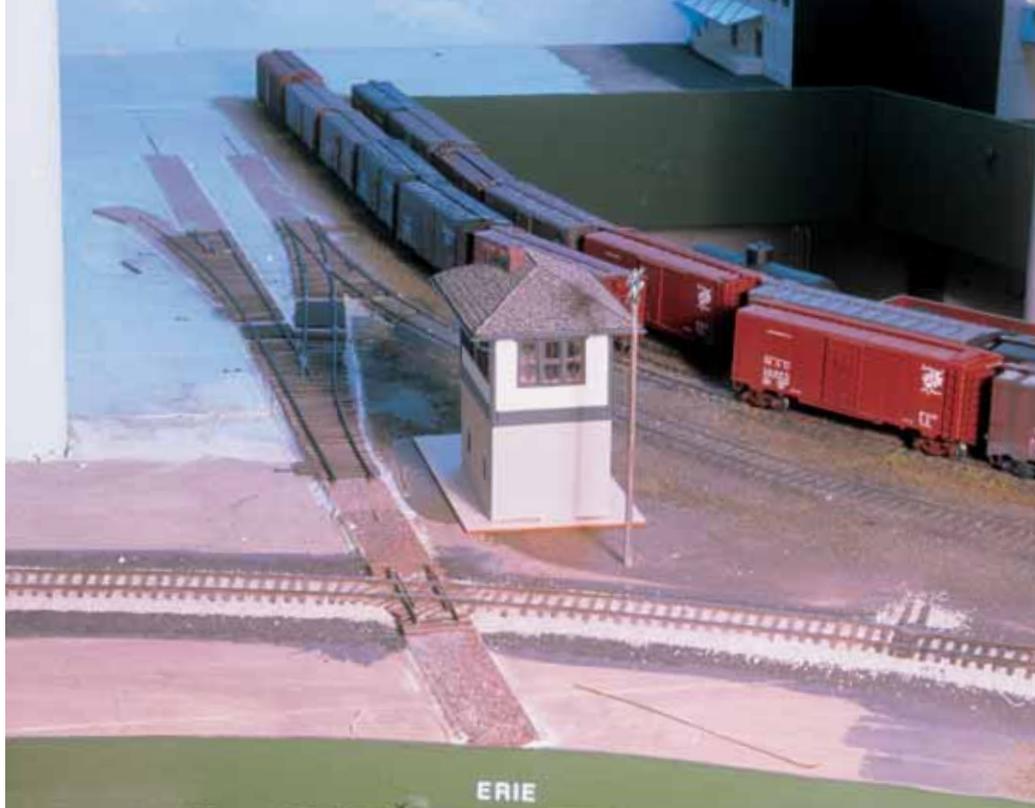


## AND MAYBE THE ERIE

One other Maumee crossing with the potential to be a live interchange is with the Erie's line out of Marion to Dayton, at Beech City on the lower level. For now, cars are staged by hand on the Erie interchange track.

An Erie engine could be kept in open staging on tracks that also include a couple of industries. The Erie would then work the industries and push cars into the Maumee connection. I've considered using a track on a removable shelf extending into the aisle as a tail track for Erie switching, but the jury is still out on that one.

► The scene around the Erie RR crossing at Beech City has yet to be developed. Possibilities include open staging for the connecting train, industrial tracks along the alcove wall at the left, and maybe even a removable extension shelf into the aisleway to provide a switching lead for the Erie.



## RUNNING LIVE INTERCHANGES

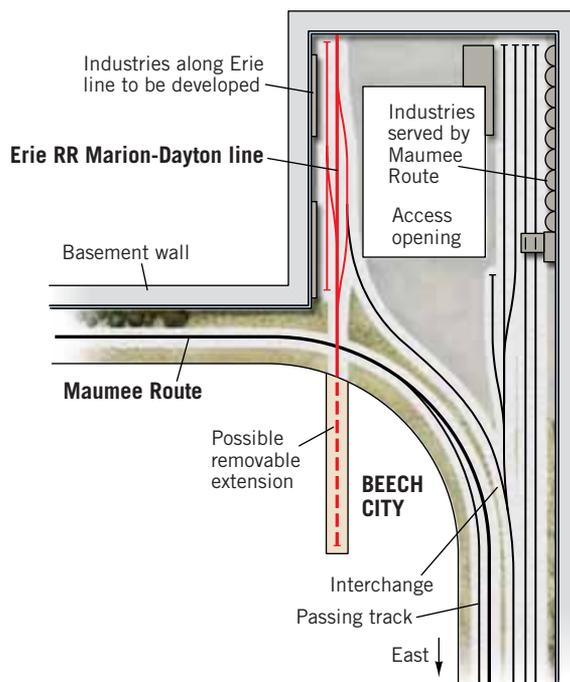
In an operating session a crew – usually two people – is called off the extra list to work both Sciotovale and Gastonia. This crew plays the roles of the two connecting railroads. Generally the crew works each interchange once an operating “day.”

Instructions for their work are placed with the car cards in the “interchange box.” The busier interchanges have these special car-card boxes, which accentuate their importance and keep the interchange cards from getting mixed up with those for local industries.

After the work is done, the crew calls the Maumee dispatcher as the other railroad and reports the number of cars delivered (neither location having a Maumee freight agent). The dispatcher will have the cars picked up by an appropriate train.

It takes a crew roughly the same amount of time to run both interchanges as to take a train over the main line, so the job has good “play value” for them. There's also the added interest of having Maumee trains react to the interchange work.

Once four live interchanges are operational I may decide to have one crew work all four, or I may split them up. It should be enjoyable either way. – B. D.



## DUMMY INTERCHANGE TOO

The Maumee Route also has connections represented by dummy interchanges. At Delphia the CIC&St.L main crosses the New York Central branch to St. Marys, Ohio. There's a short interchange track east of the crossing that ends at the backdrop. The scene is only 12" deep at this point, leaving room for only one or two cars on the interchange track.

At Mifflin we cross another NYC line, this one part of the subsidiary Toledo & Ohio Central. Here the interchange track west of the crossing comes off the Maumee's main line and runs to the edge of the layout. It has capacity for two or three cars.

At both locations cars delivered to the NYC are removed from the layout by hand, and cars arriving from the Central are manually positioned for pickup by the Maumee. – B. D.