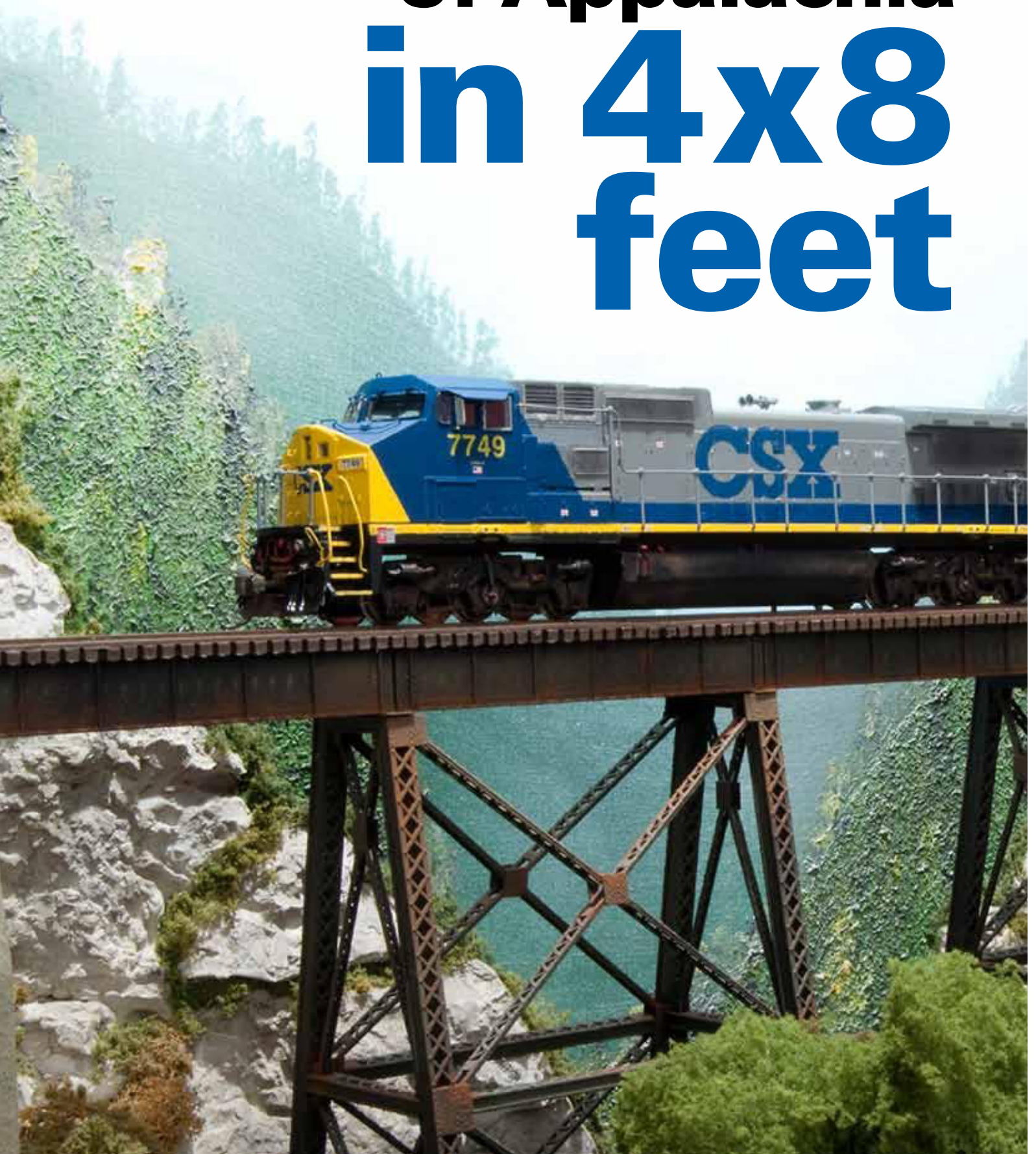


**4x8
SPECIAL!**

Capturing a slice of Appalachia in 4x8 feet



A landmark layout inspired this HO scale freelanced modern CSX coal country branch

By Rick Van Laar

Photos by Lou Sassi

I was struggling to fit an Appalachian-style HO scale model railroad into a 4 x 8-foot space when *Model Railroader* reprinted John Allen's track plan for the original 3'-7" x 6'-8" Gorre & Daphetid railroad in August 1996. As soon as I saw that G-D Line plan, I realized that it could be adapted to fit my space.

My track plan is a slight modification of the G-D Line's design. It also features a twice-around loop with a branch line that climbs to a higher elevation. By

eliminating the turntable and adding a scenic divider, I could fit two different scenes into my slightly larger area.

The Rosston, Joelberg & Holly RR (RJ&H) is a fictitious branch line, located in the coal region of West Virginia, that's named for my three children: Ross, Joel, and Holly. Its primary purposes are to haul coal mined locally to an interchange with CSX's Coal River Subdivision and to serve a regional grain elevator. The period is shortly after the CSX merger in 1990.

My original goal in building this layout was to pass on the joy of model railroading to my sons, who were about the same age I was when my dad introduced me to the hobby. It would also serve as a way for all of us to spend time together.

Regrettably, my good intentions were overtaken by my perfectionist tendencies as I built a solid foundation for the railroad and laid the track (missing the opportunity to teach these skills to my boys). Their enthusiasm picked up as scenery began, but here again my perfectionism proved to be discouraging and dampened their interest. As they wandered off into other pursuits, it didn't take long for me to realize the "torch of model railroading" wasn't going to be passed very soon. With that realization, I continued to work on the RJ&H with far less help than I had anticipated.

Within the 4 x 8 footprint, I built a coal mine, a grain elevator, a power plant, and the fictitious town of Joelberg tucked in the Appalachian Mountains.

Built for portability

My goal was to build a model railroad that I could take to train shows and share with others. This meant that it had to be portable and interesting to viewers.

The size of the layout was determined by the bed of my pickup truck and what I could move up the stairs and through the doorways. I settled on the 4 x 8 size, but quickly realized that I'd have to use lightweight construction if I was going to be able to move it easily.

My benchwork consists of a 1 x 4 frame with legs and braces that fold up and fasten inside the framework for easy transportation. I attached diagonal 1 x 2 braces with bolts and wing nuts, and I have removable handles at each end so two people can lift the layout and tip it sideways to pass through doorways.

I built a removable panel to hold the power pack and electrical controls. It's bolted to the end of the layout with wing nuts for ease of assembly, and a pair of connectors energize the circuits.

1. These CSX C40-8Ws are modified Athearn units, which Rick Van Laar uses on unit trains that originate from the Rosston Coal Mine on his HO CSX West Virginia branch line.



PLAN 5

The layout at a glance

Name: Rosston, Joelberg & Holly RR (CSX branch line)
Scale: HO (1:87.1)
Size: 4 x 8 feet
Prototype: freelanced CSX
Locale: West Virginia coal country
Era: 1990
Style: island, portable
Mainline run: 32 feet
Minimum radius: 17"
Minimum turnouts: no. 6 (main line), no. 4 (yard and branch)
Maximum grade: 3 percent (main line), 3.5 percent (branch line)
Benchwork: portable, with wood frame, foam base, and folding legs
Height: 38" to 46"
Roadbed: cork
Track: code 100 flextrack (main line), code 83 (branch line)
Scenery: Stacked and sculpted extruded-foam insulation board detailed with Hydrocal rock castings
Backdrop: two-sided foam core
Control: DC single cab

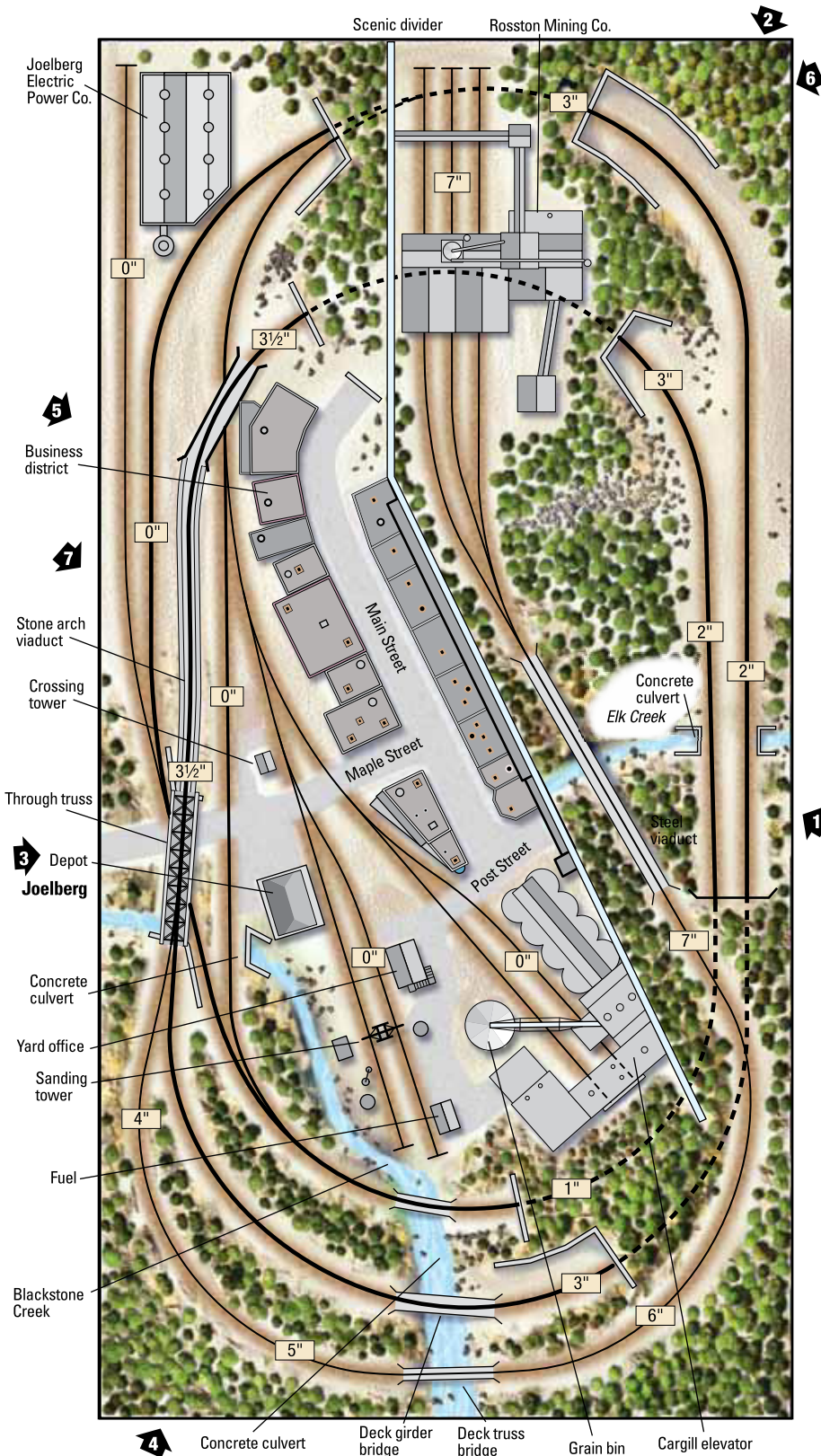
Rosston, Joelberg & Holly RR.

HO scale (1:87.1)
 Layout size: 4'-0" x 8'-0"
 Scale of plan: 1" = 1'-0", 12' grid
 Numbered arrows indicate photo locations
 Illustration by Jay Smith

Find more plans online in the
 ModelRailroader.com Track Plan Database.

I could coat both mating surfaces with adhesive and let it dry before I set the track in place. While the adhesive was drying, I laid strips of thin cardstock on the roadbed. Then I set the track in place and checked its alignment before I pulled out the strips one at a time and pressed the track into contact with the roadbed to make the instant bond. This eliminated the use of weights or pins to hold the track while the glue dried. But this method makes it difficult to adjust the track after it has bonded to the cork.

My DC track wiring follows the common rail method, and I didn't bother dividing for cab control. The railroad has room to operate just one train at a time, but I did include eight electrical blocks, controlled by single-pole single-throw switches, where I can park a locomotive. Every piece of rail in the layout has a feeder wire to ensure reliable operation, and I used Caboose Hobbies ground throws on all of the turnouts.



A 1x2 ledge is mounted around the inside of the 1x4 frame so I could glue a sheet of 2" extruded foam insulation board in place using Liquid Nails for Projects, a latex construction adhesive that doesn't attack foam. I made the scene divider from two panels of foam core braced with 1/4" x 3/4" wood strips between them and fastened it to the frame.

Subroadbed and trackwork

Using more Liquid Nails as an adhesive, I made my subroadbed and risers from foam board to minimize weight. Then I used Elmer's water-based contact adhesive to attach cork roadbed to the foam subroadbed.

I used the same contact cement to attach the track. This worked well, since



2. This "aerial" view shows the control panel and how the diagonal double-sided backdrop separates the coal mine scene from the urban area.

Bridge variety

The layout has a variety of bridges that I kitbashed to fit each location. They include through and deck girder bridges I made from Atlas parts, but the big through truss is a modified Walthers double track kit. I trimmed this truss bridge to about $\frac{3}{4}$ of its normal width to accommodate the turnout leading to the branch line (its points are on the bridge).

I scratchbuilt the stone arch viaduct from 2" extruded foam by cutting the arches on a band saw, smoothing their edges, and then covering them with a layer of smooth drywall compound. After the compound dried, I carved individual stones using a straight edge and the back edge of a hobby knife. This carving turned into a rather arduous job, but the end result was certainly worth the effort.

Assembling the Micro Engineering tall steel viaduct kit for the branch line wasn't difficult, but I had to adjust its legs to fit the contour of the terrain.

Scenery techniques

A scenic backdrop separates the town from the Rosston mining area, so I began the scenery by painting both sides



3. An Atlas CSX MP15DC blocks the Maple Street grade crossing as it switches cars at the Cargill elevator. Well planned detailing and use of the proper highway warning signs and pavement markings adds realism for closeup viewing.

of this divider. Then my wife, Sharon, used a stippling technique to add the distant trees. I painted the closer hills using medium green paint mixed with sawdust to give it more texture. Then Sharon added more large trees.

Next, we added some thin rock castings and a few trees and some brush to give the backdrop some added depth and

help blend it in with the foreground scenery. Finally, I used an airbrush to spray a light coat of white over the hills to represent haze in the distance.

I spray painted the rails and ballasted the track in all four short tunnel locations. After the paint dried, I used stacked layers of foam to build the tunnels, which I lined with dark gray cardstock



4. Downtown Joelburg captures the appearance of a hillside Appalachian community, and the slope makes it look considerably larger than it really is.

to simulate concrete. Once the tunnels were done, I filled in the mountainous terrain around them with more stacked layers of extruded foam.

Rock faces

I used a combination of several Woodland Scenics rock molds to cast the exposed rock faces in lightweight Hydrocal. I let these castings dry in the molds and then glued them to the foam terrain with Liquid Nails. In the process, I varied the orientation and broke some castings to avoid repeating patterns. There are 320 individual rock castings of various sizes that make up the rock details. In each case, I kept the plaster off the horizontal surfaces to keep the layout's weight to a minimum.

I used washes of Woodland Scenics rock pigments to color the rocks and then applied thin washes of India ink to get the crevices to stand out. In between the individual castings, I added various shades of Woodland Scenics foliage.

The horizontal surfaces have a 50-50 mixture of flat tan latex paint and water with Woodland Scenics ground foam sprinkled into the wet paint. Subsequent applications of different textures and colors of ground foam added depth to these surfaces. I soaked everything with a 50-50 mixture of white glue and water to secure the layers of ground foam.

Vertical rock faces constantly shed loose rock, called talus, that accumulates

at the base. I placed broken plaster bits into a container and dyed them with the same color that I used on the rock faces. I spread the mixture on newspaper and let it dry. Using white glue, I positioned the large rocks first, and then gradually added the finer talus around them. I used an application of white glue and water to secure everything to the layout.

Asphalt and gravel roads

I simulated the asphalt roads in Joelburg with black 400-grit wet-or-dry sandpaper glued to the foam with contact cement. The sidewalks are styrene strips I painted with Polly Scale Concrete and installed with contact cement. I used

Woodland Scenics dry transfers to stripe the road before I weathered it with an airbrushed coat of thinned Milwaukee Road Gray and Concrete colors. I applied some oil spills and tire marks with powdered pastels.

Ground cover and foliage

I added layers of various shades of Woodland Scenics coarse turf on top of my initial scenery base to represent the weeds and wild plants in the mine area, and I put random clumps of field grass along the right-of-way.

It took a lot of miniature trees to simulate the massed tree cover of the West Virginia mountains, and most of mine are handmade. Some of the foreground trees near Joelberg are made from Scenic Express SuperTree kits. I also used Woodland Scenic Fine-Leaf Foliage kits for some of the other foreground trees. I made a few pine trees by upgrading Heki pine trees with spray adhesive and a layer of fine dark green turf.

I have two fast-flowing mountain streams in the layout that I made from soupy plaster and crushed plaster rocks. To complete the water effects, I applied two-part epoxy over white poly fiber that I glued to the stream bed. The poly fiber produces the effect of rough bubbly water after the epoxy dries.

Structures

Since the layout was built to travel, I designed the entire town of Joelberg so it's removable to minimize potential damage during transport. The 24-hour convenience store and the Klosnuff Tool & Die Co. lift off to provide access to the electrical connectors and nylon fasteners that secure the block of buildings on the layout base.

Joelberg portrays a West Virginia town built on a mountainside, so it's divided into three levels. The first is at track level and includes buildings with loading docks. The second, or middle, level is the town's main street and retail district and also has some light manufacturing. The top level is a shallow back-drop area made up of the backs of the buildings along the next street higher on the mountain. I fit all of this in a space less than 12" deep between the track and the backdrop, and with a total width of 30".

Almost all of the Main Street structures are kitbashed so I could compress them into a small footprint. Although I maintained the width of each structure, I drastically reduced their depth and only used the front and two sides on



5. Because of its prominent location, Rick carefully detailed and lighted the interior of Sharon's Corner Cafe so it would stand up to close inspection.



6. Rick kitbashed the Rosston coal mine complex from a Walthers New River mine kit that he expanded with a scratchbuilt processing building on the left.

most of them. This allowed me to use the back wall from each kit as low-relief structures seen from the rear. All of my retail buildings are about 2" deep.

Closeup detailing tricks

The proximity of the viewers meant that all of the layout's buildings required detailed interiors. Adding illumination made the interior details even more important, as light tends to attract attention. Thus, every structure has at least a partial interior to make it look lived in.

I put considerable effort into Sharon's Coffee Shop, since it was closest to the viewers. It has eight 1½V lamps illuminating the signs on the outside, and a

detailed interior with a 1½V light fixture hanging over each table. I made the booth seating from modified passenger car seats, and each table is properly set.

To add some life, I have 14 patrons sitting at eight tables with a waitress and a cashier serving them.

A handy trick that I used to simulate a detailed interior was to take a digital photo of a prototype store and scale it to fit inside a model building. I scratchbuilt simple store fixtures to put in the foreground, right behind the shop windows. Then I installed a scaled-down digital photo in the background, giving the illusion of considerable depth, and providing a lot of detail and visual interest.



7. Excellent craftsmanship and careful attention to detail make Rick's Cargill elevator into a showpiece. He kitbashed it from a pair of Walthers kits.

Running the railroad

Since I'm modeling a freelanced CSX branch line, most of my equipment has either a CSX or Chessie System paint scheme. My tight-radius curves limit the locomotives to mostly 4-axle road switchers and yard engines, handling cars under 40 feet in length. These smaller cars and locomotives would typically be from an earlier period, but this is a compromise I can live with to have more cars operating smoothly on the layout.

All of my equipment is weathered with thinned Polly Scale earth colors and powdered pastels. I generally don't apply Dullcote over the pastels, so excessive handling of a car or locomotive means I'll have to reapply the pastels.

Most of my efforts so far have gone into the modeling, so I haven't done much in the way of operations. I do run local freights and a small unit coal train. The depot hints of passenger service, but I can't operate full-length passenger cars on these curves.

During shows, I let a train run continuously on the double loop, and change trains every half hour. I rotate between the unit coal train, a grain train, and a mixed freight to keep things interesting.

Staying active in the hobby

I've accomplished most of my goals for the layout. With portability in mind from the beginning, I was able to keep its weight to a minimum, although the plaster rock castings came out heavier than I expected. If I build another portable display layout, I'd work at reducing the weight even more.

Building this railroad showed me that a small layout can be a great way to stay active in the hobby when there are many other demands on my time. Reducing the size of the project allowed me to try new techniques and hone my modeling skills on a layout without investing large amounts of time and money, and I could easily change direction. Finally, displaying a small, well-detailed layout at train shows inspires others and shows the public yet another interesting facet of this wonderful hobby. [MR](#)



▶▶ **Meet Rick Van Laar**

A Christmas gift of HO trains from his dad started 10-year-old Rick in model railroading. His first layout was a figure-8 on a piece of plywood, but it hooked him on this great hobby for life.

Rick lives in Fort Wayne, Ind., with his wife, Sharon, and their three children. He's the compliance manager for International Truck and Engine Corp.'s medium- and heavy-duty vehicles. His other interests include golf, woodworking, volunteering at church, and attending his children's many athletic events.