

Model SPECIAL ISSUE Railroader

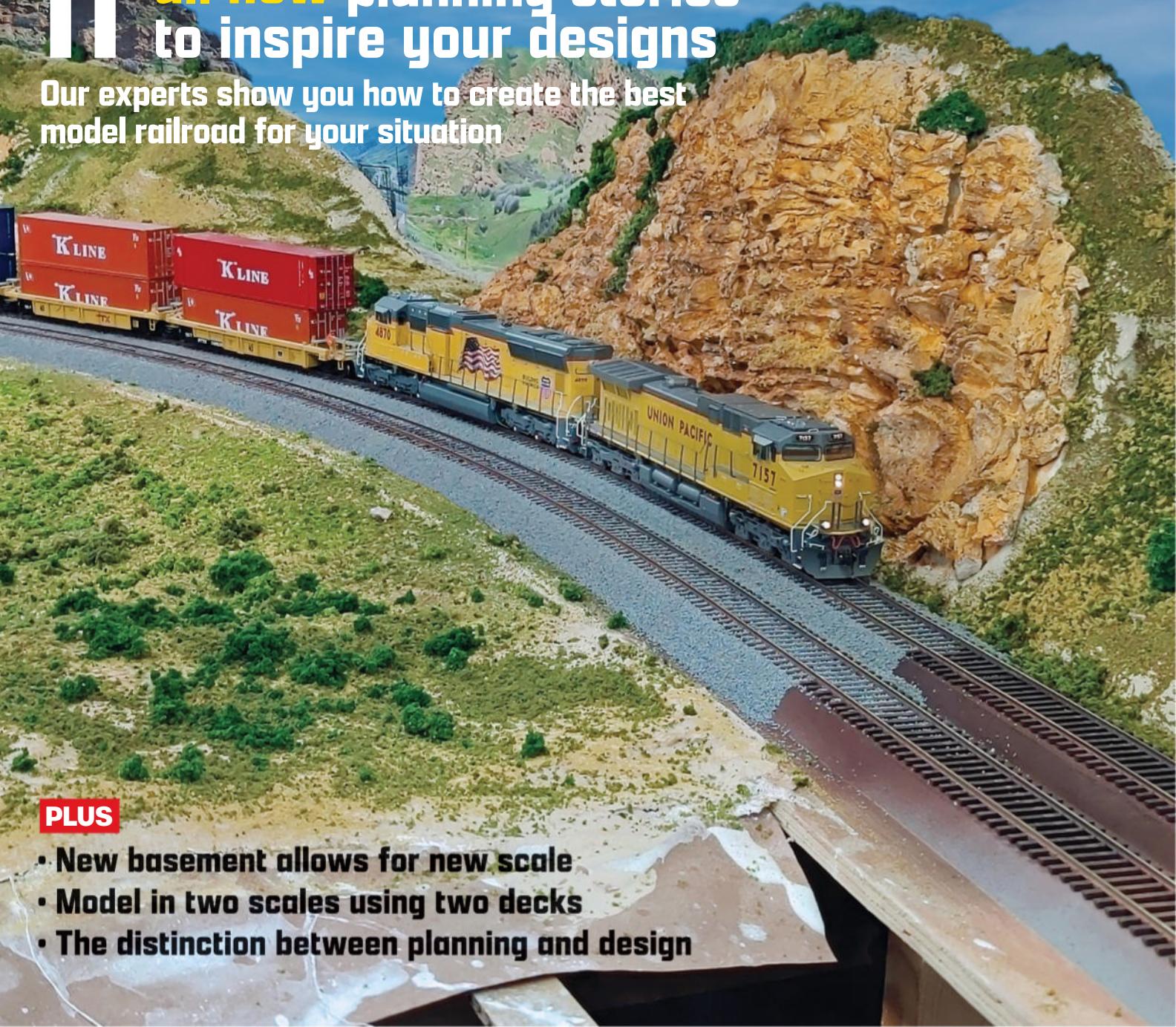
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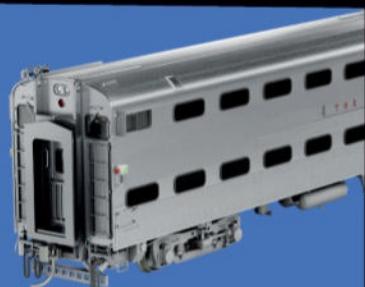
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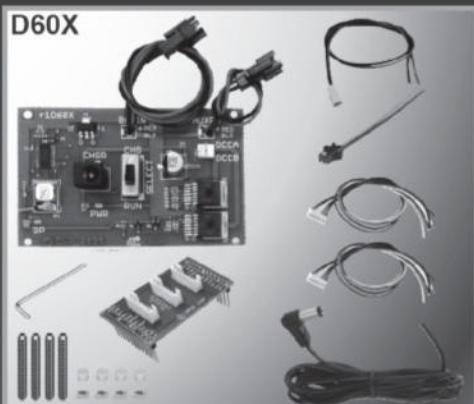


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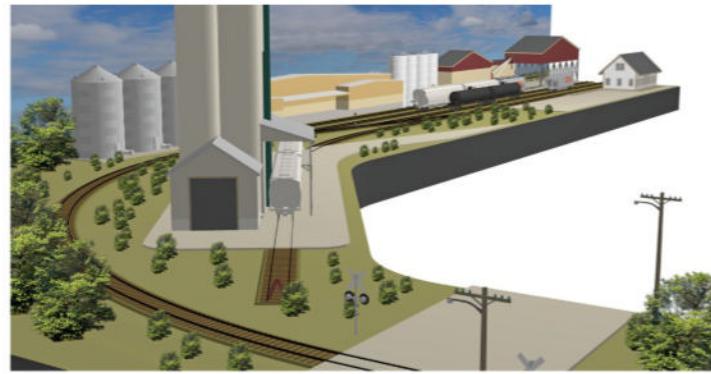
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**MADE IN THE
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Model Railroad Planning

2026



Page 46: A plan that grows creates just enough model railroading. 3-D illustration by Robert Chant

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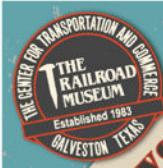
REAR PLATFORM

90 Forcing perspective by changing scales

Doug Tagold

On the cover:

General Electric AC4400CW No. 7157 and Electro-Motive Division SD70M No. 4870 head east with stack train ZLTG2 between Lathrop, Calif., and the Global 2 yard near Chicago on Daryl Kruse's HO scale Union Pacific Evanston Subdivision. Though the scale may have changed, the UP theme remains on his new layout. See page 24. Daryl Kruse photo



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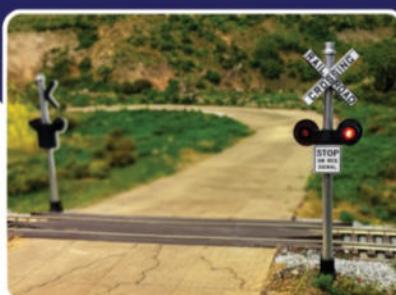
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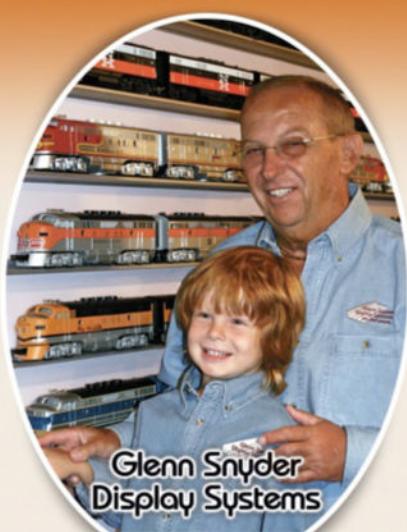
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Editorial

Compact layouts



One of the most inspiring small, almost tiny, HO railroads is Australian Tim Nicholson's Pennsylvania branch set in Indiana (see MRP 2025). He has recently added steam to the motive-power fleet. Tim Nicholson photo

I recently read in *Aviation Week & Space Technology* that 55% of world's population lives in urban areas. Further, the United Nations says that will increase to 68% by 2050. That suggests that the trend we see toward more spare-room and apartment-size layouts will continue to develop. Rest assured that we will continue to welcome article candidates on more compact railroad designs.

This issue covers five railroads designed for a small room or along one wall of a garage. They cover most of the scale and gauge bases: N, HO, S, and On30. I was especially pleased to receive Joseph Kreiss's report on his On30 Louisiana swamp logging railroad, as he has built a lot of very interesting railroad in a small room — and has an HO railroad stacked on top of it! And former *Model Railroader* staffer Paul Schmidt has a lot of Appalachian coal railroading beautifully orchestrated in N scale in a spare room.

But one caveat needs to be kept in mind. Remember that famous letter way back in 1657 from Blaise Pascal (often mistakenly attributed to Mark Twain and a host of others) that began, "I'm sorry this letter is so long, but I didn't have time to write a short one"? It takes a lot of time and effort to cut out all the extra verbiage and express one's points in just a few words. Similarly, when the area in which you are building your model railroad is at best modest in size,

it's going to take more effort to weed out things you'd like to have but upon further reflection aren't critical to achieving your main objectives.

We select a balance of feature articles for each issue of MRP that will help you establish and then guide you toward your goals. We enjoy covering model railroads that have developed far enough for their designers and builders to have spotted and corrected the inevitable missteps that one confronts when transitioning from a 2-D plan to a 3-D railroad, but are still unfinished in some areas so you can see how the builder is getting there from here.

Goodbye to Gerry Albers

We lost one of the nicest and most talented model railroaders I have had the pleasure of meeting and knowing as a friend with the passing of Gerry Albers from Cincinnati. His HO scale Virginian Ry. layout was a masterpiece (see *Great Model Railroads 2014*), and he invited his friend, the late Allen McClelland, to develop part of his basement into the Virginian & Ohio 3.0 after Allen and his wife, Sharon, had moved into a retirement community.



Gerry Albers

Tony



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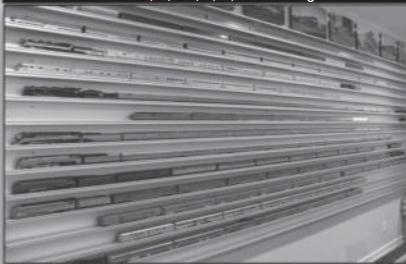
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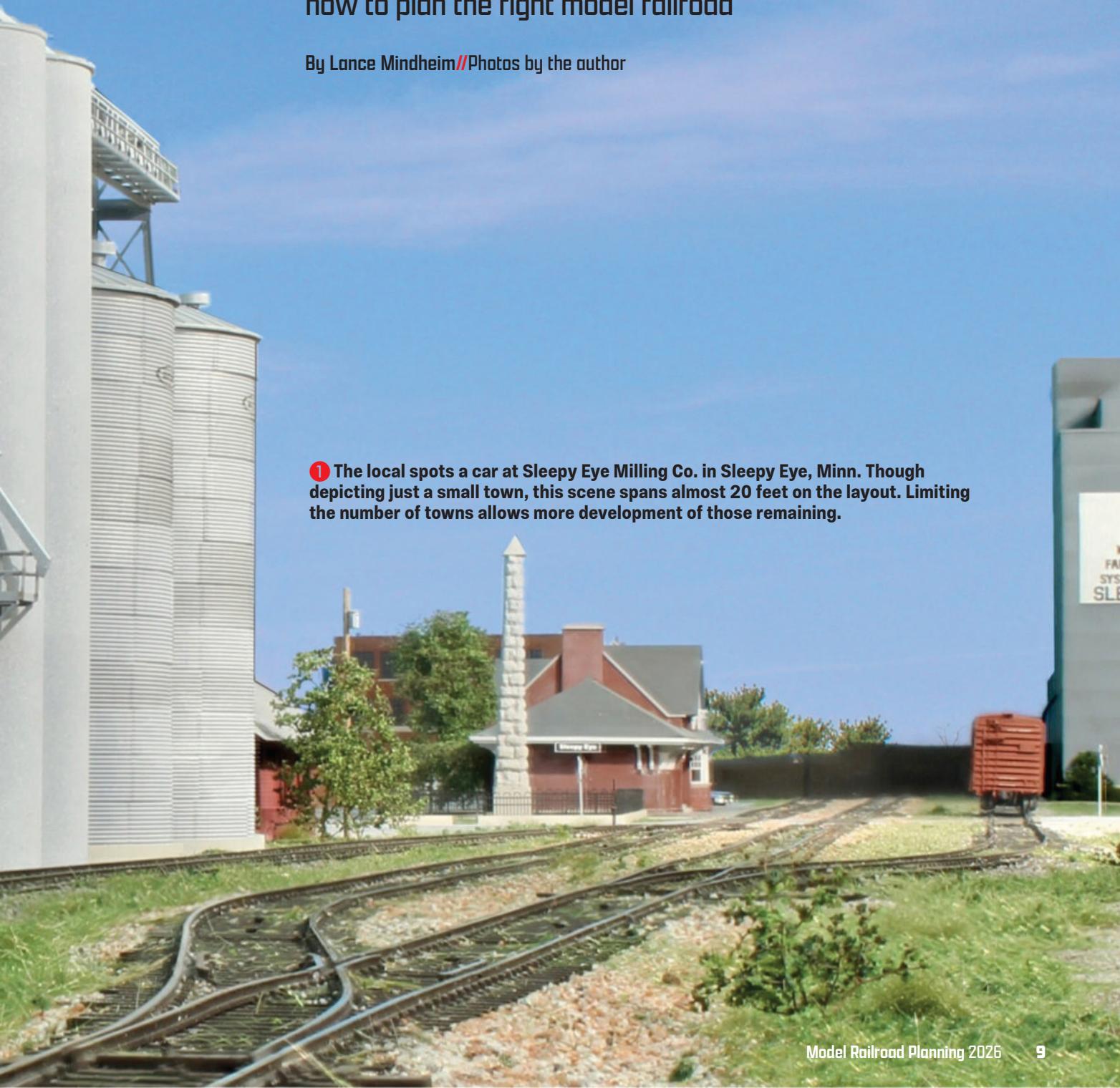
ROUTE OF THE

An exercise in strategic planning

Chicago & North Western's Alco Line provides an example of how to plan the right model railroad

By Lance Mindheim // Photos by the author

1 The local spots a car at Sleepy Eye Milling Co. in Sleepy Eye, Minn. Though depicting just a small town, this scene spans almost 20 feet on the layout. Limiting the number of towns allows more development of those remaining.





If you turn to the cover of this annual, you'll notice its name emblazoned there: *Model Railroad Planning*. It doesn't say *Model Railroad Design*. The distinction between planning and design is a crucial one. Understanding that will play a major role in determining the success of your layout — success being defined as being a railroad that actually gets built and delivers the level of satisfaction and enjoyment you envisioned going in.

Planning refers to overarching strategic decisions and needs to be done first if any degree of success is to be ensured. Design is more tactical in nature and addresses things such as technical specifications. Modelers often get into trouble by jumping immediately to the tactical decisions and missing the big picture. They design the wrong layout, one that is technically correct but doesn't match their overall goals or mesh with their lifestyle.

Two of the more important planning decisions are deciding how many towns you'll have on the layout and being clear about how the layout will be operated so that your design matches that style.

Big Decision One

How much of the prototype will you model? It's a big decision and will ultimately determine how plausible your layout looks. There are two ways to make a concept fit into our space: Cropping and compression. Realistically we need a

combination of both, but the real question is just how far we lean towards one method or the other.

Compression happens at both the macro (layout) level and micro (town) level. At the macro/layout level, compression relates to the distance we leave between towns. At the micro (town) level, compression relates to how much spacing we have between structures and scenery elements, i.e., how tightly we squeeze them together.

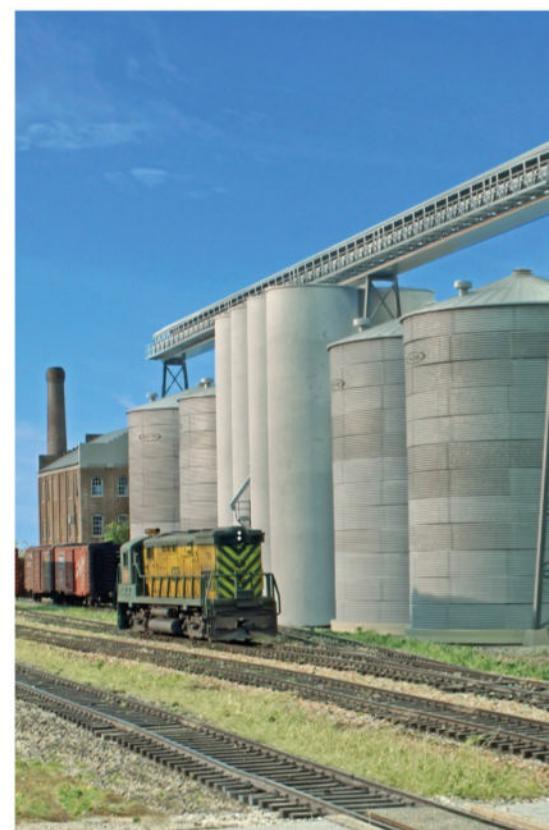
Culturally, modelers lean hard towards compression. There is an underlying fear that they need a lot of stuff or they'll be bored. Taken too far, however, you can lose sight of the ultimate goal, which is to feel like you're being transported to the location being modeled.

The other way to make things fit is to crop or cut things out of our scope. Choosing what not to include is a subtle, but major, decision and one that has a large artistic component. Leaning more towards cropping, or eliminating features, tends to enhance realism. The fewer towns you model, the more you can spread them out and the more realistic your scenes will look.

The same is true at the micro/town level. Removing elements from your scene allows you to space the structures farther apart.

There is a natural tendency among prototype modelers to take the view of "if it's there, I need to model all of it."

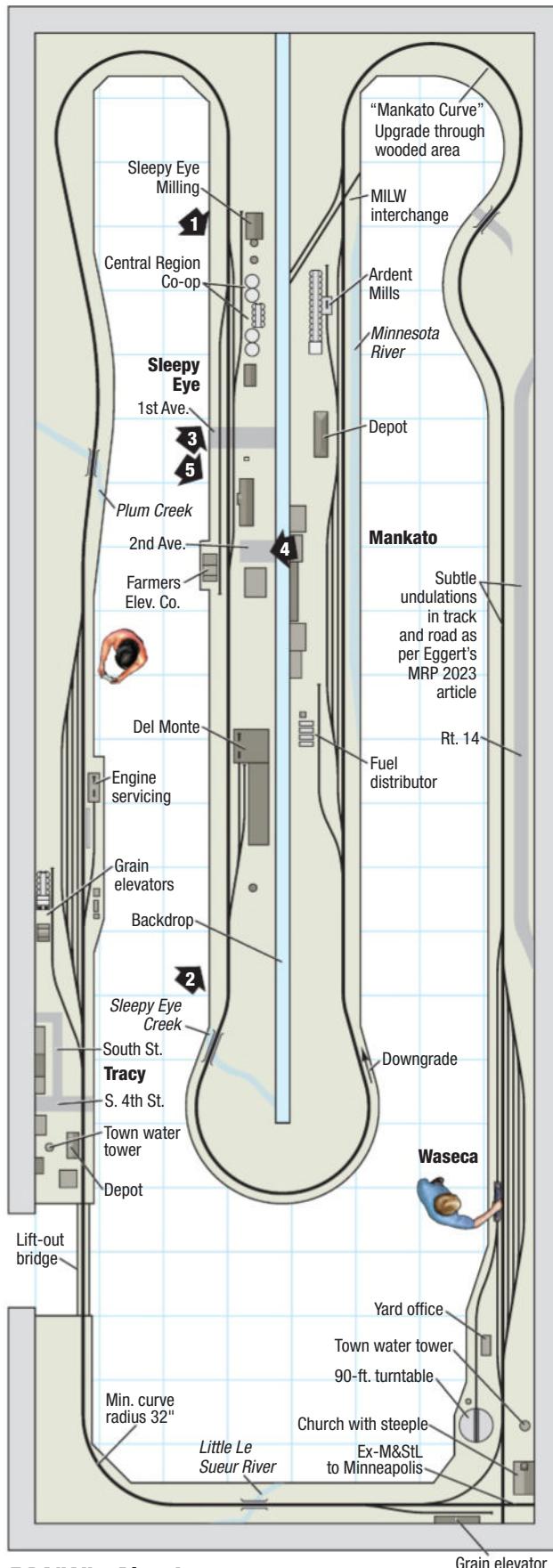
② Del Monte Plant No. 114 in Sleepy Eye is one of the largest industries in the region. Working the plant adds operational interest because it's car-spot-dependent, meaning specific cars go to specific doors. A train would likely be blocked accordingly prior to leaving the yard in Tracy.



The layout at a glance

Name: C&NW's Alco Line
Scale: HO (1:87.1)
Size: 15'-7" x 46'-6"
Prototype: Chicago & North Western
Locale: Minnesota and South Dakota
Era: 1978
Style: single deck
Mainline run: 180 feet
Minimum radius: 32"
Minimum turnout: No. 6
Maximum grade: 1.5 percent (Mankato)
Train length: 10 feet
Benchwork: open grid
Height: 50"; Mankato 52"
Roadbed: 1/2" birch plus cork
Track: Walthers code 70
Scenery: 1 1/2" extruded foam base
Backdrop: walls painted sky blue
Control: NCE DCC

③ Having fewer towns means you can do more with the towns you do include, such as adding elements that are not rail-served like an abandoned freight house, parking lots, wide streets, and more. Getting away from including only structures that have a spur in front of them enhances realism.



C&NW's Alco Line

HO scale (1:87.1)
 Room size: 15'-7" x 46'-6", Scale of plan: 3/16" = 1'-0", 24" grid
 Numbered arrows indicate photo locations, Illustration by Kellie Jaeger

⊕ Find more plans online in the Trains.com Track Plan Database.



4 Looking southward down 2nd Avenue in Sleepy Eye, we see a boxcar awaiting unloading at Farmers Elevator Company. Small towns do not mean small buildings. Lance either scratch-built or heavily kitbashed the structures for the Alco Line.

However, given our limited space, that isn't necessarily the best approach. If something doesn't support your visual or operational goals, crop it out. Visually, you want to avoid the subtle trap of cherry-picking and eliminating only non-rail subjects. You want a balance that captures the feel of your place.

Big Decision Two

How will the layout be run? This is another crucial decision. Will you be

running by yourself or with a crew most of the time? Also related: When running solo, what is your attention span? How long will your operating sessions be?

Despite what we read in the hobby press, large, multi-crew formal operating sessions aren't the norm. I've noticed that most modelers run solo most of the time. In those situations, the design should focus in that direction and not be overburdened with features that won't be used and take up space that could be useful for other things.

Things such as staging yards and large classification yards are tools meant to be applied to specific situations and allow you to achieve certain objectives. They were never meant to be used with every style of layout operation.

A decision-making case study

I'm presently working on a design/build based on Chicago & North Western's famed "Alco Line." It stretched from Winona, Minn., to Pierre, S.D., and derived its nickname from the prevalence of Alco power that plied its rails in the 1970s. Traffic was light, and its less-than-pristine track necessitated slow-speed running. Then *Trains* Editor

Meet Lance Mindheim

Lance Mindheim is a regular contributor to MRP and a custom layout planner, designer, and builder; see shelflayouts.com



J. David Ingles called the line's trains "Land Barges." [See Dennis Eggert's article on modeling this line in MRP 2023 — Ed.]

The customer, "Bill," brought a rare degree of strategic clarity to the planning process that offers some helpful lessons. His strategic plan (notice that I didn't say design) had two driving forces:

- He wanted to capture the feel of the Alco Line by restricting the number of towns and emphasizing the prairies.

- He planned to operate the layout by himself; there would be no multi-crew, multi-train operating sessions.

Bill wrote, "My first memory of the Alco Line was when I was probably 7 or 8 visiting our old neighbors up in Rochester, Minn. That was also about the



When given the space to breathe, a model town takes on a naturally realistic appearance.

Fewer towns, more realism

One of the benefits of modeling fewer towns is that those you do incorporate can be modeled closer to scale, enhancing their realism. Spreading it out makes you feel like you're actually there. Sleepy Eye, Minn., is a small town with a population of 3,500 people. There isn't anything particularly noteworthy about it, which is why it's worthy of inclusion — it's representative; it's ordinary, not extraordinary; it's the norm; and it's what you would expect to see.

My design mentor, Chuck Hitchcock, said years ago, "The key to realism is to highlight the ordinary." Sleepy Eye had only a handful of industries, and yet this scene stretches out to 20 feet in length on the layout. Streets are modeled to full width. Space is provided for easements and parking lots. Del Monte plant No. 114 is just on the outskirts of town. A five-foot-long scenery-only buffer zone was placed between it and the town to create the sense of a little distance. — *Lance Mindheim*



The layout is going into a portion of a large agricultural steel shed that's being renovated with new interior walls and climate control. Although the client had more space, he set hard limits on the size of the layout to keep it manageable.



same time I received my first Tyco HO train set. What surprised me most was how slow they were moving and how different the motive power looked. I think that's what got me hooked — the

This westward view, taken on the outskirts of Sleepy Eye, illustrates the vast open look of the southern Minnesota prairies. To capture the essence of this region, setting aside space for scenes like this was a top design priority.

slow-moving long trains of mostly 40-foot boxcars on a single-track main on beautiful prairies. As the years went by and after numerous visits up north, my fascination grew, and along the way I told myself that someday I'd like to model this."

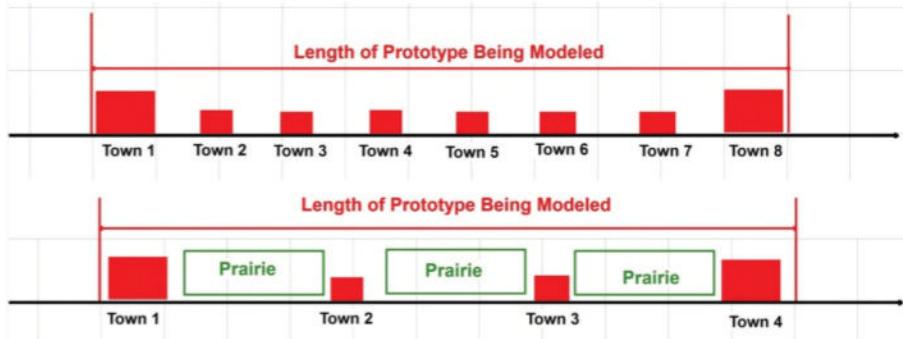
In other words, he was very clear on the look he wanted and that specific, defining element served as the foundation for the layout. He didn't say, "The Alco Line is interesting, and I'm going to try to find a way to squeeze as much of its track into the space I have available."

The vast open prairies of southern Minnesota that the Alco Line traversed are its signature element. As such, they should be one of the primary features incorporated into the design, not the first thing to get trimmed in an effort to add yet one more town or yard. He was very clear that to achieve that look, he needed to set a hard limit on the number of towns represented in the design — four, in this case, two bookends and two mid-route. By not succumbing to the natural tendency to overreach and



5 This scene is the one most people associate with Sleepy Eye. You're looking southwest at the depot with the Chief Sleepy Eye monument on the left. Notice the generous spacing between the structures and the scale width of the streets (First Avenue is in the foreground).

include too many towns, he freed up space to create a much more plausible representation of the area. It allowed him to represent the signature look of the prairies. It also allowed him ample room



Limiting the number of towns and significant track features along a route frees up space for region-defining scenery elements and increases visual realism. It allows you to spread out and open up the towns you do model. It also makes it less likely that a train will be entering a town while its caboose is still in the previous town.

to give the elements within the towns some breathing room and avoid the typically, overly squeezed model train layout look.

Bill was also very clear on how the layout would be operated. He's a time-strapped business owner who does an enormous amount of travel. He had no illusions about or desire to host formal, multi-person operating sessions. Other than the occasional visit from a friend or his grandkids, the overwhelming percentage of the time it would be just him running trains and taking in his miniature version of the prairies. The model railroad needed to be designed for one-person operation.

We all tend to think we want multi-person operating sessions, but if we are honest with ourselves, most of us are like Bill. If that's the case, there may not be a need for staging. Since Bill isn't interested in detailed train blocking, there isn't the need for numerous, space-eating yards. There are just a few, and they only have enough ladder tracks to make the point that they are, in fact, yards.

Much of the enjoyment of running the 15 x 46-foot model railroad will be having a tandem of weathered Alcos crawling through the Minnesota prairies

at 15 or 20 miles per hour and switching a grain elevator here and there. When running solo, most of us have an attention span of an hour or two. It doesn't take that many industries, or that much track, to fill up that time when switching at prototype speeds.

The major lesson to be learned from Bill's layout is this: Be wary of putting in more track than you'll use. **MRP**

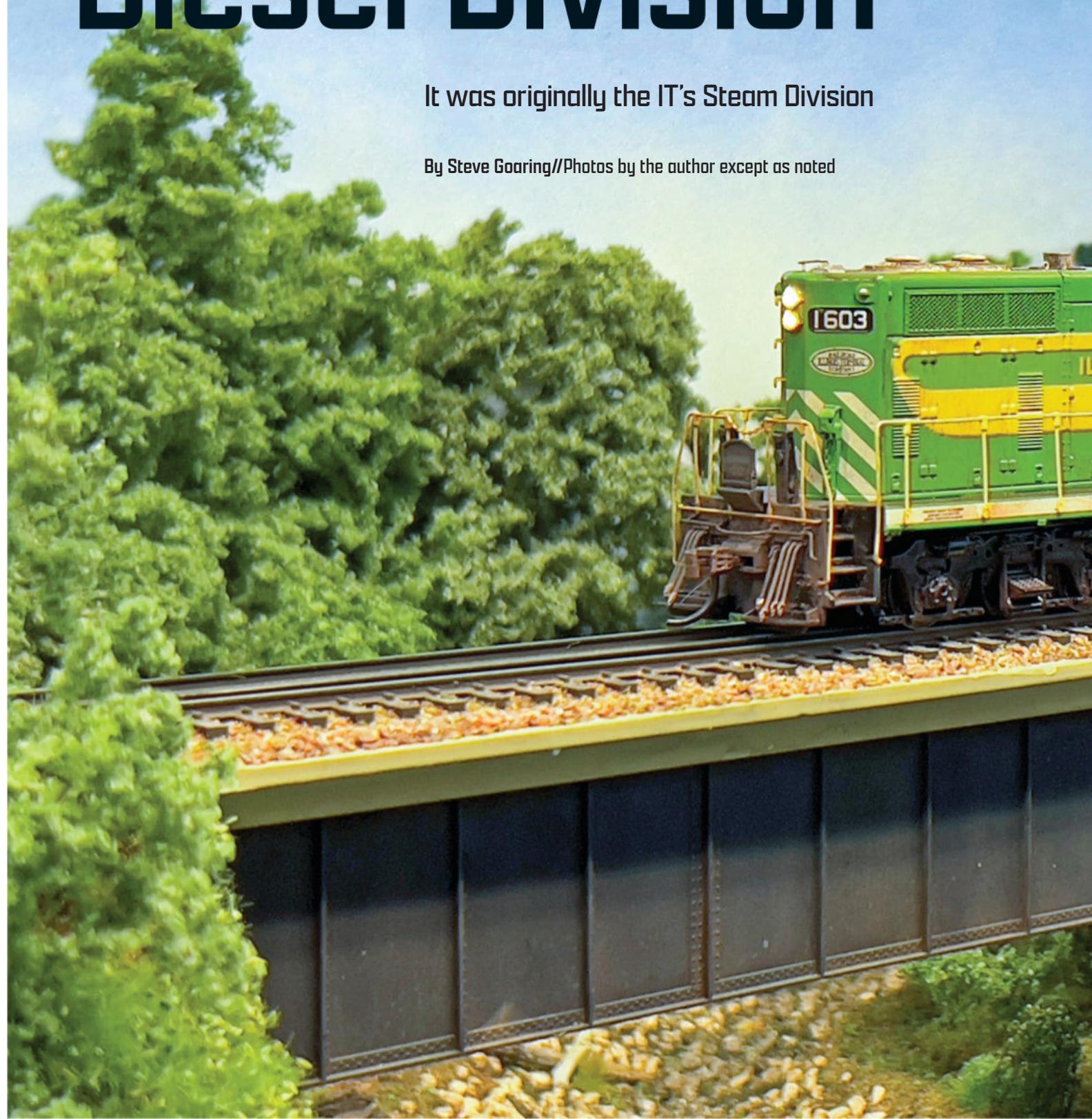
Learning Points

- Limiting the number of towns creates a sense of distance between them, increasing realism, and allowing you to spread out the footprint of the towns you do select, also increasing realism.
- If you expect to be running your layout mostly by yourself, select your Layout Design Elements accordingly; it may not be necessary to include staging, multiple yards, or other features designed for larger crews.
- Running by yourself means it takes less "stuff" to keep you entertained.

Illinois Terminal's Diesel Division

It was originally the IT's Steam Division

By Steve Goaring//Photos by the author except as noted





1 Illinois Terminal Electro-Motive Division GP7 No. 1603, power for the Alton Yard and Road Job, crosses Ogle's Creek with a flatcar load of Farmall tractors. The scene takes place on Steve Goaring's HO scale Illinois Terminal O'Fallon Branch.



② It's a humid afternoon as the McKinley Yard and Road Job crosses over Lockmann Road, the Pennsylvania RR's line between Terre Haute, Ind., and St. Louis, and Longhi Creek at PAIT on its way south.

When model railroaders think of the Illinois Terminal of the 1940s and '50s, images of a traction line with spindly track and interurban passenger trains running through the fields, towns, and small cities of central Illinois probably come to mind. The Illinois Terminal Co. (ITC) was one of the largest interurban railroads in the country. Its electrified system spread across Illinois from Peoria to Bloomington, Decatur to Danville, and Springfield to metro St. Louis.

What many modelers may not know is that the ITC had an extensive steam- and later diesel-operated system around the Illinois Metro-East area across from St. Louis. The ITC served St. Louis, crossing the Mississippi River on its own McKinley Bridge. On the Illinois side, it spread across the area to Madison, Granite City, Wood River, and the main

yard and shop at Federal Yard in Alton, then from McKinley Yard east to Troy and north to LeClaire, Edwardsville, and Wood River. This brings us to ITC's O'Fallon Branch.

Picking a branch to model

In 2007, I had been in my new home for two years. With an unfinished space in my partially finished basement allocated for a railroad, I began thinking about what I wanted to model. I grew up along the Illinois Central's St. Louis District, so that would have been my first choice. But the space available to properly model it was just not there, so I began to think about an IC branch line. Finding no candidates nearby, I remembered the walk I took back in the late 1970s along the old Illinois Terminal branch right-of-way from Troy Junction

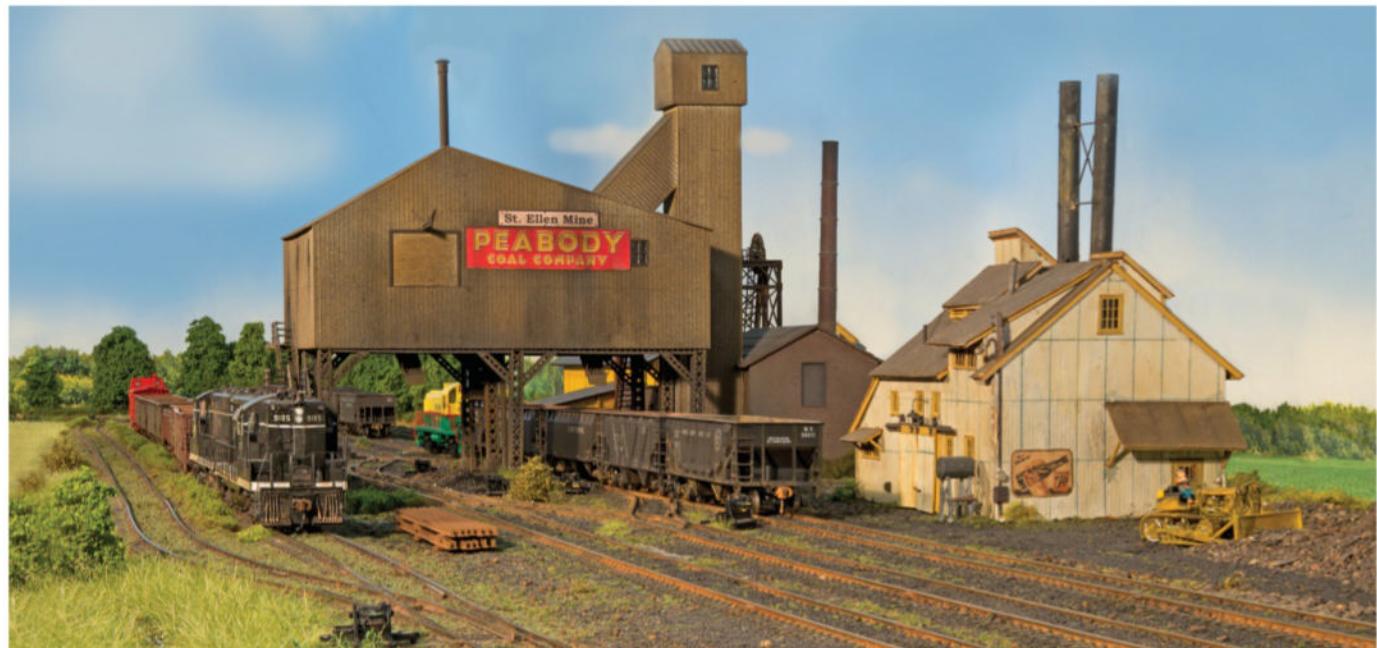
to O'Fallon. At the time, all the rail and bridges were still in place, since ITC used it for car storage.

I looked through my collection of slides and photos and decided this could work. I began more detailed research, talking with former ITC employees and visiting community historical societies. In 2009, I decided that this was the prototype for me: a 10-mile-long branch line, interchanges with the Pennsylvania and Baltimore & Ohio railroads, a lumberyard and team track in O'Fallon, and a coal mine! What more could I ask for?

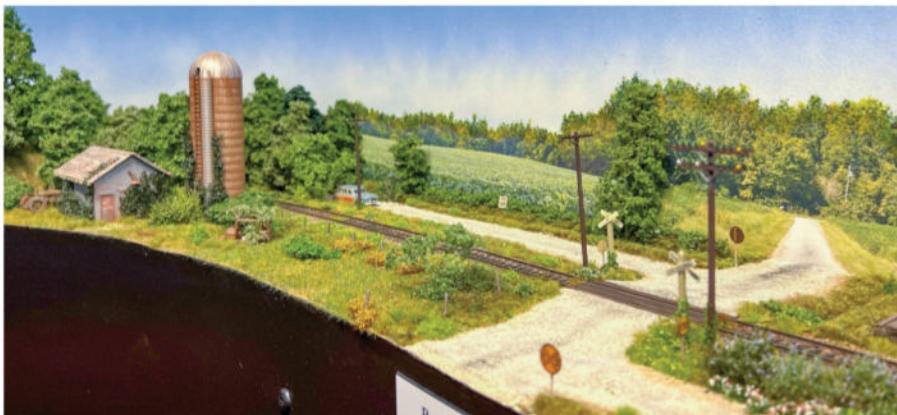
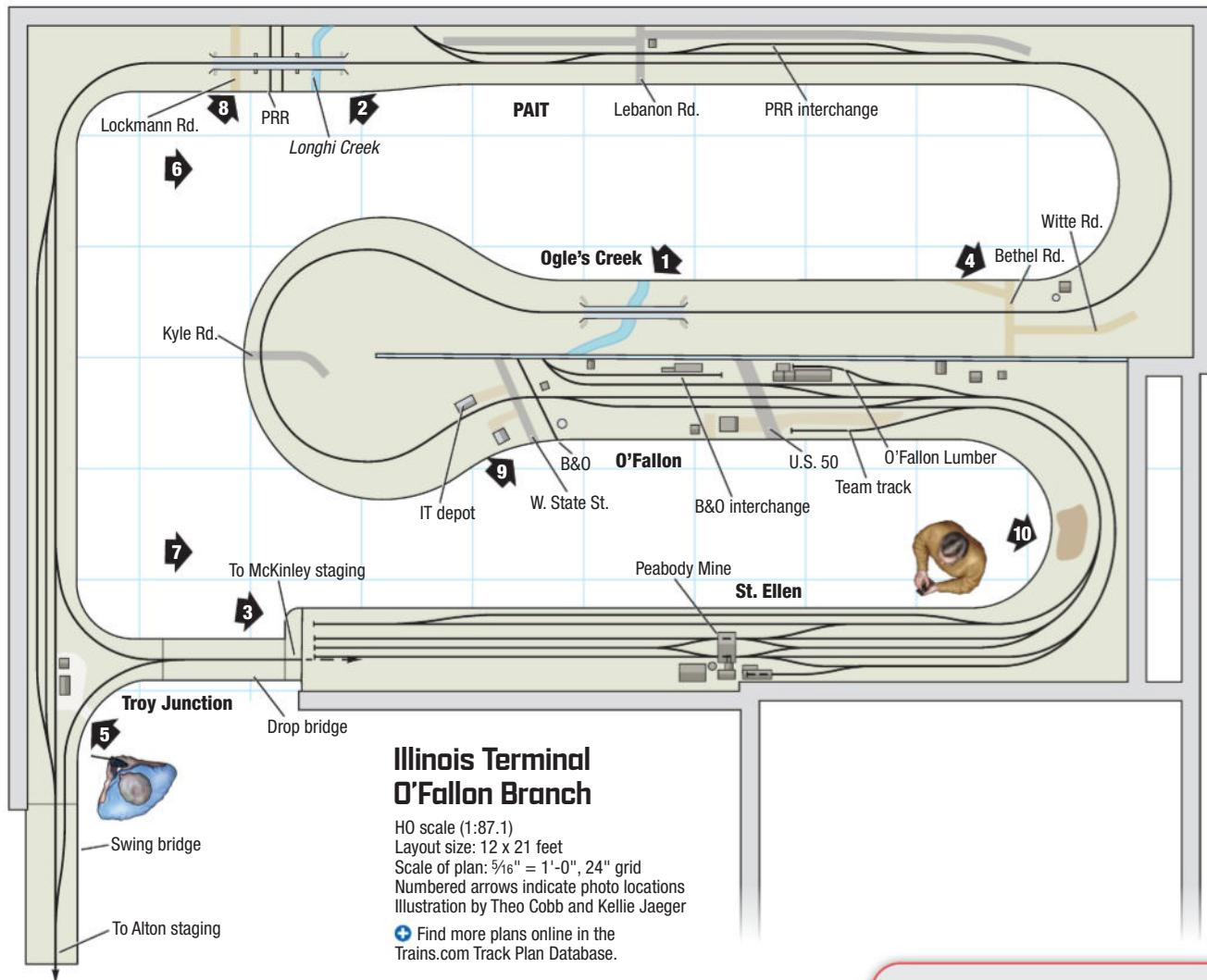
A little history

The Illinois Terminal O'Fallon Branch is an HO scale proto-freelanced layout depicting my vision of the railroad in the summer of 1961. Historically, the railroad began building to Troy Junction from LeClaire in 1930 to connect with the St. Louis, Troy & Eastern (later purchased by ITC) and to access the coal around the O'Fallon area. The ITC extended its line south to O'Fallon, initially connecting with PRR at Formosa Junction and later at PAIT (Pennsylvania-Illinois Terminal) due to a new PRR routing.

The ITC also connected with the B&O at O'Fallon. Getting to O'Fallon also established a connection with the Louisville & Nashville branch from Belleville and enabled the ITC to lease the trackage at St. Ellen Mine from the St. Louis & Belleville Electric Ry. This gave ITC the coal haul to their dock on the Mississippi River at Alton.



③ Peabody Coal Co. acquired the St. Ellen Mine from Perry County Coal in 1959, but it closed in 1962 when coal reserves were depleted. By assuming a new deposit of coal was discovered and Peabody continued to operate the mine, Steve could resume shipments over the IT and Illinois Central. Dan Munson photo



4 This abandoned farm scene at Bethel Road between the bridge over Ogle's Creek and the PRR-IT interchange at PAIT illustrates an eye-catching way to fill a corner of a layout while disguising the entrance to yet another turnback curve.

The branch was part of what was called originally the Steam Division. By the mid-1930s, these lines used a mix of 0-6-0s, 0-8-0s, 2-6-0s, 2-8-0s, 2-8-2s, and a single 4-4-0 on the Alton-Grafton line. The electric lines were all part of the Electric Division, while the Illinois

steam operations were under the Steam Division. Each had their own employee timetable. When the ITC dieselized in 1950, it was renamed the Diesel Division.

In 1940, the IT bought the mine trackage outright. The L&N abandoned its line except for the O'Fallon trackage

Track plan at a glance

Name: Illinois Terminal O'Fallon Branch
Scale: HO (1:87.1)
Size: 12 x 21 feet
Prototype: Illinois Terminal Diesel Division
Locale: St. Louis Metro-East Illinois
Era: summer 1961
Style: around-the-walls with central peninsula
Mainline run: 85 feet
Minimum radius: 20"
Minimum turnout: No. 4
Maximum grade: 1.75%
Train length: 12 to 14 cars
Benchwork: 2" extruded-foam on metal and wood brackets.
Height: 48" to 54"
Roadbed: AMI Instant Roadbed
Track: code 83
Scenery: Woodland Scenics, Martin Welberg, and Lars op 't Hof Scenery with Scenic Express SuperTrees
Backdrop: $1\frac{1}{8}$ " tempered hardboard
Control: Digitrax Digital Command Control



5 After leaving the mine at St. Ellen, the main passes through O'Fallon and Ogle's Creek on opposite sides of a central peninsula, then continues through PAIT to Troy Junction. Trains can then continue straight to Alton (staging) or swing to the left to McKinley (staging). The bottom photos show Troy Junction under construction, being scenicked, and complete.

and leased it to IT, which bought it in 1943. Operations on the branch were steady until about 1960 when traffic patterns changed on the PRR, drying up the interchange traffic, and the St. Ellen Mine was depleted and closed in 1962. Except for infrequent service to the B&O and O'Fallon, the branch declined with the last service around 1970. It continued to be used for car storage through the merger with Norfolk & Western in 1982. The rails were finally pulled sometime around 1985.

In my proto-freelanced 1961 timeline, the interchange traffic patterns remained stable, the mine found a new vein of coal, was bought by Peabody Coal Co., and secured a long-term major coal contract with Springfield City Water, Light & Power Co.

Layout room and benchwork

The layout is in a 12 x 21-foot area. I framed the unfinished room with 2 x 4 studs on 16" centers. The benchwork is

built with 2" extruded-foam insulation board sheets on top of two 1 x 4s supported by metal wall brackets.

The peninsula is a standard 2 x 4 wall frame with 2 x 4 outriggers to support the foam bench. I designed it as a single-deck railroad, since I wanted a reasonably high layout without the structure of an upper deck over the top. Moreover, a helix would take up too much valuable floor area. The benchwork is relatively narrow, ranging from 8" to 19". The $\frac{1}{8}$ " tempered hardboard backdrop extends to the ceiling to maximize a sense of isolation between the aisleways.

To get to both the Alton and the McKinley staging yards from the wye at Troy Junction required two movable bridges. To access Alton, I built a 36" swing bridge off the north leg and a 34 $\frac{1}{4}$ " drop bridge off the west leg to the McKinley staging under the mine. I would have preferred a lift bridge here, but it would not clear the HVAC duct-work above.

Layout design

The design phase was simple, as the branch is only 10 miles long and runs nearly due south with four Layout Design Elements (LDEs): Troy Junction, the PRR interchange at PAIT, O'Fallon with the B&O interchange, and the St. Ellen Mine. Part of the beauty of picking

Meet Steve Goaring

Steve Goaring grew up in Marissa, Ill., along the Illinois Central's St. Louis District. He retired in 2016 after a 40-year career in electrical maintenance with Peabody Coal Co. and Amsted Rail. He lives in Swansea, Ill., with his wife, Shu Ying. He enjoys traveling the world, railroad and travel photography, railroadiana collecting, St. Louis Cardinals baseball, and St. Louis Blues hockey.



These overview photos show the two main aisles on either side of the main peninsula. ⑥ At upper left is PAIT and the Pennsy interchange. ⑦ In the upper right image, O'Fallon (left) and the St. Ellen mine (right) can be seen. The lower left photo shows how both sides of the line that crosses Ogle's Creek are densely packed with foliage.

this branch was that I could prototypically space out the four LDEs so that no trains would stretch from one LDE to the other while doing work or running.

As the track plan shows, I put Troy Junction on the west wall, PAIT on the north wall, O'Fallon on the south side of the peninsula, and St. Ellen Mine on the south. This allowed me to use the peninsula's opposite side to have a long run through the forest area north of O'Fallon where the railroad could prototypically travel through the woods mostly unseen except where it crossed Ogle's Creek.

Due to the staging yard under St. Ellen Mine, I needed to raise the railroad 6" between Troy Junction and O'Fallon to gain clearance. I constructed the railroad on a 1.75% grade with the LDEs being level while climbing to O'Fallon, with Troy Junction at a 48" height and O'Fallon at 54".

Fields and forests

Needless to say, scenery is one of my favorite parts of building a layout. It's what anchors the railroad in its location, in my case southwest Illinois. The ITC

went through mostly fields and forests going south from Troy to O'Fallon. Walking the old right-of-way helped me to see the different scenic areas and how they blended with one another. Fields of soybeans and corn fade into densely wooded areas along with open areas for interchanges and bridges. I believe that if the railroad goes through forests, then you shouldn't be able to see it. For that reason, I have the line from PAIT to O'Fallon buried in the woods with just a couple of spots where track is visible.

As it is summer, there are more than 850 SuperTrees on the layout as well as 1,200 Busch cornstalks in two fields and soybeans sprinkled with various sizes and colors of foliage along with areas of static grass throughout. I use Woodland Scenics and Martin Welberg products as well as scenic bushes that I make myself.

Running trains

I can operate a single local myself or have two to three crew members run four or five trains with me serving as the train-order clerk. Operating a local by myself usually lasts approximately 45

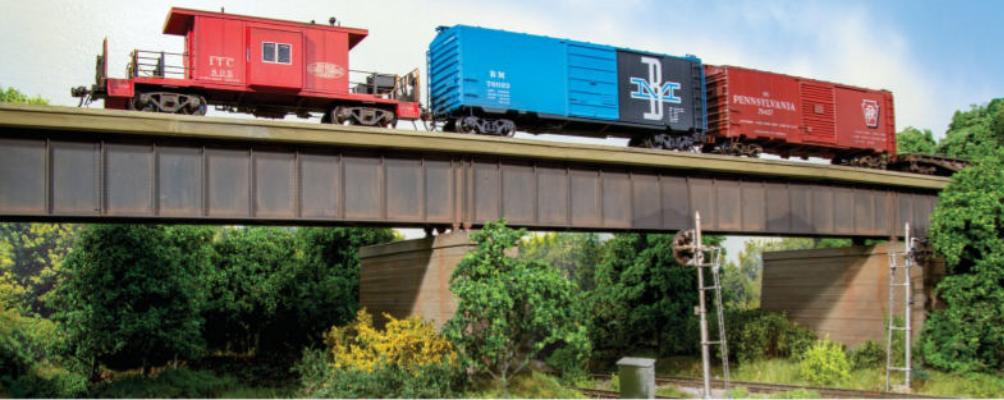
minutes, while multiple operators can run four or five locals and coal trains in approximately 2½ to 3 hours.

Trains are operated out of two staging yards, Alton and McKinley. Alton staging is a seven-track fiddle yard comprising four tracks at Federal Yard, one track at Roxanna (Shell) Petroleum Refinery, one track for the ITC/IC interchange at Mont, and one for the Mississippi Coal Dock at Alton. It also has an engine-house and three storage tracks for extra locomotives and cabooses.

McKinley staging comprises two tracks for the McKinley Yard and Road Job and the Peabody coal train from St. Ellen to the Peabody Dock in East St. Louis.

Before a crew takes their train out of staging, they're issued an Operations Guide, switch list, and card explaining the duties of that train. During an operating session, train orders and clearance cards are issued to trains arriving at Troy Junction and O'Fallon.

At PAIT, the conductor uses a train-order phone to call either the Troy Junction or O'Fallon TO office (one ring



8 An Illinois Terminal transfer caboose marks the end of the Alton Yard and Road Job as it rumbles over the long deck-girder bridge spanning Lockmann Road and the Pennsylvania RR.

for Troy, two rings for O'Fallon) to get verbal clearance to proceed.

Using IT nomenclature, the railroad has an 8 a.m. daily-except-Sunday Alton Yard and Road Job originating out of Alton Federal Yard. It works Troy Junction setting out and picking up cars from the McKinley Yard and Road Job, the PRR interchange at PAIT, and the B&O interchange and local industry in O'Fallon.

The Alton Dock and Mine Job is a 7 a.m. Monday-through-Friday

operation that takes empty coal cars to the St. Ellen Mine and delivers loads back to the Mississippi River Dock. On Mondays, Wednesdays, and Fridays, the Illinois Central delivers empties and picks up loads of coal from St. Ellen for Springfield City Water, Light & Power. This train comes to the ITC at Mont and is a joint Illinois Central/Chicago & Illinois Midland operation with both IC and C&IM power used. This train usually arrives at Troy Junction around noon but has been known to be late.

Learning Points

- Confining your ambitions to fit in your available layout space gives you a better chance of achieving your objectives.
- Modeling a branch line may allow you to model a favorite prototype in a smaller footprint.
- A lot of scenery can be modeled on rather narrow benchwork.
- A working interlocking slows down trains, thus extending their runs.

An afternoon McKinley Yard and Road Job arrives Monday through Friday from Madison at Troy Junction to pickup/setout cars for industrial customers in the Madison/National City area and boxcar loads of paper for the St. Louis *Post-Dispatch* newspaper printing plant across the river, accessed by ITC via their McKinley Bridge to Missouri. A second-trick Alton Yard and Road Job runs to PAIT with tank cars of gasoline from the Roxanna Petroleum Refinery and does any extra work that was left behind by the day trick.

I don't use waybills in car cards, as local switching crews don't care where a car is coming from, going to, or what it carries. I use switch lists to tell the crews what cars to set out, pick up, and what if anything else to do with each car beside returning it to the yard. I type the switch lists between sessions as well as move cars off and on the interchange tracks so that car movements are not repeated.

Train movements are governed by train orders and clearance cards issued at Troy Junction and O'Fallon. I installed working TO signals at both locations.

Motive power and rolling stock

In 1961, ITC motive power was a mix of Alco S2s and RS1s plus EMD SW1200s and GP7s. My railroad's motive power consists of Atlas RS1s in the original black delivery scheme along with three Athearn Genesis GP7s in their original delivery paint known as the "Rubber Band" scheme. Foreign power consists of Illinois Central GP9s and GP18s as well as Chicago & Illinois Midland SD9s.

Freight cars and cabooses are all equipped with Kadee couplers and Kadee or InterMountain metal wheels, weighted to or exceeding National Model Railroad Association recommended practices, and weathered before they are put into revenue service.



9 At the B&O crossing in O'Fallon, IT trains have to stop (top), the crew has to unlock the door of a cabinet (lower left), swing it open, and press a button (lower right) to get a clear signal to cross the B&O. It's a realistic way to slow down the run over the O'Fallon Branch.



10 Upper left: To create a slurry pond for the Peabody Mine at St. Ellen, Steve carved out the extruded-foam insulation board base to create a 1" depression. Upper right: He laid sheets of plaster cloth in the hole and along the banks to give it some texture, then coated it with Dr. Ben's Oily Crud weathering solution to waterproof the pond plus give the banks that nasty, coal slurry look. He test-mounted a slurry pipe to see where he should put the mound in the middle. Lower left: Once Steve got the pipe and its supports installed and the mound under the pipe and the dock set in, he painted the pond bottom, banks, and loadout area with Ammo by MiG Acrylic Mud No. 2104 Dark Mud Ground. After it dried overnight, he added Woodland Scenics Deep Pour Murky to simulate standing water.

The O'Fallon interlocking

The interlocking at O'Fallon was a unique setup that I'd never heard of before. It was installed by the B&O with a single-story, unmanned cabin in the southeast quadrant of the diamond. When an ITC train arrived, the conductor walked over to the cabin, unlocked the door, entered, and pressed a button that checked the B&O for occupancy three blocks each way. It would also lock the cabin door, preventing the conductor from leaving! It was explained to me by former ITC employees that sometime back in the late 1940s, a conductor left the cabin with the home signals against the B&O, which caused freight and passenger trains to be held up until they figured out the problem.

Once the circuit showed Clear, the signals on the B&O would change to red, and the associated ITC semaphore arm would rise to indicate Clear, allowing the train to cross the diamond. Once the ITC was clear, the conductor would reset the interlock for the B&O and unlock the door so he could leave.

Not being able to replicate this routine without using a bear trap, I installed a lock box on the fascia that is built from weathered-looking wood with ITC stenciled on the door. When the train arrives at O'Fallon, the crew unlocks the door, sets a toggle for the direction the train is traveling, and pushes a button marked ITRR. The B&O home signal goes red, the ITC semaphore arm goes up, and the train proceeds across the diamond. Once

clear, the operator pushes a second button marked B&ORR, which resets the interlock to its normal condition.

Less maintenance, more fun

Interesting as it would be to model part of the electrified Illinois Terminal system, modeling the O'Fallon Branch in the diesel era saved me a lot of time that would have been required to erect and maintain the overhead wire system. The IT diesel fleet was sufficiently varied and attractive, and the O'Fallon Branch fit nicely in the space I had available. I'm very pleased with my choice.

You can read more about my model of the O'Fallon Branch in Chapter Eight of MRP Editor Tony Koester's new book *Guide to Modeling Branch Lines*. **MRP**



Modeling UP's Evanston

Switching scales and locales but not railroads

By Daryl Kruse//Photos by the author

Home downsizing after retirement doesn't always mean downsizing the basement. In fact, our downsizing from a large two-story to a smaller one-story ranch resulted in a 60% increase in basement space. In July 2021, we moved into our new home with 2,200 square feet of unfinished basement.

With my love of long trains and high scenery-to-track ratios, I never really considered HO scale during my 50 years of modeling in N. With so much space now available, I not only considered it, I decided to make the switch to HO. Then I figured I might as well go even further

and changed from Midwest railroading to mountain railroading. Of course, my love of the modern Union Pacific eliminated any possible change in railroad or era.

With many Union Pacific mountain locations from which to choose, I settled on the Evanston Sub in Utah and Wyoming for its historic role in the first transcontinental railroad, the heavy double-track mainline traffic, and the beauty of the Echo and Weber River canyons.

Advance planning

During house construction, I had six months to plan for the new layout.

① Daryl Kruse's UP Evanston Sub models present day Utah and Wyoming in HO scale. The two main lines cross each other at Flyover, also known as Curvo. The upper line is the original, while the lower was added in 1916.

CADRail software was used for drafting the track plan with the requirements outlined below.

Broad curves. I had minimum mainline curve radius of 36" on the N scale Geneva Sub. This would equate to 66" in HO scale. The Evanston Sub has a minimum mainline curve radius of 42". This minimum only occurs once. Most curves have radii over 50". There is one "rule break" curve of 36", but it is less than a quarter turn and is inside a tunnel.

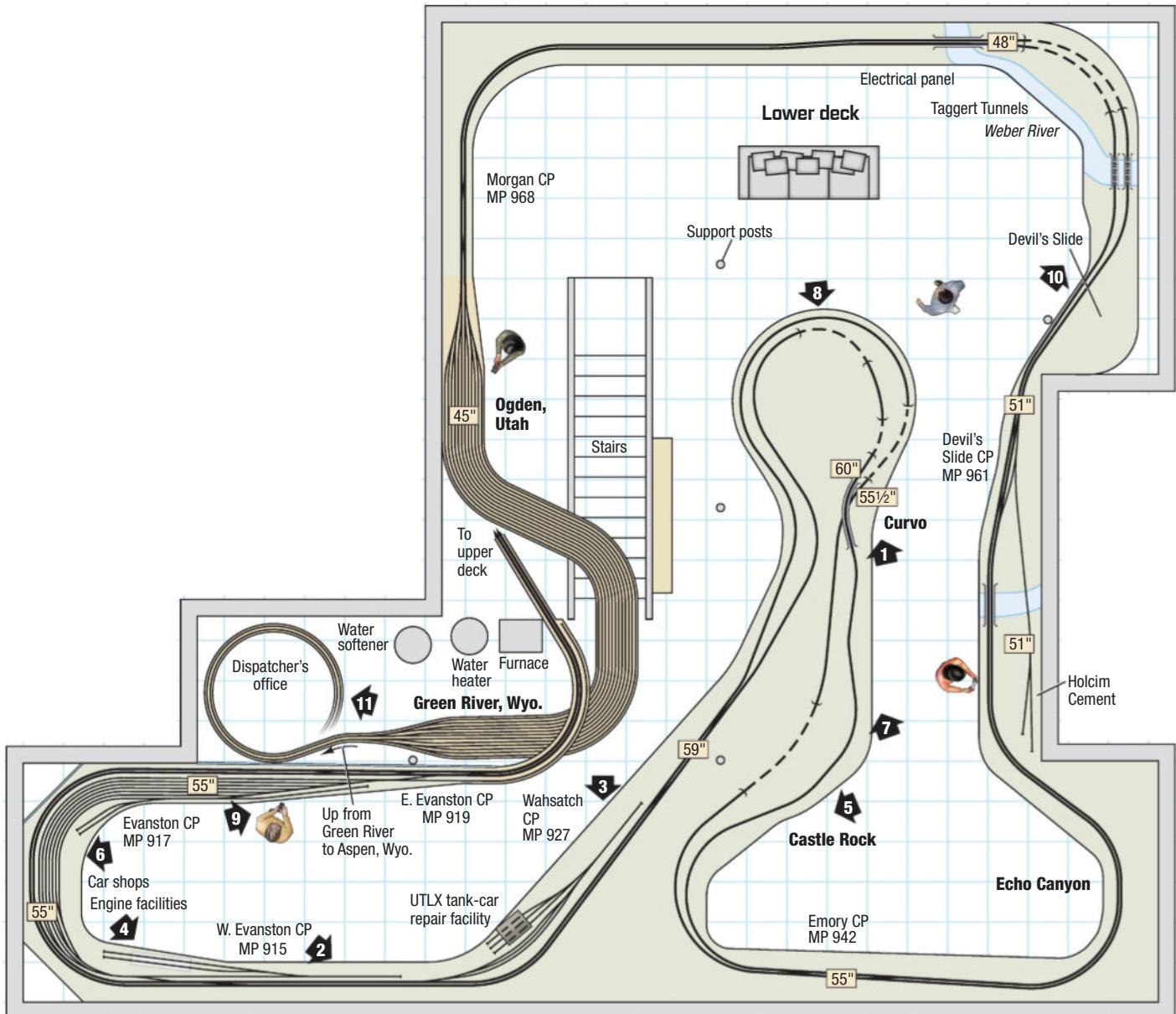
A high scenery-to-track ratio. Many HO layouts cram as much track and industry into every square foot of



Subdivision



② An Evanston yard crew pulls a string of cars on the west yard lead while an eastward empty coal train and westward manifest pass each other on the main line. The “patched” 6517 is an Electro-Motive Division SD60 originally owned by UP but now a Norfolk Southern unit.



3 A Union Tank Car Co. switch crew moves equipment between the three-track yard and the car shops at the tank car repair facility on the west end of Evanston. Finding end-cab switchers gainfully employed and in pristine condition is becoming more and more difficult.

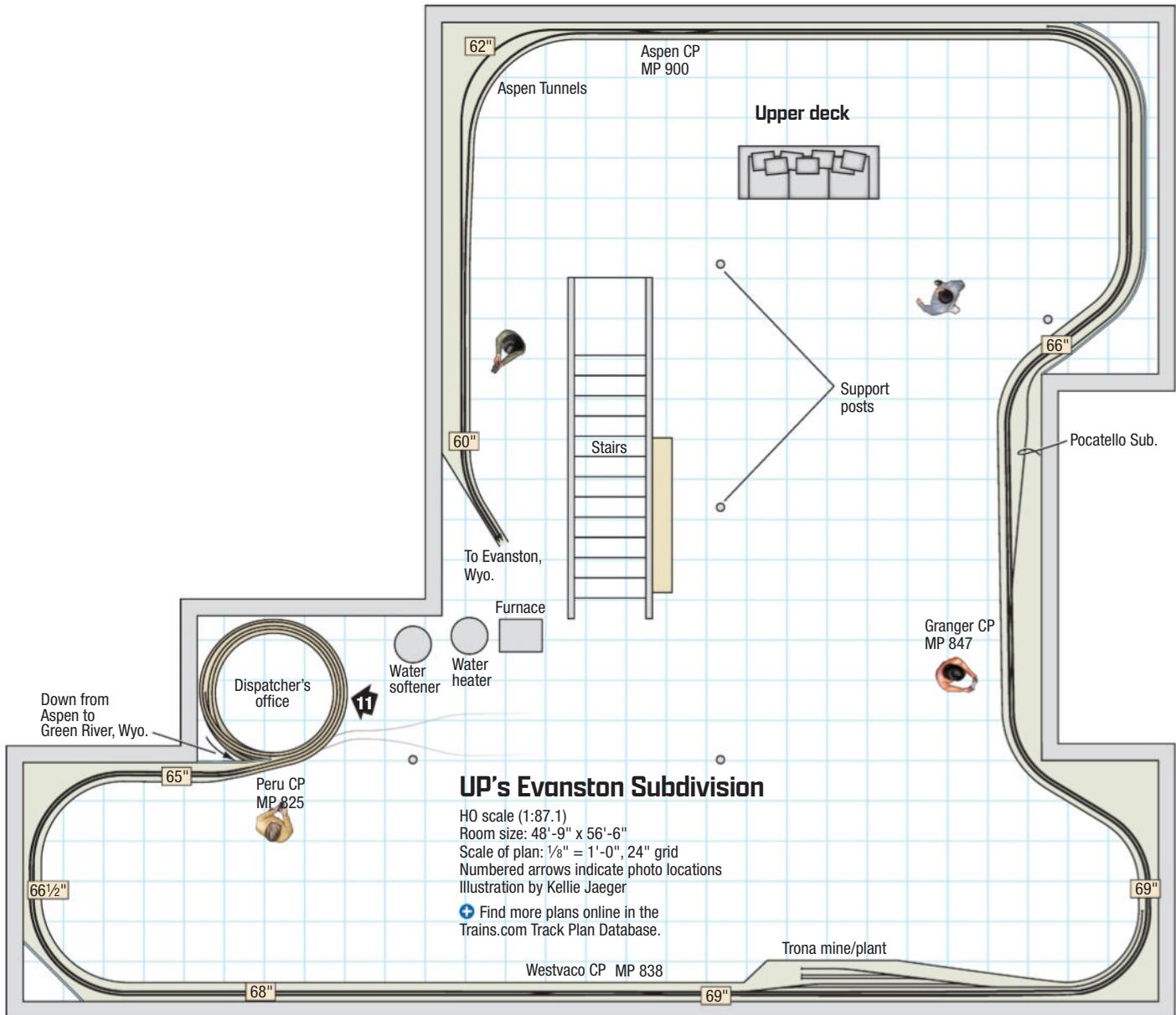
available space. The HO Evanston Sub would instead emulate N scale's high scenery-to-track ratio.

Micro Engineering code 83 track on the main line and code 70 for secondary track. Code 83 track with concrete ties would be used as applicable. Turnouts are No. 10 on the main line and No. 8 for all secondary tracks. All turnouts are handbuilt using Fast Tracks jigs.

The mainline track profile is $\frac{3}{8}$ " plywood sub and $\frac{1}{4}$ " ballasted roadbed. Most HO scale cork roadbed is only .196". Using $\frac{1}{4}$ " ballasted roadbed provides a modern look to the main line.

A wide-open, "outdoors" look. The layout has no valances and limited overhang of the upper deck over the lower deck.

Maximize aisle space. There must be ample space for the people operating the



layout. Aisle space should be generous enough to allow people to pass each other without turning sideways.

Even with 2,200 square feet, one deck resulted in only 4.8 scale miles of main line, which is a bit less than my N scale Geneva Sub. I added a second deck around the outer portion of the layout, which brings the main line up to 8 scale miles. A complete run including the helix and staging yard is more than 9 scale miles. The mostly 10"-wide second deck keeps the lower main line uncovered and maintains the wide-open, "outdoors" appearance. To complete this look, a white ceiling and 6000K LED lighting are used throughout the basement.

I generally designed the layout to incorporate the things I loved about N scale. The 1:160 influence makes it a unique HO scale model railroad.

Track plan at a glance

Name: UP's Evanston Subdivision
Scale: HO (1:87.1)
Size: 48'-9" x 56'-6"
Prototype: Union Pacific
Locale: Utah and Wyoming
Era: modern
Style: multideck walk-in
Mainline run: 570 feet (9.4 scale miles)
Minimum radius: 42"
Minimum turnout: No. 10 main, No. 8 secondary
Maximum grade: 1.7%, 2% in helix

Train length: up to 34 feet (3,000 scale feet)
Benchwork: L-girder for lower deck
Height: 45" to 69"
Roadbed: $1/4"$ cork and foam on main, $.196"$ cork secondary
Track: code 83 main, code 70 secondary
Scenery: cardboard webbing, rosin paper, and plaster gauze
Backdrop: prototype photos plus Google Street Views
Control: Digitrax DCC



4 A Union Pacific C45ACCTE and a CSX ET44AC lead an auto-rack train through Evanston while the yard crew switches cars, and road engines are serviced for their next run.



5 A manifest at Castlerock begins its assault on the Wahsatch grade that made Union Pacific's fleets of 4-6-6-4 Challengers, 4-8-8-4 Big Boys, and Big Blow gas-turbines famous.

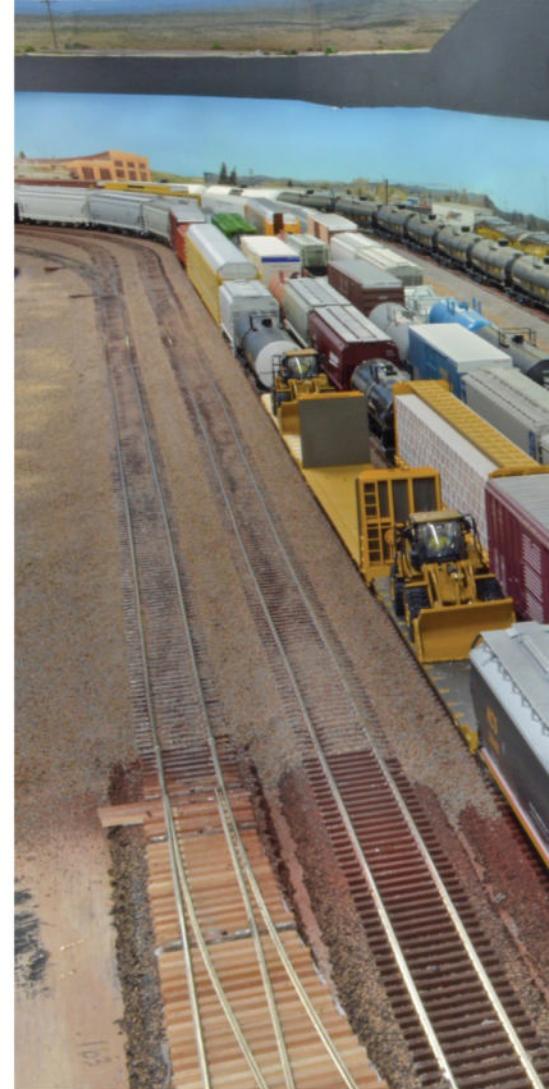
The prototype

The Evanston Sub is a 175-mile segment of the Union Pacific's original transcontinental main line laid out in 1869. It runs from Green River, Wyo., to Ogden, Utah. From a scenic standpoint, the line can be divided into three sections, the steep 1%-plus Weber River and Echo Canyons in Utah, the Evanston, Wyo., area, and the relatively flat Wyoming section east of the Altamont/Aspen Tunnels summit. The steepest climb is just west of the Wahsatch summit, which has grades up to 1.7%. In 1916, the Union Pacific added a second main line between Emory and Wahsatch that took a different route than the original line. With more modern equipment, the new mainline grade was only 1.14%. The original main line is still used for downhill westward trains while the modern main line is used for uphill eastward trains. A unique feature is that these two main lines cross

each other at Curvo making the Evanston Sub left-hand running from Ogden to Curvo and right-hand running from Curvo to Green River. (The UP refers to the crossover as Flyover.) The UP's 4-6-6-4 Challengers and 4-8-8-4 Big Boys were built to tackle the steep grades up to the Wahsatch summit.

Modeling the Evanston Sub in HO

A 12-track staging yard is located under the stairs and holds both the eastward and westward trains. Eastward out of the staging yard is the Morgan CP (control point) MP (milepost) 968, and the town of Morgan, Utah. From Morgan, the line continues through the Weber River Canyon, which includes three crossings of the Weber River, the Taggart Tunnels, a portion of Interstate 84, Devil's Slide CP MP 961, and Holcim Cement, which provides local switching operations. At Echo, Utah, MP 952, the



6 Two trains pass each other on the mainline next to Evanston yard. The upper and lower decks are separated by only 11" here, but the upper deck is just 10" wide, which leaves most of the lower deck uncovered.

line enters the Echo Canyon. The rock colors change from grayish colors of the Weber River Canyon to reddish colors of the Echo Canyon. Past the Emory CP MP 943 the main lines separate and take different routes to the Wahsatch CP MP 927, crossing over each other at Curvo MP 930.

After the Wahsatch CP, the line crosses into Wyoming and enters Evanston, Wyo., which contains a modest classification yard. On the prototype, the Evanston Yard is little used with most work done at Green River. Evanston was a major service point during the steam era. Today the turntable and roundhouse are still intact. On the layout, the Evanston Yard is a more major classification yard with two locals originating at the yard, two locals terminating, and two or three manifest trains stopping at the yard for car swaps, crew changes, and motive power swaps. Just



west of Evanston is the UTLX repair facility, which has its own switcher and generates a small daily local train between UTLX and the yard.

From Evanston, the line goes through a furnace room and makes the transition from the lower deck to the upper deck where it immediately goes through the Aspen Tunnels. After the tunnels is the Aspen CP MP 900.

From Aspen it enters the town of Granger and the Granger CP MP 846. The Granger CP includes the junction with the Pocatello Sub with one train entering and one train leaving the Evanston Sub daily. The line continues to the Westvaco Mine and Plant, which includes two empties-in/loads-out tracks, a small yard, a flood-loading track and its own switcher. The Westvaco facility mines trona and processes it into soda ash. Just east of the Westvaco facility is the Westvaco CP MP 838. While the upper deck is mostly 10" wide, it gets wider at the Aspen Tunnels, Granger, and the Westvaco Mine and Plant.

Each CP on the layout contains two No. 10 crossovers and is fully protected with signals using CTC (Centralized



7 An eastward manifest goes under a westward coal train at Curvo. The original main line, with more curves and grades up to 1.7%, is used for downgrade trains, while the modern main line is used for trains going upgrade.



8 The two main lines are at the same elevation at Emory and Wahsatch. Due to their separate paths over the grade, however, they can be at different elevations in between.

Traffic Control). All CPs on the layout are far enough apart from each other that no train can be in two CPs at the same time. The line finally makes it to Peru CP MP 824 where it enters the helix back down to the same staging yard. On its way down the helix, the first 360-degree turn is level to allow the right-hand main line to crossover so that it now becomes the left-hand main line (see **11** on the opposite page). This feature is needed to even out the crossover at Curvo and keep the two main lines separate from each other. Then there are four more turns at a 2% grade to get back to the staging yard. Trains going up the helix make only four turns at the 2% grade.

Layout construction

Work on the layout began with dry-wall installation on the basement side of the stairwell and allowing for the passage of the staging yard under the stairs. This was followed by the construction and positioning of the staging yard. The staging yard is built in three pieces with the piece under the stairs removable in case any major furnace or water heater work needs to be done.

I also left a couple of feet between the furnace and the layout for any maintenance work. I really don't anticipate the staging yard ever being removed, as our furnace and water heater are both small enough to slide under the layout.



9 Mainline roadbed is $\frac{3}{8}$ " thick to simulate a foot of rock ballast, while yard roadbed is $\frac{1}{4}$ ". Daryl uses Fast Tracks No. 8 turnouts in the yard and all secondary track, while Fast Tracks No. 10 turnouts are used on the main line.

Once the staging yard was in place, I worked counterclockwise around the basement starting at the Morgan corner. I first framed the walls, installed electrical, added/finished the drywall, painted the ceiling, installed the LED lighting, built the layout benchwork, laid track, and installed all wiring. I then moved to the next corner and repeated the process. Once I completed this process all around the basement, I went around a second time installing the second deck.

I began work in August 2021 and I put in the Golden Spike on Oct. 14, 2022. Once the main line was completed, I laid and wired all the secondary track. I'm now in the process of working around the layout again with basic scenery and ballast. The last go-around will be

structures, roads, and detailing. I also need to weather all the rolling stock.

Operations

The modeling eras of most HO layouts are selected somewhere in the 1950, '60s, '70s, or '80s with as much switching operations as possible. My modern era Evanston Sub takes a different approach by focusing on moving long trains across a modern double-track main line. There still is plenty of switching at the Evanston yard, UTLX, Westvaco Mine/Plant, and Holcim cement. But the beauty of the layout is running long trains with modern equipment across the main line. Eighteen trains with up to 45 cars run during a typical operating session. It's seldom a nonstop run as trains must be maneuvered around work being done at



10 The Weber River, Taggart Mountain, and Taggart Tunnels area is shown at the benchwork stage above, then with the mountain, tunnels, and bridges installed at right.

Learning Points

- Retirement doesn't always entail downsizing; a single-level home may have a larger basement than a two-story abode.
- Even after a half-century of modeling in N scale, with 60% more basement, a move to a larger scale seemed warranted.
- Even when the new railroad will depict the same prototype and era, it pays to weigh your options regarding locale.
- Basing the new track plan on a famous segment of the prototype is rewarding.

Holcim Cement, Westvaco, UTLX Repair, and the Pocatello Sub junction as well as MOW work being done at random locations and even steam excursion trains making PR stops on the main line. Ops sessions are made even more enjoyable by wide aisles and space for crews to relax between jobs. We operate about every six weeks with 10 to 16 crew members.

The layout is fully signaled with CTC. The DCC system and block detection are ESU components, while turnout control and signal drivers are via Digitrax LocoNet. The dispatch control panel uses JMRI CATS software. The physical signals are by Details West and Atlas.

Big changes equal higher interest

It's a big change going from Midwest N scale layouts to an HO scale mountain



11 The four-turn helix connects the eastern end of the layout with the Green River end of staging. Radii are 38" and 40" with a 2% grade. Look at the train closely to see how it goes from being right-hand running on the layout to left-hand running in the helix. This crossover is the counterpoint to the crossover at Curvo.

pike. I completely sold all the N scale equipment I had collected over 50 years. The proceeds funded a major portion of the budget for the Evanston Sub in its first year. The UPRR Evanston Sub YouTube channel also contributes to the funding. So far less than 20% of the Evanston Sub budget has come out of the family budget. This will decrease in the years to come as most of the large expenditures have already occurred. I even have a database and e-commerce website in place to sell all my HO scale equipment and layout components. I'm not going to live forever, and I don't want it to be difficult for my wife and adult children.

The best part of making big changes is that it keeps my hobby interest at a very high level. I never get bored and am always ready to work on the trains and, even better, play with them. **MRP**

Meet Daryl Kruse

Daryl Kruse worked 40 years in Lutheran elementary education in Texas, Missouri, Illinois, and Georgia. He and his wife of 47 years, Patricia, enjoy their grandchildren and volunteering at church.



Appalachian coal railroading in a spare

**This N scale railroad is
built on hollow-core
doors**

By Paul Schmidt
Photos by the author

It's March 1978.

Americans are *Star Wars* wacky and disco drunk, and a flamboyant rock band called Van Halen has just released its debut album.

But here in the Appalachian hollers of southwestern Virginia, life is much less frenzied and more traditional. Take, for instance, the Southern Ry.'s Slate Fork Branch, a former short line that a steel

consortium founded in the early 1920s. Carloads of bituminous coal move over its rails much as they have for the past half century. Located close to the Kentucky border, like its coal-hauling neighbor Interstate RR, the old Slate Fork Ry. interchanged a steady, if not large, volume of coal and miscellaneous freight with the Southern and the Louisville & Nashville RR. Another

1 A Southern Ry. GP38-2 – running long-hood-forward, of course – and a GP38 lead the daily Slate Fork Mine Run past the truck dump coal tipple at Flanary, Va., on Paul Schmidt's N scale model railroad. On the prototype, this tipple is actually at the end of the branch.



2 It's a steep trek up Appalachian ridges to gain this photo vantage point. Here's Southern's Slate Fork Mine Run headed westbound with coal loads. The signal is a fixed-aspect approach to the swing gate at C&A Junction.

room

interchange partner, the 4-mile-long Cumberland & Appalachia, a former logging railroad turned terminal railroad, relied on the Slate Fork to forward outbound loads of finished hardwoods and softwoods.

Change comes slowly in the Appalachians, but comes nonetheless. Not many years after a pair of new EMD SD9s diesels replaced the Slate Fork's

aging Baldwin 2-8-0s, the Southern made a successful pitch to acquire the consortium's short line (coinciding with the Southern's acquisition of the Interstate in October 1960, but drawing considerably less attention). The Interstate Commerce Commission's terms granted the L&N trackage rights over part of the Southern's new acquisition, and a long-standing routine soon

settled in: A daily Southern mine run out of Andover, Va., served the coal tipples at Creek Junction and Slate Fork. An L&N local from Loyall, Ky., worked the C&A interchange, Hercules Powder in Slate Fork, Va., and the end-of-branch tipple in Flanary, Va., doing so with the same placid pace of those early days on the line.

Genesis of an Appalachian coal hauler

So how did a born-and-bred Washingtonian living within sight of Victoria, British Columbia, come to be proto-freelancing a Southern Ry. branch? The answer is three-fold. While I've always had an interest in coal railroading going back to my teenage years in the hobby, Tony Koester's Coal Fork Extension series in *Model Railroader*



③ Birmingham Steel No. 2 tipple has finished loading hoppers of high-quality bituminous coal and awaits the arrival of the Southern's Slate Fork Mine Run.

One man's island

Island-style layouts get a bit of a bad rap, and with good reason: They eat floor space. Conventional wisdom points us to the advantages of around-the-wall designs as the better use of the limited space most of us have. I'd built shelf-style layouts before and understood the pros and cons. My inclination this time was toward something lightweight that could be easily moved by two adults and fit into a typical spare room with little fuss. The island-style layout seemed the best option for my new venture.

Atop my four inviolable design and planning criteria was this: The track plan must allow for trains to enter and exit the layout via staging and accommodate future expansion. The other criteria were an interchange with another railroad; a layout height of 62 inches; and point-to-point operation. Although a loop eventually figured into the final track plan (I do like to occasionally sit back and let 'em roll), I would design the scenery to make the loop less apparent.

Several influences determined the final track plan, but the most important was my discovery of the Southern's (former Interstate's) Dorchester Branch, located about 2 miles west of Norton, Va. Along with a substantial coal tipple and bank of coke ovens at Dorchester, the branch also once served smaller tipples that loaded cars spotted on the main



④ The caboose of the Southern's daily Slate Fork Mine Run rolls past the truck dump coal tipple at Flanary, Va.

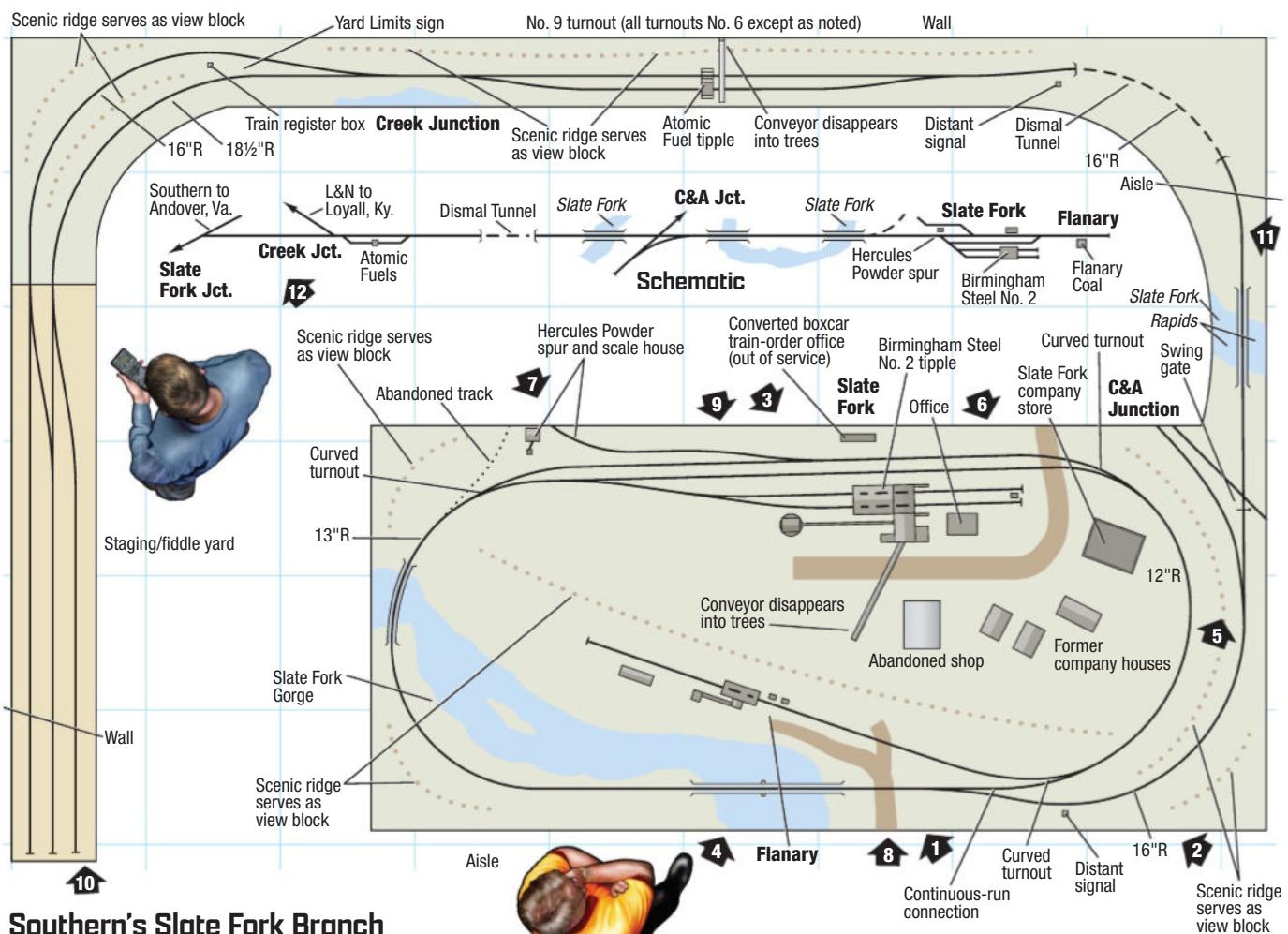
magazine in 1998 fanned those glowing embers into a small flame.

Not many years later, while I was an associate editor at MR, I encountered the Appalachian Railroad Modeling website (appalachianrailroadmodeling.com), which added more kindling. Then came the September 2003 issue of *CTC Board*, which featured Ron Flanary's article "Requiem for a Coal Hauler." In pictures and words, Ron opened up for me a previously unknown world of the Southern Ry.'s Appalachia Division coal operations in southwest Virginia. Now I had my prototype, era, and location — and a burning passion.

By 2013, I was working as a signal electronic technician for BNSF Ry. and considering the prospect of a house

move. Although I hadn't lost sight of modeling the Southern in Virginia, I had scratched one more persistent itch by building a 1950s-era British Rys. 4mm (1:76) layout in a medium-sized spare room. "Ettinsmoor" existed as a shelf-style shadowbox design, was great fun, and taught me many valuable model railroading skills and lessons.

Among the most important of those lessons was this: Building scenicked, operational model railroads, only to take them down when it came time to relocate, had become tiresome and expensive. I wanted a solution to get me back into N scale, be reasonably easy to move once or twice and, most importantly, let me model the Southern Ry. in Appalachian coal country.



Southern's Slate Fork Branch

N scale (1:160)

Room size: 6'-1½" x 9'-4"

Scale of plan: ¾" = 1'-0", 12" grid

Numbered arrows indicate photo locations, Illustration by Kellie Jaeger

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



5 Trains heading toward C&A Junction from either Slate Fork or Creek Junction, per rule, stop at the latter and swing the gate across the C&A. The crew presses a red button on the fascia, which starts the "honesty timer." He then walks counterclockwise around the railroad to the other side of C&A Junction. Once there, he watches for a red LED on the fascia to light up, indicating five minutes (actually, 40 seconds) have elapsed per rule and the train can proceed. It's all done with an Arduino Uno, an LED, and two momentary-contact push buttons.

The layout at a glance

Name: Southern Railway's Slate Fork Branch

Scale: N (1:160)

Size: 5'-10" x 9'-4"

Prototype: Southern Ry. and Louisville & Nashville RR

Locale: western Virginia

Era: March 1978

Style: island/walk-in

Mainline run: 23 feet

Minimum radius: 12"

Minimum turnout: No. 6

Maximum grade: none

Train length: 8-12 cars

Benchwork: hollow-core doors capped with extruded-foam insulation board

Height: 62"

Roadbed: cork

Track: code 55

Scenery: extruded-foam insulation board and Sculptamold

Backdrop: painted hardboard

Control: Digitrax infrared Digital Command Control



track. And at its south end, after crossing its own main line, the Dorchester Branch had an important interchange with the L&N's eastern-most reach into Virginia. While I didn't entirely copy the Dorchester Branch (although it would make for a terrific small model railroad), its influences can be seen at Flanary and Slate Fork, and in the presence of C&A Junction on the original layout.

I felt more online traffic than coal was needed, however. I considered the always useful team track, but opted instead for an ammonium nitrate covered hopper-to-truck transloader at the end of a spur parallel to the main track. Although a fertilizer, ammonium nitrate is also an oxidizer that, when combined with diesel fuel and detonated, makes for one heck of an explosion, and it became popular for exposing Appalachian coal seams. So, I added a spur at Slate Fork, where I placed a nicely kitbashed, but very fragile, loader.

As it turned out, this was the only part of the layout's design that gave me any real cause for head-scratching. While the loader was appropriate for both era and locale, it was rather tall, and its fragility and location at the layout's edge made for tense moments when uncoupling cars.

Over the years, I toyed with various other ideas, such as keeping the spur as-is and replacing the loader with a

pulpwood yard or even a truck-dump tipple. None seemed the answer.

The solution dawned on me, finally, in late 2024: I removed the loader and kept the spur, albeit with a minor bend off the edge of the layout so it would appear to be one leg of an old wye. Train crews spot loaded covered hopper cars on the spur, where later a heavy truck would chain up and tow them to an off-scene unloader, then re-spot the empty car. A scale house for weighing delivery trucks and a sign tell the story of what this industry does.

Nuts and bolts — and a door

I'm a proponent of adapting hollow-core doors (HCDs) for model railroad use. In addition to being dimensionally stable, HCDs are strong, light weight, and come in a range of useful widths from 8" up to 36". Capped with extruded-foam insulation board, in my experience the combination makes an excellent foundation for what's on top.

In early 2013, I purchased a good-quality 36" x 80" HCD, a sheet of 1½" extruded foam board, and a pair of folding table legs, and set to work building what is today the centerpiece of my model railroad. I'd been happily using Micro Engineering code 55 N scale flex-track and turnouts laid on cork roadbed since 1996, and apart from a few Atlas curved turnouts, that's what I again

6 Every important Appalachian coal town had a company store and houses, and Slate Fork, Va., is no exception. The company store is a slightly kitbashed Design Preservation Models kit on a styrene base; the company houses are laser-cut kits from Blair Line and Micro-Mark.

selected. I later built an L-girder style platform onto which the HCD is simply secured or removed if needed, with casters to easily facilitate positioning the platform in a spare room.

The Slate Fork runs on Digital Command Control (DCC), but with a twist: I opted to use Digitrax's built-in infrared function with my older UT-4 throttles, really as more of an experiment than anything else. So far, I'm content with that decision, just as I am with selecting Tam Valley's Frog Juicers for trouble-free polarity control through turnouts. Points are moved with a flick of my finger or the end of an uncoupling tool. Feeder wires are soldered to every length of rail; I learned as a youth that rail joiners do not reliably carry current (ditto for angle bars on the prototype)! All curved track on the layout employs spiral easements, which were created by offsetting the tangent track from the curved arc by about 5/16".

Scenery design requirements included view blocks to separate scenes and make the layout seem larger. This is a key

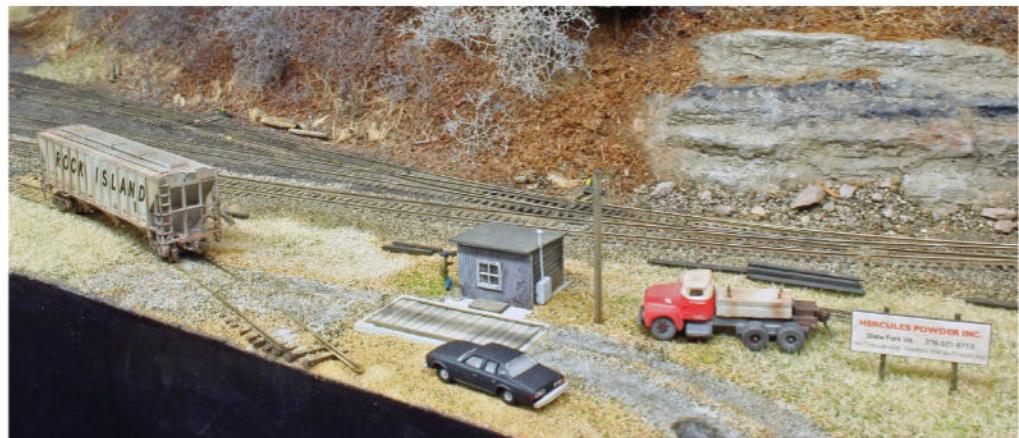
Learning Points

- Did you even notice this railroad is N scale?
- By modeling a branch of a major railroad rather than its main line, a lot of railroad action can be replicated in a relatively modest amount of space.
- Trackage rights will allow modeling the motive power (and cabooses for earlier eras) of two railroads instead of just one.
- Modeling the seasons when the leaves have fallen has become increasingly popular.
- Most of the popular coal-related structure kits available in HO are also available in N.
- There's no denying N scale facilitates a lot more railroad in a given area and more distance between focal points.

design tip I learned from Dave Frary and Bob Hayden, who aptly proved the technique on their respective Carrabassett & Dead River HO n 2 $\frac{1}{2}$ layouts. The result of that lesson is four distinct, isolated viewpoints on the Slate Fork, separated by either trees, hills, or both: C&A Junction; Flanary; looking east up though Slate Fork Gorge; and the town of Slate Fork with the Birmingham Steel No. 2 tipple. The layout's height, combined with tree-covered hills above eye level, underscores the sense of isolation and distance, making 20 square feet of model railroad seem much more imposing.

From almost day one in building the Slate Fork, I knew late winter would be the season I'd model, inspired by what I'd seen on Mike Confalone's Allagash Ry. I like how the stark trees impart a mood, while also allowing the trains to stand out against the landscape. Stacks of carved extruded foam board comprise the Appalachians, with carved Sculptamold and rubber castings, dry-brushed with acrylics, forming the rockwork. Ground up maple leaves, sifted dirt, a pinch of blended ground foam, tan and light-green static grass, and twine weeds complete the basic ground cover, while several hundred bare seafoam trees spray-painted dark brown and gray cover the hillsides, augmented with occasional evergreens. Ballast is cleaned and sifted beach sand, and the backdrop is hand-painted hardboard with coved corners.

Waterways are painted Sculptamold beds lined with real rock, which is



7 A spur and scale house represent Hercules Powder Inc., which supplies ammonium nitrate to mines in the area. The loader, which transfers the explosive fertilizer to trucks, is located off scene.



8 At the very end of the Slate Fork Branch, Louisville & Nashville Geep 508 pulls loads from the truck-dump tipple at Flanary, Va. Typically, a road-weary L&N RS3 works this job.

drybrushed with acrylics to match the limestone outcroppings on the hillsides. A greenish-brown-tinted gloss medium applied afterward in several coats captures the look of Appalachian creeks and streams, which seldom, if ever run, clear.

The Slate Fork's motive power is exclusively Atlas. I may have cornered market in 2012–13 while acquiring high-short-hood Southern GP38s and GP38-2s, and these units are consisted correctly with the long hoods facing forward. Rolling stock is a mix of Atlas, Bluford Shops, and Micro-Trains, all with metal wheels, with an eclectic blend of reliable couplers — Accumate, McHenry, and Magne-Matic (Micro-Trains). I'm eagerly awaiting the production of the N-Possible coupler, however.

Planning pays off

For several years, a staging yard clamped on at C&A Junction represented the Slate Fork Branch's

connection to the rest of the North American rail network. That arrangement changed after late 2018, following a move back to my hometown of Sequim, Wash. The first thing my son and I hauled upstairs into my condominium — and with no damage, by the way — was the fully-scenicked Slate Fork, which we set up in a 9 x 12-foot third bedroom.

Expansion could now occur by wrapping the main track around the bedroom walls counter-clockwise from C&A Junction to a new staging yard — just about as I had envisaged when designing the layout nearly six years earlier. As the cigar-chomping Hannibal Smith oft said on the TV series *The A-Team*, "I love it when a plan comes together."

By summer 2020, after I installed a grid of suspended 5000K fluorescent lights in the layout room and set up my workbench and storage, enlarging the Slate Fork was underway. The benchwork is a combination of repurposed bi-fold



9 Southern's Slate Fork Mine Run spots empties at the Birmingham Steel No. 2 tipple. High-short-hood diesels running long hood forward is the norm when one spends time watching trains in central Appalachia.

HCDs ripped to width, mounted atop shelf brackets, and capped with extruded-foam insulation board. I coupled it to the main portion of the layout with a short stretch of open-grid bench-work where Slate Fork flows between C&A Junction and Dismal Tunnel. A short, double-ended siding at Creek Junction, Va., accommodates a small, newer run-of-mine tipple, built during the coal boom of the 1970s on the site of the former Slate Fork Ry.'s interchange with the L&N.

Moving timetable west is the junction where the L&N enters and exits the Slate Fork Branch, before both the Southern and the "Old Reliable" disappear behind view blocks into a two-track staging/fiddle yard.

I'd originally intended a solo Southern mine run to work the entire Slate Fork Branch. The original two-track staging/fiddle yard, although not in keeping with Koester's sagacious formula of " $2n + 1 = N$ " (where " n " represents the number of staging tracks you think you will require, and N is the number you will actually need), was sufficient for this scheme. When I added the extension, I stuck with two staging tracks rather than adding a third, as aisle width won out as a priority.

In 2023, I decided that adding the L&N as an active component would greatly expand operations and underscore the layout's backstory. As I'd not yet started scenery at the far end of the extension, implementing this idea

required only a handlaid No. 9 junction turnout, some minor track redesign, and acquiring some L&N motive power. The benefit is a second job, the L&N Switcher. The drawback: I had inadvertently run further afoul of the $2n + 1$ formula. A three-track yard will likely be in service as you are reading this.

While the extension has been operable for several years, scenery work is still ongoing, mostly adding a couple hundred more trees. But perhaps the two most important scenic details, among the smallest on the entire layout, are already in place: a small red box on a post and a Southern Ry. sign near it declaring "Yard Limit."

Slowing down trains

Besides providing for future expansion and scenic view blocks, another tenet just as important to small-layout planning is that of expanding apparent distance through adding time. Simply put, slowing down a train makes a small layout seem larger. Applying this idea requires plausibility, though. Tony Koester described several ideas for realistically slowing down trains in the October 2024 issue of *The Dispatcher's Office*, the quarterly publication of OpSIG (www.opsig.org).

On the Slate Fork, this involves that small box on a post and the yard limit sign. Located at Creek Junction is a train register box painted red and mounted atop a section of pipe (see December 1979 *Railroad Model Craftsman*). All



10 Paul employs a two-track staging/fiddle yard on a sector plate. Staging is an important component of realistic operations, even for a small layout. Aisle considerations compelled him to violate, regrettably, Koester's First Law of Staging formula: $2n + 1 = N$.

trains entering or exiting the joint Southern/L&N trackage are required to stop and drop a register card in the box indicating time of arrival (or departure), as well as the number of empties and loads. Not only does the register box offer a simple, realistic "train task" but operators must also be prepared to stop their train rather than roll out of staging at maximum authorized speed.

As a belt-and-suspenders concession to safety, the Southern imposed yard limit rules on the joint trackage

Meet Paul Schmidt

Paul Schmidt retired from BNSF Ry. in 2025. He and his wife, Laurie, live in Sequim, Wash. Paul is the co-founder of the Realistic Model Railroading forum and senior editor of the Southern Railway Historical Association's quarterly magazine *TIES*. His other interests include logging railroads, crossword puzzles, naval history, camping, hiking, and the National Hockey League.

timetable east of the Creek Junction. This removes the requirement for trains to provide flag protection when stopped; allows multiple trains to occupy the main track without the need for additional, detailed train orders; and forces train crews to operate prepared to stop within half the range of vision.

I'd planned another means to slow down trains at C&A Junction, where I laid the layout's first track in 2013. In the layout's back story, the C&A was a logging railroad, but it attained common carrier status just before the Slate Fork Ry.'s surveyors drove in stakes. Thus, the little C&A is the senior railroad, and the Southern inherited a legal arrangement to not only maintain a swing gate (with a pair of fixed-distant signals on either side), but also by rule Slate Fork Branch trains must stop, line the gate across the C&A, then wait five minutes before continuing through the grade crossing. Once the train is clear, the gate must be restored across the Slate Fork Branch.

I scratchbuilt the swing gate from brass strip and tubing, then added a red surface-mount light-emitting diode (LED) for visual interest. The "STOP" signs are brass sheet, painted red and lettered with decals. Modeling friend Michael Whiteman built both fixed-aspect single-aspect (SA) distant signals on either side of the swing gate from kits and also installed the yellow LEDs.

Taken together, the register box and swing gate mean a train has consumed several minutes to move some 15 or so feet before continuing to Slate Fork. Yard limit rules keep speeds down, with 12 scale miles an hour looking just right!

Augmenting operating ambience

The Slate Fork Branch technically operates under timetable-and-train-order rules. The crew of the Southern's inbound Slate Fork Mine Run departs Andover, Va. (staging) as an extra east



11 Part of the Slate Fork Branch's right-of-way comprises a narrow shelf built from foam-covered hollow-core doors mounted on shelf brackets. The brackets are attached to 1 x 2s that also support the hardboard backdrop.



12 Scenery work is still in progress on this portion of the layout. Paul carves landforms from stacked layers of extruded foam. Rockwork is hand-carved Sculptamold and rubber castings, drybrushed with acrylic paints.

with a clearance card and a train order granting the crew authority to work between Slate Fork Junction (also off scene), where the branch line leaves the Appalachia Division main, and Flanary. The dispatcher has also issued a train order instructing the eastbound mine run to meet, in effect, itself but as an extra west at Slate Fork for the outbound trip. The same scenario applies to the L&N Switcher, which runs thrice-weekly as an extra from Loyall, Ky., and return.

A train crew on the Slate Fork receives a clearance card, two flimsies, two blank train register cards, and a single folded sheet of letter-sized paper on which is printed a brief timetable, a few System Special Instructions, a short switch list, and a schematic of the layout. It all fits easily on a small clipboard. But apart from the register cards, SSIs, and switch lists, which are part of the

operating scheme, the rest of the paperwork is intended solely to help immerse the operator into Slate Fork Branch's era. There's nothing onerous here, just true-to-life examples of the forms the real Southern and L&N would have used. To me, this matters as much as accurate paint schemes and wayside signage.

Goals realized

The Southern's Slate Fork Branch has exceeded my expectations in every way. I never anticipated that one of the smallest models railroads I've ever built would have become the most enjoyable, but it has. I credit its portable island design and the development of a plan for expansion to its longevity. As I enter retirement following an 18-year career in the railroad industry, I'll happily be keeping the Southern's green light shining in the Appalachian hollers! **MRP**

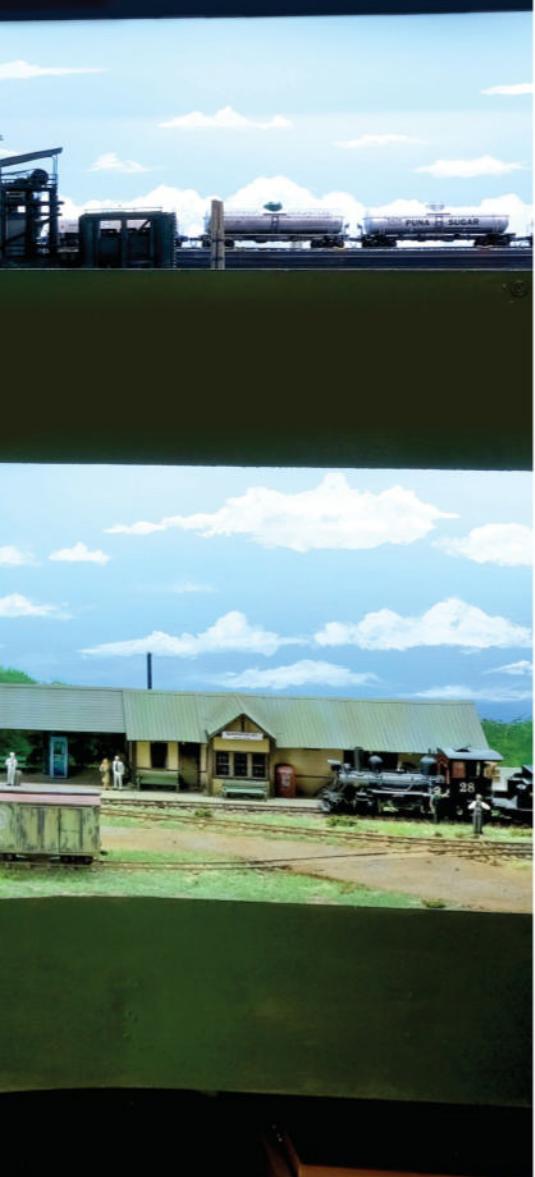


1 Joseph Kreiss has doubled his railroading fun by squeezing two shelf layouts with different scales and themes into a spare bedroom. The top deck is his modern-day Hawaiian-themed HO Kawaihae Harbor District RR layout. Directly below is his On30 1950s-era Mosquito Creek Lumber Co. cypress-swamp logging outfit.

Two scales, two decks, twice the fun

And your choice of
standing or sitting

By Joseph Kreiss//
Photos by the author



Although I didn't sit down at the drawing table and specifically plan it this way, I have set myself up for plenty of model railroading fun as I age. I managed to squeeze not one but two small layouts into a typical 10 x 12-foot spare bedroom of our new home. Both railroads incorporate remnants of past layouts, reimagined to fill the new smaller room after a recent move.

The shelf layouts were rebuilt to be stacked. I decided to place the On30 Mosquito Creek Lumber Co., a narrow gauge Louisiana-swamp logging railroad, on the lower deck, and my contemporary HO scale Hawaiian railroad, the Big Island Rail/Kawaihae Harbor RR, on the upper deck. As I reflect on this choice, I'm beginning to see the benefits of this decision. As I approach my 70s, I'm noticing my eyesight starting to wane a bit, my finger dexterity is less than optimal, and I need to sit down and



② The open-cab *Rourgarou* – a legendary swamp creature in South Louisiana Cajun folklore – shoves a supply boxcar towards the cookhouse spur in Mosquito Camp. Joseph scratchbuilt the imagineered On30 gasoline-powered critter and mounted on a Bachmann HO side-rod diesel-switcher chassis.

rest my legs and knees more often while in the train room.

The On30 layout track height of about 40" above the floor was planned so I could work on and operate the swamp logger while sitting in a rolling, adjustable-height stool. I have just enough aisle width between sections of the layout to scoot myself about. The layout depth is narrow enough that I'm able to easily reach in to line a switch or adjust a detail.

The larger size of the On30 narrow gauge cars and locomotives makes them a lot easier to handle and to appreciate the details, yet small enough to fit a good-size layout into a smaller space. This is something to consider when planning a new layout in your senior years. As I recall childhood visits to a local model railroad club with a layout featuring three scales — HO, S, and O — I now understand why the pipe-smoking “old timers” were the ones running O scale trains!

Track height on my upper-deck Big Island Rail/Kawaihae Harbor RR is 64" above the floor, and the benchwork depth is around 24" at its widest. Even with my 6'-3" stance, the trains are just below eye-level. I still have the need to occasionally use a folding stepladder to gain easier access when lining switches, doing scenery work, or cleaning track.

Both layouts end up being about the same for me when it comes to viewing level. Whether I'm sitting in the roller stool trackside at the lower On30 layout or standing and running trains on the upper HO layout, I'm slightly above the layout, which helps give a more prototypical view of the trains.

Unique concepts

Both the HO and On30 layouts have unique personalities and locales.

Although my HO Big Island Rail and Kawaihae Harbor RR don't exist in real-world Hawaii, my layout concept is based on the actual railroad that was once located on the Big Island of Hawaii. The standard gauge Hawaii Consolidated Ry. was a common carrier that operated out of Hilo on the east side of the island from 1899 until 1946, when a tsunami destroyed part of the line and ultimately put the railroad out of business. Remnants of the old right-of-way can be found if you know where to look.

I imagine my Big Island Rail (BIRR) as a successor of that original line that continued to prosper and expand throughout the Big Island. The Kawaihae Harbor RR is also a fictional line that serves the intermodal operations at Kawaihae Harbor north of Kona. Although the actual harbor was never served by a railroad, my modeled version gets interchange cars from the BIRR and rail traffic via car barge to and from neighboring islands. I've based most of my railroads' customers on actual businesses and industries that exist today within the port, such as Hawaii Cement and Young Brothers inter-island barge service.

My post-WWII On30 Mosquito Creek Lumber Co. and the affiliated Blackwater, Gulf & Southern Ry. are fictional southern Louisiana rail lines. My plan was to design a swamp-logger that combined the look, feel, and operations of a number of prototype railroads in the Deep South, such as the Argent Lumber Co. and the Red River & Gulf.

I wanted to create a certain mood for the layout. The swamps of the Deep South invariably conjure up certain images in a person's mind. My goal was to bring those mental images of steamy bayous, green backwater, and Spanish moss-draped cypress forests to life.



Joseph created a full-size template and laid it out onto the floor to make sure the layout plan would actually fit in the 10 x 12-foot spare bedroom. The room also had to be home for two work desks under the benchwork.



The benchwork for the stacked two-deck layout was designed to be completely self-standing. In this early construction photo, Joseph has built the support legs from 2 x 4s and the benchwork framing from 1 x 4 pine boards. The upper deck is supported by heavy-duty shelf brackets. A section of his previous On30 layout is already in place.

Developing a believable backstory and operating scenario for my On30 swamp logger has been a lot of fun. Logging the mighty cypress is hard work, so the scenery, equipment, and operations needed to reflect this. The light trackage winds through backwater groves of cypress and pine, crossing low trestles that span steamy, alligator-infested swamps.

Both layouts are still being finished. Trackwork on the On30 layout still needs to be laid in the log-landing section, with scenery to follow. Track is all in place on the HO layout, except for the hidden single-track staging behind the

backdrop. Scenery work and structure building are progressing.

Benchwork construction

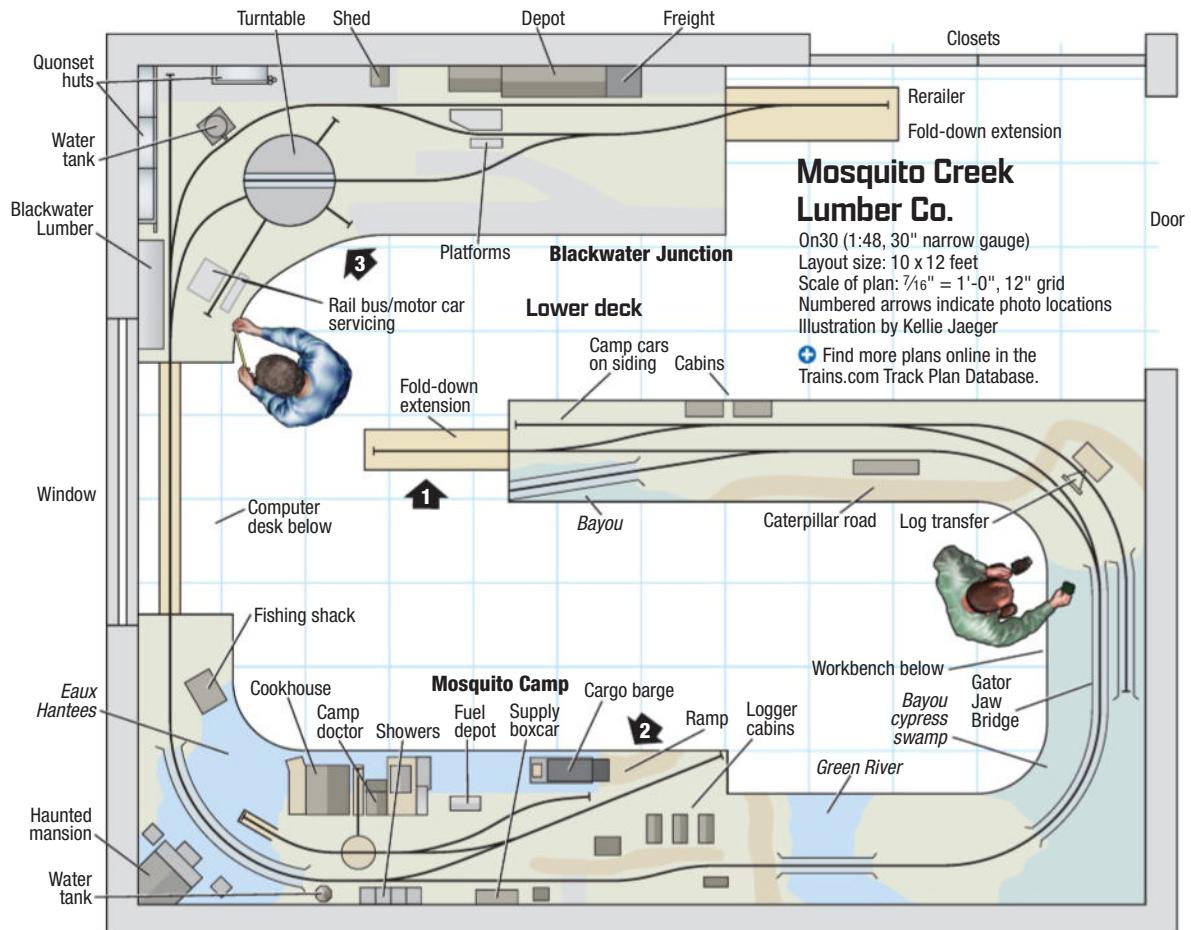
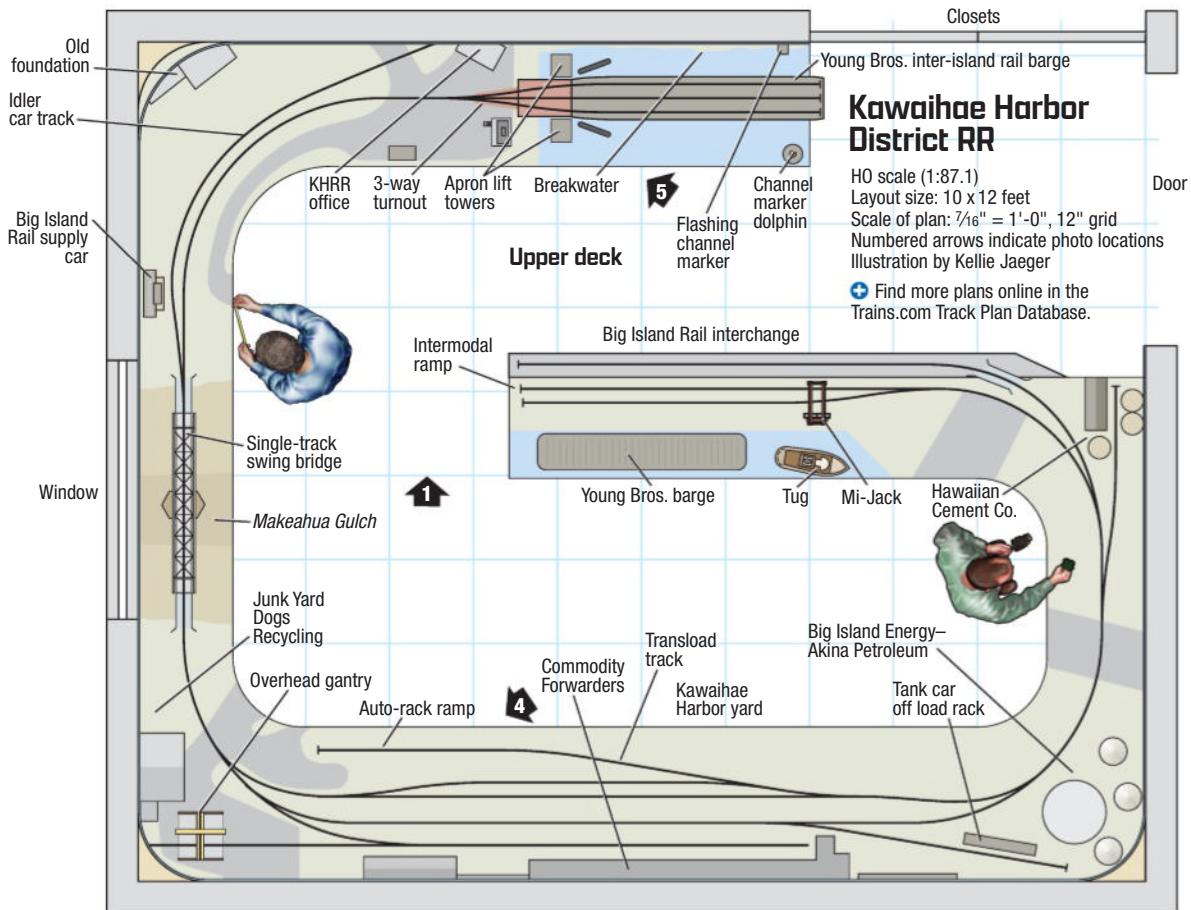
Benchwork for both model railroads was constructed using 1 x 4 clear pine for the framework and cross supports. The On30 layout subroadbed is 2"-thick extruded-foam insulation board attached to the framework with foam-safe construction adhesive [Solvent-based adhesives may etch or burn the foam insulation board. — Ed.] The upper-deck Hawaiian layout uses the same construction techniques, with the exception of adding 1/2" acoustic ceiling

The layout at a glance

Name: Kawaihae Harbor District RR
Scale: HO (1:87.1)
Size: 10 x 12 feet
Prototype: freelanced
Locale: Big Island of Hawaii
Era: present day
Style: walk-in
Mainline run: 32 feet
Minimum radius: 22"
Minimum turnout: No. 6
Maximum grade: none
Train length: 3 to 4 feet
Benchwork: clear pine 1 x 4 grid
2 x 4 support legs
Height: 64"
Roadbed: acoustic 1/2" ceiling tile on 2"-thick extruded-foam insulation board
Track: code 83
Scenery: lightweight spackle, Sculptamold over masking tape webbing, sifted dirt, assorted colors of tile grout, static grass, and ground foam
Backdrop: painted 1/8" tempered hardboard with photos
Control: MRC Prodigy Express Digital Command Control

The layout at a glance

Name: Mosquito Creek Lumber Co.
Scale: On30 (1:48, 30" narrow gauge)
Size: 10 x 12 feet
Prototype: freelanced
Locale: southern Louisiana
Era: early 1950s
Style: walk-in
Mainline run: 33 feet
Minimum radius: 20"
Minimum turnout: No. 6
Maximum grade: none
Train length: 2 to 3 feet
Benchwork: 1 x 4 clear pine grid, 2 x 4 support legs
Height: 40"
Roadbed: 2"-thick extruded-foam insulation board
Track: code 83
Scenery: lightweight spackle and Sculptamold, sifted dirt, assorted colors of tile grout, static grass, and ground foam
Backdrop: painted 1/8" tempered hardboard with photos
Control: MRC Prodigy Express Digital Command Control





3 Mosquito Creek Lumber Co. Climax No. 4 takes on water and gets oiled around by her crew at the small locomotive service facility at Blackwater Junction. The beautifully detailed steam locomotive is a Bachmann On30 offering from several years ago. The On30 turntable is from Peco.

tile sections on top of the extruded-foam insulation board for the roadbed.

The two layouts are independent of each other and are suspended on custom-built, self-standing 2 x 4 mounting supports that circle the walls of the layout room. To hold up the upper-deck HO benchwork sections in place, I attached heavy-duty metal shelf brackets to the vertical 2 x 4 support pillars. The lower-deck On30 benchwork rests directly on the rectangular 2 x 4 base structures. Except for two screws, the stacked layouts are self-standing — not attached to the room walls.

Track for the swamp logger is a combination of On30 and HO code 83 commercial flextrack. I do have several sections, mostly on spur tracks, where I handlaid code 83 rail spiked to individual wooden ties. The majority of the turnouts are On30 code 83 from Micro Engineering. There are two converted HO turnouts in the mix as well. The track is adhered directly onto the extruded-foam insulation board.

Track for the HO layout is commercial HO code 83 flextrack and turnouts from Micro Engineering, Peco, and Walthers. I sealed the ceiling tiles with several coats of water-based polyurethane and adhered the track to the ceiling-tile material.

Scenic variety

The layouts are flat without any gain in elevation, so my scenery base for both

layouts is a lightweight spackle to fill cracks and joints and add slight variations in the otherwise flat terrain. When filling larger holes or gaps around the roadbed areas, I used a masking-tape web covered with Sculptamold, a papier-mâché-like material.

The scenery was painted with earth-tone acrylic paints and finished with a variety of sifted dirt, tile grout, real rocks (landscaping lava rock for the Hawaiian pike), and various colors and lengths of static grass. Trees were handmade using wire armatures covered with artist's texture paste and topped with static grass and leaves. I made the palm trees using wrapped wire trunks topped with sections of miniature plastic ferns.

Meet Joseph Kreiss

Joseph Kreiss has been involved with model railroading since boyhood. The San Francisco Bay Area native is a recently retired photo-journalist, radio broadcaster, and professional chef. His modeling has been featured in *Model Railroader*, *FineScale Modeler*, *Railroad Model Craftsman*, *O Scale Railroading*, and the *On30 Annual*. He and his Minnesotan wife, Kim, now live near her hometown. They enjoy traveling the U.S. in their camper van along with their two senior dogs.

Structures on the layouts are scratch-built or heavily modified kits. Low swampy areas and the harbor water were made from sealed 1/8" tempered hardboard, painted and textured to look like water. Backdrops are painted on 1/8" hardboard. I used a combination of hand-painted clouds and trees mixed with actual photographs sized and printed using my home computer. The printed images were carefully cut out and adhered to the backdrop using clear acrylic medium.

Locomotives and rolling stock

The small roster of locomotives and rolling stock for the HO layout is a combination of ready-to-run and kit offerings amassed over the years. Most of the On30 cars were kitbashed or scratch-built, including log cars, specialized fuel and oil cars, and equipment flatcars. I've built several small gas- or diesel-powered logging locomotives using a HO power chassis as their base.

Custom decals were designed and printed for my one-of-a-kind road names. Several of my HO diesel locomotives and two On30 steam engines are DCC sound-equipped with more to be upgraded as finances and time allow.

Running trains

I use an older MRC Prodigy Express handheld wireless Digital Command Control (DCC) control system for both layouts. Since I'm the only one who

Learning Points

- Planning accommodations tailored for our later years of model railroading is a smart move to sustain involvement in the hobby.
- Transitioning to a larger modeling scale as we age can reduce the frustrations of weaker eyesight; less nimble hands and fingers; and complaining knees, legs, and backs.
- Lowering a layout's height allows access for modeling and operating trains from a sitting position, relieving body strain.
- Combining two layouts of different themes and scales adds variety to our model railroading enjoyment.

operates the layouts, I have both of them wired to the same DCC power supply and run trains with the single wireless throttle. The two layouts are wired independently from one another, and each layout can have its power turned off using simple toggle switches.

For the HO layout, much of the rail traffic involves intermodal shipments. A Big Island Rail train crew brings daily interchange cars from Hilo (via hidden staging track) west to the Kawaihae Harbor Yard. These cars are destined for harbor industries and the inter-island rail barge slip. There are seven active industries in the harbor complex worked by the Kawaihae Harbor RR. Using idler flatcars to reach on to the barge slip, Harbor crews also pull inbound cars from arriving barges and load outbound cars onto rail barges headed for neighboring island ports.

Vehicles shipped to Hilo on the Big Island, such as new rental cars or personal and work vehicles, will arrive in Kawaihae Harbor Young Brothers port facility on shortened auto-racks for loading and unloading.

Logging operations on the On30 layout are just as busy. Cypress logs arrive at the deep swamp log landing by Caterpillar tractor-pulled log carts. The logs are transferred from the landing cold deck to flatcars. Log trains destined for the mill head through the swamps and arrive at the small Blackwater Junction yard. Loads are exchanged for empties and the train heads back into the swamp.

Limited passenger service is planned from Blackwater Junction to the logging camps in the swamps. This rag-tag



4 Power on today's Big Island Rail Hilo to Kawaihae transfer job (HKTJ West) comprises a Big Island Rail MP15AC and a relic GP9. The BIRR crew will soon run around their train as Kawaihae Harbor No. 50 shoves a pair of empty gondolas into the Junk Yard Dogs Recycling complex.



5 Kawaihae Harbor's SW1500 No. 50 pulls the morning inbound rail-barge cars using an old flatcar as a "reacher" car to keep the heavy locomotive off the barge slip. The flatcar is weighted down with a pair of Jersey barriers as ballast to improve tracking during heavy pulls off the barge.

varnish will feature a gas-powered railbus (a Bachmann On30 offering from years ago), crew speeders, or a hand-me-down Colorado narrow gauge passenger coach tagged on the rear of a log train.

Shipments of refrigerated food and supplies for Mosquito Camp must be handled by rail crews as well. Fuel, oil, potable water, heavy bridge timbers, and equipment are also shipped by rail into the swamp.

The great thing about having two vastly different layout concepts and scales together in one room is that I have a choice as to which railroad to work on and operate depending on my mood, interest, or physical stamina that day.

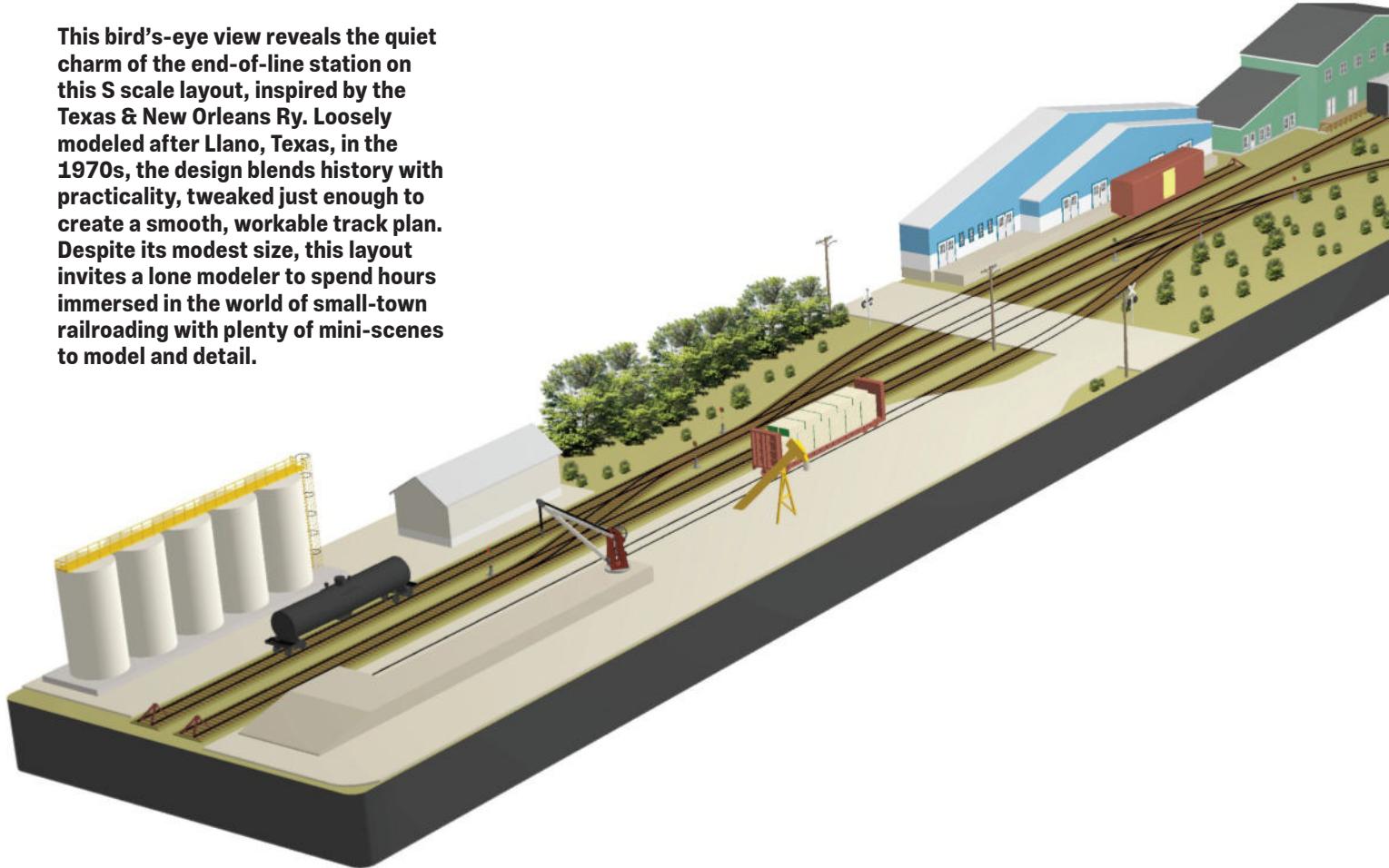
I enjoy them both, so it's never really a hard decision!

Stay up to date

Want to learn more about my modeling efforts? You can follow each layout's progress on social media, including Facebook: facebook.com/mosquitocreeklumberco and facebook.com/bigislandrailcorp

Each layout also has its own YouTube channel. Just search for Big Island Rail Corp & Kawaihae Harbor Railroad at <https://www.youtube.com/@bigislandrailcorp7278>, or Mosquito Creek Lumber Co. at www.youtube.com/@mosquitocreeklumberco.7983 MRP

This bird's-eye view reveals the quiet charm of the end-of-line station on this S scale layout, inspired by the Texas & New Orleans Ry. Loosely modeled after Llano, Texas, in the 1970s, the design blends history with practicality, tweaked just enough to create a smooth, workable track plan. Despite its modest size, this layout invites a lone modeler to spend hours immersed in the world of small-town railroading with plenty of mini-scenes to model and detail.



The curse of too much space

Concepts of a “dream layout” have changed

By Robert Chant//3-D illustrations by the author

When I first started designing layouts back in the 1990s, I had thoughts of the dream layout I would someday build. It was never drawn on paper, but it occupied my mind for a long time, and that monster inside me kept growing and growing and growing and consumed my daily thoughts more and more.

In my mind, I could see it all: a huge beast that filled every inch of a large basement, and of course one deck wasn't enough. The main line would snake from near the floor almost to the ceiling, because we all knew that bigger was so

much better back then. And it didn't matter that I was living in a small, one-bedroom apartment at the time. Someday that model railroad was going to happen, and it was going to be just as real as the impression my backside left on that armchair.

That was 25 long years ago, and since that time I've changed, and so have my thoughts on what a “dream layout” should be. Since then, I've also designed a lot of layouts, but they weren't all good designs, and definitely not all creative ones. In fact, as I now go back through

some of my old files, I find many that just make me cringe, and the delete button quickly becomes my best friend to hide the evidence of my dreadful past creations.

When I look at it now, I actually see having too much space as a curse, because the need to be creative has been diminished. You don't have to be as focused on what you truly want from your layout, and you can easily get bogged down in the design process because you have too many choices in front of you. Sometimes when your



choices are limited, the path forward is much easier to find.

If you venture onto my blog (www.jomrd.com), you will see a lot of ideas for small spaces, and you will also see some ideas for larger layouts as well. One trend I've noticed over the years is that my larger designs for clients rarely get built to completion. Some do get started, but the projects usually get abandoned or go dormant within the first year or so. On the other hand, a large number of my smaller shelf designs have been built to conclusion in a number of variations.

I'm always much more impressed with the smaller shelf designs I've created, and those designs that make creative use of their footprints. So, just like our lives are shifting to accommodate the pressures and demands of the real world, maybe it's time to shift our views of what our "dream layout" should be. Instead of a monster that wants to feed on every spare minute we have left after those everyday pressures and demands, maybe it's time to consider a much tamer version that offers everything we need in a much smaller space.

For the last few years, I've been active in a few Facebook groups dedicated to the design of model railroads. These online forums are a great place to get advice and feedback when designing your next layout project, and the interactive discussions often get quite lively and spirited when discussing the future of layout design. (If you are in the process of designing a layout, I highly recommend publishing your concept drawings to one of these groups, and ask for some comments. You'll be glad you did.)

After participating in many of those online debates, I'm now firmly set in the minimalist approach to layout design, and I hope that trend continues to gain traction, since I think that's the future of our hobby. I also have quite a fondness for layouts that are based on actual prototype locations that are worked as closely as possible to how the prototype would be operated.

An S scale prototype-based plan

Keeping all that in mind, I would like to present a simple layout that I designed a few years ago. A client wanted to build a U-shaped layout to fit in a small room in his basement. Originally, he wanted to



The layout was designed to be built in two phases and this rendering highlights the online industries placed on the shelf along the north wall during the first L-shaped phase. Thanks to detailed Sanborn maps of 1921, the scene comes alive with a few of the industries along Grayson Street that were once served by the railway: an oil depot, a wholesale grocery, a produce company, and a team track.

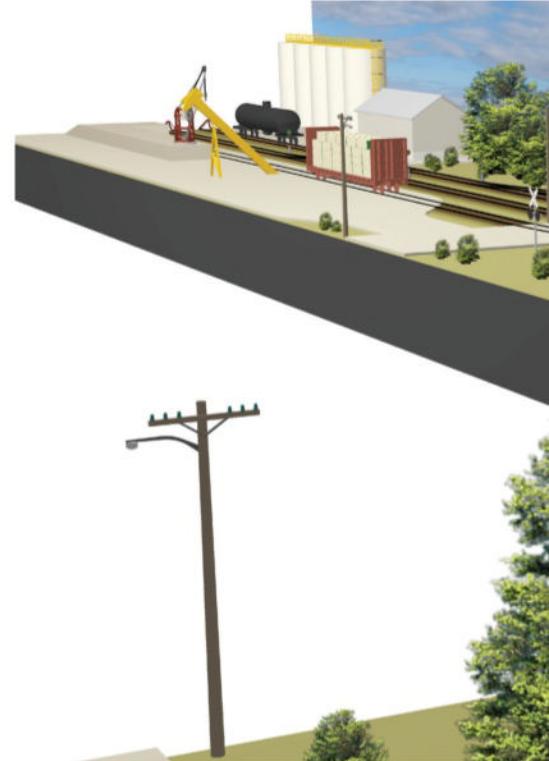
use Proto:48 (O fine scale) but decided to change to S scale (1:64, $\frac{3}{16}$ " to the foot, about halfway between HO and O) before the design work was completed. The room was small at just over 114 square feet, so I knew we were going to have to be very selective when choosing a premise and deciding what to place on 18"-wide shelves.

After a brief discussion about his given and druthers, I discovered that my client wanted to depict a location somewhere on Southern Pacific subsidiary Texas & New Orleans Ry. Since he was familiar with the area, he decided to build a layout based very loosely on Llano, Texas, in the 1970s. Once the location was determined, I downloaded some era-specific topographical maps of Llano using TopoView on the U.S. Geological Survey's website. It was a

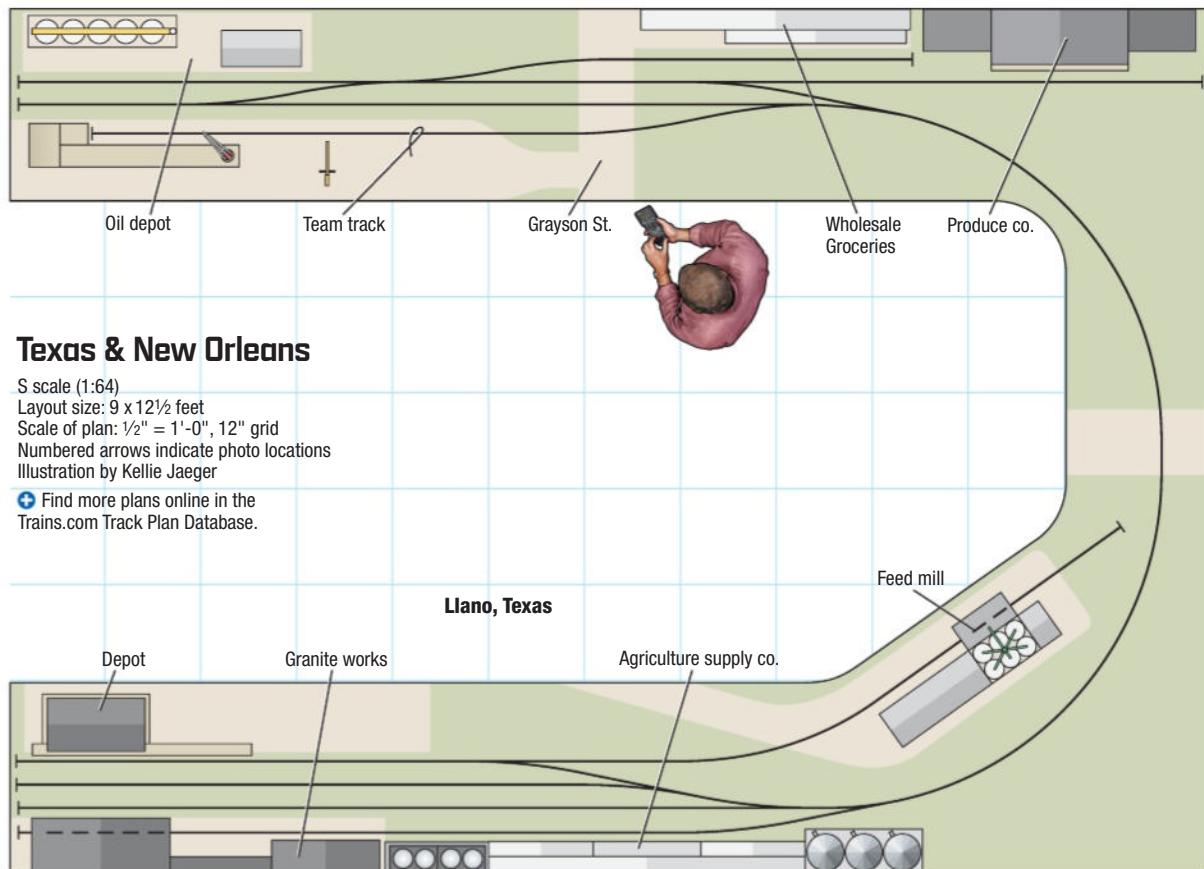
great starting point, and I advise anyone designing a layout based on an actually location to find an accurate map during the period to be modeled.

Knowing that the room size was only 9'-0" x 12'-6", I realized that the first compromise would be that the modeled Llano would need a small yard, something the prototype location lacked. While my first choice would have been a removable cassette located at the end of the shelf by the depot, my client insisted there was no more room for expansion. In the end, I just included two additional tracks to serve as staging, and a small yard now served the small city of Llano's rail traffic.

Through most of the 20th century and during the era depicted on the layout, the economy of the area centered around farming, ranching, and the granite industry. So my client wanted to include a few online customers that served the agricultural industry, and he also wanted to model a granite company that operated within the town limits. Add to that a small oil depot, team track, feed mill, grocery wholesaler, and produce company warehouse. With the limited space available, I had to use flats to include all of those online customers, and there was room for only a short run-around track.



The client also wanted to build the layout in two phases. The first phase would comprise an L-shaped section that included the shelf on the north wall and a single switching lead/staging track along the east wall. He



Texas & New Orleans

S scale (1:64)

Layout size: 9 x 12½ feet

Scale of plan: ½" = 1'-0", 12" grid

Numbered arrows indicate photo locations

Illustration by Kellie Jaeger

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

Track plan at a glance

Name: Texas & New Orleans at Llano, Texas

Scale: S (1:64)

Size: 9'-0" x 12'-6"

Prototype: Texas & New Orleans

Locale: central Texas

Era: 1970s

Style: around-the-walls

Mainline run: 22 feet

Minimum radius: 42"

Minimum turnout: No. 5

Maximum grade: none

Train length: 5 feet

Benchwork: ¾" plywood on shelf brackets

Height: 50"

Track: hand-laid code 70



From this opposite perspective, the north wall shelf stretches out to the left with the main line curving smoothly onto the adjoining east wall. The initial phase comprised just this L-shaped layout that included the switching area along Grayson Street accompanied by a single switching lead/staging track along the east wall. Rob's client felt even this first phase would provide sufficient switching complexity while still providing a relaxed and prototypical operating experience.

Learning Points

- A professional track planner has noticed a trend toward smaller, simpler track plans.
- An S scale plan can often be downsized to HO or N.
- Basing the plan on an actual location made it easier to make track-location and industry-choice decisions.
- “Bigger is better” no longer defines the author’s idea of a dream layout.

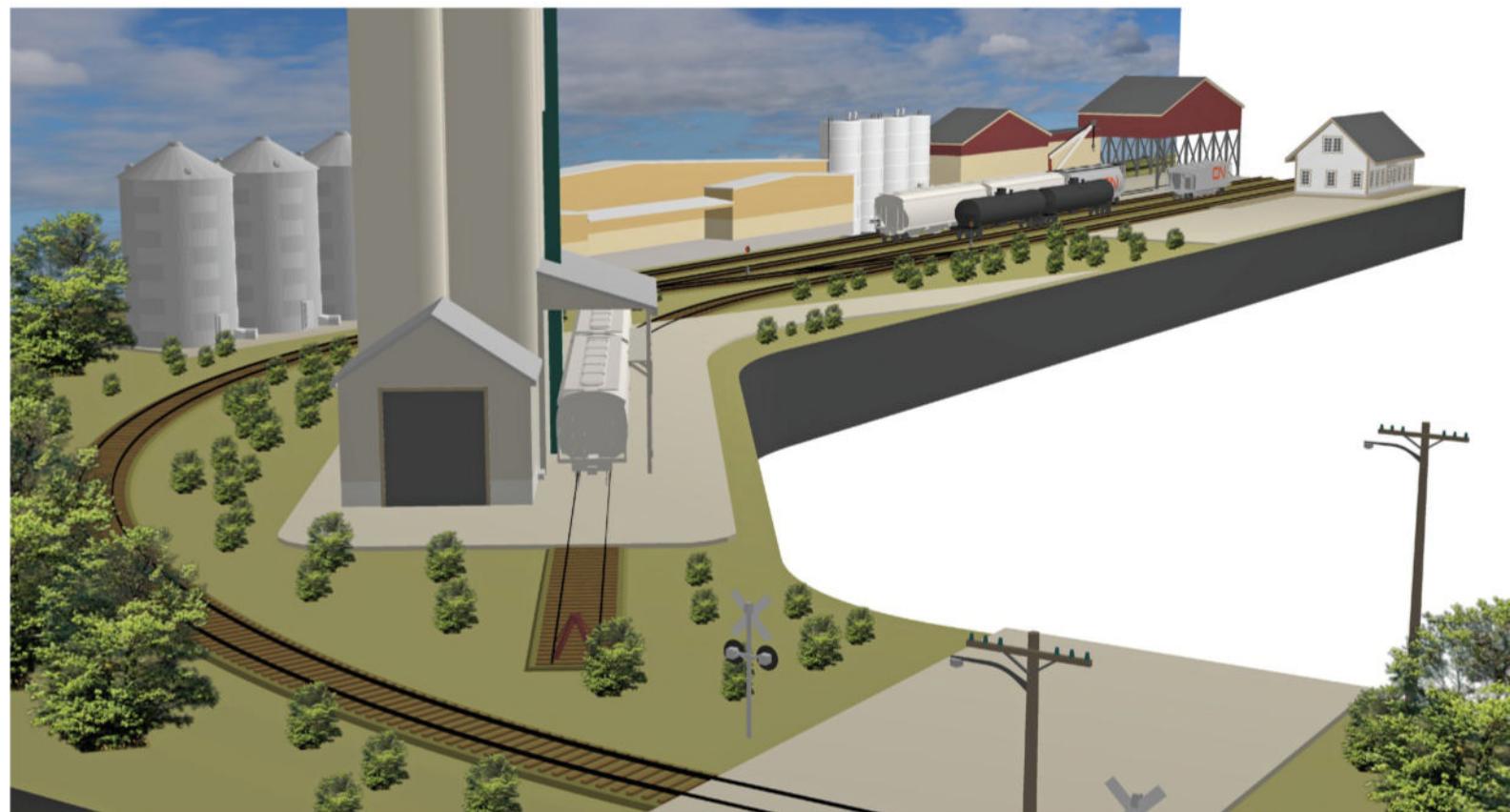
This image captures part of the shelf along the east wall again with a full 3-D view of the south wall from the opposite angle. Simplicity was the main guiding principle for this design, since Rob’s client wanted a layout that was both easy to build and to maintain out of respect for his hectic schedule. If more room were available, the shelf on the north wall could be expanded to include a few more oil dealers, an agricultural implement warehouse, and a few granite companies that were also located there. With additional room, the shelf on the south wall could also include a freight house and another small grocery warehouse.



actually felt the first phase would provide him with enough switching to keep him happy. If he decided to build the second phase, that would add the depot, small yard, feed mill, agricultural supply company, and granite works to the mix.

I like how this design came out, since it offers a lot of switching potential while still maintaining a relaxed and prototypical feel. The design is also quite flexible, and with so much open space in the middle, it could easily be converted to HO or N scale or could be readily adapted to a variety of locations or prototypes.

The one small drawback of the design is that since the tracks in front of the depot represent only one end of a longer run-around track, cars moving to and from the feed mill must be taken to the runaround track at Grayson Street before being spotted at either the mill or stored in the yard. It’s a small inconvenience, but compromises must often be made to better fit a track plan into a small space. (If you have the room, a drop-down could be attached that extends the main line and adds a turnout to represent the other end of the runaround.)





An open center area

While this design found a home in a space about the size of a typical bedroom, it still leaves the middle of the room open for other uses, so it does a great job of utilizing the space where it lives. The narrow shelves also allow for storage underneath, or they could be above a desk or workbench if built high enough. It's not overly complex, everything is easily within reach, and there's no hidden track, so it won't take a lot of time to finish or maintain. If it's operated prototypically, a solo operating session could easily provide enough fun for 30 or 45 relaxing minutes. I don't know about you, but that sounds like a dream layout to me.

I know that bedroom-sized shelf layouts are not on everyone's radar, and I am still commissioned to design layouts with much higher square footage than this one. But I'm also seeing a noticeable

This 3-D rendering shows the shelf along the south wall that would be added in Phase 2, transforming the track plan into a U-shaped design. This extension brings new life to the track plan by adding a depot, a modest yard, and key local industries: an agricultural supply company, a feed mill, and a large granite works. Since the layout had to be self-contained within the limited basement space, he added two yard tracks to serve as staging.

trend: Small and simple shelf layouts are becoming much more common these days. I also note that my clients no longer want spaghetti bowls of track; in fact, that is often included in the "do not want" category of the G&D list.

It's small layouts like this one that allow me to say that no longer does "bigger-is-better" fit into that equation for what my dream layout should be. **MRP**

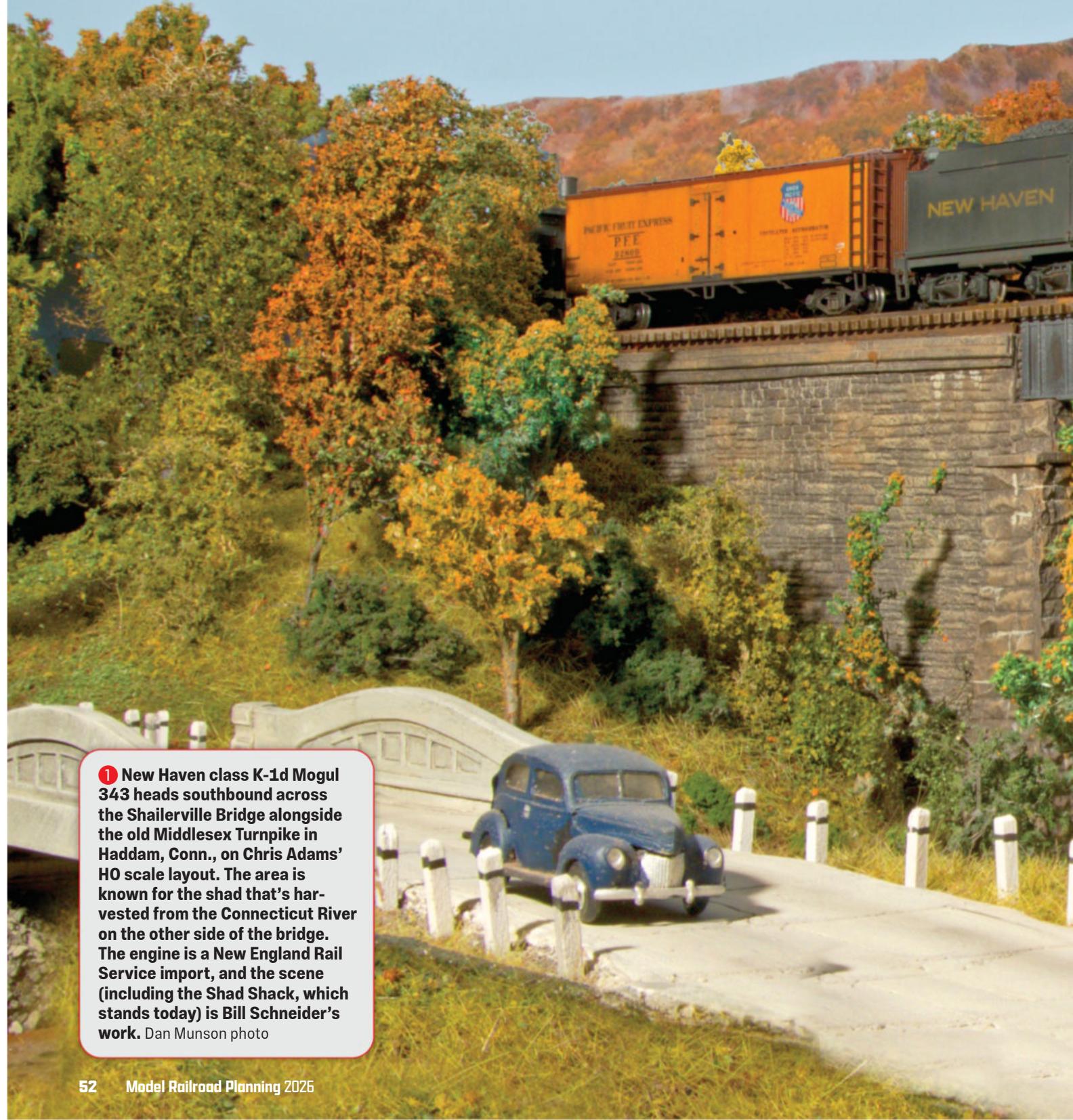
Meet Rob Chant

Robert "Rob" Chant has been characterized by clients as "their most favoured Canadian letter carrier." Now retired, he also has backgrounds in computer programming, graphic design, writing, and photography. He has spent the last 25 years trying to help model railroaders design their dream layouts, which he has shared on his personal blog (www.jomrd.com) and private Facebook group, both titled "The Journal of Model Railroad Design."

New Haven Railroad's

A quest to bring inspiring writing and photography to life

By Chris Adams//Photos by the author except as noted



1 New Haven class K-1d Mogul 343 heads southbound across the Shailerville Bridge alongside the old Middlesex Turnpike in Haddam, Conn., on Chris Adams' HO scale layout. The area is known for the shad that's harvested from the Connecticut River on the other side of the bridge. The engine is a New England Rail Service import, and the scene (including the Shad Shack, which stands today) is Bill Schneider's work. Dan Munson photo

Valley Local



John Wallace was a teenager in the late 1940s and took many pictures of the New Haven Railroad's Connecticut Valley Line, which passed by his childhood home. He later gathered his photos and reminisces of the line for an article for the New Haven Railroad Historical & Technical Association's (NHRHTA) *Shoreliner* magazine. After moving to our new home in 2007, I discovered the article as I was planning my layout.

Among the stories he shared was a detailed description of a typical "day in the life" of the local wayfreight. When I had the chance to meet John in person, I decided to try to bring his memories to life in HO scale.

The Valley Line during the late 1940s was one of a vast network of branch lines that made up the New Haven RR in southern New England. In many ways, it was a typical branch, which provided rail transportation to the towns along the way. But it was also one of the most picturesque lines on the system, following the west bank of the Connecticut River between Hartford and the main line in Old Saybrook. Along the way, the Valley Local interchanged with other local freights in Middletown and East Haddam, as well as the Shore Line locals that served the busy multitrack main line through Saybrook Junction.

Researching the prototype

The combination of scenery and variety of operations and equipment made this line an irresistible modeling subject, and the availability and variety of research resources made it possible to replicate it in HO scale. Most of this line still exists today, and I actually worked on the Valley Railroad (aka The Essex Steam Train & Riverboat) part of it during the late 1980s. I also live nearby, so field trips for research are no problem, and much of the area still looks very similar to how it did in the late 1940s — albeit with many more trees!

While John's article provided a significant amount of initial source material, I was also blessed to have literally hundreds of historic photos of the line available to me through my friend, Max Miller, who I'd met while working on the Valley Railroad. Using his and John's collections, I was able to create a vivid picture of how the line looked during my chosen era.

I also used an additional, often-overlooked, source of photos — aerial surveys and flood-damage photos. Many states, including Connecticut, conducted aerial surveys starting in the 1930s, and



2 The power for today's Valley Local in Rocky Hill, Ct., on Chris Adams' New Haven branch line is a class J-1 Mikado 3016. The scene is reminiscent of many Philip R. Hastings photographs of New England railroading in the waning days of steam. Dan Munson photo

many of those photos have been digitized and made available online.

Also, a bittersweet benefit of the Connecticut River Valley flooding fairly regularly throughout the 1930s and '40s is that there are many additional aerial photos taken from a perspective angle versus the more common aerial photos that are taken looking straight down like satellite images. These make it easier to see what structures looked like.

And I dug through the NHRHTA's online resources as well as its archives at the University of Connecticut (UCONN). While the internet is typically the first step in prototype research, be sure not to discount the more "analog" resources available at local libraries and historical societies — both for your prototype railroad as well as those for towns served by your line.

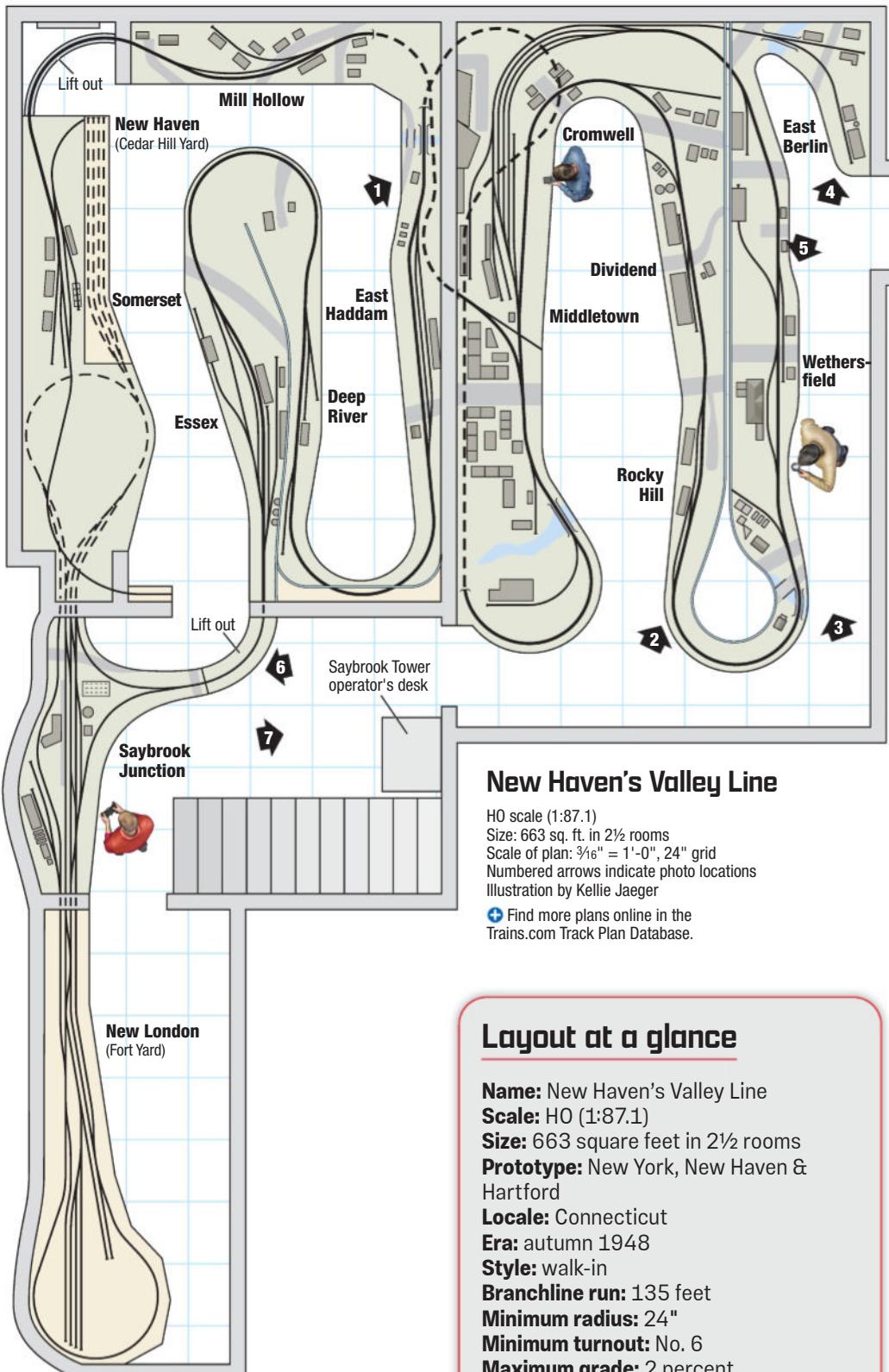
Finally, for track planning, you can't beat Sanborn insurance maps and valuation maps. Fortunately, all of the New Haven Railroad's valuation maps are available at UCONN's online railroad archive. But beware some pitfalls!

Prototype planning pitfalls

It's become common in our hobby, especially among those trying to faithfully model a prototype, to pick Layout Design Elements (LDEs) and selectively compress them to fit our space. What could be easier than taking a prototype track plan and replicating it on the layout? I did that with the first town I chose to model — Wethersfield, Conn. — right down to the house track, bulk track, and passing siding [See page 58. — Ed.]

All was fine until John Wallace visited and remarked that by the late 1940s, passenger service had ended and the passing siding had been removed. I also had a later photo but didn't notice the difference. I removed the passing siding, and the area now looks more accurate.

The lesson here is to use photos from your modeling era to cross-check a track map's accuracy. This is even more important when using railroad valuation maps. Most of these maps were produced for the United States Railroad Administration (USRA) when it took over the



New Haven's Valley Line

HO scale (1:87.1)
 Size: 663 sq. ft. in 2½ rooms
 Scale of plan: $\frac{3}{16}$ " = 1'-0", 24" grid
 Numbered arrows indicate photo locations
 Illustration by Kellie Jaeger

⊕ Find more plans online in the Trains.com Track Plan Database.

Layout at a glance

Name: New Haven's Valley Line
Scale: HO (1:87.1)
Size: 663 square feet in 2½ rooms
Prototype: New York, New Haven & Hartford
Locale: Connecticut
Era: autumn 1948
Style: walk-in
Branchline run: 135 feet
Minimum radius: 24"
Minimum turnout: No. 6
Maximum grade: 2 percent
Train length: 8 feet
Benchwork: L-girder
Height: 50" to 54"
Roadbed: cork
Track: code 70
Scenery: foam board, cardboard grid, and plaster cloth
Backdrop: hardboard and vinyl
Control: NCE ProCabs and ProtoThrottle



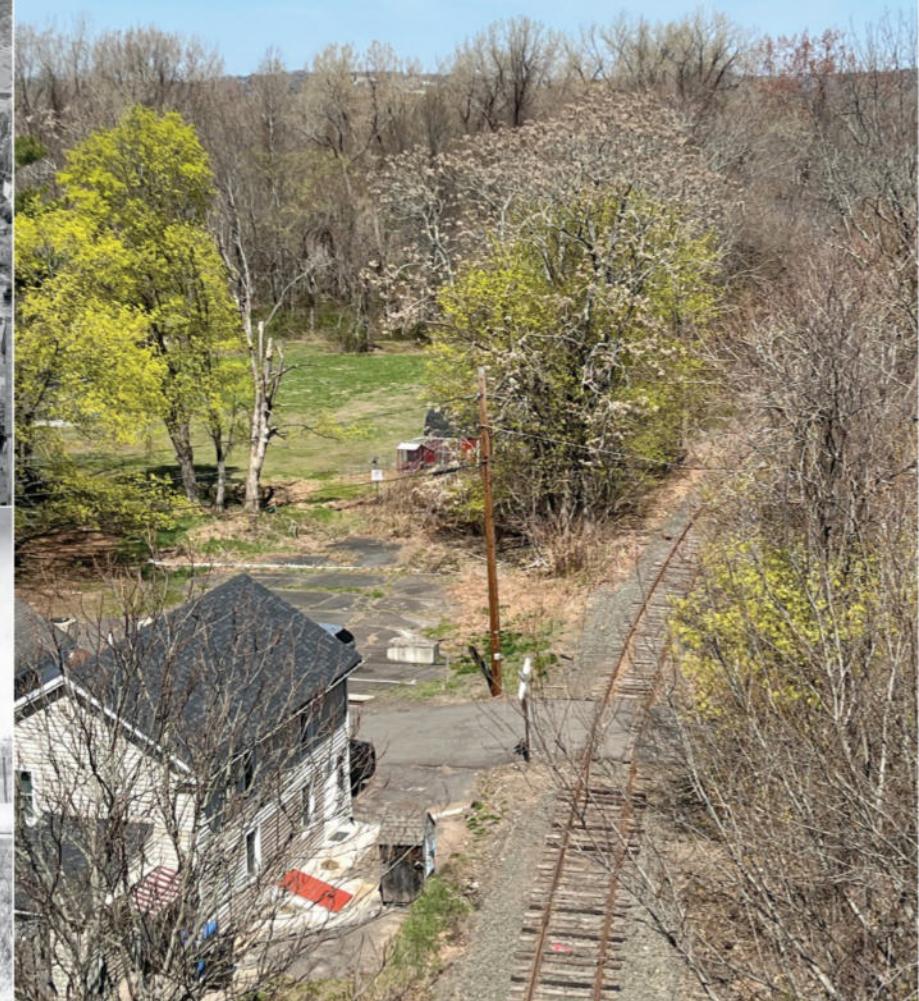
③ John Wallace's writings and photography inspired Chris to model the New Haven's Valley Line. John got to run a train on Chris's HO tribute to the branch at an early stage in its development. During John's visit, he suggested a few ways that Chris could improve the accuracy of the railroad.



The branch of the New York, New Haven & Hartford that Chris models stretches from a connection with the New Haven's New York-Boston Shore Line at Saybrook Junction north through Middletown to Hartford.



④ East Berlin offers a fine example of utilizing the often-wasted space in a corner. Chris has fit two industries into a relatively compact area, and the bulk track/loading dock provides a "universal industry."



One of Chris's favorite railroad photos (top), is this view from Arrigoni Bridge in Middletown, Conn. There is so much to see, it appears to be "model ready." Today (right), it's almost unrecognizable except for the house on the left. The photo of Mogul 466 (bottom) shows the southbound Valley Local crossing the Mattabessett River, which is just out of the frame to the right in the top photo. Top and bottom photos: Kent Cochrane, NHRHTA collection

nation's railroads. While they tend to be much more accurate than Sanborn maps, they're almost always a snapshot of how the lines looked circa 1917 and may include tracks that were gone by your era.

Other than not knowing enough about your prototype (e.g., not having even one photo of something you want to model), another pitfall of prototype modeling is knowing "too much." Once you know a certain track arrangement, building, or scenic feature existed on your railroad, it's hard not to be compelled to try to model it somehow. And you can't "unknow" it. That often leads to frustration when there's no way you can fit it in, or it results in a scene that is too cramped and doesn't look right because you thought you could fit it in, but just barely.

Take two iconic photos from above, for example. The first photo shows the Valley Local heading southbound at Miller Street in Middletown, Conn. Just out of the frame behind the train is a bridge over the Mattabessett River. The second photo shows the same train (different day) crossing that bridge. I really

wanted to include the scene on the left since it's a perfect model railroad scene. (In fact, it was the subject of an essay in *Railroad Model Craftsman* by Tony Koester more than 40 years ago.) The river scene would create the perfect dividing line between Middletown and Cromwell on my layout — just as it does on the prototype.

But it looked really crammed together when I tried to fit it all. So, I decided to focus on the overhead-crossing scene, letting it "breathe" as much as possible, and gave up on the bridge, opting for a culvert in that spot instead.

A proscenium for the prototype

Deciding what to include and what to do without required being laser-focused on my goal: duplicating the operations of the Valley Local as John Wallace remembered them. If he didn't mention it in his "Day in the Life" article, I didn't include it. Fortunately, the operations John described included moving a variety of commodities from general freight to coal, oil, lumber, rayon, feed and seeds, pigs and cattle, and even some high-and-wide

loads of gliders and bridge girders. The more I learned about the line and the more photos I came across, the more varied the car types became.

I was also able to include the interchange with the New Haven's Shore Line main at Old Saybrook. Saybrook Junction is only a mile from my house, so I decided to feature it as the first thing visitors see. The branch connected to the main through a wye, but at the ideal location at the bottom of the basement

Meet Chris Adams

Chris Adams got his start in the hobby when he "adopted" his younger brother's train set one Christmas. Since then, he worked as a steam locomotive fireman and actually ran an ex-New Haven locomotive on the Valley Line. He currently works as a legal counsel at the Connecticut legislature and lives in Old Saybrook, Conn., with his wife, Debby, and cat Lexy.



5 The first town south of Hartford, and the first town Chris modeled, is Wethersfield (top). The prototype photos show the depot and Gra-Rock Bottling Co. in the 1920s (lower left). Chris had included a passing track between the main line and the bulk track in front of the Gra-Rock building (lower right), but VIP visitor John Wallace told him it had been removed prior to the modeled era, so Chris followed suit. Prototype photos from NHRHTA collection

Learning Points

- One article and its author can inspire the design of a model railroad.
- Living close to the railroad you're modeling is a major advantage.
- Belonging to the historical society of the railroad you're modeling often provides access to key prototype information.
- Knowing "too much" about a railroad can tempt you into modeling more than your time and resources will support.
- Operating sessions are also social events.

stairs, there wasn't quite enough depth to fit it all in. For some reason, the stud wall was offset from the foundation by almost two feet. But even by reclaiming that extra depth, a door was in the way of where the main line would need to go. So, I decided to move a doorway, cut away part of the wall at the bottom of the basement stairs, and create a proscenium for the Saybrook scene.

As a bonus, after I added staging at each end, it also created a "one-town layout" where I could replicate a slice of the New Haven's busy Shore Line, producing a dramatic contrast to the sleepy branch.

Relaxing the rules

As much as I enjoy prototype modeling, I found that the more obsessed I

became with duplicating the prototype as perfectly as possible, the more I realized I was starting to have less fun. I've received some beautifully scratchbuilt buildings over the years, some based on actual prototypes but not on my line. So, I began to relax my slavish devotion to the prototype, especially in the town of East Berlin (rhymes with "Merlin"). Here only the station building is true to prototype.

All of the other structures are freelanced, built by my friend Bill Maguire. The prototype branch served some brickyards and a large chemical/paint plant. Instead, I have a small textile mill that's rail-served and an offline shoe company presumably served by the bulk track. A concrete loading dock takes care



6 The New Haven's Connecticut Valley Branch was served by two local freights: one southbound from Hartford, Conn., one north from Saybrook Junction. On the main line, the famous *Yankee Clipper* runs eastbound to Boston without stopping. Meanwhile, J-1 Mikado 3016 switches at the Saybrook Junction wye before heading north. Dan Munson photo

of any brick shipments. Being only “inspired” by the prototype here has provided some refreshing freedom.

Not knowing what you don't know

The Valley Line is my first serious layout. Like many of us, I assumed that bigger is better, and that I needed to fill all available space with railroad. That certainly seemed obvious at the beginning of the project, especially as I started confronting the limits of my space and having to decide what I had to do without. Even today, I find myself wishing I had just a little more room so I could devote more space to the scenes I've chosen to model and perhaps even include a few more towns or industries.

However, the biggest lesson I've learned is that I really should have started smaller. At the beginning, I couldn't possibly have known what I didn't know. I didn't know that I'd find detailing locomotives, structures, and little scenes so compelling. Nor did I realize how much wiring would be required, even without signaling.

If I had started smaller, I'd have been able to experience all aspects of the hobby sooner and have been in a much better position to pick what I wanted to spend my time doing. It's difficult to detail everything to the nines when you have a basement-sized layout, as opposed to a narrow shelf around a medium-size

room. I would have also reserved some space for a crew lounge. Thanks to my understanding wife, I have a beautiful railroad den upstairs, but most off-duty crews want to stay near the layout.

A larger layout typically means more crew members, and the railroad keeps up to eight operators busy. I really enjoy the social aspect of the hobby, so that's



7 The dispatcher's desk has a panel that allows Chris to set the route for the New Haven's busy Shore Line through Saybrook Junction. Crews communicate with the dispatcher using handheld radios or loud voices.

definitely a plus. And with a larger layout there's always something to do, and the variety of tasks almost guarantees there'll be a project to fit your mood.

Creating an immersive experience

But those lessons pale in comparison with what I've been lucky to achieve by focusing on what inspired me to build this layout in the first place. John Wallace's photos and stories, and my desire to model those memories, helped me to create an immersive time machine that transports me back to the engineer's seat on a local freight serving towns in a beautiful river valley in southern New England during an autumn day in the late 1940s. From playing period music through an old radio and old calendars on the walls to authentic prototype paperwork, the space the layout occupies is decorated to complete the experience.

Proof that I hit the mark became clear when John visited the layout shortly after the track was finished. I was able to hand him a throttle and have him operate the Valley Local, move for move, just as he described it in his article. Being able to re-create that experience for him, and vicariously visit that specific time and place myself, makes all of the research, planning, and effort more than worthwhile. I'm looking forward to making more progress on the layout to make the experience as complete as possible. **MRP**



A detailed HO scale model railroad scene. In the foreground, a red dump truck and a yellow bulldozer are on a dirt yard. A green sedan is parked nearby. In the middle ground, a long train of logs is being transported on flatcars. A yellow logging tractor is positioned next to the train. On the left, there's a wooden building, possibly a mill, with stacks of lumber. In the background, a large pile of logs is on a barge in a river, with a forested hillside behind it.

1 Oregon Coast 16 is working the outbound product track at Forest Park Lumber, a modified Sierra West kit, on Mat Thompson's downsized HO scale Oregon Coast RR. On the lower level, a Southern Pacific stock train is returning to Portland's Brooklyn Yard after bringing a load of cattle to the Swift Packing Plant.

A new railroad at age 75

A move to a quieter locale prompted a rebuild

By Mat Thompson//Photos by the author



② Oregon Coast GP7 No. 47 is a yard transfer hauling a string of loaded reefers from Hoyt Street Yard to the Northern Pacific's Lakes Yard. It's 1957, and union agreements require the Geep to return to Hoyt Street with only its caboose. If Lakes Yard has cars for Hoyt Street, an NP yard transfer will deliver them and will return caboose-light to Lakes Yard.



③ An Oregon Coast Geep is taking a yard transfer toward the interchange tracks at the Oregon Coast's Hoyt Street Yard. Hidden behind the white building is a hole in the wall that leads to open staging in an unfinished area of Mat's new home.

My wife and I moved south from congested northern Virginia to quieter Williamsburg, Va., in 2023. Once in our new home, my goal was to build a layout I could maintain and operate years into the future. Model railroading has been an enjoyable and important part of my life for more than 50 years, and I wanted that to continue. But while healthy and fit for my age of 75, I understood that time wasn't on my side, and I needed to consider that in my plans.

The northern Virginia version my HO scale proto-freelance Oregon Coast RR (OCRR) kept me busy and entertained

for more than 18 years, growing to fill a 35 x 55-foot basement. During that time, I hosted more than a hundred operating sessions with crews of 15 to 20 people. The modeling and theme of the layout were notable enough to be featured in *Great Model Railroads 2014*. My version of a dream layout was a great experience, but I was ready to downsize.

A smaller Oregon Coast

I would keep the Pacific Northwest flavor and 1950s era of that layout. My strategy was to build a smaller version of the OCRR using engines, cars, and

Meet Mat Thompson

Mat Thompson lives with his wife, Victoria, in Williamsburg, Va. They enjoy discovering the historical and cultural attractions of the Virginia Tidewater area. He finds building structures and cars for his layout and operating model railroads equally attractive parts of the model railroading hobby. A retired Army officer, he is an avid reader of military history.

structures from the previous layout to have an operable and largely finished layout within a year or two. After that, I would make improvements and continue participating in operating sessions and other model railroading events.

Building the past layout gave me the experience to create a new one. Engines were already Digital Command Control-equipped and programmed. Engines and cars were weathered. Most structures were already built. I had 25 years' experience using my Digitrax DCC system. I'd settled on using commercial code 83 track long ago. With so much equipment on hand and so many choices already made, I could focus my attention on benchwork, track laying, wiring, and scenery.

On the down side, I probably didn't have years to build the layout before hosting ops sessions. I needed to think about not just what I could do but how those choices contributed to enjoying the layout for years into the future. I also needed to be realistic about my limited carpentry skills. This time I wouldn't have a cadre of experienced model railroad friends to help with construction.

Basements are rare in southern Virginia, so I was prepared to accept a spare bedroom for my layout space. That would work for a switching layout, but the space would be small, and building it wouldn't keep me occupied for long. Worse, there would only be room for one or two other people, losing much of the fun of op sessions.

Good fortune arrives

Fortunately, we found a new home with one-story living and a lower-level room perfect for the size model railroad I had in mind. After painting the room and replacing the hanging fluorescent lights with recessed light-emitting-diode (LED) fixtures, I had a suitable space. Better yet, the lower level had a bathroom and a TV room that could double as a

Track plan at a glance

Name: Oregon Coast RR

Scale: HO (1:87.1)

Size: 15'-8" x 30'-0" plus staging

Prototype: freelanced, inspired by Spokane, Portland & Seattle

Locale: North Portland, Ore., industrial area

Era: 1957

Style: walk-in

Mainline run: 70 feet

Minimum radius: 28"

Minimum turnout: No. 5

Maximum grade: 2%

Train length: 8 feet

Benchwork: L-girder

Height: 30" to 36"

Roadbed: N scale cork

Track: code 83

Scenery: plaster cloth over foam and cardboard profiles

Backdrop: painted and commercial photos on aluminum trim coil

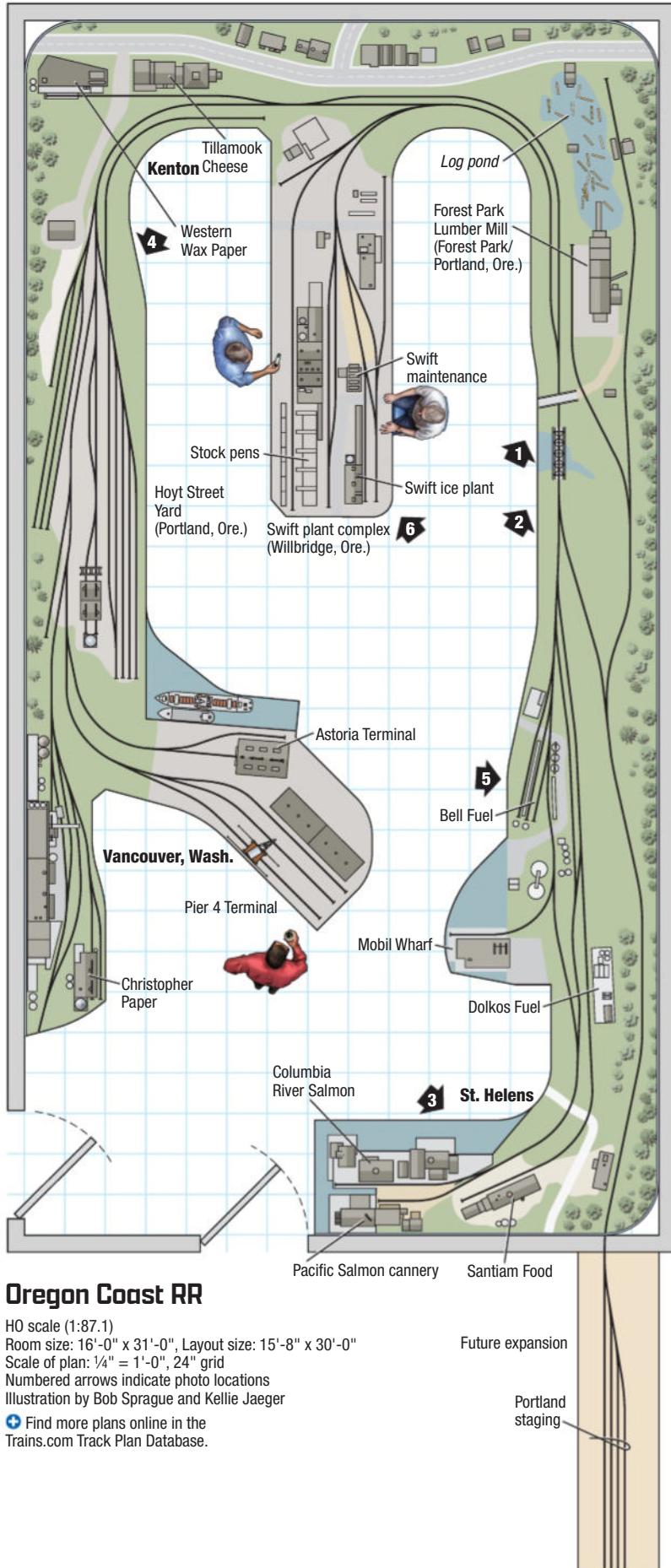
Control: Digitrax DCC

crew lounge. Some of the lower-level unfinished space could be used for staging and a workshop. Outside the TV room door was a covered patio perfect for benchwork construction in a dry area.

Even with a nice-sized room, I had more model railroad items than I needed. I sold the excess and used the proceeds to buy materials for the new layout. I wanted to have supplies handy so progress wouldn't be interrupted. [See "Building a layout more efficiently" by Randy Laframboise in MRP 2020. — *Ed.*] Purchases included flextrack, red and black wire for the power bus and feeders, 3M insulation displacement ("suitcase") connectors, plaster cloth, rail joiners, ballast, and roadbed.

I also updated my Digitrax DCC system. On the old layout, I had a command station and four boosters, half a dozen power management boards, 10 throttles, and several other DCC accessories. Everything worked fine, but I didn't want to find myself in a model railroad technology black hole sometime in the future. Selling the older equipment paid for all I needed on the new railroad. An unexpected bonus was that with all radio duplex throttles, I didn't need to run LocoNet cables underneath the whole layout. Instead, I have just one LocoNet panel near the command station for tuning new throttles to my layout's channel.

We moved in August 2023. In October, I started layout construction.





4 The four tracks to the right in Hoyt Street Yard are interchange tracks. Sometime before an op session starts, other railroads in the Portland area have brought over cars for the OCRR from their yards. The Hoyt Street crew uses these cars and cars already in the yard to build the local switching jobs.

By then, I'd given considerable thought to making the layout more friendly for myself to build and maintain and for older modelers to operate. Feet, knees, and backs tire quickly, making layout construction and op sessions uncomfortable or worse. It's difficult to get under the layout to do wiring tasks and even more trouble getting back up.

Sitting down on the job

My solution to the aching back and knee problem was to build my new layout at tabletop height (30 inches) and take advantage of the layout room's concrete floor to operate from rolling chairs. I got the idea while visiting Doug Tagsold, who explained the concept in "Operating sitting down" in the April 2009 *Model Railroader*.

My new train room is a 16 x 31-foot rectangle. The layout is built along the walls in a U-shape with a middle peninsula. Layout surfaces are 30" to 36" from the wall with track within 24" of the aisles. Aisles are a minimum of 44" so seated operators can pass by each other.

To avoid having to routinely work under the layout, I've eliminated as much wiring as I can. The red and black power bus and feeders are the only wiring I use. Bus wires run through holes in the benchwork close to the layout edge. Feeders soldered to the track are dropped through holes in the layout surface and clamped to the bus with suitcase connectors. The process is quick and easy and can be done from a chair.

All turnout points are manually lined, so switch machines and the associated



5 At Bell Fuel in St. Helens, all outbound cars are returned to Hoyt Street Yard. Inbounds go to various spots at Bell Fuel as shown on the waybills. Operators also have a brief Train Instruction Card and a diagram of Bell Fuel showing all the spots.

wiring normally done under the layout aren't needed. Many of my code 83 turnouts have a spring that snaps the points to the correct route. For older turnouts without the spring, a thin strip of styrene under the switch rod creates enough upward pressure to hold rails in place.

With no powered switch points in turnouts, there's no need for control panels. I have no plans to add signals, operating crossing gates, building lighting, or similar electrical accessories to the layout. Sooner or later, something will create the need to crawl under the layout, and I want to avoid the possibility later on.

Single-deck construction

Other decisions also support my efforts to simplify layout construction



Left: Ed Rappe (seated) is working the Swift Packing Plant with Barry Beckman. Track and turnouts are oriented toward the aisle where Ed is sitting, but occasionally one of the Swift crew will need to go to the Hoyt Street Yard aisle of the peninsula to uncouple cars. Right: As the yard was being constructed, Leroy Ware tested operating procedures while sitting. Here he is checking how far in he could reach and how comfortable he was while uncoupling cars. The layout height is desk height – 30" – and there is room for his legs under the layout even with a 4" fascia.



and maintenance. The layout is a single deck. I didn't want the complications of constructing a helix and building and lighting multiple decks. The open U-shape of the layout eliminated the need for a lift-out entry bridge. There's no hidden track.

The one decision that I struggled with was not providing for continuous running to just let a train run and enjoy the sight. It's a compromise I accepted to keep all the track within easy reach — an important feature in the years to come.

Lumber for benchwork was bought locally in amounts and sizes I could easily haul in my mid-sized SUV. This "minimalist" approach allowed me to avoid the high cost and heavy weight of marine plywood. Instead, I built the benchwork using $15\frac{1}{32}$ " plywood in precut 2 x 4-foot pieces, and similar lower-quality dimensional lumber.

Many of my industries, such as a paper mill and meat packing plant, have multiple tracks. Their configuration on my previous layout made it easy to determine new track arrangements with the actual building models on the layout surface and saved much planning time. Developing my track plan was mostly a matter of connecting the industrial sites to the yard.

An industrial switching theme

The layout theme is industrial switching in Portland, Ore., in 1957, inspired by Chuck Hitchcock's Argentine Industrial Division (February 2007 MR). A single-track main line connects a small yard and three work areas for crews. Maximum train length is 12 cars, so a single engine assigned to each train is adequate power. Crews get their trains from the yard and roll their chairs to the industrial area where they're working.

The yard and work locations can each be handled by one- or two-member crews for a maximum of eight operators. After a few op sessions, I've learned that even though there's room for eight operators, five or six is a better number. Crews talk to each other, and that's fine, but too many people in the room make it hard to hear each other, even with engine sounds set to a low level.

Other than the main yard, no single location needs to be active in any session, so the railroad is workable with as few as two people or even just by myself. There's enough activity to support sessions of two to three hours. The small crew size and simple operations also free me up to fill a crew spot myself — something that never happened on my



6 The Swift Packing Plant can keep a crew busy for hours. Refrigerator cars first go to the open concrete pad for inspection, then to the icing plant for icing, and then to the packing plant for loading. The sequence is timed using the timers on the waybill boxes.

previous, much larger timetable-and-train-order layout.

Though switching operations are my favorite, I also chose it because small-town Williamsburg has few modelers interested in realistic operation. Industrial switching is easy to learn and sessions can be short, so I'm confident that over time, local model railroaders will join the crew. Easy learning and shorter sessions are also older-operator-friendly for crew members and for me, the aging layout owner.

Another advantage of a switching layout is that preparing sessions is easy. The only staging needed is to add or remove loads on open cars and to flip waybills in car cards so the proper destinations show for the new session.

With the experience of previously having built a large layout, using structures and equipment from that model

railroad and a bit of planning, progress on the new OCRR is far ahead of where I thought it would be. Track installation and wiring are complete. The backdrop is in place and most areas have scenery. I was able to start hosting operating sessions after just one year of model railroad construction.

Looking ahead

In the future, replacing buildings, assembling resin freight cars, and learning to use new scenery materials and methods will keep the layout and my interest fresh. I could also expand the layout. An additional 10-foot-square space in the unfinished part of the basement is available to create another industrial switching area. Staging is there now, and I'm thinking about adding a harbor scene.

I'm happy with the new OCRR. There's no need to work under the layout. The first op sessions were conducted 10 months after construction started — two months earlier than my goal. At 18 months, the layout is as finished as any model railroad ever is except for some minor scenery work.

Friends have asked if I have regrets about no longer having a basement-size layout. The answer is no. Other than missing my crew-member friends, the move has been good for my wife and me. Building the new layout is keeping me busy and challenged, and that's the fun of model railroading. My goal was to build a layout I could operate and maintain for years into the future, and that's what I've done. **MRP**

Learning Points

- Moving and downsizing may offer the opportunity to build a smaller but more builder- and user-friendly model railroad.
- Consider potential crew availability in your new community.
- Just because you can build it today doesn't mean you can easily maintain it tomorrow.
- A smaller railroad means that you actually get to operate it, as opposed to managing operating sessions on a large layout.



Rutland's Bellows

Books, magazine articles, and a visit to a tourist line led the way

By Gregory Wiggins//Photos by the author

1 Rutland RR Alco RS3 No. 202 rolls the local through verdant Center Rutland, Vt., on Greg Wiggins' HO scale Bellows Falls Subdivision. The heated, insulated New Haven boxcar is likely filled to capacity with potatoes.



Falls Subdivision

2 A pair of Alco RS3s team up to take train No. 120, the eastbound through freight, from Rutland to Bellows Falls.



Like many of you, my interest in trains started at a young age influenced by an O scale layout my father built in my grandparents' basement. I often visited my grandmother in Rhode Island, and during one of our visits, my mother planned a family outing on the Edaville RR in South Carver, Mass. I was around 5 years old and vividly remember being fascinated by the sounds and smells of the steam locomotive, which influenced my interest in modeling steam railroading. My family took regular skiing vacations to Vermont for more than 25 years, and we would pass through the town of Rutland, which engraved the city name into my thoughts.

On the way to one of those many skiing vacations, I remember spotting the bright red diesels of the Vermont Ry. while driving through Whitehall, N.Y. Those shiny red locomotives fascinated 10-year-old me into wanting to have a model of a locomotive like that.

At the time, I had a small 4 x 8 layout set up in my bedroom with an Athearn F7 I purchased for probably \$20 from a local hobby shop. I remember inquiring

about those shiny red Vermont Ry. diesels at the shop, and the employee pulled an undecorated Athearn GP38-2 from the case, showed me a Herald King decal catalog, and gathered the other items needed to paint what I was looking for.

Rutland influences

The interest in the prototype Rutland was still a few years away. The first layout was a combination of Vermont Ry. and Delaware & Hudson. The D&H influence was sparked by a July 1987 MR article by Lou Sassi on painting an Atlas D&H RS3. I was also fascinated by Lou's West Hoosic Division layout in July 1988 MR and impressed by his Rutland RS3. A 1989 Paint Shop article on painting a Rutland Green Hornet L-1 4-8-2 was a definite eye opener and had me curious about what other steam locomotives the Rutland might have had.

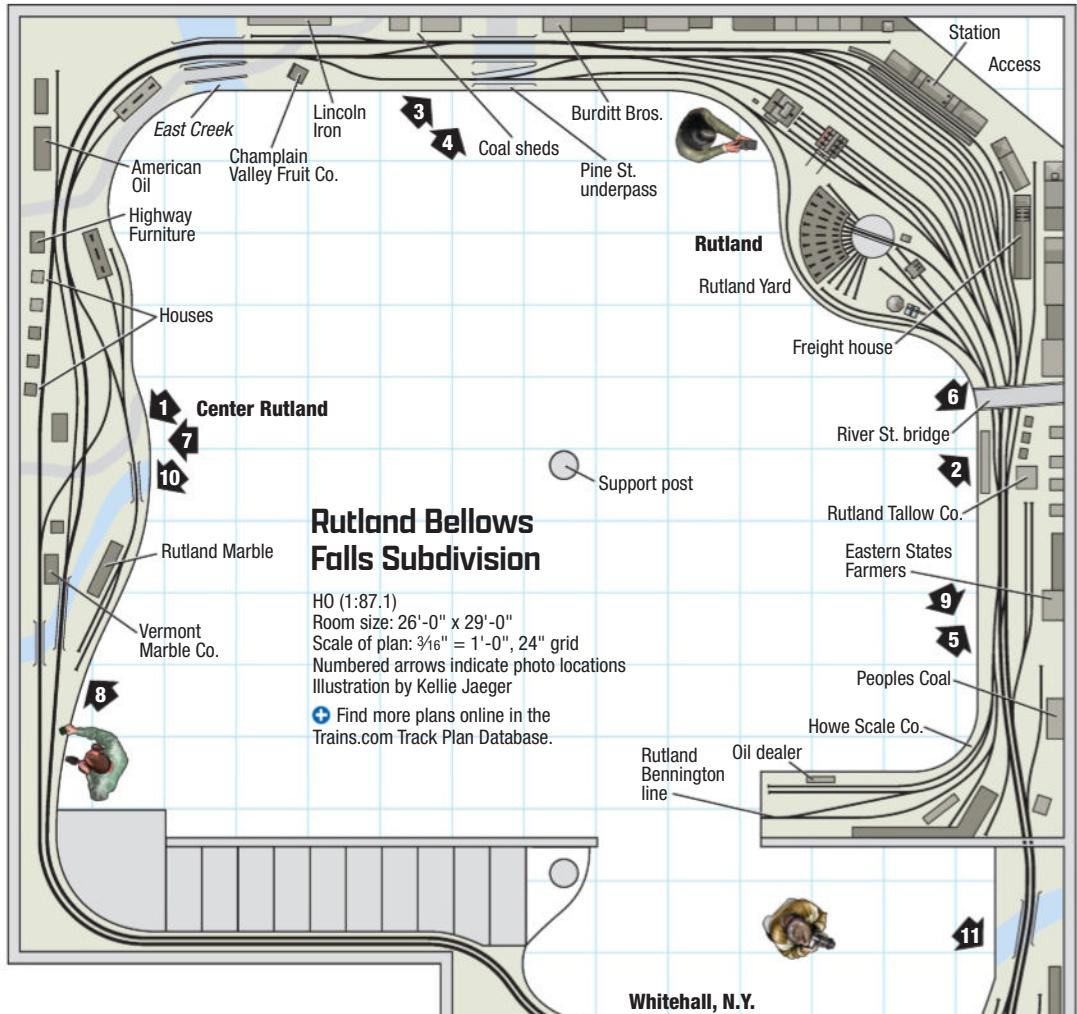
In 1990, a trip with my mom and grandmother through Vermont and New Hampshire led us to Bellows Falls, Vt., the original site of Steamtown. A ride on the *Green Mountain Flyer* and the old wooden Rutland combine was a most

memorable trip and triggered my interest in the Bellows Falls Subdivision.

After riding the *Flyer*, we stopped into a local book store near the station, where I found R.W. Nimke's Rutland books, along with those by Jim Shaughnessey on the Rutland and Delaware & Hudson. A dozen more trips to ride the *Flyer* in the years that followed allowed me to collect most of the Nimke volumes.

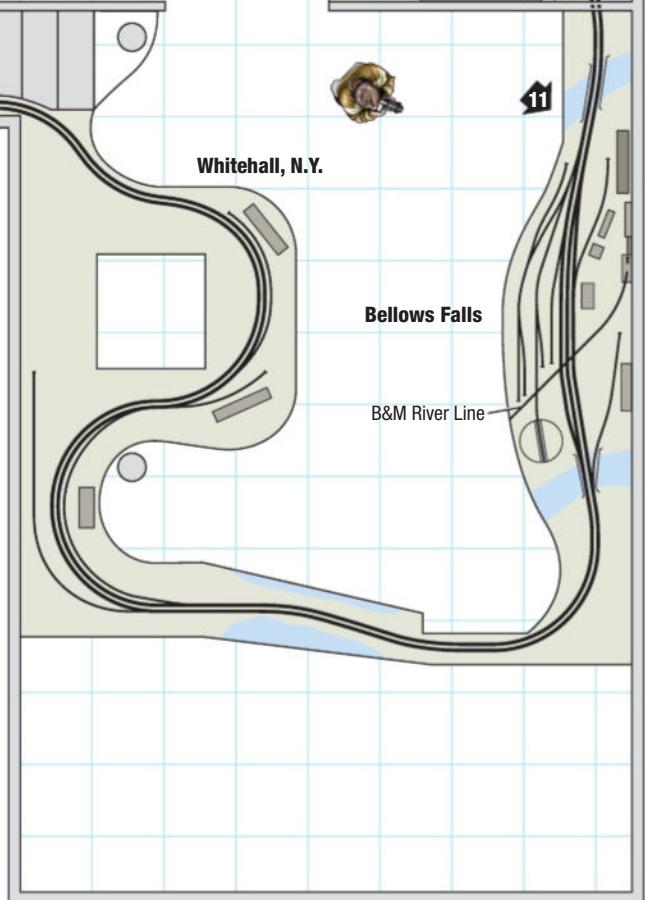
Since I live in Pennsylvania, one would think I would model one of its main railroads — the Pennsylvania or Reading. I was definitely the oddball at the local hobby shop. I have always been interested in industrial everything, especially coal mining in the Scranton region. When I discovered the Delaware & Hudson operated into Rutland, I decided that a Rutland-and-D&H-themed model railroad would be the goal. This also gave me the ability to model a railroad from my home state.

The real influence of the possibility of modeling the Rutland hit when I walked into the hobby shop and was handed the February 2000 *Railroad Model Craftsman* and saw Mike Sparks' and



The layout at a glance

Name: Rutland Bellows Falls
Subdivision:
Scale: HO (1:87.1)
Size: 26'-0" x 29'-0"
Prototype: Rutland RR
Locale: Rutland to Bellows Falls, Vt.
Era: early spring 1947 to 1955
Style: single-deck walk-in with plans of double-decking
Mainline run: 91 feet
Minimum radius: 33"
Minimum turnout: No. 6 Peco
Maximum grade: 1.5%
Train length: 25 cars
Benchwork: conventional grid and L-girder
Height: 42"
Roadbed: $3/4"$ plywood, cork
Track: code 83 flextrack
Scenery: extruded-foam insulation board, cardboard, and plaster gauze
Backdrop: drywall $1/8"$ lauan
Control: Digitrax DCC



3 Today's *Green Mountain Flyer*, which runs between Boston and Rutland, sports an all-Boston & Maine consist behind a B&M RS3 as it makes a reverse move back to the Rutland passenger station.



Randy Laframboise's Rutland article. I believe it was the same year we went to Troy, N.Y., to attend an open house at Rensselaer Polytechnic Institute to see the New England, Berkshire & Western layout. That trip and the magazine article definitely opened my eyes to prototype modeling, and I started consuming anything and everything on scratch-building structures in MR and anywhere else I could find it.

The layout

I started constructing the current layout in 2008 in a small "twin" home in Northeast Philadelphia. I had to be smart about what I was going to construct and how it was built, because it was a starter home, and I didn't plan on living there forever. I constructed Rutland on a gridwork frame with $\frac{3}{4}$ " plywood that split into three sections for a future move. I decided on an L-shaped design down two walls with a bump-out for a roundhouse and turntable. A triangular cutout at the back of it allowed for access to tracks, as well as structure and scenery work.

Modeling Rutland, Vt., and the yard allowed me to include everything I was interested in. The yard featured a backdrop of the city with scratchbuilt structures, including the passenger station and platforms, shop buildings, and engine-servicing facilities, many of which still exist today. I liked the fact that building a freight yard would allow



4 Pine Street ducks under the busy Rutland and Delaware & Hudson parallel main lines in busy downtown Rutland, Vt.

me to at least display many of the resin freight cars I had been building for the past six or seven years. Even though it was just running trains back and forth from one end to the other and switching cars, I was happy to have a layout.

The yard included an elevated roadway bridge, a pair of railroad bridges spanning a highway on the north end of the yard, and three coal-dealership sheds where many of my D&H hopper cars could be spotted. The track arrangement was a close match to Rutland track diagrams. I liked the fact that the area had elevation changes with structures at different heights.

Rutland's new home

In 2014, a move to a larger home and larger basement allowed for greater possibilities. By then, I had started scratch-building structures to accurately represent Rutland. I dismantled Rutland yard and moved it to its new home. The lack of scenery and ballasted track allowed for quick removal and re-installation.

My new basement was fully finished with drywall and a drop ceiling that was convenient for getting things going. I added extra lighting with LED troffer panels (recessed lights made for drop ceilings) that have greatly enhanced the brightness of the room.



⑤ Rutland Ten-Wheeler No. 74 and Consolidation No. 27 double-head to move train No. 126, the local freight, out of Rutland as it begins the trek to Bellows Falls.

⑥ The Rutland Tallow plant in Rutland, Vt., rendered beef and mutton fat for cooking and soap-making. It's no longer rail-served. Greg scratchbuilt it from styrene using Tichy windows and doors. The large advertisement is a decal custom made by Precision Design Co.

I painted the walls Behr Utah Sky blue interior house paint. The corners of the room were modified into coves using $\frac{1}{8}$ " lauan and some 1 x 6 boards cut as braces forming a 12" radius. Once attached, I blended the lauan into the walls with drywall mud. I did this so that the walls could be used as the backdrop without adding any additional material other than photo backdrops. By eliminating the harsh 90-degree corners, it made the room look much larger.

Expanding outward

The model railroad comprises three scenes. The largest and main section of the layout is the Rutland freight yard and engine terminal with a roundhouse and a few large industries, such as the famous Howe Scale Co.

As I expanded the layout outward, I modeled the area of East Creek with a bridge that carried both the Rutland and the Delaware & Hudson lines into the city. Modeling this area allowed for the look of a double-track main line even though it was two separate lines.

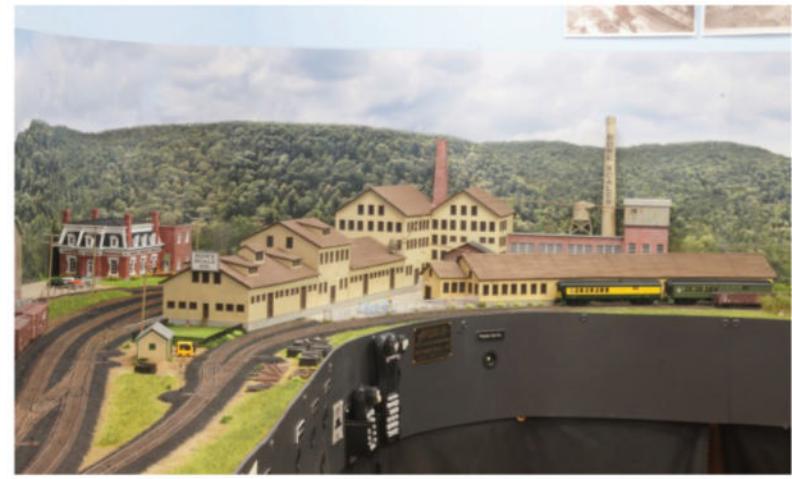
This one scene established a time frame for the railroad between 1947 and about 1955. That's because in June 1947, a flood washed out the bridge, and it was replaced with a single-track span. There are other items like the bridge that were gone before the diesels ever arrived that I have chosen to overlook; I find certain elements and structures are too cool not to model them.

The third section is Center Rutland, which turned into the second largest scene. This section was an interchange point between the Rutland, Delaware & Hudson, and Clarendon & Pittsford RR (CLP), which was owned by the Vermont



⑦ Delaware & Hudson switched the Alco plant in Schenectady, N.Y., and was always a loyal Alco customer. Here S2 3023 clatters across the Clarendon & Pittsford diamond in Center Rutland.

8 A duet of Delaware & Hudson Alco RS3s crosses Otter Creek on the way from Rutland to Whitehall, N.Y. Greg scratchbuilt the bridge using a Central Valley kit and Micro Engineering girders. The abutments are resin cast from a mold made by Jim Dufour.



9 During and after photos show how Greg scratchbuilt the iconic Howe Scale Co. from Evergreen styrene sheet and strip stock. The massive complex still stands just east of downtown Rutland.

Marble Co. I'm fascinated with the marble industry, as well as the numerous areas of the region that were served by all three railroads. Modeling Center Rutland allowed for the continuation of the D&H and Rutland's parallel main lines and allowed me to incorporate the CLP into the operating plan. This section also serves as a transition away from urban Rutland into a more rural scene.

Modeling Center Rutland also allowed me to model a second waterway, Otter Creek, that powered two marble mills on either side of its banks. It has two sizable railroad bridges that span the

waterway, one for the D&H and the other for the CLP. The track arrangement was fascinating because the CLP crossed two sets of diamonds over the D&H main line to connect with the Rutland. The CLP also dropped in elevation to pass under the D&H bridge and continue on to Proctor, Vt., while the Rutland also veered off toward Proctor.

The current model railroad is an around-the-walls design with continuous running. It passes through an adjoining room, which offers plenty of potential for expansion. Two of the planning goals for any future layout

construction will be to avoid duck-unders, as well as to maintain generous aisles space.

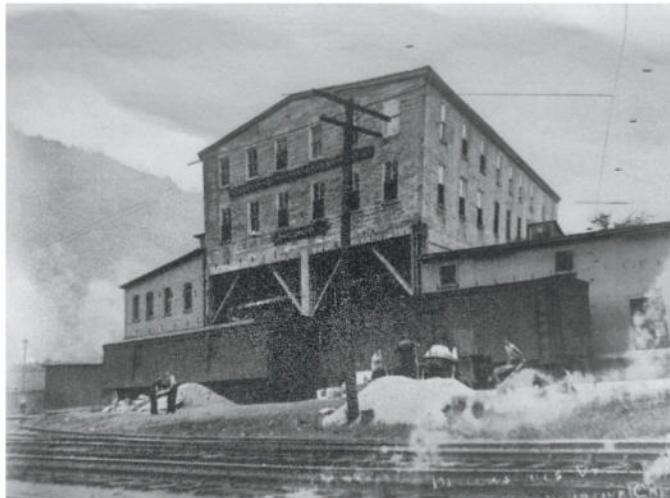
The track from Center Rutland continues through the basement steps, hugging the wall and reconnecting with the other end of Rutland on the opposite side of the room. I'm living with a duck-under at the moment with plans to continue along the walls into the second room of the basement. Part of the continuation will include scenes along the D&H Rutland branch to Whitehall, N.Y. This will create a section that will help hide the future helix.

Learning Points

- Personal experiences often have a great influence on what we later choose to model.
- Taking advantage of visits to tourist lines and what they sell can be very important.
- Planning for a move paid off when an entire major terminal scene was salvaged.
- Careful research may show that you can literally have your cake and eat it too – in this case, by modeling both the Rutland and the Delaware & Hudson.
- Constructing the layout one section at a time allowed time to plan for future expansion and careful decision-making.



10 Rutland's sole GE 70-tonner and Alco RS1 No. 403 join forces to switch the Vermont Marble Co. in Center Rutland, Vt. Greg built the plant from Evergreen styrene with custom resin supports for the Walthers overhead crane.



11 Sometimes a grainy old black-and-white photo or two that shows only two walls of a building are all you have on which to base a model, so you do the best you can. That was the case when Greg scratchbuilt this well-detailed model of the Bellows Falls Co-op Creamery in Bellows Falls, Vt. Prototype photo from Rockingham Free Public Library

Motive power and rolling stock

Motive power is a mix of Atlas RS1s and RS3s along with various brass Rutland steam locomotives. I run nine custom-built D&H 2-8-0 Consolidations made with Bachmann Spectrum drive mechanisms to help represent their unique look. Freight cars on the layout are primarily a mix of resin kits from Funaro & Camerlengo and Westerfield. Other rolling stock is from Accurail, InterMountain Railway Co., and various brass importers.

Looking ahead

Future expansion plans include building a peninsula that will come into the main room, visually separating Rutland and Center Rutland. The plan is to have open running into a scene at Proctor and

model the sprawling Vermont Marble Co. mill buildings connecting the CLP to Center Rutland.

One of my current projects is building a scene at Bellows Falls where the track will eventually climb to a second deck using a helix. This will extend the run with five modeled towns along the way. The second deck will be a mainline run with passing sidings for trains from Rutland or Bellows Falls. Both point-to-point and continuous running will be accommodated by this addition.

I want to thank Jim Dufour, Randy Laframboise, Mike Sparks, and Mike Evans for their help as the railroad has progressed. I also thank Paul and Linda Maynard of Lin's Junction and Henning's Trains for 25-plus years of help and friendly service. **MRP**



Meet Greg Wiggins

Greg Wiggins and his wife, Dawn, have two children, Megan and Ryan. He is a professional railroader who worked for CSX Transportation from 1999 to 2021 out of Philadelphia, Pa., as a locomotive engineer and conductor and now works for SMS Rail out of Bridgeport, N.J., and Morrisville, Pa. He loves skiing, photography, and traveling around the country to visit tourist railroads and national parks.

An action-packed garage



This HO scale plan was inspired by the Van Dorn Street Yard in Alexandria, Va.

By Bernard Kempinski // Photos by the author

The Washington, D.C., metropolitan area (often called the DMV for District of Columbia, Maryland, and Virginia) receives scant attention in the model railroad hobby. As a longtime resident of that area, I find that perplexing, as the region is chock-full of interesting and diverse railroad operations.

As far back as the Civil War, the railroads of the DMV were both vital to the war effort and extremely busy. In the later steam era, the growing city relied on seven different railroads to serve it. Potomac Yard, which was the main railroad yard in this area located in Alexandria, Va., hosted trains from the Pennsylvania RR; Baltimore & Ohio; Chesapeake & Ohio; Seaboard Air Line;

Atlantic Coast Line; Richmond, Fredericksburg & Potomac; and the Washington & Old Dominion railroads. The PRR built an elevated line on an impressive stone viaduct through the District of Columbia that featured coal-fired power plants, vast produce and general freight yards, elevated tracks to upper floors of storage buildings, and a large Navy Yard that saw all manner of heavy freight traffic.

Those railroads remained busy through the diesel era, although many of the retail customers of the railroad switched to truck service. But railroads still play an active part with up to 60 trains a day passing through the region's main north-south corridor. One can

find coal, mixed freight, Amtrak, and commuter passenger, garbage, and even double-stack intermodal trains now that the Virginia Avenue tunnels have been enlarged.

I drew inspiration from this railroad-rich environment to design a layout that captures double-track mainline action, staging, and a branch line with heavy 60-car freights powered by modern diesel locomotives.

Northern Virginia: A railroad hot spot

The layout plan focuses on the Northern Virginia region including parts of Alexandria City and Fairfax County. Prior to World War II, most of Northern Virginia was rural and

layout

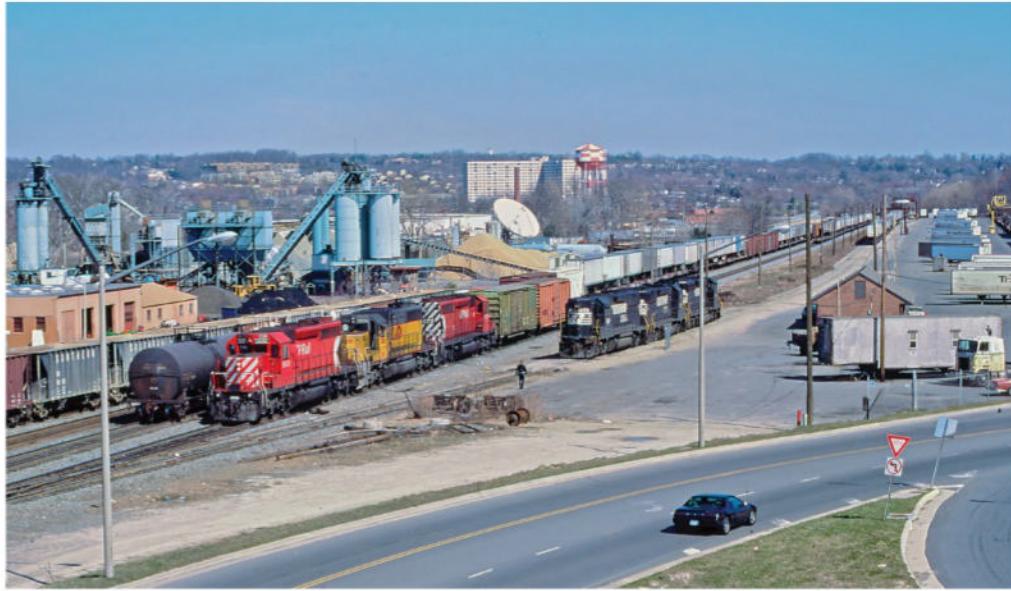


Judging by the motive power and fresh rock ballast, you wouldn't associate this scene with yard switching. But that's exactly what Norfolk Southern SD60E 6909 and an equally brutish General Electric unit are doing at the east end of Van Dorn Street Yard in 2024. Bernard Kempinski designed an HO scale track plan around this yard in Northern Virginia.

distinctly Southern, with dirt roads, small farms, and very little industry.

After the war, the area boomed and quickly developed as a bedroom suburb of Washington, D.C. It's not an area known for heavy industry, as the nation's capital's primary output is hot air and paper. Nonetheless, several businesses, including construction material suppliers, light manufacturers, and warehouses, developed along what is now the Norfolk Southern (NS) railroad right-of-way from Alexandria to Manassas.

The NS in Northern Virginia traces its roots to the Orange & Alexandria RR.



A Delaware & Hudson/CP Rail run-through passes Newton Asphalt (background) and the Van Dorn Street Yard on the right in the 1990s. Some Triple Crown RoadRailers can be seen in the parking lot at right.

Chartered in 1848, the O&A was the first railroad constructed on the south side of the Potomac River near Washington, D.C. The O&A made Alexandria its headquarters. Construction of the railroad started in Alexandria with a yard and shop and continued southward. The line reached Tudor Hall, later renamed Manassas Junction, in October 1851.

By 1854, rails reached Gordonsville, where it met the Virginia Central RR (later to become the Chesapeake & Ohio). This provided connections to Richmond and Charlottesville. Using trackage rights on the Virginia Central to reach from Gordonsville to Charlottesville, the O&A built southward from Charlottesville to reach Lynchburg by 1860.

These railroad routes played a critical role for both sides in the Civil War. The northern portion from Alexandria to Manassas was under the control of the United States Military RR and helped supply the Union army. The Confederates utilized the southern portions to supply Richmond and strategically deploy troops.

After the Civil War ended in 1865, control of the Orange & Alexandria shifted between major railroads until it was absorbed by Southern Ry. in 1894. On June 1, 1982, Southern Ry. merged with Norfolk & Western Ry., creating the Norfolk Southern Corp. (not to be confused with the Norfolk Southern Ry. Co.)

The Alexandria line has remained in Norfolk Southern's hands ever since. Today it is part of the railroad's Washington District. The north end of the

District is now at an interlocking with CSX named Val (formerly AF Tower) just south of the Alexandria passenger station. Much of the original northern end of the line, including the former shops area, has been removed and the land redeveloped for non-railroad purposes. The NS Washington District continues south to Lynchburg. It also includes the B-Line, which connects in Manassas, Va., to the Hagerstown District in Front Royal, Va.

The main line is controlled by Centralized Traffic Control (CTC) signals in Greenville, N.C., while the B-Line uses Track Warrant Control. After 1999, most of the north-south traffic on the NS Washington District uses the B-Line to avoid Alexandria and downtown Washington, D.C.

Between Alexandria and Manassas, where NS maintains a small yard, there are just a few scheduled local freight trains. Those included a coal local that works from Manassas to the power plant and Robinson Terminal in Alexandria and back. Unfortunately, both of those are now closed.

Another train can switch the Shirley Industrial District warehouses. Other locals work from Vulcan Materials quarries in Virginia to two Vulcan Materials facilities in Alexandria, one in the Shirley Industrial Park and the other near Van Dorn Street, across from the former intermodal yard. Intermodal trains used to originate in Alexandria's Van Dorn Street Yard for a run to Atlanta, while their northbound counterparts terminated here.



Norfolk Southern 3402, an Electro-Motive Division SD40-2, works cars at Vulcan Materials in the Shirley Industrial District. Vulcan's veteran end-cab switcher waits for its turn to work the hoppers.

With the closing of the Van Dorn intermodal yard, those trains no longer run. However, this yard — which NS calls Alexandria Thoroughbred Bulk Transfer (TBF) terminal — is now a busy terminal for ethanol trains. Norfolk Southern transports ethanol for the Northern Virginia fuel market in 80-car unit trains. The railroad has expanded the yard to simplify switching, but it still requires a good deal of work to service the trains in the terminal.

Passenger trains also use this main line. Virginia Railway Express commuter trains operate on NS tracks from Alexandria to Manassas. Amtrak's *Crescent* and *Cardinal* utilize all or portions of the NS Washington District as they service Washington, D.C.

Light industry

The Shirley Industrial District started in the 1950s to provide a location for light and medium industries to develop. The Shirley Industrial District was located in Springfield, Va., at the intersection of the I-395, the Shirley Highway,



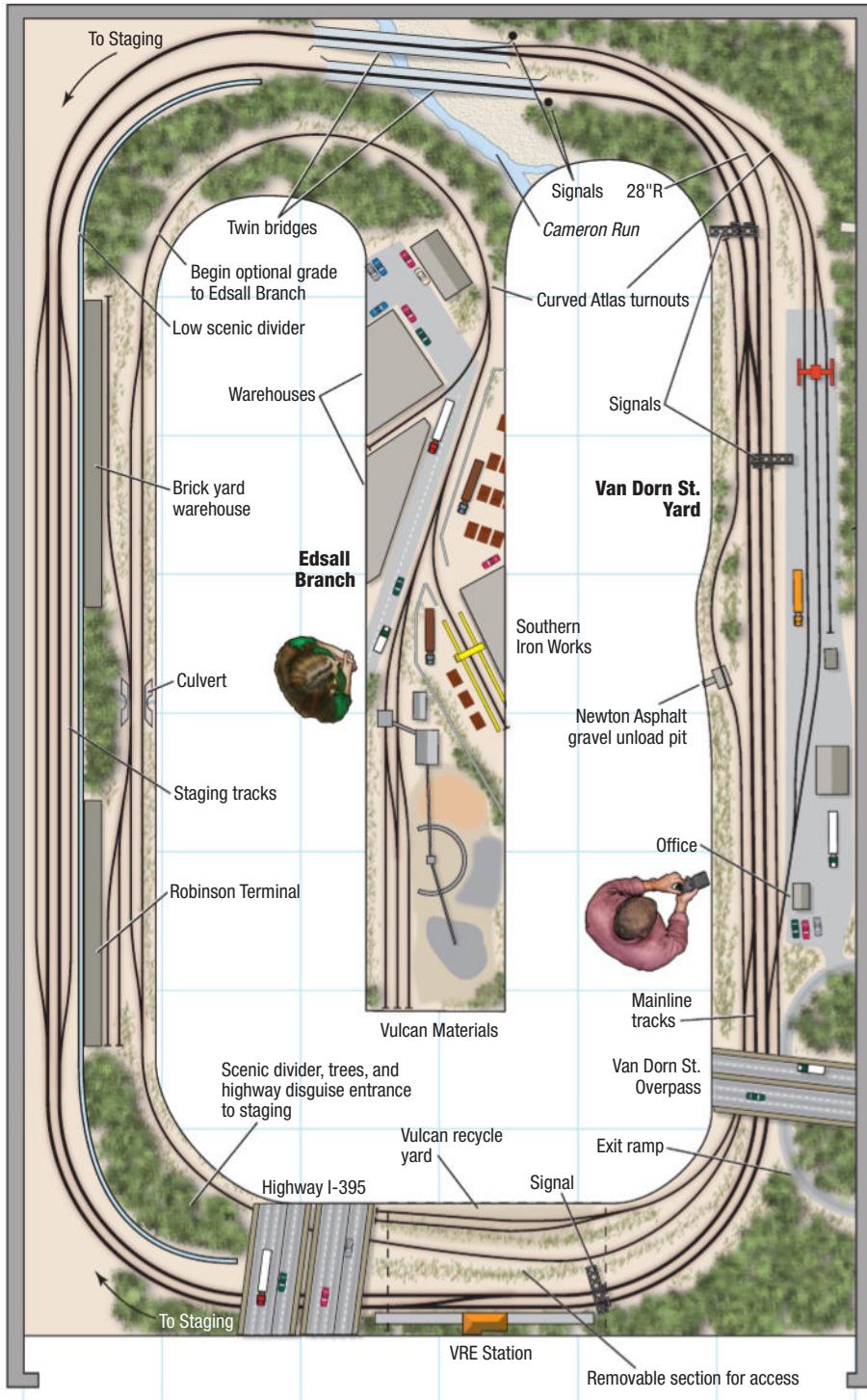
Norfolk Southern engines departing Vulcan Materials pass Southern Iron Works. Note in the plan that Southern Iron works has been moved to the opposite side of the track. The black-and-white sign and the yellow cranes are signature elements of the scene.

and the then-under-construction Capital Beltway. The Southern main line was adjacent to its southern end and provided rail service to the park. Several companies moved into the industrial park over the subsequent years.

Southern Iron Works was one of the first businesses to move into the park in the early 1950s. The structural-steel fabricator has been in the Washington,

D.C., area since 1933. Its facility had a stub siding where gondolas brought raw steel plates into a receiving yard.

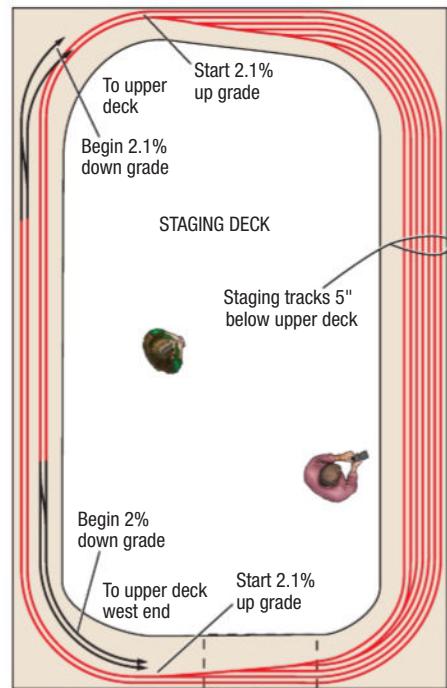
Overhead cranes unloaded the steel plates and stored them in orderly piles until needed in the manufacturing process. When needed, the overhead cranes moved the plates into the main structure where the fabrication was done. This involved cutting, welding, and shaping



Alexandria Van Dorn St. Yard

HO scale (1:87.1)
Room size: 12'-0" x 19'-0"
Scale of plan: $\frac{3}{8}$ " = 1'-0", 24" grid
Illustration by Bernard Kempinski

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



Track plan at a glance

Name: Alexandria Van Dorn St. Yard

Scale: HO (1:87.1)

Size: 12'-0" x 19'-0"

Prototype: Norfolk Southern

Locale: Northern Virginia

Era: 1990s

Style: walk-in

Mainline run: visible 40 feet

Minimum radius: main, 30"; branch, 28"

Minimum turnout: No. 6

Maximum grade: 2.1% in optional staging

Train length: 8 to 20 feet

Benchwork: open grid

Height: 0" to 5½" relative to chosen layout elevation

Roadbed: cork

Track: Atlas code 83

Control: Digital Command Control

the plates into all manner of structural beams used in construction.

The finished steel beams were shipped to job sites all around the Washington and Baltimore area, usually by truck. Southern Iron Works stopped receiving steel via rail in the early 1990s, but the tracks and unloading facilities are still present. The layout plans assume rail service has continued.

Robinson Terminal Warehouse Corp. in the Shirley Industrial Park has been actively involved in the warehousing

business since 1939 in Alexandria and Springfield, although it can trace lineage to an Alexandria firm as far back as 1853. This location handles much of the newsprint that the *Washington Post* uses. Several boxcars are spotted at the Shirley Industrial Park warehouses each week.

Edsall Road Yard & Recycle is the major user of rail transportation in the Shirley Industrial Park. It's part of Vulcan Materials Co., a major construction materials company headquartered in Birmingham, Ala. Vulcan is the



nation's leading producer of construction aggregates: primarily crushed stone, sand, and gravel, materials that are used in nearly all forms of construction. In particular, large quantities of aggregates are used to build non-residential properties and roads.

Across the United States, Vulcan has 166 stone quarries, 37 sand and gravel plants, 66 sales yards, 45 asphalt plants, and 22 ready-mixed concrete facilities that shipped 255 million tons of aggregates in 2006.

The facility at Shirley Industrial Park is a recycled concrete and gravel supply yard. The primary products are asphalt aggregate, base material, concrete aggregate, manufactured sand, and re-crushed concrete. Vulcan has a three-track yard and a small end-cab switcher on hand to work it. There are several conveyors, crushers, and numerous material piles scattered about the facility to provide modeling challenges.

Norfolk Southern delivers one or two trains a day with up to 60 rapid-discharge hopper cars per train. Many of the cars, which are in captive service from Vulcan quarries elsewhere in Virginia, have VULX reporting marks. Norfolk Southern uses heavy-duty power, including six-axle diesel

locomotives like the railroad-rebuilt SD60Es and General Electric Dash 9s, to drag these cars up the steep grade to the industrial park.

Several businesses maintaining large warehouses with rail-served sidings along the NS main line are in this area and in the industrial park. Some of these are now closed, but a few still get rail service. The Vulcan recycle yard near Van Dorn Street also kept a switcher on the property to shuffle gondolas around. Alas, that facility closed in the 2020s.

The HO basic plan

The layout's design focuses on the Van Dorn Street Yard and the activity that yard supports. I first became interested in this area when I lived near it. My young son, Chase, was fascinated by trains. He and I would often visit the yard. His incessant questions about railroads piqued my interest in the subject. As he grew older, his interest waned, but mine grew until I became a full-fledged model railroader.

I designed this layout to fit an area of 12 x 19 feet. It could fit in my garage or any similar-size space. The layout wraps around the walls and thus requires a duckunder or a liftout to access the central pit. The best location for a liftout is

Norfolk Southern SD60E 6909 leads a freight train across the bridges at Cameron Run in 2024. The graffiti on the bridge piers might make an interesting detail.

between Van Dorn Street and the I-395 overpass, as indicated on the plan.

The model railroad is inspired by prototype track arrangements in the 1990s. I developed two versions of the plan. The basic plan is a single-deck, double-track oval supported by staging, albeit somewhat limited. The advanced plan includes a lower deck for much more staging capacity.

The main focus of attention is on the Van Dorn Street Yard and the activity there. In the 1990s, it was an intermodal yard that received trailer-on-flat-car and RoadRailer trains. The railroad maintained a gantry crane for unloading trailers from the flatcars. As mentioned earlier, the yard is now used as an ethanol terminal if you wish to update it.

There are two industries in front of the yard. Newton Asphalt has a gravel pit under an odd bump in the track for unloading bottom-dump hoppers. Vulcan's smaller concrete recycling plant is to the west of that.

The main line winds around the room away from the yard in both

Learning Points

- The metropolitan District of Columbia area offers a lot of interesting modeling opportunities.
- Focusing on a tightly defined location does not preclude through traffic.
- Even a sprawling urban area can be modeled in HO scale in a garage or other area that's less-than-basement size.

directions. The eastbound main crosses Cameron Run on a pair of interesting bridges. The westbound main passes a Virginia Railway Express station and then travels under I-395.

The tracks curve behind a scenic divider to a small staging yard. There's room for storing two 12-car trains in this staging yard without fouling the main lines. The trains re-stage themselves when they enter the staging yard by the virtue of the double-track oval design. This is admittedly a small number of tracks to try to simulate the coal, passenger, and through freights, including a Delaware & Hudson run-through, that comprise daily train activity.

The two main tracks have signals to support right-hand running. The signal system could be designed to help ensure through trains can safely negotiate the somewhat-hidden staging yard. A camera system or strategically placed mirror would be simpler solutions to managing traffic into the staging yard.

The Edsall Branch shown on the plan is a proto-freelanced rendition that combines various industries from the Shirley Industrial Park and others along the main line. It departs in a westerly direction from the main line near Van Dorn Street Yard. This branch passes in front of the upper-deck staging yard. There are two warehouses with facing- and trailing-point sidings that require switching service. Those warehouses help hide the staging tracks.

The branch continues around the layout up an optional steep grade to the central peninsula where several other customers await. I swapped the Southern Iron Works to the opposite side of the track to better fit in the space available. It's black-and-white sign and yellow cranes are signature elements of the branch line.

The Vulcan Materials facility at the end of the branch is the main customer. It can be a challenge to work long cuts of



Norfolk Southern 9851, a General Electric Dash 9-40CW, is deep in the Vulcan Facility at Shirley Industrial Park. This photo illustrates how NS uses the heaviest engines to switch this branch.

hoppers there. Because there's no room in the industrial park to handle all of the cars, the crews will probably pull the empties and bring them to a small run-around siding by the Robinson Terminal warehouse and brickyard. To spot the loads, they'll shove the whole cut of cars up the hill into the Vulcan yard. Norfolk Southern tends not to bring cars destined to the other business into the industrial park with the Vulcan train. Those are done in a separate run.

The aisles are quite generous. They should be easily able to accommodate up to four operators.

The HO advanced plan

The advanced plan greatly increases the amount of staging available. There are more and longer staging tracks in the new staging yard under Van Dorn Street Yard. This extra staging would better simulate the steady stream of through trains in this area.

The advanced plan is still a double-track oval. The key difference is that in the area where the small four-track staging yard was in the basic plan there are now two parallel double-track sections that slope at 2.1% in opposite directions down to the lower level yard. Those sloped track sections are hidden behind and below the warehouses. The staging yard is about 5" below the upper deck. This is sufficient for occasional access to the staging yard for maintenance and re-railing cars.

The plan includes several crossovers to allow the most operating flexibility. The staging-yard ladder design allows

access to the switch points without being blocked by trains already in staging.

The additional train capacity of the bigger staging yard might also merit a dispatcher's job to keep the sequence of trains organized.

As in the basic plan, the liftout is best placed under the Virginia Railway Express station. However, that might not be the best solution for all rooms.

Both the basic and advanced plan provide a variety of enjoyable construction, scenic, and operational challenges. The payoff comes when multiple operators bring a steady stream of through trains across the layout while switch crews work the branch line. The various bridges, warehouses, iron works, and gravel yards offer variety and interest. The layout provides an opportunity to run long trains and switch big industries in a modest space. And your model railroad will be one of the few that model this interesting region. **MRP**

Meet Bernard Kempinski

Bernard Kempinski is a regular contributor to MRP. He lives in Alexandria, Va., with his wife, Alicia. After serving in the United States Army, Bernard retired from a 35-year career as an engineer in defense analysis. He now runs Alkem Scale Models and works on his model railroad when he isn't accompanying his wife on the golf course.



Although Chuck Tremblay's N scale ATSF Albuquerque Industrial Division is designed to fold up against the garage wall when not in use, the layout will fold down safely with a car in the garage.

A fold-up garage layout

Building a second N scale railroad in Florida for the winter

By Chuck Tremblay//Photos by the author

I have been an N scale modeler since 1968 and have built seven layouts that reached a reasonable level of completion, along with some Ntrak modules. Three-deck layout No. 6, measuring 12 x 40 feet, is in our New Hampshire summer home. It was started in 1997 and is now in its third home with only minor changes. The layout is set in 1976, as I love the Santa Fe's Bicentennial SD45-2 diesels (I have all 5!), and most of my cars are older 40-footers that fit that era.

When I retired, I spent a lot of time getting No. 6 out of storage and back together. When my wife retired, we began renting a house in The Villages in Florida for the winter. Once we knew we liked it there, we purchased a house and now are true Snowbirds, spending roughly six months there and six in New Hampshire.

Once we were settled, I started getting active with the N scale division of The Villages Railroad Historical Society. My wife saw my enjoyment with the club and, knowing my constant need to keep busy, suggested I build a small railroad in Florida — layout No. 7!

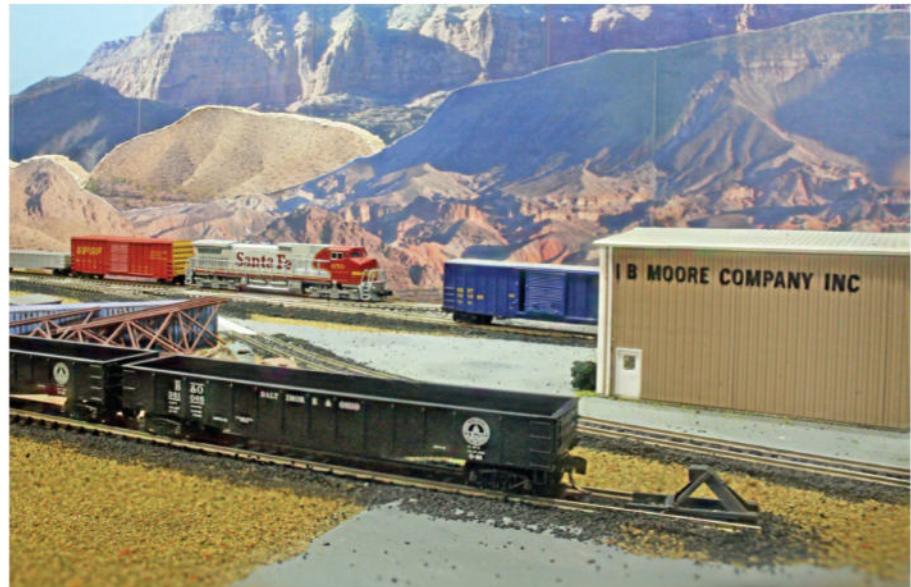
Reusing an old idea

What you hear is true: Florida houses have no basements. Also, with family and friends wanting to visit, it isn't possible (at least for me) to take over one of our three bedrooms. My wife suggested the garage as a possibility, but I knew it had to remain usable as a garage to stash the car, golf carts, and miscellaneous stuff when we leave for the summer.

I had anchored layout No. 4 in my parents' basement to a wall on large bolts so that it could hinge up against the wall when not in use. This seemed to be a good solution for the garage layout with some improvements. One wall of the garage had old kitchen cabinets where I store assorted tools and hardware. A solid box frame with a three-track staging yard, lag-bolted to wall studs, would give a solid base to mount the folding part of the layout, provide hidden staging, and move the hinged part of the layout out so that I could have some clearance for buildings and scenery. The hinged portion of the layout could be shaped to fit under the cabinets with about $\frac{1}{2}$ " of clearance. Unlike No. 4 where the free edge hung from the ceiling by chains when in use, No. 7 would have three legs that fit into sockets under the layout to support it.

Construction

My planning looked good, so it was time to cut lumber and attend to other



Chuck opted to stick with modeling the Santa Fe in N scale when he designed the garage layout for the Tremblay's winter home. However, he chose a more modern era, just prior to the 1995 merger with Burlington Northern.



The railroad is obviously compact but still incorporates some major industries such as an intermodal yard and this Boise Cascade rock-crushing plant. The latter is a detailed and weathered Glacier Gravel kit from Walthers.

preliminary chores. Lighting in garages is generally poor, so I added two daylight light-emitting diode (LED) spotlights over the model railroad, as well as a strip of daylight LEDs under the cabinets. This gives plenty of light for both construction and operation.

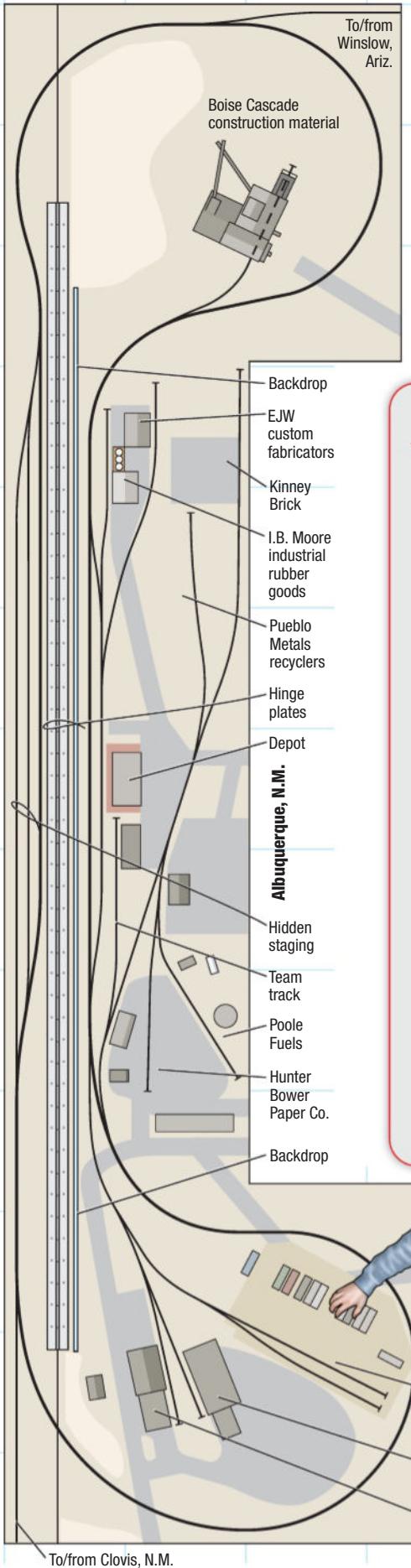
Everything in a second, seasonal, and smaller home is, well, small! Up north, I have a well-equipped woodshop. In Florida, with the space and storage limitations, I have a battery-powered circular saw and drill, a saber saw, and a lot of clamps and straightedges. That, along with common hand tools, is all it takes to make some solid, accurate benchwork. I just had to be careful when measuring and cutting.

The layout is constructed using 1 x 3 lumber and $\frac{1}{4}$ " lauan plywood. The

exception to this is the hinge area, which is two pieces of 1 x 6 lumber joined with No. 6 wood screws. The hinge area is notched to be the thickness of a 1 x 3 for about 18" at both ends and is where the tracks cross from the hinged to the fixed part of the layout. A piano hinge runs about 10 feet down the top of the hinge area, joining the two 1 x 6 boards. Latches at each end lock the folding part in the down position and pull the ends tight to maintain track alignment across the interface.

Once completed, the entire surface of the layout was painted with my favorite "Southwest Desert Sand" I had custom mixed years ago.

At the end of the first winter (four months), I had the main line operational.



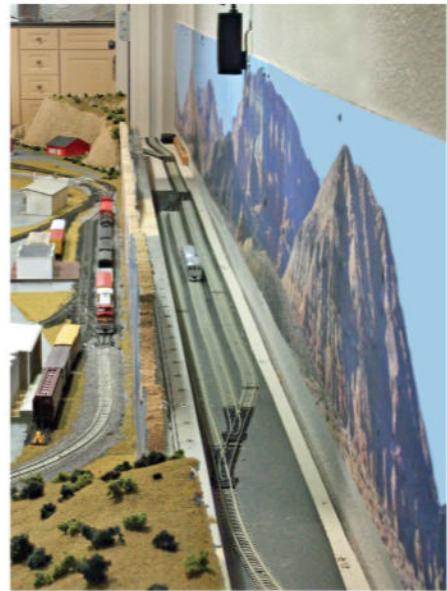
ATSF Albuquerque Industrial Division

N scale (1:160)
 Layout size: 3'-4" x 12'-9"
 Scale of plan: 3/4" = 1'-0", 12" grid
 Numbered arrows indicate photo locations
 Illustration by Kellie Jaeger

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

Track plan at a glance

Name: ATSF Albuquerque Industrial Division
Scale: N (1:160)
Size: 3'-4" x 12'-9"
Prototype: Santa Fe
Locale: Southwest
Era: 1995
Style: fold-up
Mainline run: 31 feet
Minimum radius: 14"
Minimum turnout: No. 6
Maximum grade: none
Train length: 4 feet
Benchwork: 1 x 3 frame with 1/4" plywood top
Height: 33"
Roadbed: Woodland Scenics Track-Bed
Track: Peco code 55
Scenery: 1" extruded-foam insulation board, plaster rock molds, Woodland Scenics ballast and ground-cover materials
Backdrop: Main backdrop on 1/8" hardboard; intermediate backdrop on 1/4" foam core; images from Railroad Graphics CDs
Control: Digitrax DCC with Wi-Fi



The long and sturdy piano hinge that allows the layout to be folded up is visible between the hidden staging yard with the Budd RDC and the thick scenic view block.

I put construction on hold to see how the track and benchwork survived both seasonal temperature and humidity changes. When we returned six months later, everything was as I left it, and now after two years in a garage with no climate control, there are no problems with warping, expansion, or contraction of any components.

The layout is relatively low, about 33" off the floor. When operating, I use my adjustable mechanic's stool. At that height the view is perfect.

Wiring the railroad

There are two electrical buses under the layout. The Digitrax DCC track-power bus — No. 12 red and green stranded wire — follows the track to provide track power. There are currently no blocks or power districts on the layout, as it's really too small to need them, and I have no plans to add signaling. I may add a circuit breaker to protect against short circuits rather than relying on the command station's internal breaker. Track feeders are No. 22 wire, also red and green, and feed every length of flextrack.

A DC bus provides 12-volt direct-current power for accessories and lighting. It is also No. 12 stranded wire, black and white. Black and yellow wires feed any accessories. I tried something new: All buildings on the layout are illuminated with LEDs and Woodland Scenics Just Plug components, both powered from the DC bus.



Two views of the benchwork under construction show the sturdy framing and the two long piano hinges running along the raised “backbone.” Note the notch in the benchwork to fit around the wall cabinets. The removable legs fit into sockets.

Initially, both buses ran through the two hinge interface boards, but when the layout was folded up and down, they weren't stiff enough and would get pinched. I made some spring-loaded contacts using springs, assorted screws, nuts, and bolts at the interfaces, and they work fine.

The Digitrax network cable to the two Digitrax UP throttle panels was stiff enough not to pinch, along with the power for the radio panel, so I left them alone. I recently added a Digitrax LNWI Wi-Fi interface to the layout. This is really working well with the WiThrottle software on my iPad, and I will probably add this to the New Hampshire layout as well.

Early on, I kept forgetting to unlatch the movable part before raising it for storage. I wired a red LED that gets its power through the latches that lock the layout into position. If the red light is on, don't lift it up!

One important point, especially for layouts at a low height and older builders: It is really nice to drop various power feeds through the top of the layout, then fold it up and make the final

connections from a comfortable seating or standing position.

Track choices

While my old model railroad has Atlas and Peco code 80 track and turnouts, on this layout I used Peco code 55 for more realism. The main line track, which has concrete ties, is laid on Woodland Scenics foam Track-Bed. The sidings have wood ties and are laid directly on the plywood. All switch points are manually controlled.

The track plan was designed using SCARM software. Initially, it was a loop of track with John Allen's tried-and-true Timesaver layout as a switching area. I played around with this until I was happy and had a balance of facing- and trailing-point moves. I did the same for Kingman on the New Hampshire layout; using an existing design and modifying it can get the juices flowing. Both areas started from the same design but now are quite different.

Two tracks appear to run off the edge of the layout. I have designed cassettes to connect to those tracks. I will probably build cassettes as kits at home and ship them to Florida for construction.

The minimum mainline radius is 14". I think this is a little tight (my home layout uses 20"), but I won't be running Big Boys or Northerns, and tests with six-axle diesels, including a long-truck Alco PA-1, found no problems.

The only part of the layout where I followed my track plan exactly is the main line. This is true for both layouts; once the main line was operational, the industrial and switching areas were

“civil engineered” on the fly to meet my operational needs and fit structures as they were built.

Where the tracks cross the interface is interesting. I laid the track across the joint and spiked every tie, both in the center and on the outside rail of the curve. I then used a razor saw and cut the track along the joint. This has held the track in place for a couple of years now. There have been no problems maintaining alignment.

All track is visible, except for a short 8" tunnel, so cleaning and maintaining the track is easy.

Scenery and buildings

I admit that scenery and structures aren't my forte, but I can do a passable job. Buildings are mostly kits, all painted, weathered, and with extra details added to make their origin less obvious. I do my weathering with acrylic sticks. They work like chalk and are applied the same, but they stick better and aren't impacted by water or Dullcote as much.

My wife gave me a Cricut machine for Christmas a few years ago. These are normally used to cut self-adhesive vinyl, paper, cardstock, and other similar materials. I have stretched its capabilities and have used it to cut and score styrene, which I have used to make small buildings and other features. I used it to make concrete platforms for the intermodal terminal and Poole Fuels; the foundation, loading dock, and tank area for I.B. Moore; the loading ramp for the team track; and even to scratchbuild a model of the building where my layout lives in New England!

Learning Points

- Listen to your spouse when she/he suggests building a second model railroad.
- Look creatively for a suitable location for that railroad and how to accommodate it in that space.
- A garage may not be as uninviting as it first seems.



The layout in the stowed position is a snug fit around the cabinets. Note the Digitrax DCC system on a shelf under the bench-work. Latches at each end lock the folding part in the down position and pull the ends tight to maintain track alignment.

Scenery is made with extruded-foam insulation board, plaster rock castings, drywall compound, and various Woodland Scenics materials. I use light-weight spackle to make roads and paint them with a custom-mixed color from Lowe's. I had them mix me a sample, and the small sample is probably enough to do a much larger layout.

The backdrops are from CDs I bought years ago by Railroad Graphics and are made up of 8" x 10½" segments. None of the options that were appropriate for my layout were long enough to span the entire layout (12' 9"). To remedy that, I took the first and last two pieces and reversed them on the computer so they would match and extended the main backdrop on both ends.

The front backdrop is only about 1" from the track and mounted to the moving hinge board. I eliminated the sky from those and mounted them to ¼" foam core cut to follow the hill contour and applied scenic material to the top edge. This gives a 3-D effect to the backdrop and more importantly hides the hinge section.

Operations

When the idea came to build this layout, one of my first decisions was to change eras. I have some nice-running locomotives and some other rolling stock that were too new for my other layout. I decided on 1995, the last full year of the Santa Fe before the BNSF merger.

Another early decision was to have the possibility of interchanging cars with the layout in New Hampshire. The new layout represents an industrial area in Albuquerque, N.M., east of my other layout. I have been setting up routes and trains in the same JMRI OperationsPro

database as the New Hampshire layout that are limited to this layout, but I could expand to interchange with the other layout easily if so desired.

What happens to the cars at the industries when the layout is folded up? Before undoing the latches and turning off the red light, I have trays with slots labeled for each industry and move the cars there. It takes only a few minutes to set up for operations and remove them after.

Like the New Hampshire railroad, industries are named for actual industries in that geographic area with no intention of duplicating their facilities. There are three exceptions to this: I.B. Moore Corp. is named for an industry owned by my uncle and where my father worked. EJW Engineering is named for Jim Whitehead, whose layout — the UP Northern — was the cover story in the June 1987 MR. The building is from that layout. Poole Fuels is named for Ernie

Poole, whose Montana Rail Link layout was in the May 2009 issue of MR.

Ernie, Jim, and others helped build layouts 5 and 6, and I learned a lot from them as part of our long-time Thursday Ngineers round-robin group. Thanks to all who contributed and mentored me over the years. This new layout is a one-man show, but I still ask advice and take suggestions from them on our weekly Zoom calls.

Going forward

At this writing, the layout is celebrating its second birthday, so there is a long way to go. An old friend of mine who was a prolific modeler said he did it by setting aside one hour a day to work on his modeling. It's hard to do with my layout in New Hampshire, as it is in a building 7 miles from home. This layout has the opposite distance "problem:" It's right there! I usually leave it down, and if there's a quick thing to do when I walk by, I do it. It's constant progress, six months at a time.

Most of the scenery is still only basic. I especially need people, cars, and trucks to populate the industries and streets. I have two more industrial buildings for McKinley Brick that I need to complete, then I'll work on non-railroad structures.

Most important to me is to get into operations. I need to finish configuring OperationsPro. Operation probably won't support more than one or two people. Once the wiring is finished, I will cover the bottom of the layout with another layer of plywood to protect the wiring when the layout is folded up.

Having "winter and summer" layouts that complement each other in many ways, yet are set in different time frames, has worked out very well. **MRP**

Meet Chuck Tremblay

Chuck Tremblay received an American Flyer train set for Christmas at age 7, which slightly addressed his envy of his cousin's Lionel trains, which he later inherited and still has. He started in N scale in 1968 and never looked back. Chuck is one of the original members of Northeast Ntrak and has been a member of Ntrak (now NRail) since 1981. Retired from a senior IT management role with a major chemical company, Chuck also enjoys bowling, golf, boating, home improvement projects, and antique cars.

Reader forum

We love progress reports!

The area of my Gateway Western visible in the lead shot from my MRP 2025 article is starting to develop!

Matthew Freix
Manhattan, Ill.

MRP 2025

I really enjoyed John Golden's article in MRP 2025 on a traverse table-based layout. If he builds another one, he should write a step-by-step article on building a traverse table for *Model Railroader*. Until I read his article, I had not appreciated the importance of it on a small layout.

Jeff Halloin
Eau Claire, Wis.

I certainly enjoyed Tim Nicholson's "Small spaces, high standards" feature in MRP 2025. Both his modeling and his photographs set a very high bar, indeed! Who would have thought you could fill 10 pages with great photos of a layout as small as Tim's?

Brooks Stover
East Lansing, Mich.



Matthew Freix sent us a visual progress report on his HO Gateway Western. The area shown in his MRP 2025 article's lead photo is beginning to develop with the arrival of a custom-made crossing. Matthew Freix photos

To me the most interesting and insightful articles in the 2025 issue of MRP are Steve Holzheimer's on planning and designing his Akron, Canton & Youngstown layout to move and change, and John Golden's Hermitage Road cameo layout with traverser. I'd seen John's work already, and it's nice to see it getting wider exposure.

Tim Nicholson's work is always a joy and inspiration to see. Sometimes just a single photo or two will catch my eye and cause me to linger, taking in the details and forms, such as the bulk cement and concrete batch plant on

Tim Garland's old layout (bottom of page 13). Sure, they are more-or-less stock Walthers kits, but combined they present more than the sum of their parts.

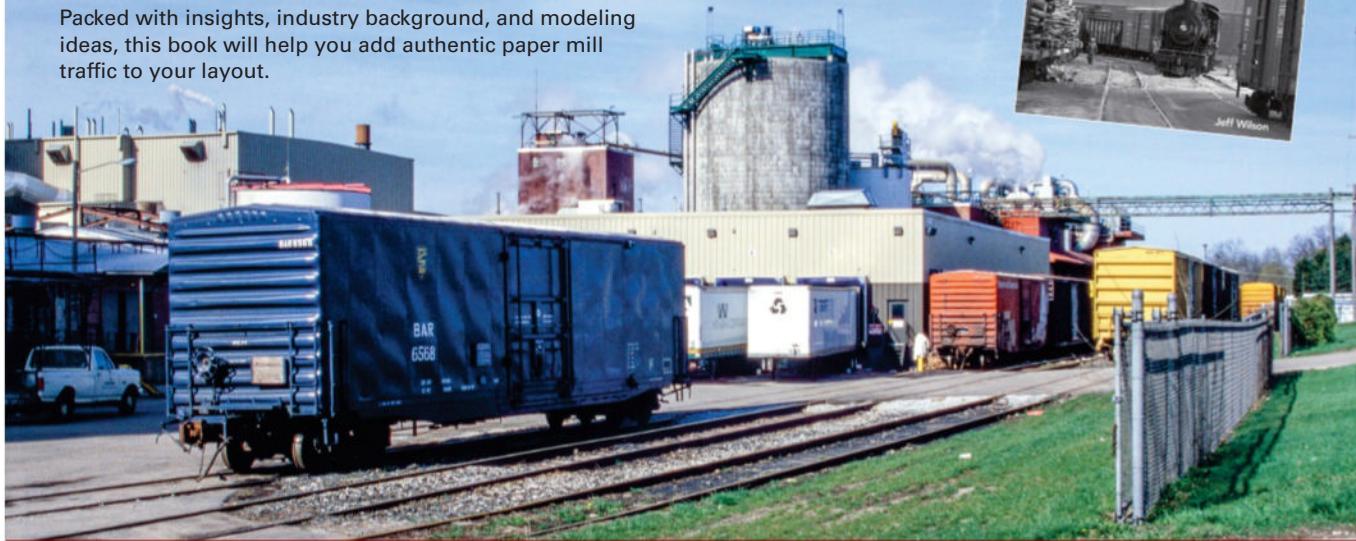
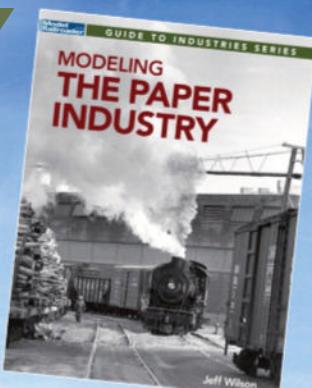
The photos of the warehouse with the cantilevered roof over the loading dock on Kinzer Hurt's HO scale First Coast RR apartment shelf layout really capture the form of these ubiquitous modern buildings. And the two small photos of the shadow-box effect on Lee Nicholas' HO scale Utah Colorado Western were a perfect closing.

Jim Eager
Ingersoll, Ontario, Canada

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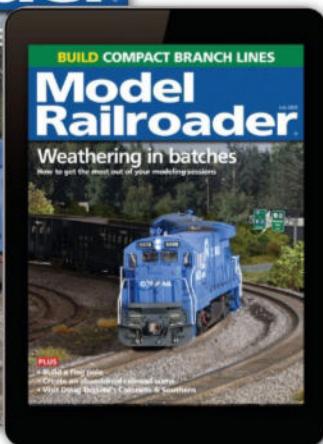
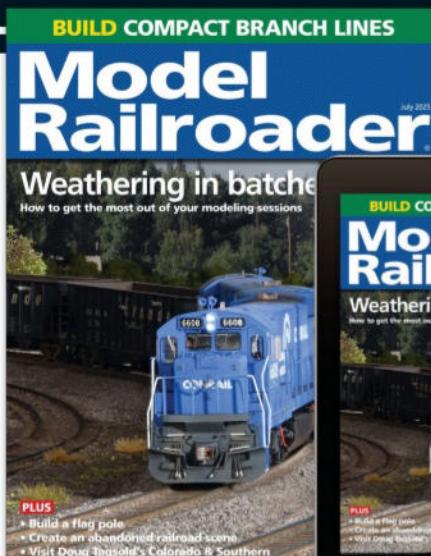


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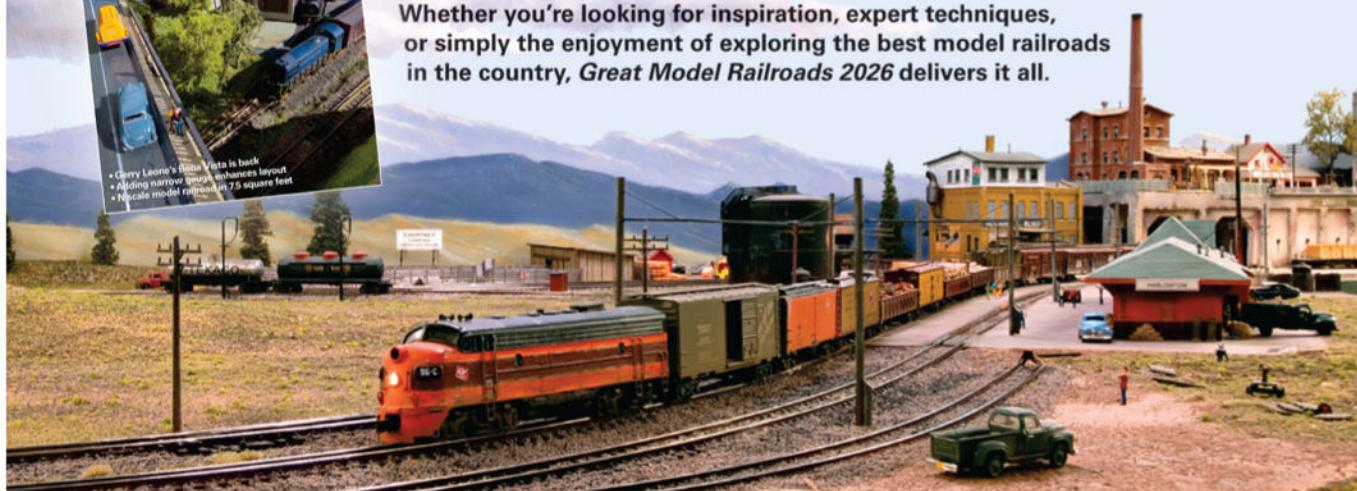
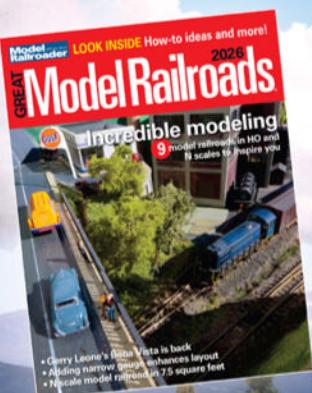
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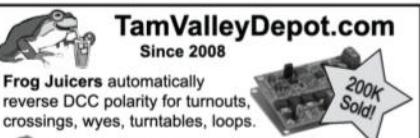
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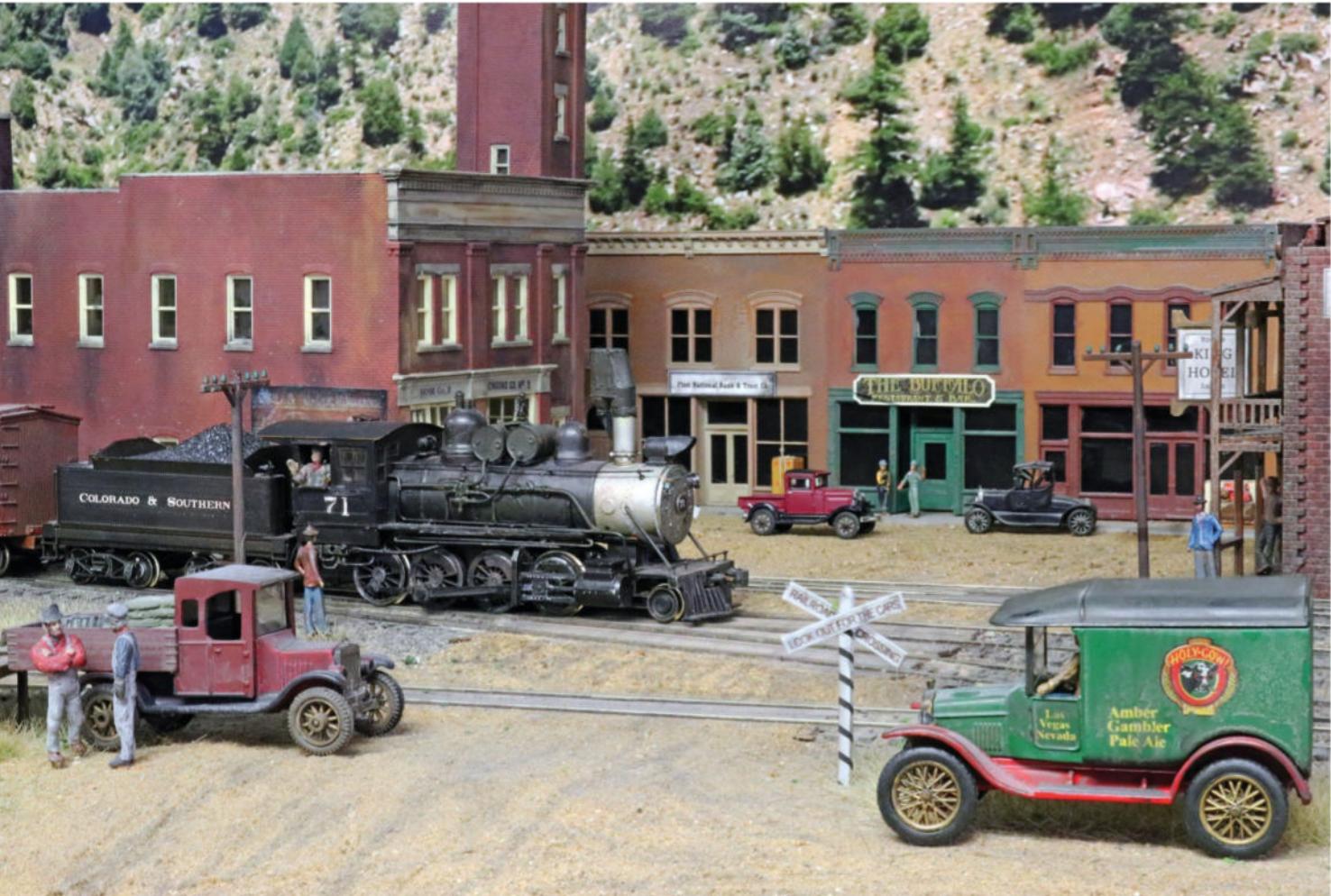
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Forcing perspective by changing scales

By Doug Tagsold



Doug Tagsold uses larger-scale models in the foreground and smaller-scale models in the background to fool the eye into seeing more depth in the scene than actually exists. Doug Tagsold photo

The photo shows a forced perspective using three different scales. I model in the unusual scale of 1:72 — see MRP 2018. But that doesn't mean that everything on my railroad adheres to that proportion. Using figures and models of a slightly larger or smaller scale can "force" the perspective to create what appears to be greater depth in a scene.

The two vehicles in the foreground, along with the two standing human figures by the maroon truck on the left, are all S scale (1:64), hence larger in scale than my railroad. The Colorado & Southern locomotive, engineer, and conductor discussing their next switching move, as well as the two individuals watching on from the King Hotel front

porch to the right, are all 1:72 scale figures. (There are lots of 1:72 figures available: military, civilian, and American Old West. Many of the European OO figures are advertised as OO/HO, and the few that I tried appeared to be closer to HO [1:87.1].)

The fire station directly behind the locomotive is a large HO scale structure, suitable for 1:72 scale. The more distant buildings, automobiles, and figures, are all HO scale (1:87.1). It is common to find modelers using smaller-scale models in the background of their scenes to create the appearance of greater distance, but this photo shows that larger-scale models can be used in the foreground as well. The depth of this scene is only 18".

I've put S scale (1:64) engineers and firemen in the cabs of all of my steam locomotives, as they seem to reinforce the look of the diminutive size of narrow gauge equipment.

To create a forced perspective, I've come up with the following guidelines for figures, vehicles, and even some structures on my layout:

- In the foreground between the aisle and track I use S scale (1:64).
- Closest to the track, I use 1:72 scale.
- Behind the track to the backdrop, I use HO scale (1:87.1).

It may sound strange, but it seems to work, at least to my eye. Of course, if you're working in a different scale, adjust the numbers accordingly. MRP

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