



1 A Class B Shay works the yard on Andrew Dodge's HO scale Asheville Lumber Co. layout. One of the by-products of the lumber operation is sawdust, used by area horse farms and as insulation in ice houses.

Geared steam down South

This 6 x 8 foot freelanced HO scale logging layout fits neatly in the corner of a basement room

By Andrew Dodge • Photos by the author

Model railroaders come to the hobby from different points of view or objectives. Some just like to run trains. Others meticulously research and model a specific prototype. A few fill all their available space with as much layout as possible. I'm guilty on all counts. During my years in the hobby, I've built almost a dozen model railroads, ranging from a small German N scale layout in less space than a sheet of plywood to 1½" gauge live steam system with a quarter mile of track around the house, including superelevated curves!

My latest layout, the HO scale Asheville Lumber Co., came to be in a rather backward manner. For more than 30 years I've been an O scale modeler. Then, in 2020, I came into possession of my father's HO equipment from the 1950s and '60s. I decided to hold on to a



2 Andrew used pieces of extruded-foam insulation board and papier-mâché for the scenery. The trees and bushes help mask the joints between sections and make the layout feel larger.

few items as keepsakes, including two geared locomotives I've always loved. Instead of displaying the models, I began thinking about a small model railroad to run them on. I wanted the layout to be movable, easy to build and maintain, and have operational interest. Further, I wanted it to be something to engage and give to my grandkids.

Inspiration from the past

While everyone has their own priorities and interests, mine took me back to my logging line days. One track plan from *Model Railroader* that always intrigued me was the Gum Stump & Snowshoe by Chuck Yungkurth from the April 1966 issue. The 1 x 6 foot HO scale layout had two small switching areas at either end with a switchback connecting the two yards. I had more room than that to work with, but the plan provided the seed for my layout.

The two ends of the layout connected by the switchback are separated in elevation, which is important when lateral distance is limited. On my model railroad, I have a logging camp at one end and the depot, main yard, enginehouse, and locomotive facilities at the other.

Due to space limitations, selecting structures of an appropriate size was critical. Since most of the layout is set in a wooded rural area, I didn't want the buildings to overpower the landscape.

Finding a space

A corner of my basement living room provided the ideal location for the

layout. After surveying the space, I knew I could extend one end out 8 feet before I ran into the fireplace. The other end could come out 6 feet from the corner.

The 6 x 8-foot layout consists of three 2 x 4-foot sections of 1"-thick extruded-foam insulation board. I wanted the layout to be tall enough to clear the entertainment center below yet allow for a comfortable reach-in distance for lining turnouts and uncoupling cars.

I designed the benchwork with simplicity in mind. Since a model railroad like this would be ideal for someone downsizing, I chose materials that are readily available in hobby shops and home-improvement stores. No special tools are needed, and the materials create little or no mess.

I selected 2 x 3s for the open-grid benchwork since they were cheap and easy to work with. Lumberyards and some home-improvement stores will, for a fee, cut lumber for you. Once I painted the benchwork Forest Green, it blended into the room. If you want to give the benchwork a finished look, you could use any type of hardwood.

For those who can't stand for long periods, the model railroad would fit on a pair of 6-foot bi-fold tables. A chair with caster wheels would make the layout accessible to virtually anyone.

Bring on the foam

I used 1"-thick extruded-foam insulation board as the scenery base. The material is rigid, not susceptible to changes in moisture and temperature, and can be cut with a utility knife. The foam can



3 Ashville Lumber Co. three-truck Climax No. 6, a brass import from the late 1960s, passes the station. The Gulf Oil tank car now serves as fuel storage for the logging railroad, which is set in the southeastern United States.



4 The logging camp is at the opposite end of the line. The Shay is a Pacific Fast Mail brass import from 1961. Most of the freight cars in the scene are from the same period except for the caboose, which is a craftsman kit from the early 1950s.

also be scored with a hobby knife and snapped, similar to styrene.

Since I wanted to be able to disassemble the layout into manageable units, I cut the foam into three 2 x 4-foot sections. This required a way to secure the sections together on the benchwork.

My solution was to glue thin, 1" angled aluminum pieces along the front and back edges of the extruded-foam insulation board with Loctite PL300, a foam-safe adhesive. You can find

4-foot-long aluminum angle at most big box home-improvement stores. The lightweight material is easy to drill and can be cut with attachments in a motor tool [Wear eye and ear protection when working with a motor tool. — Ed.]

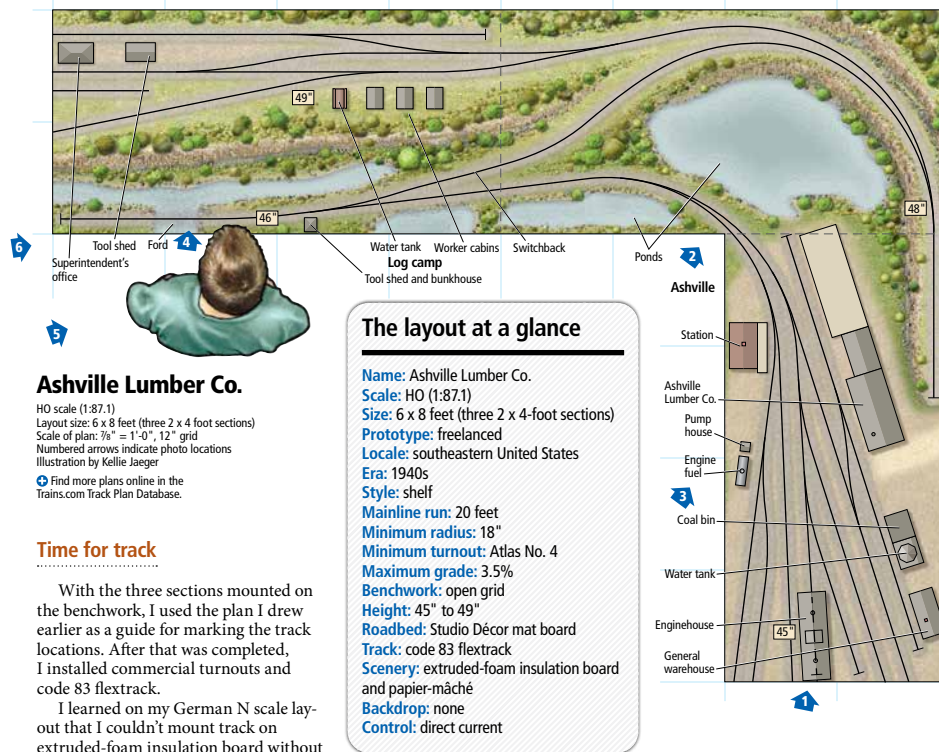
To secure each section to the benchwork, I drilled two holes through the foam and aluminum and into the side girders on the front edge of the benchwork. Clamps or an extra pair of hands might be needed to prevent the foam

from shifting. I confirmed the sections were aligned before drilling the holes.

Next, I inserted metal studs matching the size of the drill bit into the side girders, leaving enough material projecting above the surface so the exposed ends would slide into the holes. The aluminum provides a firm guide when installing the sections onto the frame, and it's not susceptible to wear or other environmental issues that might cause the sections to become misaligned.



5 Andrew designed the model railroad to fit in the corner of his basement living room. At 45" tall, the layout is at a comfortable height for operators without interfering with the entertainment center below.



Model a river ford

To model the river ford shown below, I first had to remove some of the extruded-foam insulation board below the rails to create depth. I then placed a piece of mat board between the tracks and foam for the stream bed. I used papier-mâché to fill in around the rough spots and create a natural transition.

To draw the rails into the stream bed, I used thick cyanoacrylate adhesive to attach a short piece of rectangular brass with a threaded rod in the center to the bottom of the track. The threaded rod passed through the foam, which let me to attach a washer and nut on the bottom.

Then I adjusted the threaded rod so the track would have a sag that looked realistic. Don't overtighten the rod, though, or you'll end up with a V dip that may cause couplers to disengage or foul each other. I tested the various pieces of equipment that would pass through the scene to make sure there were no issues.

Satisfied with the look and operation of the track, I added rocks and dirt to the scene. Then I poured the water material, bringing it to the tops of the ties at the lowest point in the sag. — *Andrew Dodge*



6 Climax No. 7 leads side-door caboose No. 169 over a river ford near the base of the switchback.

Lightweight scenery

In an effort to keep the layout lightweight, I used extruded-foam insulation board and papier-mâché for the scenery. I started by cutting the foam into rough shapes, stacking it as necessary, and securing the pieces with PL300. After the adhesive dried, I applied papier-mâché to smooth the joints.

Papier-mâché is easy to use and has a long working time. Best of all, even your grandchildren can help. Mine did, and they enjoyed getting their hands into the bowl, mixing the material, and applying it to the layout.

Unlike plaster, which I've always used in the past on my bigger layouts, papier-mâché is light and easy to drill when planting trees. It's also generates far less dust if it needs to be cut when it's time to move the layout to a new home.

To add some interest to the scenery, I included ponds and a ford [See "Model a river ford," opposite. — *Ed.*] I surrounded the areas where I added water with trees and bushes. The vegetation also helped conceal the joints between sections and visually increased the perceived size of the layout by tricking the eyes with a variety of focal points.

Planning ahead

The HO scale Ashville Lumber Co. will allow me to continue in the hobby for years to come. This type of layout could be expanded at each end for those who have more space.

On a social level, the model railroad would be fun for a couple of people to operate; a larger group could take turns running trains. As we get older, standing for long periods may become more difficult. Operating sessions of 15 to 20 minutes might be the answer, allowing for more social time over coffee for those who have finished running trains or are awaiting their turn.

I still have a lot of projects to do on the layout. There's no rush, though. The layout runs and can be operated as it is. The fine points and any upgrades can be done while I sit back and enjoy the hobby. After all, that's one of the points of this layout. Have fun! [👍](#)

Andrew Dodge is a retired educator and historian and an engaged grandfather who lives in Olney, Md. He has been interested in model railroading since he was 3 years old and has built layouts in N, HO, HO3, On3, Proto:48, and 1½" scale outdoor live steam.

simple process to make sure none of the breaks occurred where there was a change in grade.

No risers were needed except between the level areas of track. I used Atlas plastic bridge piers, cut to length, to support the roadbed and track in these grade-transition areas. The piers should fit securely. Don't force them. Since I had track that was on a grade where the sections met, I had to make sure there was support directly under the roadbed and on both sides of the joints.

I used glue to attach the flextrack to the mat board roadbed. At section joints, I used 4" pieces of removable track with rail joiners at both ends. This made the sections easier to disassemble and protected the track ends from damage.

Going old school

Since the geared locomotives I inherited were from the 1950s and '60s, I left

them as they were and powered the layout with direct current. Two engines are required at Ashville. A single engine is required for the log camp yard.

If you were to bring the layout into the diesel era, a light-duty or industrial switcher would do nicely in the main yard. A 44-ton diesel could take trains up the grade to the logging camp.

Since I used two engines, I installed two block toggle switches for each section. All of the turnouts are operated manually with Caboose Industries ground throws that are secured to the mat board with brads. The frogs are electrically powered through the points.

If I was doing this from scratch with new equipment, I would strongly consider investigating the Dead Rail Society (deadrailsociety.com). Battery power would eliminate all wiring on the layout. The battery would be in the engine's tender. The locomotives would be controlled through a radio or Bluetooth decoder.