

# The Modeler's Journal

A Free Journal for Today's Modeler

VOLUME I

[www.TheModelersJournal.com](http://www.TheModelersJournal.com)

APRIL-JUNE 2018

## Modeling Narrow Gauge

### Modeler's Showcase:

- A Narrow Point of View
  - The Silverton Railroad — Circa 1890
  - Profile of a Narrow Gauge Modeler
- An Interview with Troy Pendzimas  
and Steve Montgomery

### A New Publication

**For All Modelers**

From the Editors of  
YouTube Model  
Builders eMag.

Be Sure To Check Out Columns From  
Harry M. Haythorn, Jack Hykaway,  
Ron Marsh, The Track Planner,  
and Blayne Mayfield

Cover Photo Courtesy of Troy Pendzimas  
Structure Built by Steve Montgomery



# Editor's Note...



elcome to the inaugural issue of *The Modeler's Journal*.

While this is an inaugural issue of *The Modeler's Journal*, it represents the evolution of the much-loved *YouTube Model Builders eMag* which I started three years ago with a simple first issue in January of 2015 and quickly grew into a complex and sophisticated publication.

As the Greek philosopher Heraclitus put it “the only constant in life is change.” And everything continues to change all around us. Change is part of evolution and evolution is part of growth. Change is a good thing because with change comes new ideas, new thoughts, and new opportunities to provide a better product to you, our readers.

Over time we recognized that everything around us was evolving including the hobby, technology platforms like YouTube, and the needs of our growing reader base. In addition, we realized that our hobby is more than just about model railroading. We knew that it was time for us to evolve as well. It was time for us to change.

In order to better represent and better serve the broader modeling community, we changed our name to *The Modeler's Journal*. With our new name, we are no longer bound by the YouTube name, nor limited by the representation of a single Google+ community. We can now serve a broader modeling community.

*The Modeler's Journal* will continue to feature model railroading and related topics as we did in the *YouTube Model Builders eMag*. However, over the short course of time, we will broaden our focus to cover all model making. This includes vehicles, aircraft, ships/boats, figures, structures, weathering, scenery, and sci-fi.

*The Modeler's Journal* is produced by the same dedicated staff of volunteers that produced the former *YouTube Model Builders eMag*. The tireless amount of energy and work *The Modeler's Journal* team put towards this issue is impressive. Each member of the editorial staff and contributing authors put in a countless number of **volunteer** hours to ensure you will enjoy a great product. And of course, *The Modeler's Journal* is **FREE** and completely **ad-free**!

While our name and our footprint have changed, there are some things that have not changed. Our mission has been constant. Our dedication to the modeling community, our commitment to you, and to the quality of this publication will be unwavering.

Are we going to continue to change and continue to evolve? You bet. Keep a lookout for it and be excited about the new things to come! Remember, change is a good thing.

Happy Modeling!

– **Loggin' Locos**  
Editor-In-Chief



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#### About the Cover

*Montgomery's Freightling and Storage* sits on Troy Pendzimas's HOn3 Pacific North Central Railroad. It was built by Steve Montgomery from the *Bailey's Produce* kit produced by Fine Scale Miniatures (George Sellios). Steve modified the structure to make it unique. The first floor is sided with stucco and the second floor is sided with shake shingles.

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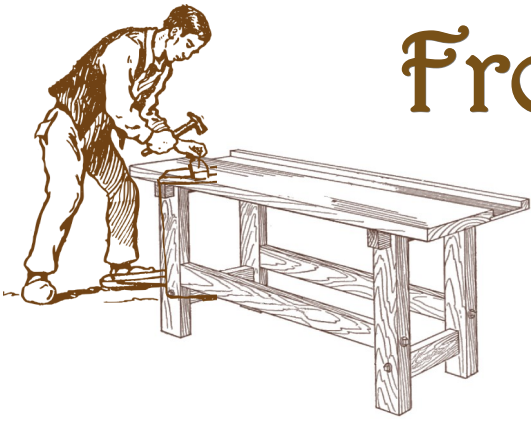
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# From My Side of the Workbench...

## A Time for Change



By Blayne Mayfield

**M**odeling is about change and growth. For example, a few years ago, I began building a “chainsaw” HO scale railroad layout. (The adjective “chainsaw” was coined by Dave Clemens, and it refers to the fact that it is an experimental layout that likely will be taken out – perhaps with a chainsaw – to make room for the next one.)

With the help of online videos, model railroad publications, and discussions with fellow modelers (face-to-face and over teleconferencing apps), I was able to learn and try out new techniques and sharpen my skills. Over time, I found out what worked well and what could have worked better. So now, with a greater sense of confidence, I have designed layout 2.0 and begun construction. Modules of “my ol’ friend,” the chainsaw layout, now lean against the walls in my workshop. (I’m hoping to recover some of its materials for reuse.)

An important discovery as I worked on the chainsaw layout was that my

model railroad was not only about railroads. As time went by, I learned the importance of including appropriate people, animals, structures, vehicles, and everyday objects to impart a sense of realism. Of course, this meant that I had to learn how to build and weather structures, create roadways with cracks and potholes, make realistic grassy areas, modify cars and trucks, and much more. In other words, my hobby became much broader than it had been when I first chose it. (Or, did it choose me? Anyway ...)

I think that my evolution of thought and approach to modeling can be compared to that of the publication you are now reading.

When the *YouTube Model Builders eMag* (YTMB eMag) was first conceived, it was started with little knowledge and experience about publishing a magazine. The Editor-in-Chief (JD - Loggin’ Locos) gave the eMag a good, solid launch, and I am proud to have had the opportunity to join the YTMB eMag team – along with Harry Haythorn and Jack Hyka-

way – beginning with volume 1, issue 3 (May 2015). It has been a great ride working with these folks!

As with my railroad layout, the all-volunteer staff of the YTMB eMag learned-as-we-went how to crank out a quality publication every couple of months. We experimented with new ideas, columns, and such; we discovered what worked well and also what could have worked better. As we were pushing forward (and again, comparing it to my train layout experience), technology was changing around us. When the YTMB eMag was first published, YouTube arguably was the major video-sharing site on the Internet; now, YouTube has a number of serious competitors. And, of course, social media and other web-based information-sharing venues continue to evolve.

And – perhaps more importantly – the YTMB eMag staff quickly learned that our hobby is about more than just the model railroads. It is about scenery and terrains; it is about structures and vehicles of all kinds; it



is about people, animals, and everyday items. In other words, it is about modeling, in general. The techniques and skills that one needs to develop to be a great model railroader are the same techniques and skills needed in other areas of modeling, such as automobile, aircraft, and military modeling.

For all of these reasons, we realized it was time for the eMag to evolve, as well. The much-loved YTMB eMag became the chainsaw layout, and *The Modeler's Journal* became its successor. We hope that, with

broader modeling and technological approaches, we can use what we've learned to create an even richer experience for all types of modelers. We also hope you'll share your ideas and consider writing content for upcoming issues of *The Modeler's Journal*.

Come along with us on the next part of our journey. We are sure it's going to continue to be a great ride!



## About the Author

Blayne Mayfield is a university professor by day and an HO engineer by night. After a 20+ year absence from the hobby, he currently is working on a proto-freelance layout based on the [Frisco Railroad](#) in southern Missouri. Blayne lives in Stillwater, OK, and volunteers as a content editor for *The Modeler's Journal*. You can follow him on his YouTube channel by clicking [here](#).

Make  
BIG  
Changes  
in  
SMALL  
STEPS...  
...and Welcome CHANGE!

# A Narrow Point of View



**By Barry Rosier**

**M**odel railroading is fascinating, partly due to its diversity. You can find so many ways to enjoy your time spent with our great hobby. There are many niches that people enjoy. This article focuses on one such niche: narrow gauge railroading.

## **What is narrow gauge?**

To define narrow gauge, we need to contrast scale vs. gauge. Scale defines the actual size we model, as compared to the real world; for example, in the United States, O scale is 1:48 (that is, one inch in the model world equals 48 inches in the real world), S scale is 1:64, HO scale is 1:87.1, and N scale is 1:160. (The exact ratios used to define a given scale vary in different parts of the world.) The scale tells us how big our rolling stock should be and how large our model structures are. Gauge, on the other hand, defines nothing more than the rail-to-rail spacing of railroad track.

So, what is narrow gauge modeling, then? A quick discussion of prototype railroads will steer us in the right direction: standard gauge track

has a rail-to-rail spacing of 4' 8½". It would naturally follow that narrow gauge track would have rail spacing less than that of standard gauge track; typically, narrow gauge rail spacing is 3' 6" or less. Narrow gauge railroads are typically used for small short lines such as industrial lines or logging railroads (especially in the mountains where passages are narrow). The narrower rail gauge means the tracks can be laid with tighter corners and easily repositioned to other locations, requiring fewer tracks and reducing cost. Tie-to-tie spacing can often be increased and rail size decreased due to the lighter load on the rails, thus saving more money.

Locomotives and rolling stock were often smaller, again leading to cost savings. Logging railroads even would move their tracks as areas of the forests were cut down so that the operation could head on to other, uncut areas. These unique prototypes give rise to many interesting things that we can model. So, let's take a look at the different scales/gauges that we can model.

In narrow gauge modeling, the scales/gauges are notated as the scale fol-

lowed by the letter 'n' and then the gauge, such as:

- **On3, Sn3, HOn3, and Nn3:** O, S, HO, and N-scale railroads based on a 3' prototypical rail gauge;
- **On30 and HOn30:** O and HO-scale railroads based on a 30" prototypical rail gauge; and
- **On2, Sn2, and HOn2:** O, S, and HO-scale railroads based on a 2' prototypical rail gauge (typical of Maine railroads).

The 3' and 30" gauges are the narrow gauge railroads most commonly modeled, while the 2' gauge lines represent a smaller portion of the modeling community. There are other narrow gauge lines, such as the 18" gauge, but these make up a very small subset of the hobby and typically are used in mines and industrial facilities.

Part of the allure of modeling narrow gauge railroads is the diverse equipment used by the railroads. For years, it has appealed to those who love to scratch build, especially locomotives and rolling stock. In recent years, manufacturers have




*An example of some amazing narrow gauge (HOon3) modeling by Ron Klaiss on his [Mine Mount & Seaside Railroad](#). Photograph Courtesy of Ron Klaiss.*

begun to produce a wider variety of narrow gauge models. Many of these are low production run items such as brass models and wooden kits. Very few companies have invested in volume production (Bachmann being an exception). Companies – usually smaller companies – now are investigating 3D modeling and printing as a way to bring more narrow gauge models to us.

Just as with those who model standard gauge railroads, narrow gauge modelers don't always model a prototype; those who freelance have created some of the most interesting and unique models you might ever

see. And most narrow gauge models are set in very early railroad times, such as the late 1800s or the 1920s-1930s when steam engines, as well as early gas mechanical locomotives, were very prevalent. Like the rolling stock, the steam engines are smaller, making their cabs seem oversized as compared to the rest of the locomotive. All of this adds to the unique characteristics of this area of our hobby.

If you are just starting in the model railroading hobby or are looking to start yet another railroad empire, you may wish to consider modeling a narrow gauge railroad. I am confident you will enjoy it. 

## About the Author

Barry Rosier is currently building a 12' x 20' American Flyer S scale layout. Barry is one of the founding members of the Strasburg Model Railroad Club and has worked to help build their 117 feet modular layout of the Strasburg Railroad near Lancaster, PA. The club is over 25 years old. Barry is currently documenting his American Flyer build on YouTube. Hopefully the construction of the HO layout will begin this summer and will be documented on his channel at <https://www.youtube.com/user/bsrosier>.



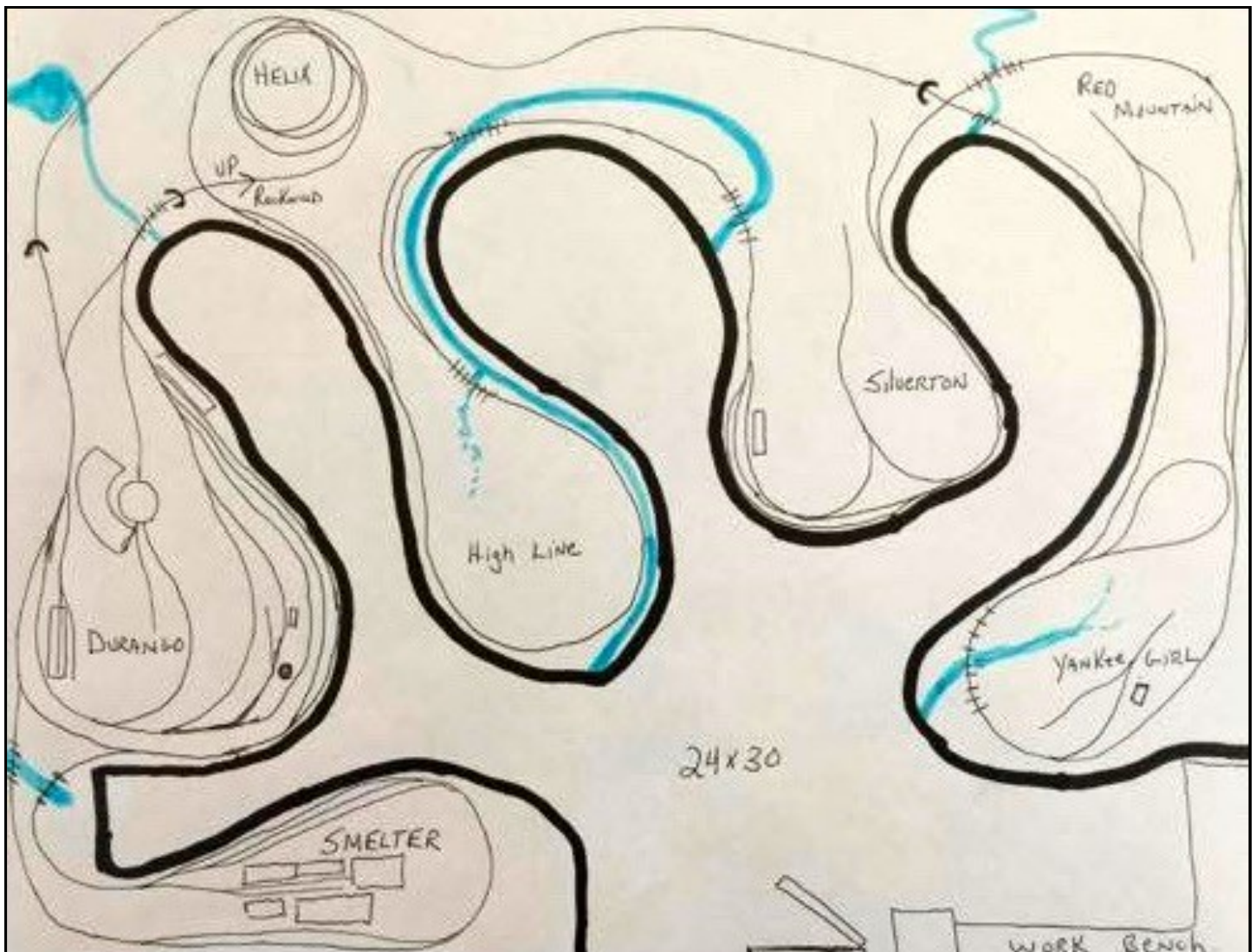


**Kevin Kussow Presents...**

# **The Silverton Railroad Circa 1890**

All photographs by Kevin Kussow.





Every railroad has to begin somewhere. Kevin started building the Silverton Railroad with the above hand-sketched plan and has constructed a masterpiece over the course of eight years.

### About Kevin Kussow

Kevin Kussow is a 53-year-old avid modeler with an extensive art background. He owns and operates a large outdoor store in Franklin, North Carolina called Three Eagles Outfitters. He also coaches several baseball leagues. Kevin is married, as he tells us, “to an incredible wife” and has two boys whom he says “put up with his passions!” You can check out Kevin’s HOn3 Silverton Railroad on his YouTube channel here: [www.youtube.com/watch?v=krA\\_IC1eXtc](http://www.youtube.com/watch?v=krA_IC1eXtc).

In this issue, we feature Kevin Kussow's HOn3 Silverton Railroad which is set during the 1890s in the Colorado San Juan Mountains. Some areas on the railroad are closely prototypical, while others areas more loosely represent the region; regardless, the layout certainly captures the feel of the San Juan Mountains.

Kevin began construction of his HOn3 Silverton Railroad 8 years ago. In anticipation of building his layout, Kevin actually began making trees in his spare time several years prior to starting construction and stored them away. He had realized he would need massive amounts of trees once he was ready to complete the scenery on the Silverton Railroad. (And he is still adding more trees!)

Kevin's layout room sits above his wood shop and the layout is 24'x30' in size. The layout is built using 2'x4' girder-style workbench construction, giving it strength while being lightweight. The scenery base is built with chicken wire and cardboard strips. Kevin also used extensive amounts of rock molds and foam resin products from Bragdon to build up the scenery in order to give it an authentic "San Juan" look. It took Kevin six months to complete the backdrops as he carefully planned out exactly how he wanted them to look.

The layout height ranges from 42" in Durango to 70" at High Line, and the mountains there reach well over a person's head. This gives the viewers an immersive feeling, and that they are part of the scene. The layout has a six-loop helix with an incline just under 2% in order to reach the highest grade level (at High Line).

For his tracks, Kevin used Micro Engineering code 70 tracks on the main lines and code 55 tracks on the service lines. He has at least one of each turnout manufactured by Micro Engineering, as well as some custom-built curved turnouts.

The Silverton Railroad is powered, controlled, and operated using Digitrax's DB 150 5 Amp DCC Command Station and booster, UR 92 Duplex Radio Transceiver/IR Receiver panels, and a DT402D Duplex Radio Super Throttle.

Kevin's HOn3 layout is 75% complete and the town of Silverton is starting to hustle and bustle as 90% of the structures have been completed there. In addition, Durango will soon be getting a new smelter.

Currently, the Silverton Railroad operates two Class C-16 2-8-0 steam locomotives (#100 and #101) from Blackstone Models which have been modified and detailed to look like the Silverton Railroad prototypes, and a couple of brass Class C-16 2-8-0 locomotives from Kemtron and West Side. Kevin tells us that he has not yet focused his attention on engines, prototypical cars, and coaches (and they are sitting in boxes awaiting construction) because he is busy completing track work and scenery. He will get there soon enough.

We hope you enjoy some photographs showcasing Kevin's layout within the following pages!







**Above:** A wide view of the High Line area. The mountains rise above a person's head which makes one feel they are part of the scene. **Below:** A panoramic view of the Silverton Railroad.



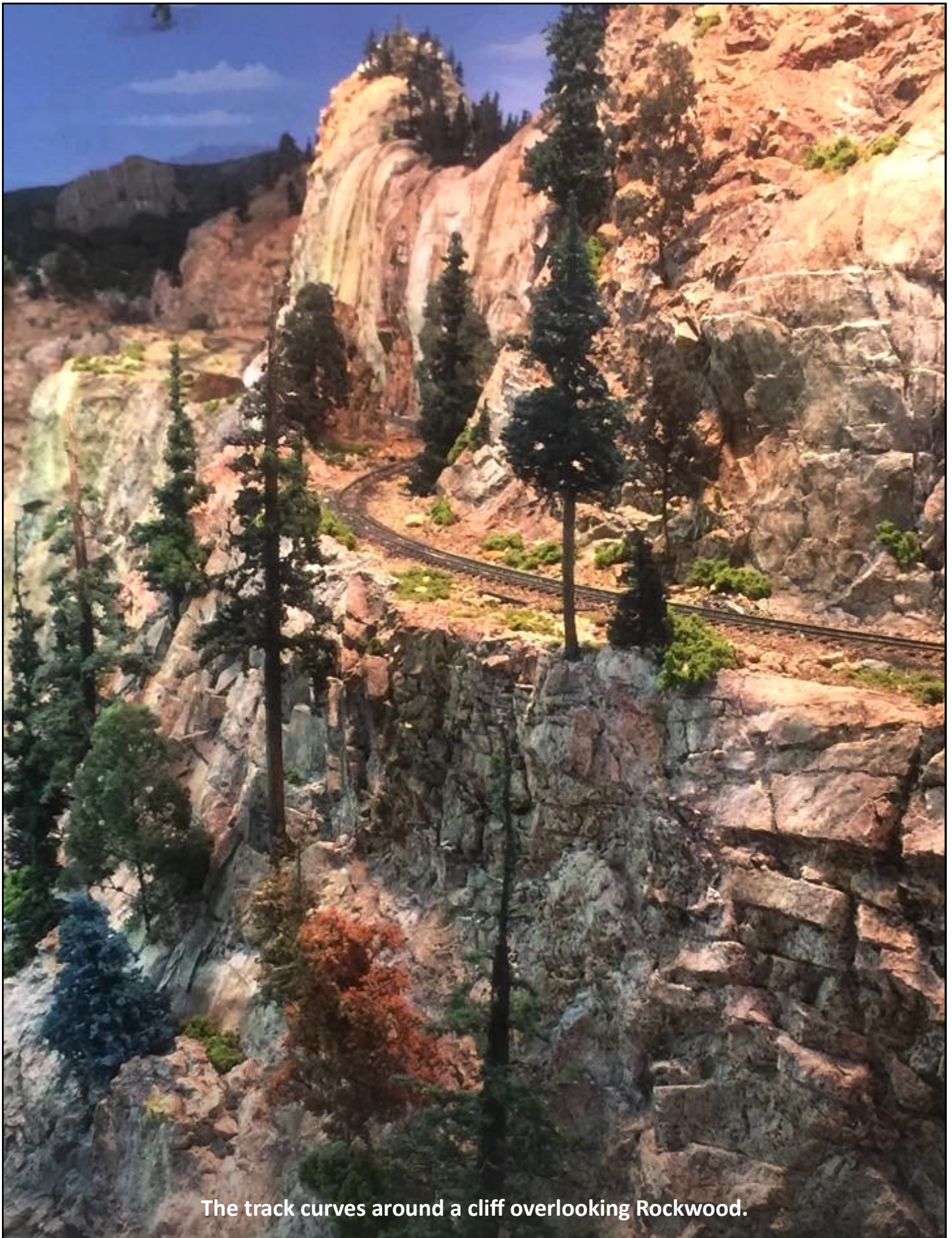




**Above:** An aerial view of the Yankee Girl Mine area in the foreground and the Red Mountains in the background. **Below:** A panoramic view of the Silverton Railroad.







The track curves around a cliff overlooking Rockwood.





The track passes through the High Line area and heads towards Silverton.





**Above:** Silverton is now a hustling-bustling town. Almost all of the buildings in Silverton (including the Grand Hotel) are scratch-built. The Grand Hotel just might be booked up before nightfall.

**Left:** Rockwood stage-coach is heading out towards Telluride.





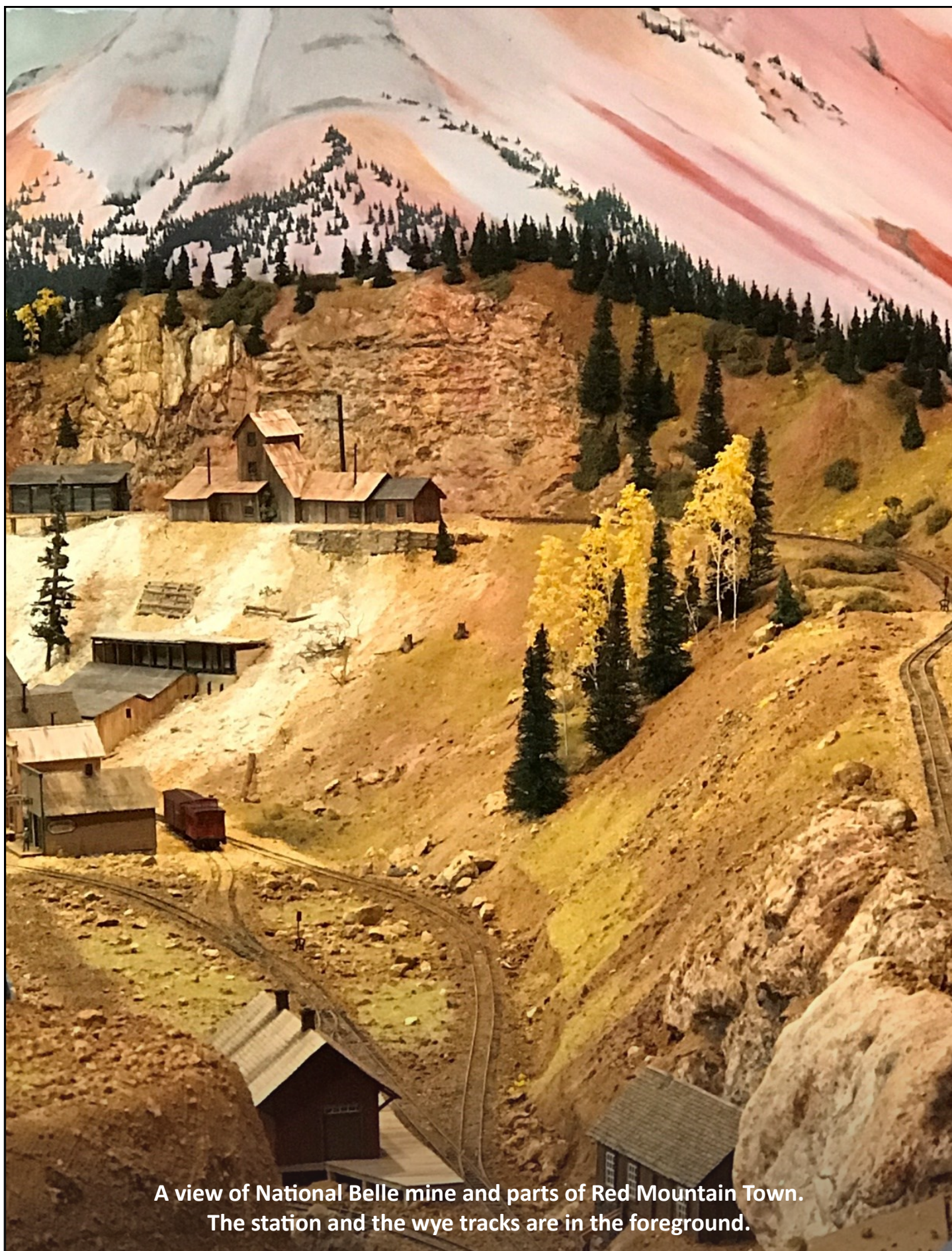
Engine #100 is picking up ore at the Yankee Girl Mine.





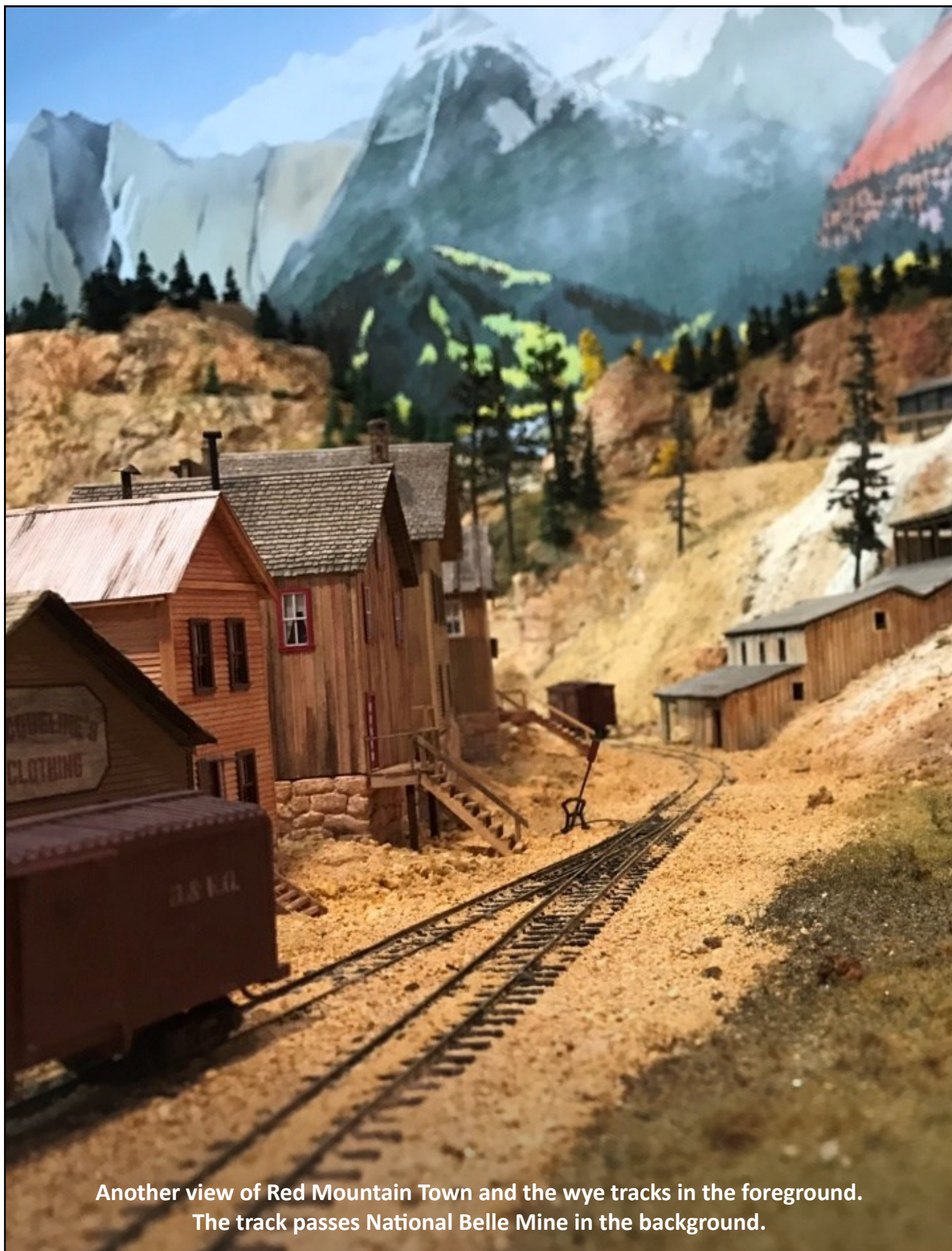
Engines #100 and #101 work the mines.





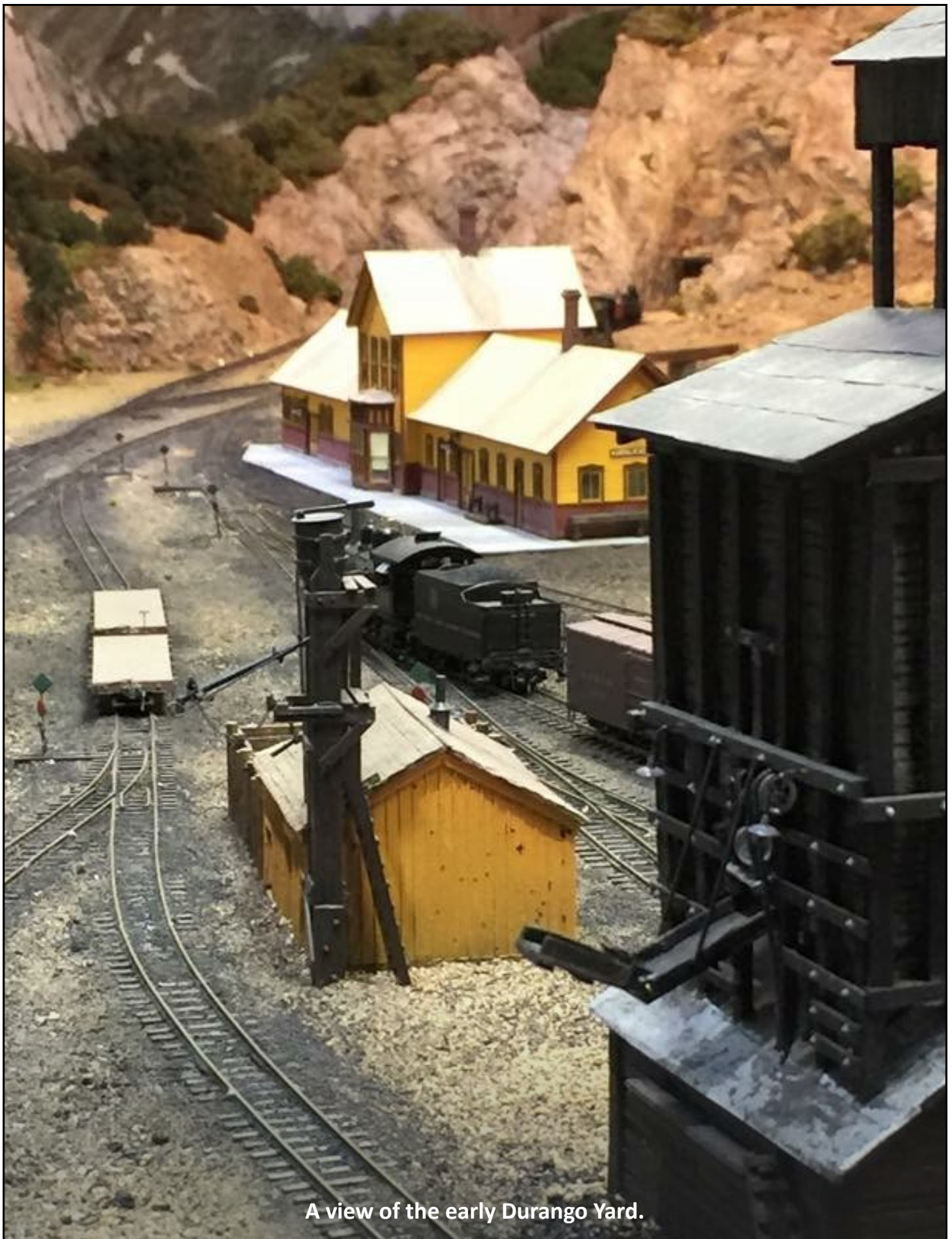
A view of National Belle mine and parts of Red Mountain Town.  
The station and the wye tracks are in the foreground.





Another view of Red Mountain Town and the wye tracks in the foreground.  
The track passes National Belle Mine in the background.





A view of the early Durango Yard.





A view looking down towards Red Mountain Town in the distance.  
High Bridge is in the foreground.





An old water tower stands guard as the line crosses over a curved trestle bridge.



# Gain A New Perspective With The Track Planner!

Follow Bill Beranek's column "A Perspective  
on Track Planning" in every issue of  
*The Modeler's Journal*.

Topics include:

- ✓ Principles of Track Planning
- ✓ Designing for Operations
- ✓ Proper Benchwork Design
- ✓ Dissecting Track Plans

And much, much more!



# Profile of a Narrow Gauge Modeler: Troy Pendzimas

Based on Interviews Conducted by Blayne Mayfield and JD (Loggin' Locos).



**By Blayne Mayfield**

All photographs by Troy Pendzimas.

We recently had a chance to catch up with Troy Pendzimas of Minnesota to talk with him about his [Pacific North Central \(PNC\) Model Railroad](#), a proto-freelance, HOn3 pike in the basement of his home. (See Figures 1 and 10.)

**TMJ:** So, Troy, how did you get the name for your railroad?

**Troy:** Well, My Dad and my Grandfather worked for the Northern Pacific (NP) and Great Northern (GN) Railroads, so I'd always been around these railroads. I decided on the name PNC to pay homage to those two men and their railroads. If you look at the Pacific North Central Railroad logo, you'll also see that it blends elements from the logos of the NP and GN. (See Figure 2.)

**TMJ:** We assume that this large layout is not your first. How did you get into modeling, and how long have you been at it?

**Troy:** As a kid, I built a lot of model cars, but never anything with a lot of details. (To give you an idea of my abilities back then, I took 10th place in a model car contest!) But I never really got into model railroad-ing until fall 2007. My daughter discovered Thomas the Tank Engine, so I decided to build a layout we could run together. We lived in a small apartment at the time, so I built a small N-scale layout above the couch. (By the way, I discovered that they didn't make Thomas the Tank Engine in N scale!) It was a 4'x8', DC, 2-track oval, with the track going through mountains and such. My daughter used a step stool to reach it.

**TMJ:** Have you always modeled trains for N scale?

**Troy:** Well, up until my current layout. In winter 2009, we moved to a bigger place. After the move, my daughter looked at the first layout and said, "Dad, this is too small." So, I started building an 8'x8', N-

scale layout in the basement. This one had a walk-in section in the middle so she could go in there to play. After the benchwork and track were complete, she came down one day and said, "Dad, this is too small." So, my Dad drew up some plans that spanned the basement: 4'x21' in a backward '7' shape, with three levels and no helix. So, I started building that.

In 2011, we moved into our current house. The N-scale layout from the old basement would fit in the basement, but not without sacrificing the clotheslines that were there. My wife overruled me, and it was time to rebuild, again. This time, the design was 17'x12', U-shaped, and had a helix. I "scenicked" a logging camp based on photos provided to me by the Editor-in-Chief of *The Modeler's Journal*, JD (Loggin' Locos). It was a transition era layout, modeled to represent the time around the NP / GN / CB&Q / SP&S merger. That decision required that I purchase



four sets of locomotives and rolling stock!

**TMJ:** So, your newest layout is not N scale. What caused you to “jump scales?”

**Troy:** The layout I am building now is HO narrow gauge. Several factors led me to make the move to HOn3. One is that my eyesight was changing with age, and I couldn't see the details like I used to. (And my fat fingers didn't want to cooperate with my failing eyes!) I really like logging

operations, and it was Andy Crawford who suggested that I check out HOn3. I have found that HOn3 logging engines, such as Shays, seem to operate more smoothly and quietly than do their N-scale sisters. It also is easier to install decoders and sound into the larger locomotives, and the sound quality is better. One downside is that HOn3 equipment is more expensive, but at least I don't need as many locos and as much rolling stock for my narrow-gauge line as I might for other HO railroads.

**TMJ:** Tell us more about this narrow-gauge railroad you're building.

**Troy:** As I said earlier, I like logging operations, so that is the central theme of the layout. I contacted Bill Beranek (*The Track Planner*) to do my design because I wanted this to be my “dream layout”. I told him I didn't want any straight track; I like the rounded, smooth, and flowing look you get with lots of curves. (See Figures 3, 4, and 5.)

*Figure 1. As darkness falls, #401 passes Montgomery's on its way to the engine house.*





Figure 2. Logo of the Pacific North Central Railroad

Bill came back with a great plan. It's basically a shelf layout that runs around the room, with shelves that are as narrow as 4½" at some spots. It also has a peninsula, but – as you can see from the plan – even that is

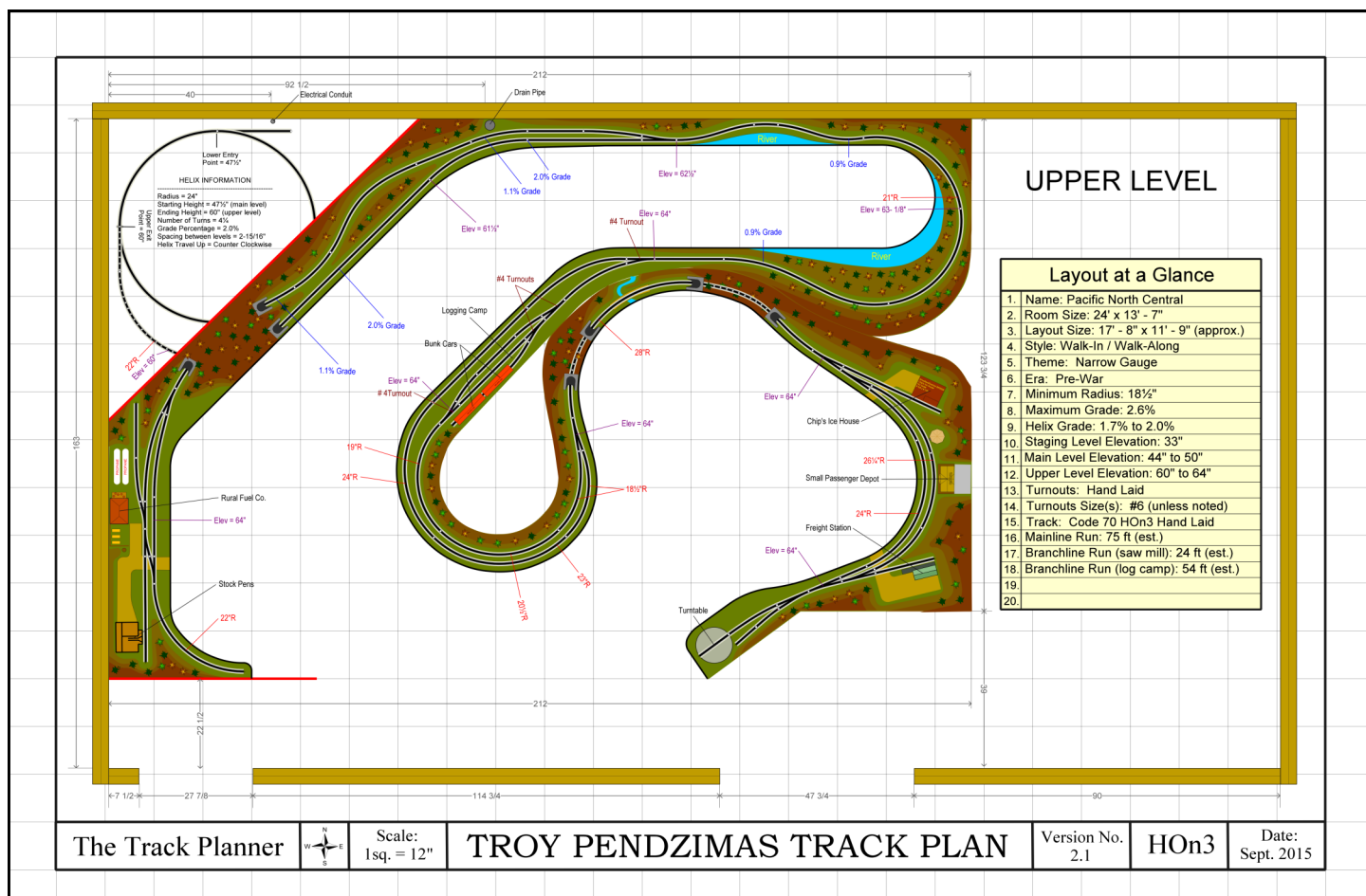
designed as shelves. It is a three-level plan with a “double-stacked” helix: a single-track helix goes between the staging level and the main level, and on top of that is another single-track helix that goes between the main level and the upper level. When it is complete, there will be 586 linear feet of track (that's almost 10 scale miles). I am hand laying all of the track using Micro-Engineering code 70 rail and Fast Tracks tie sticks and ties. (I use a wire brush to add grain to the ties, and then I stain them with Minwax.) I'm also building the turnouts using the Fast Tracks jigs; the plan calls for #4 turnouts throughout, but I found that I can use #6 turnouts and make them look like #4 turnouts. So, now there is only one #4. I would like some big

mountains but, given all the shelves the track is running on, this won't work.

**TMJ:** What about the era and location of your railroad?

**Troy:** I settled on about 1922 to 1925, and with no particular region; it's all freelance. It is late summer or early fall on the railroad, and the foliage colors reflect that. (I am color blind, so it has been a challenge getting the blend of colors just right!) And I want to give it a feeling of remoteness, so there won't be any big towns on the layout. Instead, such towns will be “off-stage” and left to the imagination of the operators.

*Pacific North Central Railroad track plan and design: Figure 3 (below) is the Upper level design, Figure 4 (next page above) is the Main level design, and Figure 5 (next page below) is the Staging (lower) level design.*





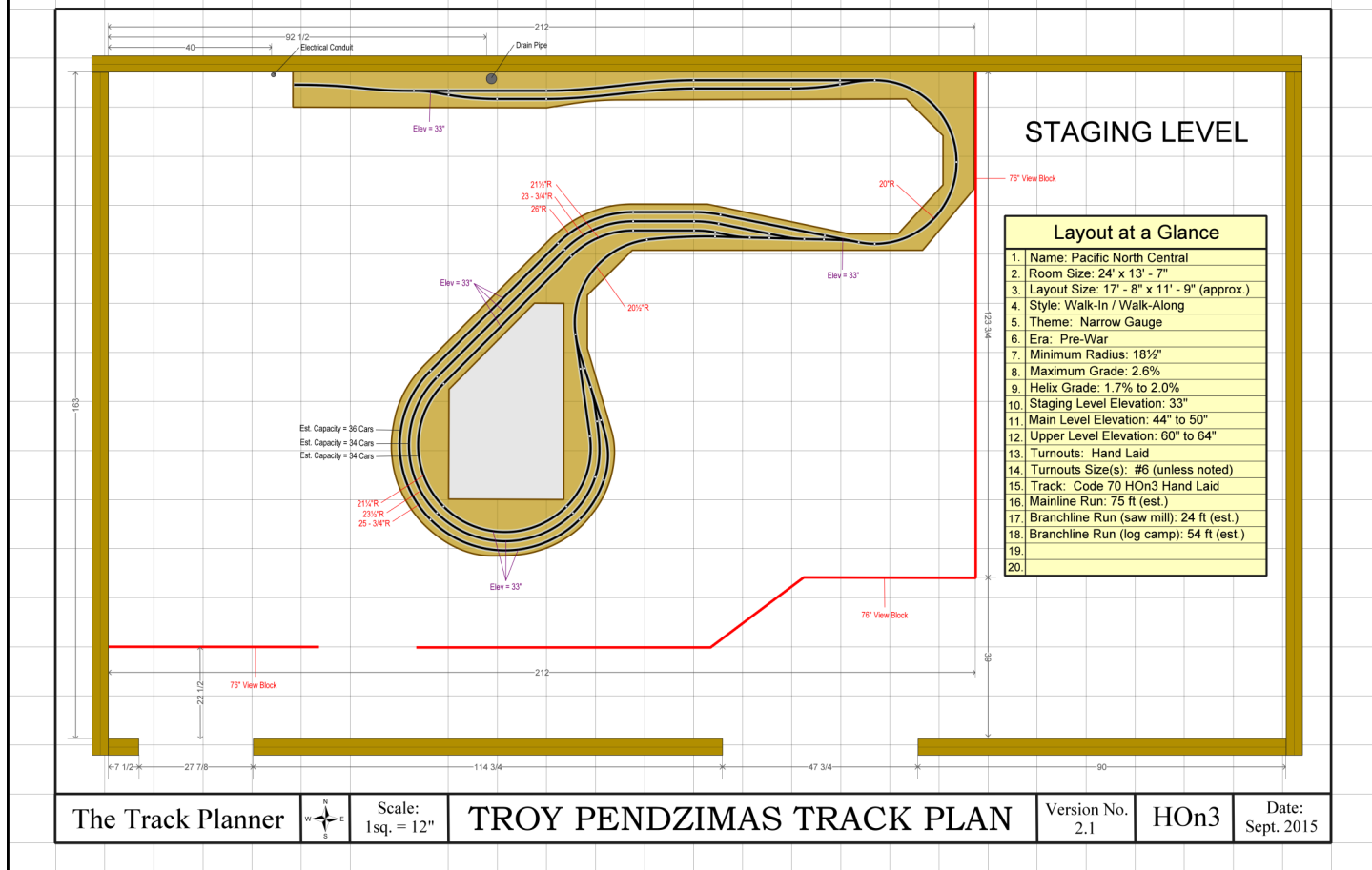
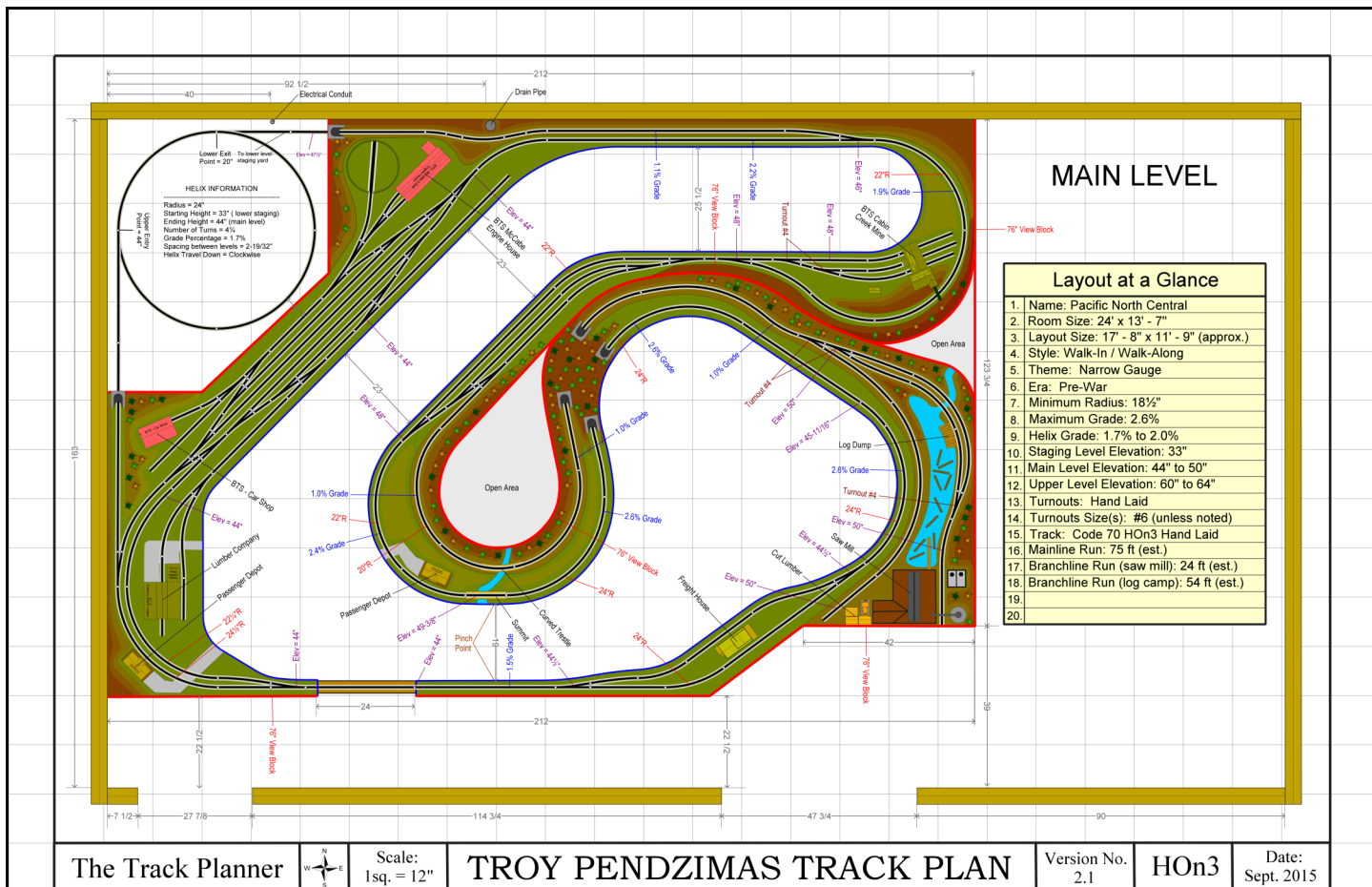






Figure 6. This engine house has seen better days, but it still is in service

**TMJ:** We see from the plans that you have a staging level. Does this represent those “off-stage” areas?

**Troy:** Yes. In fact, the staging area will have tracks that represent connections to three other modelers’ railroads: those of Ken Anderson (the [Watauga Creek & Southern Railroad](#)), Ron Klaiss (the [Mine Mount & Seaside Railroad](#)), and Steve Montgomery (the [Carol Valley Railroad](#)). These guys have been a great influence and inspiration for me!

**TMJ:** We also notice that you have some great looking structures on your layout. Can you tell us a little more about those?

**Troy:** They are a combination of scratch-built structures and Fine

Scale Miniatures kits (by George Sellios). Steve Montgomery, a great modeler who lives in Ohio, has built all the structures that I have. (This frees me up to do the other work on my layout that I enjoy more.) I’ve been very pleased with his work! (See Figures 6 and 7.)

**At this point, we called Steve Montgomery to get his input about the structures on Troy’s layout.**

**TMJ:** Thanks for taking time to speak with us, Steve! We were just admiring the workmanship of the structures you built for Troy’s layout. One of our favorites is *Montgomery’s Freighting and Storage*, which we have selected for the cover shot of our inaugural issue. Can you tell us a little about that structure?

**Steve:** Troy sent me the *Bailey’s Produce* kit produced by Fine Scale Miniatures (George Sellios). He told me he wanted an older-looking freight house. Basically, I built it according to George’s plans, though I did move one wall so that the structure would look different than the way most people would build it. (Building this freight house also taught me a lot about George’s weathering techniques.)

The first floor is stucco; I did that with a paintbrush. I found it difficult to make stucco look right in HO scale; I ended up putting it on, scraping some off, and reapplying it until I got the texture to look right. Then I colored the stucco.

The second floor is sided with shake



shingles. These are Campbell shingles that are included in the kit. The shingles come in strips that you cut to length; that way, you can lay whole rows of shingles at once.

I built the walls before putting the structure together. So, throughout the process, I frequently held the walls together to test fit them and make sure everything was coming together right.

**TMJ:** How about your scratch building efforts for Troy; do you have any particular structure that is your favorite?

**Steve:** One time, Troy purchased a kit of an ice house and sent it to me to build. But there was a problem: the kit was a mechanical ice house, and the era of Troy's layout predates the introduction of mechanical ice. I

didn't really like the kit design but I built it anyway, and I just wasn't happy with the results. Then I ran across the article "Building a Narrow-Gauge Icing Facility" in the Jan/Feb 2017 issue of the *Narrow Gauge and Short Line Gazette*. In the article, author Peter Smith describes an S-scale facility that operates using pond ice; however, the plans were given in HO scale. Troy sent me two cars to guide me as I scratch-built the ice house. (See Figures 8 and 9.) It came out so nice that I didn't want to send it to Troy! (But I did.)

**TMJ:** Thanks for speaking with us, Steve! Troy, this is a pretty intricate layout! How is construction coming along?

**Troy:** When I started building, I laid out a tape outline on the floor and then built the lower level to

match the outline. After that, I built the main and upper levels at the same time. All of the benchwork is L-girder, and the roadbed is 1/2" homasote over a 3/8" plywood sub-roadbed.

Now I'm beginning to add trees. I started by getting some Woodland Scenics pre-made trees and placing them into the scenes just so I could figure out the forced perspective. Now I'm replacing those with lots and lots of trees that I'm building myself using Scenic Express Super-Trees; the first couple of trees took me about 15 minutes each to build, but now that I'm used to it, I'm able to build 10 trees together in a little more than that amount of time.

The scenery shell is made up of cardboard strips covered with plas-

*Figure 7. It looks as though someone is working late at the sawmill.*



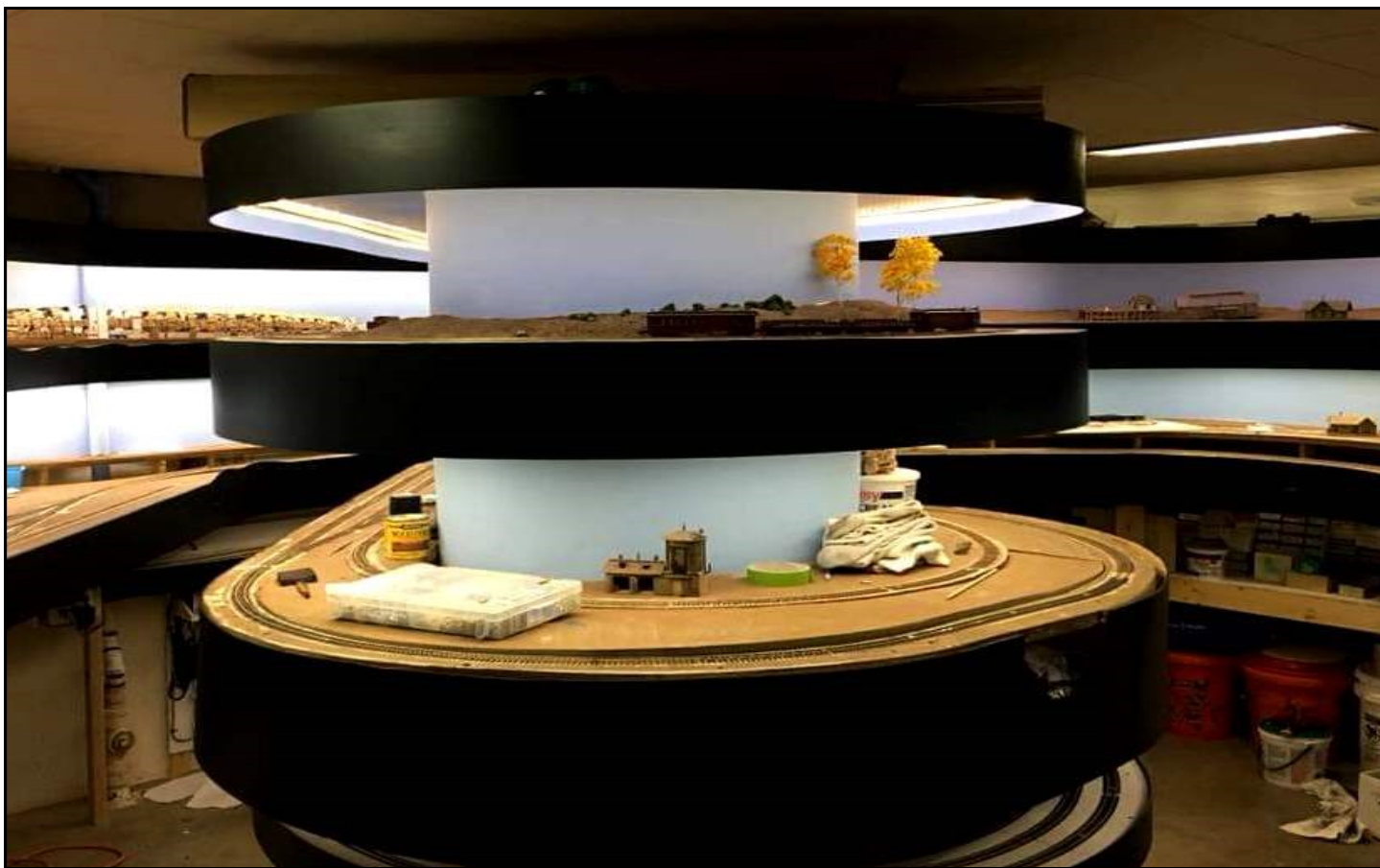




*Figure 8 (above). This scratch-built ice house utilizes two old cars to store its pond ice.  
Figure 9 (below). Another view of the ice house.*







*Figure 10. A wide angle view of Troy's layout.*

ter cloth. Some of the rocks are built from plaster into which I hand-carved a rock face. Others are made using rock molds, and I broke up the castings and attached them to the landscape as needed. After they are in place, I color and highlight the rocks. And, I chose to use real dirt. (As the saying goes, nothing looks more like real dirt than real dirt!) I'm also using static grass, throughout. Overall, I'm pleased with how things are progressing. (See Figure 10.)

I did hit one minor snag along the way. I didn't paint my rails before I laid them, and I wanted to paint them with Floquil rail brown. The only Floquil rail brown I had was an old spray can. So, I held the can upside down and emptied out the pro-


pellant, and then I punctured the can and drained the contents (including the ball) into a glass jar. But it turns out that the spray version of the paint contains chemicals that help build pressure when you shake the can. Well, I shook the jar, and when I started to open it, pressure had built up and it spewed paint droplets across the fascia where I was standing. I now open the jar much more slowly and carefully!

**TMJ:** That's a good thing to know and keep in mind! Do you have any other tips you'd like to share with people who are just getting started in narrow gauge modeling?

**Troy:** I would suggest giving HO<sub>N3</sub> a try; given its size, you can fit a lot more railroad into your space than you can with On3. And, it's a lot

easier to work with than N scale. HO<sub>N3</sub> locos generally are smaller than HO locos (just like their real-world counterparts), so you also can have tighter corners.

It was our great pleasure to get a glimpse of Troy's vision in creating the Pacific North Central Model Railroad. His story can serve as encouragement to those who might want to model a narrow-gauge railroad but haven't taken the leap. Troy was not afraid to try things and – if they didn't work – undo them and try again. It is important to remember that practice of our modeling skills is the key.

So, what are you waiting for? There are logs waiting to be transported to the mill! 



# The Modeler's Workshop

WITH  
**RON MARSH**  
**RTNT**

## Using Mock-ups As Placeholders



**By Ron Marsh**

All photographs by Ron Marsh.

Welcome to the first installment of *The Modeler's Workshop*. Many of you know me from my YouTube channel, [Ron's Trains N Things](#), where I share model railroad tips, tools, and techniques to help modelers save time, money, and frustration. I have taken up that task

as an act of appreciation to those who have shared their model railroad expertise with me over the years.

I have been model railroading for over 20 years. I came into this hobby with a love for trains but little knowledge about model building and

zero knowledge about constructing and operating a layout. What is more, I lived in a small town with no hobby shops, no model railroad clubs, and no model railroaders of whom I knew. In those early days, I relied on articles in magazines like *Model Railroader* and *Railroad Model Craftsman* and what I could glean

*Figure 1. The mock-up (left) and the finished kit-bashed model of the Holt Hotel (right).*







*Figure 2. The mock-up (left) and the finished scratch-built model of Berend Bros. Farm & Garden (right).*

from this new-fangled thing they called the *World Wide Web* to help me improve my skills.

Fortunately, over the years I was able to rub shoulders with some pretty skilled model railroaders in various places that I lived. I attended train shows whenever I could, toured home layouts when possible, and jumped at every invitation to

operate on a layout that came my way... and I learned. Truth be told, I am still learning. There are many model railroaders out there who are far more skilled than I in many areas, and I eagerly take the opportunity to learn everything I can from them whenever possible.

I started my YouTube channel for two reasons. First, I wanted to pass

on what I have learned to those who want to learn and grow their skills in the hobby. Second, and more personally, I wanted to build relationships with other serious model railroaders where we can learn from one another and together improve our skills.

My goals for this column are the same. I want to use this forum to

*Figure 3. A mock-up of the planned Midwestern Mud Services model.*





*“If done well, a cardboard mock-up for a scratch build can become a pattern for cutting the real model.”*

share tips and techniques for model building as well as stories that may inspire the modeler in his/her craft. I also want to learn from you. Often, someone will see one of my ideas and will build upon and improve it in a way that is helpful to themselves, to me, and to others. As I share my tips and quips here, I hope that you will also share with me how you might take these ideas and improve upon them. In this way, we can work together to help the entire community of modelers to grow their craft.

In several of my past videos, I have talked about building and using structure mock-ups on my layout. I have found mock-ups to be an invaluable resource for several reasons. First, I use mock-ups when kit-bashing as a way of test fitting structure pieces together without actually taking a razor saw to them. I simply photocopy the actual kit pieces, cut them out from the paper, and assemble them as I plan to do when I build the structure. Mounting them on foam core is a great way to turn these paper pieces into an actual structure mock-up.


Figure 1 shows a mock-up I made in this manner for my kit-bashed model of the Holt Hotel in Wichita Falls, Texas. The model was built from three Design Preservation Models (DPM) Hilltowne Hotel kits. Using the mock-up, I could see exactly where each piece needed to be cut and how it would fit together. I could also get a real sense of how it would fit on the layout. Mock-ups can serve as placeholders on the layout as well. This mock-up sat on my layout for over a year before I built the actual structure.

I also use mock-ups when scratch-building. In these cases, I typically use thin cardboard as my building medium. I try to cut the cardboard to match exactly what I believe the dimensions of the pieces of the scratch-built structure will be. By doing so, I can see if the different components will fit as I imagine. If done well, a cardboard mock-up for a scratch build can become a pattern for cutting the real model.

Figure 2 shows a mock-up I used in my scratch-build of Berend Bros. Farm & Garden in Bowie, Texas. As I built the mock-up in this instance, I realized that some of the wall sections needed to fit together in the opposite fashion—the ends that lapped to the outside needed to be lapped to the inside of the structure. Here the mock-up process saved me valuable styrene that I probably would have cut in the wrong manner and thrown into the scrap box. I also realized as I placed this mock-up on the layout that it was too small as originally planned, so I modified it to better fit the space. Figure 3 shows one more mock-up that I similarly built for my future model of Mid-

western Mud Services in Bowie. I have simply drawn some details onto the mock-up to give a sense of the building's character. This mock-up is still serving as a placeholder on my layout today.

Mock-ups can be an incredibly helpful tool as you kit-bash and scratch-build structures. They can save you money, time, and a great deal of frustration. With a mock-up, you get to practice building a structure before you truly build it. Their use is one of those lessons I learned years ago that helped me become a better modeler. I hope they will do the same for you.

Happy Modeling, Ron. 

## About the Author

Ron Marsh is a pastor in Southwest Missouri. He grew up in West Central Missouri where he became a railfan of the Gulf, Mobile & Ohio and Missouri Pacific Railroads at an early age. Ron has been a model railroader for over 20 years and has modeled 1970s Missouri Pacific and contemporary BNSF. He is currently working on his third layout—the Texas, Colorado & Western—depicting BNSF operations in North Texas and Colorado in 2008. He is a member of the [N Scale Enthusiasts](#) – a national organization for N scalers. Ron posts model railroading videos weekly to his YouTube channel, [Ron's Trains N Things](#).





# A Perspective On Track Planning



By William (Bill) J. Beranek - The Track Planner

## The Believability Factor

**W**hen designing layouts, there is a series of questions that need to be asked prior to starting any plan. These questions include, “Are you going to model a prototype?” And if so, “What do you like about the prototype?” Many modelers have a favorite prototype railroad, but their answers to these questions vary widely, ranging from, “I like the colors of the freight cars,” or “The new paint scheme on the engines is cool,” to the more common answers, “It’s the railroad my father or grandfather worked for,” or “It’s the railroad I grew up next to.” Some answers are more operations specific, such as, “I like coal hauling,” or, “I like passenger trains.” These answers give the designer insight into the modeler’s wants and thought process.

The first four answers have a common theme and have the element of emotion attached to them. The last

two are more “operational” answers, with emotions probably playing a secondary role.

There’s nothing wrong with “liking a color scheme” or “wanting to model the railroad your grandfather worked for” or “what you remember from growing up.” But from a track planning perspective, liking specific types of railroads for emotional reasons isn’t very helpful. Liking a railroad because it’s big into coal hauling operations, however, is much more meaningful.

A designer’s job is twofold:

1. Design a layout that the modeler likes, and
2. Make the design “believable.”

### **Why Believability Needs to Trump Emotions**

Liking coal-hauling railroads can have elements of emotion tied to it as well. For example, if you are seri-

ously into coaling hauling, seeing a long string of loaded coal hoppers snaking their way through the mountains of West Virginia can elicit strong emotions.

Unfortunately, many modelers have trouble setting aside the emotional reasons to focus on the serious questions about building their dream layout. The first is, “Do you have the resources to build your dream layout?” And the second is, “Do you have the space required to construct the layout of your dreams?” For the most part, these should be non-emotional questions; but many times they elicit emotional answers. The most common of these is, “But it is what I like,” or “It’s really what I want.”

What the modeler should be asking his or her self is, “Can I successfully build a model railroad representing what I like or want?” and, “When completed, will the layout have a look and feel of believability?”



The designer's job is to create a great track plan that operates as designed and is believable. Sometimes, the modeler has problems getting over the emotional hurdles that drew him or her into the hobby in the first place. More than once, I've been told, "You're the expert; figure it out!" Most designers are very good at what they do, but performing miracles is not part of their expertise.

Many times, making a track plan believable means telling the modeler that he or she cannot have everything he or she wants. Many modelers have unrealistic expectations about what can be built within a given amount of space.

Unrealistic expectations lead directly to non-believable and unrealistic model railroads. Many in today's younger generations want double-track mainlines, the ability to run modern equipment, mountain scenes with lots of track elevation changes, large inter-modal operations, and so on. If the designer tries to give the modeler even a little bit of each "want" and the available space isn't there, even the best track plan will not be believable. Never let emotions trump believability!

### **What about the "Pure" Prototype Modeler?**

I define the "pure" prototype modeler as the "no-compromise" modeler. For the no-compromise modeler, believability and accuracy are everything. They will spend countless hours, days, months, and sometimes even years researching their favorite railroad. Many times, they'll know more about the prototype than half

of the people working for the prototype railroad.

Designing track plans for this small, but a very determined group of individuals can be just as challenging as designing for the modeler who is basing all his or her wants on emotions.

For the no-compromise modeler, emotions still play a role. These people know exactly what they want because they have invested years getting ready to build their dream layout.

I've seen cases in which the no-compromise modeler never completes his or her dream layout. Such modelers have trouble making choices; they know that they can't have it all, but because of the amount of information they have absorbed, it is very hard for them to leave something out. The term "*paralysis by analysis*" could apply to them. In these instances, "pure believability" can be a serious constraint.

### **The Emotions Modeler vs. Pure Prototype Modeler**

From a track planning perspective, designing for these two, very different types of modelers can be extremely challenging. The person who likes a specific railroad because his or her grandfather worked for the railroad probably isn't that interested in how many or exactly what kinds of industries are present, or whether the industries are located in specific towns. Instead, they usually will listen to the designer and go with his or her recommendations.

On the other hand, the pure prototype, no-compromise modeler – having spent years studying the proto-

type – knows not only what industries were in which towns, but they can tell you on which side of the mainline the industry was located and how many tracks led into said industry.

I have found the emotions modeler easier to design for, whereas, the pure prototype modeler always wants to know the reasons why this or that is not being included.

### **Google and Google Earth**

Two decades ago, if you wanted to be a serious designer, you literally needed a library of reference books. Back then, the designer had to rely on reference books, going to the public library, or subscribing to numerous railroad publications.

Today, Google and Google Earth have changed the way designers approach their job. Research is a lot easier and less stressful, but not necessarily less time-consuming. If I need information on a specific railroad or subject, I type a few words into Google search, and instantly I'll have thousands of hits. The problem is that there is so much information – both good and bad – that the designer still can spend hours filtering out the irrelevant information.

### **Designing for Believability: An Example**

Recently, a modeler contacted me to design a track plan based on the *Vermont Railway*. The modeler was relatively new to the hobby and wanted to model the area near where he lives. He had specific "givens" regarding towns and the industries. But he wasn't sure how to incorporate these "givens" into a successful



layout design. After a couple of phone calls and numerous emails, I spent the next few hours researching the area in general and the *Vermont Railway* in particular. Because the layout was being designed based on a prototype, the modeler also wanted the layout to operate like the prototype. In other words, make the design believable.

The modeler wanted the layout to represent the area in such a way

that, when visitors familiar with the area entered the room and walked the layout, scenes would be recognizable. To make things even more challenging, the available space I had to work with measured approximately 12' x 14', or approximately 170 square feet.

Prior to starting the design process, we needed to decide which industries would be included and which would get left out. We settled on

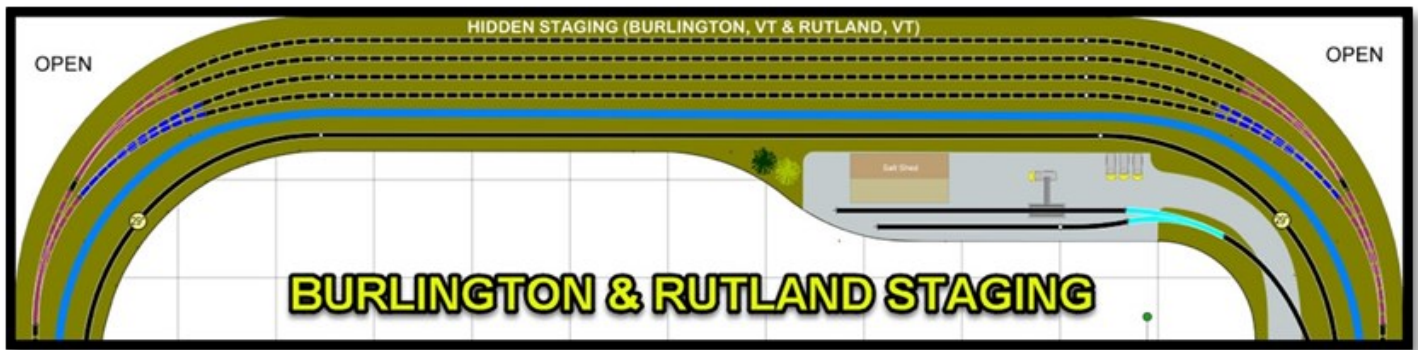
one town and six industries. There simply was not enough room for multiple towns if we wanted to keep the design believable.

We then tried to arrange the industries in some geographical order to match their real-world counterparts, to enhance the believability factor. This also proved to be impossible; certain industries did not fit the available space on the track plan. Using “modeler’s license,” we decid-

*Figure 1. Track plan overview.*







*Figure 2. The hidden staging yard shown within the track plan.*

ed it was more important to include a good representation of the industries and make geographical locations a secondary concern. In the end, this proved to be a good decision.

The rest of this article will discuss the final version of this track plan and include a series of images and comments, taking the reader on a visual/textual tour of the *Vermont Railway* between Burlington and Rutland, VT.

### Track Plan Overview

As seen in Figure 1, the design is a simple around-the-room, center-peninsula plan, with a lift-out at the entrance to the room. As stated earlier, the room measures approximately 12' x 14', or approximately 170 square feet.

Because the modeler wanted the ability to do prototypical operations, I included a four-track staging yard (see Figure 2). There was not

enough space for a helix, therefore the staging needed to be on the same level as the rest of the layout. I suggested using an 18" to 24" high view block (the blue line in Figure 2) to divide staging from the rest of the layout.

The plan depicts the *Vermont Railway* between Burlington, VT (Figure 3) and Rutland, VT (Figure 4). As designed, the plan has only one town, Middlebury, VT (Figure 5). However, there are numerous small towns

*Figure 3 (below left). Burlington, VT (Imagery ©2018 Google, Map Data ©2018 Google).*

*Figure 4 (below right). Rutland, VT (Imagery ©2018 Google, Map Data ©2018 Google).*

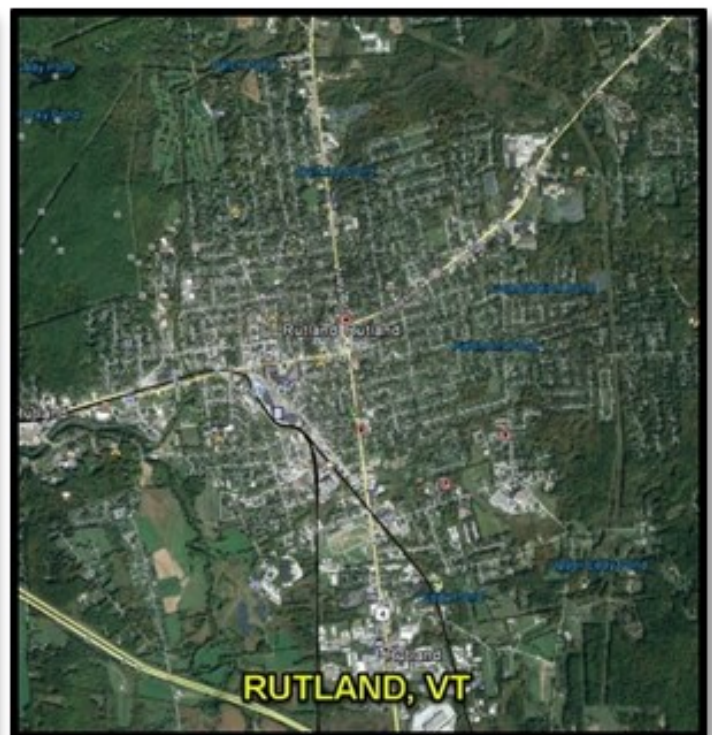
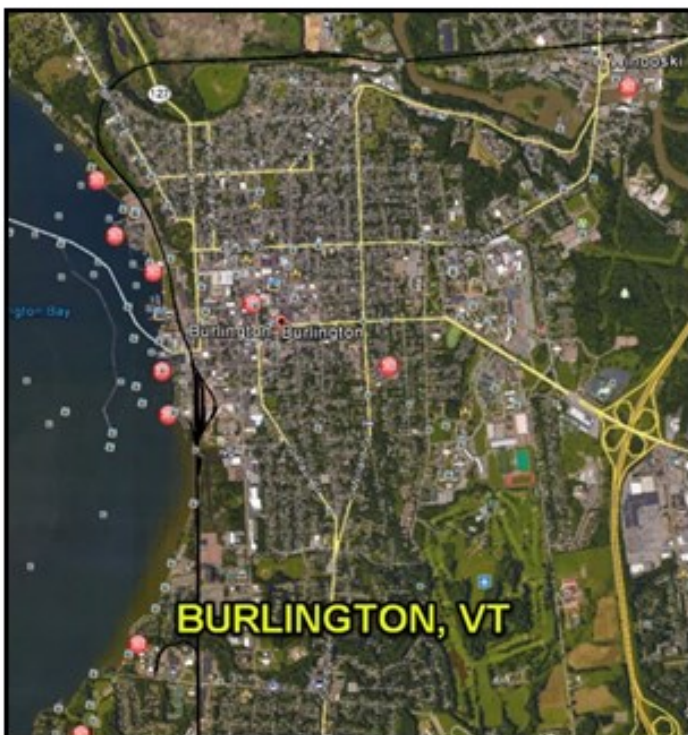






Figure 5. Middlebury, VT (Imagery ©2018 Google, Map Data ©2018 Google).

to the *Pan Am Southern*. Hoosick Junction literally is nothing more than a junction. The modeled portion of the layout runs from Burlington, VT to Rutland, VT.

### Burlington VT and Rutland, VT (Hidden Staging)

It was decided that Burlington and Rutland would be the two terminal points on the layout, represented by hidden staging (see Figure 2, above).

between Burlington and Rutland, so serious “selective compression” was necessary. Even though Middlebury is the only town on the plan, it plays a major role in the overall operations and believability of the design.

There are six industries on the layout. Four of the six represent actual industries located along the *Vermont Railway* between Burlington and Rutland. Two other industries were added to fill space and give the owner some additional locations to switch cars. The color coding on the turnouts (see Figure 1, above) is simply a way of easily identifying different types of turnouts while building the layout.

Even though the modeler wanted prototypical operations, he also wanted the ability to railfan. This was accomplished by including a single track running in front of the staging yard.

### Vermont Railway Overview

As shown in Figure 6, the *Vermont Railway* is a north-south route from Burlington, VT to Hoosick Junction, NY (see Figure 7), where it connects

Figure 6. A map of the Vermont Railway system.  
Map courtesy of [Vermont Rail System](#).







*Figure 7. Hoosick Junction, NY (Imagery ©2018 Google, Map Data ©2018 Google).*

Hidden staging is made up of four tracks. This will allow eight trains to run during an operating session. Trains traveling onto the layout from the left-hand side of the plan are northbound trains coming from Rutland and heading to Burlington; trains entering the layout from the right-hand side of the plan are traveling southbound, from Burlington to Rutland. During operating sessions, four trains can operate in and out of the two Burlington staging tracks, and four trains can operate in and out of the two Rutland staging tracks.

### **Middlebury, VT**

The town of Middlebury, VT (see Figure 5, above) was positioned on the plan approximately halfway between Burlington and Rutland staging. If you refer to the *Vermont Railway* system map (see Figure 6, above), you will notice that Middlebury does sit approximately halfway between Burlington and Rutland; this was a bonus and added a remarkable amount of believability to the layout. Anytime you can depict the real world accurately, the believability factor is increased.

Middlebury contains a small yard. This yard plays a major role in the overall operations of the layout: freight trains coming from Burlington or Rutland will drop off and pick up cars in Middlebury.

Local trains will distribute the cars to the various (on-layout) industries. I have included a small engine servicing facility in Middlebury. This lends believability to the fact that Middlebury is an important location on the *Vermont Railway*.

### **Salt Plant (Shelburne, VT)**

This industry is not placed on the plan in a geographically correct position (see Figure 8). Shelburne, VT is located just a few miles south of central Burlington. As southbound trains leave Burlington, they travel through Shelburne. I had to take modeler's license and locate the salt plant at a geographical location different than in the real world.

The plant is relatively new, so there were no Google Earth photos of the plant when the track plan was being designed. Fortunately, the modeler was able to send me a newspaper

*Figure 8. Salt storage complex in Shelburne, VT shown within the track plan.*

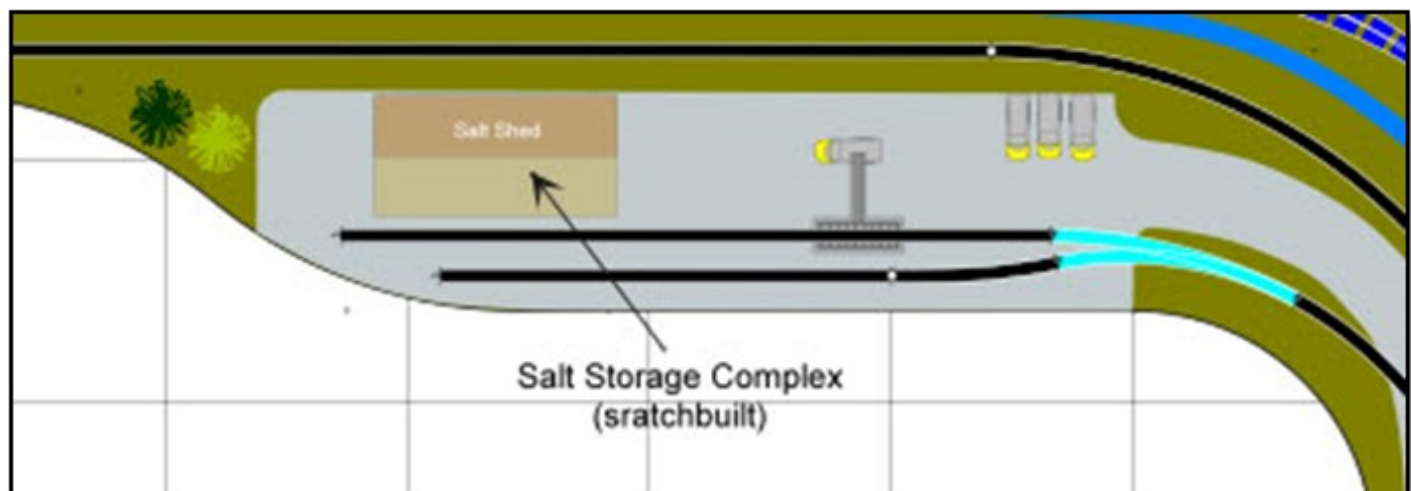






Figure 9. Champlain Valley Creamery (Imagery ©2018 Google, Map Data ©2018 Google).

article describing the operation of the plant. This was very helpful in designing the industry and maintaining the believability factor.

### Champlain Valley Creamery (Vergennes, VT)

Using Google Earth, I was able to find an overhead view of a company called *Champlain Valley Creamery* (see Figure 9). From the aerial view, it looks as though the creamery has been out of business for several years, but I felt this would be a good industry to include based on the region and the believability factor. I opted to specify the Walthers *Citrus Packers* structure (#933-2926) to represent the facility (see Figure 10). The modeler will modify the structure making it into a creamery.

### Blue Seal Feeds (Brandon, VT)

*Blue Seal Feeds* is located in Brandon, VT, which is geographically south of Middlebury. As shown in Figures 13 and 14, *Blue Seal Feeds* is a large complex. Based on the track plan

configuration, there was no room to include the industry south of Middlebury. Again taking modeler's license, we decided the industry was important enough to include anyway. So, we placed it north of Middlebury, on the opposite side of the peninsula view block. On that side of the pen-

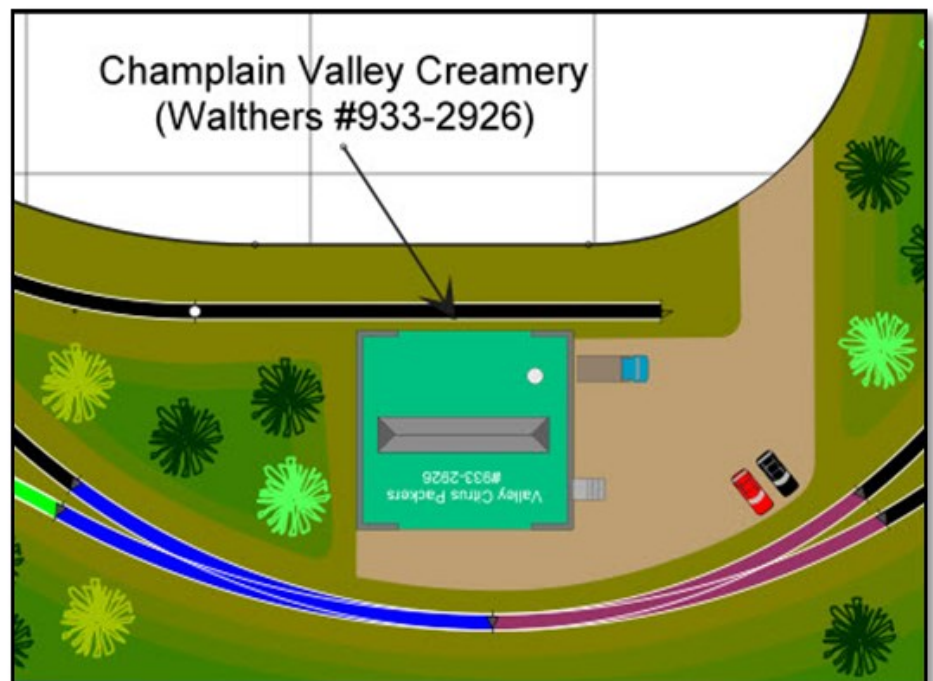
insula, we wanted an industry that would dominate the scene, and this filled the bill.

To represent the complex, I elected to use the *Pikestuff Milton A. Corp.* (#104) and the Walthers *Grain Bins* (#933-2937), as shown in Figure 13. The Pikestuff building was a perfect fit and is a good representation of one of the larger industries on the *Vermont Railway*. The overall scene is believable.

### Rail-to-Road Aggregate Transfer

A rail-to-road aggregate transfer industry was not part of our original list, but we decided to include it. On the north side of the peninsula, we had enough space for a small, one-spur industry. The rail-to-road aggregate transfer seemed like a good fit, plus it provided an additional industry without affecting the other industries. As far I know there was no prototype. I used the Walthers

Figure 10. Champlain Valley Creamery shown within the track plan.







*Figure 11 (above left). Blue Seal Feed (Imagery ©2018 Google, Map Data ©2018 Google).*

*Figure 12 (above right). Blue Seal Feed street view (Image Capture: August 2012, Map Data ©2018 Google).*

Rail-to-Road Aggregate Transfer (#933-4036), as shown in Figure 14.

### **OMYA Marble Plant (Florence, VT)**

OMYA is a marble quarry, located in Florence, VT. The plant mills and purifies marble to produce finely ground calcium carbonate. It proba-

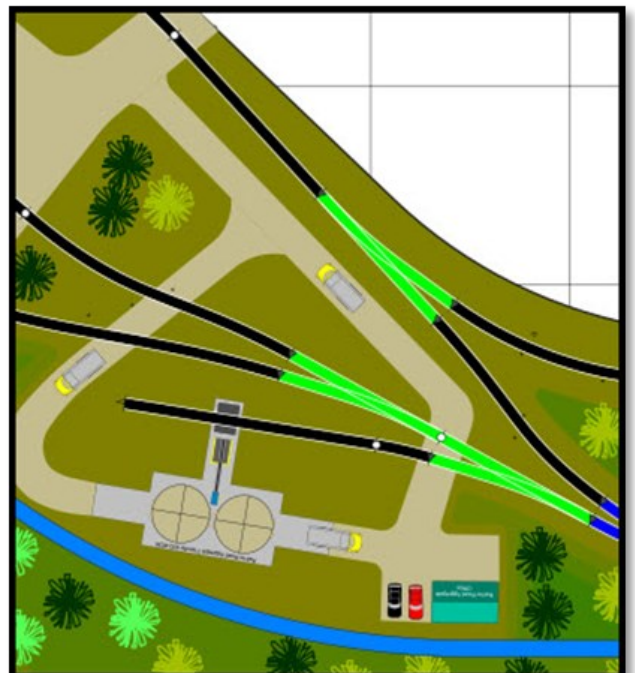
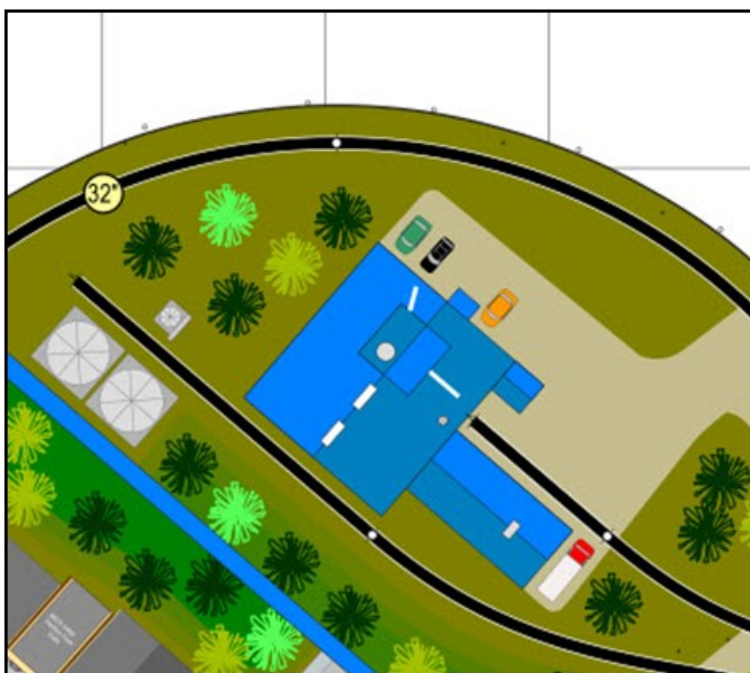
bly is one of the largest, rail-served industries in Vermont. If you use Google Earth to search for Florence, VT, you easily will find the plant (see Figures 15 and 16); a short distance to its north is a large open-pit mine. The plant and open pit were many times too large to fit the space we had. We decided to include as large

a structure as would fit into the available space and represent the rest of the plant using photo backdrops.

The Walthers Valley Cement Plant (#933-3098) was chosen to represent the facility, and it will be modified to fit the space (see Figure 17).

*Figure 13 (below left). Blue Seal Feed shown within the track plan.*

*Figure 14 (below right). Rail-to-road aggregate transfer shown within the track plan.*





*Figure 15 (above left). OMYA Marble Mill (Imagery ©2018 Google, Map Data ©2018 Google).  
Figure 16 (above right). OMYA Marble Mill street view (Image Capture: April 2012, ©2018 Google).*

With the use of photo backdrops, I think the scene will be easily recognizable and believable.

### Final Thoughts

In this article, we have dealt with a relatively small track plan; but because the modeler wanted to accurately represent an area with which he is familiar, it took time and effort to do the proper research, and hard decisions had to be made on what to include and what to leave out.

Overall, I feel, we reached a good balance, providing the modeler with

a layout design he will find fun to build and fun to operate. Most importantly, we created a believable product. 🚂

### About the Author

Bill Beranek - The Track Planner has over forty years in the model railroading hobby. Bill enjoys golfing, traveling, and of course designing “prototypical operations” focused track plans. He has been a member of a local 135+ member model rail-

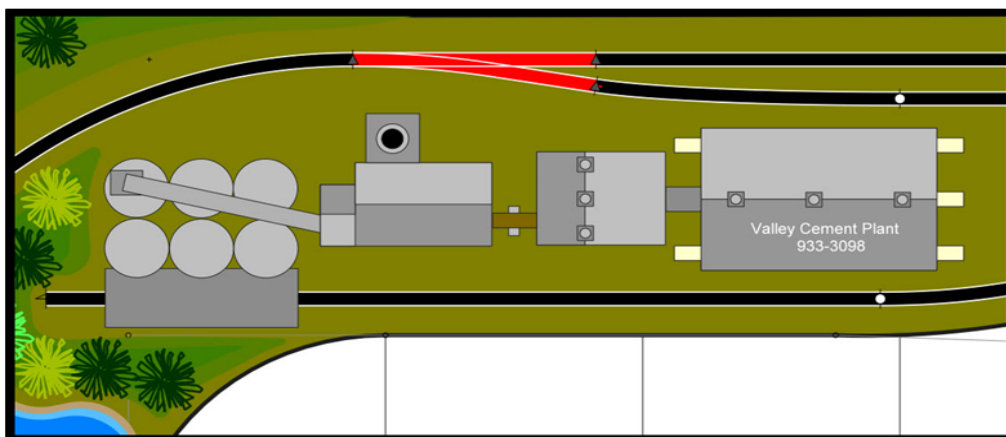
road club since 2003 and has served twice as the club’s president, twice as a board member, and is currently serving as the club’s treasurer.

Bill is currently working on his latest triple-deck HO scale layout depicting the SP&S (Spokane, Portland & Seattle Railway) in southern Washington and the OTL (Oregon Trunk Line) on the upper level in northern Oregon in the mid-50s.

You can find more about Bill—The Track Planner at:

[www.thetrackplanner.com](http://www.thetrackplanner.com).

*Figure 17. OMYA Marble Mill shown within the track plan.*







Harry M. Haythorn, UPHS #4043

# The Howard Fogg Power Car Builds

**W**elcome to the March 2018 edition of the UP-HUB! The New Year brings a few changes to the magazine, including a name change that is discussed in the opening of this issue. But fear not, the quality of the articles will not wane; in fact, they will only continue to improve and this article will be no different. Now let's get on with the build article.

This is the article that many Union Pacific modelers have been asking about for over two years, and I finally got around to writing it. Why is this such a hot topic among Union Pacific modelers? The *Howard Fogg* is used with #844 and #3985 (and soon it will be used with #4014) when they are on the road.

## Car History

UPP (Union Pacific Passenger) No. 209 *Howard Fogg* started its life as American Car and Foundry baggage

dormitory No. 6006 in 1949 for use on the Union Pacific's City Fleet trains. In 1962, it was converted to a boiler baggage dormitory and was renumbered to 304 to be used with the UP #8444. It was also used to provide steam heat to passenger cars that were on excursions and other public relations trips during that time. By now, the 304 was also used to provide "house steam" to the locomotives while they were being maintained without a fire in the boiler.

In 1987 the car was renumbered again to 209, and it was assigned to the heritage fleet full-time in 1990. In 1996 the car received the name *Howard Fogg* after the world-renowned railroad artist passed away.

In 2000, the car was upgraded again to accommodate a Head End Power (HEP) generator. The steam and HEP are fed to the train by a diesel generator that is housed in the for-

mer baggage compartment of the car. The car also has a laundry room, a shower room, a freezer and fridge room, and three large state-rooms for the steam locomotive crews.

## Build it Already!

This car is only available in two ways: either buy it or build it.

The car model was produced by Overland Models Inc. in brass and currently sells for close to \$1,000 on the secondhand market. Even at this price, it's a hot commodity and any available cars usually sell within hours of becoming available.

The alternative of building it yourself makes for an ambitious weekend project. If you have been a regular reader of this column for any length of time you already know that if I can't find it, then I build it. And that's what I did – rewinding the clock to four years ago when I started to build it.



*Figure 1. Shown above is my personal Howard Fogg Car; this is actually the 4th car I have built. It is the five-axle version and I like it the best. Shown below is the third car that I built. It is the modern six-axle version. It has been sold as well.*



At the time, I had it finished in about three weeks and ran it for the first time on the club layout during the North Platte Railfest. Two gentlemen saw it and asked where it came from. I told them that I had built it and could construct more if they were interested. I sold that car that day and immediately built the second gentleman one. The third car that I built went to my buddy who ended up switching to N scale. Needless to say, that car has been sold off.

This car is easily built using one of two American Car and Foundry baggage-dormitory cars available from Walthers. Walthers released these as part of their Union Pacific City series of cars a few years ago. The part numbers of these cars are as follows: 932-9560 is the Union Pacific lettered car and 932-9564 is the CNW lettered car in UP colors.

Both cars work well, however one involves more paint and decal work than the other. Both cars have the word "Baggage" next to the baggage door which will need to be removed, and if you chose the CNW-lettered car then it is necessary to re-decal it to a UP car. Sometimes the Micro Sol trick works in removing the pad-printed letters, and other times it doesn't.

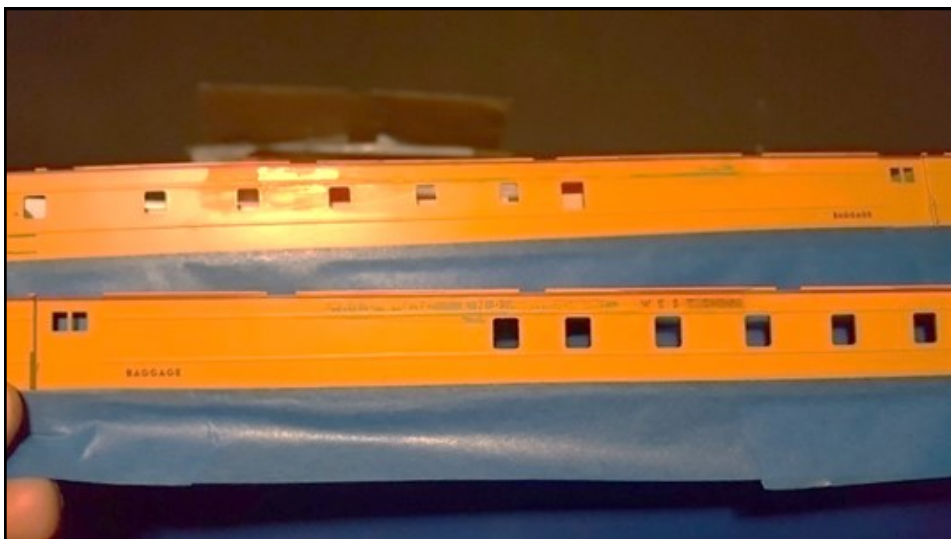
In the case of the latter, your best bet is to completely repaint the sides. Be sure to remove the sides from the car then remove the windows from the car's walls before you paint. If you use high-quality masking tape, you can mask the car at the stripes and not have to repaint the Harbour Mist Gray below the bottom red stripe thus saving some time and effort. I have done twelve of these builds, seven of which I

started with CNW cars. Of those seven, I have had to restripe four. (See Figures 1 and 2.)

### **Starting the Build**

Let's get started on this build. Before we set off, we must decide on which car we are going to build. Over the years there have been a few changes made to the 209, most notable of the changes have been the trucks. The 6000-series baggage dorms were originally equipped with 41-N-11 two-axle trucks; these were removed from the car in the 1980s and were replaced with a 41-NDO-11 two-axle truck on the dormitory end and an A62-UDO-11 three-axle truck under the baggage/generator end thus making it a five-axle car. This configuration lasted until 2010, when the two-axle truck was replaced with another A62-UDO-11





*Figure 2. The sides are removed from the car skeleton and all "glass" is taken out. The sides are masked and are then ready to be painted.*

truck, now making it a six-axle car. There have been other small parts added or removed over the years, but the basic roof items and vents on the side have been the same for a long time.

To add the correct A62 six-wheeled truck you must shorten the center (underbody) water tank by about a half inch. This is easily done with a razor saw, trim the end back to the first under-floor rib near the front of the tank. Save the end cap to put back on the tank. If you are building the five- or six-axle version, the dormitory end needs no modification for the trucks.

## The Rooftop Modifications

Let's start with the roof modifications; these include removal of a section of the roof walkway, and installing some boxes, antennas, and other rooftop details as well as building a cableway and a roof panel.

The first modification required is the removal of the section of the roof walkway to install the rest of the rooftop details. I use a single-edge

razor blade and cut the walkway at the fourth set of double rivets from the front (baggage door) end of the car and then I make a second cut at the eighth set of rivets. (See the white strip on the rooftop in Figure 3.)

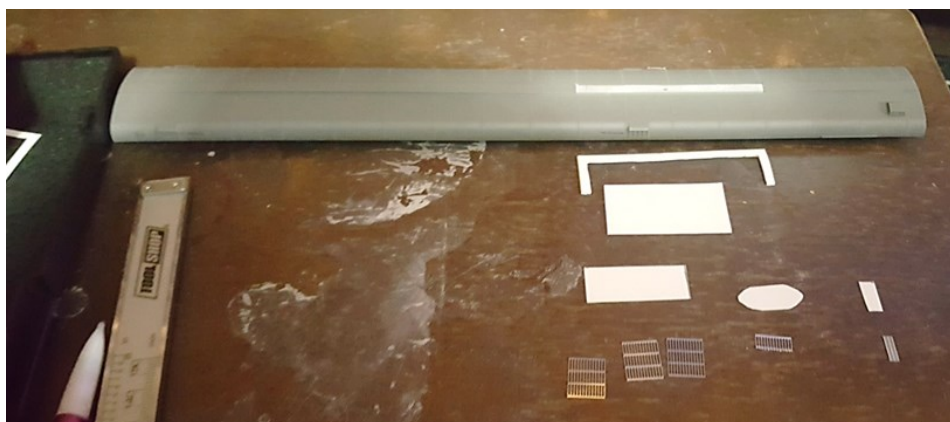
The cableway can be made in a few different ways, based on your skills and your available tools. My chosen method is to cut the needed piece from a .020" sheet of styrene with a nibbler so that it is a one-piece item that is .148" (3.15mm) wide by 3.010 inches (76.45mm) long. To do this, I

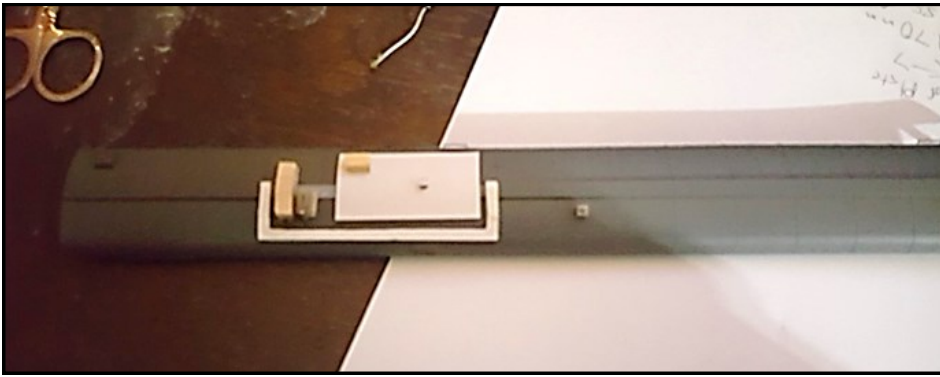
first make a template out of .010" sheet that I lay over the top of the thicker sheet. This ensures that each copy of the component is the exact same.

Another good method is to instead use .020" strip that is .148" (3.15 mm) wide and piece it together. I used this method on some of my customers' cars and it works very well. This piece is then glued to the roof on the left-hand side, between the section cut out of the roof walk and runs to the outside rivet row on the roof. (See Figures 3 and 4.)

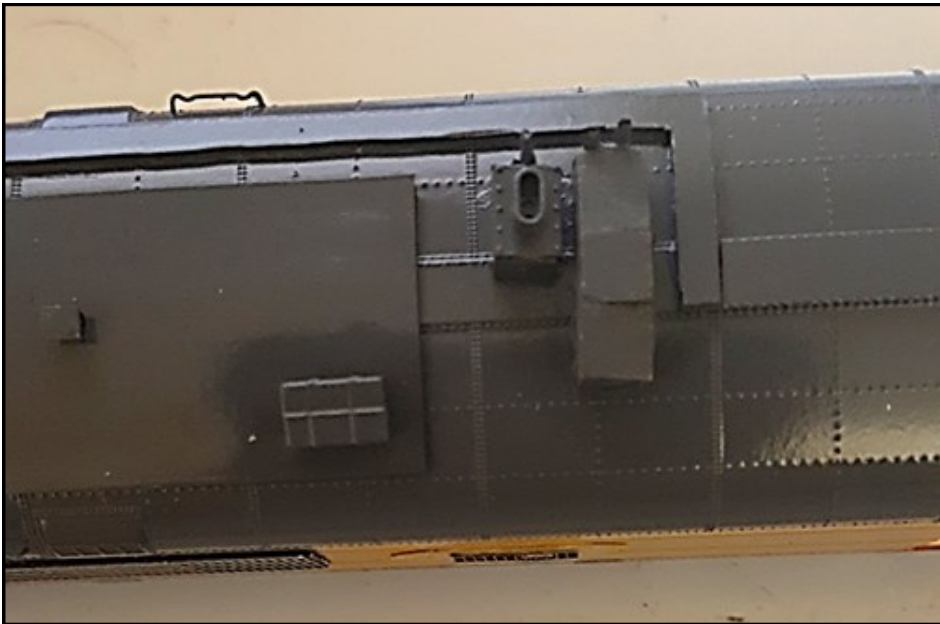
To build the roof panel, I use two pieces of .010" styrene sheet which measure 1.675" (42.52mm) by .871" (22.12mm). The bottom sheet should be cut a few millimeters smaller than the top sheet to give the illusion that the plate is not just stuck directly to the roof surface. I then add a small box at the front right-hand corner just slightly back from the edge of the panel. The exhaust stack in the middle is made from a piece of .070" styrene rod with a piece of .010" styrene sheet glued to the top to simulate a rain cap. This roof plate should be positioned in the area bounded by the

*Figure 3. The rooftop has been cut out and is ready for installation of the cableway and the roof plate.*





*Figure 4 (above). Starting the installation of rooftop parts.  
Figure 5 (below). Rooftop details are starting to take shape.*

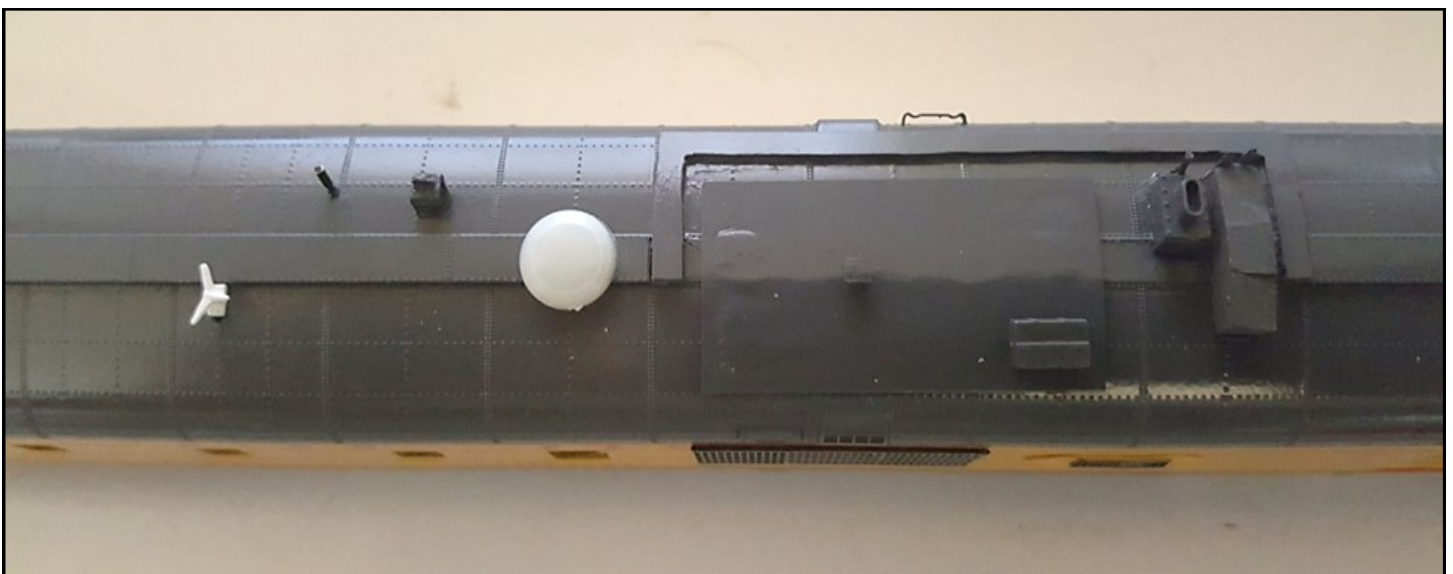


first rivet row from the inside of the cableway to the outside rivet row on the right-hand side. The final details to add are the four lift rings at the corners of the plate.

The rest of the rooftop details and boxes are a mix of commercial and scratch-built parts. The forward-angled top box is made out of a piece of 1/4-inch square strip with angles cut into the top and the bottom and curved to match the roof; it is glued at the first rivet row behind the cableway. The exhaust stack behind this box is made using a piece of scrap plastic and a Detail Associates EMD non-turbo exhaust stack. (See Figures 4 and 5.)

The other pieces on the roof include a round GPS antenna (positioned at the ninth double-rivet row on top of the walkway), a Sinclair radio antenna on a ground plane (placed on the single rivet row between the ninth and tenth double-rivet rows), and a firecracker antenna (located on the tenth double-rivet row). Both antennae are on the left (fireman's)

*Figure 6. The finished rooftop.*







*Figure 7 (above). The right-hand (engineer's) side of the car is drastically modified. Figure 8 (below). The left hand (fireman's) side of the car is pretty basic; no significant changes other than the lettering.*



side of the roof walk. On the right (engineer's) side, there is a TV antenna on the 11th double-rivet row right along the side of the roof walk. Because this part is very hard to come by, I usually omit it from the model. However, if you wish to include it, a good way to simulate it is to fabricate it out of .010" styrene rod by cutting it in the basic shape of the TV antenna. With all the parts installed it is a whole different roof. (See Figure 6.)

### **Adding Grilles**

Now let's work on the right hand (engineer's) side where the vents go. (See Figures 7 and 8.) This is comprised of eight separate pieces that must be added to the side of the car, three pieces of .010" styrene sheet and five etched-metal grilles from Detail Associates.

The three pieces of styrene are used to add the grilles to the body as they do not fit flush on the sides of the prototype. Each of these styrene

pieces must be cut to fit as each is of a specific shape.

The biggest panel is the air intake for the diesel generator. This plate measures .503" (12.78mm) wide by 1.522" (38.66mm) long. I like to paint this piece a flat grimy black before gluing the air intake panels to it. It is attached to the body on the right (engineer's) side of the car, .404" (10.25mm) ahead of the first big window and straddles the window's bottom batten strip.



*Figure 9. The Howard Fogg car in a train rolling across the system with Art Lockman ahead of it and Reed Jackson/Sherman Hill behind it.*

The next plate is what I call the football plate (because it is shaped like a football), which also has a grille on it. It measures .841" (21.38mm) long by .377" (9.57mm) wide. I paint this piece yellow first then add a black strip where the grille will go. Using a spare grille from the set of six you purchased (see the list of materials at the end of this article), cut one section from the large grille. Glue the cut grille horizontally on top of your football plate which is approximately .210 inches (5.36mm) ahead of the big grille.

The third grille is the smallest and it goes ahead of the baggage door, at .372" (9.45mm) and measures .197" (5mm) wide

by .440" (11.18mm) tall. There is a grille that fits in this space. This one is also painted yellow before it is attached.

There are a few tanks and other underbody details on the prototype that I don't always recreate on the model, but they are easily made with sheet styrene and parts available from many suppliers.

The finishing touches to the car are the decals. There are a few options available to you based on with which car you started, and how much paint work was required. If you need to add stripes, the "Union Pacific", the "Howard Fogg", and the "209" letters and numbers, you will need a set of Micro Scale Decals UP Busi-

ness Cars (87-1056) decal set, and a set of Union Pacific Red Stripes (87-632). If you just need the "Howard Fogg" lettering, Circus City Decals sells them on sheet #UP205. On the prototype car, the last half of the word "Pacific" – the "I-F-I-C" – runs on top of the LARGE grille. I have tried a few times to get the decals to stay applied to this area of the model with no success.

### **Building the Consist**

Now that you have your car finished, you might be asking yourself where and how this fits into a steam trip. This car is always the second car within the train consist, positioned behind the 85' ACF baggage/machine shop car 6334 Art Lockman. A sam-



## Required and Suggested Parts

- Walther's Baggage Dorm 932-9560 or 932-9564; both are sold out (check eBay).
- Walther's passenger car trucks:
  - \* 920-2119 GSC A62-UDO-11 6-wheel baggage car trucks.
  - \* 920-2109 41-NDO-11 4 wheel disc brake trucks.
- Detail Associates diesel parts include
  - \* GR-2717 GE 8-40CW grilles.
  - \* EX-2402 EMD non-turbo exhaust stack.
- Details West parts:
  - \* RA-157 Firecracker antenna.
  - \* RA-214 Sinclair radio antenna with ground plane stand.
- Hi-Tech Details HDT-6003 UP/BNSF GE GPS Antenna Dome.
- 1 sheet of .010" styrene.
- 1 sheet of .020" styrene.
- Assorted grab irons or scale-size wire for the roof plate lift rings.
- Assorted boxes made from 1/8" and 1/4" strip styrene.
- The "Flying V" TV antenna (if you can find it).

*Left: The list of parts and a photograph of a few of the items used during the build.*

waiting for me to write this for over two years, thank you! This article has been needed for some time in the Union Pacific modeling community. I have a few other business/heritage fleet car builds in the works and they will probably end up in *The Modeler's Journal* in the future. Please do not hesitate to contact me through Google+, YouTube, or Facebook should you have any questions regarding this build and the techniques I used. 🚂



## About the Author

Harry is a rancher in Nebraska who works with his father and grandfather to help run their 22,000-acre, 1,500-head of mother cow, ranch. Harry has been model railroading for over 20 years and models the Union Pacific Steam era from the 1930s to the 1960s, in central and western Nebraska. Harry is a Sustaining Member of the Union Pacific Historical Society and a member of the UPHS Streamliner 100 club. He is a National Model Railroad Association member currently working on his Master Model Railroader Certificate. Harry regularly posts videos on his YouTube page. You can follow Harry as he works on his 7th layout at <https://www.youtube.com/channel/UC6-MPHmYU3Cc2uEVfjZDIcQ>.

ple of a ferry move might be set up as follows:

#844 and tender, water tenders 809 Jim Adams (Flag tender) and 814 Joe Jordan, BE-70-1 boxcar 9336 (if you model before 2012, when it was wrecked in Herne, Texas), 6334 Art Lockman baggage car, 209 Howard Fogg baggage dormitory, 5714 Lynn Nystrom baggage car, 5818 Reed Jackson/Sherman Hill concession car (named Sherman Hill prior to 2009

and Reed Jackson after 2009) one of the Flag Baggage cars, and the CA-13 Steam Crew Caboose (which, interestingly, is now at the Rail Giants Museum in Pomona, California). These pieces are all stabled at and maintained in Cheyenne, Wyoming, whereas the rest of the passenger cars are stored in Council Bluffs, Iowa. (See Figure 9.)

I hope that you have enjoyed this build and if you have been patiently

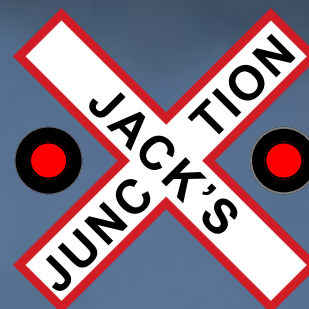


Photograph by Jack Hykaway.



# The Story of a Photograph

All photographs by Jack Hykaway.



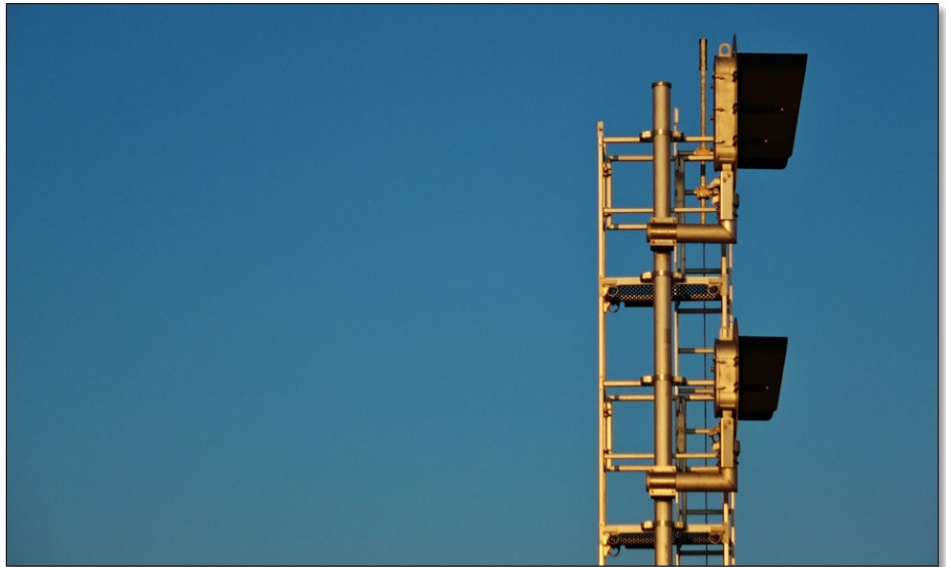
By Jack Hykaway

## PART ONE

### – Take a Step Back

A bright blob of light flickers in the distance, slowly splitting into three as the sound of laboring prime movers fills the air. The sheer power of the locomotives and the immense weight of the freight cars pounding rail joints shake your bones, and the warm wind kicked up by freight cars' rolling wheels reeks of creosote-soaked cross-ties. There's no other experience quite like standing next to the railside, taking in the passing of a speeding freight train.

However, from a photographer's point of view, standing twenty feet off of the right-of-way doesn't always yield the best photo. Though many incredible shots have been composed looking down the pipe at an oncoming freight train, it might be worth your time to investigate alternative angles. Take a walk around and in between trains, and spend some time scouting out different angles that catch your eye. Keeping your personal safety in mind and be-



*Try getting close to the details (above) or capture the broad scene (below) in your photography.*

ing conscious to stay on public property, look for fences, buildings, signs, unique vegetation, and geographic formations that can be included into your shot. Any small details and elements of the surroundings give depth and context to the photograph and encourage your viewer's eye to wander longer.

The majority of my images are captured in the wide-open spaces of the

prairies, where there's always plenty of room to step back and capture a broader scene and many opportunities to get close to the details. In July, the fields of canola are in full bloom. The canola's bright yellow blossoms provide a spectacular foreground – or background – to any image. Getting low among the buds frames the subject nicely. From across the field, a VIA Rail passenger





train seems to glide through the bright yellow flowers.

The same is true in photographing models, and specifically in photographing model trains. Build up a scene; include a foreground and background, and position your subject strategically in the frame. There's a balance that needs to be struck between the foreground, background and the subject – one strives to put together an interesting foreground, but it mustn't take away from the subject. In other words, make it interesting but not too interesting; it should complement your subject but not distract viewers. The same goes for the background: it should be there and viewers should notice it, but it shouldn't be the star of your image.

Composition is critical to making or breaking a photograph – especially when you have the power to, quite

literally, move mountains in your own miniature world. Place buildings, signs, signals, and many small details so that they frame your subject well and complement your subject. Obeying the rule of thirds – laterally (across the frame from left to right) and/or longitudinally (from the top to the bottom of the frame) – is crucial to keeping your audience's eye wandering around to each corner of your image.

## **PART TWO**

### **There is always a Shot**

Finding something interesting in the uninteresting is a sense you will develop as your photography improves. Photographers develop an ability to capture the atmosphere of a scene even on the bleakest of days.

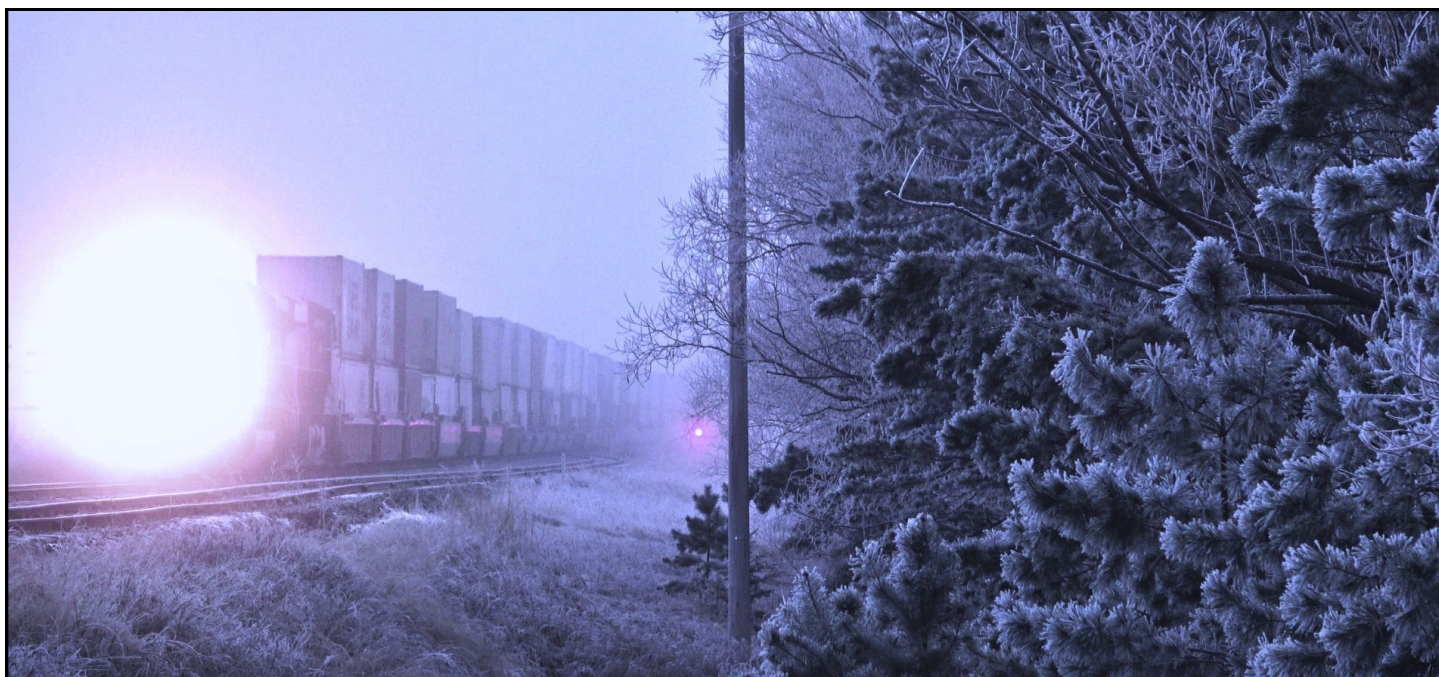
We've been taught as photographers to never shoot towards the sun and to be wary of the sun's position on

the subject. This is important to take into account when composing your photograph. Unfortunately, as railroad photographers, we've also been taught that a photograph taken whenever the sun isn't shining is not as good as its sunny-day counterpart.

This quite simply is not true. Sure, the colors don't pop as much under cloudy skies but think of the diverse photographic opportunities that open up now that the sun is shrouded. Now, you can successfully shoot on the "shadow side" of the tracks without having the bright sunlight ruin your image. In addition to new angles, cloudy, rainy, foggy, or snowy days have a different atmosphere – photographs captured in these conditions often make for a more interesting shot because of this. They show that railways never sleep: trains are running rain or shine, hot or cold.

*Notice how the rule of thirds is respected in this photograph. The tree trunks on the left and the train on the right balance the image horizontally, while the train above and the reflection in the water below balance the image vertically as well.*





*Blue-hour light such as this can be created by using cool, diffused lighting when photographing models, then tweaking the image afterward in a photo editor. Note the textured foreground element on the right.*

Take, for example, this article's cover image of a train's headlight piercing through an early March blizzard. I distinctly remember thinking I was crazy to stand out in the blowing snow to capture the moment that the headlights appeared through the whirling drifts. The 60 MPH winds made standing outside a feat in itself, and the raging gusts made harmless, fluffy snowflakes into abrasive shards, which were being embedded into my jeans by the winds. I was only outside for about fifteen minutes to capture the shot before I retreated to shelter, but that didn't stop small drifts of snow from forming around my stationary feet!

They were indeed crazy conditions for photography, but I look back at this image more fondly than most I have captured. This is one of my favorites not only because it was a memorable moment, but mostly because of what an incredible story it tells of the train crew's determina-

tion and perseverance to battle the storm with the help of an incredible machine.

It's hard to photograph delicate models in adverse weather conditions. However, with a few tricks and practice, these conditions can be simulated without risking any of your model's detailed and fragile components.

Using appropriate lighting is the key to constructing the setting for your image. As an example, using a cool, diffused light gives the viewer an impression that your image was shot on an overcast day where the light was flat and the shadows nonexistent. Dimming/brightening the lighting gives hints to the time of day and helps add to the story of your photograph. It's important not to forget about the placement of your lights either – If you can't take your models outdoors, try to emulate the lighting from the sun, ensuring the shadows cast by your models are

realistically positioned (Ideally, all shadows should be pointing in the same direction).

Shooting models in the dark is especially spectacular if there are lighted buildings, signals, and signs. Spot lighting from miniature model street-lamps and traffic lights can be useful to frame your subject in darkened environments.

### **PART THREE** **Learning from Others**

Everybody sees something different in a scene, one photographer might see one shot while you want to try another. Sometimes, a second opinion will lead you to try a shot you never thought you would. Whether that second opinion comes in the moment or weeks later, it is worth acknowledging. Learning from more experienced photographers is a great way to develop your eye and broaden your skillset. Find an online community of photographers and ask





*Slowing the shutter speed allows for more light to enter the camera. This must be accounted for while shooting!*

questions, make connections and share your photographs.

#### **PART FOUR** **Learn your Gear**

To execute a photograph successfully, you need to familiarize yourself with the equipment you're using. Each camera and lens performs best under specific conditions – whether they are external conditions (lighting, weather, etc...), technical conditions (shutter speed, aperture, etc...) or a mix of both. There is only one way to know under which settings you will receive the best image, and that's through trial and error.

To achieve the best possible result while shooting, you must try to control as many conditions as possible. When shooting photos of model trains, for example, external conditions such as lighting can sometimes be controlled, especially if shooting indoors. If a smaller aperture yields a sharper image from your camera, then brighter lighting will be necessary to expose the image properly. Or, if you wish to capture the move-

ment of your subject with a blur, a slower shutter speed is necessary and therefore less light will be needed.

#### **PART FIVE** **Express Yourself**

This is what it's all about – photography allows one to get their creative juices flowing and to share their efforts with others. Being creative and trying new things is how each individual photographer defines themselves; it's how they develop their unique flair and their unique style to reflect their individual personality.

The best advice I can give a photographer who is just starting is to try **everything**. Don't be limited by the boundaries of the box – go crazy with different angles, different camera settings and different adjustments made after-the-fact in your photo editing software. Find what you enjoy, and find what works for you. A trial-and-error process is simply the best way to discover what you enjoy shooting and how you

prefer to capture your subject. Always try pushing the limits of your photography gear and your photographic eye, and always keep an open mind to suggestions from others. With springtime around the corner comes warmer temperatures and, as with any other season, photo opportunities abound! Hope to see you out shooting! 🌳

### **About the Author**

Jack Hykaway is a student, currently attending a post-secondary institution in his hometown of Winnipeg, Canada. He is an amateur videographer and writer and enjoys exploring and documenting nearby railroads and railroad operations in both written and visual formats of his work.

Jack's main focus of late has been producing his column *Jack's Junction* for *The Modeler's Journal*.

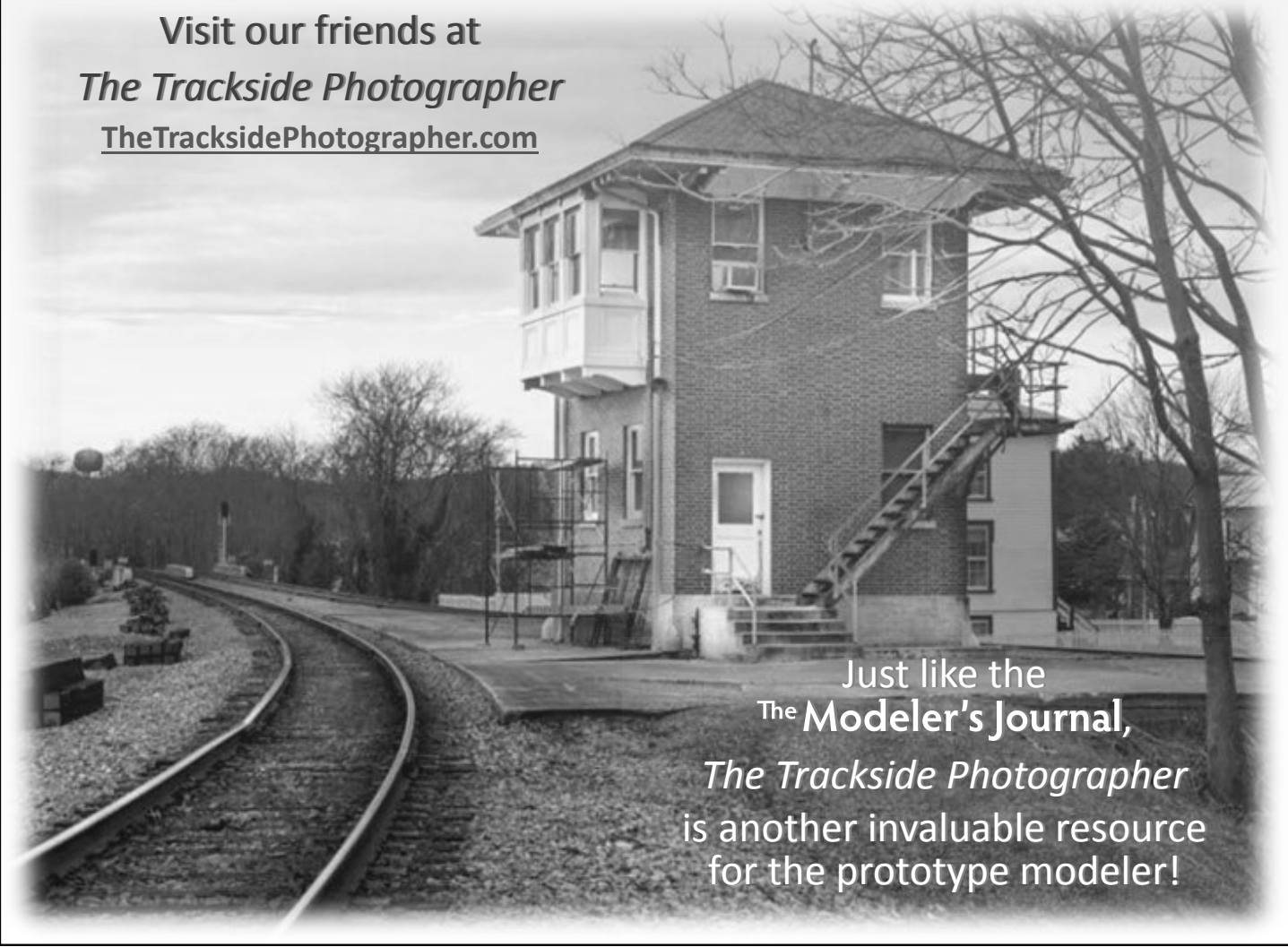
Follow along with Jack's videography on his YouTube channel at <https://www.youtube.com/user/WinnipegRailfanner1>.

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