

September 2016

Free Edition

Trackside

# Model Railroading™

**RGS and D&RGW**

**in On3**

**Build a Road  
on Your Layout**

**Colorado Midland Railroad &  
W. Hill Logging Branch Line in HO**



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**Model Railroading™**  
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# From the Publishers

## September 2016

Thank you for reading the first Free Edition of *Trackside Model Railroading*. This Free Edition is a smaller version of our Premium Edition. The Free Edition of the magazine will feature the same two layouts each month as the Premium Edition, but it contains less photographs and shorter videos of each layout. The Premium Edition will remain the same as always, and will still be advertisement free.

We tour Jim Reardon's On3 Rio Grande Southern and Denver & Rio Grande Western layout and Wayne Hill's Colorado Midland Railroad and freelanced W. Hill Logging Branch Line Railroad this September. Jim's layout includes the towns of Murphy, Cumbres, and the freelanced town of Nocksville, which is loosed based on several towns. He built a number of the well-known bridges and tunnels from scratch. His freelanced version of the RGS and D&RGW is very well presented and we think you will enjoy seeing his work. The layout is based in the mid-1950s.

We also travel back in time on Wayne Hill's layout, which is a freelanced version of the Colorado Midland Railroad based in 1917. He

and a group of modeling friends have modeled the town of Ivanhoe and the Sawatch Mountains in Colorado. In addition to the CMRR, they model a freelanced version of early 1900s logging in Hagerman Pass. The W. Hill Logging Branch Line Railroad uses spar pole logging to pull logs out of the mountains and deliver them to the sawmills in Ivanhoe. Both layouts this month include an article, photographs, and video.

The project this month shows you how to build a road with a crossing on your layout or diorama. It is longer than most of our projects, but is still simple enough for anyone to complete. If you want to build the precast concrete crossing along with the road, you will need to refer to the September 2014 issue of *Trackside Model Railroading*. That issue includes the printable crossing and the instructions to build it. (You can also build the road without using that crossing if you wish.)

The two images to the right are sized for you to use as a desktop image on your computer. They are included in the magazine download. -TS



# In Case you Missed It:

## Recent Railroading Events in the News

By Jennifer Waters

### Washington, D.C., USA July 29, 2016

Amtrak will be replacing its current onboard magazine *Arrive*, which is distributed only on some eastern routes, with *The National*, which will be distributed nationwide, in October of this year. *The National* will be bi-monthly, and will be produced by the company Ink. Ink is an international company with more than 300 people on staff.

### Lometa, Texas, USA August 2, 2016

Under the ownership on OmniTRAX, the Central Texas & Colorado River Railway began operations on the August 2<sup>nd</sup>. The railway was formerly the Heart of Texas Railroad. OmniTRAX owns 20 shortlines. The CTRX plans to serve an aggregate quarry, a cement factory and frac sand producers and interchanges with the BNSF Railway in Lometa, Texas.

### Illinois, USA August 2, 2016

The state of Illinois passed legislation increasing fines to motorists who drive around flashing signals and gates at railroad crossings. The state ranked second nationwide in 2015 for rail crossing fatalities: 140 crossing collisions, 24 fatalities, and 79 injuries. The new law will raise the fine for failing to stop at an activated crossing to \$500 USD for the first offense and to \$1000 USD for each subsequent offense.

### USA August 5, 2016

Total United States railroad traffic declined 7.9% in the month of July, as compared to July 2015. Grain, waste, nonferrous scrap, and miscellaneous carload movements increased, but coal, petroleum and petroleum related products, stone, gravel, and sand carload movements decreased. Intermodal and trailer movements also decreased.

### Cajon Pass, California, USA August 16, 2016

The Blue Cut wildfire shut down Interstate 15 and the BNSF and UP lines on Tuesday,

August 16<sup>th</sup> in Cajon Pass, California. Both Union Pacific and BNSF trains were delayed for a little over a day. One train had to be evacuated, but the crew was not hurt and the train did not burn. To help fight the fire, the BNSF deployed a few water trucks. The fire damaged the UP's Mojave Sub Bridge, though not seriously. The railroad repaired it a few days after the fire. The fire destroyed over 300 structures and 37,000 acres burned.

### Washington, D.C., USA August 19, 2016

Amtrak has named Charles "Wick" Moorman as its new CEO as of September 1<sup>st</sup>. Moorman was the chairman and CEO of Norfolk Southern until he retired last year. Current CEO Joe Boardman will be retiring. Moorman is expected to be the "transitional" CEO until the railroad finds a replacement. Moorman began his career with NS's predecessor in 1970 and became the CEO in 2006. Amtrak is currently working on two large new tunnels Hudson River rail tunnels which connect Manhattan and New Jersey. The company is hopeful that Moorman's experience with NS will help him in negotiations in some of its current projects.

### Roanoke, Texas, USA August 21, 2016

A Union Pacific coal train derailed in the Dallas/Fort Worth area on Sunday, August 21<sup>st</sup> and 26 coal cars derailed. At least five of those cars fell into Denton Creek. The derailment occurred near highway 377. Part of the railroad bridge collapsed, but it is unclear if the collapse caused the derailment or if the derailment caused the collapse. Crews worked to remove the derailed cars and clean up the spilled coal while investigators worked to determine the cause of the accident.

### USA August 23, 2016

The Federal Railroad Administration has requested that Niantic Labs Inc, creators of the Pokemon Go game, discourage players of the game to hunt for Pokemon virtual characters near railroad property. Some Pokemon, Pokestops, and virtual objects have been located on or near railroad property, and officials are concerned that people overly focused on the game may trespass and risk being hit by a train. Sarah Feinberg, the FRA Administrator, and Ed Hamberger, President and CEO of the Association of American Railroads, requested that the company "consider ways to promote safety, particularly through action to avoid placing Pokemon and virtual points of interest in Pokemon Go on or near railroad tracks." -TS

# Rio Grande Southern & Denver & Rio Grande Western

Story by Jennifer Waters

Photos by Ross and Jennifer Waters

We visit Colorado's San Juan Mountains this month on Jim Reardon's freelanced On3 layout. Jim models parts of the Rio Grande Southern and the Denver & Rio Grande Western railroad routes, as well as parts of the Cumbres & Toltec Scenic Railroad route in northern New Mexico. Fans of the RGS, D&RGW, and the C&TS will recognize some of the landmarks from their routes, including the Upper and Lower Gallagher trestles, the Mud Tunnel, Butterfly Bridge, the Monarch Mill, and Rock Tunnel. The layout is based in the mid-1950s and includes the towns of Murphy, Cumbres, and Nocksville, which is a freelanced version modeled loosely after several towns in the area (Chama, Ridgeway, Como, and Durango).

Jim's layout is in two rooms in the basement of his and his wife Rose's home in Milwaukie, Oregon. The first



Rio Grande No. 481 pulls out of Cumbres and starts down the hill.

room is 9x12 feet (2.74x3.66 meters) and houses Murphy, which is what the railroad called Gallagher. This room is the first thing you see when you visit, and the Upper and Lower Gallagher trestles and the Monarch Mill make a striking first impression.

RGS No. 455 crosses the Upper Gallagher trestle, which Jim built from scratch. It has four fewer bents (vertical supports) than the prototype, due to space limitations. Otherwise, it is as close to prototypical as possible.



No. 473 takes water at Nocksville, which some folks say reminds them of Chama, New Mexico.

To build the trestles, Jim used 1/4" birch wood from the lumber supply store and constructed them from scratch. The Lower Gallagher trestle is exactly like the prototype in length (though the bridge is reversed). The Upper Gallagher trestle has four fewer vertical supports, called bents, than the prototype. Jim chose to model it a little shorter than the prototype because he did not have quite enough space to make it full size. Aside from the length modification, he

modeled the bridge as accurately as possible and even cut the notches in each tie to match the prototypical drawings and photographs. The station in Murphy is modeled after a photograph of a station in Kelker taken in 1954. Jim built it from scratch and gave it a removable roof which can be removed to view the detail inside.

The second layout room is 13x31 feet (3.96x9.45 meters) and contains the Mud Tunnel, the town of Nocksville, Butterfly Bridge, the Rock Tunnel, and the mountain line leading up to Cumbres. Jim built a freelanced scenic river route by the Mud Tunnel on the way into Nocksville. He used

photographs to build the Mud Tunnel from scratch to look like the prototype, but flipped its direction to better fit it into the space. The railroad repairs locomotives and runs passenger service out of Nocksville. The low line through Nocksville continues through the wall and over Butterfly Bridge, which Jim also built from scratch. He constructed the mill behind the bridge using photographs from *The RGS Story* by Collman, McCoy, and Graves. He built and weathered the water tower at Ames to match the prototype.

On the upper line out of Murphy, the route bypasses Nocksville and crosses the room on two duck under bridges: one to bypass the Mud Tunnel cutoff and one to cross from Nocksville to Cumbres on the opposite side of the room. Jim built both the snow shed and Cumbres station from scratch.

From the town of Nocksville, the lower line travels through a tunnel in the wall and out to cross the Butterfly trestle. It then continues up to Cumbres in the mountains.



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No. 481 crosses the Butterfly Bridge. Jim painted all the layout backgrounds himself.



In this freelanced scene, RGS No. 473 heads along the river toward the Mud Tunnel. It will arrive in Murphy shortly.

Jim built a snow shed in Cumbres and carved the Rock Tunnel in plaster. He keeps photographs of the prototypes he has modeled for those who are interested in comparing the model to the original.

Jim started building the layout in 1978. It has been essentially complete for many years, though he does have plans to change a few things. He wants to tear out and rebuild part of the mountainside near the dam on the line to Cumbres and will build a bridge on the line up to the mine. He enjoys all aspects of model railroading. He worked for the former Willamette Iron and Steel Company for 44



years after completing his military service, working in several different jobs for the company including being a machinist and eventually a mechanical engineer. His experience in manufacturing and his adaptability shows in his approach to modeling, as he has constructed most of his structures and trestles from scratch and has learned how to work in every facet of modeling. He has completed the entire

No. 455 crosses the Lower Gallagher trestle. The trestle is built from scratch and is prototypically accurate. No. 455 and its long freight are climbing toward Cumbres assisted by leased Rio Grande No. 462.

layout on his own, including all scenery work, painting the backdrop, working on locomotives and rolling stock, and building all of the structures.

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**Above Left:** No. 481 emerges from Rock Tunnel and crosses the stone retaining wall which Jim carved from plaster to simulate the scene at Toltec Gorge.

**Below Left:** No. 481 approaches the Upper Gallagher trestle.



He earned his NMRA Master Model Railroader achievement in 2013 as number MMR 519. He constructed the mainline on the layout from scratch, using 100' sections of Rail Craft Code 100 track to simulate prototype rail of about 75 pounds per yard. All the switches and ties are wooden and are handlaid. Jim also has travelled to visit some of the structures he has built so that he could measure them to draw up his own plans to build the models.

Jim used wood for the buildings and created custom corrugated roofing over the mill using cookie sheets that he scribed and etched. The water towers are also built from scratch. He uses a hard cardboard tube as a form for each water tower and tapers it a bit at one end on his lathe. Then he applies each wooden board separately around the form. He makes a small strip of plastic or cardboard to form the metal bands.

### Stats:

Owner's Name: Jim Reardon  
 Layout Name: RGS/D&RGW  
 Prototype: Rio Grande Southern and Denver and Rio Grande Western  
 Era: Mid-1950s  
 Locale: Colorado and New Mexico  
 Size: Two Rooms, 13x31 Feet (3.96x9.45 Meters) and 9x12 Feet (2.74x3.65 Meters)  
 Style: Linear Walkaround with Duck Unders  
 Scale: On3 (1:48)  
 Track: Handlaid  
 Turnouts: Handlaid  
 Minimum Radius: 42"  
 Maximum Grade: 1.5%  
 Backdrop: Hand Painted  
 Control: Pacific Fast Mail Sound System II  
 Track Height: 42" to 59"  
 Scenery: Plaster Hardshell  
 Groundcover: Dirt and Rocks Collected in Colorado, Sand Blast Medium  
 Roadbed: Cellotex and Fir-tex  
 Benchwork: Open Grid  
 Switch Machines: Manual Scratch-Built  
 Switch Stands



In addition to modeling for himself, Jim frequently builds locomotives and structures for modeling friends and tests other modelers' equipment on the layout. He is currently refurbishing some O scale locomotives for the widow of a friend, Dick Nock. Jim named the town of Nocksville in Dick's honor. He has also built several water towers for other modelers and teaches a clinic to help other modelers learn to build the towers on their own.

Jim uses a Pacific Fast Mail sound system for train control, which originally came out in the 1970s. The sound is quite realistic and includes a variety of train sounds including

RGS Galloping Goose No. 2 has exited the Rock Tunnel and heads up the line towards Cumbres with a few passengers to drop off at the station.

whistles, steam chuff, hissing and wheel noises, and coupling sounds. The sound system includes a momentum throttle and the ability to set acceleration and deceleration rates. It was popular when Jim was building the layout and he has never changed it because he is happy with how it operates. He says, "The secret to PFM sound is using 14 gauge speaker wire as the feeder to each block, eliminating the inductance

issues associated with chuff degradation. Also be aware that speaker installation is crucial to good sound. I fill the body of the tender around the speakers creating an 'infinite' baffle. This eliminates the reflected sounds, which tend to cancel sounds from the front of the speakers. As a final note, the old speakers are no better or worse than modern equivalents if they were of high quality when purchased." All of the speakers on Jim's layout are of 1980s or earlier vintage.

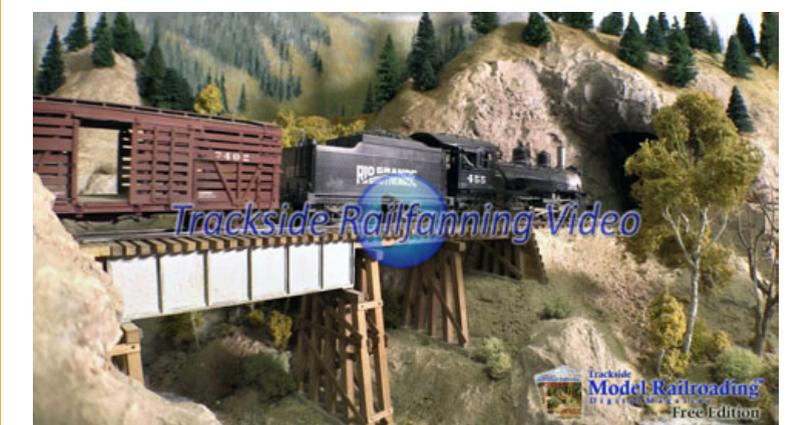
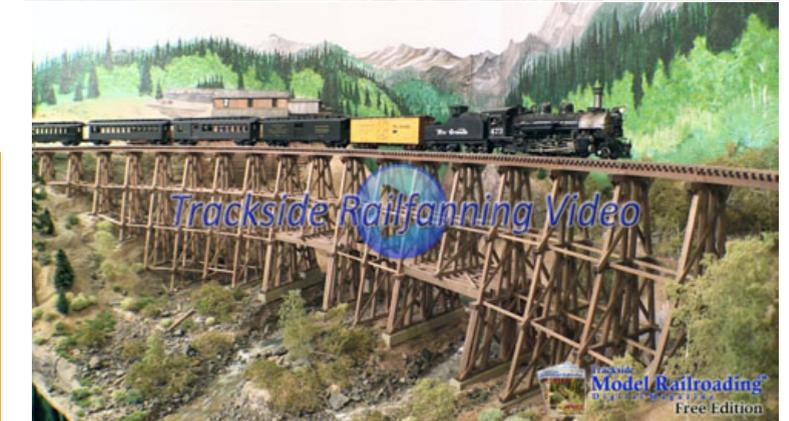
Jim enjoys sharing the layout with visitors, and it is included on layout tours from time to time. If you are in the Portland area during a tour, you may be able to see his version of the RGS and D&RGW in person. In the meantime, we hope you enjoyed the photographs and videos of the layout. –TS

If you enjoyed what you saw of Jim's layout and would like to see more, you can subscribe to the Premium Version for \$14.99 per year.

The subscription price includes much more video and many more photographs of each layout that we feature.

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Click on the images below to go to the video page and watch the videos of Jim Reardon's RGS and D&RGW Layout in On3.



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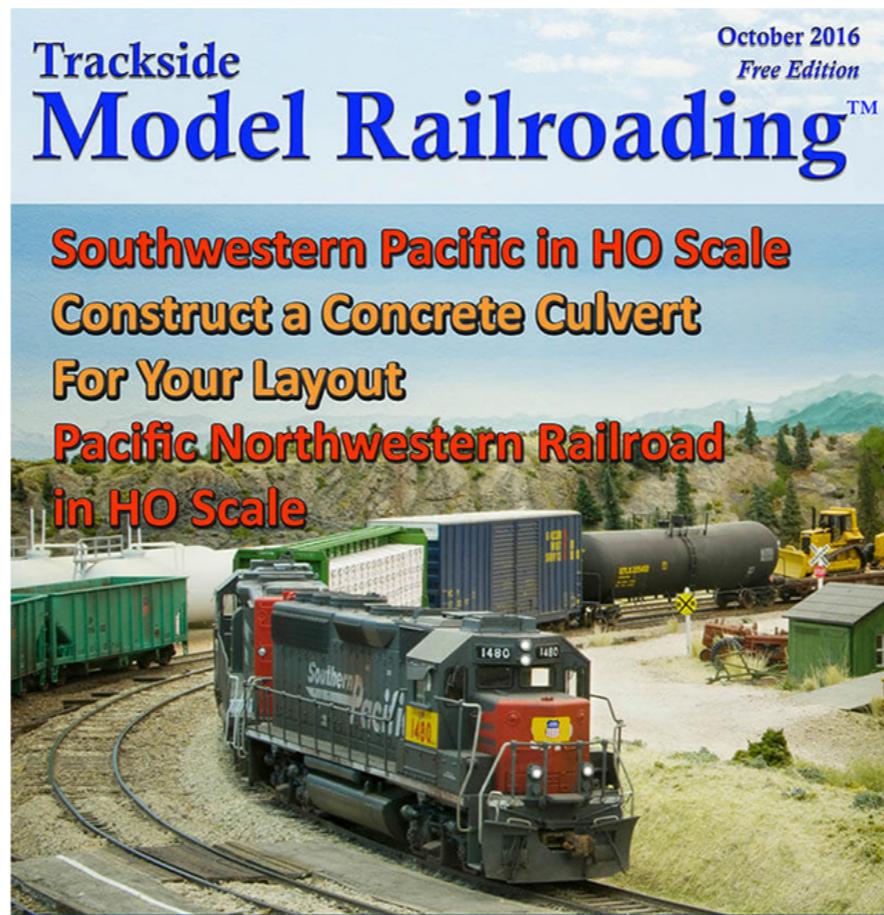
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# Build a Road on Your Layout

By Ross and Jennifer Waters

This month we will show you one method of building a road on your layout or diorama. We will be using a precast concrete crossing that we shared as a how-to project in the September 2014 issue of *Trackside Model Railroading*. If you choose to use that crossing with this project, you will need to refer to that issue to make the crossing. The printable crossing and instructions to build it are included with the magazine for that month. Link to buy it here: [https://www.tracksidemodelrailroading.com/](https://www.tracksidemodelrailroading.com/archive/2014/sept2014issue.html)

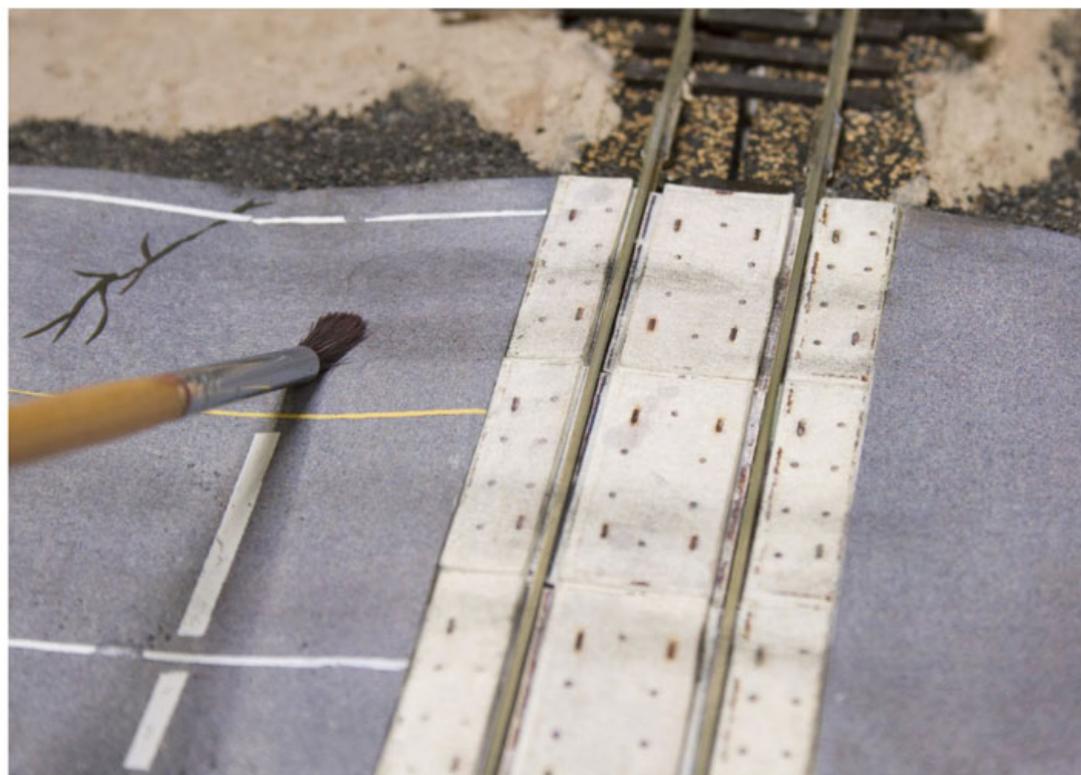
[archive/2014/sept2014issue.html](https://www.tracksidemodelrailroading.com/archive/2014/sept2014issue.html)

We will not be repeating that information here, but you can make the crossing and then install it as you complete this project. If you want to build a different type of crossing or are building a road that does not cross the railroad tracks, just skip over the steps that relate to the crossing.

The surface of the road we are building is made from cardstock paper. We created a printable road texture which is included in the download for this issue and you are free

to use for your project. Just print it out on a sheet of cardstock (80 lb.) paper before you begin. Read through the list of materials, as you will need a number of tools and supplies to complete the project.

We built a road that crosses from



## What You Will Need:

Water  
Pencil  
Scale Ruler  
Plaster of Paris  
Blank Cardstock Paper  
Paper Printed with Road Texture (File Included in Download) on a Laser Printer  
Mixing Container  
Acrylic Paints in White, Dark Gray, and Yellow  
White Glue  
Small and Medium Paintbrushes  
Dirt or Dirt/Ballast Mix for Road Edge

A Layout or Diorama with Prepped and Painted Plaster Hardshell Surface  
Measuring Cups and a Stir Stick and Spoon  
Putty Knife  
Clear Tape  
Paper Towels  
Scissors  
Emery Boards  
Weights  
Chalks for Weathering  
A Set of Trucks or a Piece of Rolling Stock  
Optional: A Precast Concrete Crossing Created From our September 2014 How-to Project

the edge of our diorama across the railroad tracks and then terminates in a small parking lot. The road is somewhat rural, but is made of asphalt and is painted. The road itself is made from plaster of Paris, and then we glued the paper surface over the top of it

and added details weathering. In the following pages, each step is illustrated with a photograph. We have tried to be quite thorough so that anyone can complete the project. There are quite a few steps, but none of them are difficult. Have fun! -TS

**Left:** Weathering the road and crossing

**Right:** The completed road and crossing in use.



**1** Use a scale ruler to measure the width of the road you want to build and mark it with a pencil. We made our road 27 feet wide. We will have one lane in each direction and a bike lane on one side.



**2** Mark the end of the road as well. We are building a small parking lot where the road ends and used a pencil to mark it.



**3** Mix the plaster in a container. We used plaster of Paris and mixed 1 1/4 cups plaster to 1/2 cup water. Stir the plaster well and make sure it is thin enough to spread but thick enough to hold its shape.



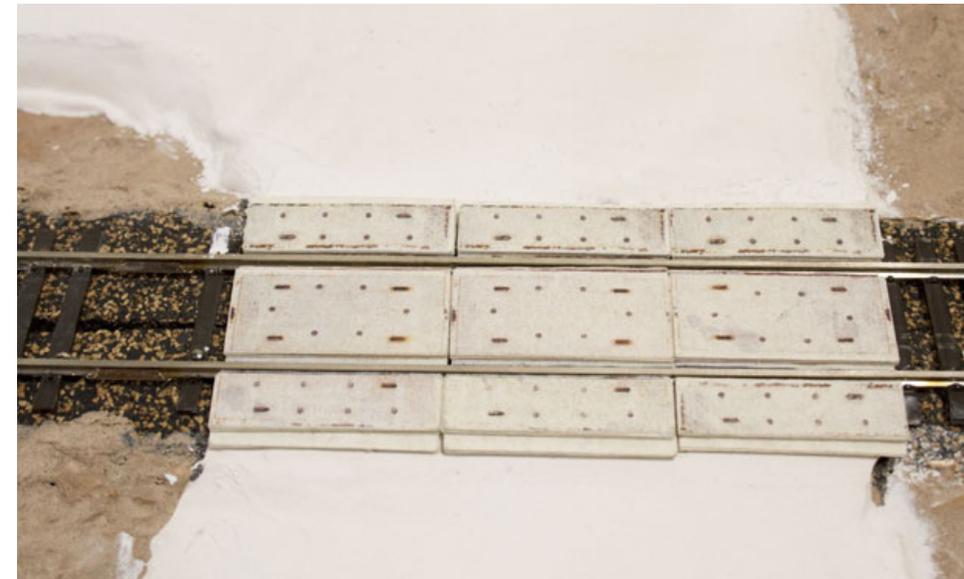
**4** Pour some of the plaster onto the area where you want to make the road and spread it smooth with a putty knife.

**5** Continue on the other side, and try to make the edges of the road smooth.



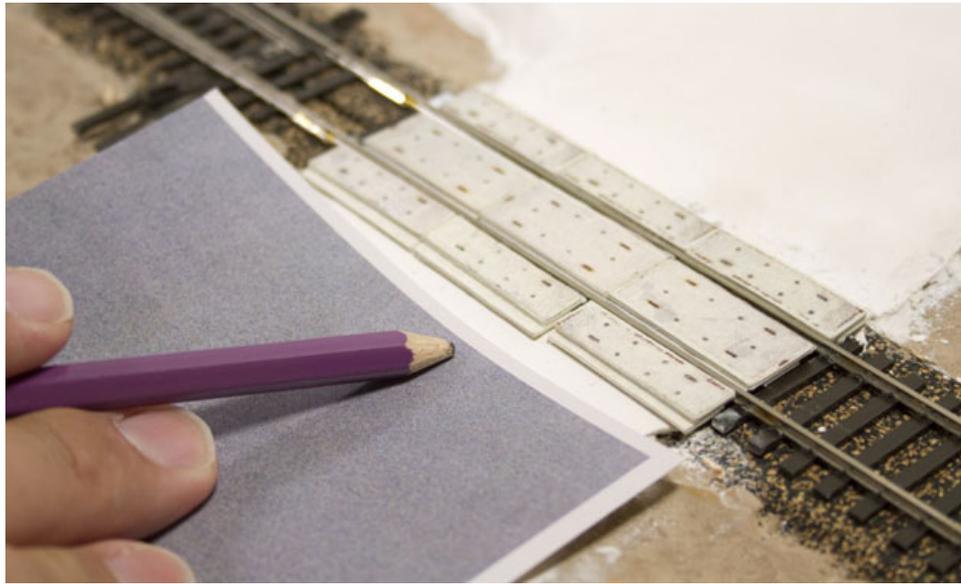
**7** When you are happy with how the road looks, you will need to let it dry. This can take a while, depending on temperature and humidity.

**6** Clean up any plaster that you dripped on the layout away from the road. This is easy to do with a wet paper towel.



**8** We are using a pre-cast concrete crossing that we featured as a how-to project in our September 2014 issue. If you want to use it, refer to that issue for the instructions and print out the pdf document. It is in HO scale. Set the crossing sections in place, but do not glue them yet. (If you are not making this crossing, just skip the steps relating to the it.)

**9** With the crossing set in place, print out the road texture sheet that is included in the download. Use white cardstock paper (80 lb. is what we used) and print it on a laser printer. (If you must use an inkjet printer, be sure to thoroughly seal the paper before you continue or the ink will smear when it gets wet.) You will need to trim the white borders off of it.



**10** Cut one side and line up the sheet on the road, measuring the width and marking it with a pencil.



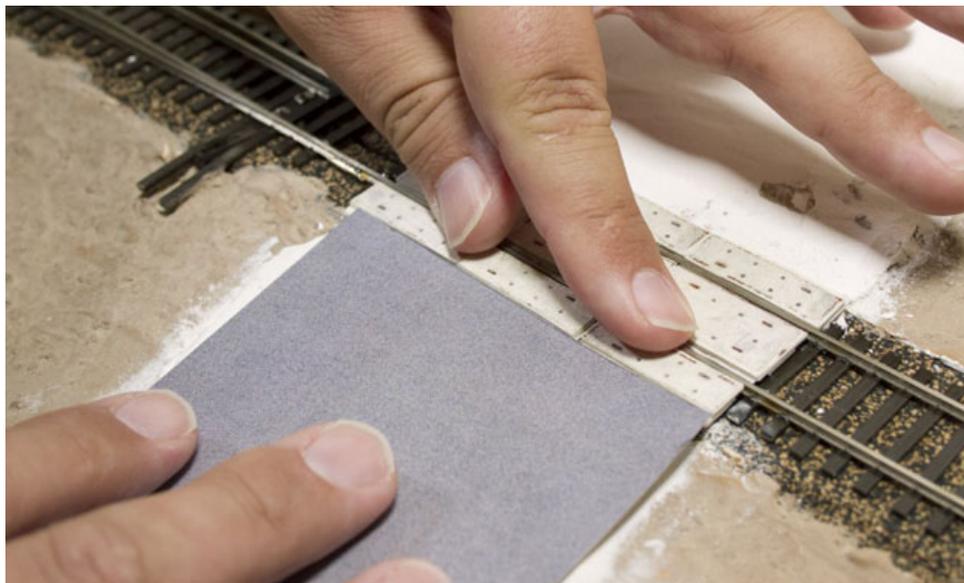
**11** Mark the edge and then cut it with scissors.



**12** Once you have cut the width, you will need to mark the end that meets the crossing. This may not be a straight line, depending on your layout. We used the lined up in place (similar to step 10) to line up our cut.



**13** Cut the end of the road and then make sure it lines up correctly with the crossing.



**14** Now mark the opposite end of the road where it meets the end of the layout and cut that end with scissors.



**15** Lay the cut road over another sheet of cardstock and mark around it. If you are using the pre-cast concrete crossing like we did, you will need to make sure you use the same number of sheets as you did when you made the pre-cast crossing. For ours, we needed 5 layers of cardstock

to be flush with the crossing. Your crossing thickness may be different than ours, depending on the code of rail used. Just make sure to make the road the same height as the crossing.



**16** Cut out the extra sheets you need to make the road the correct thickness to match the crossing.

**17** Apply white glue to one of the extra sheets of cardstock.



**19** Press the two sheets together and then cover them with a book to make sure that they dry flat. (If they aren't absolutely flat, that may be alright for a rural road. You will have to determine if it looks realistic enough once you glue it into place.) Repeat steps 17-19 to glue each extra sheet you made until the road is the correct thickness.

**18** Spread the white glue with your finger to make it even.



**20** Once you have glued the necessary sheets of paper under the printed road sheet, make sure it is the correct thickness to match the crossing. You may want to coat it with some white glue (as shown) or spray it with a flat finish to protect it. (If you used an inkjet printer instead of a

laser printer, make sure to seal it well with a flat paint or the ink will run.)

**21** Remove the crossing from the track. If you have not weathered the rail on your layout or diorama, you will want to do that now before you install the crossing permanently. We used Blacken-It to weather the rail and gave it time to dry before continuing to the next step.



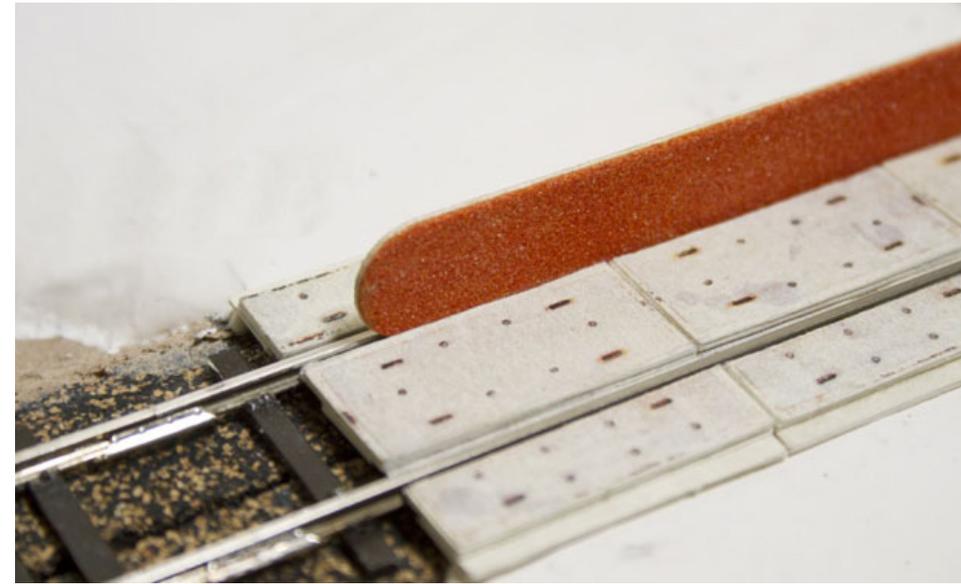
**23** Place the center sections in between the rails over the glue.

**22** Once you have weathered the rail, you are ready to glue the crossing into place permanently. Apply white glue in between the ties, avoiding the rails.



**24** Make sure that the center sections are in place correctly and will not affect the flange of the wheels (to prevent derailments). Here, we ran a set of trucks with the wheels set to a slightly tighter gauge than normal to make sure it would move freely without problems.

**25** Apply white glue to the ties on the outside of the rails and then fit those sections of the crossing into place.



**27** The crossing is built so that an emery board should fit in between the flange and the rail, as shown. This also allows you to make any needed adjustments once everything is dried. If installing on curved track, you may need to file the crossing and flare the ends on the inside flangeway to prevent problems.

**26** Once you are done installing all the pre-cast crossing pieces, check again that everything works as planned and that the flangeways are free from obstruction. Adjust if necessary.



**28** Once you are happy with the crossing, you are ready to glue the road down over the plaster. Straighten out your road to be as flat as you can. The road will be stiff, but the shape will need to be corrected. Apply white glue to the bottom the road.

**29** Apply a line of white glue on the crossing edge.



**31** You will now want to let the road dry. Place a weight over it to hold it in place. Be sure to inspect where the road and pre-cast crossing meet. Since we got the road wet, it may have a tendency to peel. Placing a piece of rail along the meeting edge and then the weight will ensure a flush connection.

**30** Press the road into place, making sure it goes over the crossing edge.



**32** Apply glue to the bottom of the other road section and repeat steps 29-30.

**33** Put a weight over the other road section and allow both some time to dry before you continue. Note the emery board: we needed a little thicker material on that end and this helped the road adhere to the pre-cast crossing. Just make sure it is something that won't glue to your road and wreck your progress.



**35** Apply the dirt with a spoon along the edge of the road. Avoid the area close to the tracks, as you will want to ballast that later.

**34** Once the road has dried, you are ready to add the dirt for the road's edge. We used a mixture of ballast and dirt.



**36** Pat and smooth out the dirt/ballast mix with your finger, avoiding leaving finger impressions.

**37** Spritz the dirt with wet water (water with a drop of dish soap), saturating it.



**39** Clean off any extra water or glue that you may have dripped on the surface of the road. Allow the glue to dry. Repeat steps 35-39 around the rest of the road.

**38** Once the dirt is saturated with water, apply white glue.



**40** Once the glue is dry, you are ready to paint the lines. We used clear tape to mask off the lines. Whatever tape you use, test it first on a piece of paper to make sure it will not remove the ink (having a coating of white glue or flat paint over the paper will help prevent removal of the ink). You may also want to practice painting lines before doing so on your layout.

**41** Here, we are painting in the white line indicating the edge of the road.



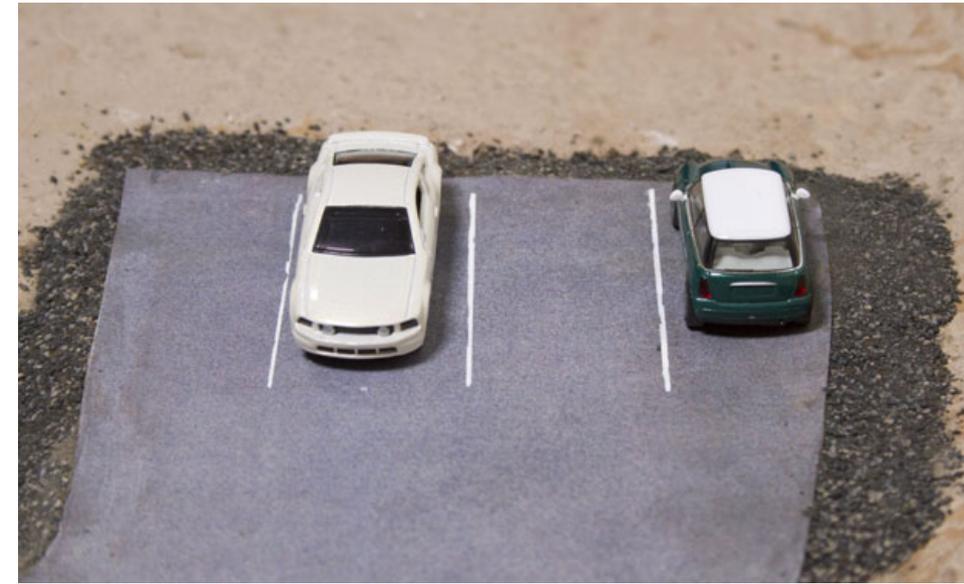
**43** When you remove the tape, pull it gently at an angle, as shown. This puts less stress on the paper and may reduce the chance of removing ink from the paper or peeling off your new paint lines.

**42** When you apply the tape, press it down gently at first so you can see it well when you place the second piece (if you press it down tight at first, it darkens and you cannot see the edge as easily). Once both pieces are applied to the road and are straight, press them down tight and remove any bubbles.



**44** Continue painting the lines you need for your road. Here, we are painting the yellow line for the center of the road.

**45** Measure the parking spaces if you are making a parking lot and tape them off.



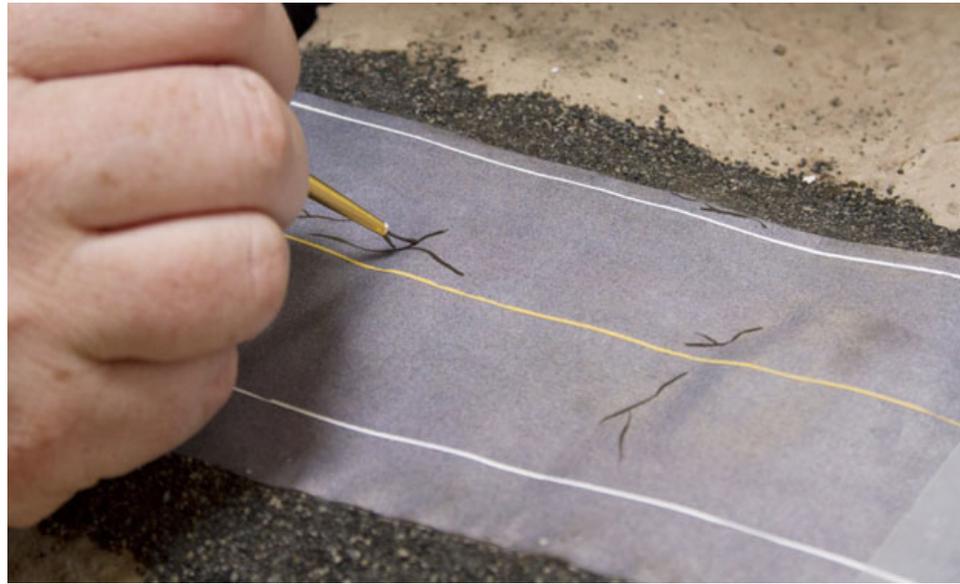
**47** Here is the parking lot with cars in the spots. We made our parking spots 10 scale feet wide.

**46** Paint the lines for the parking lot, then remove the tape.



**48** Remember to paint in the stop line for the crossing.

**49** To make the road more realistic, you may want to add details like these asphalt repair lines that we painted on the road. Use a very small brush with a dark gray paint.



**51** We added a few oil spots and grime in the parking spaces. After you have weathered it, use a clear flat coat of paint to seal everything and add another layer of water proofing protection for your new road and crossing. When using paper, it is important to ensure it is

fully sealed because installing scenery requires a lot of water and this will protect the paper materials used.

**50** You can also add a bit of weathering to make the road more realistic. We used chalk to darken the road and the crossing where vehicles travel over it, applying it with a medium-sized paintbrush.



**52** Here is the finished road and crossing in use. It looks quite good and is not a difficult project to complete.  
-TS

# W. Hill & Colorado Midland Railroad

Story by Jennifer Waters

Photos and Video by Ross and Jennifer Waters

We visit the Wayne Hill & Colorado Midland Railroad this month, a beautiful HO scale layout based in Colorado in 1917. The layout is modeled after the Colorado Midland Railroad and the freelanced Wayne Hill Logging Branch Line Railroad. Wayne started the layout on his own in an upstairs room of his home in Vancouver, Washington. He

realized the room was too small for his dream layout, and later moved it downstairs. He had joined a model train club to learn new modeling skills and invited a group of experience modelers from the club to assist him in building the layout. Wayne, Andy, Bruce, Dave, and Myron worked together to design, build, and realistically landscape the



spectacular Rocky Mountain scenes on the layout. The mountains are constructed seven feet high, while the scenery drops all the way down to just 24 inches off the floor at CC Gorge. This

No. 616 heads through CC Gorge on point of a mixed freight train.



dramatic gorge is named in honor of Wayne's wife Cecille, who has baked pies and treats every Tuesday for the past 10 years for the club members. The height of the scenery means no background is needed, and visitors get to experience a taste of the grandeur of Colorado's Rocky Mountains. The layout is linear walkaround in style, and is 13x24 feet (3.96x7.32 meters).

The Colorado Midland Railway was founded in 1883 and was the first standard gauge

No. 7 is ready to dump logs in the mill pond at the W. Hill Sawmill in lower Ivanhoe.

railroad to cross the Continental Divide in Colorado. It connected Colorado Springs and Leadville, as well as Glenwood Springs and Grand Junction, Colorado through the divide at Hagerman Pass. In 1885, John Hagerman gained control of the railroad and he sold it to the Atchison, Topeka, and Santa Fe Railway five years later. At that time, the name was changed to the Colorado Midland



C&W No. 7 hauls a few log cars on the higher logging line, which is a 4.5% grade in some areas. The line visible below was torn out by the railroad after it was determined the engines were not efficient on such a steep grade. The abandoned grade is now used for pack mules and hikers.

Railroad, also going by the nickname the "Midland." Most of the CMRR's trackage was on a grade, some of which was quite steep. Three summits were required in crossing the state: the Hayden Divide near Colorado Springs, Trout Creek Pass, and the Hagerman Pass on the Continental Divide. In 1887, the railroad completed the Hagerman Tunnel. It replaced it later with the Ivanhoe-Busk Tunnel at a lower altitude in 1891. The new tunnel allowed

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for an easier grade, but the trip was still difficult. Eastbound trains had to traverse a twenty mile 3% grade, and westbound trains faced a slightly steeper but shorter climb. From Colorado Springs to the Continental Divide, some parts of the grade were at 4%. Parts of the line were also over 9,000 feet in elevation, and the railroad faced closures at times due to heavy snow. In 1899, a severe blizzard kept the line closed for 77 days at a great cost to the railroad. After the railroad's demise, the Ivanhoe-Busk tunnel was closed. However, it was then converted for automobile traffic until 1945, when it collapsed. It was reopened again in 1957 and used to divert water from the west side of the Rockies to ranches in the valley on the east, or Busk side of the mountains.

A man named A. E. Carlton purchased the railroad and wanted to extend its service into Salt Lake City, Utah. Unfortunately, his purchase was quickly followed by WWI and he was unable to manage the

expansion he had planned. The U.S. government attempted to use the Colorado Midland as a main route through Colorado during the war but reversed its decision when it became clear that the Midland was not up to the task. Carlton was forced to abandon the railroad in 1918.

Wayne's version of the Colorado Midland Railroad operates in 1917, shortly before the railroad's closure and while the Ivanhoe-Busk tunnel was still in full operation. On the layout, Wayne runs 2- and 3-truck Shays, a

The Colorado Midland's passenger trains sometimes haul freight as well. Here, a train with both freight and passenger service leaves Ivanhoe eastbound.





Colorado & Western No. 7 leaves the Beamer Tunnel, and passes by the abandoned Lucky Cecille ore mine as it enters Ivanhoe with a load of logs for the sawmill.

Colorado Midland for the group and helped in the construction of much of the scenery and some of the structures on the layout. He also made the large CC Gorge trees, which are a variety of styles including Ponderosa Pine, made with Nandina flowers drilled into hand-carved cedar trunks, and Douglas-fir trees made with dried weeds and then sprayed with glue and dusted with ground foam. Most of the many smaller trees are intended to give perspective and increase the effect of distance. They were made by Myron Sandberg using different grades of furnace filter and scratch pads. Myron did much of the finish detailing and landscaping on the

Heisler, and a Climax. The logging line uses a variety of secondhand power.

Wayne constructed many of the structures on the layout and worked on much of the scenery. His modeling friends are all NMRA Master Model Railroaders, and the group has pooled talents to create a beautiful layout. Dave Herbenson is a retired science teacher who studied the history of the

layout.

Myron and Bruce built many of the rock castings on the layout using large molds. They used a combination of resin, plaster, and Hydrocal over a molded layer made by

the mold, they peeled it out and laid it over the window screen where needed. Bruce Beamer also worked with the scenery and rock casting. Andy Bell did much of the electrical and mechanical work on the layout. Both Mac Storey and Emil Folz



brushing a layer of polyurethane on a mat of bubble wrap and a top layer of nylon window screen that is pressed into the polyurethane. As the polyurethane began to harden, and while it was still warm, the large sections (18x24x3/8" thick) were laid over rough-formed Styrofoam. The two-part casting resin was poured into commercial rubber molds. Before the resin hardened in

worked on the layout as well as advising the

No. 616 travels over the trestle at CC Gorge on the mainline. CC Gorge is named after Wayne's wife Cecille and is a signature scene on the layout. The scene begins just 24 inches off the ground, and is seven feet tall at the top of BB Mountain.



C&W No. 7 in Ivanhoe heads through Ivanhoe with a load of logs bound for the W. Hill Sawmill. Mac's Engine House and the residential part of Ivanhoe are visible in the background.

group on railroad operations, as they worked for the Union Pacific and Southern Pacific Railroads and had prototype experience.

The main town on the layout is Ivanhoe, a freelanced town at the base of the west side of the Sawatch Mountains, which are part of the Rocky Mountain range in Colorado. Wayne and his friends chose to attempt to capture the feel of the CMRR, but did not

wish to model exact structures from the prototype. In addition to the Colorado Midland, they modeled the freelanced Wayne Hill Logging Branch Line Railroad. The town of Ivanhoe includes the W. Hill Sawmill, which Wayne built. Dave Herbenson built the brewery, fire department, a small main line passenger station, supply and hardware store, the plank mill, the small Campbell's kit sawmill and a large residential scene situated on the hill overlooking the big sawmill. Bruce Beamer built the old Lucky Cecille ore stamp mill named after Wayne's wife Cecille. The Lucky Cecille is now abandoned. Bruce built the old tram line that delivered ore to the railroad and then he burned it with a lighter to simulate fire damage.

The logging line heads east out of Ivanhoe up through Hagerman Pass to a temporary logging camp in the mountains. It is a freelanced representation of early 1900s logging. The logging crews utilize steam donkeys and spar pole logging to move the logs down from the steep hillside into camp. They have an engine repair facility and temporary bunk houses where the loggers can stay during the season. The logging line continues around the layout on two separate lines, crossing the CC Gorge (also named after Wayne's wife Cecille) and Myron Creek before arriving at the sawmill. There is also an abandoned logging line, which was too steep for the log trains and is now used as a trail for pack animals and hikers. The upper line includes a rock slide/snow shed to protect it from damage during the harsh Colorado winters. Parts of the logging line are a steep 4.5% grade.

The mainline travels through the lower elevation Ivanhoe-Busk tunnel from Ivanhoe at the west end to the Circle H Ranch on the Busk east end. The Circle H Ranch is a freelanced, by Dave, farming area representative of the farms that existed on the Busk side of the mountains, though the prototype farming area was much further from the tunnel. It continues through the Sawatch Mountains and over the lower end of CC Gorge, a beautifully landscaped signature scene on the layout, with 20" tall ponderosa pine and Douglas fir trees, built by Dave, deep in the gorge.

### Stats:

- Owner's Name: Wayne Hill
- Layout Name: W. Hill & Colorado Midland Railroad
- Prototype: Colorado Midland and Freelanced Wayne Hill Logging Branch Line Railroad
- Era: 1917
- Locale: Colorado's Rocky Mountains
- Size: 13x24 Feet (3.96x7.32 Meters)
- Style: Linear Walkaround
- Scale: HO (1:87.1)
- Track: Shinohara Code 83
- Turnouts: No. 6s and Larger
- Minimum Radius: 20"
- Maximum Grade: 2% on Mainline, 4.5% on Logging Line
- Backdrop: None Needed, as the Scenery is 7 Feet High
- Control: Easy DCC
- Track Height: 42" to 58" (1.09 to 1.47 Meters)
- Scenery: Particle Board and Insulation Foam; Plaster, Resin, and Hydrocal Rockwork over Bubble Wrap and Nylon Screen for the Mountains
- Groundcover: Sifted Natural Dirt, Gravel, Sand, and Woodland Scenics Groundfoam
- Roadbed: Homasote
- Benchwork: L-Girder with 2x2 Support Legs
- Switch Machines: Tortoise and Servo
- Mainline Length: 2.14 Scale Miles (1.2 Exposed, .94 Hidden)
- Logging Line Length: 1.74 Scale Miles

After the gorge, it branches into two lines and trains can travel into a tunnel below the long rock /snow shed, built by Bruce, to four hidden staging tracks under the Rocky Mountains which can also be accessed from the Busk end of the Busk/Ivanhoe tunnel.

Union Pacific No. 616 has just travelled across the CC Gorge bridge and now emerges from the Circle H Ranch tunnel. It will continue westward through the Ivanhoe/Busk tunnel on its way to Ivanhoe on the west side of the Continental Divide.

Alternatively, the train can continue on the mainline and enter the town of Ivanhoe to pick up lumber from the W. Hill Sawmill or drop off passengers and supplies.

The scenery base on the layout is 1.5" insulation foam over ½" particle board. The mountains are constructed over nylon screen and bubble wrap and cast with plaster, resin, and Hydrocal from large rock molds. Since they are seven feet high, the structure needed to be strong. The club was careful to build a number of removable sections in the mountains to allow for tunnel access in case of derailments or the need for repair.



They also made many of the structures and scenes in town on their own sections of hardboard so that they are removable, including the large sawmill scene. Club members can also climb under the layout to access the interior trackage or work on wiring or switches, and can stand up inside the layout under the mountains. The Church scene and the two of Ivanhoe can be lifted or removed to allow access to the engine facility yard. The log loads on many of the logging cars are made from Arrowwood Shrub and Douglas-Fir tree branches. The club members bored out the logs and weighted them with lead so they would not derail when underway.

Colorado & Western No. 7 Shay at the temporary logging camp in the mountains. The logging camp is a freelanced representation of early 1900s logging.

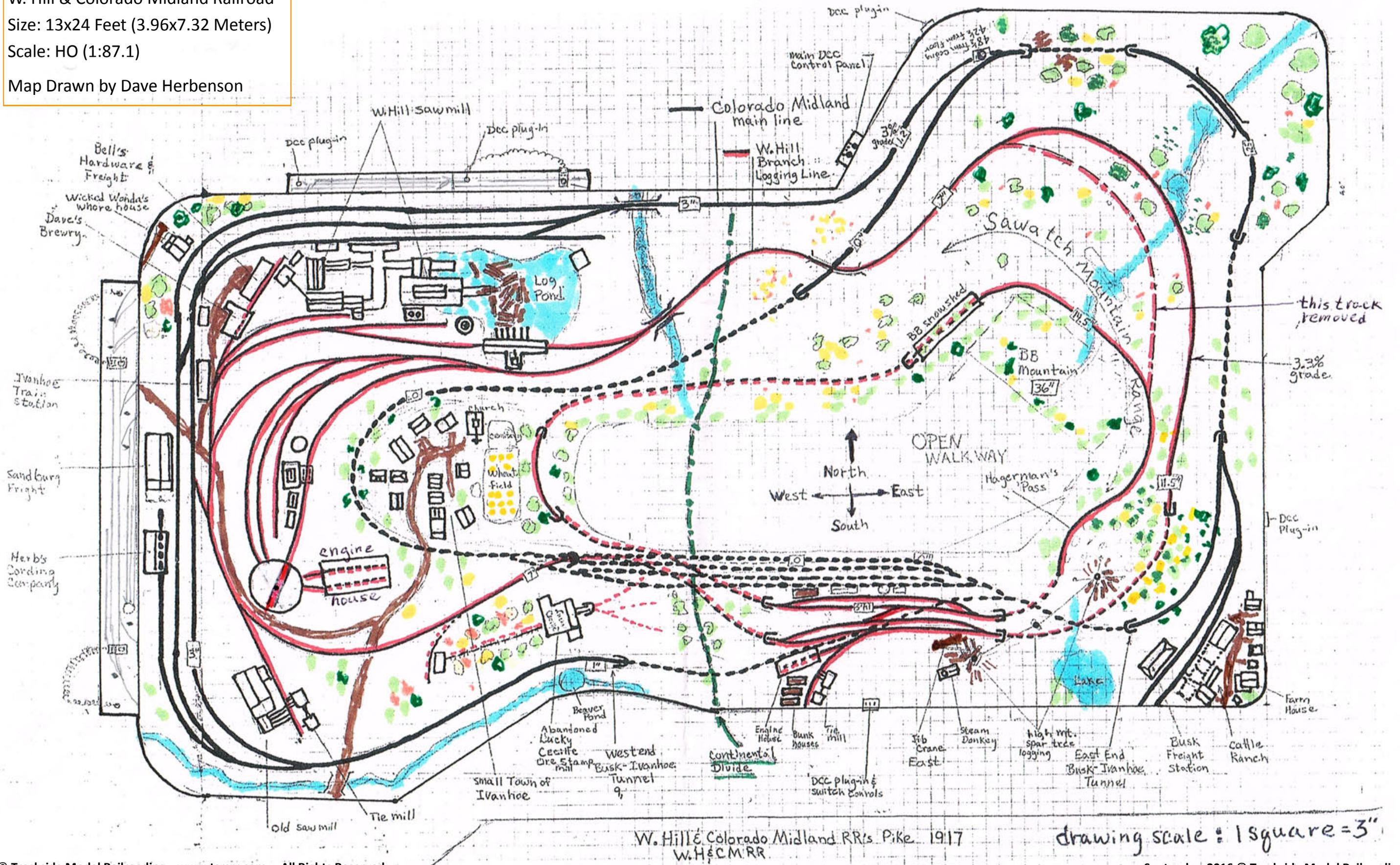
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W. Hill & Colorado Midland Railroad

Size: 13x24 Feet (3.96x7.32 Meters)

Scale: HO (1:87.1)

Map Drawn by Dave Herbenson



Many of the Tortoise switches are installed underneath the building and land structures on top of the layout surface, which is unusual but convenient if there is a need for access. A few of the structures are scratch-built, but many are Campbell kits. The layout is meticulously detailed. Almost every structure in Ivanhoe includes a stack of chopped firewood, cut by Bruce over several weeks, outside as the residents prepare for the coming winter, and the mountain scenes are beautifully decorated with autumn color.

Wildlife can be found in many areas, with bear on the side of the mountain and moose in the waterways. An eagle sits on a nest in a tree in CC Gorge while one flies near by. An HO crew also is re-gaveling the

road in front of Bill's Hardware & Freight that leads to the W. Hill Mill, as workers are busy at work at the sawmills, freight docks, and at the a lot of activity is going on at the cattle ranch in Busk. Loading and feeding cattle, feeding the horses, chopping wood and hauling freight in the horse drawn buckboard trailer.

The W. Hill & Colorado Midland Railroad layout was on the 2015 NMRA National Convention tour. It may not be available for future tours, as Wayne and Cecille are planning to move soon and the club will have to dismantle the layout and possible reassemble it in some fashion later. Be sure to watch the videos of the layout, which can be viewed to the right. -TS

If you enjoyed what you saw of Wayne's layout and would like to see more, you can subscribe to the Premium Version for \$14.99 per year or buy a single issue of Trackside Model Railroading's Premium magazine for \$2.49.

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**Left:** Michael Siekmann from Detmold, Germany shared this image of a Union Pacific ALCO C855 on his layout.

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