



BNMRR N DIVISION INFO BULLETIN



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ROADBED, TRACK LAYING, AND BALLAST APPLICATION

This is the third in a series of offerings presented to help division members understand the NTRAK standards and methods used to build modules. There is room for much improvement of our layout at this point. By presenting this information, in this format, I hope we can all improve our modules to achieve better running trains and thus have more fun.

Blue underline text will link to websites of interest. The links at the bottom of the page will take you to the respective standards documents. BC

In the last issue I suggested ballast should be applied last after the track arrangement and performance has been checked and deemed good. So why discuss ballasting now? To be sure the precaution is clear and demonstrate why. My ballasting procedure is included at the end of this bulletin.

Last month I replaced the Blue track on a corner module. The track had a problem I attempted to fix more than once without success. When the module was built, I applied ballast soon after the track was installed and before the module had been placed in the layout or tested. I didn't follow my own advice!

The removal of the track and ballast required the ballast to be soaked with water. After the wet mess was vacuumed up I had to scrap the remaining glue residue from the roadbed and sand it smooth. This work took two hours. My haste to get the module completed resulted in extra work and wasted track and ballast material.

So please don't make the same mistake when you build a module.

On to roadbed. I use [Midwest Products](#) cork roadbed. I feel this is the best material for roadbed. If you take a close look at the two halves of the typical cork roadbed you'll find they are not of equal width. I find this to be a problem for two reasons.

First, I feel the roadbed is too wide and second, since the joint where the two halves meet is not in the center, I have difficulty applying the cork accurately along the track centerline.

So to deal with this situation I will begin cutting the wider strip down to match the width of the narrower strip on new modules.

Refer to the photo on the next page.

One other note about cork roadbed: The tapered edge of the narrower piece is usually ragged thus not forming a clean, uniform shoulder. I use a common sanding sponge to clean up the edge.

Again, I want to mention I use 'Titebond' yellow carpenter's glue, (from Ace) for both the ballast and track installation.

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On to track laying. I want to mention rail joiners and illustrate how I install them on flex track. A close look at Atlas flex track shows the molded spike heads that hold the rail to the ties. These spike heads prevent rail joiners from sliding under the rail a sufficient distance for proper grip. I use an Xacto knife to slice off the spike heads on the first tie and then gently push the tie down to separate it from the two rails to allow the rail joiner to fit.

In the photo below the four spike heads have been chiseled off the bottom tie. Compare the other two ties to the bottom tie.



On to ballast application. I use [Arizona Rock & Mineral](#) ballast in this ratio:

- #1151 Empire Builder Basalt = 1 part
- #1301 Northern Pacific Gray = 3 parts
- #1381 CSX/SP/Wabash Gray = 1 part

Here is my procedure which is a slight modification of one I found in Model Railroader a few years ago. Do not apply ballast near the turnout point rails!

Step 1: Between the rails:

- Spread ballast between the rails, keeping it off of the tops of the ties and out of the rail webs.
- Soak with 70% alcohol.
- Apply glue #1 gently with a pipette.
- Allow to dry overnight.

Step 2: Part One: Along the shoulders:

- Brush glue #2 along the shoulder.
- Sprinkle ballast lightly along the shoulder.
- Allow to dry overnight.

Part Two: Along the Shoulders:

- Apply a second layer of ballast.
- Spray with 70% alcohol.
- Apply glue #1 gently with a pipette in two steps:
 - Along the edge of the ties – allow to flow towards toe.
 - At the toe of the shoulder.
- Allow to dry overnight.

Inspect for loose ballast and flange way fouling. Slowly push a car along the track, check for ballast interfering with free rolling. Use a pick or Xacto knife to remove fouling rocks. Check turnout point rails for free operation.

Glues:

#1: 50/50 mix of white glue and water (with a small amount of 70% alcohol).

#2: 80/20 mix of white glue and water plus a small amount of 70% alcohol.

Notes:

- Do not apply ballast to turnout point areas.
- If possible, tilt the module so the roadbed shoulder slope is near horizontal. This makes keeping ballast in place while shaping and gluing much easier.