

# Handlaid Track

Tips and techniques for modeling track that looks like the prototype.  
By Michael L. Cougill



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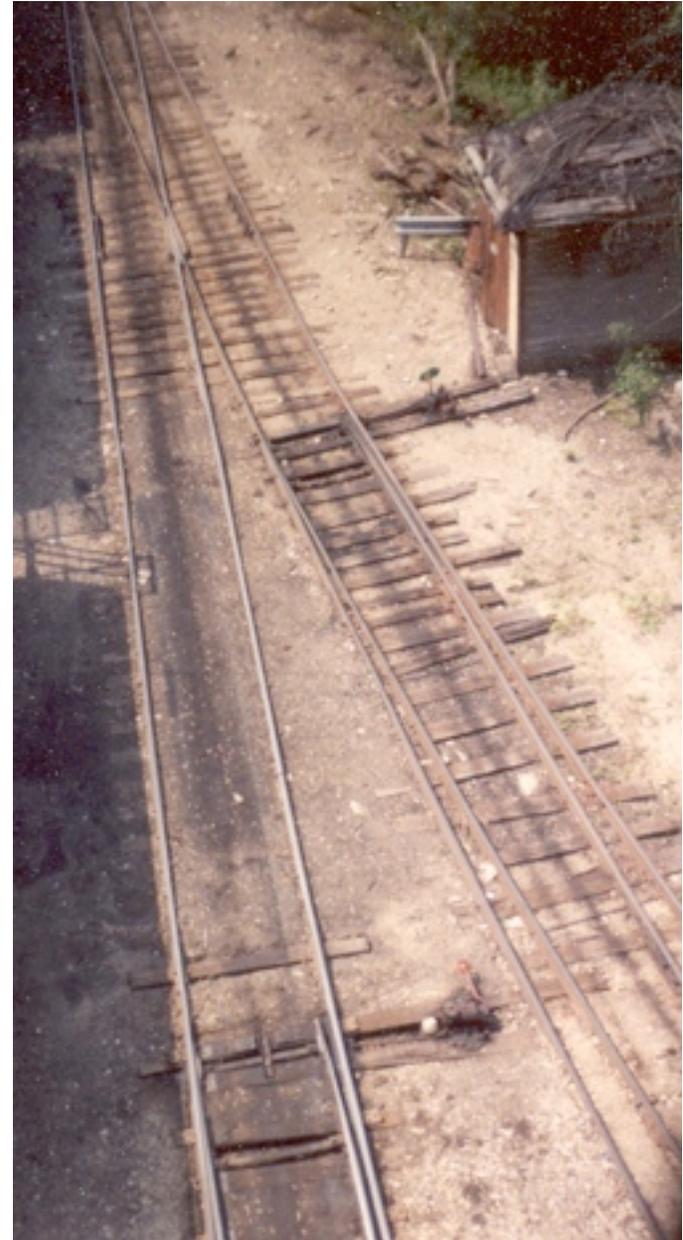
This e-book was inspired by questions from Patrick Welch and others getting started in P48 modeling. These newcomers are the future of P48 and I love Patrick's enthusiasm. It reminds me that we're all beginners at something.

Bill Davis also contributes meaningful insights and ideas, which makes my writing that much better.

Even though it is such a basic layout element, model track seldom gets the attention it really deserves. I happen to enjoy building track and turnouts. I guess this puts me in a minority position in the hobby. I enjoyed every minute spent on my track because working in P48 finally allowed me to build the level of detail into it I had always wanted.

I handlaid my track over a period of two years. This was mostly due to financial considerations because doing track to this level is expensive. I really wasn't in a hurry either. The first sections allowed me to run some trains and do basic switching moves, which kept my enthusiasm and interest high. My layout isn't that large and I laid half of the total trackage laid while I saved up to do the rest. This worked well for me. It also let me test things and work out the bugs before getting in too deep.

Handlaying track seems to scare the be-geebers out of a lot of people. There really isn't any cause for fear. Working in P48 is easier in many ways than doing the same tasks in a smaller scale like HO. The reason being there are many wonderful castings available for parts like frogs, guardrails and switchpoints, which make the construction of these critical elements very simple. Follow along as I review some of the techniques used to create the track on the I&W.



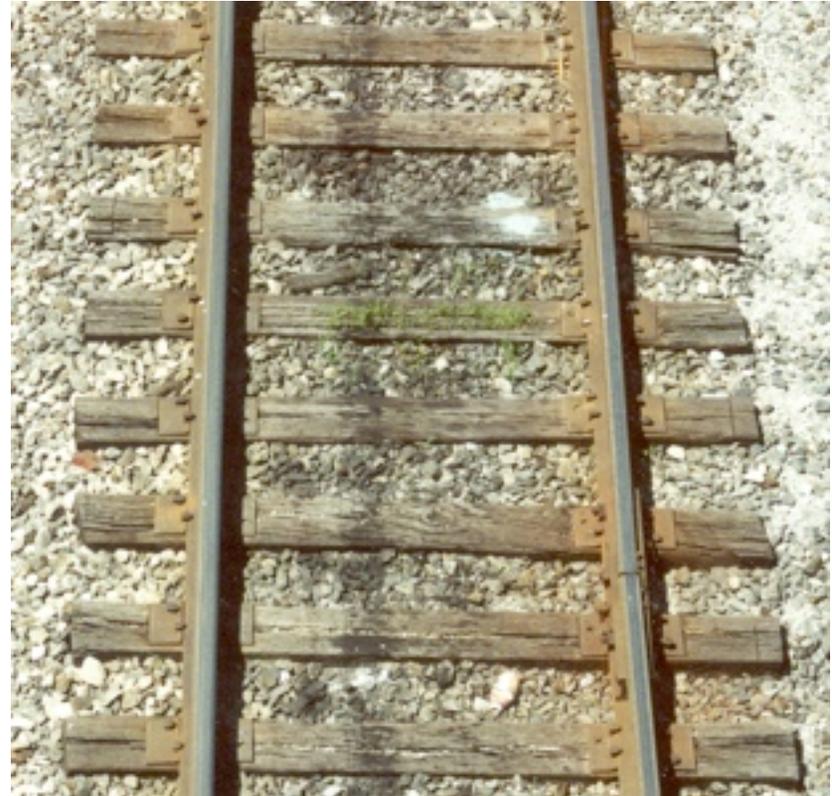
## Getting started

At this point, I can't stress enough the value of having prototype photos of the track you want to model as it is much easier to match and compare colors and texture if you do. Take this photo of Norfolk Southern track as an example. Notice the amount of variation in color and texture between the ties shown here. Notice too, the checks and splits in the individual ties. They are much more visible than the wood grain in this well maintained mainline track.

Even though individual ties will have a lot of variation in color and shading, there will still be an overall consistency in the track's coloring. You don't want a zebra or kaleidoscope appearance to things. There is variety here but when you look at the track as a whole, the coloring is pretty consistent.

There are tons of lessons to learn from this photo, from the way the dripping oil stains color the ties and ballast, to the weeds that have sprouted in the checks of the fourth tie from the top. Notice the fine sand or powder spills, the plastic bottle and other trash; the color and texture of the rails and tieplates and the list could go on forever. The point is that it's all here for anyone who wants to do detailing like this. You just have to learn how to see it.

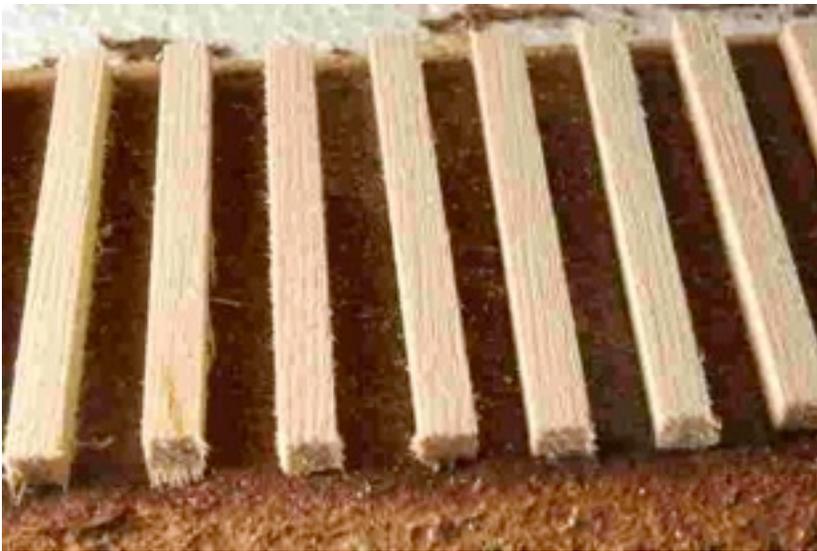
The modeling scale one works in will impact how much and what kind of detailing that applies to your track. 1/4" scale and up allows for a high level of visible detail and texture, while scales like HO or N might emphasize color more than texture. Whatever the case, there is much more that can be done to make track of any kind, handlaid or commercial, as realistic as any other aspect of a layout.



## Ties

I like track that has a lot of character to it. The New York Central branchline I model is a little used secondary that has seen better days. Following this prototype example, I put a lot more effort into the preparation of the ties than many consider normal.

The photo below shows how I added texture to the ties. The ties are cut from strips of 3/16" square basswood and are a scale 8'-6" long. I felt that the basswood was too smooth for the type of track I wanted to model, so after gluing them to the roadbed material -Celotex brand fiberboard- I used a razor saw blade to give them a rough textured surface.



This can be easily overdone, since a little will go a long way. Depending on how aged or decrepit you want your track to look, you could really beat up certain ties to make them look older than the surrounding ones. I did this on a few ties located on the layout's "Pole Track" (photo below). Again go easy on this. A few ties on a little used siding looks okay, too many such ties turns your track into a caricature instead of a model. I used a variety of tools from a dental pick to a modeling knife to achieve this effect. I just eyeballed things and stopped when it looked good to my eyes. Like so many things in the hobby the end result is very subjective. The best advise is to study the prototype you're modeling.



## Tie coloring

Once the ties have been glued to the roadbed and textured, I start the coloring process with a wash coat of Golden Oak Minwax stain (Product #210B). I use it right out of the can, simply brushing it on the ties in a random fashion. To get the variation in color, I really brush out a big section of ties until the brush is almost dry before reloading with more stain. Sometimes I will go back and coat individual ties that don't have enough color. Other times I will wipe down ties that are too dark for my liking with a paper towel or cloth.



The Golden Oak gives a yellowish brown color and is simply a base coat for what's to come. After the stain I give random ties another wash coat of Floquil Grimy Black paint. I just shake the bottle enough to distribute some pigment and dip my brush in just far enough to

pick up some color. I'm really using it as a stain more than a paint coat. I'll do the same with Floquil Rail Brown on other ties. I have to stress that this whole process is totally random and subjective. The best advise is to just experiment on scrap material until you get satisfying results.

In addition to the Floquil products, I also use water based craft paints such as the Apple Barrel brand or Folk Art. these are found in any craft store like Michael's, Hobby Lobby or the craft section of Walmart. They are inexpensive and come in an amazing variety of colors, although I mainly stay with the usual earth colors.

I mix all these paints and stains together on the ties will they're still wet. I just layer stuff on-acrylic over solvent and vice versa- not worrying about how things will react. In fact, sometimes interesting effects happen that you couldn't predict or duplicate. Having prototype photos and a willingness to experiment are the main ingredients to success; however, if you have a favorite method or material, by all means use it. My methods have worked well for me in producing the results I'm looking for, but they're certainly not the final word and I'm always interested in learning new techniques. The photo on the next page shows the results of all this prep work.



I made up this sample of mainline track to demonstrate my methods. The ties have a nice texture to them without looking overdone, and they have some variation of texture between them. Once again, this is all very subjective.

## Laying rails-finally!

The basics of spiking down rails, keeping things in gauge and in alignment have been extensively covered many times, so I won't go into a lot of detail.

For the I&W I used code 125 rail for all but two side tracks: The Pole Track and the Mill Track. For these I used code 100 rail. Every tie (mostly) got two tieplates and four spikes just like the prototype. I used the small spikes from Micro Engineering and a pair of needle-nosed pliers. This is why my track took two years to finish. Some will object to the oversized spike heads, but once the track was painted and weathered, they weren't bad looking at all (photo below).



Right-O-Way 14 inch tieplates (TPF2) were used in all places except turnouts and the two sidings. For the code 100 rail on the sidings I used 10 inch tieplates (TPF3). Joint bars were a combination of glue on (CJ25) and insulated (IJ25). The insulated joint bars come in two pieces with a cast in spacer in the middle to create a gap. They were used around turnout frogs to completely isolate them for electrical purposes, or anywhere else a gap would be needed.

Even a small layout like mine will eat tieplates, joint bars and other details like crazy. I didn't keep track of numbers, but there are probably between a 1000-2000 tieplates (probably more than that) not counting the special ones for the turnouts. For those I used the 24 inch flat plastic ones (TPF4) under the frogs, guard rails and the points until there was enough space to use regular plates on the diverging rails. The point areas also got rail braces with built in tieplates (RB25) and gauge plates (GP25) at the headblock ties (some people call these switch stand ties, but headblocks is the correct term). The two piece gauge plates are brass and have to be insulated from each other or a short will occur. I simply glued a piece of thin styrene (0.020") between the two halves and trimmed it flush. Right-O-Way brass throw rods connected the switch-points. They also had to be insulated to prevent shorts. A simple procedure outlined in the rod's directions.

Working with individual tieplates was a new experience for me. In HO Scale tieplates are too small to mess with, so most modelers doing handlaid track just ignore them. O Scale however, allows such detailing to really shine as the photos show. Working with them turned out to be fairly simple. I would just place about ten or so down on the ties and lay the length of rail on top, and line everything up. Then I put spikes at one point to hold the rail. I would then move over three or four ties and spike the rail again. Once the rail was held in place I would continue adding tieplates until I could spike the entire length of the rail(s). By leaving the rail slightly loose, I could easily slip tieplates under it and they would stay in place until I finished spiking everything in place. Every one will have their own ideas about the best way to do this, and it really boils down a personal preference and what works best for you.

There is no denying the fact that modeling track to this degree of fidelity takes time and effort. Effort that few modelers are willing to put forth in a time scarce, instant gratification driven society. But for those who do make the effort, the rewards are well worth it. The next part will take a closer look at modeling turnouts.

