

## TRACK PLANNING FOR MODULAR RAILROADING

When we discuss track planning we have assumed that we are past THE DECISION: WHAT TO BUILD.

We are told, and rightly so, we need to decide on what to model. What is our railroad's job, reason for being? Are we prototyping, freelancing? Dan Borque\* broke this into five approaches. But even at this decision we are way ahead of ourselves.

This is MODULAR MODEL RAILROADING. HAVE MODULE WILL TRAVEL.

How many members of the general public, even those that are very interested in the hobby, see the typical home layout? We are the vanguard, the ambassadors. We meet, in public places, the part of the general public that has some interest in the hobby. We need to recruit the visitors, at least some of them, into our low cost, both in dollars and commitment, take on the hobby.

Last month, Frank was talking about negotiating trackage rights in his new house for his home layout. What house can't have the car outside for work sessions and the modules stowed in the overhead of said garage? No negotiating!! Isn't the garage supposed to be ours? Okay, this *is* Washington – but half ours.

So what audience attracting features do we need to consider before deciding which way of modeling? Consider this, two months ago someone was talking about a teenage kid fiddling with a turntable, learning how to run it and moving engines back and forth at a museum exhibit. An audience gathered and grew in numbers while the kid fiddled. No one moved until the exhibition was over. My brother observed that an audience gathers and does not move on until switching operations are over.

### CRANKSHAFT | Tom Batiuk and Chuck Ayers



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So what does the audience want? MODEL ACTION.

And remember the audience is people who paid to see a model train show. These people are interested enough in the hobby that they shelled out money to look at what someone else was doing.

They want to see model train action: mainline trains dropping off cars, switchers delivering the cars to industries, switchers picking up cars at industries, and local freights taking those returned cars down the mainline.

So our shift is not big: more opportunities for railroad operations and consciously having operations during the shows.

**1** So this is our first requirement for our module: switching operations are available.

Next is one of my bucket list targets: MMR.

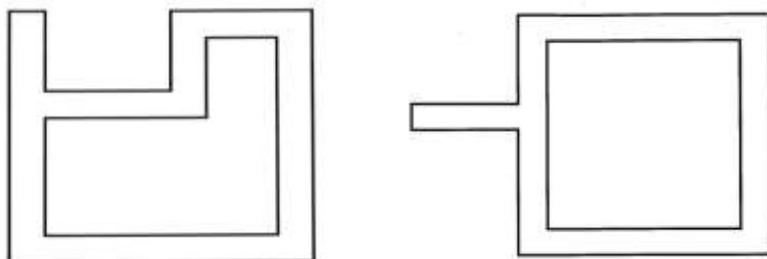
The proposed track layout we will get to later is 4' x 12' peninsula off a corner. I discovered that there is enough square footage in this and the rough track plan had enough possibilities that with little tweaking, four legs (Achievement Certificates – seven of eleven are required) of the MMR could be satisfied given quality work. Civil was almost a given, structures needed greater variety, scenery needed a few more things, and electrical needs of the plan would satisfy the requirements.

**2** So this is our second requirement for the module: meeting some MMR “legs” qualifications.

Still before we make the decision as to what to build we need to consider the need of the module group. Where are the switching modules now? All on the outside track, all in the inside track, do we need to add an interchange siding?

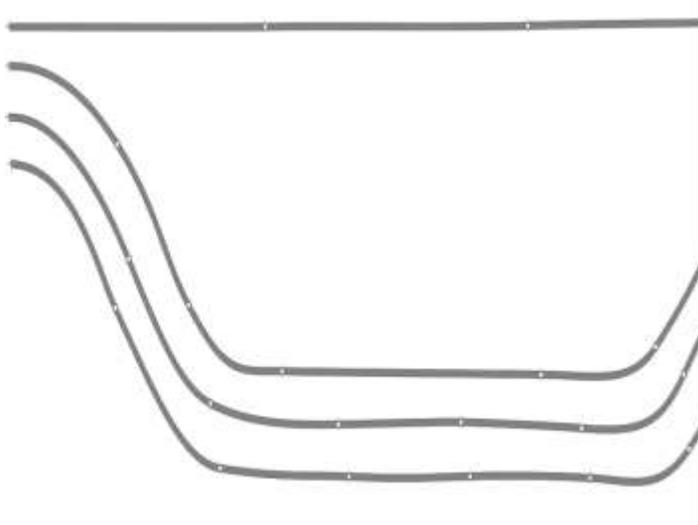
In analyzing this I see four distinct methods.

- a. A peninsula
  - i. Coming off a corner and sticking out into the crowd
  - ii. Along the side making a “T” and sticking out into the crowd



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- b. A routing of the mainlines and the inner local track to the back of the module – this frees the outer local track to be servicing the sidings and industries



- c. Using the inner local track to service a small local route.
- d. Using the inner local track to service sidings coming off the local track

These would, of necessity be paired for maximum effect. But any of them could stand on their own, exchanging freight cars with themselves.

- 3** So this is our third decision requirement for the module: determining whether we are going to build an innie or an outie.

The next decision or modular or standard layout is how many square feet do we want to model? This is an amount that is only limited by our storage space and time to model. Luckily we have it over the stationary layouts two ways: we are not bound by walls nor do we need a room of layout completed to run.

This decision is totally intertwined with what do we want to model. As you will see later, a taste of a short line easily fits 30 to 40 square feet. So does an industrial area such as Kent or south Seattle. Ditto for a working mine – supplies in, ore out.

**If you need an inspiration**, think of areas you enjoyed in your life or with which you are/were intrigued. Remember to that we need to keep it in module form: 2 – 3 feet deep and 4 foot wide. The 4 foot can be repeated, but longer lengths need stronger support of the bed. How many sidings/industries do you want? You need several to give enough action and make the switching interesting. Too many gets crowded, but there are prototypes of that, e.g. the brewery area in Milwaukee.

- 4** So decision number four is what and how big.

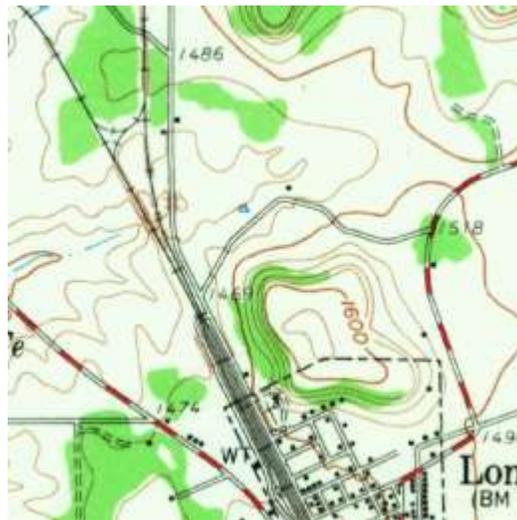
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We are now to Dan Borque's, "Tough Choices", *Railroad Model Craftsman*, August 2009 – the five approaches at the bottom of his decision tree: Strict prototype, prototype, proto-freelance, disciplined freelance, and freelance.

The Historical Society for wherever you are looking will be most helpful. Ask them for help; they live for this.

There are libraries of pictures, plans, and other materials at Kalmbach and the NMRA as well as ties to other resources.

The US Coast and Geodetic survey puts out both 7 minute and 15 minute maps ([ngs.noaa.gov](http://ngs.noaa.gov)) which can show the features of an area that can be used to selectively model an area.



REI has a National Geographic mapmaker which prints a custom 7 minute map.

Google, Bing, Mapquest and others have mapping ability and some will show street scenes.

These are current time, however.

County assessors have maps and pictures

Rail fan down the prototype's right-of-way. Or several that might have interesting approaches or industries.

Talk to owners and residents about railroad activities

Selective omission and compression will be utilized as you plan your track.

The track plan I using as an example is somewhere between prototype and proto-freelance. I am basing it on the Gulf, Colorado and San Saba Railway. The Gulf runs from Lometa, Texas to Brady, the center, or as the locals call it, the Heart of Texas. Lometa is the interchange yard with the Santa Fe (sic now BNSF, Warren Buffet's train set in 1:1 scale).

You do your research, decide on the number of sidings, decide on the scenery, and the intensity of accuracy to a prototype railroad.

### 5 Number five: what, how true to a prototype, and how big

Now, finally, you are ready to plan your drawing of your track plan. You get a piece of quad-ruled graph paper and sketch out a rough idea. (You can make one with Excel or 123 by sizing the cells and making lines on the background grid.) First, rough out size. Shrink to the graph paper.

Then placement of major objects: sidings, buildings, scenery, creeks, and hills.

Don't get too detailed; that comes soon enough.

This will be reiterative, in that you will go through several iterations of moving chunks around. You have a rough idea.

Now comes the decision on track planning software. We are presuming that you will use software. It can be done by hand with paper and pencil as it was for many years. It is laborious and requires a big eraser. Your software finished product can be blown up full size by computer and printed.

There are many manufacturers of track planning software: CAD-Rail, 3<sup>rd</sup> Planit, 3D, AnyRail, and many, many others. There is probably more than a dozen. Most will give you free demonstration software. Demos are limited in the number of objects at one time, typically 50 to 60. The Gulf, shown later, was done just with the demo from Anyrail. These are modules not rooms of trains. I will be getting the full software to go from rough to detailed planning for the Gulf Line

### 6 The sixth step of getting a reasonable image of the final plan is complete.

Now we need to mock this up full size in our scale.

Keith Jordon suggests cardboard cutouts for the train table on which his friends write suggestions. *Model Railroad Planning*, 2001, available from Model Railroader on DVD

Dan Risdon recommends masking tape on the garage floor where rolling stock is slid around. Z marks his out on tissue paper. *Model Railroad Planning*, 2013 available from Model Railroader

One model railroader marks his out on tissue paper.

Jack Hamilton sketches his on brown paper which is used as the base on his module. From a Conversation, June 2013

What I am doing is using the miracle of modern printing (a big thank you to Mike Slease and Sir Speedy Printing, Tacoma WA) and printing the plans 1:1 for the scale train table.

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All of the above approaches permit cardboard mockup of structures, testing to how many cars a siding can hold, analyzing clutter and building overkill, lines of sight, the fit of parallel tracks on curves, et cetera. In general, does it fit, how is the clutter factor, is it the over the top?

**7** The seventh step exposes weaknesses and potential betterments.

These changes are sent back to the sixth step for refining the track plan (and with some software, the buildings and scenery).

After several iterations of refining you will get a plan you can live with. It will never be perfect.

You are ready to lay track when you feel done. Don't worry, to quote Gen George Patton, "No plan survives contact with the enemy". So even the last iteration won't be what you actually do. But the last one will get you to there.

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\*Dan Borque, "Tough Choices", *Railroad Model Craftsman*, August 2009 – The five approaches at the bottom of his decision tree: Strict prototype, prototype, proto-freelance, disciplined freelance, and freelance.