

Great Northern in Western Washington

Here are some detail bullet points about the model railroad that John Krueger has started building, themed on railroading in the Pacific Northwest. *Note, as of late February, 2023, this is mostly planned. Benchwork on level two extends around the basement exterior and a 175' mainline loop with three long sidings is in place so I can occasionally take a break from construction and run trains.*

Theme:

- Model railroad evokes Great Northern Railway's route west through the Cascades from Wenatchee with a bit of the north / south line in the Puget Sound area too.
- Era is the mid-1960s, when railroads still hauled RPOs, mail and express in passenger trains freight hauling was transitioning from boxcar loads to bulkhead flats, covered hoppers, TOFC and open autorack cars.
- The east / west main will feature mountain railroading, potentially using pusher service on longer through trains.
- The north / south line will have more concentrated urban / industry areas than the east / west line and will have staging feed overhead traffic. Staging at the east end of the modeled east / west line will feed overhead traffic to and from the Rockies and Midwest US.
- Since I enjoy NP and Milwaukee Road too, some rerouted trains might travel parts of the layout :)
- The layout is planned for operation with a potentially large crew since this was a busy railroad with a variety of freight and passenger operation at the time.

Planned operational features:

- A large yard south of where the east / west main joins the north / south one that will classify freight coming from and going to the north, south and east

- A port area with a rail-barge, grain export, Alumina import, and maybe a fruit export area
- King St passenger station terminal and support tracks, with International's from the north and pool trains (GN and NP from the south) begin and end there, as well as the big east / west trains, the Empire Builder and Western Star.
- A paper plant and a few other industries
- One town on the east / west main is planned to have a large lumber mill.
- Appleyard will be towards the east end of the modeled line, which will have fruit traffic feed in from the nearby town of Wenatchee and the Rusty-Dusty branch that connected there. I hope to model a couple towns on that branch line as level three of the layout. These towns in the Columbia river valley provided loaded iced reefers of apples yet at the time, as well as some finished lumber.
- Between Appleyard and east staging, I hope to model a plant that imported Alumina and made aluminum ingots.
- One of the towns on the east / west line is Leavenworth. It had been a lumber town that played out the available lumber and transformed itself into a Bavarian themed vacation area (commercial buildings were designed to look that way – kind of like New Glarus looks). I plan to send ski specials there. I also plan to add the Bavarian Brewery as a railroad industry (not in the actual town, but it definitely fits the theme). I plan to model this as a winter / Christmas-time scene as this is when this town really comes to life.
- The middle of the main room is planned to have what I call a Blobix, a large curved-in peninsula area where the mainline is planned to twist and turn over an area to gain height between level one and two to minimize the use of hidden track. I don't like helices, but I am planning a multi-level layout, so need to get between levels. This middle area will be a mushroom benchwork design.

- I am using multi-level construction to stretch out the mainline and have at least a long train length and sometimes more between sidings on the single track mainline part of the line. The total mainline length, running from south staging, through the main yard and over the east / west line is planned to be over 900 feet long. The connecting branch line is planned to be 135 feet long.
- Sidings on the single track portion of the layout are designed to be at least 22 feet long to accommodate freight train lengths of up to 30 cars and multiple engines.

Construction details:

- Given the complexity of designing a multi-deck layout with a mushroom design as part of it, I use CADrail planning software to plan aspects of the layout (track, benchwork, wiring component layout, etc.).
- Benchwork is being built out of 2.75" strips cut out of sheets of half-inch thick, 9-ply Baltic birch plywood. This is sturdy and relatively light-weight and it doesn't twist like dimensional pine boards.
- In areas with wider subroadbed (towns, yards, industry areas, etc), I am using 5/8 inch ceiling drywall. It is construction grade material that has been used extensively by the Riverrail group of model railroaders and is less expensive than using plywood sheets. I am using plywood as subroadbed in some narrow single track areas where I need more structural strength.
- I am using Digitrax components for the DCC power. The layout is divided into five zones with boosters.
- I am wiring blocks with sub-busses for detection and CTC signaling.
- Hopefully to improve electronic and wiring components for maintenance, I have begun to build panels into drawers.

- I plan to use a lattice of cardboard strips to support basic scenery shell. I might use a glue/paper basic shell with a plaster mix goop on top for the scenery base. I will use pink Styrofoam in some places also. I look forward to experimenting with new scenery materials and lots of rock castings on top of this!
- The walls were painted blue for sky in the whole exterior of the basement when the room was set up. I do plan to add some Masonite coves.
- A bathroom was added to the basement when prepping it.
- There is a crew lounge and the layout will run around two walls of it.
- I plan to use LED strip lighting in lower layout levels.

Current layout progress:

- Prep-work:
 - Wiring was added to the basement for lighting and wall receptacles. The receptacles in most of the basement can be shut off with one switch.
 - Drywall was installed on the walls and painted sky blue.
 - Studs were added around the walls next to the garage to add backdrop to as construction commences.
 - A bathroom was added along the stairwell for the convenience of the operating crew.
 - A lounge was added for crew use (and as an exercise area in the winter). Holes in the wall allow the layout to continue around the basement on the three levels.
 - The door to the lounge is a fun feature – designed to look like a boxcar door.

- The level two benchwork is built around the exterior of the basement.
- About 175 feet of mainline and three sidings have been laid.
- A connector track is included on the mainline to complete the loop so I can run a few trains when I take a break from construction.
- The Digitrax LocoNet cables are strung along the basement walls.
- A main control panel and 3 other zone panels with boosters are partially wired – at least enough for the current track to operate.
- One wiring panel is hanging over where the lower staging willing be located. Three others are on drawers below short sections of level-one benchwork that has been installed.

Next work to be done:

- I will add more to the wiring panels so they are set up for added wiring for the other levels when I get to that.
- I plan to work on some scenery in the town of Lynn's Pines since access might be harder when level three staging benchwork is added.
- I need to add level three staging benchwork and track next.
- Work will begin on level one benchwork and track – the portion around the basement exterior.
- I might need to take a break from woodwork and track laying and wiring and add some scenery and buildings in the towns I have up as well as in between.