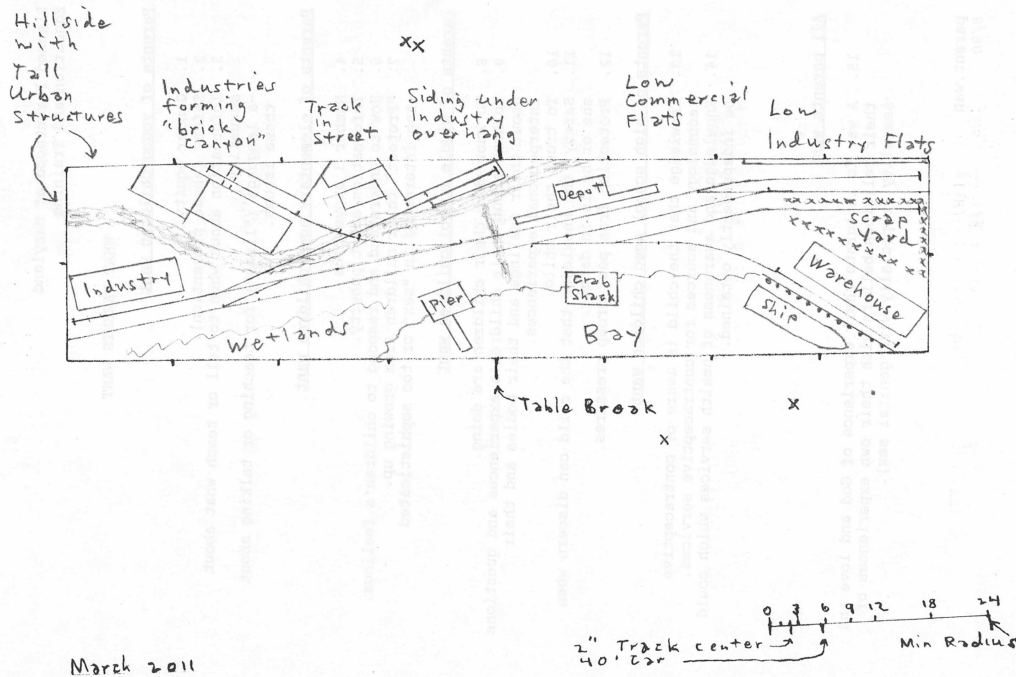


Chesapeake City - Arthur Boyd



Design Criteria

The Division design parameter was a two foot by eight foot flat table top, divided into two sections – each 2x4 feet. The track design should be self-contained, plausible, and should allow for operations, but not be a “switching puzzle.” The design should avoid complex trackage at the table break. The layout is to be portable, with the two halves nesting one on top of the other to form a box.

Design Concept

This is a freelance design (that is, not based on any real location) featuring a bay-side setting in a small city. It has a mainline with passing siding or runaround track (which is necessary for operations, whether local switching or through trains). Several industrial sidings provide places to spot and pull cars, with both facing point and trailing point turnouts for greater switching interest. While not a switching puzzle, there is one complication of a switchback which will require pulling cars from the tail track to access the switchback track.

The layout could be thought of as the end of the line coming from the left and ending at bayside, with a train arriving, doing switching, and returning to the left. This is probably the most easily understood concept for guest operators. Alternatively, it could be a town on a continuing mainline, with a train “arriving” from either direction and continuing in that direction after local switching – requiring added switching complexity to pick up cars only heading in that direction.

Aesthetics

Few tracks parallel the table edges, making the design seem larger, as does the placement of industry tracks at varying angles. Angling the mainline from extreme opposite corners yields the longest mainline. Buildings placed off-center and at varying angles add to the visual interest in a limited space.

Low buildings and scenery at the front of the layout allows for safe “nesting” of the two sections for travel – one on top of the other. Wetlands, then open water with a fishing pier, a crab shack, and a quay with a small freight lighter ship identify this as somewhere on the Chesapeake Bay.

The rear of the layout against the backdrop, going from left to right, starts with a hill having tall urban buildings. Then comes a tall (perhaps 5-8 stories) multi-building industry with a “brick canyon” between them for the rail siding and an overhead connector between the buildings to hide the track end at the backdrop. The next buildings step down in height (perhaps 3-5 stories) with a siding going under an open gallery on the side of the building. A gas station is wedged between the industries, fronting a road with the track running down the center of the road. Moving behind and to the right of the depot are low commercial flats, perhaps store rears (perhaps one to two stories). Approaching the right rear the “building scene” raises slightly with low (perhaps 2-4 stories) industry flats with loading doors at trackside. Having both left and right ends of the layout rise up, even if slightly, brings closure to the scene and keeps the eye from “dropping off the face of the earth.”.

The overall scenic and building visual effect is an urban hill side with tall buildings on the left rear corner to a low bayside on the right front corner. There are three differently themed scenes, which also makes the small layout seem larger. The “depot – crab shack - fishing pier” complex makes a “human scene” between the “urban scene” on the left and the “quay – scrap yard scene” on the right. The busy depot just to the right of center provides a visual anchor for the layout, linking the three scenes.

The mainline running from the left front corner toward the center middle draws the eye into the layout, as does the curving quay siding on the right moving toward the center. The pier and crab shack with open water in front provides a “visual resting place” as the eye moves from the busy left rear to the less busy right rear and back again, and from busier rear to soothing front.

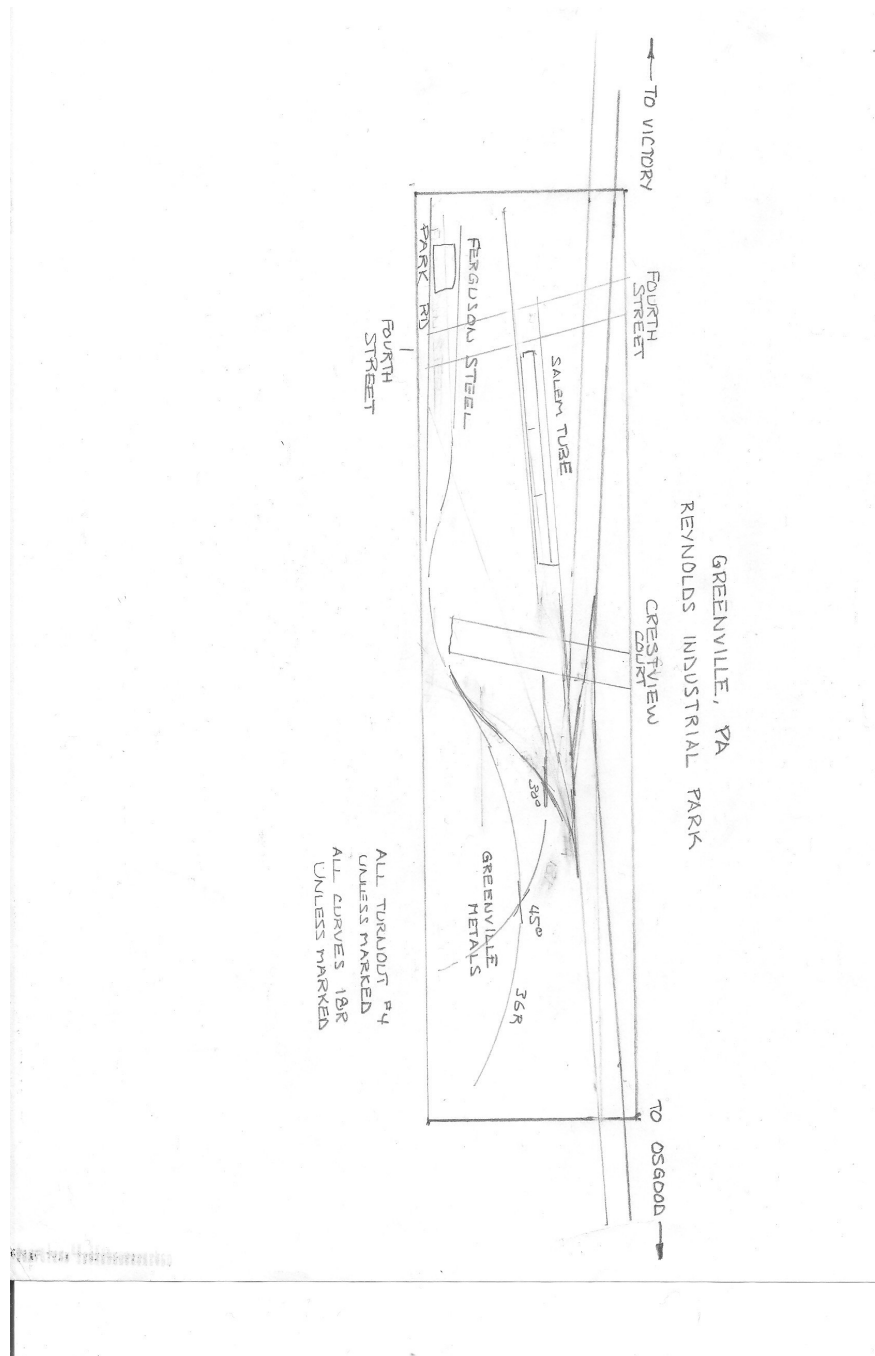
Practicalities

My initial free-hand sketch had an aesthetically pleasing flowing broad S curve to the mainline, and “cosmetic curves” throughout. Allowing for a long enough length of track at each end for at least one car and an engine, and having straight track at coupling-uncoupling points forced a largely straight mainline configuration. Larger frog number turnouts were in my mind, but number fours were necessary to make everything fit when pencil hit paper. Curves are 24 inch radius. The crossing is 45 degrees.

There are six industrial spurs, holding two to three cars each (perhaps fewer, depending on final track laying). The mainline siding will hold six cars plus engine, so about half the possible car spots could be switched per operating session. Starting with a bit more than half the spots full will make a satisfying operating experience.

Adding spurs or lengthening spurs for increased car capacity – always tempting – would only make switching frustrating if not impossible. Freight car types needed by the chosen industries should be restrained to only be the most common types (box, gon, flat) rather than special purpose cars that can only be spotted at one of the industries.

Track Plan 2



This layout is based on a track diagram I found of the Reynolds Industrial Park in Victory, PA on George Elwood's [Fallen Flags](#) web site. I found the location using Google maps. This appears to be in Greenville, far western PA and I think it was on the Erie Lackawanna. Member Jeff Mutter, local EL historian, found "according to the Employee Timetable, there was a Greenville between Amasa and Shenango/Chicago Bridge Works on the Second Subdivision of the Mahoning Division. It was single-track territory."

Some of the trackage is extant in the Google map satellite view. The remnants of some older ROW is visible as scars on the landscape.

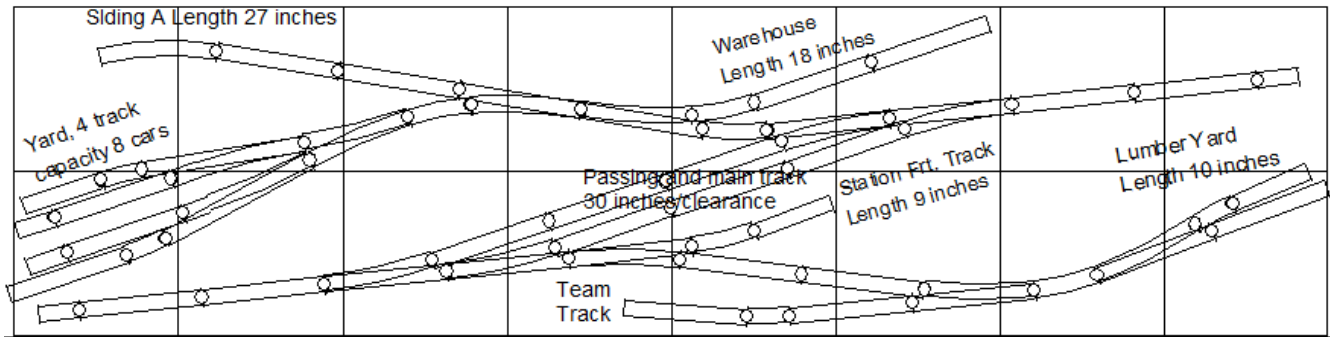
Three businesses are represented on the diagram. Salem Tube, Inc. (founded 1963) supplies small diameter tubing from a 185,000 square foot facility. Starting from a broad raw material inventory of stainless and nickel alloy strip and seamless hollows, Salem offers a wide variety of seamless and welded and drawn tubing in both standard and non-standard dimensions.

Ferguson Steel is a giant Erector Set. Founded in 1968, they are a major supplier and erector of pre-engineered metal buildings, structural steel, joist, decking, pre-cast concrete, installation of machinery and cranes, heavy moving and rigging, and industrial maintenance. They offer a complete installation of standing seam metal roof systems for new construction or retro fit of existing roof structures.

Greenville Metals produces metallurgical products using many techniques including electric arc furnace, argon oxygen decarburization, induction furnaces, and various crushing, grinding, and sizing equipment. Our products include nickel, cobalt, and iron based (particularly stainless steel) alloys produced as ingots, pigs, shot and powder.

Lots of operational interest here. Some compromise was required to adapt the plan to fit the available space of the Chesapeake City footprint. I did some squeezing of the lead to the Ferguson tracks and I eliminated some other tracks. One major change was to reverse the orientation of the Greenville Metals sidings so that required the addition of a crossover on the main to allow for a runaround move. The main had a siding here and will be used by the peddler to block the cuts to be moved into the industrial park. Note the roads. They can't be blocked by cars for more than five minutes. A wide variety of car types and loads can be staged off the layout and any number of methods can be used to vary the consist of cars to be switched.

Track Plan 3



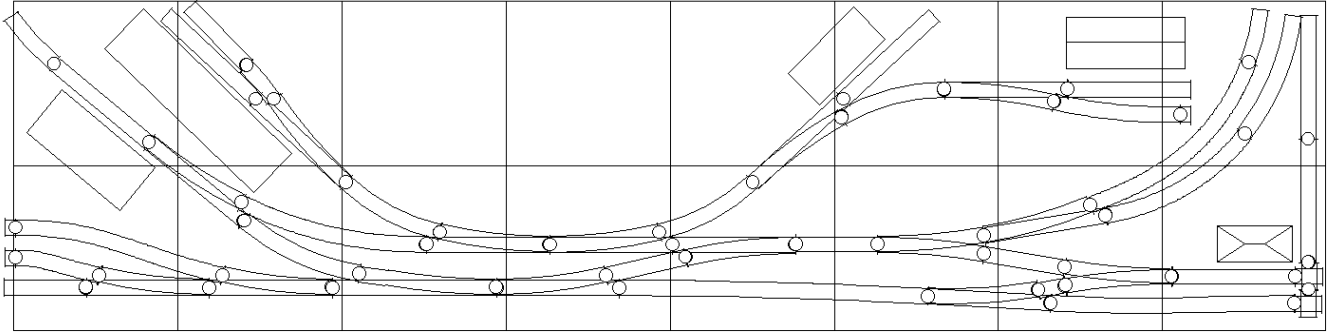
With this plan, the mainline enters from the lower left and exits through the upper right side of the plan. The passing track and main track each have 30 inches of clearance. Both tail tracks have 21 inches of clearance, enough for one 60s/70s era 4-axle diesel and two 40 foot cars.

The plan has a small 8-car capacity yard; siding A which is 27 inches long for one industry on the back drop at an angle to the front. The warehouse would be also angled the other direction to the back drop. The station would be a combination passenger and freight station with its own LCL track. A separate team track is provided. The lumber company has its own two track siding as well.

With the train pulling into town, it could have one engine, 8 cars, and one caboose and still be able to operate and run around its train. If this time period was set in the 60s, a dedicated switcher might be stationed at Chesapeake City to handle all the local switching with cars dropped off by a passing freight train. This would be similar to the operating scenario used by the B&O in Washington Court House, OH. The small yard is a variation of that yard.

With this plan, three levels of operations could be done. First, simply have a two man crew work the train as a local without any time restriction or constraints. Second level: have the local crew have to contend with a fast clock and let teams of operators compete for best time. Third level: have a scheduled RDC/gas-electric/passenger train scheduled and the crew must be done or out of the way (main track cleared, and train tucked into the passing siding and yard) 10 fast minutes before the first class train arrives in Chesapeake City. If the dedicated switcher is added (with DCC control of course), then the crews would have to work together to get the work done and not foul each other up.

Track Plan 4



Background and Operational Synopsis for Chesapeake City with Interchange

This layout design is based upon a small interchange and junction with another railroad. Along with two interchange tracks (one outbound, other inbound cars), there are 4 other industries: a team track with loading rack and a lumber yard (which share a common switch lead), a chemical company with two inbound tracks (on lower left of plan), and a freight house with two tracks on the upper left lead.

The time period could be either late 60s/early 70s with a local freight carrying a caboos or a more modern operation with a single engine with the conductor riding with the engineer as a two man crew.

The structures for this layout would be a moderate freight house, a loading ramp/dock, a lumber yard, a gated chain link fence representing the off-layout chemical plant, a commuter shack on the left end of the main track, and an interlocking tower.

The freight house would be similar to an interurban freight house with two tracks and bridge plate loading of the outside track box cars through the box cars on the track nearest the loading dock/platform.

The team track loading dock ramp could be either wooden or a more modern poured concrete ramp. This is of course still the first of two universal industries on the layout. The second universal industry is the interchange tracks.

The lumber yard can be represented by the Atlas lumber yard kit. It would fit into either the modern or early time frame. Cars could be boxcars or modern bulkhead or center beam flat cars.

The interlocking tower can be open as in the 60/70s or boarded up and closed with a signal call box available for the crew to call for permission to cross the diamond or at least use the crossover inside the interlocking to perform run-arounds.

The chemical company would be appropriate in either time frame. Forty foot tank cars for the earlier era; larger tanks or chemical covered hoppers for the more modern era. It would be simply represented by a chain link fence, similar to how NS delivers cars to Invista (formerly DuPont) in Seaford DE.

This layout design will work for both eras though 4 axle engines would be the norm in both cases. In 60/70s era, older GP9s or newer GP35/30s could be used in single on the local. In the modern era, a well worn GP15 or even a Genset engine could be used.

For electrical control, either DC or DCC could be used. DCC would allow two engines to be used at the same

time without having to put in electrical blocks and switches. With Atlas switches, wiring would be simple with multiple drops to a common power bus.

An operating session would start with some cars already distributed on some of the tracks, including a cut of inbound interchange cars on one of the two interchange tracks. If the crew needed, they could get permission to use the crossover at the interlocking or if they can do without it, use the run around on the left half of the layout. The train would head into town from the left (west end) and the crew would normally pull into the siding. When the operations are completed, the train could be almost the full 8 foot length of the main track.

With the interlocking in the plan, there is also the opportunity for installing a rudimentary interlocking system with lit signals. Along with the option of placing a caboose and one or two cars north of the junction for the competitor railroad (Pennsy any one?)

Thanks for taking a look at my track plan and proposal.

Track Plan 5

Chesapeake City Railway and Dock Company Layout Design Proposal

Goals:

This Display layout is intended as an educational project with the aims of:

- Demonstrating aspects of the Model Railroading hobby to the Public
- Examining elements of Layout Design
- Showcasing construction techniques in trackwork, scenery, and structures
- Exploring operating procedures and systems

Layout Design Concept

Exercising the “given” footprint of 2 x 8’, we are pointed in the direction of a switching layout. The goal for operation education skews the traffic toward operation, with scenery becoming secondary to the operating purpose of the layout.

‘Chesapeake City’ is a neighborhood in one of the cities located along the Chesapeake Bay. It is served by the major railroads of the northern end of the Bay through interchange, using sound equipped leased power from those roads (unless a volunteer offers use of an engine or 2, re-lettered for CCR&D). Located on the Bay, CCR&D serves a variety of industries, both on-line and via local delivery at team tracks and freight houses. In addition to land connections, CCR&D serves ships in the Bay and connects with other railroads and isolated trackage via carfloat. Built at the turn of the prior century, trackage was designed for short cars with most loading dock door spots built for 40’ cars. For this layout cars are limited to 53’

Operation

Operations on the CCR&D are designed for up to three operators, with two operators and a yardmaster-agent being more reasonable on the 2 x 8’ real estate available. DCC with tethered throttles is to be used from the aisle side of a 2.5 x 8’ train show table. The removable carfloat and interchange (visible staging) tracks provide a source and destination for utilizing a variety of cars, being added and removed during operation. Both interchange location are at the front of the layout, so changes can be made from the aisle in a train show type venue.

The interchange yard serves as open staging, representing connections with the B&O and PRR, each with their own track, and with the WM via carfloat. Yard tracks will reach the end of the layout, and if there is room in the display venue (no adjacent, or an empty table) cars can be exchanged via cassette attached to the end of the layout. Otherwise, the 0-5-0 method will work. There would be at least two carfloats, which would have bumpers and couplers at the sea end and stiffening braces (sidewalls) along the sides of the float to retain cars during float swapping.

Interchange yard capacity is 14 cars and the carfloats hold up to 8 cars. There are 30 potential industry spots. With industry track utilization at 50% and yard / float utilization at 90%, there is a good balance between inbound and outbound cars.

There would typically one switcher for the float operation; gantry and team tracks and Crown Central Petroleum tracks. The other switcher would handle weighing, interchange, warehouses and American Radiator and Standard Sanitary. Transfer between switchers occurs at the runaround closest to the aisle. The YM / Agent handles exchange of cars from interchanges and carfloats. He / she would also assign destinations for cars and handle car requests from industries. With a Superintendent, there are 4 potential positions for operation on this small layout.

Construction:

Construction would require adding another layer of foam to the existing sections. It would be a $\frac{3}{4}$ " if available, or $\frac{1}{2}$ " layer. The float area would be cut out, using the existing surface capped with styrene or Masonite to maintain railhead height over time with the compressive nature of foam. The base of the carfloat would be $\frac{5}{8}$ " or $\frac{3}{8}$ " furniture grade plywood. Bulkheading would serve to align the float to the shore.

Turnouts are # 4, code 100 (more economical) with a frog angle of (Shinohara-Walthers = 13.33; Atlas = 12.83) degrees. Track spacing is 2". Turnouts would be ground throws or slide switches operated from the front of the layout for turnouts difficult to reach around structures.

Power would be DCC, placing the booster behind the layout backboard (or off the floor under the table), with throttles plugged in at either end of the layout.

Commercial structures would be kitbashed to fit the space, or scratch built. The gantry crane is available, and track spacing may need to be reduced; it accommodates open loads on flat cars and gondolas. The team track could take box cars and reefers. The scale, yard office and float office can be converted from available kits or used as scratch building demonstrations. The road bridge would be modified from available kits to fit. The warehouses (serving Chevrolet / GM; Continental Can; Baltimore News-American; Lever Brothers; Montgomery Ward; and Western Electric with designated car spots) could be kitbashed or scratch built; one would be built as a refrigerated warehouse, expanding the industries accepting reefers on the layout. The industry large enough to be rail served at the right rear could be designated as Revere Copper and Brass; GLF Soil Building Service (fertilizer plant); American Radiator and Standard Sanitary; or others that could accept tank cars, box cars, covered hoppers, gondolas, and the occasional load of machinery on flat cars. The open track next to the bridge could contain a coal yard (cut away top layer of foam to take the coal dump), power plant, concrete distribution plant, or other facility taking cars of interest to the members. Crown Central petroleum would have a rack for tank cars and storage tanks for product, one of which would be large enough to contain a contributions jar.

Funding:

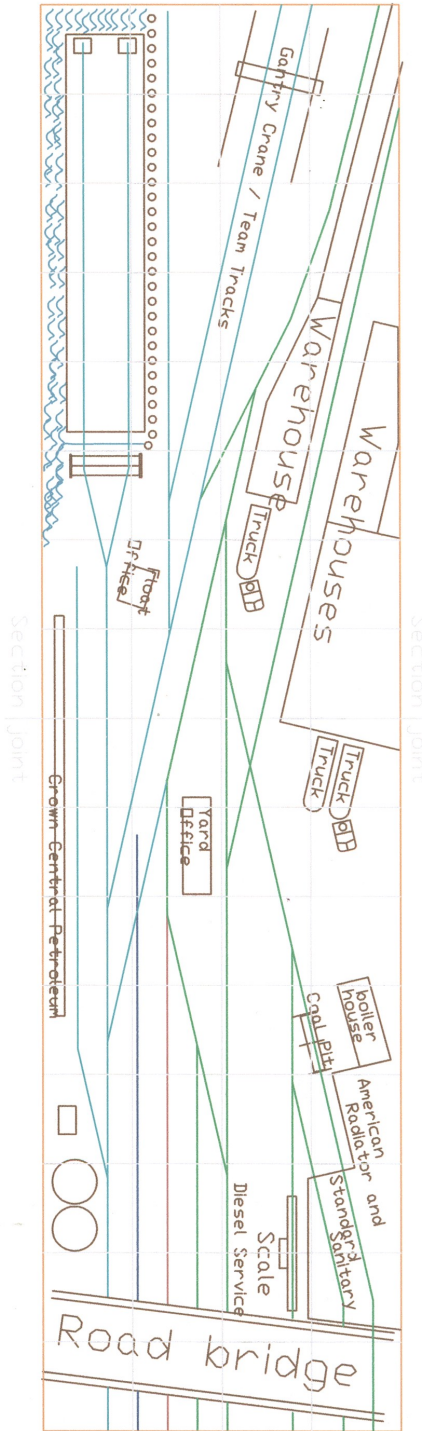
Obtaining track and buildings would be the most challenging tasks. The membership could be solicited to raid their 'hobby shop' shelves; hobby shops and manufacturers could be solicited for contribution of materials, kits and rolling stock. Signs could be posted on or above the backdrop acknowledging contributions.

The layout could be auctioned off after two years or so, in its entirety or by components. A contribution jar would be placed in one of the Tanks for Crown Central Petroleum for contributions by those observing the layout in progress or operation.

PR:

A sign (foamcore) would be posted above the backdrop. Flyers would be available for handout explaining the nature of the project; function of the Division, and soliciting membership in the NMRA.

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Chesapeake City Railway and Dock Co
 NMRA - Chesapeake Div design contest
 KT Stavac
 2-14-11
 Atlas #4 turnout dimensions; angle = 12.83 degrees
 6" grid

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Track Plan 6

This was submitted for consideration without any text document.

