

Model Railroad Engineer Scenery

INTRODUCTION

The Norfolk Southern Connector (NSC) is a free lanced HO scale model railroad that I have constructed in the lower level of my home. I will use the scenery of this model railroad to satisfy the NMRA Model Railroad Engineer- Scenery AP requirements. This document has been prepared to provide a written summary of how the Scenery AP requirements are met on my model railroad.

I am using a portion of my Norfolk Southern Connector (NSC) layout to meet **requirement number 1** of the Scenery AP requirements. The portion used is just over 55 square feet in area, in excess of the minimum 32 square feet required. The area being submitted for judging has structures, terrain features, a water feature with a dual track railroad bridge, background panels, lighting, and other scenic related features found on a railroad.

To meet **requirement number 2**- I have prepared a set of photographs and a written description describing the intended setting of the NSC and the scenic details of the towns and other features located within the modeled area.

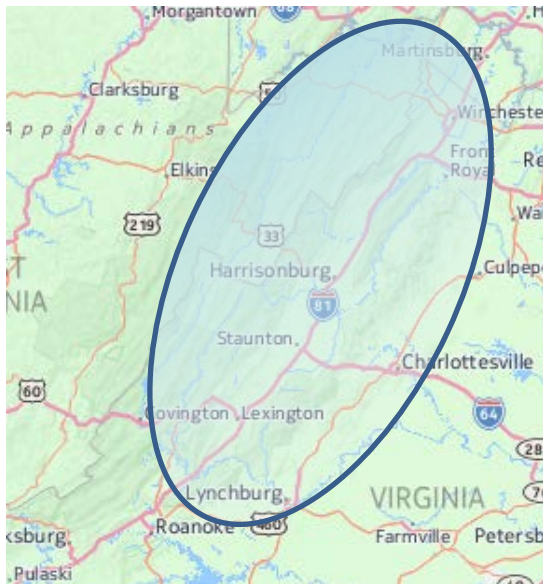


Figure 1- A geographic map of the Roanoke and Shenandoah Valleys.

TERRAIN- The NSC was modeled on the geographic area containing the Roanoke and Shenandoah Valleys where open country, rolling hills, and an abundance of farms, cedar, pine, and other types of trees are found. This area lies between the ridge lines of the Blue Ridge Mountains from Roanoke, Virginia to Winchester, Virginia and eastward to Front Royal, Virginia. This area is shown in Figure 1 to the left. The modeled portion features the NSC engine shop, Bella's Transfer, Abby's Motor Shop, Littleton yard, Anthony's Cement Company, Littleton Lumber, Hot Springs, Alexandra's Power and Light, Furnace Mountain, and McDonald's farm. The NSC territory reflects rolling terrain and a number of variations of vegetation colors found in these valley areas. I have not modeled any specific scenes but have tried to provide the viewer a glimpse of what they might observe if they visited the valley regions. The names of the various features are fictional names based upon the names of my grandchildren or other family members.

The following pictures were secured from the internet to provide a glimpse of what the real Roanoke and Shenandoah Valleys would look like if you were to visit the region. Figure 2 is from the valley perspective showing Fall season foliage.



Figure 2- The rolling valley showing Fall foliage.

Figure 3 shows the Shenandoah Valley area from a perspective along the Blue Ridge Parkway. Figure 4 shows a farm in the Roanoke Valley.



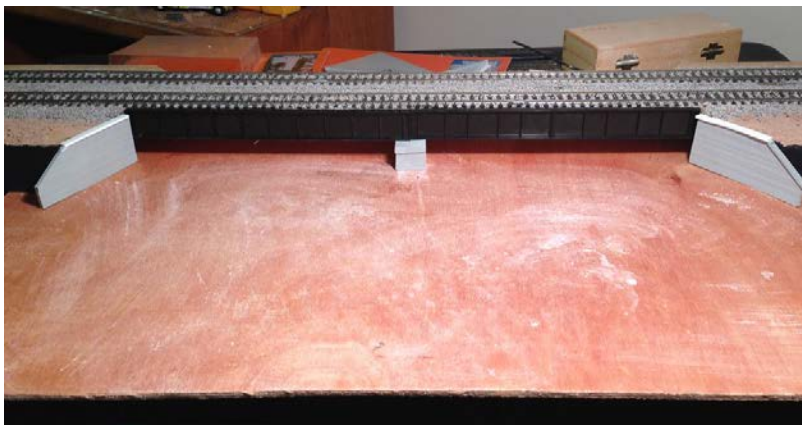
Figure 3- A photo of the Shenandoah Valley



Figure 4- A farm in the Roanoke Valley

The NSC layout base is of "1" girder construction with ½ inch plywood as the scenery base. In a portion of the layout there is an additional layer of homosote in addition to the plywood as the base. All structures on the modeled layout have the appropriate exterior lighting and some of them have interior lighting. The scenery of the NSC is designed to place the viewer in a position to observe the terrain, deciduous and broad leaf trees, with some stands of hickory and oak trees that define the Roanoke and Shenandoah valleys in the Commonwealth of Virginia. All photos below were taken on the modeled portion of the NSC.

As a part of the modeling process a water scene was created on the layout consisting of a dual track girder bridge crossing *Hot Springs*. As a part of this scene two canoes with occupants were placed in the water as would be a common sight of the many water features of the valleys. To construct this scene a base was prepared with a wooden 1" x 8" board attached to a 2' x 3' piece of quarter inch plywood using carpenter's glue and a bolt. This assembly is attached to the layout with a piece of piano hinge connected to the left side. I kit bashed the bridge girders from an Atlas plate girder bridge kit that I cut the track sections out of and attached the girders to the sides of the 1" x 8". The abutments were created by modifying resin kits made by Walthers. The picture below is what this assembly looked like on my work bench at the end of this step of construction.



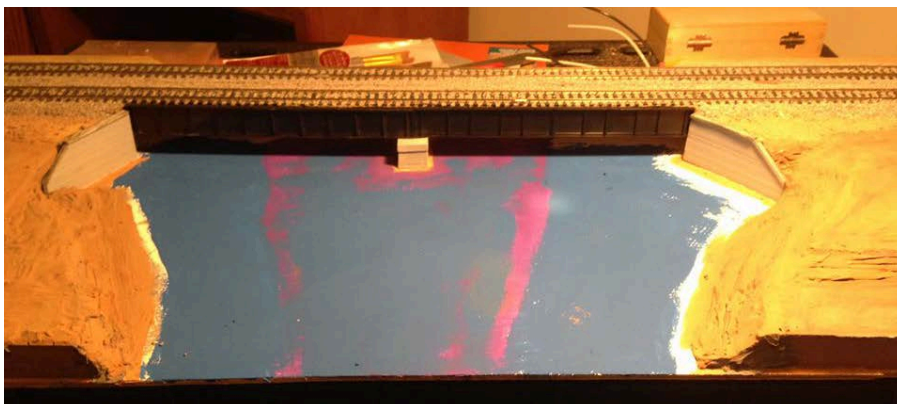
Next, a coat of white paint was applied to the plywood where the water would be located.



After the paint dried, pieces of 1" foam and ½" foam were attached to the plywood and a layer of black tinted lightweight hydrocal plaster was added on both sides of the water feature.



Some of the water area plywood surface was repainted with blue and purple paints to provide a better base color for the water and where I felt there would be additional work being done for sandbars and the like. At this point I also painted the hydrocal a medium brown color to establish an earthtone base for the finish materials that would be applied in this area.



A coat black paint was added to the water effect area to provide the appearance of water depth. I then applied a thin coat of Realistic Water to the water areas of the scene after placing two pieces of angle at the front and rear of the water areas to contain the product. I allowed the water coat to dry then applied a second coat to provide a better water effect. I also applied water scenic effect with a small brush, to give the appearance of water flowing, and added the canoes and occupants to the scene. A couple of sand bars were made using a ballast product.



The last step was to apply various vegetation features (grass, fine ballast, sand, etc.) to the hydrocal and paint the resin abutments a concrete color. The picture below shows the final scene with a backdrop.



The following is a tour of the NSC modeled area beginning with the area where the *NSC engine shop*, *yard office*, *Littleton Yard* and *Bella's Transfer* are located. This area has chain link fence to provide security for the area. The fencing used was a Walthers kit that provided the fence poles and fabric, which had to be cut to size, and connecting material. I painted the fabric black to make it less obvious to the observer and provide a more pleasing look. The poles were set in 1/8" diameter plastic tubing to simulate a footing which was set into a 1/8" hole I drilled into the base, at a scaled 10' distance apart. The tubing was painted with a concrete color paint and set flush with the top of the grass surface. The fabric and connecting material were secured to the poles with CA cement. The photos below show the fence in place between the Yard office and the NSC engine shop.



There is an access road into the area created by using lightweight hydrocal plaster as the road surface. The hydrocal was tinted with a black dye and small amount of white paint was brushed onto the hydrocal surface to give it an older look. Stop lines were placed on the road surface on each side of the track crossing and a set of cross bucks were placed at the rail and road intersection. The photo below shows what the final intersection looks like on the layout.



The *NSC yard office*, shown below, is located at the end of the entrance road and is near the Littleton yard and NSC engine shop. This is where the employees of the NSC report to work and train crews change out at the time of their shift change.



Just to the rear of the Yard Office is the *NSC engine shop*, shown below, which performs locomotive and rail car repairs and maintenance.



Bella's Transfer, shown below, is located to the rear of the Littleton Yard and is accessed via the Yard access track .



Immediately adjacent to Bella's Transfer is *Littleton Yard* used for rail car storage and also used by the NSC engine shop to store equipment in need of maintenance or repair.



Proceeding toward Hot Springs on the mainline *Abby's Motor Company* is located on the left. Electrical motors are made and shipped to a number of locations here.



Continuing toward Hot Springs from Abby's Motor Company it is a short distance to *Anthony's Cement Company* that is located on a siding near Littleton Junction.



As we proceed toward Hot Springs on the mainline the *Littleton Lumber Company* is located on a siding, on the right side of the main, allowing it to serve the community with the building materials it needs.



Having passed Littleton Lumber on the main line we now cross Hot Springs, a flowing river that is used by many people to enjoy various water sports. Here we see NS 890 crossing the bridge on a local run to Barttown to deliver petroleum products.



After crossing Hot Springs the Alexandra Power and Light building is located on a short branch line that serves both the power plant and the quarry.





The photo above shows the quarry on the NSC layout. It is based on one of Vulcan's quarries that are in abundance in the region.

Having passed the quarry and gotten past Furnace Mountain, we see the McDonald farm on the right. It has been an attraction on the NSC for years and serves as a source of food, milk, and quality beef for the region. The photo below shows the farm with a small pond.



As we go past McDonald's farm we see the country store on the left.



Having passed the country store we now come into the Joyceville/Barrtown communities. Here is where the offices of the *Joyceville Journal* and a new office building are located.



After the office area we come to the end of our tour in the industrial area where the *Town Fire Department*, *Austin Fuel*, and *Elizabeth's Pellet Company* are located.





Backgrounds for the modeled area were created in four different ways. First was using a cardboard backer board a printed background picture was used. The picture was attached to the backer board using picture mounting tape and a spray on adhesive product. The backer board was attached to a wall of the layout room using a Velcro adhesive system.



Another method was using 1/8" Masonite panel board and various paints. The sky was painted a medium shade of blue using a brush and the base coat for the mountain area was a medium brown. Various shades of green, yellow, and orange were then applied to the mountain area using a damp sponge technique where a small amount of paint was placed on a damp sponge then dabbed onto the board until the desired effect was achieved. The sky area was painted with white and off white paints to simulate clouds. A thin line of black paint was placed where the skyline met the mountain. Again this board was attached to a layout wall using a Velcro system.



A third method used ¼" thick foam board where base colors of blue, gray, and white were used to simulate foliage. The colors were brushed and dry brushed onto the board. The board was mounted using a Velcro system to a layout room wall.



A fourth method was used in the area of the quarry and power plant. Here a cardboard backing board was used. A collage of several pictures of the Vulcan quarry located in Manassas were arranged to provide a picture of a quarry. The original pictures were taken with a hand held digital camera while riding on a 611 excursion last June. The pictures were mounted with picture mounting tape and a spray on adhesive then various paints were used to meld the quarry into a skyline. The backing board was mounted to a wall of the layout room and required some cutting to allow for light switches located in the same area.



To meet Requirement number 3 I have prepared a description of the materials of construction used in creating various features of terrain, background, and lighting and am providing them as a part of this document package.

Scenery Materials

ITEM	SOURCE	PRODUCT
Ballast	Woodland Scenics	Medium Gray Blend
		Fine Gray Blend
Road Bed	Midwest	HO scale cork
Dirt	Woodland Scenics	
Trees	Woodland Scenics	373-94126, TR1112
Rock	Woodland Scenics	
Plaster Cloth	Woodland Scenics	985-1191
Bushes	Woodland Scenics	
White Glue	Elmers	White Glue
Pliobond	Pliobond	Liquid adhesive
Ground Cover	Woodland Scenics	Green grass
	Woodland Scenics	Burnt grass
	Woodland Scenics	Brown medium C1275
Water	Woodland Scenics	Realistic water
Signs	Homemade decals	
¼"x2"x2" plywood panel	Lowe's	
1"x8"x4' pine board	Lowe's	
Richart dust free powder paint-black	Michaels	
Spray adhesive	Michaels	Elmers
18" plate girder bridge	Atlas	Part 150-8555
¼" foam board- 24" x 36"	Michaels	Elmers
1/8"x16"x48" Masonite board	Lowe's	
RR crossbucks w/track numbers	Tomar Industries	Kit 869
Lightweight hydrocal plaster	Woodland Scenics	C1201
Ground Cover	Woodland Scenics	Fine Turf yellow T43
	Woodland Scenics	Fine Turf soil T41
	Woodland Scenics	Talus Fine brown C1274
1"x24"x48" foam board panel	Lowe's	
Water based acrylic paints	Michaels	Various colors
1/8" plastic tubing	Evergreen	
HO double track truss bridge abutment	Walthers	933-1042
HO double track truss bridge pier	Walthers	933-1041
3/16" plastic angle	Plasticstruct	
One piece scenic picture backdrop	ScenicKing	M024- Fields end

One piece scenic picture backdrop	ScenicKing	M001- Hardwoods
Canoes	Woodland Scenics	A1918
Clump foliage	Woodland Scenics	FC682
HO chain link fence	Walthers	933-3125
Train mechanics people	Woodland Scenics	A1859

Structures

ITEM	SOURCE	PRODUCT
Yard office	Walthers Cornerstone	933-2830
Medusa Cement Company	Walthers Cornerstone	933-3019
Fire Station	Walthers Cornerstone	933-4022
Northern Power and Light	Walthers Cornerstone	933-3021
Merchants Row II	Walthers Cornerstone	933-3029
Plastic Pellet transfer tanks	Walthers Cornerstone	933-3081
Propane Tanks	Walthers Cornerstone	933-3129
Fuel Tanks w/berms	Walthers Cornerstone	933-3168
Railcar shop	Walthers Cornerstone	933-3040
Built up structure- lumber yard	Model Power	490-1655
Horse stable	Undetermined	Undetermined
Storage warehouse	Pikestuff	541-8017
Loading rack	Walthers Cornerstone	933-3169

To meet Requirement number 4 a copy of materials in Sections 2 and 3 is attached to the SOQ for use by the judges.