BACKDROPS

by

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Why Do We Want Backdrops?

- For many of us, our modeling goal is to recreate realistic scenes associated with railroads

- Scale models allow us to recreate these scenes in a relatively small space.

- By judicious track planning, many of us can achieve relatively long stretches of track in a limited space.

- Our real scenic limitation is depth.

- **Practical considerations dictate that most items on our layouts should be accessible (within arm's reach)**

- **Also, in order to maximize long stretches of track, we fold our track into the available space, trying to find an optimum balance between aisle width and layout width.**

- **Because we cannot practically achieve a realistic perspective, we must do it artificially, using "forced perspective."**

- **The intent of this clinic is to show various ways a realistic-looking forced perspective can be achieved.**

“Forced perspective is a photography technique that uses the space between your subjects to create an interesting or unusual relationship between them. This photography trick manipulates the viewer’s perception of the space and distance between two objects, creating an optical illusion.”

From Google

Ways to Achieve Forced Perspective

- Offset scenery
- Roads
- Building Flats
- Background Buildings
- Smaller Scale Buildings
- Mirrors (but not smoke!)
- Painted Backdrops
- Photo Backdrops
  - Ready - Made
  - Custom
- Angled Corners
- Curved Corners

Offset Scenery

- The illusion of depth can be achieved by leaving a space between the background objects and the wall.

- The eye sees a space between the background objects and the wall, with the relative sizes between the background objects and the objects on the backdrop establishing the desired depth

Use of Offset Scenery on Bob Johnson's Layout

Note the wooded hill is several inches away from the back wall
Woods. mountains, lake and building painted on the backdrop are smaller and a hazier color
Tracks going behind the wooded hill imply depth

ROADS

- Blending roads into a two-dimensional backdrop can be tricky.
- Perspective and viewing angle are very important
  - The road should appear to be going off into the distance.
  - The road should look continuous from the most likely viewing angle

Rick Steinmann used a photo of a road going off into the distance and properly scaled to the width of his road to achieve depth

On my layout, I used cardboard for my road surface

Where it meets the wall, I cut it to a curving taper, bend it up and use shrubbery to make it appear as if it was going around a curve and out of sight

Use of Cardboard Road to Hide the Back Edge of the Layout

Building Flats

- Building flats are photos of individual buildings. Can be mounted on thin foam boards

- Very realistic-looking, very thin, and convey a 3-dimensional picture

- They can be the same scale you are modeling, or a smaller scale to convey distance


M. D. GARAGE


BACKSIDE
SAMPLE


RIA & RESTAURANT
Caporal

Background Buildings

- Background buildings are buildings designed to be placed against backdrops
- Provide good 3-D effect
- Some come as kits, but regular buildings can be kit-bashed into a narrower background buildings
- Walthers makes a fairly extensive selection of background buildings

Two Walthers River City Textile Plant background building kits kit-bashed together on my layout

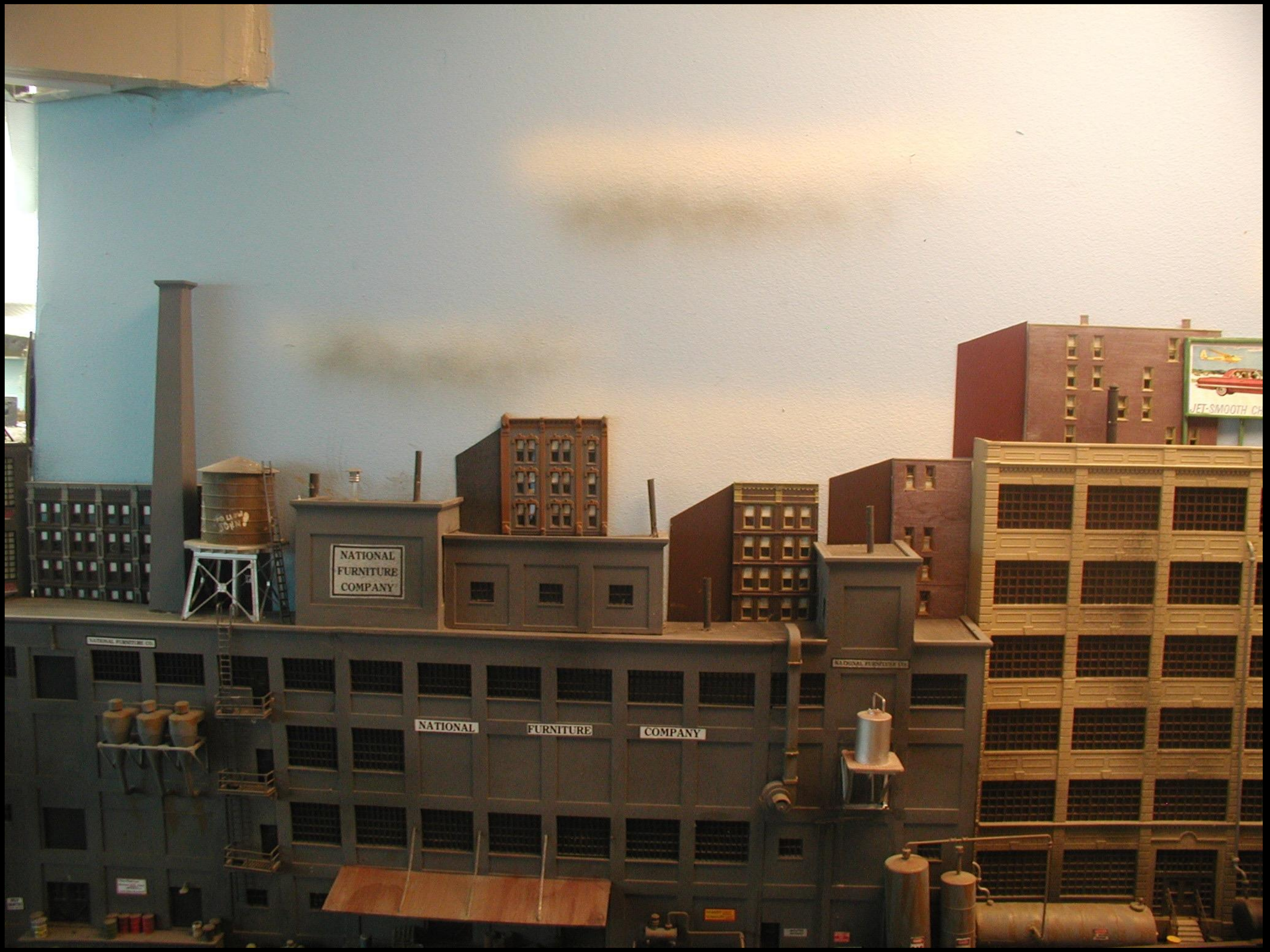
Building and loading dock are only a couple of inches wide

Smaller Scale Buildings

- Things appear smaller, the more distant they are
- Using smaller scale buildings behind larger buildings or towards the back of the layout creates a “forced perspective” (the illusion of distance).
- Use N scale buildings behind HO scale buildings
- Use N, HO or S scale buildings behind O scale buildings

N-scale building flats on top of HO building flats

The N-scale building sides were cut from cardboard, painted, and glued to the wall to help create the illusion of depth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FURNITURE
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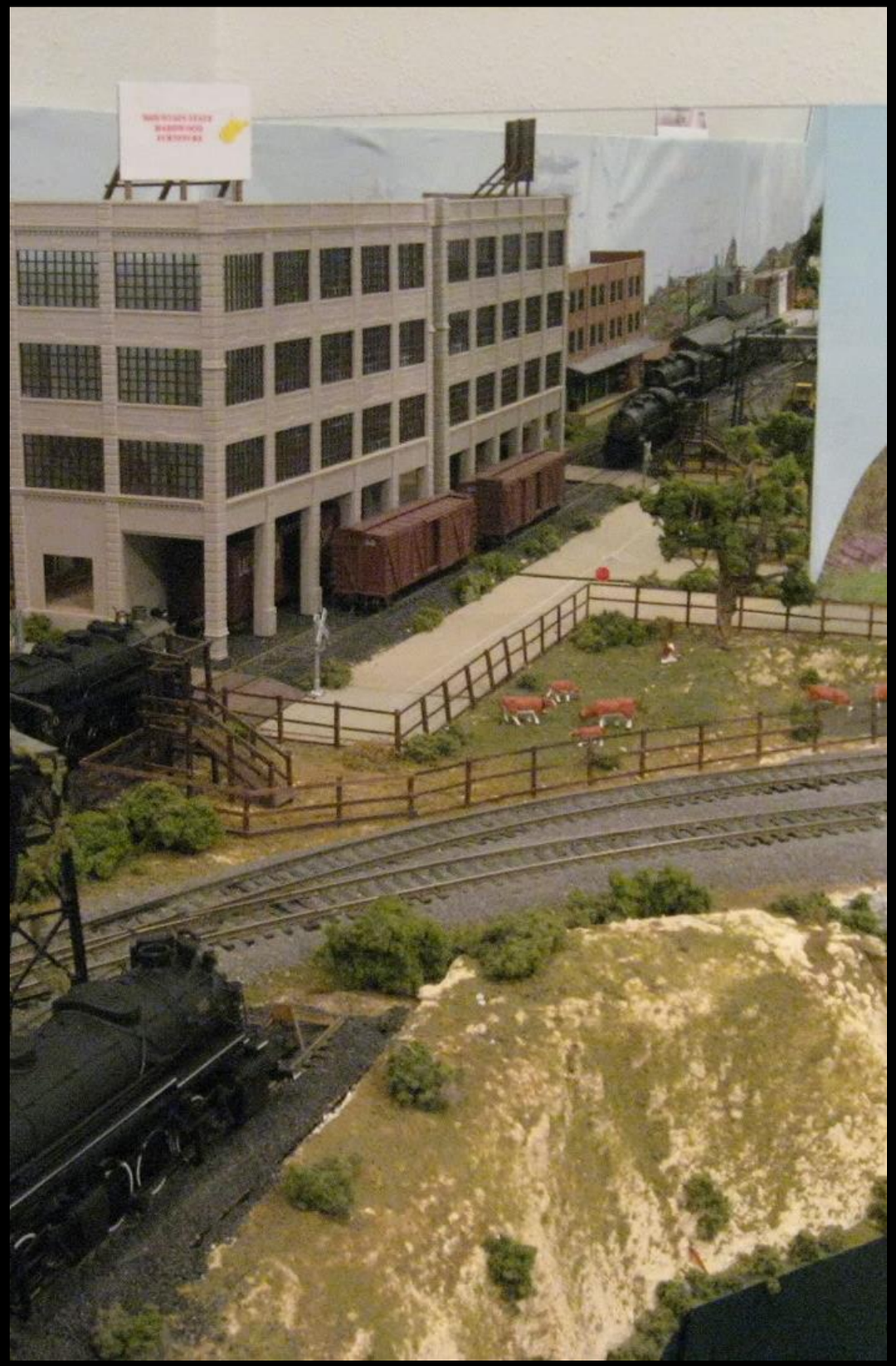
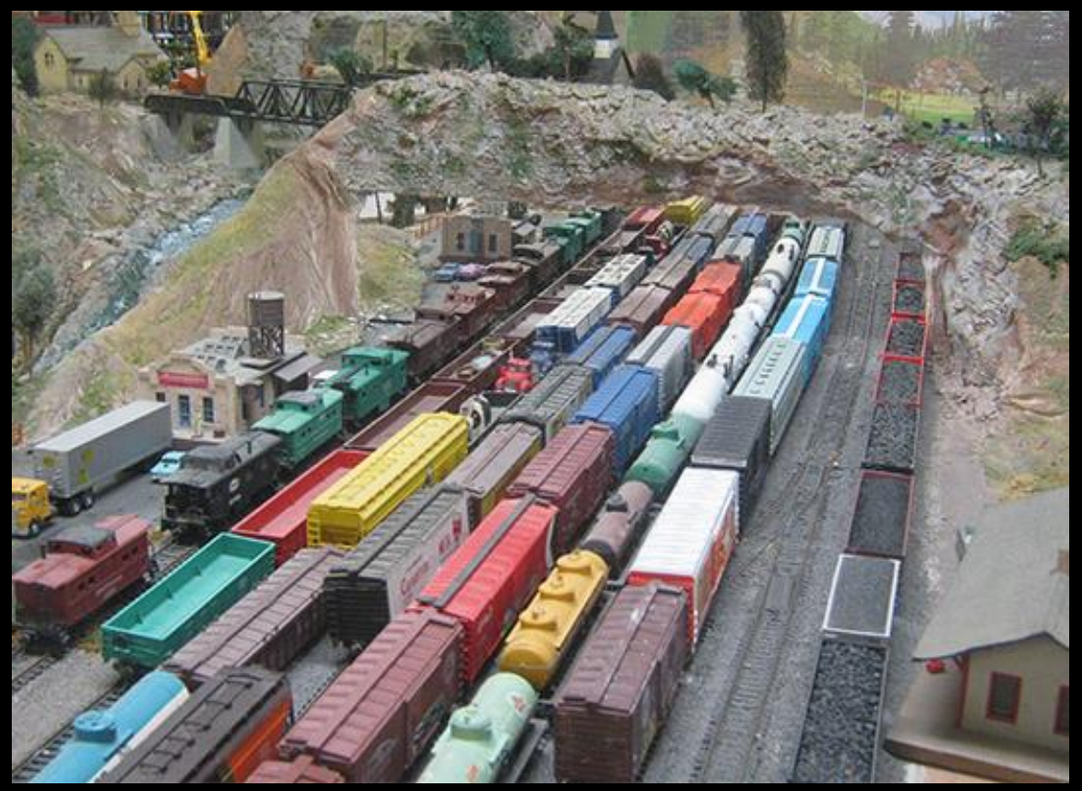
N-scale buildings on a hill on Bernie Haloran's HO layout give an illusion of distance

Mirrors

- Judicious placement of mirrors can make your layout seem bigger than it is
- A lot has been written on this subject, so I won't spend lot of time on it
- The main trick is to place mirrors so the observer sees a reflection that makes the layout look deeper than it is, but doesn't reflect the viewer!
- Viewer should look at mirror from an angle





Painted Backdrop Scenes

- Painted backdrop scenes work best when depicting objects far in the distance
- Objects far in the distance do not need a lot of detail to look realistic
- Mountains and hills can be painted on the back wall of the layout
- Use lighter colors to represent atmospheric haze

Mountains in the Distance on Dean Ripple’s Layout

Photo of Long Island Sound and Connecticut Shoreline as Seen From Crab Meadow Beach on North Shore of Long Island

Long Island Sound and the Connecticut Shoreline Painted Onto My Layout Wall

Ready-Made Photo Backdrop Scenes

- Backdrop scenes that are photographs of actual scenes probably provide the most realism

- Several companies sell photographic backdrop scenes in various lengths and scales

- Sources for photo backdrop scenes come and go over the years. Ads in model railroad magazines or a Google search of the internet are your best bet.

- **Some come with or without adhesive backing**
- **Pick a scene that you would typically expect to see behind the section of the layout you are modeling**
- **Make sure the season the photo backdrop depicts is consistent with the season on your layout**

- **Most photographic (and non-photographic) backdrop scenes include the sky.**

- **If the height of the printed scene does not reach the top of your backdrop, there will be both a visible seam and noticeable break in the sky color (your printed scene can only extend as high as the printed width).**

- **One option is to cut the sky portion of the printed scene off, paint your existing backdrop sky blue, and glue just the scenery portion to your backdrop.**

- **Your sky will now extend to the height of your backdrop**

NYC backdrop Scene From Backdrop Junction in front of Sunnyside Yard on my LIRR

Sky has been cut away from backdrop photo and then backdrop scene glued to wall

Tips on Mounting Your Backdrop

- If you buy a backdrop scene with adhesive already attached, simply peel it off and attach the backdrop scene to the wall
- For backdrop scenes without adhesive backing, I use spray adhesive

- **Note that the color of the sky usually changes from sky blue to white as you look to the horizon**

- **Spray your backdrop wall white where it meets the layout surface, and fade it to sky blue as you move vertically up the backdrop**

- **This can easily be done by making multiple passes with your spray can, and holding it farther and farther from the backdrop as you move upwards**

- Cutting away the sky portion of a printed scene may make it harder to handle
- One option is to first glue the entire printed scene (with the sky) onto posterboard, then cut the sky portion away
- The printed scene will now be stiffer and less likely to tear while handling
- However, posterboard will leave a thin white edge that needs to be painted
- For long printed scenes, consider cutting them into 2 or even 3 sections along scenic boundaries (e.g., a vertical building edge) for easier handling

Installing a rural scene on my LIRR with the sky portion of the printed scene cut away

Note that the bottom of the printed scene is about 3” above the point where the printed scene meets the layout surface in order to get the right perspective


FARMINGDALE
ICING PLATFORM


BLUE POINT BEATING CO.
LONG ISLANDS BEST
LIRR
4210
STERN'S
PICKLE PRODUCTS
LIRR
40008
STERN'S PICKLE
WORKS
TABLE CONDIMENTS
SINCE 1864
FARMINGDALE N.Y.


STERN'S PICKLE WORKS
FARMINGDALE
CRISCO
STERN'S PICKLE WORKS
ICING PLATFORM
INTERNATIONAL
Accent Opaque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COMPANY, INC.
ICE
STERN'S PICKLE
WORKS
LIRR
4021
A&P
El Capitan
FARMINGDALE

Custom Photographic Printed Scenes

- Generic photographic printed scenes may not provide you with the desired scene you are trying to create
- Custom printed photographic scenes are desirable when a specific scene (perhaps at a specific location) is being recreated
- Some companies that sell photographic scenes will make custom printed scenes
- The trick is to find photos that will work

- **Things to consider for determining whether a photo will make an adequate printed backdrop scene**
  - **Is the resolution of the photo sufficient?**
  - **Will the photo scale properly to create a realistic scene?**

Photo Resolution

- If photo resolution is not high enough, the printed scene will be grainy/fuzzy when enlarged to your backdrop dimensions

- I have found that resolution of at least about 1000 x 1000 pixels or greater is necessary

- When in doubt, ask the person making your custom printed scene whether it will have enough resolution when enlarged to your specified dimensions

Scale

- Photo must scale properly so it looks realistic
- Determine what length the printed scene must be
- Take measurements of the photo (length of photo and height of objects (trees, buildings, etc.)
- Calculate the ratio of the length of the desired printed scene to the length of the photo
- Multiply the height of a typical tree or building on the photo by this ratio
- This is how high the tree or building will be on the printed scene
- It is best to look for panoramic photos

Example

- Desired printed scene length is 60”
- Photo on computer screen is 10” long
- Building on computer screen is 6” high
- 60”/10” x 6” = 36”
- If the photo is blown up to be 60” long, the building will be 36” high
- You need to decide if this too big, too small, or acceptable
- Background buildings should be smaller than foreground buildings

Royalties

- A good source for finding photos for backdrop scenes is the internet
- If you Google a description of the scene you want, a plethora of photos will hopefully pop up
- When you click on them, you need to determine if they are available for free, or if you must pay a royalty to use the photo
- Pixabay is a great source for free photos. There are other free sources
- Commercial printed backdrop manufacturers will likely not print a custom backdrop scene from an internet photo unless appropriate royalties are paid

Example #1 - Brooklyn/Queens Backdrop Scene

- I needed a photographic backdrop scene the Brooklyn/Queens skyline that would be 91” long

- I Googled “Brooklyn Skyline”

- Hundreds of photos were available

- I focused on those that were panoramic (very long compared to the height), had sufficiently high resolution, and picked several that were promising

- I checked the scale to determine it would be acceptable
- I copied the links and sent them to Backdrop Junction and asked them to tell me which ones would have sufficient resolution.
- They responded with 3 that they said would work

Brooklyn Skyline Photo from Wikipedia

Note that since I only wanted a skyline, I did not need the water or roads in the lower part of the photo

Brooklyn Backdrop Scene Mounted

Note that I cut away the sky, and raised backdrop scene 3” above the layout track elevation.


WEISS Hardware
The Praise Cabernacle
NOW SHOWING
CASABLANCA
DINER
MEATS
ABC
FABRIC

Example #2 - NYC Scene


Garry JEWELERS
RELIABLE FRANKS
NAVAL UNIFORMS
Smith's BAR
RESTAURANT
LENOX LOUNGE
STATIONERY & TOYS
PORK STORE
IDEAL HOSIERY
MENS HOSIERY

Example #3 - Another Brooklyn skyline backdrop scene made from merging two photos found on Pixabay

PPixabay


Chiclets
AMERICAN CHICLE CORP.
NESPER WIRE AND CABLE COMPANY
PEELS BEER
ENGLO PAINT CORP.
GOODYEAR
OLIN MATHESON Adhesives
HOLBAN YARD OFFICE
NOSTRAND AVENUE
INDUSTRIAL SIDINGS

Example #4

Industrial backdrop scene found on Dreamstime website
(~$10 Purchase Price)

Backdrop scene in example #4, behind Walthers background building and an HO building flat


WEST CHEMICAL
PRODUCTS INC.
RECEIVING A
SAFETY FIRST
RECEIVING B
SAFETY FIRST
SHIPPING A
SAFETY FIRST
RECEIVING B
WEST CHEMICAL PRODUCTS INC
WEST CHEMICAL PRODUCTS INC
WEST CHEMICAL PRODUCTS INC
STATEN ISLAND
482

Example #5 - Manhattan/East River

- I am modeling the LIRR car floats in Long Island City in Queens
- Car float bridges were located on East River
- Standing on a car float bridge and looking west, you saw Manhattan skyline about 1/4 mile away
- Looking north, you are looking up the East River and would see the 59th Street Bridge
- I needed a backdrop scene that would wrap around an inside corner, show Manhattan when looking west, show the East River and 59th Street Bridge when looking north, and was a total of 73” long

Looking west from the car float yard in Long Island City

Car Floats on my LIRR

- I went on the internet and first Googled “Manhattan skyline”
- I then Googled “East River looking north”
- Amazingly, I found photos of both views!
- I selected candidate photos and copied them into an editing program (“Pages” on my iMac)
- I butted them together and adjusted the scales so the buildings were the same size

Manhattan Skyline Photo

East River looking north photo

Manhattan skyline on left, looking up the East River on Right, and adjusted for size

- I needed a backdrop scene 73” long. I scaled the previous photo and confirmed the building heights would be acceptable
- I confirmed with Backdrop Junction that these could be made into a continuous printed backdrop scene
- Both photos required royalties (Backdrop Junction paid them (about $50 total) and added cost to my bill (about $100 total)
- Backdrop Junction made the printed backdrop scene. I mounted them on posterboard so I could have a continuous 73” backdrop
- Water was an issue. colors were very different on each photo

- I asked Backdrop Junction to make a reverse image of the East River photo
- I cut the water from the reverse East River photo and put it under the Manhattan photo

Wrap-around backdrop scene.
The water under Manhattan skyline a mirror image of water under East River

Angled Corners

- Corners can be 90 degrees (inner corner) , or 270 degrees (outer corner)
- For inner corners, installing a curved backdrop allows a smooth, continuous scene
- If you can’t (or didn’t) install a curved backdrop, there are ways to disguise the corners

Inside Corner on Bob Johnson's Layout

Note the use of dark colors helps hide the corner seam

Inside Corner on Bob Johnson's Layout

Note that leaving wall white tends to hide the corner seam.
Lighting can also be adjusted to de-emphasize corners

Wrapping a Building Around an External Corner

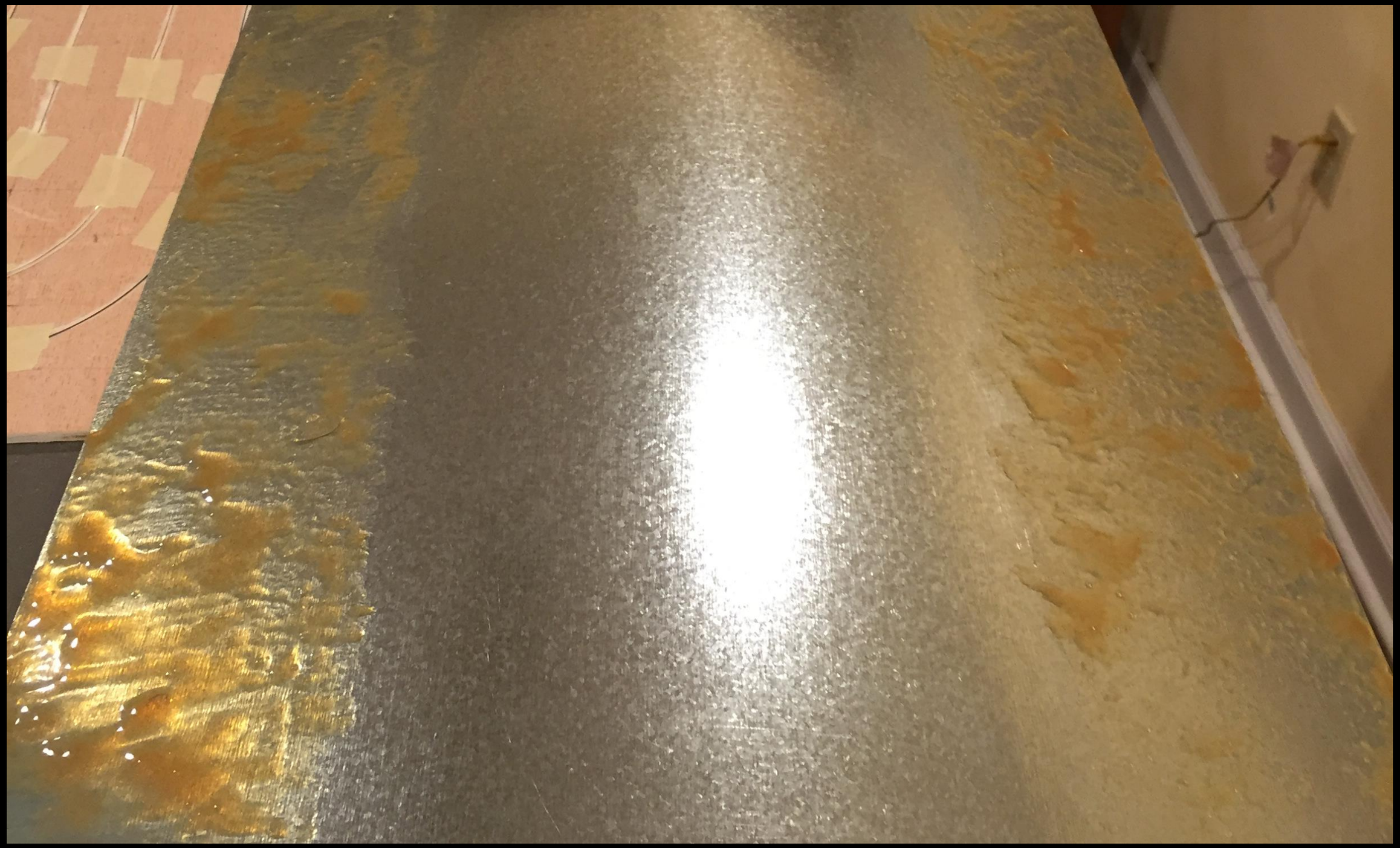
Tall building plus a smoke stack helps disguise corner. Head-on perspective is fine. However, angled view shows distortion

Curved Corners Provide for Continuous Scene with No Angles

- Curved corners are not hard to make. All you need are:
  - Sheet of ductwork steel from Home Depot or Lowes
  - Metal cutting shears or a metal cutting bandsaw
  - Contact Cement

Corner Without Curved Backdrop

Contact Cement Painted in About a 6”
Width on Both Sides of Corner



Sheet Steel Cut to Size and 6” wide Coat of Contact Cement Applied to Each Side

Sheet Steel Glued in Place

Drywall Spackle Used to Smooth Edges to Wall

Curved Corner Painted Sky Blue

White Horizon Sprayed On

Finished Corner with Wrap-Around Backdrop scene in Place

- **Thank You for Your Attention**
- **I hope this was helpful**
- **Questions?**

- **Clinic Slides are Available on Potomac Division Web Site www.Potomac-NMRA.org**
- **I can e reached at BWSheron@mac.com**