

# **37 Years of Tips and Tricks**

**by**

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## **Telescoping Magnet**

**Keep handy on or near workbench to easily pick up any dropped ferrous metal parts**



## **Handy Clamps**

**Spring-type paper clips make handy clamps for small projects.**

**Small Vise-Grip style welding clamps are handy to reach around obstacles**



## **Angle Iron Blocks**

**Short sections of angle iron, when cleaned and painted, make handy 90 degree plates for holding model parts in place while glue dries. They are heavy and can also be used for weights when gluing.**

**Welding shops often have cut off ends that they will give you or sell to you very cheap.**

# LED Strips

- LEDs are Light-Emitting Diodes
- Advantage is that they are bright, compact, have a long life, and draw very little current.
- They come in various forms, such as on adhesive strips.

- **They can be used behind valences for layout lighting**
- **They can be located at strategic spots on your layout to highlight scenes**



**Cut away of underground platforms on my Long Island Rail Road without LED lighting**

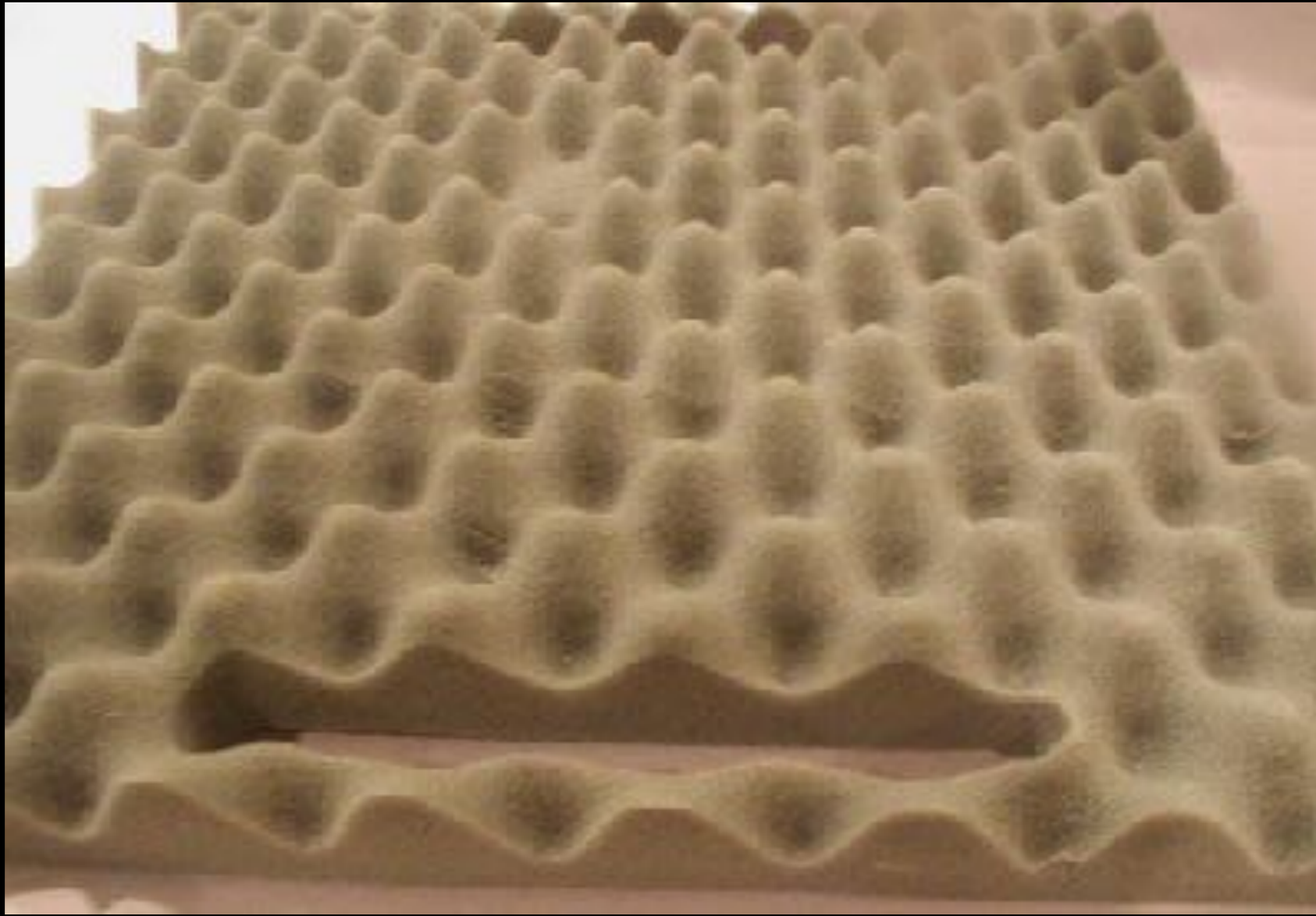


**Same scene with LED strip lights**





**LED Strip Lights adhering to underside of benchwork**



## **Egg Crate Packing Foam**

**Egg crate packing foam makes an ideal work surface when working on projects with small parts (small screws, nuts, springs, etc.).**

- **The foam makes a sturdy, soft cradle for working on cars or engines**
- **If small parts accidentally fall out of model, they will likely land in one of the many small “egg pockets”, rather than bounce off of a hard work surface and onto the floor**
- **When removing small parts (e.g., coupler screws), just drop them into one of the “foam egg pockets”, so you know where they are, and where they will not get lost**

# Fixing Digitrax Telephone Plugs

- **Digitrax throttles use a 6-pin telephone jack (also known as an RJ12 modular plug)**
- **The plugs come with a small tab that locks it into the LOCONET receptacle (e.g., UP-5)**
- **The locking tab on the plug that locks it into the receptacle often will break off after repeated use**

- **Using them with the broken tab means they will easily pull out of a LOCONET receptacle and sometimes don't make good electrical contact, resulting in loss of control of your engine!**
- **Sending a throttle to Digitrax for repair is expensive (\$25) and time-consuming (at least 30 days).**

- **These modular plugs can be easily repaired**
- **All you need is a crimping tool and RJ12 plugs**
- **Crimping tools are not expensive (about \$10-\$20) and can be found in hardware stores or on ebay**
- **RJ12 modular plugs are also available in hardware stores and on-line**



**Crimping tool and RJ12 modular plugs**

- **Cut the broken RJ12 plug off as close to the plug as possible**
- **Using an Xacto blade, trim the outer insulation off of the 6-wire cable about 1/4"**
- **slide the new RJ12 plug onto the 6 wires**
- **Make sure the wires are oriented (color-coded) on the new plug the same way they were on the old plug**
- **Insert the RJ12 plug and wire into the crimping tool and squeeze**





# **Adding an Extension to a Wireless Throttle so it can be Tethered**

- **Older wireless throttles have a short cable. This must be plugged into the LOCONET panel in order to acquire or dispatch a locomotive**
- **Many layout owners do not have wireless DCC. Using a wireless throttle on these layouts means you must plug into the LOCONET panel and cannot easily move about the layout room due to the short cord**
- **Making an extension solves this problem.**

- **Cut a length of 6-conductor telephone wire to the desired length of the extension**
- **put an RJ12 plug on each end**
- **buy an RJ12 coupler so you can connect the extension to the throttle**
- **Couplers are also available in hardware stores and e-bay.**



**Digitrax Wireless Throttle with  
Extension for Tethered  
Operation**

# Simple Weathering

- **Weathering with ordinary pastels requires that you overspray them with a sealer when finished**
- **Sealers can dull and mute the weathering effect**
- **A company called Bragdon Industries makes a pastel weathering kit that does not require any sealer overspray**



# **Bragdon Industries Weathering Kit**



**A Weathered Gondola using  
Bragdon Industries  
Weathering Pastels**



**Light Weathering on a  
G5 4-6-0**





# Light Weathering of a F&C P-54 Coach

# Adding Rust Spots on Cars

- **A company called Weathering Solutions makes decal sheets with decals that simulate rust spots, oil and grime, etc.**
- **These are inexpensive and apply just like ordinary decals**
- **When used with weathering pastels, they create a quick, easy way to get great weathering effects on cars**



# WEATHERING DECALS

**NEW!**

create stunning **realism**



- Rust • Cement • Oil • Placards • Stenciling
- Damage • Graffiti • Hazmat • Lime • Flour
- Grime • Reporting marks & more!



*the evolution of prototype modeling*  
**www.weatheringsolutions.com**







**Covered hopper weathered with rust decals and Bragdon pastels**



**Another covered hopper weathered  
with rust decals and Bragdon  
pastels**



**Extremely weathered box car with  
rust decals and Bragdon pastels**



**Reefer with Bragdon pastel weathering, Weathering Solutions rust spots, and graffiti decals**



# **Use Soldering Paste to hold small screws on the end of screwdrivers**

- **Holding small screws on the end of a screwdriver is useful when you need to start them in tight spots**
- **Slotted screwdrivers that expand the blade can sometimes work to hold slot head screws. Phillips or Torx head screws aren't as easy**
- **Dip the end of the screwdriver into a tub of soldering paste, then put the screw on the end of the screwdriver**
- **The paste is sticky enough to hold the screw while you start it, but does not form a permanent bond.**
- **Other sticky pastes, like Vaseline, may also work.**





**Very Small Phillips Head Screw  
stuck to a screwdriver with  
Soldering Paste**

# Easy, Moveable Backdrop

- **Island-type layouts are not against walls, and usually do not have backdrops**
- **Photography can be challenging if the background has a wall, window, etc. in it.**
- **Make a lightweight, portable background out of foam board**
- **Foam board is used for insulation, it is inexpensive, lightweight, and comes in 4'x8' sheets at local lumberyards**
- **Attach your background to the foam board, and just slide it into position behind the area you want to photograph**



**Foam Board Backdrop on my Layout  
(slid out of position so you can see  
how it is moveable)**



**Photo of my layout with the foam board backdrop in the distance (better than looking at my furnace!)**

# **Caboose Industries Turnout Hand-Throw Direction Indication**

- **Show the direction that a Caboose Industries turnout hand throw is thrown.**
- **First nail a small brad on each side of the hand-throw to limit the throw.**
- **Paint one side of the end of the hand throw and one brad head red and the other hand throw side and brad head green.**
- **The brad also keeps the handle from swinging too far, and makes it easier to grab.**





# Cleaning Engine Wheels



# What's Needed?

Paper Towel and Electronics Spray Cleaner  
(I use DeoxIT)

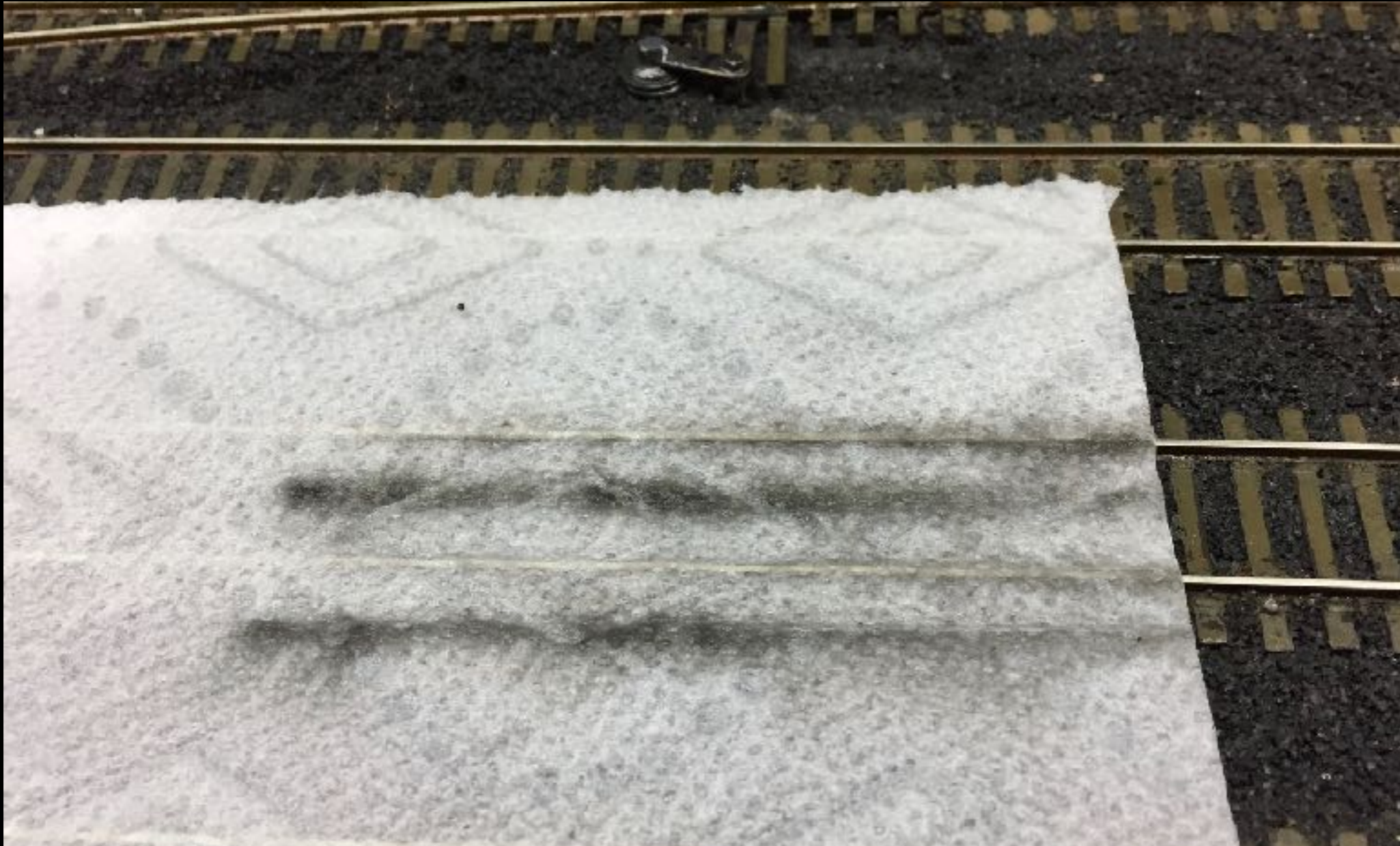


**Lay Paper Towel on Tracks and Soak  
with Electronics Cleaner**



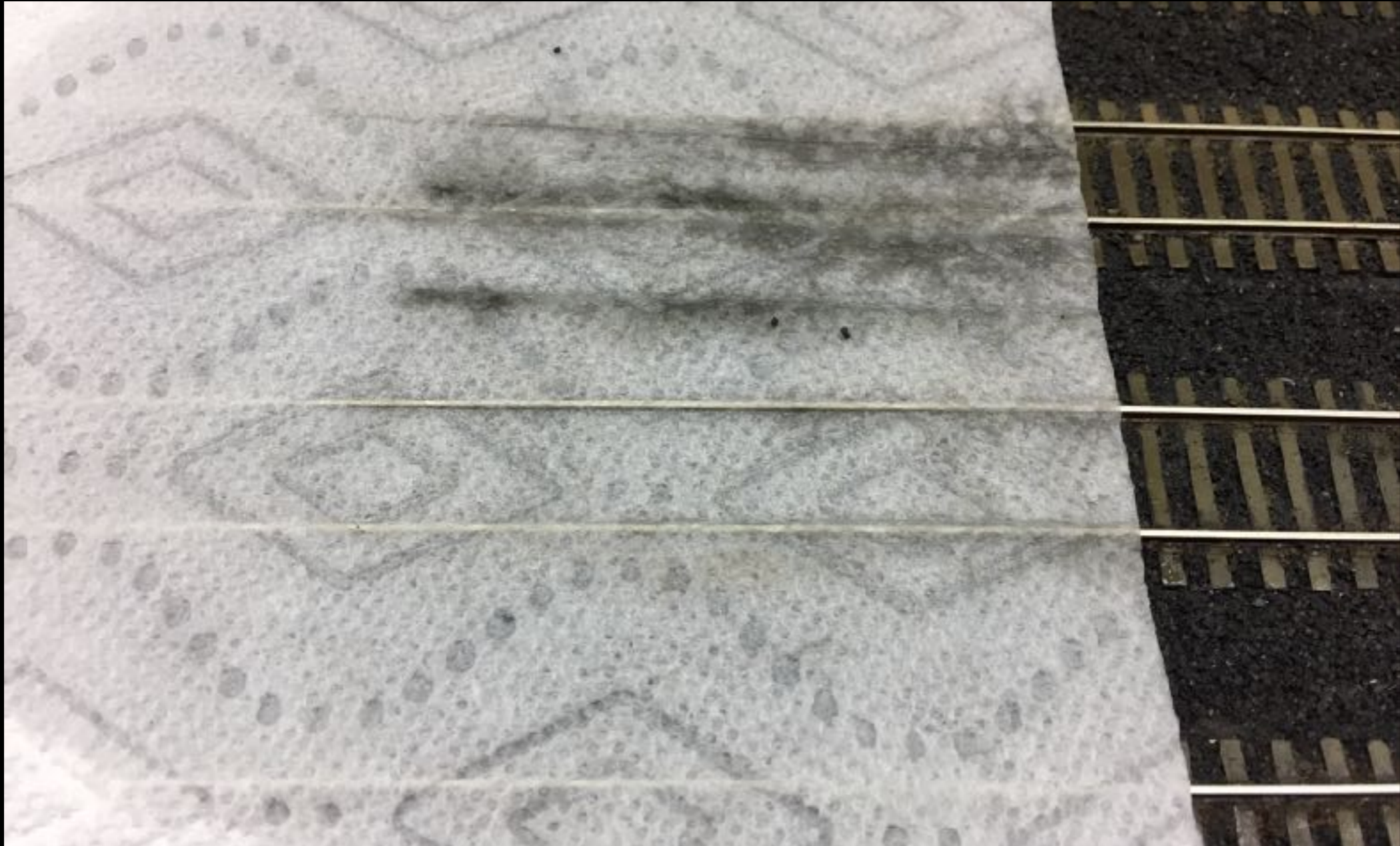
**Run one set of engine wheels on saturated paper towel.**

**(Note - this works only for engines that have front and rear electrical pickups)**



**Be amazed or be disgusted (or both) when you see how much dirt comes off**

**Note: move paper towel and re-run engine on it several times until dirt residue disappears**



**Middle rails show that most of the dirt has  
been removed**

**Turn engine around and repeat process**



## **Keep your Layout Clean with a Mini- vacuum**

**Small, inexpensive battery-powered vacuums, usually intended for computer keyboards, can pick up small pieces of debris, dust, etc., in tight spots around the layout.**

**ZOpid**

HP-ZV12DB

# MINI DESKTOP VACUUM

Keep Your Desktop Clean



Patented Slim Nozzle. Fits even between computer keyboard keys.



Dust Collector. Simply unscrew to empty dust from vacuum.



Powered by 2AA batteries.





# Adjusting Coupler Height

- **Despite standards, coupler height differences among cars can occur**
- **There are several ways to adjust coupler height**
- **To raise a coupler's height, you can add thin washers between the trucks and car body**
- **If you use Kadee couplers, you can raise the coupler height with an under shank coupler**

- **You can lower a coupler's height several ways:**
- **If you use Kadee couplers, you can replace the couplers with overshank couplers.**
- **If the coupler pockets are not permanently mounted to the car body, you can insert shims between the coupler pocket and car body**
- **A third way is to use smaller wheels (or larger wheels to raise a coupler).**
- **H0 freight car wheels come in 28", 33" and 36" scale diameters**

- **Left Photo shows identical cars with 33” wheels**
- **Right Photo shows same cars, but car on left has 28” wheels and car on right has 33” wheels**



# Make Your Own Decals

- **Make your own decals using white or clear decal paper**
- **Custom decals can be made using clip art or other figures**



- **Light colored decals made on ink-jet or laser printers will not show up on a dark background**
- **Print dark-colored decals and apply to light-colored surfaces**

# Sources of Decal Paper

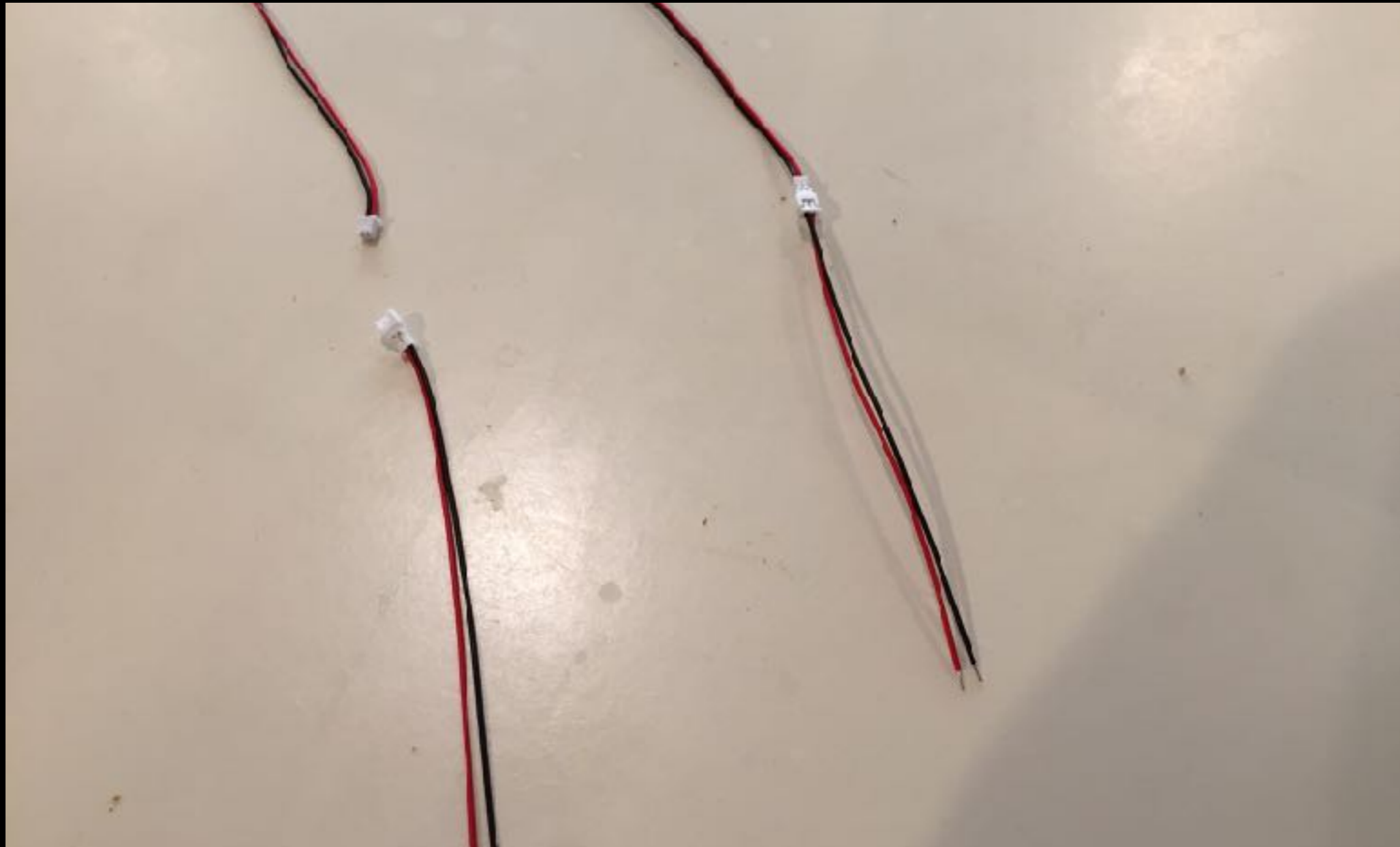
- **Tango Papa Decals, 1901 Mitman Road, Easton, PA 18040 1-484-767-8731 [www.tangopapadcal.com](http://www.tangopapadcal.com) (note: this decal paper only works with laser printers)**
- **Bel, Inc. 12610 NW 115 Avenue, Medley, FL 33178 305-593-0911 x1501 [www.BelDecal.com](http://www.BelDecal.com) ( the decal paper works fine with ink jet printers).**
- **Note that decal must be oversprayed with a sealer before using. Also, I have found that decal setting solutions do not work with Bel decal paper and should not be used**

# Electrical Connectors

- Lights or illuminated signs in or on buildings are usually fed by wires from under the benchwork
- Being able to quickly remove a building from the layout to change a bulb, troubleshoot, etc., is desirable
- Micro connectors allow for easy removal and reinstallation
- Cost about \$10 from Miniatronics for two sets
- Advantage is only a small hole is needed. Cheaper, but larger connectors are available.







**Less expensive mini connectors are also available. These were \$5.93 for 20 connectors from a company called Hobbyfield on eBay.**

# Background Perspective

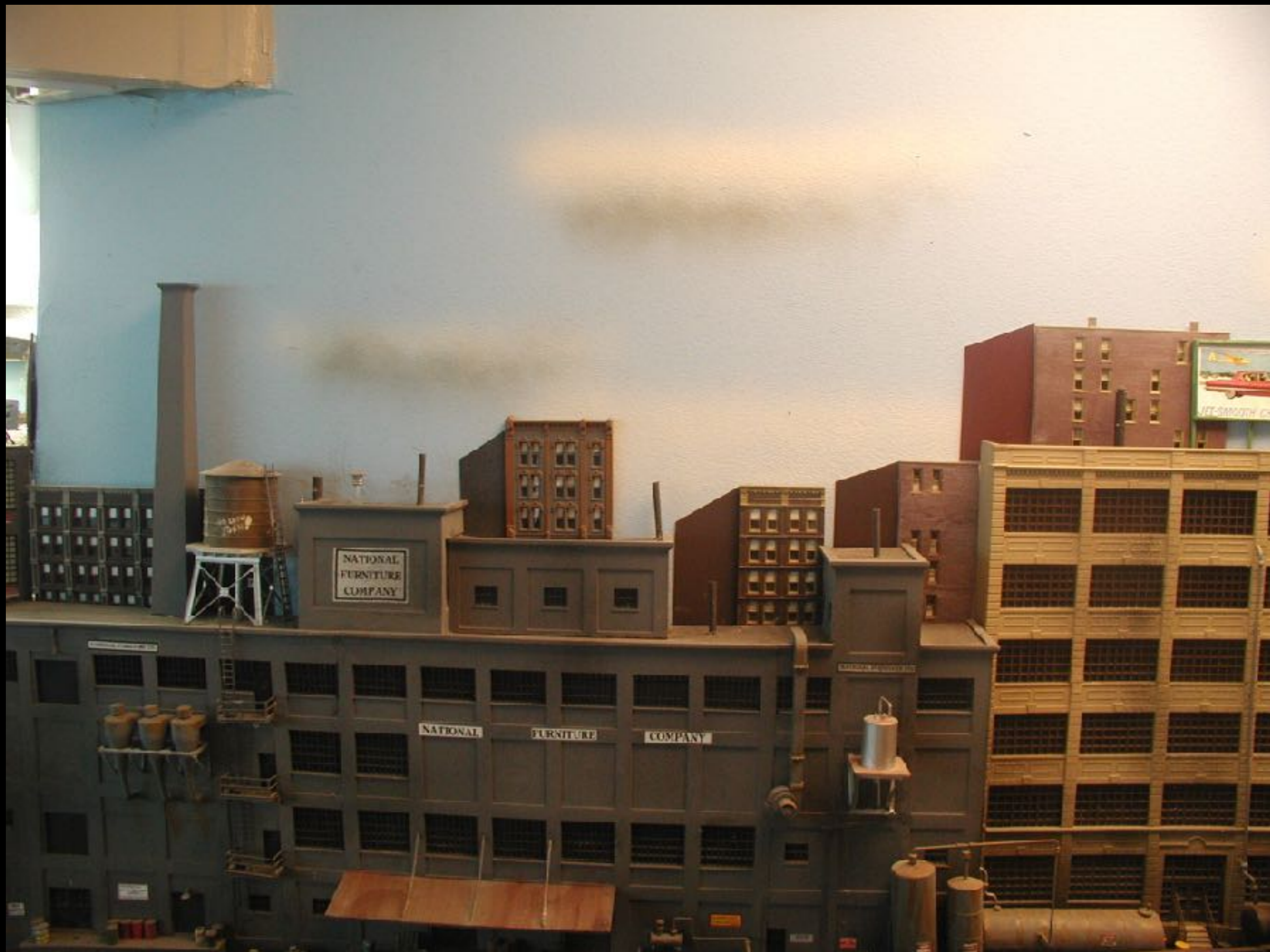
- **Forced Perspective is a way to give the viewer a feeling of there being more distance in front of them than their really is**
- **Adding a printed backdrop will do this**
- **Putting a hill or tree line towards the back of your layout, and leaving a space (e.g., 6"-10") between it and wall will give the viewer a feeling of depth**



**Photo backdrop of NYC behind my freight yard**

# **Add some smaller scale buildings**

- **Putting smaller scale buildings fronts on top of scale building fronts will also give the appearance of depth**
- **For example, use N-scale building fronts on top of HO scale building fronts**
- **Add a building side with perspective to show depth**





# Contact Cement

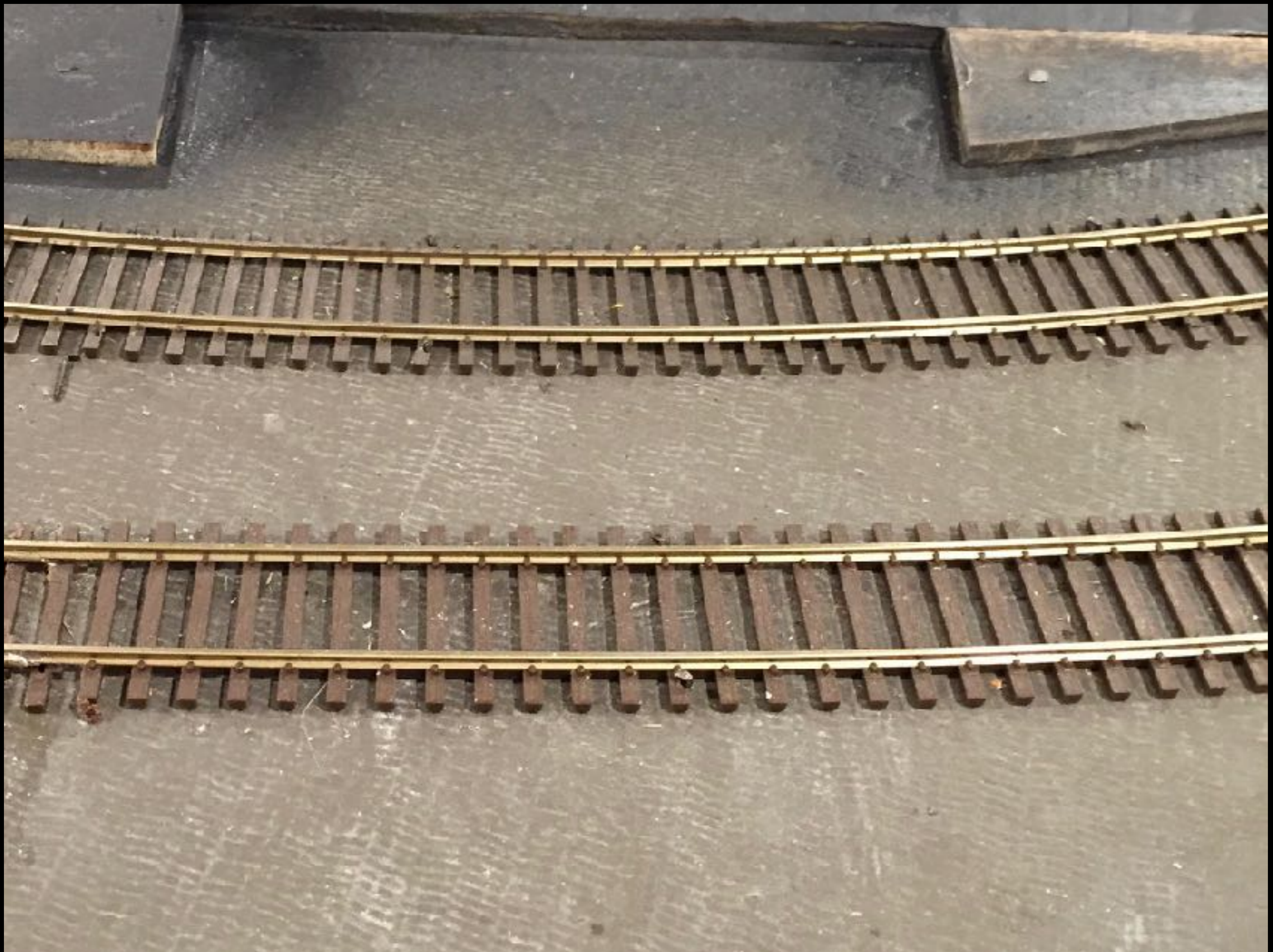
- For gluing larger pieces onto a flat surface (e.g., sheet styrene plastic and sidewalks for under buildings, Contact Cement holds tight, and doesn't un-bond with age.
- Simply brush it on both surfaces to be joined, let it dry for about 20-30 minutes, then join the pieces to be glued
- Note that it is extremely tacky, and you cannot adjust the pieces once they are joined



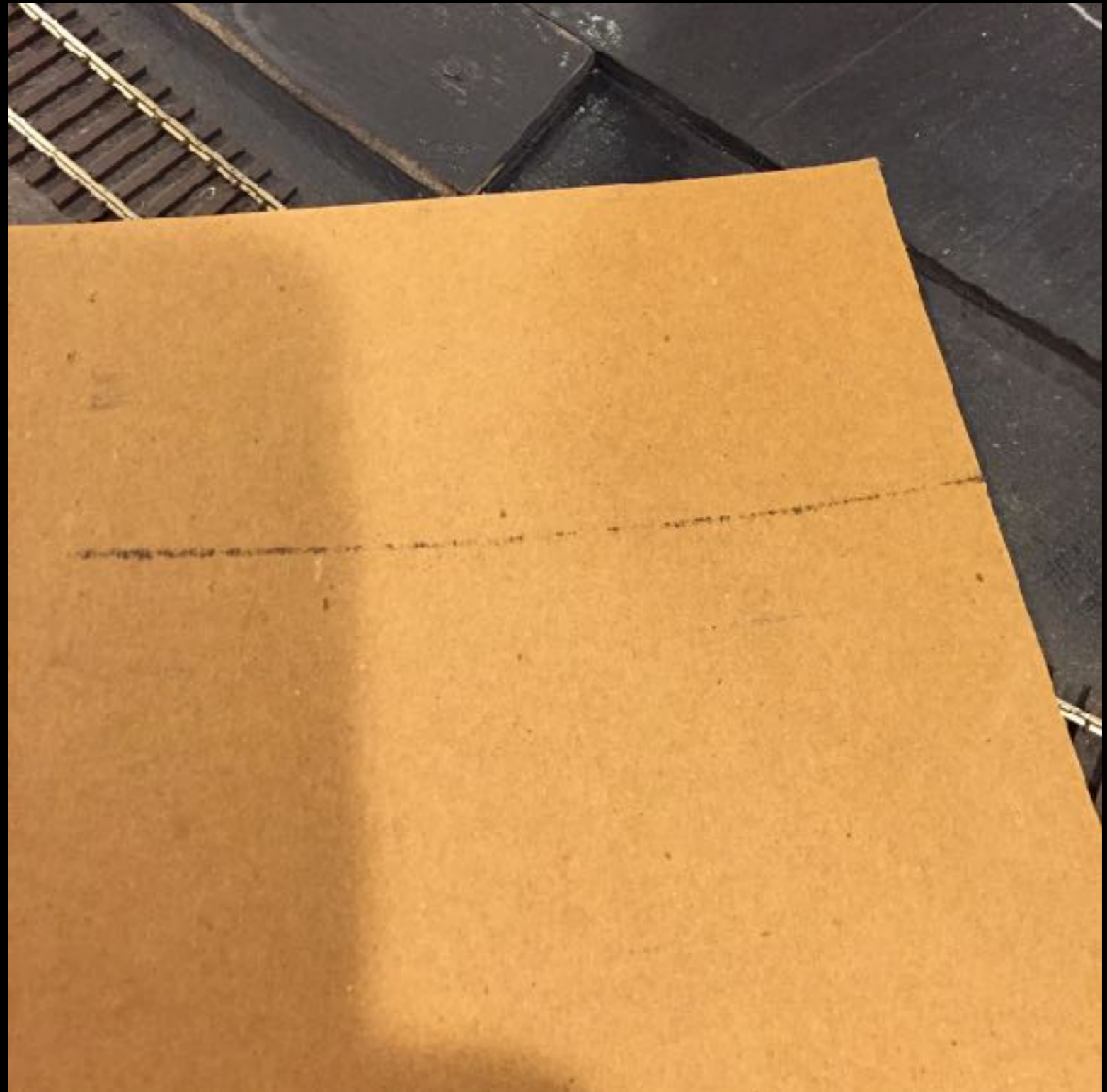
# **Making Road Crossings and Station platforms on Curved Tracks**

- **To make a grade crossing or a station platform that curves to the same radius as the track, rub the graphite from a pencil onto the top of the rails**

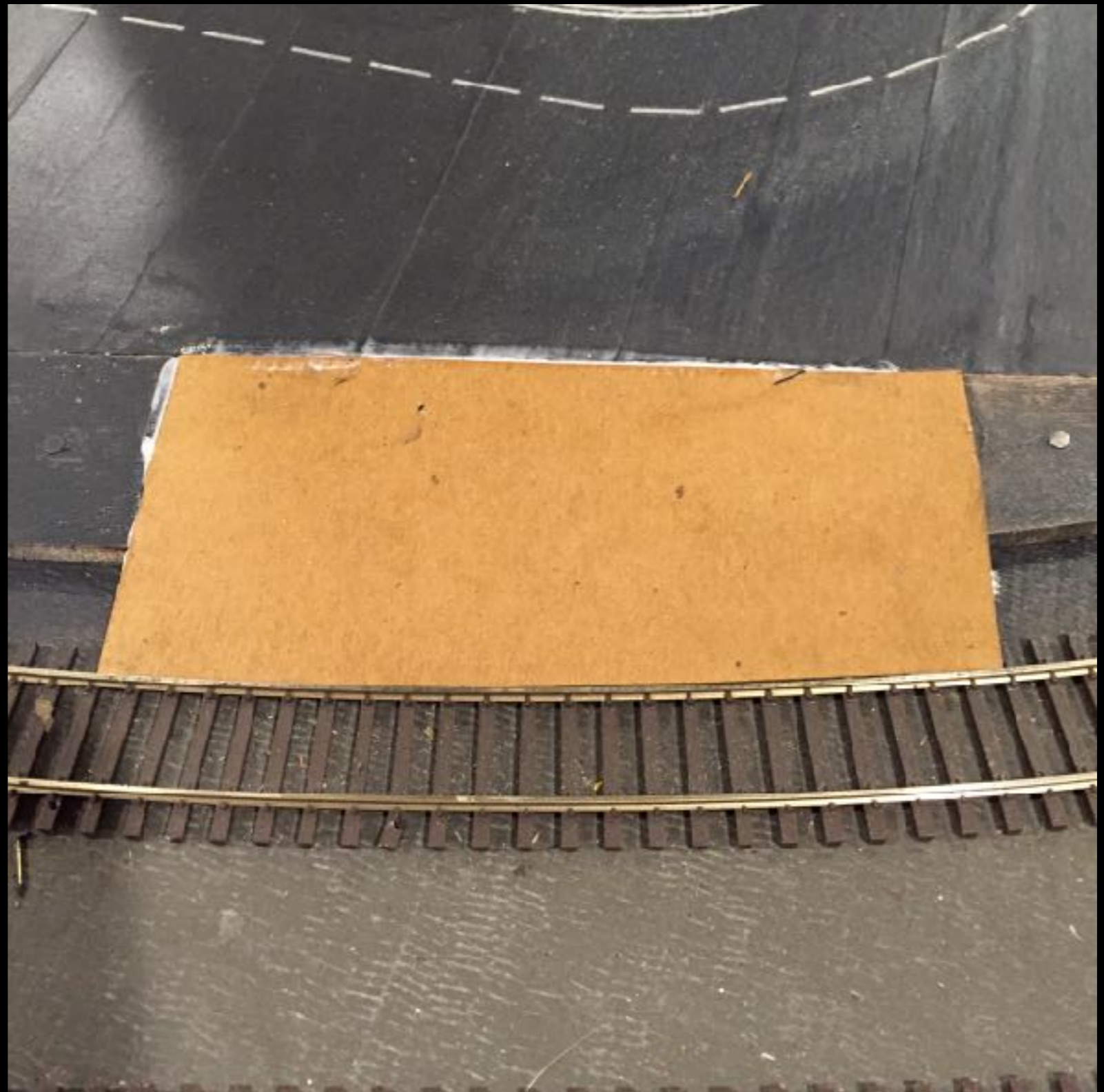


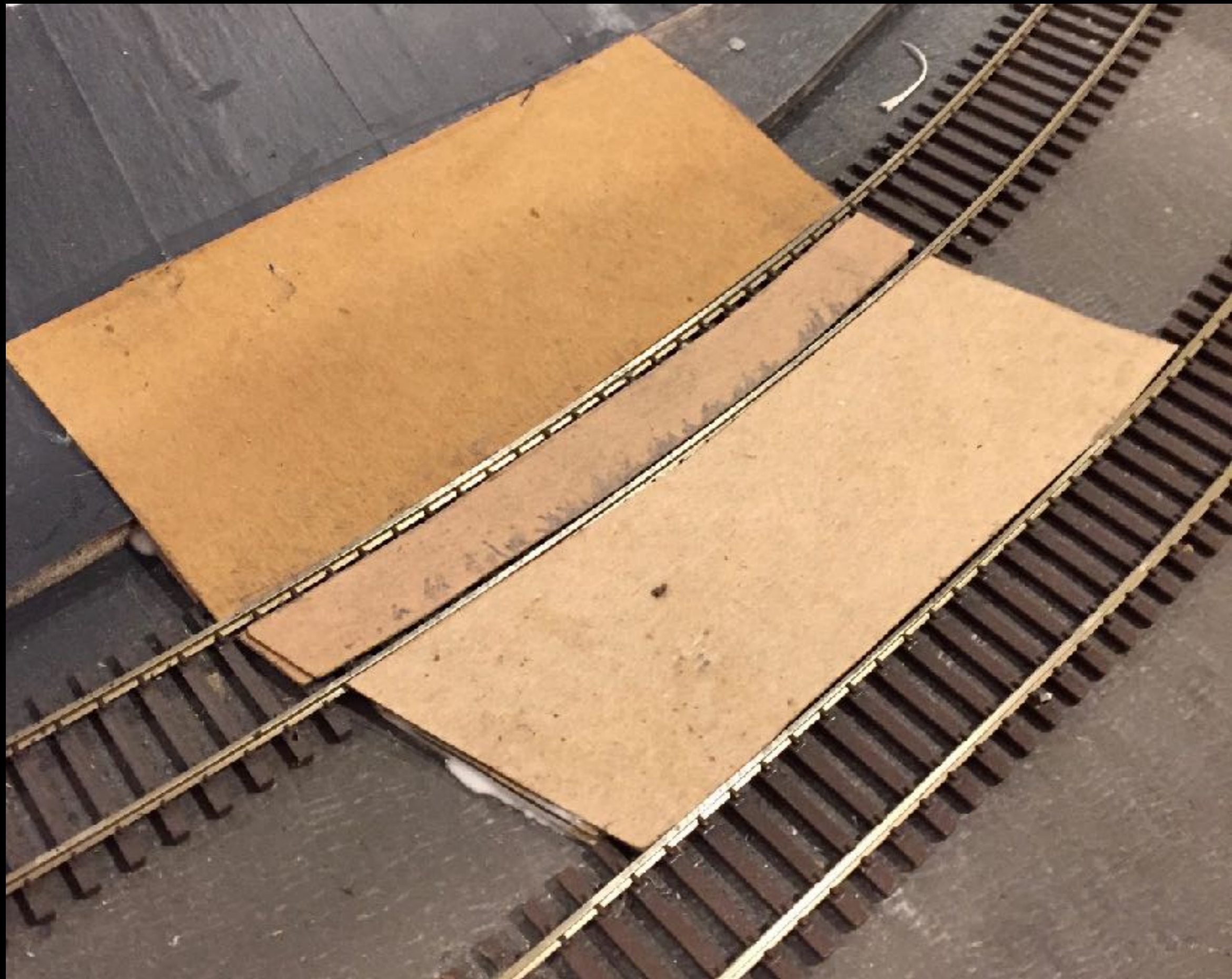


- **Rub roadway material over the top of the rail with the graphite on it.**
- **Use very short strokes and press on the material where it makes contact with the rails**



- **Turn the material over and a trace of the actual curve is on the paper**
- **Carefully cut along the line and the resulting curve should butt up snugly against the rail.**
- **For the grade crossing filler between the rails, put graphite on both rails and rub roadway material over it.**
- **Cut the filler piece slightly narrower than the graphite marks for wheel flange clearance**







**Finished Crossing**

# eBay!

- **Perusing eBay, you can find many rare or out-of-production items not available in hobby shops**
- **If you need to buy a lot of the same item, many eBay vendors will have a large supply available. Many hobby shops unfortunately only stock a few of each item.**

# Dispenser for Liquid Plastic Glue

- Liquid glue for bonding plastic usually comes in a jar with a brush attached to the screw-on top.
- Trying to join long or large surfaces can be difficult because the glue starts to evaporate before you can coat all of the surfaces.
- A plastic bottle with a small tube applicator can deliver ample glue to large or long surfaces before it can evaporate
- Some hobby shops carry them. Custom Model Railroads ([www.custommodelrailroads.com](http://www.custommodelrailroads.com)) sells them for \$4, or look on eBay



# **Sprung Tweezers make ideal clamps for holding and gluing small parts**

- **Tweezers that are normally closed, and must be squeezed to be opened, make handy clamps**
- **Because they will lie flat, you can use them to hold small objects (e.g., figures) in place vertically while glue dries**
- **Easy to remove**





# **Wax Paper as a Light Diffuser**

- **Most buildings come with clear plastic for windows.**
- **Unless you model an interior, the clear plastic lets you see into the empty building.**
- **If you add interior lights, you will see not only the empty interior, but also the light bulbs.**
- **Putting wax paper behind the clear plastic windows allows light to pass, but diffuses the light so you cannot see into the building.**



**Wax Paper Glued Behind Windows  
on a City Classics Building**

# City Classics Building from the Front in Daylight





**Night Scene with Wax Paper Diffuser on  
City Classics Building (note other  
buildings also have wax paper behind  
windows)**

# **Storefront Signs from the Internet**

- **Many storefront signs are ornate and unique**
- **Storefront signs found in most model kits are not as ornate as those often found in real life**
- **So why not use signs found in real life?**



**Find a photo of a storefront with a sign you like on the internet. Use a photo editing program to crop and size it**

**Print it (I use photo paper), glue it onto a piece of styrene plastic, and then glue it to the building**





**With the exception of the theater sign, all of these storefront signs were made from real Brooklyn/Queens storefront photos found on the internet**



- **The slides from this clinic are available at [Potomac-NMRA .org](http://Potomac-NMRA.org). Follow links to “Clinics.”**
- **I hope some of this helped**
- **Thank you for your attention**
- **Questions?**