

Expanding the Long Island Rail Road

Brian W. Sheron, MMR

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Yes, the LIRR spells the words “Rail Road” as two words

Entrance to Atlantic Ave. Station in Brooklyn

Purpose of Clinic

- **Planning an Expansion**
- **Research**
- **Faller Car System**
- **Modeling car float bridges, entrance trackage, barges and tugboats**
- **Car float operations**
- **Easy curved backdrops**
- **Putting it all together**

Some Background

- **Current layout started in 1988**
- **Original layout models the Port Jefferson Branch from East Northport to Jamaica (Queens)**
- **Layout expanded in 2005 to model City Terminal Zone from Jamaica to Pennsylvania Station in Manhattan**
- **Time is 1964 (or 1954 if I feel like running steam!)**

MTA Metropolitan Transportation Authority
MTA Long Island Rail Road

Key

- Full Time rail station
- Accessible station
- Part Time rail station
- Major Transit Hub

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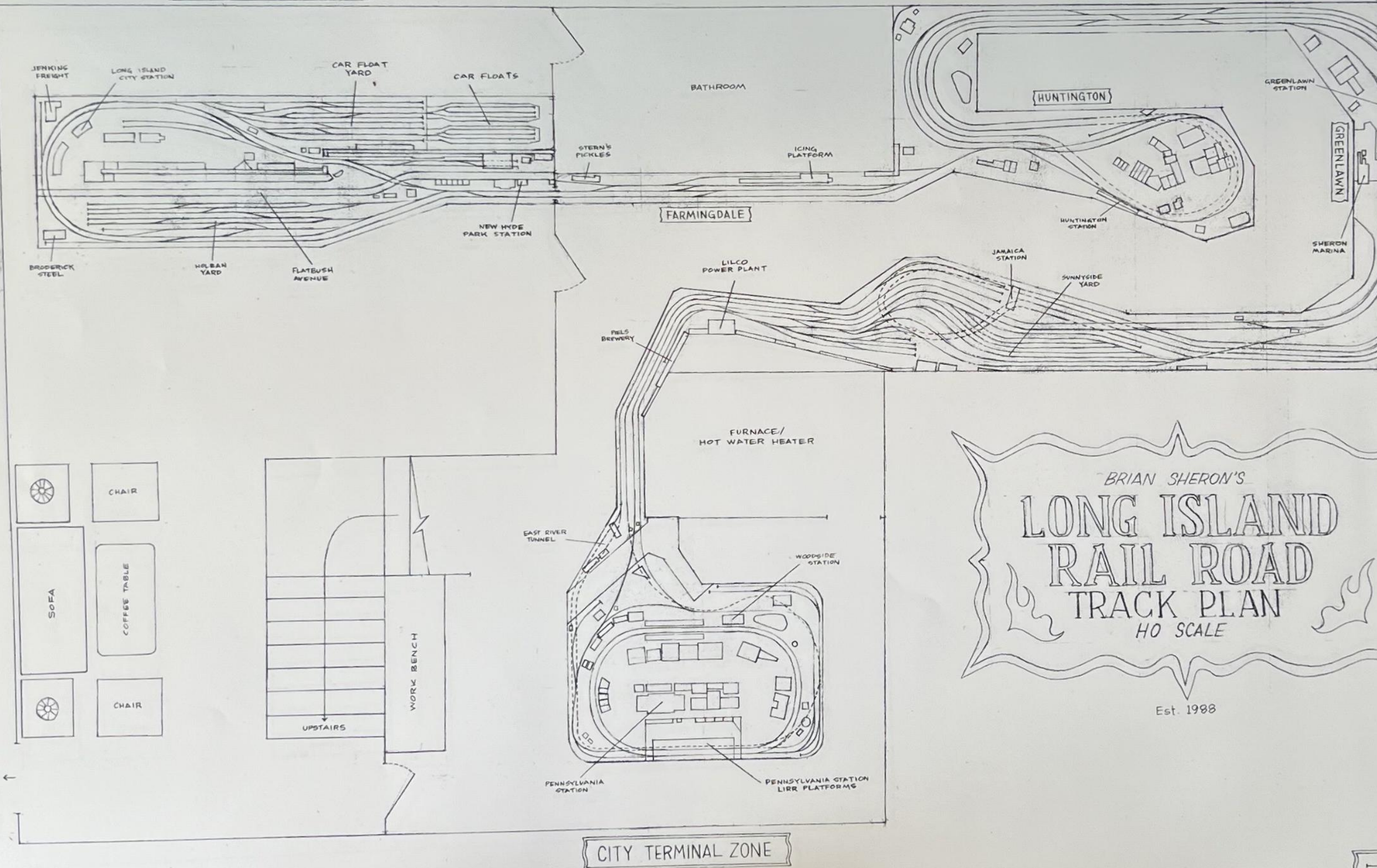


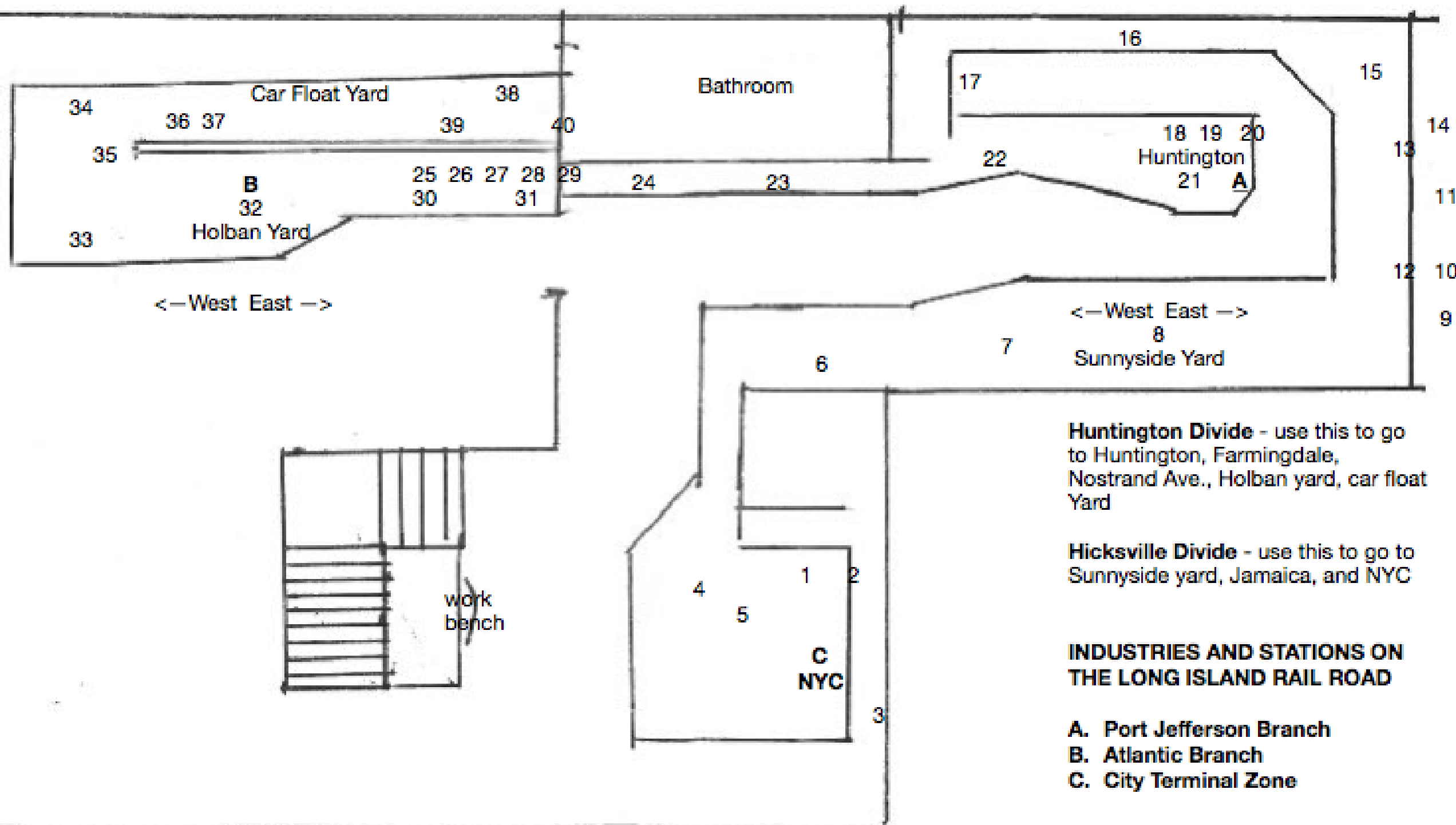
- **I retired in November of 2015 after 42+ years of Federal Service**
- **I humbly requested, the management if I could expand my layout into the back half of the finished side of our basement (~10' x 20' space)**
- **Management said she never goes in through basement, so I was given approval**
- **Two main questions: 1.) around the wall or center island? and 2.) what to model?**

- **I decided upon a center island, which eliminated the need for a duck-under or lift-out bridge in order to access the bathroom**

ATLANTIC BRANCH

PORT JEFFERSON BRANCH





1. Target Rock Sand & Grave
2. 8th Ave. Station
3. Target Rock Storage Siding
4. Hell Gate Siding
5. 8th Ave. Siding
6. Lilco Coal Yard
7. Jamaica Station
8. Sunnyside Yard
9. Long Island Produce
10. A & P

11. Tommy Fischer's Appliances
12. Hicksville Divide
13. East Northport Siding
14. East Northport Station
15. Kelsey's Seafood
16. Greenlawn Interchange
17. Huntington Divide
18. Citgo Distributing
19. Huntington Siding
20. Dave's Garage Doors

21. Huntington Station
22. Quality Used Auto Parts
23. Farmingdale Ice Company
24. Stern's Pickle Products
25. American Chicle Corp.
26. Nesper Wire & Cable
27. Englo Paints
28. Olin Matheson Adhesives
29. H.C Bohack Co.
30. Holban Tower

31. New Hyde Park
32. Holban Yard
33. Brodrick Steel Fabricator
34. Jenkins Freight
35. Long Island City Station
36. Sunshine Biscuits
37. Ronzoni Corp.
38. L.I. City Car Float Yard
39. Dugan's Bakery
40. West Chemical Co.

What to Model?

- I wanted to move an existing freight yard to the new section
- The existing freight yard was against the wall of a narrow aisle (which seemed to get narrower as the years went by!). Operating the yard was difficult when others needed to pass by during an operating session
- I Saw a car float module in a Free-Mo layout Exhibit at 2015 MER Convention
- This inspired me to model the LIRR car floats and float bridges in Long Island City. This would provide both an additional modeling challenge and a different and interesting switching opportunity during operating sessions

Car Float Barges and Bridges

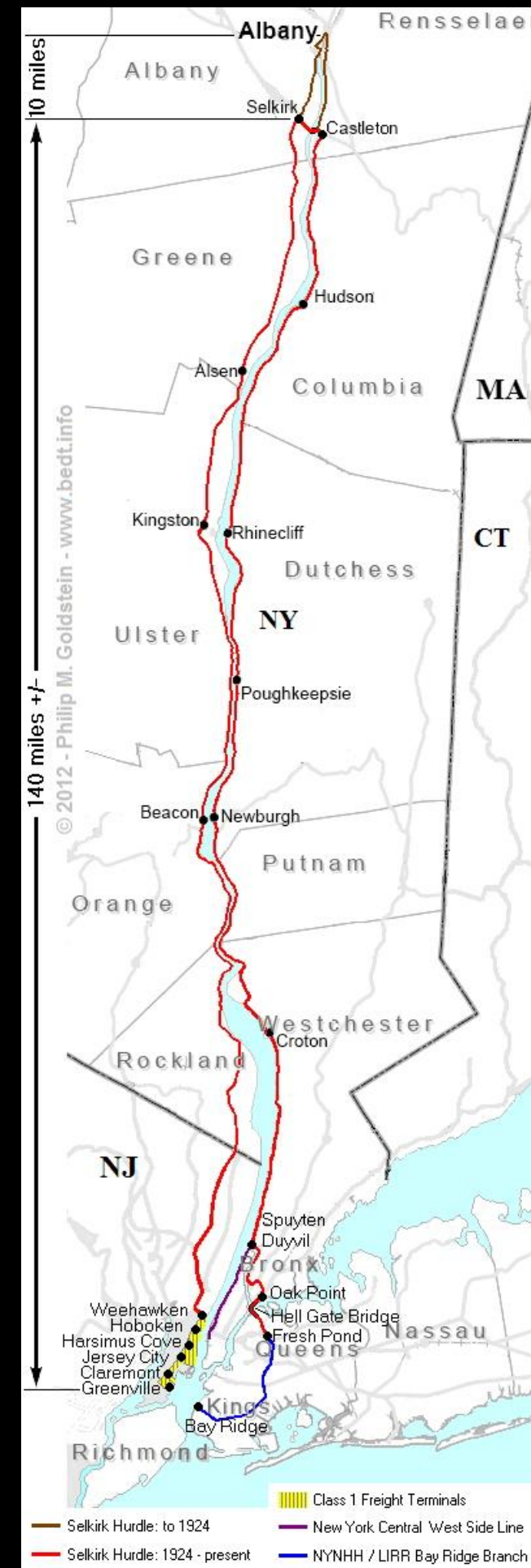


**Car Float Module at Free-Mo exhibit at
2015 MER Convention (NJ Division)**

What are Car Floats?

- **Car Floats are large barges that transport freight cars over water from one point to another**
- **No railroad bridge existed in the NYC area for freight trains traveling eastbound to cross over from New Jersey to Long Island**
- **To access Long Island, freight trains had to first head north for 170 miles to Albany, NY, cross over the Hudson River, then travel 170 miles south to cross onto Long Island around the Hell Gate area.**

**The freight
route from NJ
to LI before
the car floats**



- **Trains traveled at roughly 40 mph, so the 340 mile round trip took over 8 hours**
- **This necessitated a crew change, in addition to the extra time and fuel needed**
- **Thus, transporting freight from New Jersey to Long Island via car floats became financially advantageous**
- **Freight cars were loaded on car floats in New Jersey, and a tugboat would push them across lower New York harbor and up the East River to the LIRR car float bridges in Bay Ridge or Long Island City**



What is a Car Float Bridge?

- A car float bridge is the platform that connects the rails from the car float barge to the fixed rails on land
- The East River is tidal, so the float bridge needs to be able to pivot up and down with the tide in order for the rails on the car float to line up with the fixed rails on land
- A good website that discusses car floats in detail is <http://members.trainweb.com/bedt/indloco/developmenttransferbridge.html>









Long Island City Car Float Gantry
Cranes Today
“Gantry Park”





Where are the Long Island City car float bridges?

LIC car float bridges are approximately in center of photo

Where to Start?

- I do not like to draw detailed track plans in advance. Plans and ideas change and evolve over time
- I envisioned the extension as essentially a 17 1/2 ft by 5 ft table with a backdrop/view block down the middle
- Modeling Holban Yard was planned to be the focus of one side of the new layout, and modeling the car floats, float bridges, and car float yard would be the focus of other side.
- Track connection to the existing layout would be via a hole cut through the wall (right next to door)
- Mainline track would go in a loop around new section and return to existing layout

- **Tracks for both Holban Yard and Car Float Yard were first laid temporarily**
- **Operating sessions almost always identify problems, areas for change and/or improvement**
- **After 1-2 operating sessions, members of our operations group recommended several changes**
- **Once improvements were made and more experience gained operating the yards, the track design was finalized**

Benchwork

- At the end of the last Ice Age, glaciers advanced to the North Shore of Long Island, and then began to retreat
- Glaciers pushed earth up in front of them, so the North Shore is quite hilly along Long Island Sound. As the glaciers retreated, they melted and runoff carried soil and rock south
- Long Island is called a “till plain” (glacial runoff) and, with the exception of the north shore, is flat. Very flat!
- Since the section of the Island I would be modeling was flat, and a majority of the new section would be yards, I opted to lay the track directly on Homosote (no grades)
- Benchwork is simply 3/4” x 3” and 3/4” x 2” pine boards. Legs are 2” x 2”











- **I put 1/8" plywood (flooring underlayment) on the framework (for stiffness), then put the Homosote on top of the underlayment**
- **Backdrop is 1/8" Masonite, 27" high**
- **Homosote is painted with Latex paint to seal it. This helps prevent it from absorbing moisture when humidity changes, and reduces expansion and contraction**















Adding the Yards

- The car float yard layout was determined once the car float bridges were constructed and located

The Street

- While the freight yard would be a focus of operational activity, I wanted the street behind it to reflect the urban environment of New York City
- What better street to capture the urban NYC environment than Flatbush Avenue in Brooklyn?
- More to come on Flatbush Avenue.....

Roadway Stripes

- **Microscale Decals 91131, Stripes 4” and 6”**
- **Cut to short lengths to make passing lines and parking spaces**





Building the Car Float Yard

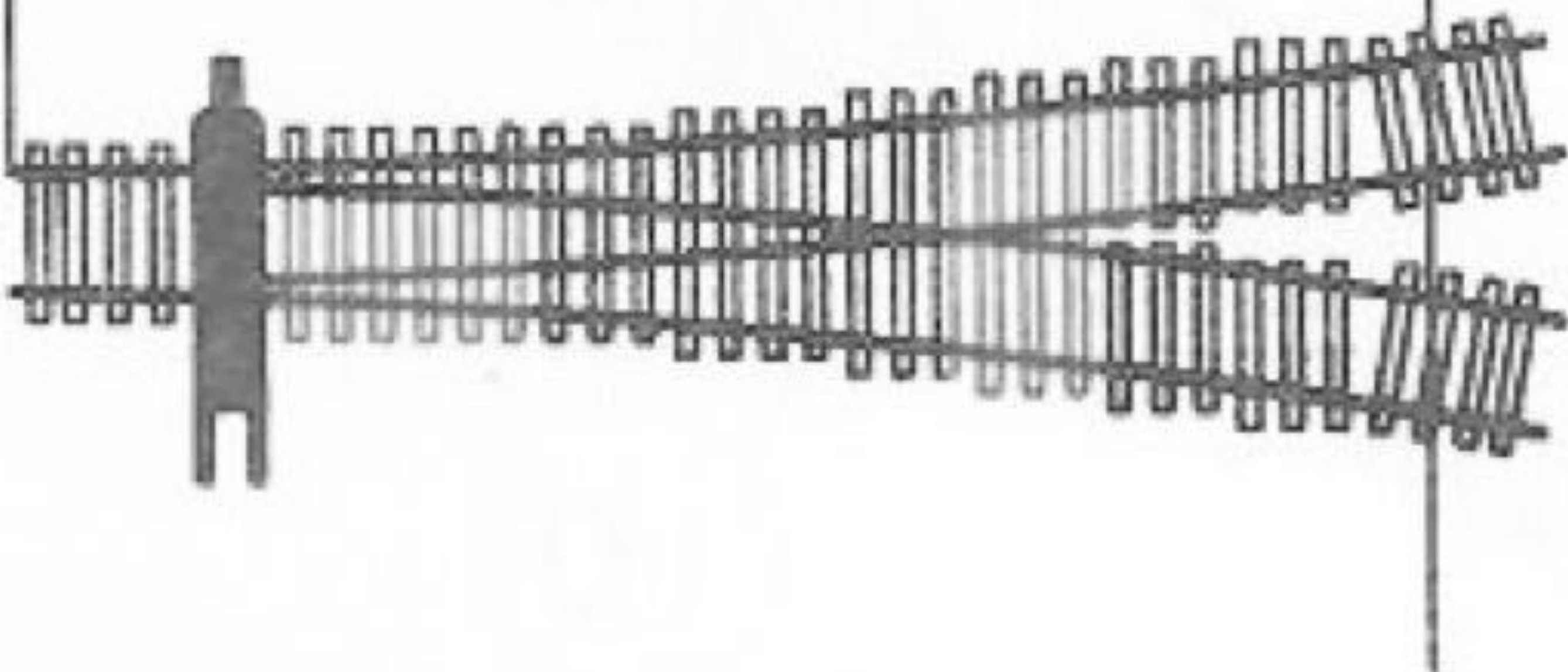


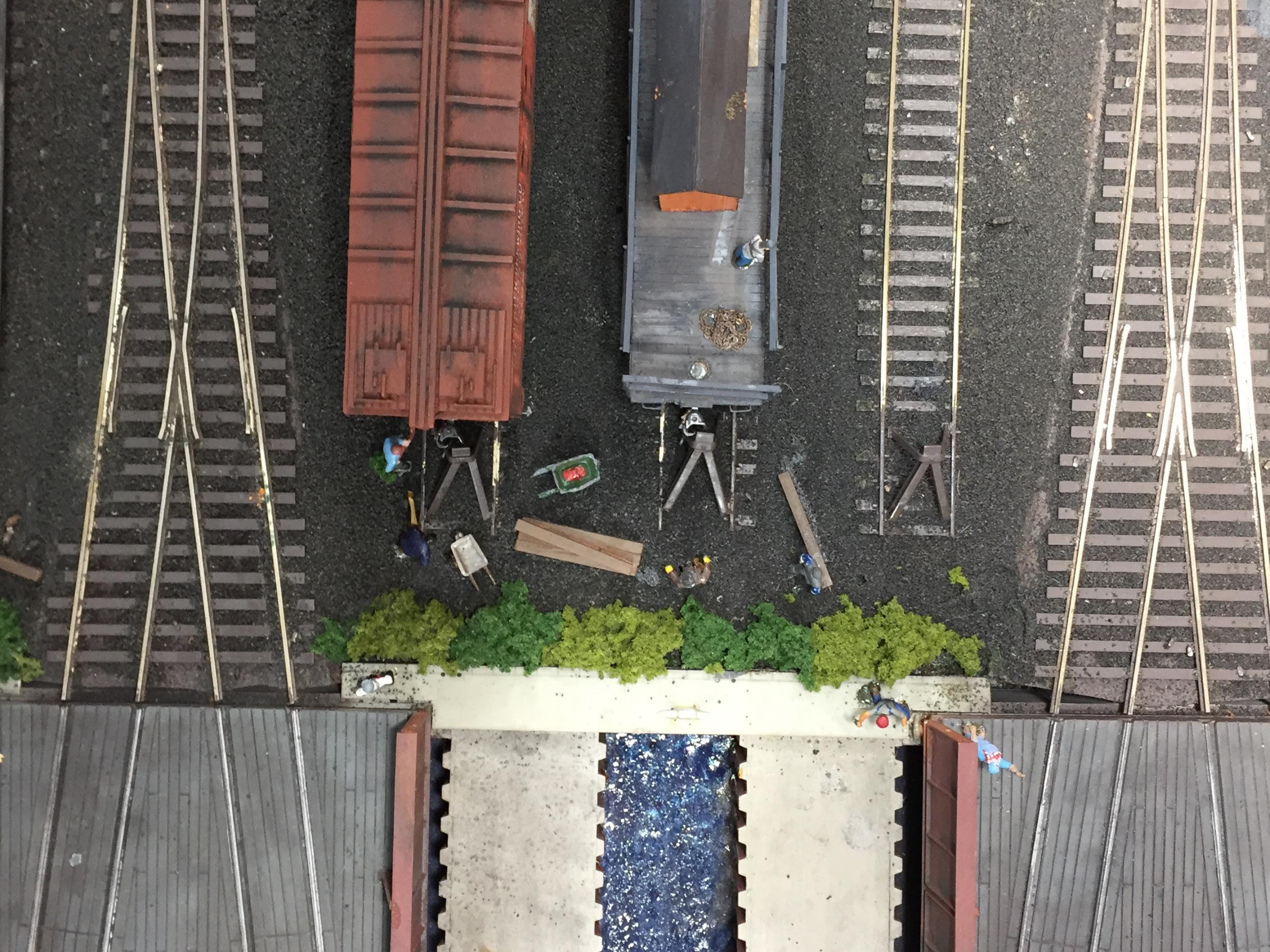
Car Float Bridges

- **Walthers car floats and car float bridges are similar to (but not exactly) the ones used by the LIRR at Long Island City**
- **I connected two car float dock kits together where they meet the shore with a strip of plastic, and with an elevated building between them (per the prototype)**
- **This stiffens the structure and allows me to move both of them together as a unit**

- **The Walthers Car Float Bridge require that you purchase a Walthers code 83 #4 Wye turnout (948-8807) and cut both wye tracks shorter by a precise amount so the wye rails align with the rails on the car float bridge**

238 mm







LONG

ISLAND

NYC
47062

HORMEL







Tugboat and Idler Cars

- Car Floats are moved by tugboats
- LIRR had a fleet of tugs
- I modeled the LIRR tug “Meitowax” using Walthers’ tugboat kit
- Again, it is a close, but not exact, model
- (Meitowax comes from “Matouwac”, which means “land of the periwinkle” or “country of the ear shell”)



LIRR Tug "Meitowax" c.1960s





MEITOWAX

NATIONAL

NATIONAL

N.K. FAIRBANK & Co.
CRIPPSVILLE, MD. 21035
AND BRANCHES AT
BALTIMORE, MD. 21201
COLUMBIA, MD. 21046
FREDERICK, MD. 21701
HAGERSTOWN, MD. 21740
PACIFIC, MD. 21150
ROCKVILLE, MD. 20850
TOWSON, MD. 21204
WILKES BARRE, PA. 18703

I.R.T.C.9
535

PENNSYLVANIA

PRR
268004
MAY 1961 ST. LOUIS
MAY 1961 ST. LOUIS
MAY 1961 ST. LOUIS

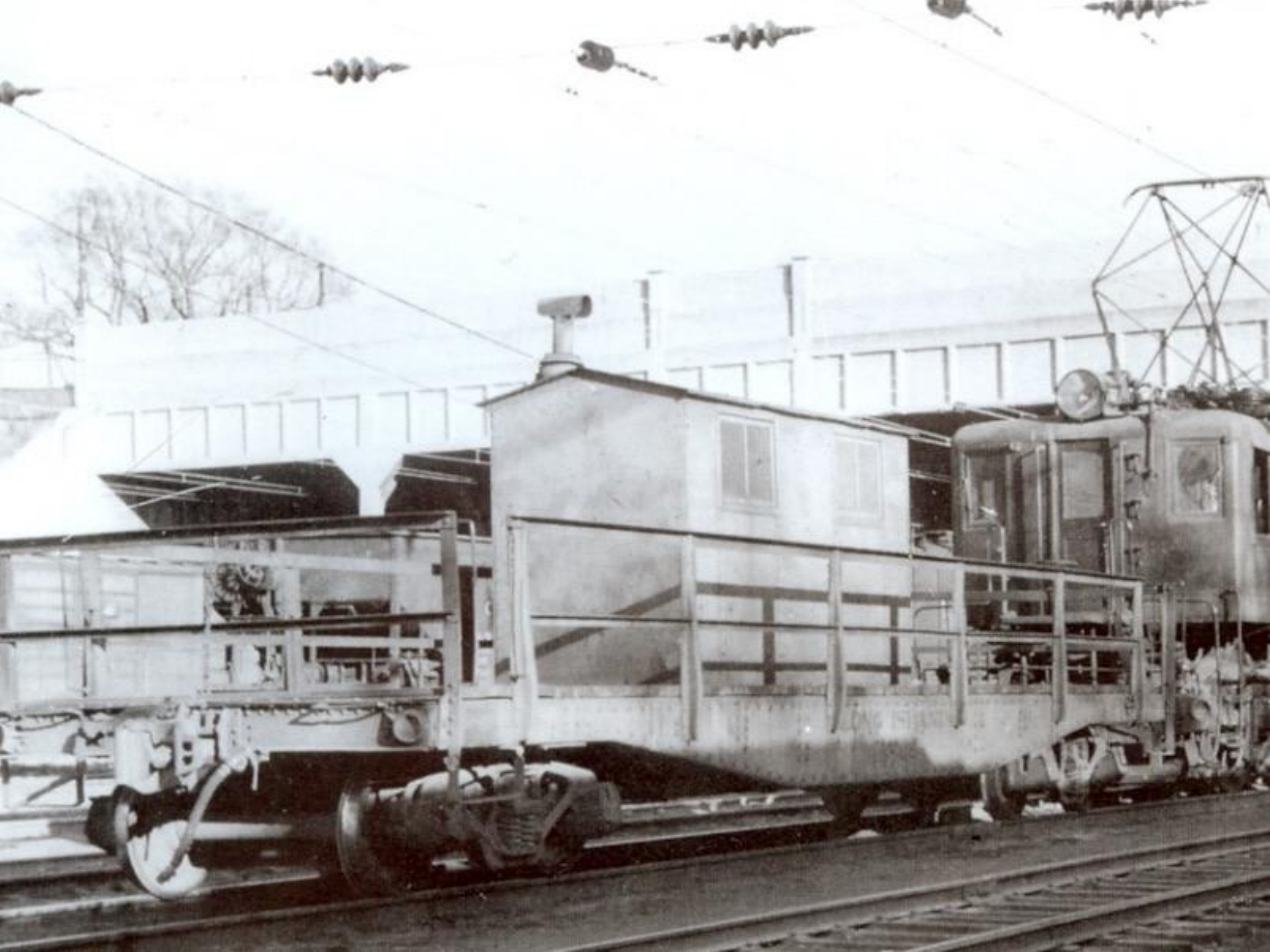
CSOX
2540



- **Engineers did not want to travel onto car float bridges or car floats with their engines due to weight.**
- **To move cars on and off the car floats, lighter weight idler (or reach) cars were used to “reach” onto the car float bridge and barge, couple up to the freight cars, and pull them off the barge.**
- **LIRR used modified flat cars, some of which had crew shelters on them**













**And yes, accidents do happen on float barges and bridges
This is why you don't want to back an engine onto a float
bridge!**



Moving Cars On and Off the Barges

- **LIRR barges carried about 16-18 cars on 3 parallel tracks**
- **Cars had to be put on and taken off of the barges in a specified sequence in order to keep the barge from listing too much**

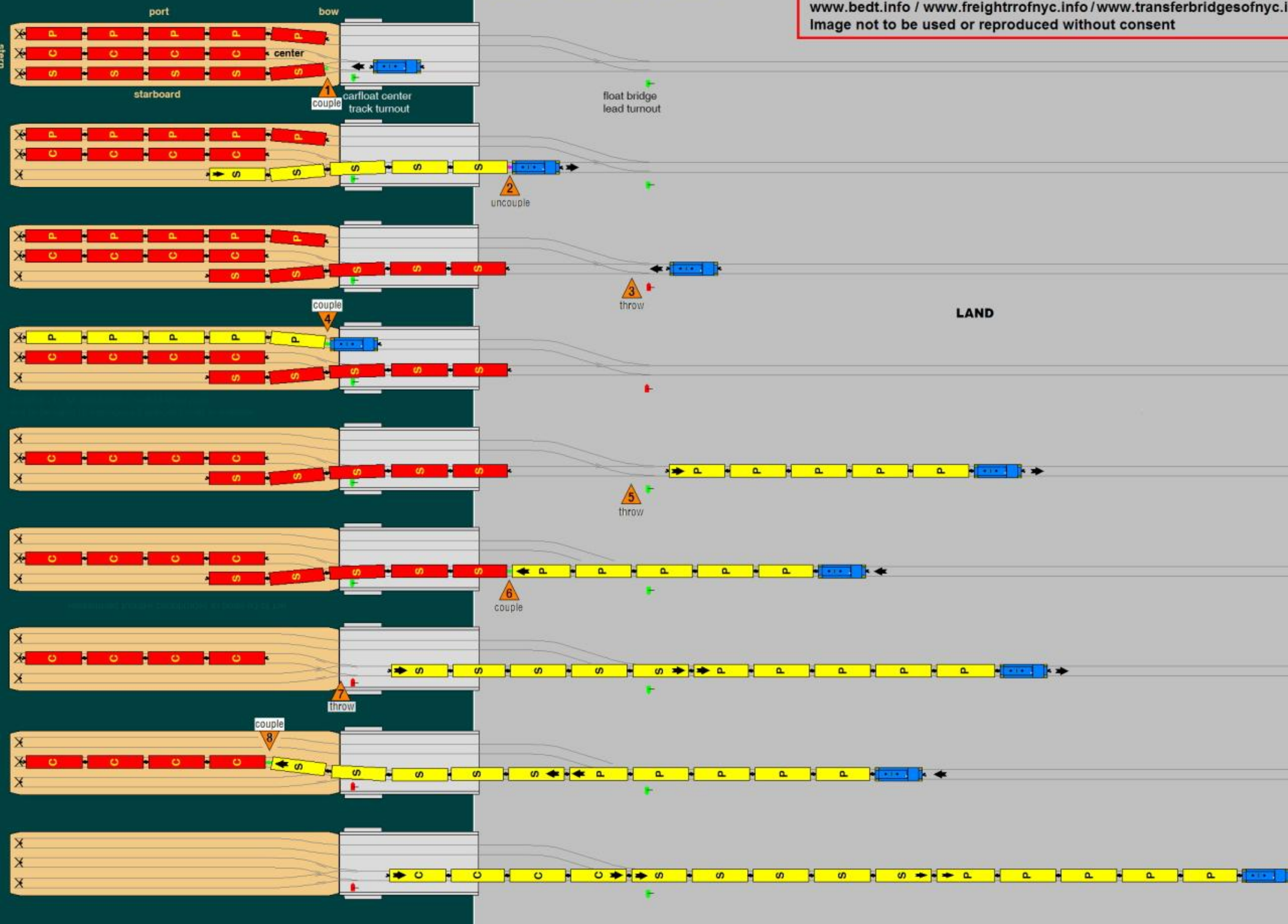
CARFLOAT**FLOAT BRIDGE**

red cars denotes stationary cars
yellow cars denotes cars in motion

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Backdrop for Car Floats

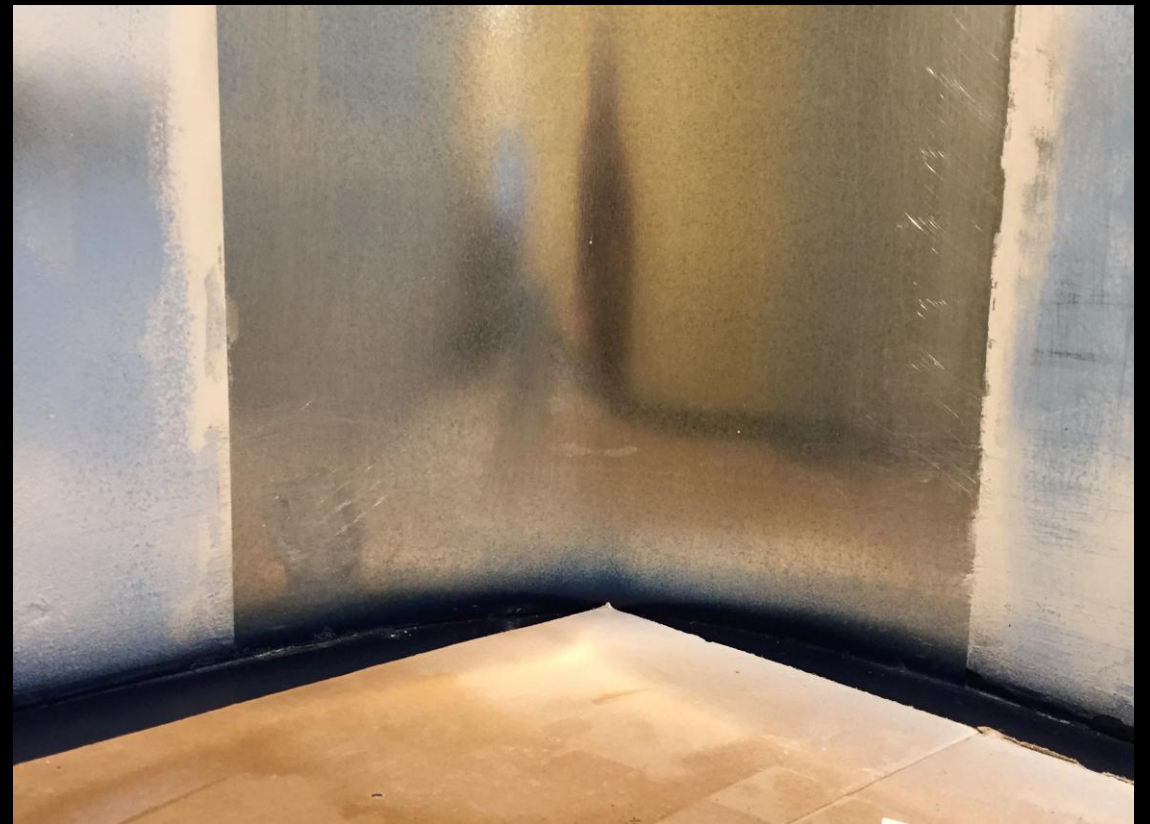
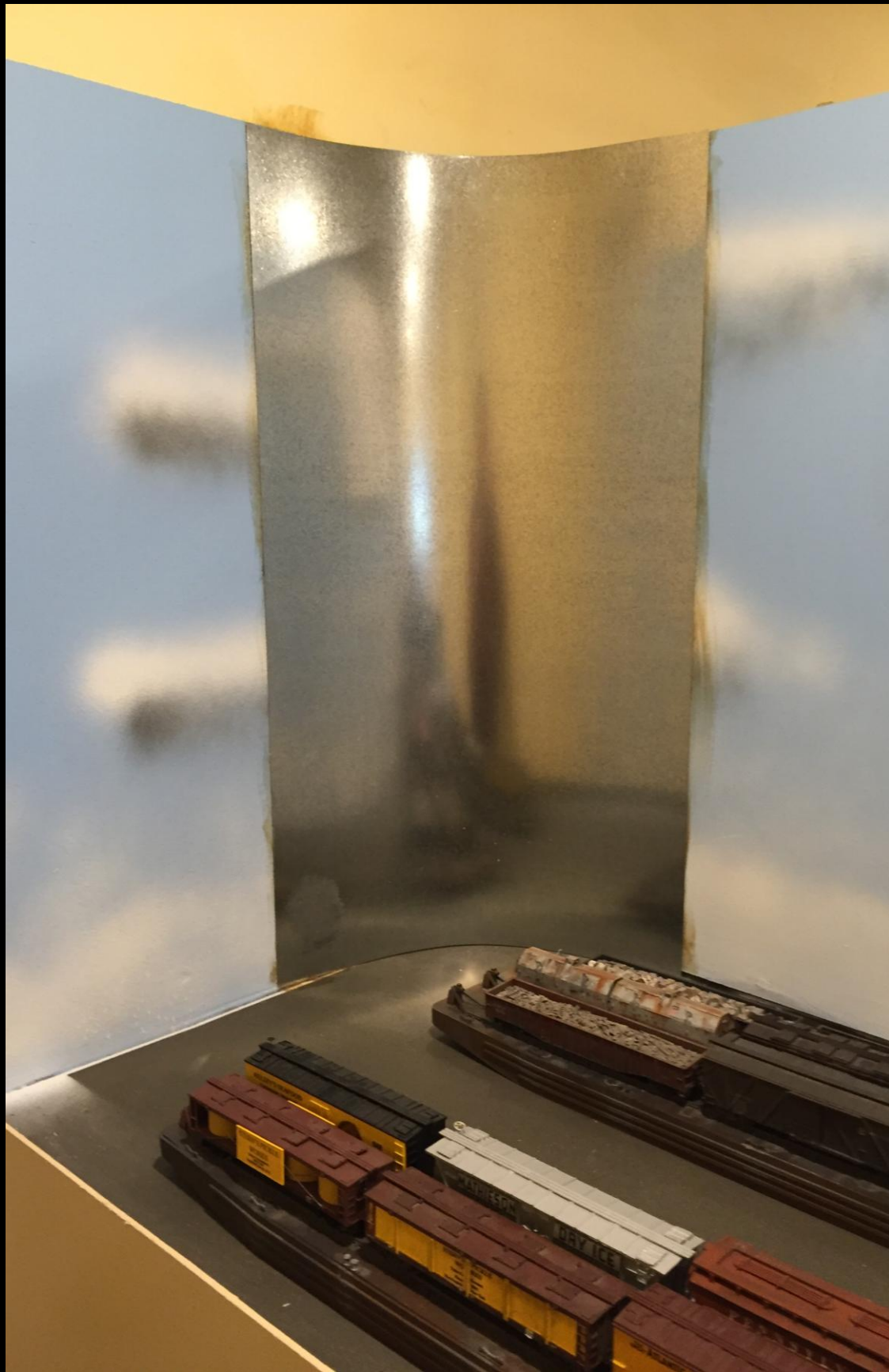
- A person standing on the car float bridge looking west would see the Manhattan skyline about 1/4 mile away.
- Looking north, they would be looking up the East River and see the 59th Street Bridge
- I found photos of both the Manhattan skyline, and the East River (with the 59th Street Bridge) on the internet, and contracted with “Backdrop Junction” to purchase the photos and merge them into a 73” backdrop that would sweep around the corner of the layout where the car floats are located

How to “Sweep Around the Corner”

Installing a Simple Curved Corner

- I purchased an 18" x 36" piece of thin, flexible, ductwork steel at Home Depot
- Formed it into a curve in the corner, marked its location, and glued it into place with contact cement
- Blended edges flush with existing backdrop using drywall spackle, sanded and then painted to blend with sky-colored wall









Finished car Float Yard









What About the Old Holban Yard?

- **Decided to make benchwork narrower for easier aisle movement during operating sessions**
- **Ideal home for Stern's Pickle Products and an icing platform for reefers**













EASE 24,000 SQ

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STERN'S PICKLE PRODUCTS

TABLE

CONDIMENTS

STERN'S PICKLE PRODUCTS

STERN'S PICKLE
WORKS
TABLE CONDIMENTS
SINCE 1864
FARMINGDALE, N.Y.

STERN'S
WO
PICKLE
RKS
Table Co
Since
Farmingdale

Modeling Flatbush Avenue in Brooklyn

- **Found internet photos of Flatbush Ave.**
- **Constructed storefronts similar to those found on Flatbush Ave. from kits**
- **Created signs from internet photos**
- **More detailed description in my clinic on Modeling Urban Scenes**



Flatbush Ave., Brooklyn



Flatbush Ave., Brooklyn



Flatbush Ave., Brooklyn



Flatbush Ave. Brooklyn
(Car Float side of Layout)



Long Island City Station

Holban Yard





Nostrand Ave., Brooklyn



Nostrand Ave., Brooklyn



Holban Yard and Flatbush Ave.



HOLBAN YARD



NOSTRAND AVENUE
INDUSTRIAL SIDINGS

NEW HYDE PARK

LIGHTS

MAIN 110 VAC SWITCH











MISS Hardware
If You Can't Find It, We have it 169

NOW SHOWING
CASABLANCA

THE DINER
STEAKS - CHOPS - SEAFOOD

MEATS
POULTRY

- **In 2019 I learned that Mike's Train House (MTH) was offering a 4 car subway set modeled after the R17 cars used in New York City**
- **The set came with DCC and sound**
- **Most importantly, cars could be programmed to automatically stop and then restart at multiple stations**
- **At station stops, cars produced actual recordings of subway conductor's announcements**

**So in 2019 I added an elevated
subway line above Flatbush
Avenue**









- **Thank you for your attention**
- **Presentation can be found on Potomac Division web page (<http://potomac-nmra.org>)**
- **Related Clinics on the Potomac Division Web Site**
 - **Backdrops**
 - **Modeling Urban Scenes**
- **Click on “Clinics” link**
- **Any Questions?**