

Traffic – Not the Movie

by Peter Ezzard

Our model railroads strive to simulate the real world as accurately as possible. Part of a successful simulation includes the following elements: history, geography, era, traffic, and railroad management. As we refine our statements regarding these elements and we refine our operations to incorporate them, our simulation becomes more realistic.

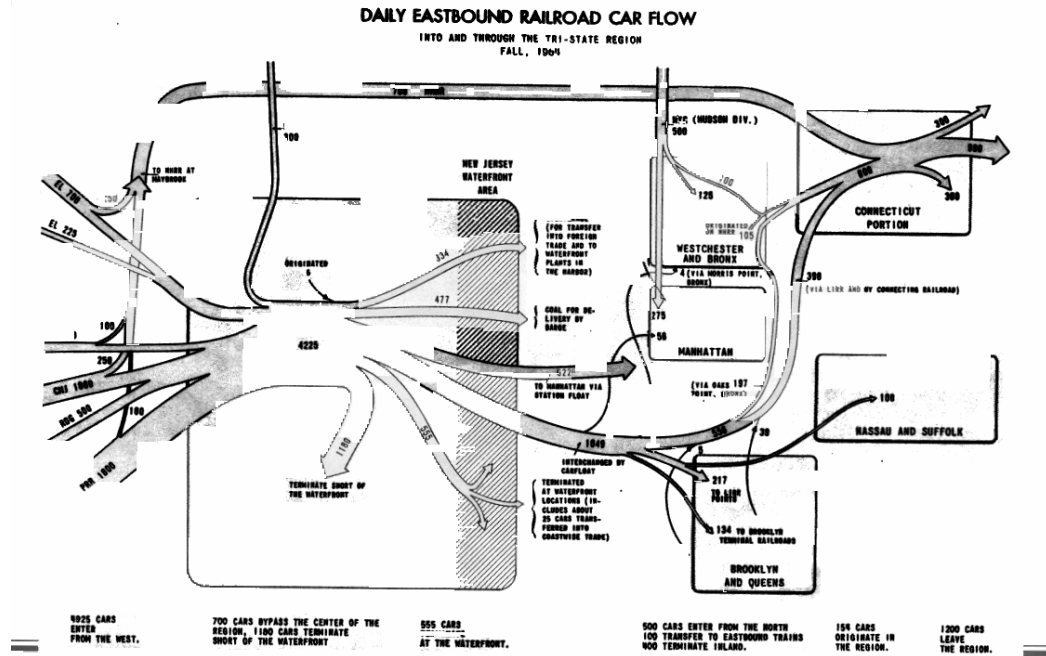
In the mid 1840's the Delaware & Ohio railroad was built in order to bring coal from the Pennsylvania mountains to the Ohio River. Management soon realized a terminus on the Delaware River was insufficient, and the Passaic & Delaware were incorporated to build a line to the Hudson River. The Delaware, Lackawanna & Western, not wanting a direct competitor agreed to buy a 50% interest in the branch already built, from Summit to Gladstone, and operate it jointly with the HD&O. In addition, a joint agreement allowed Hudson, Delaware & Ohio trains to utilize DL&W tracks between Dover and Hoboken. This much of our history appears in founder Paul Mallery's book *Operations Handbook for Model Railroads*, published by Carstens. Bill Jambor adds the following: The HD&O purchased the DL&W's interests in the joint lines prior to World War I, making the HD&O the sole user of the Morris & Essex line to Hoboken. The DL&W continued to use the Boonton Line for its trains. Others have suggested the HD&O continues west of Pittsburgh to either St. Louis or Cincinnati to make western and southwestern connections.

Regardless whether such a history is complete or not, it helps establish the railroad's geographic setting and outlines the beginning of a traffic base. The HD&O hauls coal from the Pennsylvania anthracite coalfields to tidewater ports and in addition funnels through goods and people between western connections in Pittsburgh and Hoboken, and indirectly to Philadelphia via the Gilberton-Reading branch. On-line industries also generate traffic to these points, as well as interchange partners along the way.

Paul's original statements allow us to think about traffic, run a wide variety of trains, and hopefully have more enjoyable operating sessions. Given our geography, we can begin researching what the railroads in our area did, and make their traffic base to a large extent our traffic base. Goods to the Port of New York become a large part of the traffic on our railroad. In the new addition we will model a large Hoboken terminal for both passenger trains and freight cars. We can look to what the other railroads did in the port area, and incorporate elements of their operations into our traffic mix.

In Morning Sun's *New York Harbor Railroads* by Thomas K. Flagg the author does an excellent job of depicting railroad marine operations in and around the Port of New York. One of the unique aspects of railroad operations in and around New York Harbor was the use of the waterways as a railroad belt-line. The harbor was an extension of each railroad's tracks with the trains and their cargo traveling by water rather than rail. The author outlines and gives photographic examples of railroad ferries, tugs, lighters, station floats, and car floats as well as terminal operations on both sides of the Hudson River and the East River. I strongly recommend the book to all interested in such operations.

Of special interest is the diagram on page 8 outlining the Eastbound traffic flow for all railroads through the tri-state region in 1964. In addition, it tells us the destination of the cars.



Daily Eastbound Traffic into the Port of New York and surrounding areas, Fall 1964, page 7 "Morning Sun's Port of New York".

We can summarize the chart above with the table below:

Eastbound Traffic Flow:

<u>Railroad</u>	<u>Total Eastbound</u>	<u>To Maybrook</u>	<u>To Port Area</u>
Erie Lackawanna	925	-250	675
Lehigh Valley	400	-100	300
Central of New Jersey	1000	-250	750
Reading	500	0	500
Pennsylvania	1800	-100	1700
West Shore	300	0	300
Total Eastbound	4925	-700	4225

The different railroads entering the New York/New Jersey metropolitan area had a wide range of car counts heading eastbound, with a low of 300 on the West Shore and a high of 1800 on the Pennsylvania. Our Club tradition has been to use the Delaware, Lackawanna & Western as a guide. I consider it a reasonable assumption that the Erie Lackawanna totals should be our guide and goal when determining traffic amounts. 675 cars a day headed east to the Port Area translates to a little more than six 100-car trains, eight 75-car trains, or 12 50-car trains per operating day heading towards Hoboken.

Establishing a goal of up to 600 plus freight cars a day into the Hoboken terminal, we can use the information from *Morning Sun's* book to refine our picture of HD&O traffic. We can summarize the cars to the terminal area of the port with the following table:

Cars in the Waterfront:

<u>Disposition</u>	<u>Total Traffic</u>	<u>Pct of Total</u>	<u>HD&O Projection Based on 675 E-L</u>
Lighterage	334	7.9%	53
Coal delivery by barge	477	11.3%	76
Station Float - Manhattan	621	14.7%	99
LIRR – Bklyn & Queens	217	5.1%	35
LIRR – Long Island	100	2.4%	16
NH via NY connecting	354	8.4%	57
NH via Oak Point	197	4.7%	31
Brooklyn Terminals	134	3.2%	21
Terminate @ Waterfront	555	13.1%	89
Terminate short of Waterfront	1180	27.9%	188
<u>Interchange Manhattan</u>	<u>56</u>	<u>1.3%</u>	<u>9</u>
Total Eastbound	4225	100.0%	675

By examining the railroad activity in the port area the traffic of the HD&O becomes a little bit clearer. If the Erie-Lackawanna basis of 675 eastbound cars a day is reasonable, we can expect to float 268 freight cars across the river. Approximately 100 will be onto station floats – railroad floats with platforms in the middle of the barge to allow loading and unloading. A station float would travel directly to a waterfront industry and tie up directly alongside the industry. The pier serves as the railroad siding. About 170 cars would be floated directly to interchanges with other railroads with slips to accept the cars. If each Walthers float holds twenty cars, we will need over twenty-five floats to model the traffic.

A coal train or two totaling about 75 cars between them would be needed to travel to the coal dumper and placed in barges. Most of the coal coming to the New York area was anthracite coal, which was used as a heating fuel. Another 50 cars would travel to the piers to be transferred to lighters – specially designed barges that hold bulk cargo and would then be transferred to either customers or even directly to ship. Some of the lighterage cargo might be cement canisters from the Trenton Northern's Lehigh Cement plant. In addition about 200 cars a day should be going to industries in New Jersey but not at direct waterfront locations.

A little research and analysis has allowed us to expand greatly on Paul's original history about the Hudson, Delaware & Ohio. Of course, 675 cars a day into Hoboken might be a bit too much for our railroad and operators to handle. By keeping track of the Percentage of cars to various destinations, we can adjust our totals downward (or even upward!) and still keep a reasonably accurate mix of activity in and around the waterfront.

The types of freight cars and commodities hauled over the HD&O have not been fully developed as of yet. The destinations of the cars are meant as a starting point. As each of us refines our prototype research we can build upon Paul's original story and make our fictional world even more believable.