

THE PENNSYLVANIA RAILROAD SYSTEM

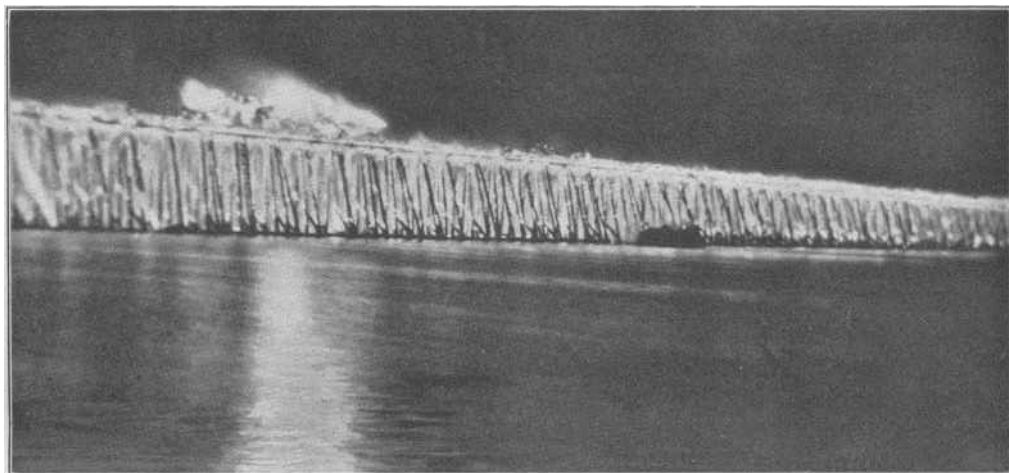
Broad Street Station
PHILADELPHIA, PA.

August 8, 1913

Pennsylvania Station
PITTSBURGH, PA.

9

How the Newark Bay Bridge Was Destroyed and Rebuilt



A railroad bridge and a train of 30 cars of potatoes on fire. This photograph was taken at 1.15 A. M.—an hour after the fire started

On the night of Saturday, June 14th, the Pennsylvania Railroad's two-track trestle across Newark Bay, near New York harbor, was burned to the water's edge. A tremendously important piece of track—accustomed each day to convey hundreds of carloads of freight—was put out of commission.

Twelve and a half days later a new trestle bridge, temporarily replacing the former structure, was in service. It took 1500 men working day and night, backed up by all the resources of a great organization, to accomplish it.

It was a fine piece of work. The men who did it deserve great praise. How it was done is a story of efficiency in emergency.

It was almost impossible for anyone to get close enough to fight the flames. Fire engines from near-by cities were obliged to pump water for more than a mile, and fire boats in the channel were kept a long distance from the fire because of low tide.

When the fire started a Pennsylvania Railroad freight train from the South with thirty-five cars of potatoes bound for New England was on the bridge. The engine and the first five cars got across into Greenville safely; the flagman of the train, seeing the danger ahead, cut off the cabin car at the end of the train, and pushed it to safety himself. The remaining thirty cars of



A section of the 3500 feet of ruins of the Newark Bay Br

potatoes were totally destroyed, and the debris sunk with what was left of the bridge. The fire was under control by 10.30 Sunday morning, June 15th.

* * * *

The Pennsylvania Railroad's Newark Bay drawbridge between Newark and Greenville was 5653 feet long—something over a mile; the draw itself was 264 feet long. Over it about 1600 freight cars passed daily, cars with food products, coal and iron, for New England and Long Island, and in return came cars loaded with the output of factories of that section.

Greenville, it might be added, is a highly important railroad settlement on the Jersey shore of New York harbor. Cars destined for New England and Long Island are floated from here to their connection with the New York, New Haven and Hartford and the Long Island Railroads. Coal for steamers and for export also gives the Greenville Yard much to do.

Fire, caused probably by sparks from a locomotive, started on one of the two parallel bridges—one owned by the Pennsylvania Railroad and the other by the Lehigh Valley—about 1200 feet from the Jersey shore, and, fanned by a land breeze, worked its way rapidly to the Greenville shore. About 3500 feet of both bridges were burnt.

Once it was seen that the fire would put the bridge out of commission, the first thing to be done was to provide for an alternative freight route to New England. Traffic was sent north from Trenton over the Pennsylvania Railroad to Belvidere, N. J., where connection was made with the Lehigh and Hudson Railroad, which crosses the Hudson River on the Poughkeepsie Bridge. Some 5000 cars were handled to and from New England this way. The Hudson River docks of the Delaware, Lackawanna and Western and the Erie Railroads were also placed at the disposal of the Company. So promptly were these arrangements made that



idge, which was rebuilt with almost unprecedented speed

the hundreds of cars of perishable freight went through to their destinations without delay.

The engineers of the Company and of the Lehigh Valley Railroad did not wait for the fire to abate its fury before they had all their plans perfected for re-establishing connection between Newark and Greenville.

It was decided that each road should build one track, thereby giving a two-track bridge when both had finished. The Lehigh Valley bridge builders started at the west end of the bridge, while the Pennsylvania men worked in the opposite direction.

* * * *

Here are a few things the engineers were ordering while the fire still burned: Fourteen pile drivers, thirteen marine derricks, twenty-one scows, two tugs, six catamarans, five air compressors, three water boats, two derrick cars, two locomotive cranes, three switching engines, two teams of horses, 3,000,000 feet of lumber and 1500 men. This was but a starter. As the work progressed much other equipment was added.

Here within sight of downtown New York was a construction camp such as might have been building a railroad in the far West miles from even a village. Those men the railroad chiefs had put in charge to repair the damage done by the fire didn't leave their job until it was finished. More than seventy of them had their meals and slept there. A sleeping car gave them beds, while they ate in a dining car. For the laborers and carpenters other quarters were established. As great care of sanitary features was taken as at the Gettysburg Reunion.

The special physician who was on duty every minute remarked afterward that such was the attention paid to every detail when the camp was organized that there proved to be little need for the services of a physician. There was no case of illness, and but a few minor accidents. The only serious accident happened to one laborer, who had an arm broken.

Not a little trouble was experienced with the steel trucks and underframes of the cars in the potato train which had fallen in the bay. Many of them had lodged between the piles, and it was necessary first to remove them before sawing off the burned piles at the water level, for on top of these burned piles were to be laid transverse sills a foot thick, and on these a new trestle of timbers just as heavy. As the bridge now stands the track level is about twenty-six feet above high water.

Another obstacle the engineers met at first was the thousands of feet of steel rails which lay twisted among the charred piles, but speedy work was made of it when two hundred men were set to work cutting the rails in small sections so they could be handled with some ease.

* * * *

Every minute counted with the engineers in charge of the work. They had 1000 men working in the day, and 500 at night; they built an average of ten feet of bridge every hour. They were paid one and a half times the regular compensation for their hurry.

A complete electric light plant was established at the western end of the burned bridge, so that wires could be carried out over the burned portion. On the eastern end connection was made with the Pennsylvania Railroad's electric light plant at Greenville Yard, and with the Public Service Company's lines. Both arc and incandescent lamps were supplied from the eastern end, so that the burned portion of the bridge was brilliantly lighted for night work. Telephone lines were run to the middle of the bridge to facilitate communication between the various parts of the work.

The burned portion of the Newark Bay bridge cost originally \$130,455. To replace it will cost approximately \$295,000. The \$164,545 difference practically represents what the Pennsylvania spent for speed. The

total loss to the company was \$295,000—for the former bridge was not an old one; it was built in 1904 and was a modern structure in every way.

J. B. Fisher, Superintendent of the New York Division, was in entire charge of the reconstruction of the Newark Bay bridge.

Mr. Fisher's assistants were:

C. I. Leiper, at that time Division Engineer, New York Division.

F. W. Smith, Division Engineer, New York Division.

J. H. Harris, Division Engineer, Manhattan Division.

G. M. Ball, Jr., Supervisor, New York Division.

M. W. Clement, Supervisor, Manhattan Division.

William R. Mershon, Master Carpenter, New York Division.

F. S. Reynolds, Master Carpenter, Jersey City and New York Terminal.

T. E. Nestor, at that time Assistant Supervisor, New York Division.

A. Y. Tomlinson, Division Operator, New York Division.

C. G. Baird, Division Operator, Manhattan Division.

G. H. Watkins, Assistant Master Mechanic, New York Division.

James McCoy, Assistant Supervisor, Manhattan Division.

* * * *

Very few people knew that all this happened when it did. Certainly still fewer knew that these men were working day and night, and that their Company was paying out money with but one purpose—to restore communication in the quickest possible time.

And why all this haste and pressure? Because those who conduct a railroad appreciate that it is their responsibility to meet emergency with resources and action—that the service they are expected to render to the public may not be interrupted.