

INTERSTATE COMMERCE COMMISSION

REPORT OF THE DIRECTOR OF THE BUREAU OF SAFETY CONCERNING AN
ACCIDENT ON THE LONG ISLAND RAILROAD AT VANDEVEER PARK,
LONG ISLAND, N. Y., ON DECEMBER 4, 1934.

February 15, 1935.

To the Commission:

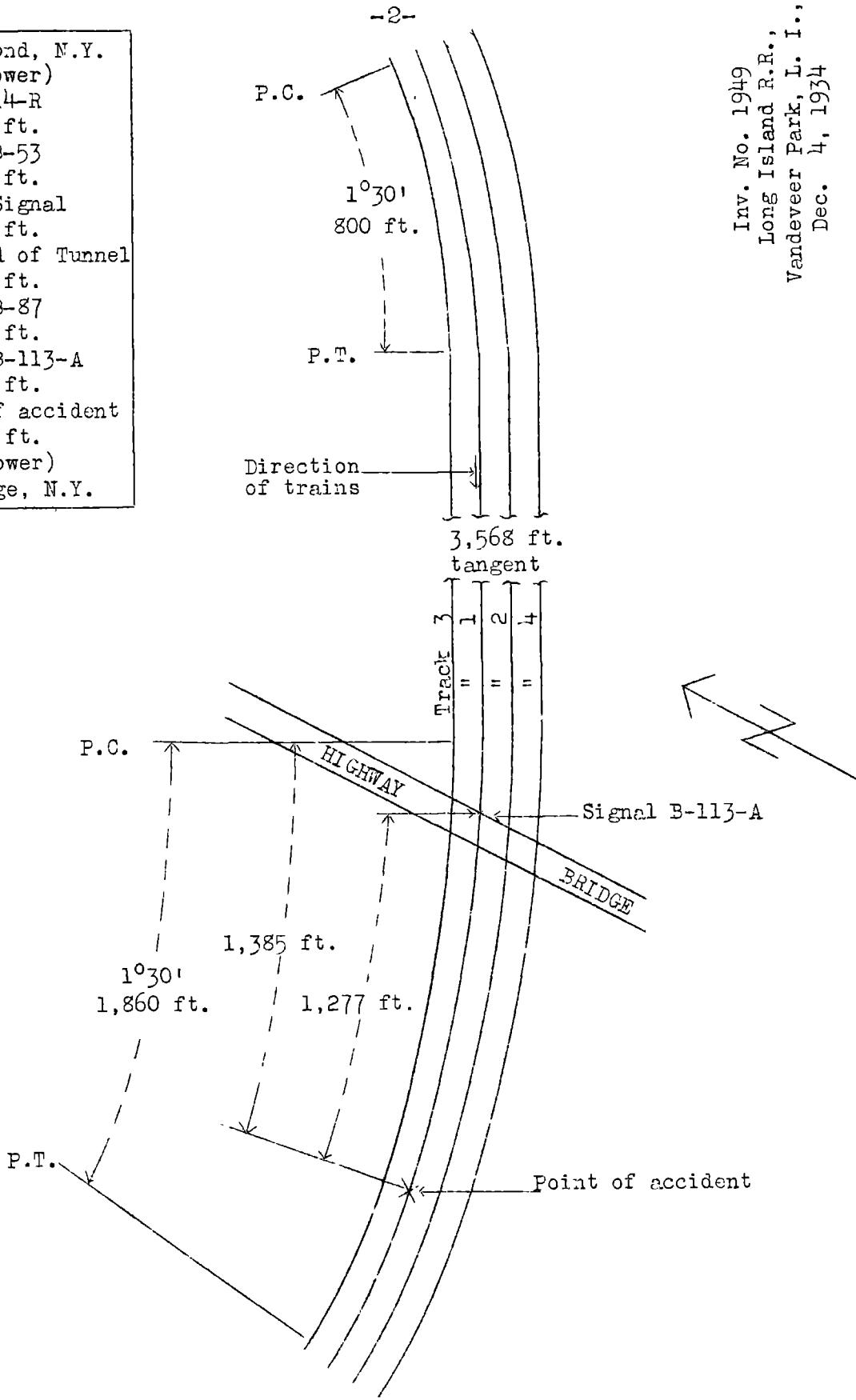
On December 4, 1934, there was a rear-end collision between a Long Island Railroad work train and a New York, New Haven and Hartford Railroad freight train on the tracks of the Long Island Railroad at Vandever Park, Long Island, which resulted in the death of 2 employees and the injury of 12 employees. The investigation of this accident was held in conjunction with a representative of the New York Public Service Commission.

Location and method of operation

This accident occurred on the Bay Ridge Branch, which extends between FN Tower, Fresh Pond and Bay Ridge, N. Y., a distance of 11.5 miles; in the vicinity of the point of accident this is a 4-track line over which trains are operated by time table, train orders, and a manual block-signal system. The tracks are numbered, from north to south, 3, 1, 2 and 4, and the accident occurred on track 1 at a point 117 feet east of the overhead bridge at Brooklyn Avenue or 1,167 feet east of Vandever Park freight station. Approaching this point from the east, there is a 1°30' curve to the right 800 feet in length, followed by tangent track for a distance of 3,568 feet and then a 1°30' curve to the right 1,860 feet in length, the accident occurring on this latter curve at a point 1,385 feet from its eastern end. The grade is 0.3 percent descending for west-bound trains at the point of accident.

The block signal at FN Tower governing track 1 between that point and MJ Tower, a distance of 7.1 miles, is a 3-indication color-light signal, known as signal 14-R; it displays red for stop, yellow for other than passenger trains to proceed with caution prepared to stop short of a train or obstruction, and green for proceed. In addition, there are four signals within the block as follows: Signal B-53, located 1,815 feet west of signal 14-R, is a distant signal for East New York tunnel, the tunnel signal being 4,660 feet farther west; then comes the tunnel, which is 3,535 feet in length, and nearly 2 miles west of the

Fresh Pond, N.Y.
 (FN Tower)
 Signal 14-R
 1,815 ft.
 Signal B-53
 4,660 ft.
 Tunnel Signal
 3,535 ft.
 West end of Tunnel
 9,320 ft.
 Signal B-87
 11,575 ft.
 Signal B-113-A
 1,277 ft.
 X Point of accident
 3,538 ft.
 (MJ Tower)
 Bay Ridge, N.Y.



Inv. No. 1949
 Long Island R.R.,
 Vanderveer Park, L. I.,
 Dec. 4, 1934

tunnel is signal B-87, giving advance information as to the position of hand-thrown cross-over switches near New Lots yard, approximately 3,000 feet west of signal B-87; more than 2 miles farther west is signal B-113A, the distant signal for MJ Tower. Signal B-113A is 1,277 feet east of the point of accident and is mounted on Albany Avenue overhead bridge. Approaching this point the engineman of a west-bound train obtains practically no view of the track ahead until after passing under this bridge, and then his view of a train standing at the point of accident is restricted by curvature and an embankment on the inside of the curve to a distance of less than 1,000 feet. The maximum authorized speed for freight trains on track 1 is 45 miles per hour.

The weather was clear at the time of the accident, which occurred about 9:48 a.m.

Description

Extra 312, a west-bound Long Island work train, consisted of a caboose and five cars, in the order named, being pushed by engine 312, headed west, and was in charge of Conductor Erunner and Engineman Hubbs. This train entered the Bay Ridge Branch at FN Tower at 9:20 a.m. and made three stops en route, the last stop being made a short distance east of Brooklyn Avenue bridge. The train had just started ahead when its rear end was struck by Train N-1.

Train N-1, a west-bound freight train of the New York, New Haven and Hartford Railroad, hereinafter called the New Haven, consisted of 17 cars and a caboose, hauled by electric engines 077, 082, 089 and 074, and was in charge of Conductor Lynch and Engineman Marley. This train left FN Tower at 9:36 a.m. under a permissive indication displayed by signal 14-R, passed signal B-53, the signal at the entrance to the tunnel, and signal B-87, all of which were displaying clear indications, passed signal B-113A, the distant signal for signal 34 at MJ, which was displaying an approach indication, and collided with Extra 312 while traveling at a speed estimated to have been between 25 and 40 miles per hour.

Engine 312 stopped 491 feet beyond the point of collision with its tender demolished and the cab badly damaged, while all of the electric engines and the forward truck of the leading car of Train N-1 were derailed and the rear truck of the caboose knocked off center. The lead engine came into contact with the overhead bridge at Brooklyn Avenue and was demolished, the superstructure stopping in reverse position on top of engine 082, which was badly damaged. The other engines of Train N-1 remained upright and practically in line with the track, engine 089 being considerably damaged. The employees killed were the engineman of

Train N-1 and an assistant enginehouse foreman, off duty, who was on the same engine, and the employees injured were the fireman, brakeman and flagman of Train N-1, the fireman and a brakeman of Extra 312, and seven section men who were in the caboose of the latter train.

Summary of evidence

Conductor Brunner, of Extra 312, stated that he received instructions from the work train foreman to stop at the entrance to the tunnel, at New Lots and at Vandevener Park in order to pick up section men for the purpose of cleaning up rubbish along the track in the vicinity of Bay Ridge. He was on the front platform of the caboose, the leading car in the train and did not see the following train. His own train had just started after making the third stop and was moving at a speed of 2 miles per hour when the collision occurred, the time then being 9:48 a.m.

Engineman Hubbs, of Extra 312, stated that the train entered on the tracks of the Bay Ridge Branch at FN Tower under a clear signal indication and that after passing that point all signals were in clear position. The fireman was handling the engine under his supervision and did not exceed a speed of 15 or 18 miles per hour on account of the fact that the engine was pushing the cars. None of the three stops which were made was of more than 1 minute's duration. At the last stop the flagman got off as the train was stopping; the train had just started and was running between 1 and 2 miles per hour when the tender was struck by Train N-1; just before the collision occurred he saw that train approaching and estimated its speed at between 40 and 50 miles per hour.

Fireman Molese, of Extra 312, stated that he was a qualified engineman and operated the engine between Long Island City and the point of accident. The flagman got off each time before the train stopped and on the first two occasions he was recalled by means of the engine whistle, but he was not recalled after the last stop had been made as it was intended to stop again within a short distance in order to perform some work, and on turning around to tell the flagman not to get on, the fireman saw the New Haven train approaching when it was about eight or nine car lengths distant, with the flagman back about 80 or 90 feet and his own train traveling about 3 miles per hour; at the speed at which the following train was moving he realized that a collision would occur and after shouting a warning to the engineman he jumped off, leaving the throttle partly open and not having applied the brakes.

Flagman Buckley, of Extra 312, stated that he rode on the engine from Long Island City and had proper flagging equipment with him. He got off while the train was reducing speed for the stop at the tunnel but was recalled immediately; he said the train did not stop at New Lots, but when it was slowing down at Vandevener Park he got off again and was back about 75 feet when he saw a train approaching on the same track; he located the approaching train as coming under Albany Avenue bridge, or 1,000 feet distant. His stop signals were not acknowledged but when the approaching train reached a point about 300 or 400 feet distant he saw sparks flying from the wheels and he estimated that it was traveling at a speed between 50 and 55 miles per hour; he did not have time to place torpedoes after he first observed the train and said he had not thrown off any fuses because his train had not been moving at a speed low enough for it to be overtaken by a following train.

Fireman Therriault, of Train N-1, stated that he had been working with Engineman Marley for 2 or 3 weeks prior to the accident and so far as he was aware the engineman was in good physical condition. A permissive indication was received at FN Tower, the tunnel signals were clear and the distant signal for MJ Tower was yellow, all of these signal indications being called by both himself and the engineman. The train moved through the tunnel at a speed of about 20 miles per hour, reduced speed at New Lots, and then speed was increased to a rate not much more than 25 miles per hour, but after the distant signal, which is mounted on Albany Avenue bridge, was seen the engineman started to apply the brakes. After passing under Albany Avenue bridge Fireman Therriault saw the engine of the work train but did not see a flagman; the engineman immediately moved the brake-valve handle into emergency position while Fireman Therriault ran back through the gangway and was about half way through the second engine when the collision occurred, not paying any attention to whether or not speed was being reduced. It was his understanding that the signal indication displayed at FN Tower meant that there was a train ahead, but he did not see any smoke, except from an engine in New Lots yard, and he did not think his own train was being operated at an excessive rate of speed.

Brakeman Greenberg, of Train N-1, stated that he was in the rear engine when the train passed FN Tower but saw the permissive indication displayed at that point. He then went forward to the front end of the leading engine and upon approaching the distant signal for MJ Tower he observed that it was displaying a yellow indication and that the work train was only a short distance beyond it. The engineman called the signal indication and then moved the controller handle but Brakeman Greenberg did not know whether the brakes were applied as the engineman immediately shoved him through a door. In his opinion the train did not ex-

ceed a speed of 30 miles per hour at any point after passing FN Tower; its speed was reduced before passing New Lots, and it was traveling at about 30 miles per hour at the time of the accident.

Conductor Lynch, of Train N-1, stated that the brakes were tested after cars were set out and others picked up at various points en route, including Fresh Pond, and the caboose gauge registered a brake-pipe pressure of 74 pounds when the train left FN Tower on track 1. Speed gradually increased until after the train passed through the tunnel and then was reduced to about 10 miles per hour in the vicinity of New Lots, after which it kept increasing and he thought the train approached the point of accident at a speed of from 30 to 35 miles per hour; he did not feel a brake application until about 5 seconds before the collision occurred. Conductor Lynch did not know what signal indications the train had received but from his experience with Engineman Marley in the past he considered him a competent man, and it was his idea that the engineman ran slowly after leaving FN Tower because he was looking for some train or engine ahead, and that after passing an engine at New Lots he began to speed up. Flagman Chatterton said that after passing New Lots yard the speed increased to approximately 25 miles per hour and the train was still traveling at this speed when the collision occurred; he did not know whether there was any application of the brakes.

Block Operator Conklin, on duty at FN Tower, stated that at 9:15 a.m. he received authority from the operator at MJ Tower for Extra 312 to enter the block on track 1 and this train passed his station at 9:20 a.m. When Train N-1 was ready to depart he asked the operator at MJ Tower if the work train had passed that point and that operator replied in the negative. Operator Conklin then advised that he would display a permissive signal indication for Train N-1 and this train passed on track 1 at 9:36 a.m. The circuit failed at 9:48 a.m., indicating that something was wrong, and some time later the conductor of Train N-1 reported the accident.

Road Foreman of Engines Kramer stated that after the accident an engine was coupled to the rear end of Train N-1 and the caboose and cars were pulled back to New Lots yard, where the brakes were tested; inspection of the brakes on the cars which were undamaged indicated that the brakes were in good condition except that on one car the piston travel was $10\frac{3}{4}$ inches. He also inspected the engine of Train N-1 at the scene of accident. On the head end of engine 077 the automatic brake-valve stem was broken off and the handle missing, consequently he was unable to determine the position of the valve; the independent brake-valve handle was in place and was in running position.

Assistant Supervisor of Track Goodfellow stated that a view of a train occupying track 1 at the point of accident can be had by the engineman of a following west-bound train for a distance of 944 feet.

Conclusions

This accident was caused primarily by the failure of Engineman Marley, of Train N-1, properly to control the speed of his train when running in an occupied block under a permissive signal indication; a contributing cause was the failure of Engineman Hubbs and Flagman Buckley, of Extra 312, to provide proper flag protection for their train.

Under the rules when a permissive signal indication is displayed it means that trains other than passenger trains are authorized to proceed with caution prepared to stop short of a train or obstruction. Signal 14-R, located at FN Tower and governing movements on track 1 between that point and MJ Tower, located beyond the point of accident, was displaying a permissive indication for the movement of Train N-1. This train, therefore, should have been operated prepared to stop at any point short of MJ Tower, but the evidence indicates that it covered the distance of approximately 6 miles to the point of accident in 12 minutes, or at an average speed of 30 miles per hour. Taking into consideration the fact that the speed was moderate after entering the block and was reduced for the tunnel, 3,535 feet in length, and also approaching New Lots, it would appear that the speed approaching the point of accident probably was at least as high as the rate of 30 or 35 miles per hour estimated by Conductor Lynch; the condition of the wreckage and the statements of some of the witnesses indicated that the speed had not been reduced to any great extent prior to the accident. Engineman Marley had had 81 efficiency tests on signal observance since 1927 without a failure and his work on the Bay Ridge Branch had been observed by Road Foreman of Engines Kramer on 13 occasions within about 2 years, his performance having been considered satisfactory on each occasion; in addition, he had been examined on the Long Island rules on April 5, 1934, and on the New Haven he had been examined on the rules on March 13, 1934, given a physical examination on October 17, 1934, and examined on vision, color sense, and hearing on October 24, 1934. Under these circumstances it is impossible to offer any explanation for his failure to have his train under control unless, as suggested by one of the witnesses, he ran carefully until after passing an engine which was into clear at New Lots, and then assumed that this was the train which had been in the block and caused him to be given a permissive signal indication, and increased speed on the assumption that there was nothing else ahead of him.

Extra 312 entered the block at 9:20 a.m., while the accident occurred at 9:48 a.m.; therefore this train had consumed 28 minutes in traveling 6 miles on a track where freight trains were permitted to travel at a maximum speed of 45 miles per hour. Apparently none of the three stops which had been made was of sufficient duration for the flagman to go back for any considerable distance to provide protection and the flagman did not leave fusees or torpedoes; however, it is clear that this train was being operated under circumstances which brought it within the requirements of that portion of rule 99 which requires that when a train is moving under circumstances in which it may be overtaken by a following train the flagman should take such measures as may be necessary to provide full protection; by night, or by day when the view is obscured, lighted fusees must be thrown off at proper intervals. This accident occurred during the day, in clear weather, but the view was obscured by curvature, an overhead bridge, and by an embankment on the inside of the curve. Under these conditions Flagman Buckley should have thrown off fusees as required by the rules, and in view of the fact that engine 312 was pushing its train ahead of it, with the conductor on the head end, it became the duty of Engineer Hubbs to see that the rear end of his train was properly protected; neither of these employees performed his duties insofar as providing flag protection was concerned.

Respectfully submitted,

W. J. PATTERSON

Director.