

INTERSTATE COMMERCE COMMISSION  
WASHINGTON

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INVESTIGATION NO. 3010  
THE CENTRAL RAILROAD COMPANY OF NEW JERSEY  
REPORT IN RE ACCIDENT  
AT BAYONNE, N. J., ON  
AUGUST 2, 1946

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SUMMARY

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Railroad: Central Railroad Company of  
New Jersey

Date: August 2, 1946

Location: Bayonne, N. J.

Kind of accident: Rear-end collision

Trains involved: Passenger : Passenger

Train numbers: 4227 : 4927

Engine numbers: 753 : 634

Consist: 6 cars : 4 cars

Estimated speed: 2 m. p. h. : 25 m. p. h.

Operation: Signal indications

Tracks: Four; tangent; 0.30 percent  
descending grade westward

Weather: Clear

Time: 4:32 p. m.

Casualties: 1 killed; 230 injured

Cause: Failure to operate following  
train in accordance with  
signal indications

INTERSTATE COMMERCE COMMISSION

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INVESTIGATION NO. 3010

IN THE MATTER OF MAKING ACCIDENT INVESTIGATION REPORTS  
UNDER THE ACCIDENT REPORTS ACT OF MAY 6, 1910.

THE CENTRAL RAILROAD COMPANY OF NEW JERSEY

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September 27, 1946.

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Accident at Bayonne, N. J., on August 2, 1946, caused by  
failure to operate the following train in accordance  
with signal indications.

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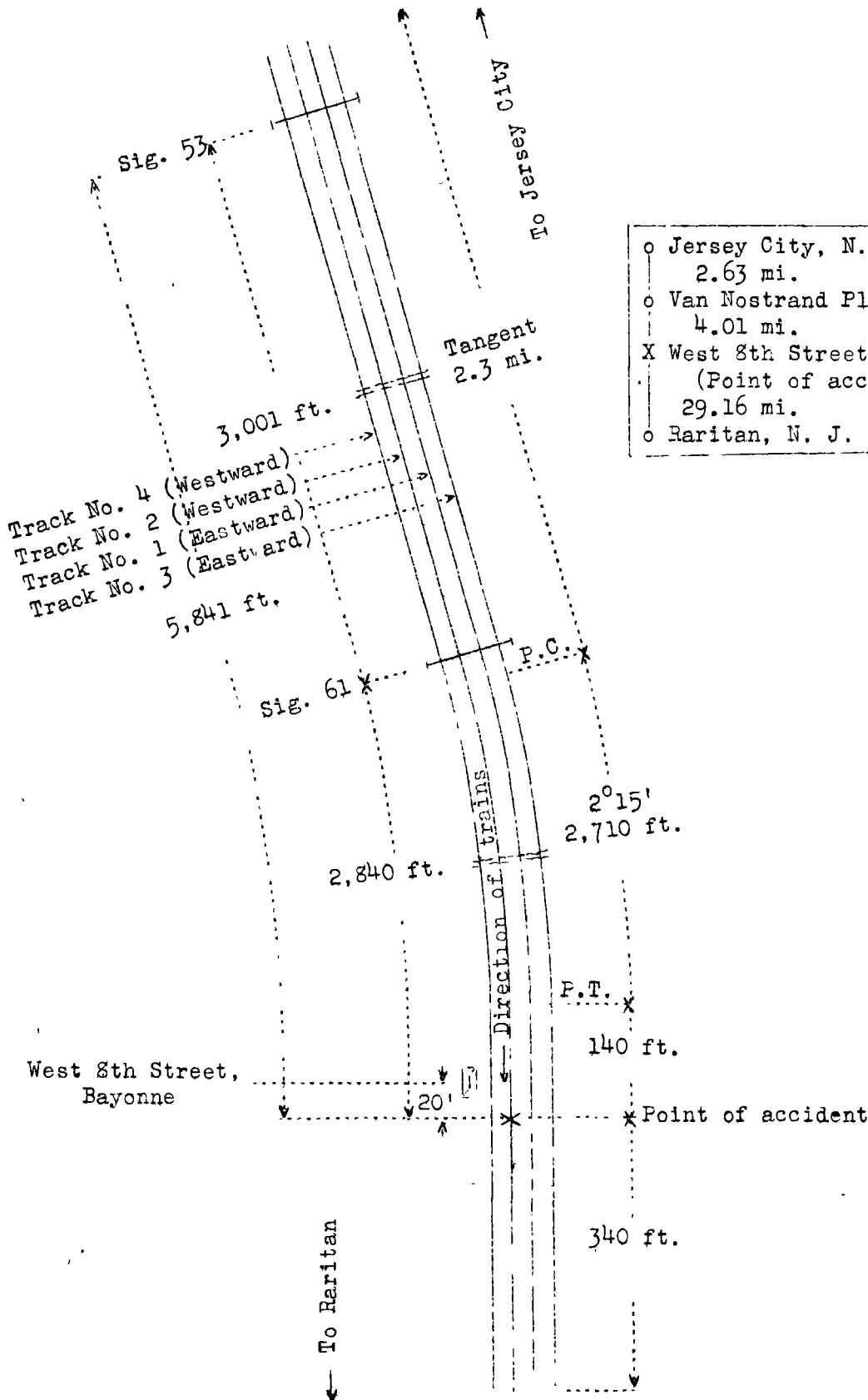
REPORT OF THE COMMISSION<sup>1</sup>

PATTERSON, Commissioner:

On August 2, 1946, there was a rear-end collision between two passenger trains on the line of the Central Railroad Company of New Jersey at West 8th Street, Bayonne, N. J., which resulted in the death of 1 employee, and the injury of 225 passengers and 5 employees. This accident was investigated in conjunction with a representative of the New Jersey Board of Public Utility Commissioners.

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<sup>1</sup>Under authority of section 17 (2) of the Interstate Commerce Act the above-entitled proceeding was referred by the Commission to Commissioner Patterson for consideration and disposition.



- o Jersey City, N. J. 2.63 mi.
- o Van Nostrand Place Tower 4.01 mi.
- X West 8th Street, Bayonne (Point of accident) 29.16 mi.
- o Raritan, N. J.

Inv. No. 3010  
 Central Railroad Company of New Jersey  
 Bayonne, N. J.  
 August 2, 1946

Location of Accident and Method of Operation

This accident occurred on that part of the Central Division extending between Jersey City and Raritan, N. J., 35.8 miles, a four-track line in the vicinity of the point of accident, over which trains are operated by signal indications. The main tracks are designated from north to south as tracks Nos. 4 and 2, westward, and tracks Nos. 1 and 3, eastward. The accident occurred on track No. 2 at Bayonne, 3.64 miles west of Jersey City, at a point about 20 feet west of the station at West 8th Street. From the east on track No. 2, there are, in succession, a tangent 2.3 miles in length, a 2°15' curve to the right 2,710 feet and a tangent 140 feet to the point of accident and 340 feet westward. The grade for west-bound trains on track No. 2 is, successively, level 1,500 feet, 0.11 percent ascending 800 feet, 0.23 percent ascending 1,400 feet, level 800 feet and 0.30 percent descending 350 feet to the point of accident and 150 feet westward.

Automatic signals 53 and 61, governing west-bound movements on track No. 2, are mounted on signal bridges located, respectively, 5,841 and 2,840 feet east of the point of accident. These signals are of the color-light type, and are approach lighted. The involved aspects and corresponding indications of these signals are as follows:

<u>Signal</u>	<u>Aspect</u>	<u>Indication</u>
53	Yellow-over-red, staggered	Proceed preparing to stop at next signal. Train exceeding medium speed must at once reduce to that speed.
61	Red-over-red, staggered	Stop. Then proceed with caution in accordance with Rule 509-B.

The controlling circuits of these signals are so arranged that when a train is occupying track No. 2 in the block immediately west of signal 61, signal 53 displays proceed-preparing-to-stop-at-next-signal and signal 61 displays stop-then-proceed.

Operating rules read in part as follows:

DEFINITIONS

\* \* \*

Medium Speed.--One-half the normal speed, not to exceed thirty (30) miles per hour, \* \* \*

\* \* \*

Restricted Speed--Proceed prepared to stop short of train, obstruction, or anything that may require the speed of a train to be reduced.

#### 14. ENGINE AND MOTOR WHISTLE SIGNALS

Note.--The signals prescribed are illustrated by "o" for short sounds, "\_\_\_" for longer sounds:  
\* \* \*

SOUND	INDICATION
* * *	
(c) ___ o o o	Flagman protect rear of train.
* * *	
(e) ___ _ _ _ _	Flagman may return from east or north, as prescribed by Rule 99.
* * *	

35. The following signals will be used by flagmen:

Day signals--A red flag,  
Torpedoes and  
Fuseses where required.

\* \* \*

99. When a train stops under circumstances in which it may be overtaken by another train, the flagman must go back immediately with flagman's signals a sufficient distance to insure full protection, placing two torpedoes, and when necessary, in addition, displaying lighted fuseses.

\* \* \*

When a train is moving under circumstances in which it may be overtaken by another train, the flagman must take such action as may be necessary to insure full protection. By night, or by day when the view is obscured, lighted fuseses must be thrown off at proper intervals.

\* \* \*

509. When a train is stopped by a block signal it may proceed:

\* \* \*

(b) On two or more tracks at once at restricted speed.

The maximum authorized speed for passenger trains on this line is 65 miles per hour. Time-table special instructions prescribe the maximum authorized speed for passenger trains as 55 miles per hour in the territory immediately east of the point of accident and 30 miles per hour in the immediate vicinity of the point of accident.

#### Description of Accident

No. 4227, a west-bound first-class passenger train, consisted of engine 753, one passenger-baggage car and five coaches, in the order named. All cars were of steel construction. This train passed Van Nostrand Place Tower, 4.01 miles east of West 8th Street, Bayonne, at 4:26 p. m., and stopped on track No. 2 at West 8th Street, Bayonne, at 4:31 p. m., with the rear end standing about 2,820 feet west of signal 61. About one minute later, after this train had moved about 20 feet westward, the rear end was struck by No. 4927.

No. 4927, a west-bound first-class passenger train, consisted of engine 634 and four coaches, in the order named. All cars were of steel construction. This train passed Van Nostrand Place Tower at 4:28 p. m., passed signal 53, which displayed proceed-preparing-to-stop-at-next-signal, passed signal 63, which displayed stop-then-proceed, and while moving on track No. 2 at an estimated speed of 25 miles per hour it struck No. 4227.

The force of the impact moved No. 4227 forward about 70 feet. The sixth car was derailed and stopped on its right side on track No. 4. Its rear end was crushed to the rear bolster. The tender of the engine, and the first and fifth cars of this train were slightly damaged. The engine of No. 4927 was derailed, and stopped on its right side on track No. 4, and was badly damaged. The cars of this train were slightly damaged.

The weather was clear at the time of the accident, which occurred about 4:32 p. m.

The fireman of No. 4927 was killed. The conductor, the front brakeman and the flagman of No. 4927, and the conductor and the fireman of No. 4227 were injured.

### Discussion

The time-table schedules of Nos. 4227 and 4927 at West 8th Street, Bayonne, were, respectively, 4:27 p. m. and 4:30 p. m., but these trains were not scheduled to stop for passengers at this station. However, because a preceding train could not accommodate all the west-bound passengers at this station, the train dispatcher instructed the towerman at BV Tower, West 8th Street, to stop No. 4227 by displaying signals at stop. The crew of this train did not know their train was to receive these passengers until their train stopped at the station at 4:31 p. m. About 1 minute later, after this train had started and moved westward about 20 feet, the rear end was struck by No. 4927 about 2,840 feet west of signal 61, which displayed stop-then-proceed.

When No. 4227 stopped at Bayonne the engineer sounded the engine-whistle signal for the flagman to provide protection against following trains. Immediately afterward, signals for this train to proceed were given and the engineer sounded the engine-whistle signal to recall the flagman. The conductor and the front brakeman were in the first car. The flagman said that when his train stopped he alighted from the rear vestibule of the rear car. Immediately afterward, a signal recalling him was sounded and he had just started to re-enter the rear car when he saw the following train closely approaching. He immediately gave stop signals with a red flag from the lower step of the rear car, and jumped from this car just before the collision occurred. Because the speed of all trains is restricted to 30 miles per hour in this vicinity and the weather was clear, the flagman did not consider it necessary to drop lighted fuses to provide protection for his train as it was preparing to stop at Bayonne.

As No. 4927 was approaching signal 53, located 3,001 feet east of signal 61, the speed was about 45 miles per hour. The brakes of this train had been tested and had functioned properly en route. The engineer was on the right side of the cab, which is located midway of the boiler, and the fireman was in the fireman's shelter at the rear of the back-head of the firebox. From this location the fireman is unable to maintain a lookout ahead. The fireman was killed in the accident. The engineer said that when the engine was in the immediate vicinity of signal 53 he made a service brake-pipe reduction, which soon reduced the speed to 30 miles per hour, in compliance with the proceed-preparing-to-stop-at-next-signal indication displayed by signal 53. Then the engineer operated the injector to supply water to the boiler. He said that the injector did not seem to function properly and that he did not see the indication displayed by signal 61, because he was engaged in manipulating the injector. Under the conditions present, this signal should



have displayed stop-then-proceed-at-restricted-speed for No. 4927, and in tests after the accident it functioned properly. The engineer of No. 4927 first saw the preceding train about 300 feet distant. Then he moved the brake valve to emergency position. The speed of No. 4927 was about 25 miles per hour when the collision occurred. After the accident the injector assembly of the engine of No. 4927 was applied to an engine of similar type. During tests this injector assembly functioned properly.

During the 30-day period immediately preceding the day of this accident, the average number of trains operated daily in the territory involved was 255.8. According to the timetable, the time interval between the schedules of Nos. 4227 and 4927 at Jersey City was 1 minute, at Communipaw, 5.39 miles east of West 8th Street, 2 minutes, and at West 8th Street, 3 minutes. Such close headway requires extraordinary alertness on the part of engineers in order to avoid collisions.

Cause

It is found that this accident was caused by failure to operate the following train in accordance with signal indications.

Dated at Washington, D. C., this twenty-seventh day of September, 1946.

By the Commission, Commissioner Patterson.

(SEAL)

W. P. BARTEL,  
Secretary.