INTERSTATE COMMERCE COMMISSION

WASHINGTON

INVESTIGATION NO. 2773

THE NEW YORK CENTRAL RAILROAD COMPANY

REPORT IN RE ACCIDENT

NEAR ASHTABULA, OHIO, ON

FEBRUARY 12, 1944

SUMMARY

Railroad:	New York Central	
Date:	February 12, 1944	
Location:	Ashtabula, Ohio	
Kind of accident:	Side collision	
Trains involved:	P. R. R. engine	: N. Y. C. passenger
Train number:		: Extra 3137 East
Engine numbers:	476	: 3137
Consist:		: 13 cars
Speed:	Standing	: 70 m. p. h.
Operation:	Automatic block-signal and automatic train-stop system	
Track:	Four; tangent; level	
Weather:	Snowing	
Time:	2:32 a. m.	
Casualties:	1 killed; 5 injured	
Cause:	Failure to provide proper protection for a crossover movement	

INTERSTATE COMMERCE COMMISSION

INVESTIGATION NO. 2773

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

THE NEW YORK CENTRAL RAILROAD COMPANY

April 17, 1944.

Accident near Asntabula, Ohio, on February 12, 1944, caused by failure to provide proper protection for a crossover movement.

REPORT OF THE COMMISSION[1]

PATTERSON, Chairman:

On February 12, 1944, there was a side collision between a Pennsylvania Railroad engine and a New York Central Railroad passenger train on the line of the New York Central Railroad near Ashtabula, Ohio, which resulted in the death of one New York Central Railroad train-service employee, and the injury of one passenger, one Pullman employee and three New York Central Railroad train-service employees. This accident was investigated in conjunction with a representative of the Public Utilities Commission of Ohio.

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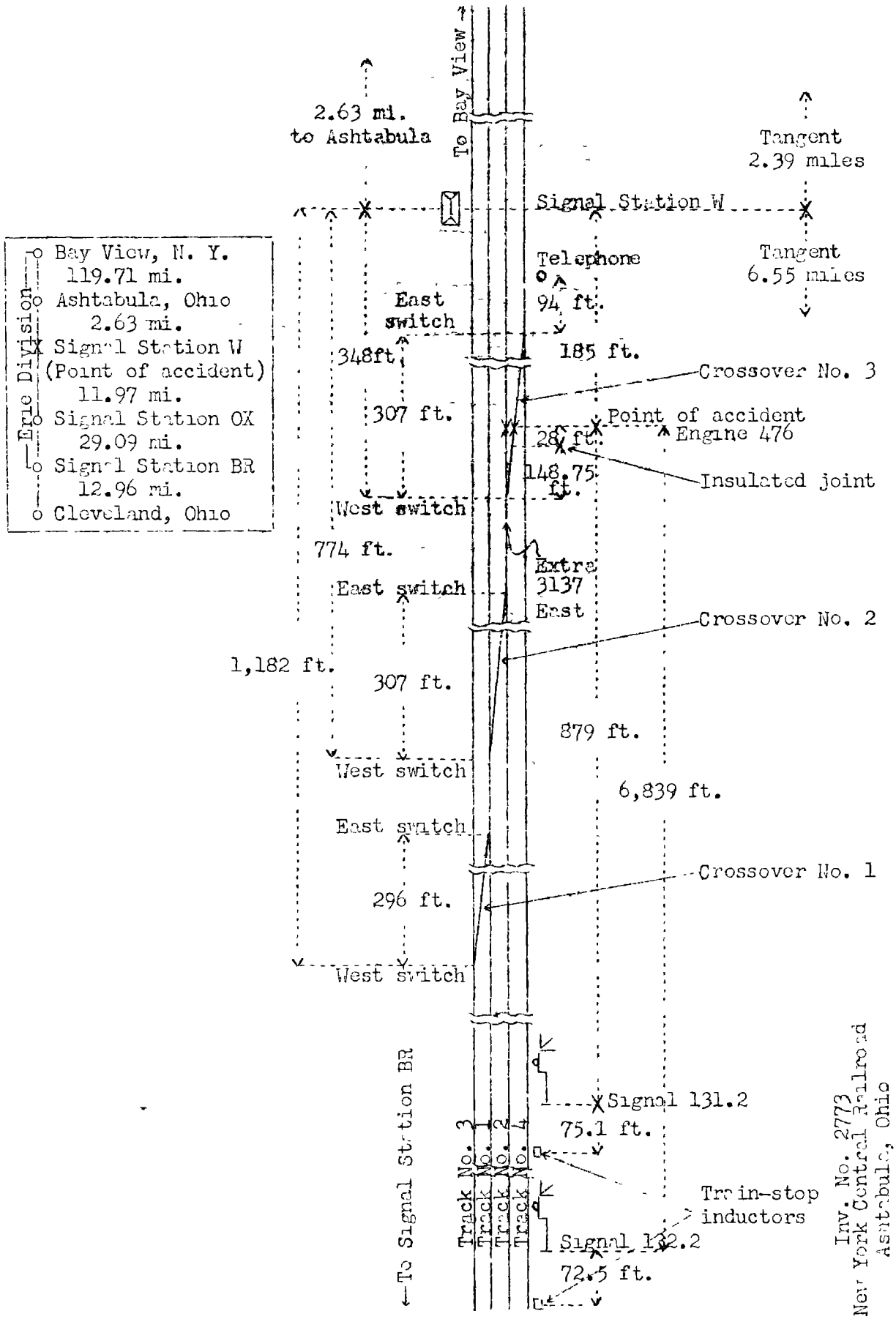
[1]Under authority of section 17 (2) of the Interstate Commerce Act the above-entitled proceeding was referred by the Commission to Chairman Patterson for consideration and disposition.


Erie Division
Bay View, N. Y.
119.71 mi.
Ashtabula, Ohio
2.63 mi.
Signal Station W
(Point of accident)
11.97 mi.
Signal Station OX
29.09 mi.
Signal Station BR
12.96 mi.
Cleveland, Ohio
To Bay View
2.63 mi.
to Ashtabula
Tangent
2.39 miles
Signal Station W
Telephone
94 ft.
Tangent
6.55 miles
East
switch
348ft.
185 ft.
Crossover No. 3
307 ft.
Point of accident
Engine 476
28 ft.
148.75
ft.
Insulated joint
West switch
774 ft.
East switch
Extra
3137
East
Crossover No. 2
1,182 ft.
307 ft.
879 ft.
West switch
6,839 ft.
East switch
Crossover No. 1
296 ft.
West switch
Signal 131.2
75.1 ft.
Train-stop
inductors
Signal 132.2
72.5 ft.
Track No. 3
Track No. 2
Track No. 4
To Signal Station BR
Inv. No. 2773
New York Central Railroad
Ashtabula, Ohio
February 12, 1944

Location of Accident and Method of Operation

This accident occurred on that part of the Erie Division extending between Signal Station BR, near Cleveland, Ohio, and Bay View, N. Y., 163.4 miles. This was a four-track line over which trains moving with the current of traffic were operated by an automatic block-signal system, the indications of which superseded time-table superiority, and an automatic train-stop system. The Pennsylvania Railroad train involved was being operated over a portion of this line. The main tracks from north to south were No. 3, westward freight, No. 1, westward passenger, No. 2, eastward passenger, and No. 4, eastward freight. In the vicinity of Signal Station W, 2.63 miles west of Ashtabula, a crossover 296 feet long, hereinafter referred to as crossover No. 1, connected tracks No. 3 and No. 1, a crossover 307 feet long, hereinafter referred to as crossover No. 2, connected tracks No. 1 and No. 2, and a crossover 307 feet long, hereinafter referred to as crossover No. 3, connected tracks No. 2 and No. 4. The west switches of these crossovers were, respectively, 1,182 feet, 774 feet and 348 feet west of Signal Station W, and were facing-point for east-bound movements through the crossovers from track No. 3 to track No. 1, from track No. 1 to track No. 2 and from track No. 2 to track No. 4. The accident occurred 185 feet west of Signal Station W, at the fouling point of track No. 2 and crossover No. 3. The engine was occupying crossover No. 3 and the passenger train was moving on track No. 2. The main tracks were tangent throughout a distance of 6.55 miles west of Signal Station W and 2.39 miles eastward. The grade was practically level.

The switches of the crossovers were of the hand-throw type. The switches of crossover No. 1 were provided with high switch-stands and the switches of crossovers No. 2 and No. 3 with low switch-stands. The switch-stands were provided with oil lamps. When the switches were lined for movement through the crossovers a red light was displayed by each lamp, and when lined for movement on the main track a green light was displayed by each lamp. Both switch-stands of crossover No. 3 were between tracks No. 2 and No. 4. A telephone for communication between members of train crews and the train dispatcher was south of track No. 4 and 94 feet east of the east switch of crossover No. 3. An interlocking, which formerly protected movements through the crossovers at Signal Station W, was discontinued on July 29, 1932.

Automatic signals 132.2 and 131.2, which governed east-bound movements on track No. 2, were, respectively, 6,839 feet and 879 feet west of the point of accident. The signals were of the two-unit, three-indication, color-light type and were approach lighted. The involved aspects and corresponding indications of these signals were as follows:

Aspect	Indication
Red-over-red, staggered	Stop, then proceed at restricted speed
Yellow-over-red, staggered	Proceed preparing to stop at next signal. * * *
Green-over-red, staggered	Proceed

The automatic train-stop system was of the intermittent-inductive type. Train-stop inductors were located 72.5 feet west of signal 132.2, and 75.1 feet west of signal 131.2. The controlling track circuits were so arranged that when either switch of crossover No. 3 was lined for movement through the crossover, signal 132.2 would display yellow-over-red, and signal 131.2 would display red-over-red. When the switches of crossover No. 3 were lined for movement on track No. 2 and no train or engine was occupying track No. 2 within the controlling track circuits, signals 132.2 and 131.2 would display green-over-red when an east-bound train entered the approach-lighting circuit 12,646 feet west of the west switch of crossover No. 3. Insulated joints of crossover No. 3, which separated the track circuit of track No. 2 from the track circuit of track No. 4, were located approximately 150 feet east of the west crossover-switch.

SIGNAL DEFINITIONS

* * *

Slow Speed.--A speed not exceeding fifteen miles per hour.

Restricted Speed.--A speed not exceeding that which will enable a train to stop short of train ahead, obstruction, or switch not properly lined, look out for broken rail, and not exceeding slow speed.

Operating rules read in part as follows:

11. A train finding a fusee burning on or near its track must stop and extinguish the fusee, and then proceed prepared to stop short of train ahead or obstruction.

15. The explosion of two torpedoes is a signal to reduce speed and prepare to stop short of train ahead or obstruction. * * *

* * *

35. The following signals will be used by flagmen:

* * * Night signals--A red light,
A white light,
Torpedoes,
Fusees.

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 fusees. When recalled and safety to the train will permit, he may return.

* * *

The front of the train must be protected in the same way when necessary by the head brakeman, baggageman or fireman.

* * *

511. Both switches of a crossover must be open before a train or engine starts to make a crossover movement, and the movement must be completed before either switch is restored to normal position.

513. Unless otherwise provided, in automatic block system territory, yard engines or trains before entering a main track, or crossing from one main track to another, must obtain permission from the signalman or train dispatcher. This permission must not be given unless it is known that the movement of an approaching train will not be affected. This will not relieve employes in train service from the duty of promptly and properly protecting their train.

* * *

The maximum authorized speed for the N. Y. C. train was 70 miles per hour.

Description of Accident

Extra 476 West, a west-bound Pennsylvania Railroad freight train, consisted of engine 476, of the 2-8-2 type, 94 cars and a caboose. This train stopped about 2:15 a. m. on track No. 3 east of the west switch of crossover No. 1 at Signal Station W, and the engine was detached. About 13 minutes later, after the engine had moved eastward through crossovers No. 1 and No. 2 and had entered crossover No. 3, it stopped 163 feet east of the west switch of crossover No. 3, with the engine-truck wheels 28 feet east of the insulated joints and the front end of the

engine fouling track No. 2. About 4 minutes later the engine was struck by Extra 3137 East.

Extra 3137 East, an east-bound New York Central Railroad passenger train, consisted of engine 3137, one baggage car, three coaches, seven Pullman sleeping cars, one coach and one Pullman troop-sleeping car, in the order named. All cars were of steel construction. This train passed Signal Station OX, 11.97 miles west of Signal Station W and the last open office, at 2:22 a. m., passed signals 132.2 and 131.2, which displayed proceed, and while moving on track No. 2 at an estimated speed of 70 miles per hour it collided with engine 476 at a point 879 feet east of signal 131.2.

The force of the impact moved engine 476 eastward about 13 feet. It was derailed and stopped, considerably damaged, upright and in line with the crossover. Engine 3137 and its tender were derailed and stopped, badly damaged, on their left sides on track No. 1, about 1,260 feet east of the point of collision. All cars of Extra 3137 East were derailed and stopped, considerably damaged, practically upright and in line with the main tracks.

All cars except the first and thirteenth cars were equipped with self-locking center-pins. The fourth, fifth, sixth and tenth cars were equipped with tight-lock couplers.

During the 30-day period preceding the day of the accident, 122 freight trains and 6 engines moved through the crossovers involved.

It was snowing at the time of the accident, which occurred about 2:32 a. m.

The train-service employee killed was the engineer-pilot of engine 476. The train-service employees injured were the engineer, the fireman and a brakeman of Extra 3137 East.

Discussion

The rules governing operation in automatic block-signal territory on this line provide that permission must be obtained from the train dispatcher and flag protection must be furnished in both directions before a train or an engine starts to cross a main track. Both switches of a crossover must be opened before a crossover movement is made, and the movement must be completed before either switch is restored to normal position.

About 4 minutes after engine 476 had entered crossover No. 3 and had stopped with the front end of the engine fouling track No. 2, it was struck by Extra 3137 East. The switches of crossover No. 3 were closed, and signals 132.2 and 131.2 displayed proceed when Extra 3137 passed them.

As Extra 3137 was approaching Signal Station W the speed was about 70 miles per hour. The enginemen were maintaining a lookout ahead. It was snowing and visibility was somewhat restricted. No warning signal was seen or heard, and the enginemen were not aware that engine 476 was occupying the crossover and fouling track No. 2 until the collision occurred.

The movement of Extra 476 West was in the charge of a pilot-conductor and a pilot-engineer, who were employees of the New York Central Railroad. The remainder of the crew were employees of the Pennsylvania Railroad. When Extra 476 stopped on track No. 3 at Signal Station W the pilot-engineer, the engineer, the fireman and the front brakeman were on the engine. The pilot-conductor and the conductor were on the caboose. The pilot-engineer communicated with the train dispatcher and obtained permission for engine 476 to cross from track No. 3 to track No. 4, in order to procure a supply of coal. The pilot-engineer and the front brakeman opened the switches of crossovers No. 1 and No. 2, and the west switch of crossover No. 3, and gave signals for the engine to move through the crossovers. The engine moved through crossovers No. 1 and No. 2 and entered crossover No. 3, then it was stopped, because snow and ice on the switch lock of the east switch of crossover No. 3 prevented opening the lock. The fireman closed the switches of crossovers No. 1 and No. 2 and the west switch of crossover No. 3, and was in the vicinity of the west switch of crossover No. 3 when he saw the reflection of the headlight of Extra 3137 about 200 feet distant. He said he displayed a lighted fusee during the time the crossover movement was being made, and the front brakeman said a lighted fusee was being used to thaw the ice on the switch lock, but the enginemen of Extra 3137 were positive that no warning signals were visible from their engine prior to the occurrence of the accident. The engineer of engine 476 said that the boiler of the engine obstructed his view to the west, and he was not aware that a train was approaching on track No. 2 until the collision occurred. The headlight on the front end of engine 476 was not lighted. It could not be determined when the pilot-engineer of engine 476 became aware of anything being wrong, as he was killed in the accident. The pilot-conductor and the conductor of Extra 476 were proceeding toward the front end of their train when the accident occurred.

Under the rules, flag protection was required to be furnished in both directions for engine 476, during the crossover movement; if adequate flag protection had been provided the accident would have been prevented. Under the rules, also, both switches of the crossover involved were required to be open before the crossover movement was started and kept open until the crossover movement was completed. If the engine had not entered crossover No. 3 until after the east switch was open and if both switches had been kept open until the engine had completed the movement through the crossover, as required by the rules, the signals governing the movement of east-bound trains on track No. 2 would have displayed restrictive indications for Extra 3137 East and the automatic train-stop apparatus would have

been actuated, and this accident would have been averted.

Both switches of the crossover involved were equipped with circuit controllers, and the circuits controlling the signals were so arranged that restrictive signal indications for movements on tracks 2 and 4 would be displayed when either crossover switch was lined for a movement through the crossover. The rails of the crossover were connected into the track circuits of tracks 2 and 4. The track circuit for track 2 extended to the insulated joints located near the middle of the crossover, approximately 150 feet east of the west switch. In the movement involved, engine 476 cleared the track circuit for track 2 and stopped on the east portion of the crossover, about 28 feet east of the insulated joints, in position where it physically fouled both tracks but would shunt the track circuit for track 4 only. As a result of the east crossover switch not being opened, because of the frozen lock, and the west crossover switch being closed while the engine was still occupying the crossover, proceed signal indications were improperly displayed for Extra 3137 East on track 2.

Section 51 of the rules, standards and instructions for the installation, inspection, maintenance and repair of automatic block-signal and automatic train-stop systems, prescribed by the Commission's order of April 13, 1939, provides that track circuits shall be so installed and maintained that the track relay will be in deenergized position, and the track circuit of an automatic train-stop system will be deenergized in the rear of the point where an engine or a car occupies any part of the fouling section of a crossover. It contemplates that track circuits shall be so arranged as to give complete fouling protection. If the circuits had been so arranged, signal 132.2 would have displayed approach and signal 131.2 would have displayed stop-then-proceed-at-restricted-speed, regardless of the position of the crossover switches.

Cause

It is found that this accident was caused by failure to provide proper protection for a crossover movement.

Dated at Washington, D. C., this seventeenth day of April, 1944.

By the Commission, Chairman Patterson.

W. P. BARTEL,
Secretary.

(SEAL)