INTERSTATE COMMERCE COMMISSION

WASHINGTON

REPORT NO. 3371

THE NEW YORK CENTRAL RAILROAD COMPANY

IN RE ACCIDENT

AT ERIE, PA., ON

OCTOBER 5, 1950

SUMMARY

Date:	October 5, 1950	
Railroad:	New York Central	
Location:	Erie, Pa.	
Kind of accident:	Collision	
Trains involved:	Freight	: Passenger
Train numbers:	Extra 5454 East	: 27
Engine numbers:	5454	: Diesel-electric units 4208A and 4209A
Consists:	76 cars, caboose	: 14 cars
Speeds:	Standing	: 83 m. p. h.
Operation:	Signal indications	
Tracks:	Four; tangent; level	
Weather:	Clear	
Time:	1:15 a. m.	
Casualties:	33 injured	
Cause:	Failure to provide protection on adjacent track after train was stopped by emergency application of brakes	

INTERSTATE COMMERCE COMMISSION

REPORT NO. 3371

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

THE NEW YORK CENTRAL RAILROAD COMPANY

December 1, 1950

Accident at Erie, Pa., on October 5, 1950, caused by failure to provide protection on an adjacent track after the train was stopped by an emergency application of the brakes.

REPORT OF THE COMMISSION[1]

PATTERSON, Commissioner:

On October 5, 1950, a derailed car of a freight train was struck by a passenger train on the New York Central Railroad at Erie, Pa. As a result 17 passengers, 2 Pullman employees, 9 dining-car employees and 5 train-service employees were injured. This accident was investigated in conjunction with a representative of the Pennsylvania Public Utility Commission.

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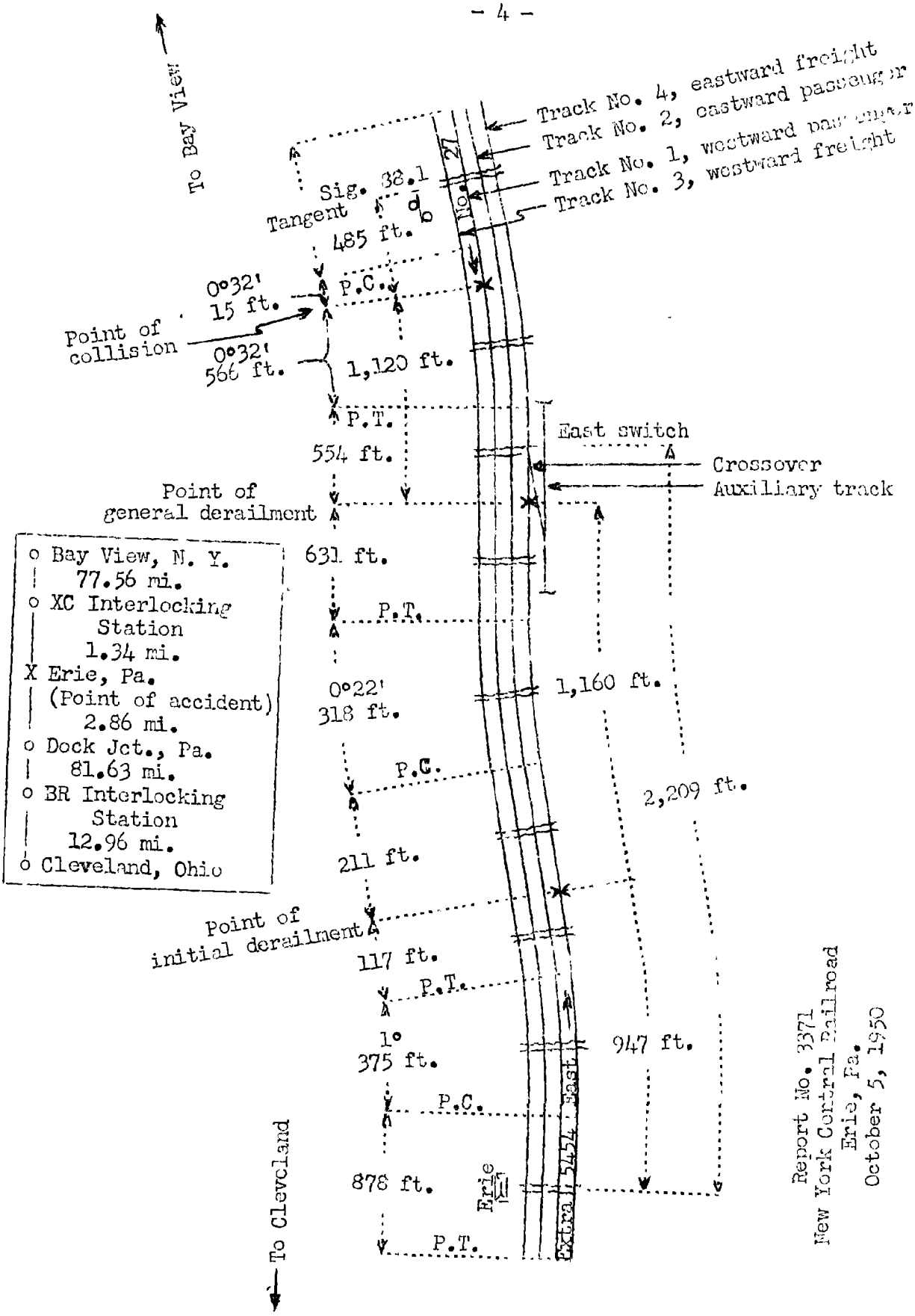
[1] Under authority of section 17 (2) of the Interstate Commerce Act the above-entitled proceeding was referred by the Commission to Commissioner Patterson for consideration and disposition.



Report No. 3371
New York Central Railroad
Erie, Pa.
October 5, 1950

Location of Accident and Method of Operation

This accident occurred on that part of the Erie Division extending between BR interlocking station near Cleveland, Ohio, and Bay View, N. Y., 163.39 miles. In the vicinity of the point of accident this is a four-track line, over which trains moving with the current of traffic are operated by signal indications supplemented by an automatic train-stop system. The main tracks from south to north are designated as No. 4, eastward freight; No. 2, eastward passenger; No. 1, westward passenger; and No. 3, westward freight. At Erie, Pa., 84.49 miles east of BR interlocking station, an auxiliary track parallels track No. 4 on the south. The east switch of a crossover, which connects track No. 4 and the auxiliary track, is located 2,209 feet east of the station. This switch is trailing point for east-bound movements on track No. 4. The initial derailment occurred on track No. 4 at a point 947 feet east of the station at Erie, and the general derailment occurred 1,160 feet eastward. The collision occurred on track No. 1 at a point 1,120 feet east of the point of general derailment. From the west on track No. 4 there are, in succession, a tangent 878 feet in length, a 1° curve to the left 375 feet, a tangent 117 feet to the point of the initial derailment and 211 feet eastward, a 0°22' curve to the right 318 feet, and a tangent 631 feet to the point of general derailment and 554 feet eastward. From the east track No. 1 is tangent a considerable distance and then there is a 0°32' curve to the right 15 feet to the point of collision and 566 feet westward. In the vicinity of the point of accident the grade is practically level.

The track structure of track No. 4 consists of 127-pound rail, 39 feet in length, laid on an average of 24 ties to the rail length. It is fully tieplated, double-spiked, provided with 6-hole joint bars and an average of 12 rail anchors per rail length. It is ballasted with slag to a depth of 12 inches below the bottoms of the ties.

Automatic signal 88.1, governing west-bound movements on track No. 1, is located 485 feet east of the point of collision. The signal is approach-lighted and displays five aspects.

This carrier's operating rules read in part as follows:

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.

* * *

102a. When a train is * * * stopped suddenly by an emergency application of the brakes * * * adjacent tracks * * * that are liable to be obstructed must at once be protected until it is ascertained they are safe and clear for the movement of trains.

The maximum authorized speed for the freight train involved was 50 miles per hour. The maximum authorized speed for the passenger train involved was 85 miles per hour.

Description of Accident

Extra 5454 East, an east-bound freight train, consisted of engine 5454, 76 cars and a caboose. This train passed Dock Jct., the last open office, 2.86 miles west of Erie, at 1:07 a. m., and while moving on track No. 4 at a speed of 45 miles per hour the front wheels of the rear truck of the thirty-seventh car were derailed. A general derailment occurred 1,160 feet eastward. The thirty-seventh car stopped on its right side and across track No. 1. About 2 minutes later this car was struck by No. 27.

No. 27, a west-bound first-class passenger train, consisted of Diesel-electric units 4208A and 4209A, coupled in multiple-unit control, one baggage-dormitory car, two coaches, one dining car, four sleeping cars, one dining car, four sleeping cars and one observation car, in the order named. All cars were of all-steel construction. This train passed Bay View at 12:16 a. m., 10 minutes late, passed XC interlocking station, the last open office, 1.34 miles east of Erie, at 1:14 a. m., and while moving on track No. 1 at a speed of 83 miles per hour it struck the thirty-seventh car of Extra 5454 East.

Both Diesel-electric units, the first to the tenth cars, inclusive, and the front truck of the eleventh car of No. 27 were derailed. Separations occurred between all units from the front of the train to the sixth car. The first Diesel-electric unit stopped on its right side and 900 feet west of the point of collision. The west end stopped on track No. 3 and the east end stopped about 20 feet north of track No. 3. The second Diesel-electric unit stopped upright and 63 feet east of the first unit. The west end of this unit was 6 feet north of track No. 3 and the east end was on track No. 3. The first car stopped upright, east of the second Diesel-electric unit and in line with track No. 2. The second car stopped against the east end of the first car and across tracks Nos. 2, 1 and 3. It leaned to the north at an angle of about 45 degrees. The third car stopped upright, against the east end of the second car and across tracks Nos. 3, 1, and 2. The fourth car stopped against the east end of the third car and across tracks Nos. 2, 1, and 3. The fifth car stopped upright, to the rear of the fourth car and across tracks Nos. 1 and 3. The sixth car stopped to the rear of the fifth car and across tracks Nos. 1 and 3. The seventh and the eighth cars stopped upright, with the west end of the seventh car on track No. 3 and the east end of the eighth car on track No. 1. The other derailed cars remained upright and in line with track No. 1. The Diesel-electric units and the first to the seventh cars, inclusive, were badly damaged. The eighth to the eleventh cars, inclusive, were somewhat damaged. The thirty-seventh to the fifty-third cars, inclusive, of Extra 5454 East were derailed. These cars stopped in various positions on or along the tracks. Nine of the derailed cars were destroyed, and ten other cars were damaged.

The engineer, the fireman, the conductor, one brakeman and the baggageman of No. 27 were injured.

The weather was clear at the time of the accident, which occurred about 1:15 a. m.

G.A.T.X. 27520, the thirty-seventh car of Extra 5454 East, was an all-steel tank car. The cargo consisted of 10,012 gallons of residual fuel oil, which weighed 74,088 pounds. The trucks were equipped with integral cast-steel truck frames. The front wheels of the rear truck were 750-pound single-plate bracketed 33-inch cast-iron wheels. They were cast in 1944.

Engine 5454 is equipped with No. 8-ET brake equipment, an M-3 feed valve, and two 8-1/2-inch cross-compound air compressors.

Discussion

As Extra 5454 East was approaching the point where the accident occurred the speed was 47 miles per hour. The brakes of this train had been tested and had functioned properly when used en route. The engineer, the fireman and the front brakeman were in the cab of the engine, and the conductor and the flagman were in the caboose. The members of the crew inspected the train on curves en route, and they did not observe anything defective. The brakes were used to control the speed of the train to comply with a signal indication. The speed of the train was reduced to 45 miles per hour and the brake valve was in lap position when the brakes became applied in emergency as a result of the derailment. When the train stopped, the front brakeman alighted from the north side of the engine and proceeded eastward with a lighted red fusee. The engineer placed the automatic brake-valve handle in running position and observed that the brake-pipe pressure increased to 80 pounds. He then alighted from the south side of the engine and looked westward to inspect the train. He did not observe anything defective, then boarded the engine and observed that the brake-pipe pressure was being maintained at 80 pounds. He said the brake-pipe pressure indicated that the train had not parted. The fireman said that the engineer called his attention to the brake-pipe pressure gauge and instructed him to recall the front brakeman. The engineer said he did not remember that he instructed the fireman to recall the front brakeman. The front brakeman said that as he proceeded eastward he observed the headlight of an approaching west-bound train, and was about to give stop signals when he was recalled by the fireman. He then extinguished the fusee and returned to the engine. No. 27 passed engine 5454 as the front brakeman was boarding the engine.

As No. 27 was approaching the point where the collision occurred the enginemen were maintaining a lookout ahead from the control compartment of the first Diesel-electric unit, and the members of the train crew were in various locations throughout the cars of the train. The headlight was lighted brightly. Signal 88.1, the last automatic signal which No. 27 passed prior to the time of the accident, indicated Proceed, and the indication was called by the enginemen. After the engine passed the front end of Extra 5454 East, both the engineer and the fireman observed the tank car across the track. However, the collision occurred before the engineer could take action to stop the train. Apparently this car stopped across track No. 1 in such manner that the track circuit was not shunted.

Examination of track No. 4 after the accident occurred disclosed no indication of dragging equipment or of any obstruction having been on the track. Starting at a point 2,080 feet west of the point of accident a series of marks appeared on the gage side of the north rail. About 35 pieces of the flange of a wheel were found between the first mark on the gage side of the north rail and the point of derailment. At the point of derailment marks on the north rail and on the ties indicated that one pair of wheels had been derailed to the north. The general derailment occurred at the frog of the east turnout of the crossover to the auxiliary track.

Inspection of G.A.T.X 27520 after the accident occurred disclosed that approximately 59 percent of the flange was broken from the north front wheel of the rear truck. All breaks were new. The remaining portion of the flange was worn. However, it was not worn to the condemning limit of the carrier, and it could not be determined if any part of the broken flange was worn to the condemning limit. The companion wheel had considerably less flange wear. The flange of the north rear wheel of the rear truck also was considerably worn. Each of the north wheels of this truck was two tape sizes smaller than its companion wheel. As a result, the rear truck of this car had a tendency to bear heavily against the north rail. A laboratory analysis of the wheel with the broken flange indicated that the metal in the wheel was normal and that the chill was not excessive.

After the accident occurred tests were made of the air-brake systems of two freight trains. The engines of these trains were equipped with No. 8-ET brake equipment, an M-5 feed valve, and two 8-1/2-inch cross-compound air compressors, the same as engine 5454. In each test the brakes were applied in emergency by opening the angle cock at the rear end of the

thirty-eighth car. The automatic brake-valve handle was then placed in lap position. After 75 seconds the automatic brake-valve handle was placed in running position. The brake-pipe pressure as indicated on the brake-pipe pressure gauge in the cab of the engine was restored to 77 pounds in 1 minute in the first test, and to 76 pounds in 1 minute in the second test. The angle cock at the rear end of the thirty-eighth car remained open throughout each test.

When Extra 5454 East stopped, the front brakeman immediately proceeded eastward with a lighted fusee to provide protection on adjacent tracks. The air-brake equipment of engine 5454 was of sufficient capacity to build up brake-pipe pressure of 80 pounds with the train parted at the thirty-seventh car and with the brake valve operated as stated by the engineer. As a result, the engineer assumed that the train had not parted and the front brakeman was recalled. However, the rules require that when a train is stopped by an emergency application of the brakes, adjacent tracks which might be obstructed must be protected until it is ascertained that they are safe and clear for the movement of trains. An inspection of the train and adjacent tracks was not made prior to the recall of the front brakeman.

Cause

It is found that this accident was caused by failure to provide protection on an adjacent track after the train was stopped by an emergency application of the brakes.

Dated at Washington, D. C., this first day of December, 1950.

By the Commission, Commissioner Patterson.

(SEAL)

W. P. BARTEL,

Secretary.