INTERSTATE COMMERCE COMMISSION

WASHINGTON

REPORT NO. 3648

CHICAGO & EASTERN ILLINOIS RAILROAD COMPANY

IN RE ACCIDENT

AT PAPINEAU, ILL., ON

JULY 1, 1958

SUMMARY

Date:	July 1, 1955
Railroad:	Chicago & Eastern Illinois
Location:	Papineau, Ill.
Kind of accident:	Derailment
Train involved:	Passenger
Train number:	1
Locomotive number:	Diesel-electric unit 1600
Consist:	3 cars
Speed:	70 m. p. h.
Operation:	Movements with the current of traffic by timetable, train orders, and automatic block-signal system; movements against the current of traffic by train orders
Tracks:	Double, tangent; 0.39 percent ascending grade southward
Weather:	Clear
Time:	9:38 a. m.
Casualties:	1 killed; 44 injured
Cause:	Train entering crossover at an excessive rate of speed

INTERSTATE COMMERCE COMMISSION

REPORT NO. 3648

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

CHICAGO & EASTERN ILLINOIS RAILROAD COMPANY

September 27, 1955

Accident at Papineau, Ill., on July 1, 1955, caused by a train entering a crossover at an excessive rate of speed.

REPORT OF THE COMMISSION[1]

CLARKE, Commissioner:

On July 1, 1955, there was a derailment of a passenger train on the Chicago & Eastern Illinois Railroad at Papineau, Ill., which resulted in the death of 1 train-service employee, and the injury of 41 passengers and 3 dining-car employees. This accident was investigated in conjunction with a representative of the Illinois Commerce Commission.

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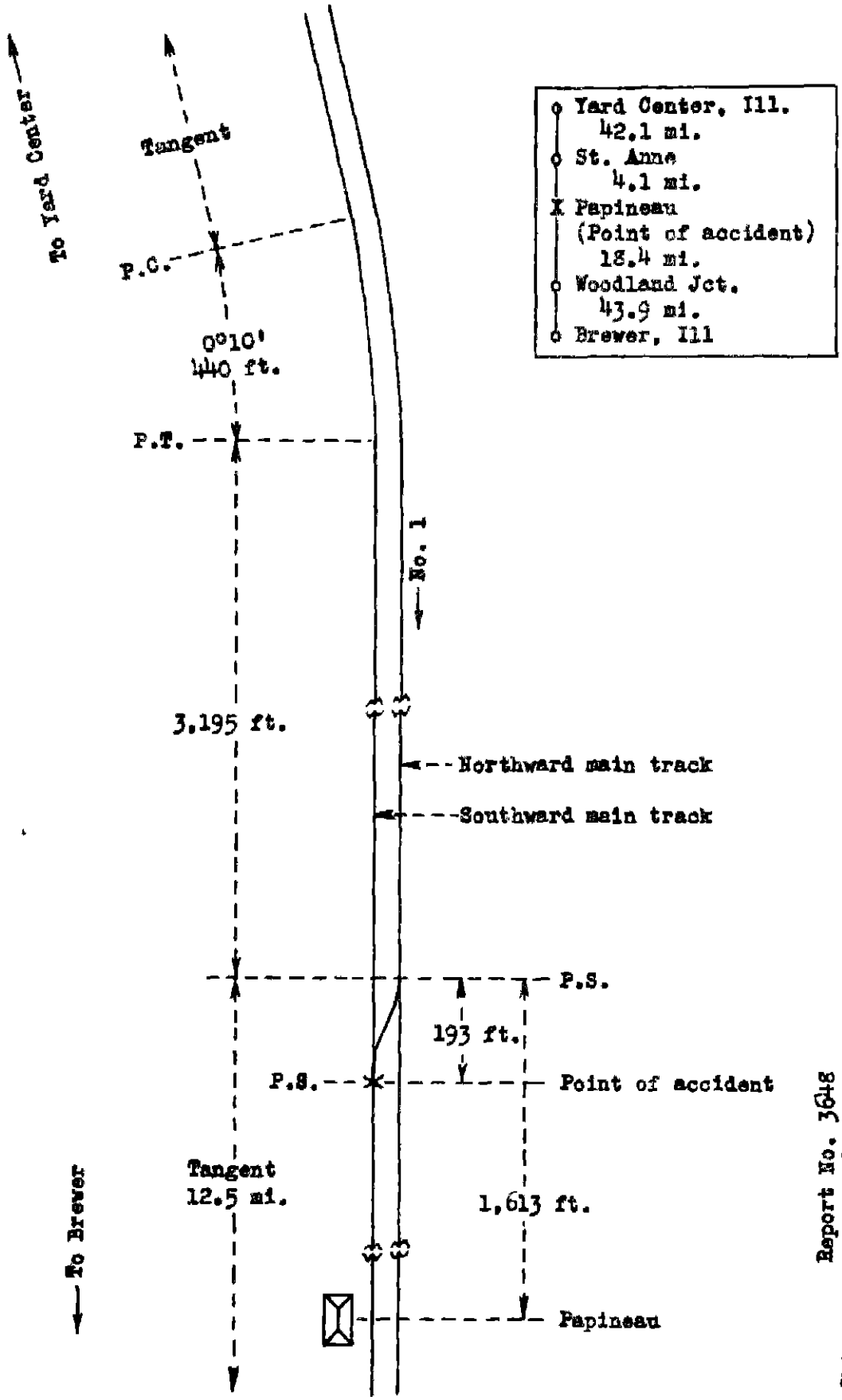
[1] Under authority of section 17 (2) of the Interstate Commerce Act the above-entitled proceeding was referred by the Commission to Commissioner Clarke for consideration and disposition.



Report No. 3648
Chicago & Eastern Illinois Railroad
Papineau, Ill.
July 1, 1955

Location of Accident and Method of Operation

This accident occurred on that part of the railroad extending between Yard Center and Brewer, Ill., 108.5 miles, a double-track line, over which trains moving with the current of traffic are operated by timetable, train orders, and an automatic block-signal system supplemented by an intermittent inductive automatic train-stop system. Trains moving against the current of traffic are operated by train orders. At Papineau, 46.2 miles south of Yard Center, a trailing-point crossover 193 feet in length connects the two main tracks. The north switch of this crossover is 1,613 feet north of the station. The accident occurred at the south crossover-switch.

From the north there is a 0°10' curve to the right 440 feet in length and a tangent 3,195 feet to the north switch of the crossover and 12.5 miles southward. The grade is 0.39 percent ascending southward at the point of accident.

In the vicinity of the point of accident the structure of the northward main track consists of 112-pound rail, 39 feet in length, laid on an average of 24 treated ties to the rail length. It is fully tieplated, single-spiked, and is provided with 4-hole 24-inch joint bars and an average of 8 rail anchors per rail length. It is ballasted with slag ballast to a depth of 18 inches below the bottoms of the ties. The crossover is provided with No. 10 spring-rail frogs. The leads of the turnouts are 71 feet long with a curvature of 7°22'. The crossover is tangent a distance of 51 feet between the lead curves. The north turnout is laid with 112-pound rail and the south turnout is laid with 110-pound rail. The main tracks are laid on 13-foot centers.

The switch stand of the north crossover-switch is of the ground-throw type and is located 7 feet 3 inches east of the center-line of the northward main track. It is equipped with an oil-burning switch lamp with 5-inch lenses.

Disc banners 10 inches in diameter are fitted around the lenses. The centers of the lenses are 1 foot 2 inches above the level of the tops of the rails. When the switch is in normal position the lenses display green aspects and the banners white aspects. When the switch is lined for movement through the crossover, the lenses and the banners each display red aspects.

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

210. * * *

Engineer must show train orders to fireman * * *. Conductors must show train orders, when practicable, to trainmen. Firemen and trainmen are required to read them and, if necessary, remind engineers and conductors of their contents.

FORMS OF TRAIN ORDERS

D-R

Providing for a Movement Against the Current of Traffic

(1) No 1 has right over opposing trains on ---- track C to F.

The designated train must use the track specified between the points named and has right over opposing trains on that track between those points. * * *

The maximum authorized speed for passenger trains is 80 miles per hour.

Description of Accident

No. 1, a south-bound first-class passenger train, consisted of Diesel-electric unit 1600, two coaches, and one lunch counter-lounge car. All cars were of lightweight construction and were equipped with tightlock couplers. At

St. Anne, 4.1 miles north of Papineau, the crew received copies of train order No. 248 reading as follows:

> No. 1 Eng. 1600 has right over opposing trains on northward track St. Anne to Papineau. Men at Papineau will handle switches for No. 1.

This train was diverted to the northward main track at St. Anne and passed that point at 9:34 a. m., on time. While it was moving at a speed of 70 miles per hour it entered the crossover at Papineau and was derailed at the south crossover-switch.

There were no separations between the units of the train. The locomotive stopped on its right side with the front end 336 feet south of the south crossover-switch and 38 feet west of the southward main track. The cars stopped approximately in line with the locomotive. The first and second cars leaned to the west at angles of 45 degrees and 20 degrees, respectively. The locomotive and the first two cars were somewhat damaged, and the third car was slightly damaged.

The conductor was killed.

The weather was clear at the time of the accident, which occurred at 9:38 a. m.

Diesel-electric unit 1600 is of the 0-4-4-0 type. It weighs 244,960 pounds. The center of gravity is approximately 66 inches above the level of the tops of the rails, and the theoretical safe and overturning speeds on a 7°22' curve having no superelevation are, respectively, 38.6 and 70.6 miles per hour.

Discussion

At the time the accident occurred the southward main track between St. Anne and Papineau was occupied by a power tamping machine. No. 1 was being operated over the northward

main track between these stations so that it would not be necessary for the maintenance-of-way force to clear the other track. When the foreman in charge of the machine arranged with the train dispatcher for this movement he told the train dispatcher that he would leave a man at Papineau to operate the crossover switches for No. 1. The dispatcher included this information in train order No. 248.

No. 1 was diverted to the northward main track at an interlocking at St. Anne, and the crew received copies of train order No. 248 as the train passed the interlocking station. The enginemen said that after the fireman received the order he read it aloud and then handed it to the engineer. The engineer then read the order, and both employees thoroughly understood the contents. On the engineer's last south-bound trip he had operated over the northward main track from St. Anne to an interlocking at Woodland Jct., 18.4 miles south of Papineau. He said that after leaving St. Anne on the day of the accident the impression became fixed in his mind that he was to return to the southward main track at Woodland Jct. on this trip. As the train was approaching Papineau the engineer saw a man in the vicinity of the crossover giving stop signals. He said he assumed that the signals were given because of track conditions ahead, and he initiated a service application of the brakes. He then saw that the north crossover-switch was open, and he immediately moved the brake valve to emergency position. He thought that at this time the train was about 450 feet north of the switch. He said that until he saw the open switch he retained the impression that he was to proceed to Woodland Jct. on the northward main track. The fireman said he was aware that the train was to return to the southward main track at Papineau. He said he was not familiar with the exact location of the crossover, and until he saw the stop signals and the open switch he was not aware that the train was closely approaching the crossover. He saw the signals and the switch at approximately the same time that the engineer applied the brakes.

The flagman said that the conductor gave him a copy of train order No. 248 soon after the train passed St. Anne. As the train was approaching Papineau he was seated in the rear car. He said that as the train approached the crossover he became aware that the speed was not being properly controlled and he started toward the rear vestibule. The brakes became applied in emergency as he reached the door. He thought the derailment occurred at approximately the same time. According to the tape of the speed-recording device the train approached Papineau at a speed of 70 miles per hour. There was no appreciable reduction in speed before the derailment occurred.

The sectionman who was assigned to operate the switches remained in the station at Papineau until train order No. 248 was issued. The agent then told him that No. 1 would use the crossover, and he proceeded to the crossover and opened both switches. He said he was not aware that the speed of No. 1 was not being properly controlled as the train approached the crossover. He said that the hand signals which he gave were not intended to be stop signals but were intended to indicate that he had lined the switches for movement through the crossover.

Examination of the track structure after the accident occurred disclosed that the south switch of the crossover was displaced to the west a distance of about 4 inches. South of the switch the west rail of the southward main track was overturned to the west, and between points 26 feet and 103 feet south of the switch the track was destroyed.

Cause

This accident was caused by a train entering a crossover at an excessive rate of speed.

Dated at Washington, D. C., this twenty-seventh day of September, 1958.

By the Commission, Commissioner Clarke.

(SEAL)

HAROLD D. McCOY,

Secretary.