

RAILROAD ACCIDENT INVESTIGATION

Report No 3799

CHICAGO AND NORTH WESTERN RAILWAY COMPANY

CARY, ILL

January 13, 1958

INTERSTATE COMMERCE COMMISSION

Washington

SUMMARY

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DATE	January 13, 1958	
RAILROAD	Chicago and North Western	
LOCATION	Cary, Ill	
KIND OF ACCIDENT	Rear-end collision	
TRAINS INVOLVED	Passenger	Passenger
TRAIN NUMBERS	514	644
LOCOMOTIVE NUMBERS	Diesel electric units 5024A and 5017B	Diesel electric unit 1722
CONSISTS	11 cars	9 cars
ESTIMATED SPEEDS	5 m p h	15 - 20 m p h
OPERATION	Timetable, train orders, and automatic block-signal system	
TRACK	Double, tangent, level	
WEATHER	Dark, dense fog	
TIME	7 25 a m	
CASUALTIES	1 killed, 65 injured	
CAUSE	Failure to provide adequate protection for the preceding train and failure to operate the following train in accordance with signal indication	

INTERSTATE COMMERCE COMMISSION

REPORT NO 3799

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

CHICAGO AND NORTH WESTERN RAILWAY COMPANY

August 20, 1958

Accident near Cary, Ill , on January 13, 1958, caused by failure to provide adequate protection for the preceding train and failure to operate the following train in accordance with a signal indication

REPORT OF THE COMMISSION¹

TUGGLE, Commissioner

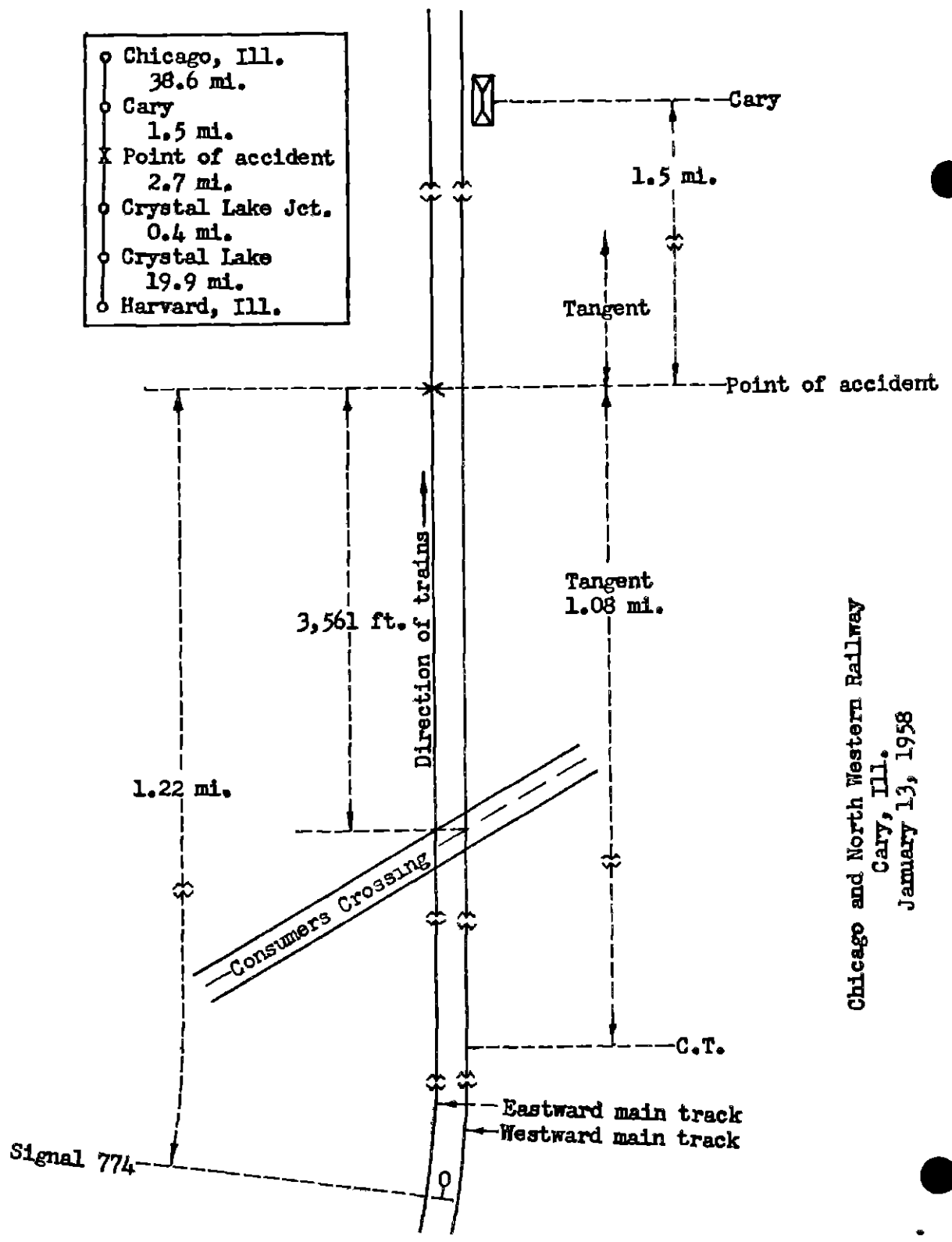
On January 13, 1958, there was a rear-end collision between 2 passenger trains on the Chicago and North Western Railway near Cary, Ill , which resulted in the death of 1 train-service employee, and the injury of 57 passengers, 3 railway postal clerks, and 5 train-service employees. This accident was investigated in conjunction with a representative of the Illinois Commerce Commission

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

To Chicago

To Harvard

- Chicago, Ill. 38.6 mi.
- Cary 1.5 mi.
- X Point of accident 2.7 mi.
- Crystal Lake Jct. 0.4 mi.
- Crystal Lake 19.9 mi.
- Harvard, Ill.



Chicago and North Western Railway
 Cary, Ill.
 January 13, 1958

Location of Accident and Method of Operation

This accident occurred on that part of the Wisconsin Division extending between Harvard and Chicago, Ill., 63.1 miles. In the vicinity of the point of accident there is a double-track line over which trains are operated by timetable, train orders, and an automatic block-signal system. The current of traffic is to the left and from north to south the main tracks are designated as eastward and westward. The accident occurred on the eastward main track at a point approximately 23 miles east of Harvard and 1.5 miles west of the station at Cary. Trains from that part of the Galena Division extending between Williams Bay and West Wye Switch, 33.4 miles, enter the Wisconsin Division at Crystal Lake Jct., 4.2 miles west of Cary. At a point 3,561 feet west of the point of accident, which is designated as Consumers Crossing, the railroad is crossed at grade by Illinois State Road NWO 40.8. From the west the main tracks are tangent a distance of 1.08 miles to the point of accident and a considerable distance eastward. The grade for eastbound trains on the eastward main track is successively, 0.62 percent descending a distance of 1.6 miles, 0.54 percent descending 500 feet, 0.20 percent descending 800 feet, and level 614 feet to the point of accident.

Automatic signal 774 governing eastbound movements on the eastward main track is located 1.22 miles west of the point of accident. This signal is of the searchlight type and is continuously lighted. It displays three aspects. The aspect applicable to this investigation and the corresponding indication and name is as follows:

Signal	Aspect	Indication	Name
774	Red	STOP, THEN PROCEED IN ACCORDANCE WITH RULE 509 (a) OR (b)	STOP AND PROCEED

The controlling circuits are so arranged that when the block between signal 774 and the next eastward signal is occupied, signal 774 indicates Stop-and-proceed-at-restricted-speed.

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

DEFINITIONS

RESTRICTED SPEED - Proceed prepared to stop short of train, obstruction, or switch not properly lined and to look out for broken rail, but not exceeding twenty miles per hour.

OPERATING RULES

11 * * *

A passenger train, finding a fusee burning on or near its track, must stop and then proceed at restricted speed.

After stopping for a fusee, a train must run at restricted speed for at least one-half mile.

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.

When the conditions require, he will leave the torpedoes and a lighted fusee

* * *

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 fusees must be thrown off at proper intervals

* * *

509a When a train is stopped by a Stop-and-Proceed-Indication, it may proceed

* * *

(2) On two or more tracks it may proceed at once at restricted speed

The maximum authorized speed for passenger trains in the vicinity of the point of accident is 79 miles per hour, but it is restricted to 70 miles per hour when hauling gallery type cars

Description of Accident

No 514, an eastbound first-class passenger train, consisted of diesel-electric units 5024A and 5017B, coupled in multiple-unit control, 1 baggage car, 1 mail car, 3 baggage cars, 1 mail car, 2 baggage cars, 1 sleeping car, and 2 coaches, in the order named. The 9th and 10th cars were of lightweight steel construction, and the other cars were of conventional all-steel construction. The 9th and 10th cars were equipped with tightlock couplers. This train departed from Harvard at 6:28 a. m., 1 hour 3 minutes late, passed Crystal Lake, 19.9 miles east of Harvard, the last open office, at 6:55 a. m., 1 hour 5 minutes late, and stopped at signal 774 which indicated Stop-and-proceed-at-restricted-speed. The train then proceeded eastward and while moving at an estimated speed of 5 miles per hour the rear end of the train was struck by No 644 at a point approximately 1.5 miles west of Cary.

No 644, an eastbound first-class passenger train, consisted of road-switcher type diesel-electric unit 1722, 1 coach-baggage car, and 8 double-deck gallery coaches, in the order named. The first car was of conventional all-steel construction. The other cars were of lightweight steel construction. The second to the ninth cars, inclusive, were equipped with tightlock couplers. This train departed from Williams Bay at 6:13 a. m., on time, passed Crystal Lake Junction at 7:15 a. m., 2 minutes late, and stopped at signal 774 which indicated Stop-and-proceed-at-restricted-speed. The train then proceeded eastward and while moving at a speed estimated as from 15 to 20 miles per hour it struck the rear end of No 514.

The rear end of the rear car of No 514 was telescoped a distance of about 10 feet 6 inches by the locomotive of No 644. The rear two cars and the rear truck of the third rear car of No 514 and the front wheels of the front truck of the locomotive of No 644 were derailed and stopped in line with the track. A slight separation occurred between the diesel-electric units of the locomotive and there was a separation of 45 feet between the second and third cars of No 514. A separation of about 16 feet occurred between the locomotive and the first car of No 644. These separations resulted when couplers and attachments were broken by the impact of the collision. The rear car of No 514 was destroyed, both units of the locomotive and the first, sixth and ninth cars were somewhat damaged, and the first to fifth cars, inclusive, and the tenth car of this train were slightly damaged. The locomotive of No 644 was heavily damaged and the first car of this train was somewhat damaged.

The flagman of No 514 was killed. The conductor, and the brakeman of No 514, and the engineer, and two brakemen of No 644 were injured.

There was a dense fog and it was dark at the time of the accident, which occurred about 7 25 a m.

Discussion

About 6 35 a m on the day of the accident, a pedestrian was struck and killed in the vicinity of Consumers Crossing by No 626, an eastbound first-class train, which then stopped with the front end of the locomotive about 1,375 feet east of the crossing. Visibility in this vicinity was limited because of a dense fog. While No 626 was standing at this point, No 630, a following first-class train, arrived and was stopped west of the crossing in response to signals given with lighted fuses by members of the crew of No 626. After the body of the pedestrian had been located, local police authorities and the train dispatcher were notified. The conductor of No 626 then instructed his flagman to remain at the crossing until local authorities removed the body of the pedestrian and completed their investigation at this point, and also instructed him to provide protection for his train. The conductor said that No 626 departed from this point at 7 05 a m.

As No 514 was approaching the point where the accident occurred the enginemen were maintaining a lookout ahead from their respective positions in the control compartment at the front of the locomotive. The conductor and the flagman were in the rear vestibule of the rear car, the brakeman was in the rear car and the baggageman was in the seventh car. The headlight was lighted. The marker lamps on the rear car were lighted and displayed red to the rear. The train was stopped at two points east of Crystal Lake where fuses were burning on the track and at signal 774 which indicated Stop-and-proceed-at-restricted-speed. It was stopped at a point about 1,275 feet east of the signal in response to signals of the flagman of No 630 and again at a point about 40 feet to the rear of that train. Soon after it stopped at this point No 630 departed and No 514 then proceeded. The engineer said that he had sounded the signal for the flagman to protect the rear of the train while it was approaching signal 774 and had not recalled the flagman at any point. The train was stopped at Consumers Crossing in compliance with stop signals given by the flagman of No 626 and proceeded after the engineer received instructions from the flagman to look out for the trains ahead. The enginemen estimated that the speed of the train was 4 or 5 miles per hour as it moved eastward from the crossing and that visibility was restricted to about 35 feet by the fog. The first indication they had that anything was wrong was when they felt an impact from the rear and the brakes of the train became applied in emergency as a result of the collision. The conductor said that the flagman placed and left torpedoes and a lighted fusee at the first point at which the train was stopped east of Crystal Lake and subsequently left a lighted fusee at each of the other points at which the train was stopped. He said that the stops were of short duration and the flagman returned and boarded the rear car each time when the proceed signal was sounded on the locomotive whistle. He estimated the speed was 5 to 7 miles per hour as the train was moving between Consumers Crossing and the point where the accident occurred. He said that the flagman threw off a lighted fusee when the rear end of the train was immediately east of the crossing. He estimated that about 1-1/2 to 2 minutes later the flagman lighted another fusee. He said that simultaneously the flagman called a warning and the headlight of the locomotive of No 644 came into view. The conductor immediately ran forward into the rear car and warned the passengers before the collision occurred. He said that he was unable to estimate the speed of the following train but he became concerned when it first came into view because it was moving at greater speed than No 514.

As No 644 was approaching the point where the accident occurred the enginemen were maintaining a lookout ahead from the control compartment of the locomotive. The fireman, a qualified engineer, was operating the locomotive and the engineer was seated on the left side of the compartment. The conductor was in the third car and the other members of the train crew were in various locations in the cars of the train. The brakes of this train had been tested and had functioned properly when used en route. The headlight was lighted brightly. The train was stopped at signal 774, which indicated Stop-and-proceed-at-restricted-speed. The enginemen observed a fusee burning on the track in the immediate vicinity of the signal. The train then proceeded. The enginemen said that as the train approached Consumers Crossing the speed was reduced to about 3 or 4 miles per hour and they then observed a flagman giving proceed signals with a lighted fusee. The brakes were then released and the train proceeded. The enginemen said that they did not hear the flagman call a warning. The engineer said that he saw police automobiles in the vicinity of the crossing and thought protection had been provided because of an accident at that point. The engineer and the fireman said that they did not observe a burning fusee on the track at any point east of the crossing. The engineer said that when he saw a lighted fusee on the rear car of the preceding train he called a warning and the fireman immediately moved the brake valve to emergency position. The engineer said that the locomotive was about 25 or 30 feet from the rear end of the preceding train when the brakes were applied in emergency. The fireman said that the speed had been increased to about 10 miles per hour for a short distance after the train passed the crossing and then reduced to about 8 miles per hour before the brakes were applied at the point of collision. The enginemen said that a torpedo was exploded by their locomotive immediately before the fusee on the rear end of No 514 became visible to them. They estimated that the speed of their train was about 8 miles per hour when the collision occurred. The conductor of No 644 estimated that the speed of his train was 15 to 20 miles per hour between the crossing and the point of accident. He said that it was difficult for him to judge the speed accurately from inside the cars but he thought the enginemen were regulating the speed in accordance with the visibility and that his train was moving at restricted speed. The conductor, the brakeman and the flagman said that they were unaware that the brakes had been applied in emergency before the collision occurred.

The flagman of No 626 said that No 630 moved eastward immediately after No 626 departed. He said that he understood from his instructions he was to provide protection for these trains and he kept a lighted fusee in his hand at all times while he remained at the crossing. He estimated the visibility was limited to 15 to 20 feet in the vicinity of the crossing. When No 514 approached he gave stop signals and after the train stopped he instructed the engineer to look out for the trains ahead. No 514 then proceeded and he observed that the marker lamps on the rear car were lighted. He and other witnesses in the vicinity said that they did not see a lighted fusee thrown off the rear of this train after it cleared the crossing and moved eastward. As No 644 approached the crossing he gave reduce speed signals. These signals were not acknowledged. He said that at this time an ambulance approached the crossing and he signaled its driver to stop and then gave signals with the lighted fusee for No 644 to proceed at slow speed. He estimated that the train moved over the crossing at a speed of 5 or 6 miles per hour. He said that as the locomotive passed he called a warning that there was a train ahead but he did not know if the enginemen heard him as he thought the windows in the control compartment were closed.

The signal system in the vicinity of the point of accident was tested and was found to function as intended.

The rules of this carrier require that a passenger train, finding a fusee burning on or near its track must stop and then proceed at restricted speed for one-half mile. 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 fusees must be thrown off at proper intervals. At the time of the accident No. 514 was proceeding at slow speed because it was closely following a preceding train and visibility was materially restricted by fog. Although the conductor of No. 514 stated that a lighted fusee was dropped on the track structure immediately east of the crossing, witnesses in the vicinity of the crossing said they did not observe it. The enginemen of No. 644 said that they did not observe a lighted fusee between the crossing and the point of accident until a lighted fusee was displayed on the rear car of No. 514 as their locomotive was closely approaching the rear end of that train immediately before the collision occurred. However, signal 774 indicated Stop-and-proceed-at-restricted-speed when No. 644 passed and this indication required that the train be so operated that it could be stopped short of a preceding train.

Cause

This accident was caused by failure to provide adequate protection for the preceding train and failure to operate the following train in accordance with a signal indication.

Dated at Washington, D. C. this twentieth day of August, 1958

By the Commission, Commissioner Tuggle

HAROLD D. McCOY,
Secretary

(SEAL)

Interstate Commerce Commission

Washington 25, D C

OFFICIAL BUSINESS

RETURN AFTER FIVE DAYS

**POSTAGE AND FEES PAID
INTERSTATE COMMERCE COMMISSION**