

INTERSTATE COMMERCE COMMISSION
WASHINGTON

REPORT OF THE DIRECTOR
BUREAU OF SAFETY

ACCIDENT ON THE
CHICAGO & NORTH WESTERN RAILWAY

BARRINGTON, ILL.

JULY 29, 1940

INVESTIGATION NO. 2439

SUMMARY

Inv-2439

Railroad: Chicago & North Western
Date: July 29, 1940
Location: Barrington, Ill.
Kind of accident: Head-end collision
Trains involved: Freight : Passenger
Train numbers: Extra 1363 East : 631
Engine numbers: 1363 : 395
Consist: 34 cars and : 4 cars
caboose
Speed: Standing : 5-7 m. p. h.
Operation: Timetable, train orders and
automatic block system
Track: Double; tangent; 0.535 percent
descending grade westward
Weather: Clear
Time: About 4:21 p. m.
Casualties: 18 injured
Cause: Failure to provide flag protection
for engine of Extra 1363 East and
failure to operate passenger train
in accordance with signal indica-
tion.

September 30, 1940

To the Commission:

On July 29, 1940, there was a head-end collision between a passenger train and an engine with cars making a switching movement on the Chicago & North Western Railway at Barrington, Ill., which resulted in the injury of 18 passengers.

Location and Method of Operation

This accident occurred on that part of the Wisconsin Division designated as Subdivision 4 which extends between Chicago and Harvard, Ill., a distance of 65.13 miles. In the immediate vicinity of the point of accident this is a double-track line over which trains are operated by timetable, train orders, and an automatic block-signal system. Trains moving with the current of traffic are operated to the left. The accident occurred on the westward main track at a point 691 feet west of the station at Barrington. The west switch of a trailing-point crossover, which connects the main tracks, is located 531 feet west of the station. The switch-stands are of the Buda 5-C type and are equipped with lamps which display red aspects when the switches are lined for the crossover. An interchange track, which connects the E. J. & E. Ry. and the C. & N. W. Ry., parallels the main tracks on the south and is connected to the westward main track by a facing-point switch located 210 feet west of the west switch of the crossover. The switch-stand is located on the south side of the track and is equipped with a lamp and a single target. The lens of the lamp is 58 inches above the head-block. The target, the center of which is 43 inches above the head-block, is a 14-inch square having a 9-inch red center on a white background. When the switch is lined for the interchange track both the lamp and the target display red aspects. The switches are equipped with indicators.

As the point of accident is approached from the east the track is tangent a distance of more than 2 miles to the point of accident and more than 8 miles beyond. At the point of accident the grade is 0.535 percent descending westward.

From Chicago to a point 3/4 mile east of the station at Barrington there are three main tracks. A remote-control interlocking, controlled from Barrington station, is located at the end of the 3-track line. The signal involved, which governs westward movements on the westward main track, is home signal C-755, located 4,320 feet east of the point of accident. The involved aspect and indication of this signal are as follows:

4,185 ft. to
Signal C-753

Signal C-755

Westward Main Track
Eastward Main Track

Direction
of No. 681

4,320 ft.

- Chicago, Ill.
17.06 mi.
- Des Plaines
14.9 mi.
- ★ Barrington
P of A
10.89 mi.
- Crystal Lake Jct.
20.28 mi.
- Harvard, Ill.

○ Water Tank

□ Barrington
Shelter Shed

□ Grocery Store
140 ft.

691 ft.

350 ft

50 ft

Point of accident

Direction
of Ex 1363

Interchange Track

E. J. & E.

Ry.

Inv-2439
Chicago & North
Western Ry.
Barrington, Ill.
July 29, 1940.

Signal	Aspect	Indication	Name
C-755	Red-over-red-over-yellow	Proceed at restricted speed, or as prescribed by Rule 652.	Restricting

If the west cross-over switch or the interchange-track switch is open, signal C-755 will display a restricting or call-on indication.

Rules for the government of the operating department read in whole or in part as follows:

92. * * *

A train must not leave a station in advance of its schedule leaving time.

93. All second and third class and extra trains must approach and pass all stations, yards, sidings, fuel and water stations, expecting to find trains or yard engines occupying the main track within the switches or yard limits, or taking fuel or water and will be prepared to stop unless the main track is seen or known to be clear. Trains and yard engines may use the main track at such point, protecting against first class trains in all cases and will protect against all trains where the view is obscured by fog, storms or track curvature, or other causes requiring additional safeguards.

Yard engines must clear the time of first class trains not less than five minutes, but must be clear at the time a first class train is due to leave the first station where time is shown, east or west, of the location where yard engine is performing work.

512a. A switch must not be opened to permit a movement to a main track when the semaphore arm is horizontal or the disc is visible in the indicator box at the switch, except under protection as per Rule 99.

606. In automatic block signal districts, the high interlocking home signal is also used as an automatic block signal.

662. When a train or engine advances on a dwarf or call-on signal indication at any interlocking plant, it must proceed prepared to stop short of train or other obstruction but not to exceed 12 miles per hour while moving through the interlocking plant limits; also, in automatic block signal or automatic train control districts if moving into and through an automatic block beyond the interlocking plant limits on a main track assigned to the movement of scheduled passenger trains, the speed of the train or engine shall not exceed 12 miles per hour until subsequent signal indications permit increased speed.

The maximum authorized speed for passenger trains at the point of accident is 70 miles per hour.

The weather was clear at the time of the accident, which occurred about 4:21 p. m.

Description

Extra 1303, an east-bound freight train, with Conductor Fletcher and Engineman Ward in charge, consisted of engine 1363, 34 cars and a caboose. This train departed from Crystal Lake, 11.29 miles west of Barrington, at 2:30 p. m., according to the train sheet, and stopped at Barrington at 4:02 p. m. The first sixteen cars were pulled eastward on the eastward main track and were backed westward across the westward main-track to the E. J. & E. interchange track. After setting out eleven cars on this track, the engine with five cars, returning to the train, had moved about 50 feet eastward on the westward main track and was stopped when the engine was struck by No. 681.

No. 681, a west-bound first-class passenger train, with Conductor Bates and Engineman Jones in charge, consisted of engine 395 and four coaches; all cars were of steel construction. This train departed from Chicago, 31.96 miles east of Barrington, at 3:42 p. m., according to the train sheet, on time, passed Des Plaines, 14.91 miles east of Barrington, at 4:04 p. m., on time, passed signal C-753, located 8,505 feet east of the point of accident and which displayed an approach indication, passed signal C-755 displaying a restricting indication, ran through the west switch of the crossover at Barrington and, while moving at a speed estimated to have been 5 to 7 miles per hour, collided with the engine of Extra 1303 East.

None of the equipment of either train was derailed. The front end of each engine was slightly damaged.

Summary of Evidence

Engineman Ward, of Extra 1363, stated that his train arrived at Barrington shortly after 4 p. m. Cars were delivered to the E. J. & E. Ry. interchange track. The flagman was left at the main-track switches to provide flag protection on the westward main track. After setting out the E. J. & E. cars he had 5 minutes to clear No. 681. The engine with five cars started back to the train at a speed of 8 or 10 miles per hour and had just entered the westward main track when he observed No. 681 approaching. He applied the air brakes in emergency and his engine stopped but too late to avoid the collision. The weather was clear but because of a water tank and the station shelter obstructing his view he was unable to see No. 681 earlier. He said that after the accident occurred he backed his engine in to clear on the interchange track and at that time he and the fireman compared time and both watches showed 4:20 p. m.; he thought the accident occurred at 4:17 or 4:18 p. m. He said that he would have cleared on the eastward track if No. 681 had not been ahead of its schedule. It was not customary for regular trains to run ahead of their schedules.

Fireman St. John, of Extra 1363, corroborated the statement of his engineman.

Conductor Fletcher, of Extra 1363, stated that his train arrived at Barrington about 4:03 p. m. He told the flagman to take charge while he would be absent for a short period; the accident occurred before he returned. He said that the accident occurred about 4:18 p. m. He did not tell the flagman that No. 681 was due nor instruct him to protect against that train as he had confidence in the flagman, who was qualified as a conductor.

Brakeman Dillebough, of Extra 1363, stated that he lined the crossover switches at Barrington for the movement from the eastward track to the interchange track. After the back-up movement was started the flagman signaled that he would attend to the switches. The brakeman rode back, made the cut, and got on the second or third car from the engine for the return movement. When nearing the westward main track he observed No. 681 approaching and at the same time the air brakes were applied; the engine was stopped at the time of the accident, which occurred at 4:18 p. m. The brakeman said that when the flagman signaled he would attend to the switches he expected the flagman also to protect against No. 681.

Brakeman Brickley, of Extra 1363, stated that he lined the switch to the interchange track and the cars for the E. J. & E. Ry. were backed in at 4:10 p. m. He was on the fifth car on the return movement and before this car reached the main track the engine stopped. He observed No. 681 just as the accident occurred. He understood that the flagman was attending to the switches and protecting against No. 681.

Flagman O'Leary, of Extra 1363, stated that when his train stopped at Barrington he went to get a supply of water. When he returned the conductor told him to take charge of the work while he was absent for a short period. He walked ahead and as the front end of his train was being backed to the interchange track he signaled Brakeman Dillabough to get on and help deliver the cars. It was just 4:12 p. m., so he thought he would have time to go to a grocery store, 140 feet distant, to get provisions for the caboose. He left the store at 4:16 p. m. and ran toward the railroad but No. 681 passed him just as he reached the tracks. When he arrived at the point of accident the conductor of No. 681 told him it was 4:18 p. m. He said that he left the switches lined for the return movement of his engine. He knew that he should have provided flag protection against No. 681, due at 4:21 p. m., but he thought he had sufficient time to go to the store and to return. He had been working on this run for 3 years. He knew that it was his duty to protect against No. 681 after 4:16 p. m.

Engineman Jones, of No. 681, stated that the air brakes were tested at Chicago and were reported to him as working properly. He made a running test of the brakes and used them three or four times en route and they functioned properly on each occasion. Signal C-753 was displaying an approach indication; he applied the air brakes at that point and the speed was reduced to 20 miles per hour. Signal C-755 was displaying a call-on indication and he reduced speed to 12 miles per hour. This speed was maintained until his train reached the water tank, 185 feet east of Barrington station, where he observed that the home signal for the E. J. & E. Ry. crossing, located 1,575 feet west of Barrington station, was displaying a clear indication, and he increased the speed to 15 or 18 miles per hour. He did not observe until he was at the west switch of the cross-over that it was lined for cross-over movement; he then applied the air brakes in emergency. At this time Extra 1363, moving out of the interchange track, came into his view. At the time of the accident the speed of his train was about 5 miles per hour. He said that he was not flagged and he did not see any member of the crew of Extra 1363 prior to the accident. He thought the accident occurred at 4:20 p. m. but he had not looked at his watch throughout the last 9 miles. He said it was not customary for

trains to run ahead of their schedules. He understood the call-on signal indication received at signal C-755 required that he operate at a speed not in excess of 12 miles per hour until his train reached the home signal for the E. J. & E. crossing.

Fireman Thompson, of No. 681, corroborated the statement of his engineman.

Conductor Bates, of No. 681, stated that there was a reduction in the speed of his train after it passed signal C-753. When the train was passing the water tank east of Barrington station the brakes were released and the train passed the station at a speed of about 10 miles per hour. He was standing in the aisle of the second car when the accident occurred. He looked at his watch just east of Barrington and it was 4:18 or 4:19 p. m. and from this he thought the accident occurred at 4:21 p. m. He said it was not customary for trains to run ahead of schedule. His watch was approved by the watch inspector on July 16.

Brakeman Miller, of No. 681, stated that about 30 seconds after the accident occurred he observed that it was 4:21 p. m.

The statement of Brakeman Winn, of No. 681, brought out nothing additional of importance.

Dispatcher Richardson stated that when the operator at Barrington reported No. 681 stopping, the operator asked him for the correct time; the dispatcher answered that it was then 4:21 and some seconds and the operator then said to record the arrival of No. 681 as 4:21 p. m. The dispatcher did not know of any instance of a train passing a station ahead of its schedule time.

Assistant Superintendent Johnston stated that the schedule time of No. 681 at Barrington applies at Barrington station. He said that Rule 93 covers the movement made by engine 1363 at Barrington and that this engine should have cleared the westward main track 5 minutes in advance of the time No. 681 was due to leave Barrington, and that the flagman should have provided flag protection after 4:16 p. m. He said that the operator at Barrington displayed a clear indication at signal C-755 and the call-on indication was displayed as a result of the opening of the switches by the trainmen.

Observations of the Commission's Inspectors

The Commission's inspectors observed that the train shed and the water tank at Barrington restrict the view from the right side of an engine on the interchange track to a distance of about 1/2 mile.

Discussion

According to the evidence, Extra 1363 East stopped at Barrington at 4:02 p. m. The first 16 cars were cut off, backed through the cross-over, and then backed into the E. J. & E. Ry. interchange track, which lay south of the westward main track. The rear 11 cars were set out and the engine with 5 cars on its return to its train had just re-entered the westward main track when it was struck by No. 681.

The rules require that trains and engines may use the main track at points such as Barrington but must clear first-class schedules at least 5 minutes or furnish flag protection. All employees involved understood these requirements; however, the conductor of Extra 1363 absented himself and instructed the flagman, who was a qualified conductor, to take charge of the work at Barrington. The flagman was at the cross-over switches when the rear end of the cut was backed across to the interchange track. At 4:12 p. m. he went to a store, 140 feet distant, and remained there until 4:16 p. m. During this period the switches were left open and there was no flag protection furnished against No. 681, which passed him on his return from the store before he could give a stop signal. The engineman of Extra 1363 stated that it was 4:16 p. m. at the time the cars were set out but he thought he had time to return to the eastward track and he was depending on the flagman to protect against No. 681. His vision was restricted by buildings but he saw No. 681 approaching in time to stop his engine before the collision occurred. There was considerable discrepancy in the statements as to the exact time of the accident. Members of the crew of Extra 1363 said that the accident occurred about 4:18 p. m.; the crew of No. 681 said the time was 4:20 or 4:20:30 p. m.; the dispatcher's statement indicated that the accident occurred at 4:21 p. m. In no case did anyone state the accident occurred earlier than 4:18 p. m., which was 2 minutes after protection against No. 681 should have been afforded.

In compliance with the requirements of the rules the engineman of No. 681 was operating at a speed of 12 miles per hour immediately after the train passed signal C-755 but when he saw that the home signal at the E. J. & E. Ry. crossing was displaying a clear indication he increased the speed to 15 or 18 miles per hour. He did not see the open cross-over switch or engine 1363 proceeding from the interchange track until his engine was at the cross-over switch. If he had continued to operate at a speed not in excess of 12 miles per hour no doubt the accident would have been averted.

Conclusion

This accident was caused by failure to provide flag protection for the engine of Extra 1363 and by failure to operate the passenger train in accordance with signal indication.

Respectfully submitted,

S. N. MILLS,

Director.