

INTERSTATE COMMERCE COMMISSION

WASHINGTON

INVESTIGATION NO. 2582

THE CLEVELAND, CINCINNATI, CHICAGO &
ST. LOUIS RAILWAY COMPANY

REPORT IN RE ACCIDENT

AT YORKTOWN, IND., ON

APRIL 17, 1942

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SUMMARY

Railroad: Cleveland, Cincinnati, Chicago & St. Louis

Date: April 17, 1942

Location: Yorktown, Ind.

Kind of accident: Head-end collision

Trains involved: Freight : Passenger

Train numbers: 158 : Second 23

Engine numbers: 1549 : 4918

Consist: 3 cars, cabooses : 6 cars

Estimated speed: 10-15 m. p. h. : 35-40 m. p. h.

Operation: Automatic block-signal system

Track: Double; tangent; 0.06 percent ascending grade westward

Weather: Clear

Time: 11:58 a. m.

Casualties: 16 injured

Cause: Accident caused by No. 158 occupying westward main track without authority and by failure to provide flag protection for this movement

Recommendation: That the Cleveland, Cincinnati, Chicago & St. Louis Railway Company install electric locks on main-track switches in automatic block-signal territory where movements of the character involved in this accident are made

INTERSTATE COMMERCE COMMISSION

INVESTIGATION NO. 2582

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

THE CLEVELAND, CINCINNATI, CHICAGO &
ST. LOUIS RAILWAY COMPANY

June 13, 1942.

Accident at Yorktown, Ind., on April 17, 1942, caused by
No. 158 occupying westward main track without author-
ity and by failure to provide flag protection for
this movement.

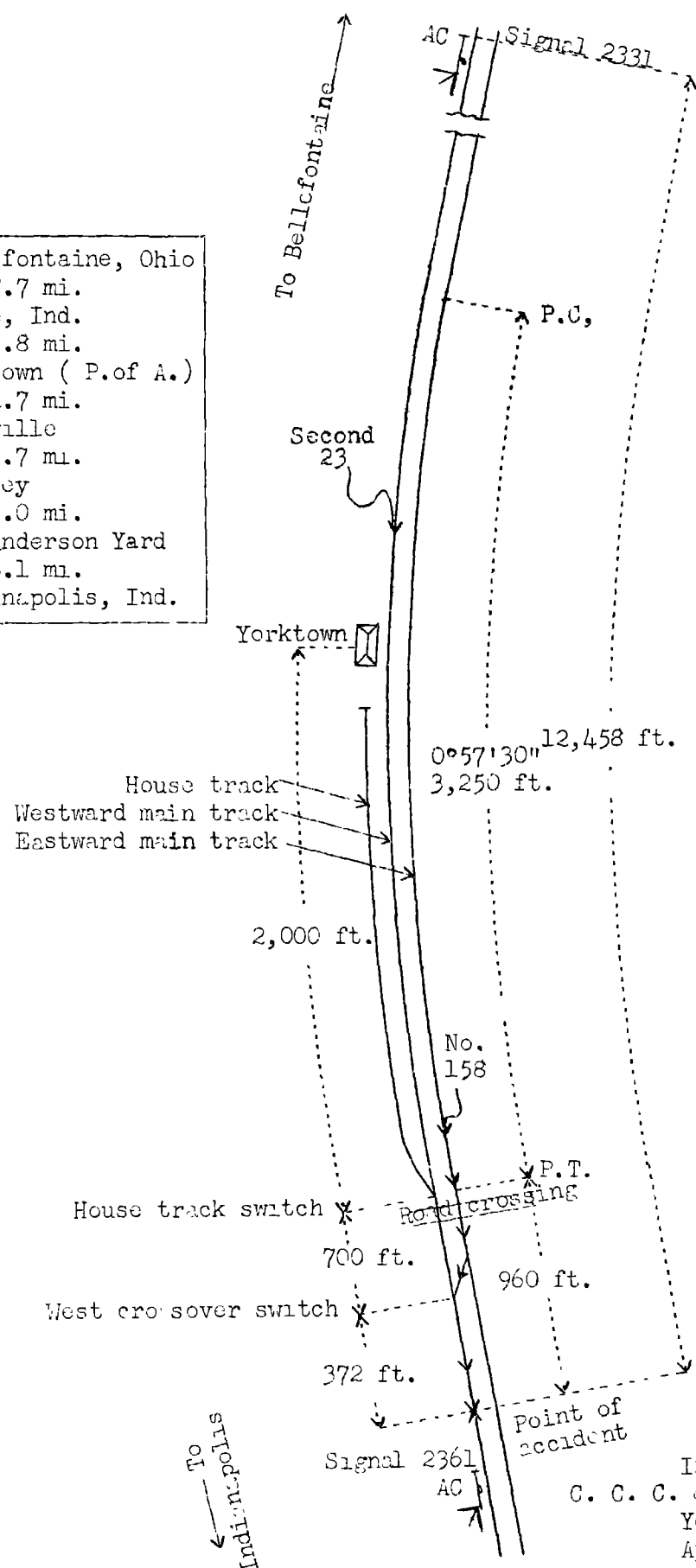
REPORT OF THE COMMISSION¹

PATTERSON, Commissioner:

On April 17, 1942, there was a head-end collision between a passenger train and a freight train on the Cleveland, Cincinnati, Chicago & St. Louis Railway at Yorktown, Ind., which resulted in the injury of 14 passengers and 2 train-service employees. This accident was investigated in conjunction with a representative of the Public Service Commission of Indiana.

¹Under 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.

- Bellefontaine, Ohio 87.7 mi.
- Vance, Ind. 6.8 mi.
- X Yorktown (P.of A.) 4.7 mi.
- Daleville 5.7 mi.
- Gridley 3.0 mi.
- So. Anderson Yard 35.1 mi.
- Indianapolis, Ind.



Inv. No. 2582
 C. C. C. & St. L. Railway
 Yorktown, Ind.
 April 17, 1942

Location of Accident and Method of Operation

This accident occurred on that part of the Ohio Division which extends between Bellefontaine, Ohio, and Indianapolis, Ind., a distance of 143 miles. In the vicinity of the point of accident this is a double-track line over which trains are operated with the current of traffic by an automatic block-signal system, the indications of which supersede time-table superiority. At Yorktown a trailing-point crossover for movements with the current of traffic connects the eastward and the westward main tracks. The west switch of this crossover is located 2,700 feet west of the station. A spur track, designated as the house track, parallels the westward main track on the north. Entry to this track is provided by a trailing-point switch located 2,000 feet west of the station. The accident occurred on the westward main track at a point 372 feet west of the west crossover switch. As the point of accident is approached from the east there are, in succession, a tangent approximately 6 miles in length, a 0°57'30" curve to the left 3,250 feet, and a tangent 960 feet to the point of accident and several miles beyond. The grade for west-bound trains is 0.06 percent ascending a distance of 1,300 feet to the point of accident and about 1,500 feet beyond.

Automatic signals 2331 and 2361, governing west-bound movements on the westward main track, are located, respectively, 12,458 feet east and 342 feet west of the point of accident. These signals are of the 3-indication, color-light type, and are approach lighted. The aspects and corresponding indications of these signals are as follows:

<u>Aspect</u>	<u>Indication</u>
Green over red, staggered	Proceed
Yellow over red, staggered	Proceed preparing to stop at next signal. Train exceeding medium speed when indication is seen must reduce to that speed before accepting a more favorable indication
Red over red, staggered	Stop, then proceed at restricted speed until train has passed next signal

The circuits are so arranged that when the house-track switch or either switch of the crossover is open, or if the westward main track between signals 2331 and 2361 is occupied, signal 2331 displays a red-over-red aspect.

The switches involved are not bolt-locked. The house-track switch and the west switch of the crossover are provided with intermediate switch stands and double-vaned targets. When the house-track switch is lined for movement to the house track, a red target is displayed.

Operating rules read in part as follows:

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 fuseses. * * *

* * *

D-152. When a train crosses over to, or obstructs another track, unless otherwise provided, it must first be protected as prescribed by Rule 99.

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.

* * * At non-bolt-locked switches trainmen will operate the switch and wait three minutes at the switch before making engine or train movement, unless it is known that the movement of an approaching train will not be affected.

Bulletin Order No. 78, dated December 11, 1941, reads in part as follows:

* * *

* * * At non-bolt-locked switches trainmen will operate the switch and wait five minutes at the switch before making engine or train movement, unless it is known that the movement of an approaching train will not be affected.

In the vicinity of the point of accident the maximum authorized speed for passenger trains is 80 miles per hour.

Description of Accident

No. 158, an east-bound second-class freight train, consisted of engine 1549, 3 empty cars and a caboose. This train departed from South Anderson Yard, Ind., 13.4 miles west of Yorktown, at 11 a. m., according to the dispatcher's record of movement of trains, 3 hours late, and arrived at Yorktown about 11:42 a. m., according to the statement of the conductor. Soon afterward this train made a back-up movement on the eastward main track to the crossover and through the crossover to the westward main track. It had just started to move eastward to the house track when Second 23 was seen approaching. No. 158 immediately stopped, started westward on the westward main track, and was moving at

an estimated speed of 10 to 15 miles per hour when it was struck by Second 23 at a point 372 feet west of the west crossover switch.

Second 23, a west-bound first-class passenger train, consisted of engine 4918, 1 baggage car and 5 coaches, in the order named. All cars were of steel construction. After a terminal air-brake test was made this train departed from Bellefontaine, Ohio, 94.5 miles east of Yorktown, at 10:15 a. m., according to the dispatcher's record of movement of trains, 2 hours 25 minutes late. Soon afterward a running test was made, and the air brakes functioned properly at all points where used en route. This train passed Vance, 6.8 miles east of Yorktown and the last open office, at 11:47 a. m., 2 hours 15 minutes late, passed signal 2331, which displayed proceed, and while moving at an estimated speed of 35 to 40 miles per hour it collided with No. 158.

Because of track curvature, the view of the point of accident from the right side of a west-bound engine is restricted to about 300 feet, and from the left side to 3,000 feet.

Engine 1549, of No. 158, stopped 942 feet west of the point of accident. The front end was damaged, the engine truck, the front pair of driving wheels and one wheel of the No. 2 pair of driving wheels were derailed. Engine 4918 and its tender were derailed to the south and stopped, badly damaged, with the front end of the engine 306 feet west of the point of accident. The left side of the cab was crushed inward.

The weather was clear at the time of the accident, which occurred at 11:58 a. m.

The employees injured were the engineman and the fireman of Second 23.

Data

During the 30-day period preceding the day of the accident the average daily movement in the vicinity of the point of accident was 49.3 trains.

According to the timetable, Nos. 23 and 11 were due to leave Hart, 2.6 miles east of Yorktown and the last place where time is shown, at 9:49 a. m. and 11:48 a. m., respectively. Yorktown is a non-train-order office. Movements at Yorktown are controlled by telephone from Gridley and Vance, located, respectively, 10.4 miles west and 6.8 miles east of Yorktown.

Signal Data

In tests made after the accident signal 2331 functioned as intended.

Discussion

The rules governing operation on the line involved provide that before a train or engine makes a crossover movement from

one main track to another main track, or obstructs another main track, authority for such movement must be obtained from either the train dispatcher or the signalman and flag protection must be provided. In territory where the crossover switches are non-bolt-locked, after the crossover switches to be used are lined for a crossover movement an interval of 5 minutes must elapse before such movement is begun. All employees involved understood these requirements.

No. 158, an east-bound second-class train, moving on the eastward main track, stopped at Yorktown about 11:42 a. m. The crew was instructed by the agent to move 2 cars from the house track, which connects with the westward main track. The conductor said that he talked by telephone with the operator at Vance, 6.8 miles east of Yorktown, and told the operator of the proposed movement to the westward main track and then to the house track. The conductor said that the operator at Vance told him No. 11, a west-bound first-class train, was 15 minutes late, and he replied that No. 158 would make the crossover movement immediately. The operator at Vance said that Second 23 passed his tower at 11:47 a. m. and, because he was afterward engaged in handling the interlocking, he did not answer the telephone until about 11:52 a. m. The operator said that the conductor of No. 158 asked for information concerning No. 11 only, and that he did not ask permission to occupy the westward main track at Yorktown, nor did the operator grant authority for such movement. He said the conductor did not give information concerning switching service to be performed at that point nor state where No. 158 was located at that time. Since the operator did not expect No. 158 to occupy the westward main track he did not inform the conductor that Second 23 was ahead of No. 11. The operator at Gridley, 10.4 miles west of Yorktown, said that about 11:50 or 11:52 a. m. he answered the telephone and the conductor of No. 158 informed him that a crossover movement would be necessary at Yorktown and then asked about No. 11. The operator at Gridley replied that No. 11 was 10 minutes late, and the conductor stated that the time was insufficient for No. 158 to make a crossover movement ahead of No. 11. About that time the operator at Vance answered that No. 11 was 15 minutes late and the operator at Gridley left the telephone.

According to the statement of the agent at Yorktown, he overheard the conductor of No. 158 conversing on the telephone. The conductor informed someone that a movement to the westward main track was necessary and asked about No. 11. Later, the conductor told the brakemen, who were in the station, that No. 11 was 15 minutes late and that No. 158 would make a crossover movement ahead of No. 11.

The investigation disclosed that No. 158 proceeded westward on the eastward main track and stopped about 11:56 a. m. at the crossover involved. After the switches were lined for the movement the conductor informed the engineer that No. 11 was 15 minutes late, but added no further information. No member of the crew was aware that the second section of No. 23, a west-bound first-class schedule, was overdue. The front brakeman had

alighted at the house-track switch, located 700 feet east of the crossover, and had lined the switch for entry to the house track. No. 158 proceeded through the crossover and stopped on the westward main track and, before that train could proceed eastward, members of the crew observed Second 23 approaching at a point about 2,000 feet distant. The front brakeman, running eastward, gave a stop signal with his hat, and had reached a point about 1,000 feet east of the crossover when Second 23 passed him. The engineer of No. 158 opened the throttle fully in an attempt to move his train westward a distance sufficient to enable Second 23 to stop short of his train, but No. 158 had moved a distance of 372 feet only when the collision occurred.

Both the conductor and the engineer of No. 158 said that the movement on the day of the accident was being made in a manner similar to movements made at that point on many other occasions. The engineer said that he expected a flagman to be stationed in the vicinity of the station to provide protection against west-bound trains but did not ascertain if flag protection had been provided, nor did he sound the engine-whistle signal for flag protection. The conductor said that he was depending on the line-up of other trains for protection. All members of the crew of No. 158 said that there was no time-interval between the lining of the crossover switches and the crossover movement. The time-interval of 5 minutes which is required by the rules, between the time the switch is operated and the movement is made, is intended to insure that any train which may be closely approaching will pass before the movement through the switch is made, and that any other approaching train will receive restrictive signal indications necessary to safeguard its movement. However, in this case the rule is not positive in character as it provides the alternative that the 5-minute wait is not required if it is known that the movement of an approaching train will not be affected. It appears that the crossover movement in this case was made under the terms of this alternative provision and upon the basis of incomplete information concerning trains which might be affected by the movement. Had this rule definitely required a proper time-interval after the switch was opened and before the movement was made, this accident probably would not have occurred. If proper flag protection had been provided, the accident probably would have been prevented.

According to the statement of the engineer of Second 23, signal 2331 displayed proceed for his train. As his train was approaching the point where the accident occurred, the speed was 70 miles per hour and the fireman and he were maintaining a lookout ahead. The engineer was not aware of anything being wrong until the engine was about 300 feet east of the house-track switch, and he saw the brakeman of No. 158 giving stop signals with a hat. The engineer moved the brake valve to emergency position and closed the throttle, but the distance was not sufficient for stopping short of No. 158. The distance from the point where the emergency application was made to the point of accident was approximately 1,375 feet. The fireman was

so severely injured that he was unable to make a statement, and it could not be ascertained if he observed the flagging signals or the house-track switch stand displaying a red target.

The brakes of Second 23 had been tested and had functioned properly en route. In tests made after the occurrence of the accident, Signal 2331 functioned as intended.

The investigation of this accident disclosed that it is customary to make crossover movements in a manner similar to the movement involved in this accident. Both the conductor and the engineer of No. 158 said that throughout a long period it was daily practice not only for them, but also for other employees with whom they had performed service, to make crossover movements in the same manner as was done in this case. The operator at Vance said that during a period of 35 days the crew involved had not requested authority to occupy another main track at Yorktown nor had he ever granted such authority. The agent at Yorktown said that throughout a considerable period he has overheard a number of conductors use the telephone at Yorktown, and in most instances they obtained information as to movement of other trains but did not request authority to occupy another main track. In addition, No. 158 moved westward on the eastward main track a distance of 2,700 feet without protection of any kind. The failure to obey one or more operating rules for a considerable period, as was disclosed in this investigation, indicates lack of proper supervision. Even though the rules involved in the movement in question were not enforced, if the crossover had been electrically locked this accident would not have occurred.

Cause

It is found that this accident was caused by No. 158 occupying the westward main track without authority and by failure to provide flag protection for this movement.

Recommendation

It is recommended that the Cleveland, Cincinnati, Chicago & St. Louis Railway Company install electric locks on main-track switches in automatic block-signal territory where movements of the character involved in this accident are made.

Dated at Washington, D. C., this eighteenth day of June, 1942.

By the Commission, Commissioner Patterson.

(SEAL)

W. P. BARTEL,
Secretary.