

INTERSTATE COMMERCE COMMISSION
WASHINGTON

REPORT NO. 3455
CHICAGO, SOUTH BORE AND SOUTH BEND RAILROAD
IN RE ACCIDENT
AT GARY, IND., ON
MARCH 4, 1952

SUMMARY

Date: March 4, 1952

Railroad: Chicago, South Shore and South Bend

Location: Gary, Ind.

Kind of accident: Collision

Equipment involved: Passenger train : Passenger-equipment train : Passenger train

Train numbers: 203 : Equipment of No. 150 : 29

Consists: 6 multiple-unit cars : 2 multiple-unit cars : 4 multiple-unit cars

Estimated speeds: Standing : Standing : 12 m. p. h.

Operation: Timetable, train orders and automatic block-signal system

Track: Station track; tangent; 0.06 percent descending grade eastward

Weather: Clear

Time: 6:04 p. m.

Casualties: 129 injured

Cause: Failure to operate following train in accordance with signal indications

INTERSTATE COMMERCE COMMISSION

REPORT NO. 3455

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

CHICAGO, SOUTH SHORE AND SOUTH BEND RAILROAD

May 5, 1952

Accident at Gary, Ind., on March 4, 1952, caused by
failure to operate the following train in
accordance with signal indications.

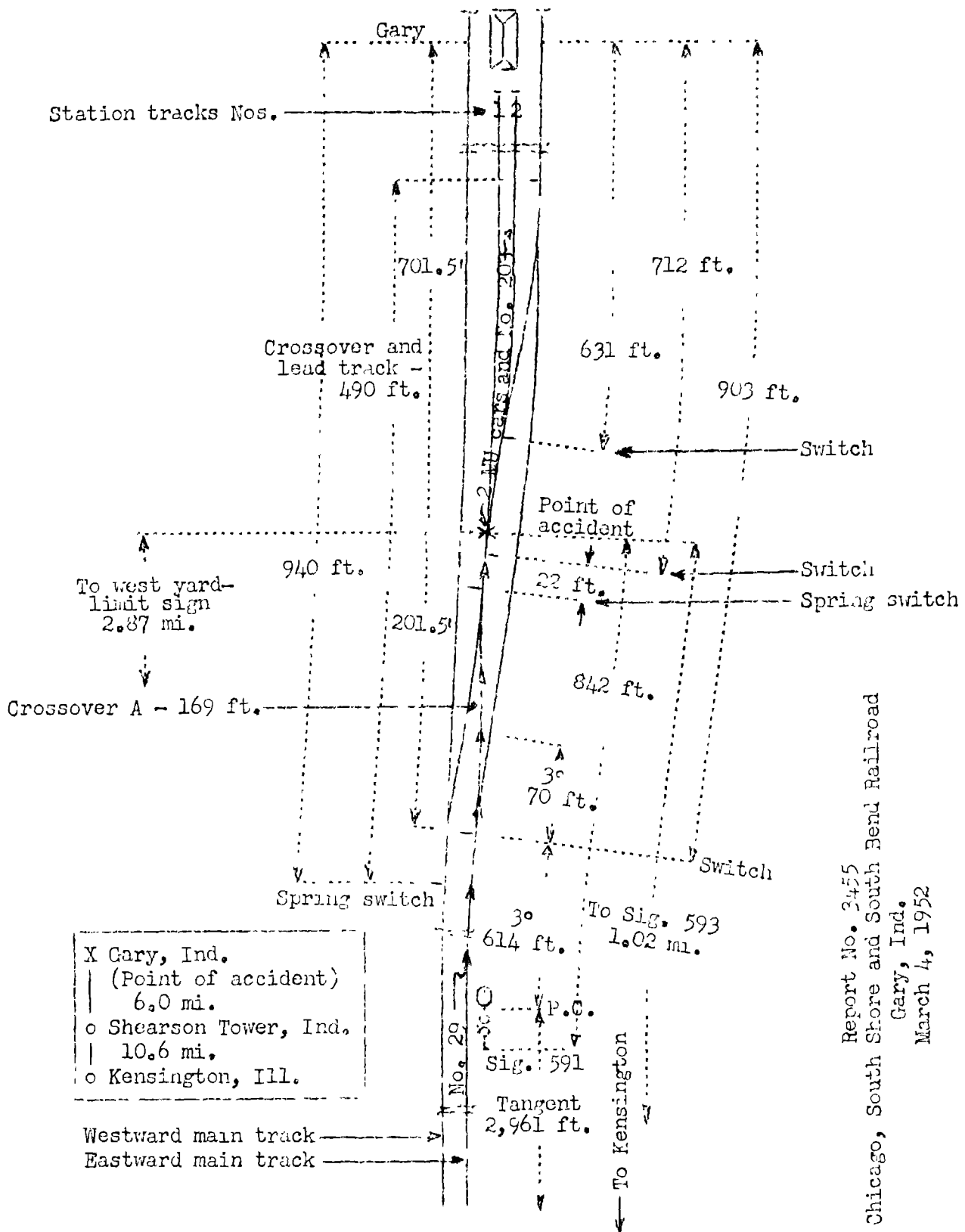
REPORT OF THE COMMISSION¹

PATTERSON, Commissioner:

On March 4, 1952, there was a collision between a passenger train and a passenger-equipment train, which in turn collided with another passenger train on the Chicago, South Shore and South Bend Railroad. This accident resulted in the injury of 180 passengers, 3 employees not on duty, 1 assistant trainmaster and 5 train-service employees. It was investigated in conjunction with a representative of the Indiana Public Service Commission.

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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.



X Gary, Ind.
 | (Point of accident)
 | 6.0 mi.
 o Shearson Tower, Ind.
 | 10.6 mi.
 o Kensington, Ill.

Report No. 3455
 Chicago, South Shore and South Bend Railroad
 Gary, Ind.
 March 4, 1952

Location of Accident and Method of Operation

This accident occurred on that part of the railroad extending between Kensington, Ill., and Gary, Ind., 13.6 miles. In the vicinity of the point of accident this is 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. A catenary system is provided for the electric propulsion of trains. The main tracks from north to south are designated as westward main track and eastward main track. The station at Gary is located between the two main tracks. A trailing-point crossover, 490 feet in length, connects the two main tracks and also serves as the lead track for station tracks. The west switch of this crossover is a spring switch located in the westward main track 940 feet west of the station. The normal position of this switch is for movement on the westward main track. Two station tracks, designated from north to south as track No. 1 and track No. 2, extend westward from the station and are located between the two main tracks. Tracks Nos. 1 and 2 connect with the lead track at switches, respectively, 712 feet and 631 feet west of the station. Crossover A, 169 feet in length, connects the eastward main track with the lead track. The west switch of crossover A is located in the eastward main track 903 feet west of the station and is facing-point for east-bound movements. The east switch of crossover A is located 22 feet west of the switch at the west end of track No. 1. It is a spring switch and is normally lined for movements on the lead track. The accident occurred within yard limits on the lead track, at a point 201.5 feet east of the west switch of crossover A and 701.5 feet west of the station, and 2.87 miles east of the west yard-limit sign. From the west on the eastward main track there are, in succession, a tangent 2,961 feet in length, a 3° curve to the right 614 feet to the west switch of crossover A and 70 feet eastward. The grade for east-bound trains varies between 0.12 percent ascending and 0.54 percent descending throughout a distance of 5,400 feet immediately west of the point of accident, and is 0.06 percent descending eastward at that point.

The switch stand of the main-track switch of crossover A is of the low-stand, ground-throw type. It is located 6 feet 11-1/4 inches north of the center-line of the eastward main track. It is equipped with both a red and a white rectangular target and an electric switch lamp. When the switch is lined for entry to the crossover a red light and the red target are displayed in the direction of an approaching train. The centers of the targets and the lenses of the switch lamp are, respectively, 1 foot 1 inch, and 1 foot 10 inches above the level of the tops of the rails.

Automatic signals 593 and 591 are located, respectively, 1.02 miles and 842 feet west of the point of accident. Signal 593 is of the 1-unit color-light type and displays three aspects. Signal 591 is of the 2-unit color-light type and displays four aspects. These signals are continuously lighted. The aspects applicable to this investigation and the corresponding indications are as follows:

<u>Signal</u>	<u>Aspect</u>	<u>Indication</u>
593	GREEN	PROCEED
	YELLOW	RESTRICTED SPEED, but not more than one-half the maximum speed for the territory.
591	RED-over-YELLOW	Facing point switch entering Gary Yard open-proceed at restricted speed, prepared to stop short of obstruction

The controlling circuits of these signals are so arranged that when the west switch of crossover A is lined for entry to the station tracks and the eastward main track between signal 591 and the switch is unoccupied, signal 591 indicates that the switch is lined for entry to Gary Yard--Proceed at Restricted Speed, and signal 593 indicates RESTRICTED SPEED.

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

104. * * * Switches must be properly lined after having been used.

* * *

104(a). All main track switches and those required by rule and special instructions to be locked must be left in that condition.

* * *

Timetable special instructions read in part as follows:

7. Train Movements:

* * *

(1) All trains, regardless of class, will approach all schedule meeting or passing points under control prepared to stop.

* * *

(c) RESTRICTED SPEED--Proceed prepared to stop short of train, obstruction, or anything that may require the speed of a train to be reduced, not to exceed (20) twenty miles per hour.

* * *

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(c) Indications of Signal 501 located * * * Monroe St., Gary, are as follows:

The top unit indications are--

GREEN Clear--Proceed

YELLOW Caution or order board display at stop indication

RED Stop, then proceed at restricted speed, looking out for track to be occupied, broken rail, or open switch.

The lower unit indications are--

YELLOW indicates facing point switch entering GARY YARD open--proceed at restricted speed, prepared to stop short of obstruction

RED indicates facing point switch to Gary Yard lined for main track movement--be governed by top unit.

20. YARD LIMITS.

* * *

(c) All trains will approach Gary * * * under control, expecting to find the track occupied by yard motors.

In the vicinity of Gary the speed of passenger trains is restricted to 45 miles per hour

Description of Accident

No. 203, an east-bound first-class passenger train, consisted of six multiple-unit passenger-train cars. All cars were of all-steel construction, and all were power units except the third car. This train was being operated from the front control compartment of MU coach 26, the first unit of the train. It passed Shearson Tower, the last open office, 6 miles west of the point of accident, at 5:55 p. m., 2 minutes late, passed signal 593, which indicated Proceed, and stopped at signal 591, which indicated Proceed at Restricted Speed to station tracks. After a proceed signal was given by a member of the mechanical force in the vicinity of the switch to track No. 2, it proceeded, entered crossover A and was routed to track No. 2. It stopped with the front end about 8 feet west of the east end of track No. 2, and the rear end about 530 feet west of the station.

A passenger-equipment train consisting of two multiple-unit passenger-train cars had been placed on the westward main track at the station by members of the mechanical force. The same employees later moved this equipment from the westward main track to the lead track to permit a west-bound freight train to proceed. The passenger-equipment train was moved to the lead track immediately after No. 203 arrived, and first was stopped about 3 feet from the rear end of that train. About 1 minute later it was moved against the rear end of No. 203 and immediately afterward the west end was struck by No. 29.

No. 29, an east-bound first-class passenger train, consisted of four multiple-unit passenger-train cars. All cars were of all-steel construction. This train was being operated from the front control compartment of MU coach 13, the first unit of the train. It passed Shearson Tower at 5:57 p. m., 1 minute late, passed signal 593, which indicated RESTRICTED SPEED, passed signal 591, which indicated Proceed at Restricted Speed to station tracks, entered crossover A, and while moving at an estimated speed of 12 miles per hour it struck the west end of the passenger-equipment train.

No. 203 was moved eastward about 11 feet. The draft gear of each car in this train was damaged or broken and all the cars were somewhat damaged. The east truck of the east car of the passenger-equipment train was slightly displaced. This car was considerably damaged and the west car was somewhat damaged. No. 29 stopped with the front end of the first car about 11 feet east of the point of collision and against the west end of the west car of the passenger-equipment train. A separation occurred between the first and the second cars. The rear end-sill of the first car overrode the front end-sill of the second car, and the vestibules between these cars were crushed inward. The rear truck of the first car was displaced slightly. The first and the second cars were considerably damaged and the third and the fourth cars were somewhat damaged.

The motorman and the flagman of No. 203, and the motorman, the conductor and the flagman of No. 29 were injured.

The weather was clear and it was dusk at the time of the accident, which occurred about 6:04 p. m.

The multiple-unit cars involved are equipped with automatic air brakes with U-4 universal valves, and an M-23 engineer's brake valve at each control station of each power unit. A safety-control feature which operates in conjunction with the controller and a foot pedal is provided. If downward pressure against spring-tension on the controller handle is released while the controller is in running position, the brakes will be applied in emergency and power to the traction motors will be cut off. Also, if downward pressure on the controller handle and the foot pedal are released simultaneously while the controller handle is in off-position and the reverser key is in, the brakes will be applied in emergency.

Discussion

At Gary, east-bound passenger trains which terminate at that station and east-bound passenger trains en route to other points which are scheduled to be passed by another train at Gary are routed to the station tracks through crossover A. The switches used for such movements to and from the station tracks and the main tracks are operated when necessary by members of the mechanical force. These employees also inspect equipment and perform switching service with the passenger equipment of trains either arriving or originating at Gary. No. 203 is scheduled to be passed by No. 29 at Gary. Timetable special instructions provide that trains must approach schedule passing points and Gary Yard under control.

On the day of the accident, as No. 203 was approaching Gary the motorman was in the control compartment at the front end of the first car and the members of the train crew were in various locations in the cars of the train. The motorman said that signal 593 indicated Proceed for his train and signal 591 also indicated Proceed when it first became visible to him. His attention was momentarily diverted by highway traffic at a grade crossing about 1 mile west of signal 591 and when he again observed the signal it was displaying a red-over-yellow aspect. He said that after his train had stopped at signal 591 he received a proceed signal given with a white light from the vicinity of the switch to track No. 2. No. 203 then proceeded and the motorman observed that the west switch of crossover A was lined for entry to the station tracks. The train entered crossover A and was routed to track No. 2. It was stopped about 6:02 p. m., with the front end of the first car about 8 feet west of the east end of track No. 2. The accident occurred about 2 minutes later.

Before No. 203 arrived at Gary the passenger equipment of No. 130, a west-bound first-class passenger train, scheduled to leave Gary at 6:25 p. m., was placed on the westward main track at the station by two car inspectors regularly assigned at this point to inspect equipment and perform switching service. Soon after the equipment of No. 130 had been placed on the westward main track, a west-bound freight train arrived at Gary. The car inspectors moved the equipment of No. 130 to the station tracks to permit the freight train to proceed. With a car inspector at each end of the passenger-equipment train, it was moved westward over the switch at the west end of the crossover and lead track. A car-inspector helper, who also was regularly assigned at this point, had lined the west switch of crossover A for entry to the station tracks, in accordance with previous instructions, and was awaiting the arrival of No. 203. When he observed that the passenger equipment of No. 130 had been moved westward he proceeded to the west switch of the crossover and lead track and lined it for movement to the station tracks. After No. 203 had entered track No. 2, the passenger-equipment train was moved eastward and stopped on the lead track with the east end of the east car about 3 feet west of the rear end of No. 203. The car inspector at the east end of the passenger-equipment train said that as the train was moved eastward he called to the helper and instructed him to close the west switch of crossover A. He said that he did not know if the helper heard or understood the instruction. The car inspector at the west end of the passenger-equipment train said that after his train stopped on the lead track he observed that No. 29 was closely

approaching and then he became aware that it had entered crossover A. He inserted the reverser key and opened the controller and the passenger-equipment train moved eastward and against the rear end of No. 203 immediately before the collision occurred. The helper said that he had lined the west switch of crossover A for entry to the station tracks before the arrival of No. 203 and he was in the vicinity of the switch of track No. 2 when that train arrived. When he observed that the passenger-equipment train was moving westward he proceeded to the west switch of the crossover and lead track to line it for the movement of the equipment to the station tracks. He said that the switch lock was frozen and it took longer than usual to open it. He restored the switch to normal position when the passenger-equipment train cleared the westward main track and then proceeded to the south side of the eastward main track and passed the west switch of crossover A without restoring it to normal position. The helper said that the arrival of the west-bound extra freight train and the return movement of the passenger equipment of No. 130 to the station tracks had not been anticipated and required a variation from the normal routine of movements. Because he became concerned with the movement of a baggage car which was to be added to No. 29 when it arrived, he overlooked the position of the main-track switch of crossover A. He was in the vicinity of the yard tracks south of the eastward main track when No. 29 entered crossover A and struck the passenger-equipment train.

As No. 29 was approaching the point where the accident occurred the speed was about 18 miles per hour. The motorman was maintaining a lookout ahead from the control compartment at the front end of the first car. The members of the train crew and an assistant trainmaster were at various locations in the cars of the train. The headlight was lighted brightly. The brakes of this train had been tested and had functioned properly when used en route. The motorman said that signal 593 indicated Proceed. When the train was closely approaching signal 591 his attention was diverted to an automobile closely approaching the rail-highway grade-crossing in the vicinity of the signal. He said he observed that a yellow aspect was displayed by signal 591 and he thought that it was the top unit of the signal and expected to proceed on the eastward main track. After he had passed the signal he observed the red light of the switch lamp and that the west switch of crossover A was lined for movement to the station tracks. He immediately made an emergency application of the brakes and attempted to reverse the power to the traction motors. He thought that the speed was reduced to about 12 miles per hour when the collision occurred.

After the accident occurred the signal system was tested and it functioned as intended. Examination of the signals involved disclosed no defective condition of the signal apparatus. Under the circumstances present, the aspect displayed by signal 591 indicated that the switch was lined for the train to enter Gary Yard, that the speed of No. 29 should be reduced to 20 miles per hour or less, and that the speed should be so controlled that the train could be stopped short of an obstruction.

Cause

It is found that this accident was caused by failure to operate the following train in accordance with signal indications.

Dated at Washington, D. C., this fifth day of May, 1952.

By the Commission, Commissioner Patterson.

(SEAL)

W. P. BARTEL,
Secretary.