

Inv-2454

INTERSTATE COMMERCE COMMISSION
WASHINGTON

REPORT OF THE DIRECTOR
BUREAU OF SAFETY

ACCIDENT ON THE
NEW YORK CENTRAL RAILROAD

SOUTH BEND, IND.

OCTOBER 18, 1940

INVESTIGATION NO. 2154

SUMMARY

Inv-2454

Railroad: New York Central
Date: October 18, 1940
Location: South Bend, Ind.
Kind of accident: Derailment following collision
at highway grade crossing
Equipment involved: Freight : Motor-truck
Train number: Extra 2829
Engine number: 2829
Consist: 58 cars and caboose
Speed: 40-50 m.p.h. : 3-8 m.p.h.
Operation: Automatic block-signal and automatic
train-stop system
Track: Double; tangent; 0.30 percent
ascending eastward
Highway: Tangent; crosses tracks at angle of
65 degrees; 5.9 percent ascending
southward.
Weather: Clear
Time: 8:38 a.m.
Casualties: 2 killed
Cause: Truck driven upon highway grade
crossing immediately in front of
approaching train

November 27, 1940.

To the Commission:

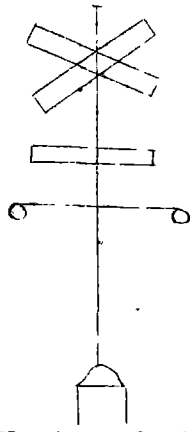
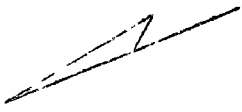
On October 18, 1940, there was a derailment of a freight train on the New York Central Railroad after it struck a motor-truck at a highway grade crossing at South Bend, Ind., which resulted in the death of the truck driver and one railroad employee. The investigation of this accident was made in conjunction with a representative of the Indiana Public Service Commission.

Location and Method of Operation

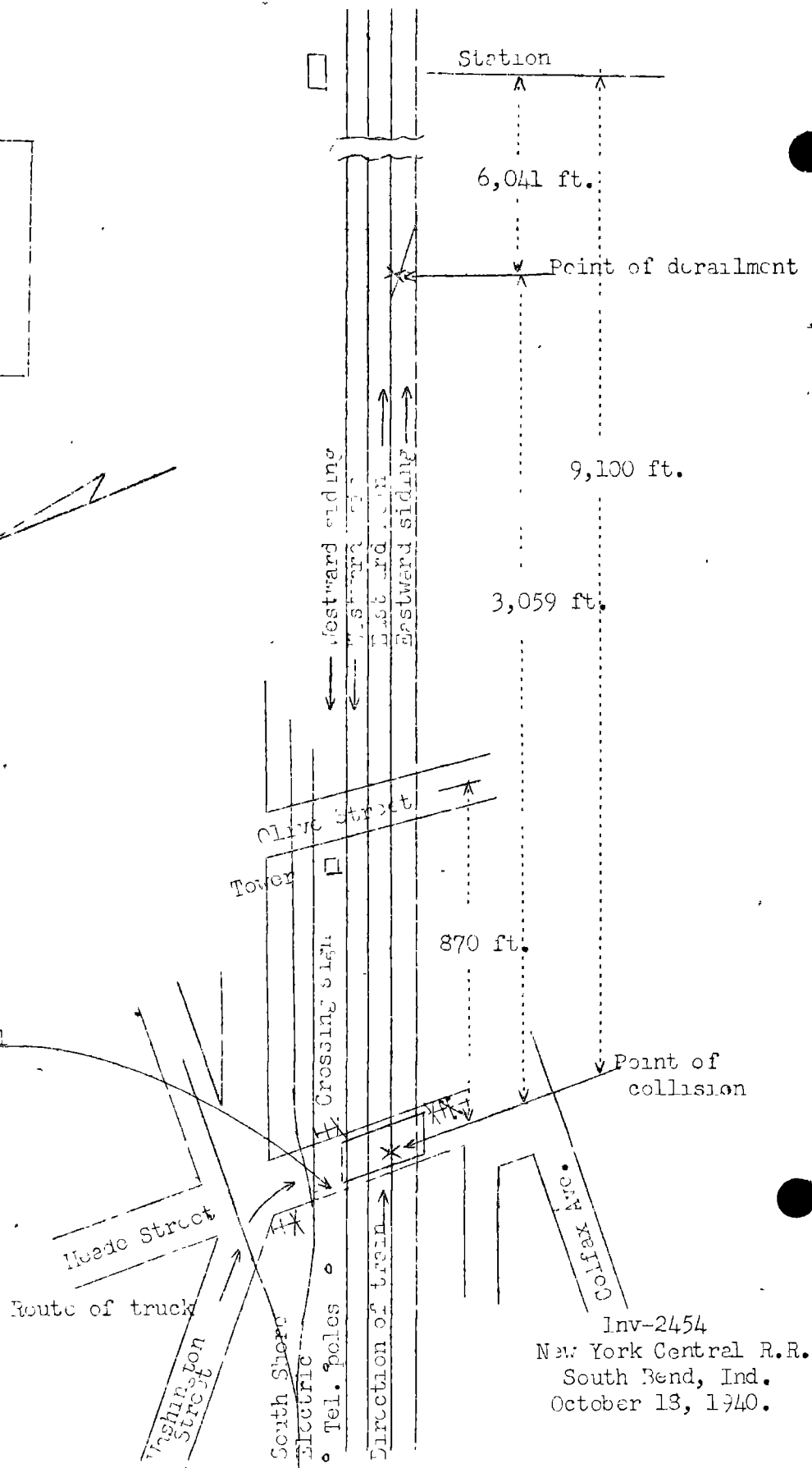
This accident occurred on that part of the Western Division which extends between Chicago, Ill., and Elkhart, Ind., a distance of 100.56 miles. In the vicinity of the point of accident this is a double-track line over which trains are operated by an automatic block-signal and automatic train-stop system; signal indications supersede time-table superiority. The tracks are designated from north to south as westward siding, westward main track, eastward main track, and eastward siding. At a point 6,041 feet west of the station a facing-point crossover having a right-hand turnout connects the eastward main track and the eastward siding. The derailment occurred at the west frog of the east switch of the crossover. As the point of accident is approached on the railroad from the west there are, in succession, a tangent more than 1 mile in length, a $0^{\circ}41'24''$ curve to the right 2,081 feet in length, and a tangent 5,659 feet to the point of derailment. The grade for east-bound trains varies between 0.30 and 0.03 percent descending 5,500 feet, then varies between 0.06 and 0.30 percent ascending 2,200 feet to the point of accident where it is 0.30 percent.

The collision with the motor-truck occurred at a point 9,100 feet west of the station, where Meade Street crosses a single-track line of the South Shore Electric Railroad and the two main tracks and the two sidings of the New York Central at an angle of 65 degrees. Washington Street practically parallels the railroad on the north and intersects Meade Street at a point about 150 feet north of the railroad. North of the crossing Meade Street is surfaced with crushed stone and cinders, and between the tracks with crushed stone and macadam. The crossing is 32.5 feet in width. At the crossing over the eastward and the westward sidings there are planks 4 inches by 8 inches by 16 feet on each side of each rail; between the planks inside the rails the surface is of crushed stone and macadam. Over the eastward and the westward main tracks the crossing consists entirely of planks. The minimum distance between track-centers is 13 feet. As the crossing is approached from the north on Meade Street the grade is 5.9 percent ascend-

o	Elkhart, Ind.	
	15.09 mi.	
o	South Bend	
X	Point of accident	13.39 mi.
o	New Carlisle	
	72.08 mi.	
o	Chicago, Ill.	



Flashing-light signal



Inv-2454
 New York Central R.R.
 South Bend, Ind.
 October 13, 1940.

ing throughout a distance of 103 feet.

The New York Central crossing is protected on the north and the south by flashing-light signals. The signal governing south-bound traffic on Meade Street is to the right of the direction of traffic and 13.2 feet north of the north rail of the westward siding. A cross-buck sign is mounted on a mast 11 feet 5 inches above the base, and bears the words "RAILROAD CROSSING;" a horizontal sign beneath the cross-buck bears the word "DANGER." A horizontal bar to which a red light is attached at each end is mounted on the mast 8 feet 1 inch above the base; the lenses are 7-1/4 inches in diameter. The flashing-light signals are controlled by a crossing watchman at Clive Street tower, located 870 feet east of Meade Street. A control circuit which extends 8,049 feet west of the tower actuates a buzzer to warn the watchman of the approach of an east-bound train; the watchman must throw an electric switch to operate the flashing-light signals. In the tower a light bulb is connected to the signal circuit and indicates when the signals are operating.

The South Shore Electric track is protected by standard cross-buck signs.

At Meade Street a row of telegraph poles located between the South Shore Electric and the New York Central tracks interferes to some extent with the view toward the west. As a south-bound vehicle turns into Meade Street from Washington Street the driver can see an east-bound train a distance of 3,000 feet. When the vehicle is 100 feet, 72 feet, and 48 feet, from the center of the eastward main track, an unobstructed view of the track to the west can be had at distances of 3,500 feet, 2,500 feet, and 3,300 feet, respectively.

A whistle post for east-bound trains is located 1,339 feet west of Meade Street crossing.

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

14. Engine Whistle Signals.

Note.- The signals prescribed are illustrated by "o" for short sounds; "___" for longer sounds. * * *

14 (1) ___ o o (1) Approaching public crossings at grade.

* * *

30. The engine bell must be rung when an engine is about to move and while approaching and passing public crossings at grade or in an emergency.

957. (Crossing Watchmen)

* * *

Where other manually operated crossing protection devices are in use, they must be placed in operation before an approaching train reaches the crossing and kept in operation until the entire train has passed and it is known no other train is approaching.

Motor Vehicle Laws of the State of Indiana read in part as follows:

Article Xlll. Section 100 - Obedience to Signal Indicating Approach of Train.

Whenever any person driving a vehicle approaches a railroad grade crossing, the driver of such vehicle shall stop within fifty feet but not less than ten feet from the nearest track of such railroad and shall not proceed until he can do so safely, when:

(a) A clearly visible electric or mechanical signal device gives warning of the immediate approach of a train.

* * *

(c) A railroad train as defined in this act, approaching within approximately one thousand five hundred feet of a highway crossing emits a signal audible for such distance and such train by reason of its speed or nearness to such crossing, is an immediate hazard.

(d) An approaching train is plainly visible and is in hazardous proximity to such crossing.

The maximum authorized speed for the train involved is 50 miles per hour.

The weather was clear at the time of the accident, which occurred about 8:33 a.m.

Description

Extra 2829, symbol Advance CDN-4, an east-bound freight train, with Conductor Moyer and Engineman Sanders in charge, consisted of engine 2829, 56 loaded and 2 empty cars and a caboose. This train departed from Gibson, Ind., 66.34 miles west of South Bend, at 7:10 a.m., according to the train sheet, passed New Carlisle, the last open office, 13.39 miles west of South Bend, at 8:26 a.m., and, while moving at a speed estimated at 40 or 50 miles per hour, collided with a motor-truck at Meade Street crossing, and was derailed at a point 3,059 feet beyond.

The motor-truck involved was owned by the Bendix Corporation, South Bend, Ind., and was being driven by Joseph Toplak. It was a 1937 model D.40, 6-cylinder, International truck of 2-ton capacity, and was equipped with dual wheels, an enclosed steel cab, and an automatic steel dump-body; the overall length was 24-1/2 feet. It was serviced and inspected October 7, 1940, at which time it was in good condition. At the time of the accident it was loaded with rubbish. It proceeded from the Bendix Corporation plant southeastward on Washington Street to Meade Street, a distance of 200 feet, then turned southward and, while moving over the crossing at a speed estimated at 5 to 8 miles per hour, was struck by Extra 2829.

Parts of the truck, which was demolished, and its contents were scattered along the tracks to the point of derailment. The truck body stopped on the westward main track, 819 feet east of Meade Street crossing. The rear wheels and the axle of the truck became wedged under the engine truck and, when the engine encountered the frog of the facing-point crossover, it caused such damage to the switch that the engine was diverted to the crossover, became derailed and stopped between the eastward main track and the eastward siding, 195 feet beyond the point of derailment. The engine leaned toward the left at an angle of 45 degrees and was badly damaged; the tender stopped to the rear of the engine and in practically the same position. The first three cars were disengaged from their trucks and stopped in various positions on both main tracks and the eastward siding; these cars were badly damaged. The front truck of the fourth car was torn loose but the car remained upright and in general line with the track. The fifth and sixth cars were derailed but remained upright and were only slightly damaged.

The employec killed was the fireman.

Summary of Evidence

Engineman Sanders stated that a terminal air-brake test was made at Blue Island, Ill., 75.73 miles west of South Bend. Ten cars were added to the train at Gibson, and the brakes of these cars were tested; the brakes functioned properly en route. As his train approached the point where the accident occurred the speed was about 50 miles per hour and he was seated in his usual position maintaining a lookout ahead. He was sounding the whistle signal for the public crossing at Meade Street when he heard the front brakeman and the fireman, who were on the left seatbox, call a warning; because of the noise of the whistle he did not understand what they said. He then heard a noise at the front of the engine and debris flew through the front window. He stepped to the deck of the engine, closed the throttle, and applied the air brakes in emergency. At the time the brakes were applied the engine was about 5 car lengths east of the crossing. The speed was reduced to about 10 miles per hour when the engine became derailed. He said that the bell was ringing continuously en route.

Front Brakeman Hipple stated that he was on the seatbox behind the fireman when his train approached the point where the accident occurred and the speed was about 50 miles per hour. When his engine was about 15 car lengths west of Meade Street crossing he saw a truck approaching from the left. The speed of the truck was reduced almost to a stop, then the driver appeared to shift gears and the truck proceeded upon the crossing. The brakeman called a warning to the engineman who was sounding the whistle signal for the crossing. Immediately after the engine struck the truck the engineman applied the air brakes. The brakeman did not know whether the driver was looking toward the train and whether the flashing-light signal was operating.

Conductor Moyer stated that before his train left Blue Island the air brakes were tested; the brakes of the cars that were added to the train at Gibson were tested also. When his train was approaching the point where the accident occurred he was in the caboose and the speed was about 50 miles per hour. He felt the brakes being applied in emergency. The train stopped at 8:38 a.m. with the caboose standing about 13 or 14 car lengths east of Meade Street. The weather was clear and the sun was shining.

Flagman Williams thought his caboose was about 30 or 35 car lengths west of Meade Street when he felt an application of the air brakes. After the accident occurred he proceeded back to provide flag protection and at that time the flashing-light signals at Meade Street crossing were functioning.

Crossing Watchman Roytek stated that the annunciator in his tower at Olive Street, 870 feet east of Meade Street, sounded when the train involved entered the circuit about 1-1/2 miles west of the crossing. He unlocked the gates which protect the crossing at Olive Street and closed the switch for the flashing lights to operate at Meade Street. At this time the train was about 1 mile distant. The light in the tower indicated that the flashing lights were operating properly. He saw the motor-truck involved approach Meade Street crossing from the north. At the foot of the grade the speed of the truck was reduced to about 2 or 3 miles per hour, then the driver appeared to shift gears and the truck proceeded upon the crossing in front of the train. He heard the crossing-whistle signal being sounded just prior to the accident. He estimated that the speed of the train was about 40 miles per hour when it passed his tower.

M. J. Van Laer, an employee of the South Bend Street Department, stated that about 2 or 3 minutes prior to the time of the accident he drove his truck across the crossing involved and stopped just south of the crossing with his truck headed in a westerly direction. He saw the truck involved as it approached the track at a speed of about 5 miles per hour and at the same time he saw the freight train approaching 2 or 3 city blocks distant and moving at a speed between 40 and 50 miles per hour. The crossing-whistle signal was being sounded but he did not hear the engine bell ringing. At the time of the accident the truck was moving about 3 miles per hour and its cab was clear of the eastward track. He did not notice whether the flashing lights were operating at the time of the accident; however, they were operating after the accident. At the time he drove over the crossing the flashing lights were not operating, no train was in sight, and there was nothing to obstruct his view of an approaching east-bound train.

John Lindorf, who was accompanying M. J. Van Laer, stated that the truck involved was moving at a speed of 5 or 8 miles per hour at the time of the accident.

Traffic Manager Sanford, of the Bendix Products Division, stated that Truck Driver Toplak had been employed by the Bendix Corporation since April 25, 1922. His tour of duty was from 8 a.m. to 4 p.m.; he had been off duty from 4 p.m. October 17, to 8 a.m., October 18. His duties included making several trips each day over Meade Street crossing. He was considered a careful driver and had been awarded several buttons and cards for careful driving. He was 49 years of age. The truck was serviced and in good condition on October 7, 1940.

General Enginehouse Foreman Ball stated that he arrived at the scene of accident about 9:45 a.m. Inspection of engine 2829 disclosed that the brake valve was in emergency position, the throttle closed, and the reverse gear set for 30 percent cutoff in forward motion.

Observations of the Commission's Inspectors

Inspection of the derailed equipment and track was made by the Commission's inspectors 35 minutes after the accident occurred. The brakes on the cars remaining on the track still were applied. Parts of the motor-truck were strewn along the right-of-way from Meade Street crossing to the point of derailment. The motor block was on the eastward siding at a point 1,798 feet east of the crossing. The rear wheels, axle and part of the chassis were wedged under the engine truck. The switch rods of the facing-point crossover switch were bent; the south stock rail was overturned and wheel marks were on the web. Apparently these wheel marks were made by the derailed cars after the initial derailment. The first wheel marks on the ties were found at the heel of the switch frog, beyond which point the track was destroyed to the point where the derailed equipment stopped. It was evident that the rear wheels, axle and part of the chassis which had become wedged under the engine caught in this frog and caused the engine to be derailed.

A check of traffic for a 24-hour period disclosed that 1,020 vehicles and 69 trains passed over Meade Street crossing. During this period the flashing-light signals were observed to be operating properly when trains passed over the crossing. The crossing-whistle signal was sounded clearly and distinctly by all enginemen. Drivers of 10 motor vehicles drove over the crossing while the warning signals were in operation.

Discussion

According to the evidence, the crossing-whistle signal was being sounded and the engine bell was ringing as the train approached the point where it struck the motor-truck. According to time-table rule, the maximum authorized speed for the train involved was 50 miles per hour and the evidence was to the effect that this speed was not being exceeded. The truck was observed by both the front brakeman and the fireman and a warning was called to the engineman just prior to the collision; however, because of the noise of the engine whistle the engineman did not understand the warning. After the truck was struck the engineman applied the brakes in emergency, but the train proceeded a distance of 3,059 feet to the frog of a

facing-point crossover. Part of the wreckage of the motor-truck was dragged under the engine truck and when the frog of the switch was encountered the engine became derailed.

According to the laws of the State of Indiana, when the driver of a highway vehicle approaches a railroad crossing where an electric or a mechanical device gives warning of the immediate approach of a train or when a closely approaching train is plainly visible, the driver of such vehicle is required to stop within 50 feet but not less than 10 feet from the nearest track of the railroad and not to proceed until he can do so safely. The evidence indicates that the flashing-light signals were operating at the time the truck approached the crossing; the watchman in charge stated that when the train involved was about 1 mile distant he closed the switch controlling the lights of the crossing signal and the indicator in the tower disclosed them to be operating. Several minutes after the accident occurred, two bystanders observed that the lights were operating properly; also the flagman observed them operating when he proceeded to the rear to provide flag protection. The evidence is to the effect that before the nearest track was reached the driver of the truck reduced speed almost to a stop, then seemed to shift gears, and proceeded upon the eastward main track at a speed between 3 and 8 miles per hour. The view is somewhat restricted by a line of poles at the north of the New York Central tracks; however, when the driver of a vehicle is 48 feet from the eastward main track he has an unrestricted view of east-bound trains moving on that track a distance of 3,300 feet. The driver was familiar with the crossing involved, was experienced, and had been on duty about 40 minutes at the time of the accident. The weather was clear and there were no trains or cars standing or moving on any other track in the vicinity. Had the driver exercised ordinary precaution undoubtedly he could have seen the approaching train in time to take action to avoid this accident. Why the driver failed to stop clear of the eastward track could not be determined, as he was killed in the accident.

Conclusion

This accident was caused by a motor-truck being driven upon a highway grade crossing immediately in front of an approaching train.

Respectfully submitted,

S. N. MILLS,

Director.