INTERSTATE COMMERCE COMMISSION

WASHINGTON

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INVESTIGATION NO. 2514

THE PENNSYLVANIA RAILROAD COMPANY

REPORT IN RE ACCIDENT

NEAR WATSONTOWN, PA., ON

AUGUST 1, 1941

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SUMMARY

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|---|---|---|
| Railroad: | Pennsylvania | |
| Date: | August 1, 1941 | |
| Location: | Watsontown, Pa. | |
| Kind of accident: | Derailment | |
| Equipment involved: | Passenger train | : Motor truck |
| Train number: | 575 | : |
| Engine number: | 6819 | : |
| Consist: | 12 cars | : |
| Speed: | 15-20 m.p.h. | : Standing |
| Operation: | Automatic block-signal system | |
| Track: | Double; $2^{\circ}34'$ curve; 0.04 percent descending grade westward | |
| Highway: | Tangent; crosses tracks practically at right angles; 4.42 percent ascending grade southward. | |
| Weather: | Clear | |
| Time: | 1:30 a.m. | |
| Casualties: | 3 killed; 2 injured | |
| Cause: | Accident caused by a passenger train striking the wreckage of a motor truck which had been stalled on a grade crossing and struck by a freight train on an adjacent track | |

INTERSTATE COMMERCE COMMISSION

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INVESTIGATION NO. 2514

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

THE PENNSYLVANIA RAILROAD COMPANY

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September 27, 1941

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Accident near Watsontown, Pa., on August 1, 1941, caused by a passenger train striking the wreckage of a motor truck which had been stalled on a grade crossing and struck by a freight train on an adjacent track.

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REPORT OF THE COMMISSION[1]

PATTERSON, Commissioner:

On August 1, 1941, there was a derailment of a passenger train after it collided with the wreckage of a motor truck which had been struck by a freight train near Watsontown, Pa. The derailment resulted in the death of three employees and the injury of two passengers. This accident was investigated in conjunction with the Pennsylvania Public Utility Commission.

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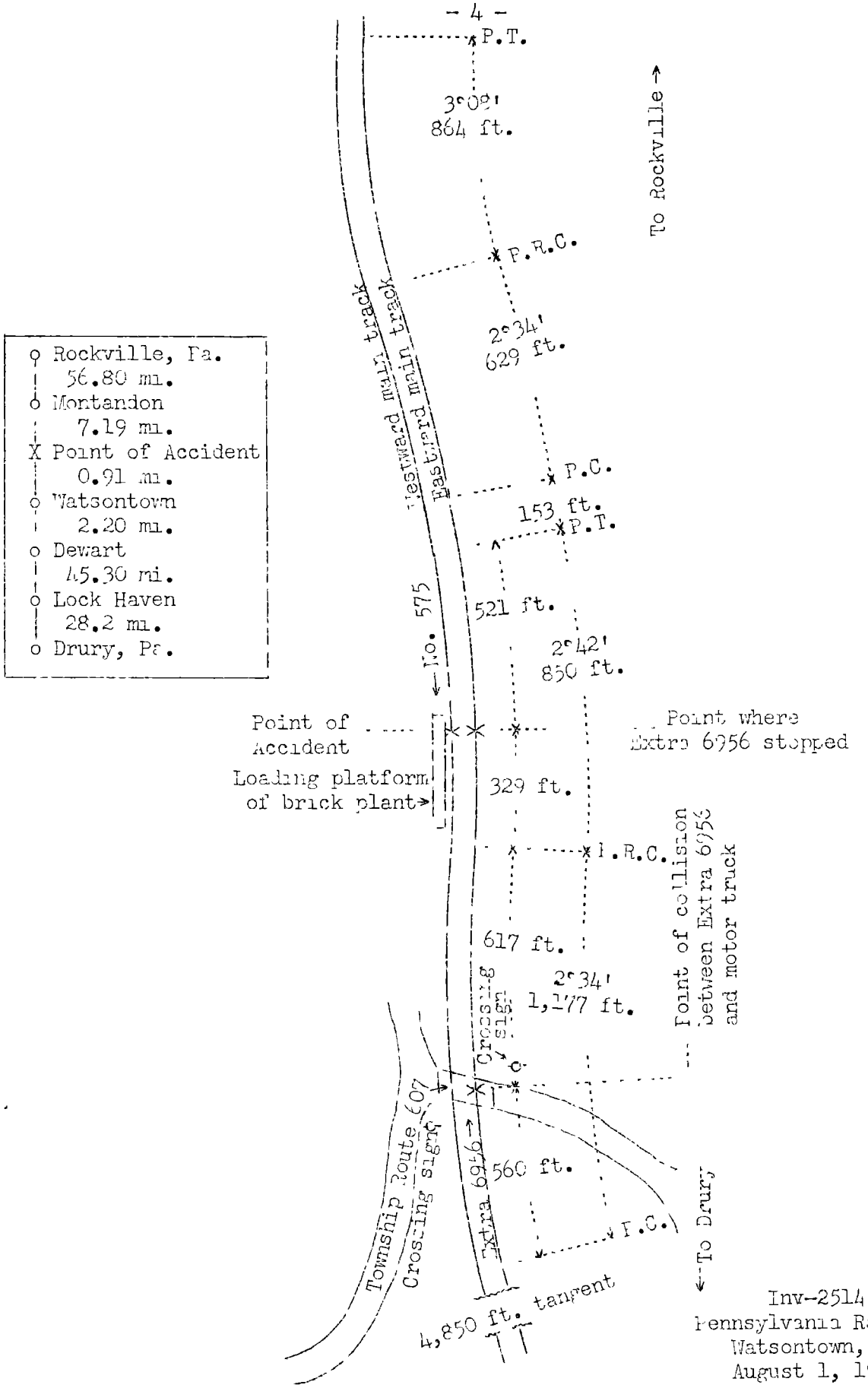
[1] Under authority of section 17 (2) of the Interstate Commerce Act the above-entitled proceeding was referred by the Commission to Commissioner Patterson for consideration and disposition.




Inv-2514
Pennsylvania Railroad
Watsontown, Pa.
August 1, 1941

Location of Accident and Method of Operation

This accident occurred on that part of the Williamsport Division which extends between Rockville and Drury, Pa., a distance of 140.6 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 system, the indications of which supersede time-table superiority. The accident occurred on the westward main track at a point about 4,820 feet east of the station at Watsontown and 946 feet east of the point where the railroad is crossed at grade by a highway designated as Township Route 607. As the point of accident is approached from the east on the railroad there are, in succession, a tangent 1,300 feet in length, a 3°08' curve to the left 864 feet, a 2°34' curve to the right 629 feet, a tangent 153 feet, and a 2°42' curve to the right extending 521 feet to the point of derailment and 329 feet beyond. As the crossing is approached from the west on the railroad there are, in succession, a tangent 4,850 feet in length, a 2°34' curve to the right extending 535 feet to the crossing and 642 feet beyond. The grade is 0.04 percent descending westward.

As the crossing is approached from the north on Township Route 607, there are, in succession, a tangent about 400 feet long, a slight curve to the left, a tangent about 100 feet long which practically parallels the railroad on the north at a distance of about 25 feet, a sharp turn to the right and a tangent about 25 feet long to the crossing. The highway crosses the tracks at practically right angles. Immediately north of the crossing the grade is 4.42 percent ascending throughout a distance of 45 feet. The highway is unimproved and poorly maintained. From the turn to the right to the crossing the center of the highway is considerably higher than its edges. The crossing is paved with amesite and is about 16 feet in width.

On the north side of the tracks the crossing is protected by two crossing signs. One is in the northeast angle of the crossing, faces southeast and protects traffic approaching from the south. The other is located in the northwest angle of the crossing, 12 feet north of the westward main track, and faces northward. These signs are oval shape, 4 feet in length and 18-1/2 inches in width, mounted on posts, and their centers are 8 feet above the ground. They bear the words "RAILROAD CROSSING STOP LOOK AND LISTEN" in black letters on a white background. Whistle signs are located, respectively, 1,300 feet west and 1,400 feet east of the crossing involved.

Operating rules read in part as follows:

102. * * *

When a train is disabled so it may obstruct another track, trains on that track must be stopped.

Special time-table instructions read in part as follows:

S7. ENGINE WHISTLE SIGNALS.

D701. Rule 14 modified and amplified:

| Sound | Indication |
|---|---|
| | * * * |
| (1) ___ ___ c o | Approaching public crossings at grade, to be prolonged or repeated until crossing is reached, unless otherwise provided; * * * |
| | * * * |

Special Hauling Permit, issued by the Department of Highways, Commonwealth of Pennsylvania, for movement of the motor vehicle involved reads in part as follows:

GENERAL CONDITIONS.

1. The authority conferred by this permit does not give the holder thereof the right to move over * * * railroads or railways, except as hereinafter provided, * * *.

2. Nothing herein contained shall be construed to confer * * * the right to cross any * * * railroad or railway tracks, at grade, until after due and sufficient notice of such proposed crossing shall have been given * * * to the track supervisor or other authorized agent of the railroad or railway company and proper arrangements made for such crossing; * * *
* * *

In the vicinity of the point of accident the maximum authorized speed for passenger trains is 65 miles per hour on tangent track and 55 miles per hour on curves. The maximum authorized speed for freight trains is 45 miles per hour.

## Description of Accident

The motor truck involved was a tractor coupled to a semi-trailer which was designed for the transportation of oversize lading. The motor truck was owned by Eck Bros., Montoursville, Pa., and was being driven by J. Otto Eck, who held operator's license No. 1836170 for 1941. The driver was accompanied by two helpers. The tractor was a 1940 model Auto-Car special, weighing 16,000 pounds, and was equipped with two rear axles and dual tires on each rear wheel; it was provided with an enclosed cab. It was hauling a Rogers semi-trailer of steel construction, type C-35-D, weighing 13,000 pounds. The semi-trailer was equipped with two rear axles and eight wheels to each axle. At the time of the accident the semi-trailer was loaded with a steam shovel weighing 40,000 pounds. The total weight of the tractor, the semi-trailer and the shovel was 69,000 pounds. The length of the tractor and semi-trailer was 45 feet. The tractor bore Pennsylvania license ZZ67B, and the semi-trailer bore Pennsylvania semi-trailer license 0831. The original clearance above the ground of the lowest part of the semi-trailer frame was 12 inches but a permanent sag reduced it to 6-1/2 inches and the clearance was further reduced when the semi-trailer was loaded.

The steam shovel was being moved under authority of special hauling permit No. H-8-3462. This motor truck was en route from Turbotville, about 5 miles northeast of Watsontown, to Middletown, Pa., about 60 miles south of Watsontown. Because of the length of the motor truck, several forward and backward movements were made in rounding the sharp curve immediately north of the crossing involved. The semi-trailer frame dragged on the surface of the highway and stalled the motor truck, which stopped with the tractor standing on the eastward main track. Several minutes later the truck was struck by Extra 6956 East.

In the immediate vicinity of the crossing, a driver of a vehicle on the highway can have an unrestricted view of a train approaching from the west a distance of 1 mile, and of a train approaching from the east, 1,250 feet.

Extra 6956 East, symbol CSB-8, an east-bound freight train, consisted of engine 6956, 29 loaded cars and a caboose. The brakes of Extra 6956 had been tested at Altoona, Pa., 115.9 miles west of Watsontown, and the brakes functioned properly en route. This train departed from Lock Haven, 47.5 miles west of Watsontown, at 12:25 a.m., according to the train sheet, passed Allens, 20.6 miles west of Watsontown and the last open office, at 12:58 a.m., and while moving on the eastward main track at a speed estimated from 18 to 25 miles per hour collided with the motor truck.

The tractor was torn loose from the semi-trailer and was demolished by Extra 6956. Gasoline became ignited and engine 6956 was enveloped in flames. The engine was but slightly damaged. The wreckage of the tractor was pushed ahead of the engine to the point where it stopped 946 feet east of the crossing. The time then was 1:28 a.m. The wreckage of the tractor fouled the westward main track and was struck by No. 575 at 1:30 a.m.

No. 575, a west-bound first-class passenger train, consisted of engine 6819, one express-refrigerator car, one express car, one baggage-mail car, one passenger-baggage car, one coach, four Pullman sleeping cars, one business car and two Pullman sleeping cars, in the order named. All cars were of steel construction. The brakes of this train had been tested at Harrisburg and they functioned properly. This train departed from Harrisburg, 70.2 miles east of Watsontown, at 12:03 a.m., according to the train sheet, 9 minutes late, passed Montandon, 8.1 miles east of Watsontown and the last open office, at 1:23 a.m., 8 minutes late, and as it was approaching Watsontown and moving at a speed variously estimated from 15 to 50 miles per hour it struck the wreckage of the tractor and became derailed.

Engine 6819 was derailed to the right, continued forward 280 feet, and stopped on its right side parallel to the track and against the loading platform of a brick plant. The pilot, the safety valves, a washout cap in the roof sheet, the left water-glass connections, and the fire door were broken off. The engine truck was torn loose and the cab was demolished. The tender was derailed to the right and stopped, badly damaged, on its right side at the rear of the engine and at an angle of 30 degrees to the track. The first car was derailed to the left and stopped upright against the cars of Extra 6956. Its front-end sheets, side sheets, center sills, corner sheet cap and side Z-angles were badly bent. The front truck-frame and the front-end platform casting were broken. The second car was derailed to the right and stopped, practically upright, with the front end on the roadbed and the rear end against the loading platform. Both trucks and the right rear corner of the car were damaged. The third car was derailed to the right and stopped, practically upright, with its front end against the loading platform and the rear end on the roadbed. The first, second and third cars of Extra 6956 were struck by the derailed equipment of No. 575. The left wheels of the rear truck of the first car were raised about 6 inches above the rail. The rear truck of the second car and the front truck of the third car were derailed. A section of about 280 feet of the westward main track was destroyed.

The weather was clear at the time of the accident, which occurred at 1:30 a.m.

The employees killed were the engineman and the fireman of No. 575, and a road foreman of engines, who was on the engine.

Data

During the 30-day period preceding the day of the accident, there was a daily average of 49.9 trains over the crossing involved. During the 24-hour period beginning at 12:01 a.m., August 4, 61 trucks, 198 automobiles and 44 trains passed over this crossing.

## Discussion

The motor truck involved had been obstructing the railroad tracks at the grade crossing involved at least 20 minutes prior to the approach of Extra 6956 East. During this period an attempt was being made to free the semi-trailer, as the bottom of the frame of the semi-trailer was in contact with the center of the surface of the highway, and no effort was made to provide flag protection for an approaching train until just before the accident occurred. The engine whistle of Extra 6956 was sounded for crossings at points 2.2 miles and 0.73 mile west of the crossing involved. The truck driver said that he heard the engine whistle being sounded and proceeded toward the approaching train in an attempt to flag it; however, he said his signals were not answered and no attempt was made by the crew to stop the train. He said he flagged the approaching train from a point 873 feet west of the crossing; however, according to statements made by near-by residents, the driver gave stop signals with a flashlight provided with a red bulb from a point about 10 feet west of the stalled motor truck. The driver had two helpers but it does not appear that they made any effort to flag the approaching train. The speed of Extra 6956 as it was approaching the crossing involved was 35 to 45 miles per hour. The engineman and the fireman were on their respective sides of the cab and were maintaining a lookout ahead. The headlight was burning brightly. The engineman started to sound the whistle signal for the crossing involved, then the fireman and he saw dim red lights on the motor truck about 1,300 feet distant and became aware that the motor truck was on the crossing. About the same instant they saw the driver near the motor truck giving stop signals with a flashlight. The engineman immediately made an emergency application of the brakes but the distance was not sufficient to stop short of the obstruction. If one of the motor truck attendants had flagged from a point 500 feet west of the crossing, his signals could have been seen by the members of the engine crew of the approaching train a distance of 1 mile,

which would be ample distance for the train to stop short of the crossing.

According to the provisions of the special hauling permit issued for the movement of the motor truck involved, sufficient notice was required to be given to an authorized agent of a railroad so that proper arrangements could be made for crossing railroad tracks at grade. No representative of the railroad had been notified concerning the contemplated movement of this motor truck. The owners of the motor truck thought it was not necessary for them to make arrangements concerning the crossing of railroad tracks at grade. They had previously transported other steam shovels without making arrangements to cross railroad tracks. Had the owners of the motor truck notified a representative of the railroad concerning the movement over this crossing, arrangements could have been made to provide proper protection, either by flag or by train order, and this accident would have been averted.

The rules provide that under conditions when there is danger of obstructing adjacent tracks, those tracks must be protected. Because flames of burning gasoline from the fuel tank of the wrecked tractor enveloped engine 6956, the crew of that engine were unable to protect the westward track immediately. About 2 minutes elapsed before the flames subsided. The fireman and the front brakeman then procured flagging equipment and proceeded eastward to provide flag protection for No. 575, but they were able to reach a point only 350 feet east of their engine to flag No. 575, and this distance was not sufficient for No. 575 to stop short of the wreckage of the tractor.

## Cause

It is found that this accident was caused by a passenger train striking the wreckage of a motor truck which had been stalled on a grade crossing and struck by a freight train on an adjacent track.

Dated at Washington, D.C., this twenty-seventh day of September, 1941.

By the Commission, Commissioner Patterson.

(SEAL)

W. P. BARTEL,

Secretary.