INTERSTATE COMMERCE COMMISSION

REPORT OF THE DIRECTOR OF THE BUREAU OF SAFETY CONCERNING AN ACCIDENT ON THE LONG ISLAND RAILROAD, PENNSYLVANIA RAILROAD SYSTEM, AT ROCKVILLE CENTRE, N.Y., ON FEBRUARY 20, 1934.

April 25, 1934.

To the Commission:

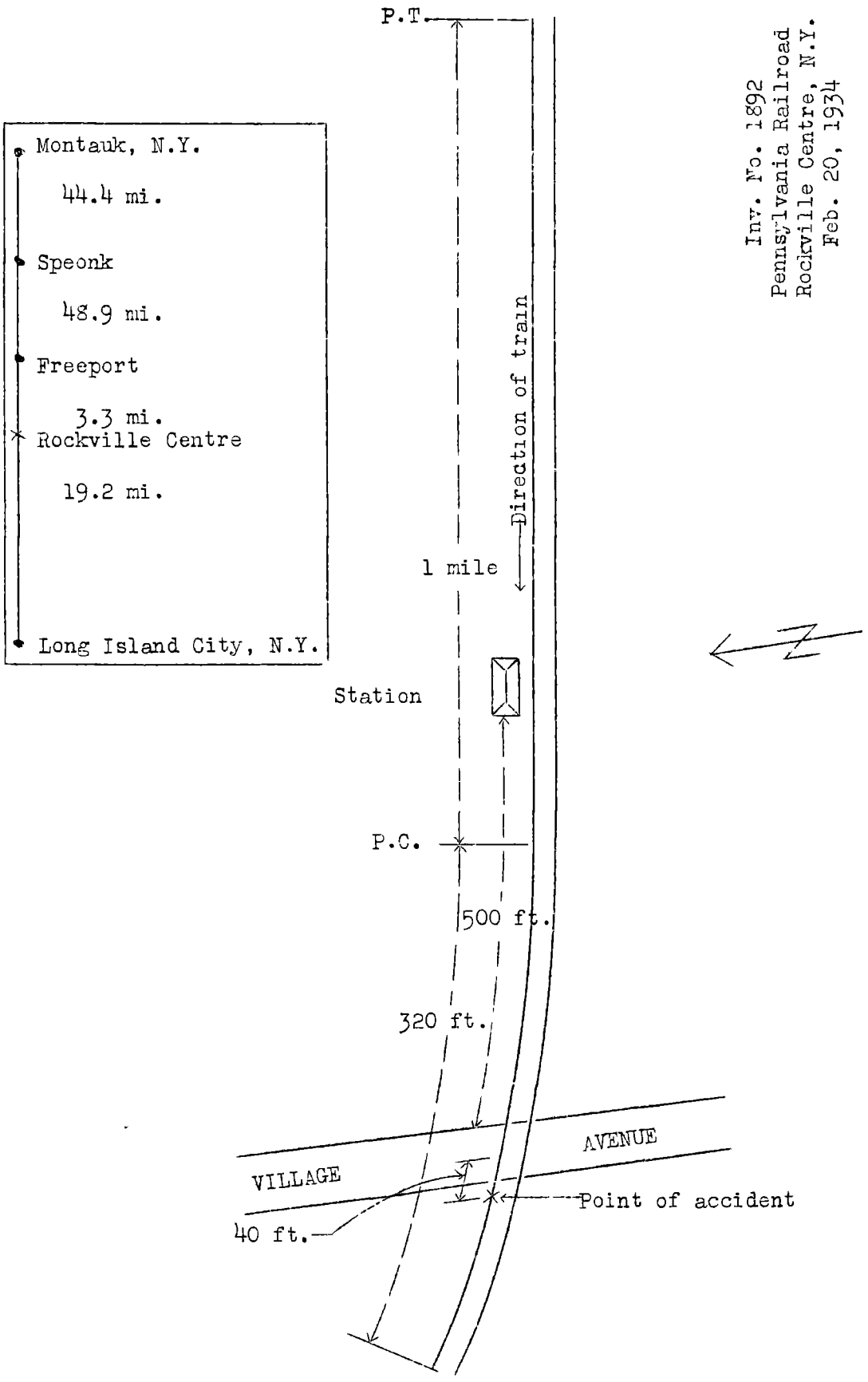
On February 20, 1934, there was a derailment of a snowplow train on the Long Island Railroad, Pennsylvania Railroad System, at Rockville Centre, N. Y., which resulted in the death of one employee.

Location and method of operation

This accident occurred on the Montauk Branch, which extends between Long Island City and Montauk, N. Y., a distance of 115.8 miles, and is a double-track line over which trains are operated by time table, train orders, and an automatic block and cab-signal system. A highway known as Village Avenue crosses the tracks approximately 500 feet west of the station at Rockville Centre and the derailment occurred about 40 feet west of the center of this crossing. Approaching this point from the east, the track is tangent for a distance of about 1 mile, followed by a 2° curve to the right 320 feet in length, the accident occurring on this curve at a point about 230 feet from its eastern end. The grade at the point of accident is 0.21 percent descending for west-bound trains.

The track is laid with 100-pound rails, 33 feet in length, with an average of 18 ties to the rail length, fully tieplated, with 8 rail anchors to the rail length, and is ballasted with cinders; the track is well maintained, and has an elevation on the curve of 3½ inches. The maximum speed permitted for a train handling a snow plow is 25 miles per hour.

Village Avenue crosses the tracks nearly at a right angle, is approximately 60 feet in width, and has 12-inch planks on both sides of each rail, with 1¾-inch flangeways; between the planks the crossing is filled with amiesite. Due to severe cold weather the planks had been raised by frost from their original positions on a level with the rails to a point about 1 1/8 inches above them, and the filling between the planks had been raised between 1 and 1¼ inches.


Montauk, N.Y.
44.4 mi.
Speonk
48.9 mi.
Freeport
3.3 mi.
Rockville Centre
19.2 mi.
Long Island City, N.Y.
P.T.
Direction of train
1 mile
Station
P.C.
500 ft.
320 ft.
VILLAGE
AVENUE
Point of accident
40 ft.
Inv. No. 1892
Pennsylvania Railroad
Rockville Centre, N.Y.
Feb. 20, 1934

A heavy snow storm had prevailed for the preceding 24 hours and the snow-plow train was the first train to be operated in a period of about 15 hours. The snow had ceased falling but the weather was cloudy at the time of the accident, which occurred about 3:20 p.m.

Description

The snow plow train was west-bound and consisted of snow-plow 190, engines 314 and 49, and a cabin car, and was in charge of Conductor Alfred and Enginemen Van Nostrand and McDonald. This train passed Freeport, 3.3 miles from Rockville Centre, at 3:07 p.m., and was derailed at Rockville Centre while traveling at a speed estimated to have been between 20 and 30 miles per hour.

The snow plow was derailed and completely demolished; it broke in two about at its center, the front portion being thrown to the right of the track and the rear portion to the left, the balance of the train passing between the two portions and was not derailed. The employee killed was the conductor, who was riding in the snow plow.

Summary of evidence

Engineman Van Nostrand, of engine 314, stated that the train was traveling at a speed of approximately 20 miles per hour, and as his engine was passing over Village Avenue crossing he felt a bump, applied the brakes in emergency, and then heard a crack. After the train stopped, between 200 and 300 feet from the crossing, he went back to make an examination, and observed that the crossing was icy between the rails; the flangeways were clear and he thought this was due to the wheels of his train having passed through them. On looking over the snow plow he found a wheel from which a portion of the flange was missing; this was a new fracture and was 12 to 15 inches in length. The snow was about 2 feet deep in that vicinity and did not appear to be drifting. Fireman McMahon, of engine 314, stated that after the accident he examined the crossing but found nothing that could have contributed to the cause of the accident.

Engineman McDonald, of engine 49, stated that his engine was coupled into the snow plow train behind engine 314 at Babylon, 14 miles east of Rockville Centre, and that the brakes were tested by the leading engineman. His first knowledge of anything wrong was when the train suddenly lurched and the brakes were applied in emergency. Fireman Johnson, of engine 49, stated that approaching Rockville Centre the leading engineman sounded a crossing whistle signal and soon afterwards he felt a sudden jar and then noticed an object along the track which he learned later was part

of the snow plow. Neither Engineman McDonald nor Fireman Johnson made an examination of the crossing after the accident.

Track Supervisor Nehrhoff was riding in the cabin car; after communicating with the dispatcher he returned to the scene of accident and found that the flangeways had been cleaned, but that vehicles passing over the crossing had packed snow about 5 inches thick between the rails requiring the use of picks to remove it. The first wheel marks were immediately west of the crossing and close to the rail, indicating that they had left the rails at the west end of the crossing; these marks were followed immediately by marks indicating that both pairs of wheels of a truck were derailed, these marks leading off toward the north until the final derailment occurred. He said there is a crossing watchman stationed at this particular crossing continuously who is furnished with the necessary tools and instructed to keep the crossing clean, but on the day of the accident with the severe snow storm and strong wind, coupled with the heavy traffic moving over the crossing, it was difficult to keep it clean. In view of these conditions, it was his opinion that light equipment such as a snow plow would be easily derailed, and that the packed snow caused the accident.

Section Foreman Sterp, on whose section the accident occurred, stated that he did not examine the crossing involved, but was working at Park Avenue crossing, located about 860 feet east of Village Avenue. He paid particular attention to the snow plow train when it passed him, traveling at a speed between 20 and 25 miles per hour, and noticed nothing out of the ordinary. The following morning he found a piece of flange that had been broken out of one of the wheels, 150 feet west of the crossing, where debris from the plow was lying. After shoveling the snow from the track on February 23 he found the first mark of derailment; this mark consisted of a scratch on a tie about 6 inches from the rail, followed by another mark about 8 inches from the rail, then about four ties from the latter point there was another mark appearing about 12 inches from the rail and the last three ties to be marked were where the plow stopped.

Extra Gang Foreman Gillan stated that he was riding in the cabin car and that the train was traveling about 25 or 30 miles per hour when he felt a slight jar and the train stopped. Some time after the accident he saw ice on the crossing and men working on it, but the flangeways seemed to be free of snow; he did not see any marks on the crossing but noticed a piece of flange about 14 inches long broken from one of the snow-plow wheels; there were no marks, however, on the top of the rail.

Freight Train Master Ellinger arrived at the scene with the

wreck train at 5:50 p.m. and after making a cursory examination he proceeded to clear the wreckage from the tracks, completing the task at 6:40 p.m. He then made a careful examination and in looking over the leading truck of the snow plow he discovered there was a piece of flange broken from the right rear wheel; this was a new break and the missing flange was not found at that time. The following day he examined the crossing and observed flange marks at the west end but was unable to determine whether they were new or old marks and consequently he instructed the section foreman to clear the snow from the ties. On February 24 another examination was made and a flange mark was visible starting at the west end of the crossing and continuing westward until the general derailment occurred. When he made his first examination, there were several men working on the crossing clearing off the ice and snow which he estimated was 3 inches above the rails. He tested it himself with a shovel to see how hard it was and then formed the opinion that the light equipment involved was raised by this snow and ice until the leading truck passed over the rail, resulting in the derailment; he did not think that the broken flange had any connection with the cause of the accident as it was found beyond where the wreckage stopped.

Crossing Watchman Sauerbray stated that on the day of the accident he went on duty at Village Avenue at 3 p.m.; the flangeways had been cleaned before he came on duty and he did not clean any snow out of them prior to the accident. There were 3 or 4 inches of snow on the crossing and it had been packed hard in the center by passing traffic. The snow-plow train was the first train to pass over the crossing after he went on duty and when it passed he noticed nothing dragging or out of order, but after it reached a point about 200 feet beyond the crossing he heard the crash as the snow plow was derailed and crushed. Crossing Watchman Duval, who was relieved by Crossing Watchman Sauerbray, said he came on duty at 11 p.m., February 19, and during his period on duty he cleaned the flangeways about once an hour; he had just come in from cleaning them when relieved. He also said that during his period on duty the section force had not done any work on the crossing.

The last train to pass prior to the accident was Train No. 75, and Motorman Carney said that it passed Rockville Centre about 12:47 a.m., nearly 15 hours before the accident occurred. It was snowing hard then but so far as the crossings and track were concerned there were no irregularities noticeable at that time.

The snow plow involved was of the Russell single-track type, built in 1897, and had a wooden underframe. It had a length of

37 feet 9 inches, a width of 10 feet 1 inch, height over all 13 feet 9½ inches, weighed 53,100 pounds, and rode with the nose 2½ inches above the rails. The end sills of the plow were of oak, 13 by 17 inches, and the center sill, also of oak, measured 12 by 12 inches; there were eight yellow pine intermediate sills measuring 5 by 12 inches, and the side sills were of the same size and also of yellow pine. Three of the intermediate sills were slightly rotted directly under the floor, and one was slightly rotted around one of the bolts. The external surfaces were intact, and the wood in general was sound and firm, and it was not thought that the strength of the plow had been impaired but rather that the application of crosswise forces was responsible for breaking it in two. The cupola was at the center of the plow and it was evident that when the plow broke in two the conductor fell through to the track directly in front of the engines.

Conclusions

This accident apparently was caused by snow and ice on the crossing raising the snow plow sufficiently to lift the wheels off from the rails.

After the accident it was found that the flangeways were clean, but between the rails the crossing planks and other material had been raised an inch or more above rail level, and snow and ice had been packed by highway traffic to a thickness of from 3 to 5 inches; the nose of the plow had a clearance of only 2½ inches. The plow was of wooden construction and weighed less than 27 tons, and apparently when it came in contact with the hard-packed snow and ice on the crossing the front end of the plow was raised sufficiently to permit the leading truck to become derailed. A portion of the flange was found to have been broken from the right rear wheel of the leading truck of the plow, but the evidence indicated this was a result of the accident and not its cause.

Respectfully submitted,

W. J. PATTERSON,

Director.