Inv-2113

INTERSTATE COMMERCE COMMISSION

WASHINGTON

REPORT OF THE DIRECTOR

BUREAU OF SAFETY

ACCIDENT ON THE

BALTIMORE & OHIO RAILROAD

BRANCHVILLE, MD.

NOVEMBER 11, 1936

INVESTIGATION NO. 2113

SUMMARY

Railroad:	Baltimore & Ohio
Date	November 11, 1936
Location:	Branchville, Md.
Kind of accident:	Derailment
Equipment involved:	Passenger : Automobile
Train number:	No. 151
Engine number:	1474
Consist:	3 cars
Speed:	76 m.p.h. : 5-10 m.p.h.
Track:	Tangent; slight descending grade
Weather:	Clear
Time:	2:40 p.m.
Casualties:	1 killed
Cause:	Automobile being driven upon highway grade crossing in front of approaching train.

December 23, 1936.

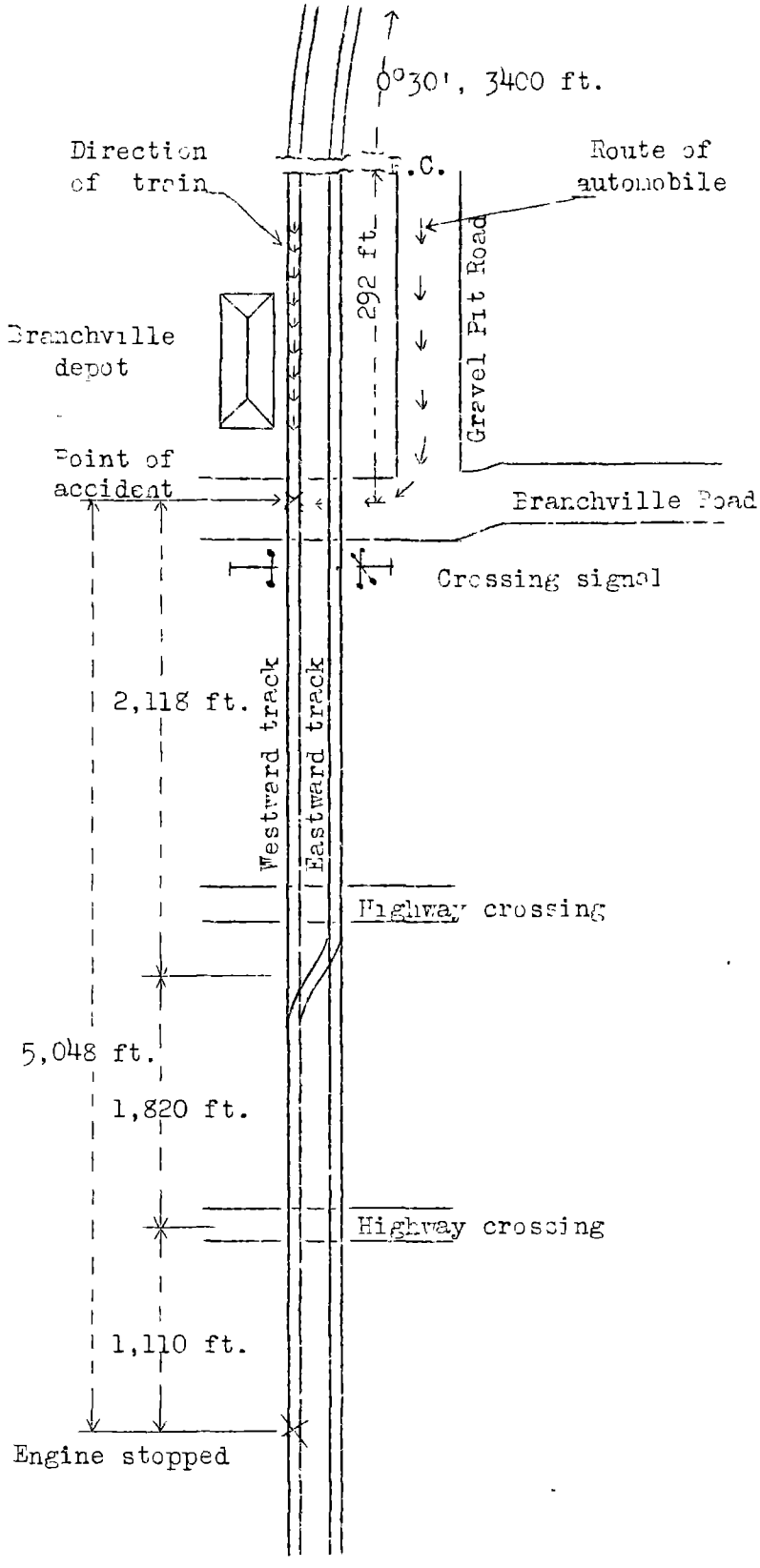
To the Commission:

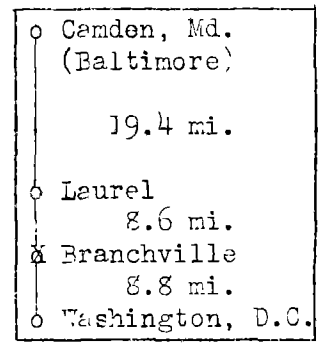
On November 11, 1936, there was a derailment of a passenger train on the Baltimore & Ohio Railroad as a result of striking an automobile at a highway grade crossing at Branchville, Md., which resulted in the death of the driver of the automobile.

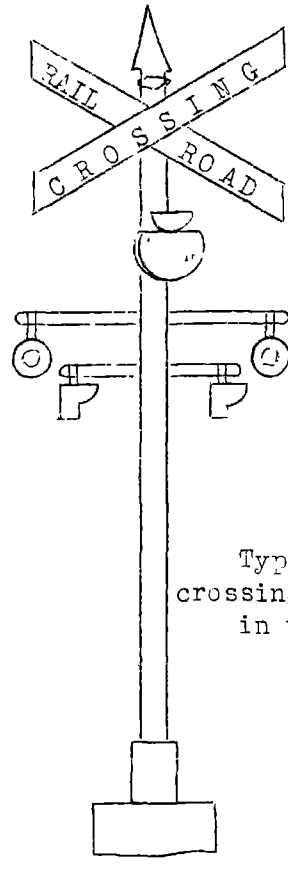
Location and method of operation

This accident occurred on that part of the Baltimore Division extending between Camden Station, Baltimore, Md., and Washington, D. C., a distance of 36.8 miles. In the vicinity of the point of accident this is a double-track line over which trains are operated by timetable, train orders, an automatic block-signal system, and an automatic train-stop system of the intermittent-inductive type. The accident occurred where a public highway known as Branchville Road crosses the tracks at the station at Branchville. The railroad tracks at the point of accident run practically north and south; however, timetable directions are east and west and these latter directions are used in this report. Approaching the point of accident on the railroad from the east, there is a 30' curve to the left 3,400 feet in length, followed by tangent track extending 292 feet to the center of the crossing and then for more than a mile and a half beyond that point. The grade for westbound trains is 0.39 percent descending at the leaving end of the curve and diminishes to level grade at a point 4,958 feet farther west. The maximum authorized speed for passenger trains is 75 miles per hour.

Branchville Road crosses the tracks at right angles; just south of the crossing a gravel road leads off to the east and runs parallel to the track to a gravel pit located about one-fourth mile beyond; the centers of the two roads intersect at a point 45 feet south of the outside rail of the eastbound track. Approaching the highway crossing on this gravel road, the grade is 2.8 percent descending for a distance of about 500 feet to the intersection with Branchville Road, where a 90° turn is made to the right on to Branchville Road, and the grade is then 3.4 percent ascending to the crossing and level over the crossing. The crossing is protected by a bell and signals of the flashing-light type. The crossing signals are located on the west side of the highway, 4 feet from the edge of the highway and 10 feet from the outside rail, on each side of the crossing. The signal mast on the south side of the crossing has two sets of lamps, one pair being focused so that they can be seen when the crossing is approached on Branchville Road from the south, and the other pair being focused so they







Type of crossing signal in use.

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can be seen when the crossing is approached on the Gravel Pit Road from the east; the latter pair of lamps are visible for a distance of about 500 feet and are spaced 32 inches apart on the signal mast and are 7 feet 11 inches above the highway grade; each lamp has a red lens 8-3/8 inches in diameter and is lighted by a 13½-volt, 10-watt electric bulb. The crossing bell, which is of the standard type, is located on the signal mast above the lamps, on the south side of the track. The control circuit actuating the signals from the westbound track begins at a point 3,348 feet east of the center line of the crossing, and the signals are so arranged that when a train encounters the control circuit it causes the crossing bell to ring and the lights to light alternately until the last pair of wheels has cleared the crossing.

The weather was clear at the time of accident, which occurred about 2:40 p.m.

Description

Train No. 151, a westbound passenger train, consisted of 1 combination baggage car and coach and 2 coaches, all of steel construction, hauled by Atlantic-type engine 1474, with brakes on the driving wheels only, and was in charge of Conductor Hoffmaster and Engineman Blizzard. This train left Laurel, Md., 8.6 miles east of Branchville, at 2:31 p.m. according to the train crew, 1 minute late, and was approaching Branchville station, still 1 minute late, when it collided with an automobile on the crossing, at the west end of the station platform, while traveling at a speed estimated by the engineman to have been 76 miles per hour.

The automobile involved in this accident was a Chevrolet coupe, driven by Clarence Holloman of Washington, D. C. The car had approached from the east on the Gravel Pit Road, made a turn to the right at the intersection with Branchville Road, at a speed of between 5 and 10 miles per hour, and was passing over the crossing at about the same speed when it was struck by Train No. 151.

The automobile was demolished, the wreckage being carried on the pilot of the engine to the point where the train stopped with the head end of the engine 5,048 feet west of the center line of the crossing. The pilot of the locomotive was broken and bent downward and the driver brake rigging was broken. Both pairs of engine-truck wheels and the leading pair of driving wheels were derailed; both trailer wheels were raised about 6 inches above, and from 6 to 8 inches to one side of the rails. The tender was uncoupled from the head car and was held by the safety chains.

Summary of evidence

Engineman Blizzard stated that before leaving Baltimore the air brakes were tested and after leaving Camden Station he also made a running test and the brakes worked properly there as well as at each of the three station stops made between Baltimore and Branchville. Approaching Branchville he timed the speed of his train between mile posts and the train was running at a speed of 76 miles per hour; he then lightened the throttle in order to reduce the speed to 75 miles per hour and to prevent any increase in speed on the descending grade at Branchville. He sounded the whistle for Branchville crossing and timed it so that the last blast would terminate at the crossing. The engine bell was ringing and he was leaning out of the window on the right side watching the crossing and saw the crossing lights flashing, which were visible through the small aperture in the sides of the lamps. His fireman called a warning and raised his hand as a signal to stop; he released the whistle cord and started to close the throttle when he felt the impact of the engine striking the automobile and he then applied the brakes in emergency and opened the sanders. The engine then rode as though there was a pair of front wheels derailed and the speed of the train was reduced satisfactorily until he passed the next highway crossing at which point the engine rode as though additional wheels had become derailed and the brakes were less effective; he thought that this was the point where the driving wheels became derailed. When the engine stopped, both engine-truck wheels on the right side were off the ends of the ties and the left wheels were against the north rail; the right cylinder was resting on the engine-truck center casting; the front driving wheels were derailed and about 8 inches from the rail and the trailer wheels were raised about 6 inches above the rail and about 6 or 8 inches to one side. The rear driving wheels and the tender were not derailed but the tender was uncoupled from the head car and was being held by the safety chains. The brake cylinder piston rod on the right side and both brake adjusting rods were broken. He thought the ineffectiveness of the sand when the driving wheels became derailed, together with grease and oil from the automobile, greatly reduced the retarding effect of the brakes and said that he thought he could have stopped the train within a distance of about 2,000 feet if everything had been in normal condition. He further stated that he could not have stopped the train, after being warned by the fireman, without striking the automobile, even if the speed had not been greater than 5 miles per hour.

Fireman White stated that, approaching Branchville, he was on the fireman's seat box looking ahead, and the speed was about 75 miles per hour. The engine whistle was sounded for

Branchville crossing and the engine bell was ringing. He first saw the approaching automobile about the time it was making the turn from the Gravel Pit Road on to Branchville Road at a speed of about 10 miles per hour; he watched its approach and assumed that the car would stop before reaching the tracks but when he saw it continue on to the eastbound track at the same speed, he called to the engineman, at which time his engine was from 1 to 1½ car lengths from the crossing. When the automobile reached the eastbound track, Fireman White saw the driver turn and look toward the approaching train but he did not change his speed. The fireman saw the crossing lights operating as the train approached but due to the noise of the engine he was unable to hear the crossing bell. He thought the driver of the car could have stopped before fouling the westbound track if the brakes on the automobile were in good condition and he had made an attempt to do so, even after he looked in the direction of the approaching train.

Conductor Hoffmaster stated that a terminal test of the air brakes was made by the car inspectors at Camden Station and they informed him that the brakes were all right. A running test was also made after leaving there and the train had handled properly en route. Approaching Branchville, he was on the right side near the center of the rear coach, and estimated the speed of the train to have been between 75 and 78 miles per hour, which, he stated, was the usual speed in that vicinity. He heard the engine whistle sounded for Branchville crossing, which was followed by an emergency application of the brakes, and he then heard a noise under the train which indicated to him that they had struck something. His brakeman looked ahead from the rear platform and informed him that the engine was derailed. Conductor Hoffmaster did not observe the crossing signals at Branchville but after the accident he instructed a maintenance of way employee named Baker to check the crossing lights and he was later informed by Baker that the signals were working properly. The weather was clear and the visibility was good.

Flagman Lentz stated that when his train stopped he immediately went back to flag. He reached Branchville crossing about 10 minutes after the accident and the crossing signals were then operating, due to a train which he had flagged occupying the westbound track east of the crossing.

Car Inspectors Fentress and Millbrook, on duty at Camden, stated that they made the terminal test of the air brakes on Train No. 151 prior to its departure and found the brakes working properly and they notified the engineer and conductor to that effect.

Signal Maintainer Baker stated that he had made his regular weekly inspection of the crossing signals at Branchville at 1:30 p.m. on the day of the accident; he was called on account of the accident and made another inspection and test of these signals at 3:25 p.m. the same day and found them working properly at the time each inspection was made. He also said that the signals at this crossing had never given him any trouble so far as maintenance was concerned.

Mr. F. J. James and Mr. G. H. Hicks, both eyewitnesses of the accident, stated that they were standing on the south side of the track about 325 feet west of the crossing when they saw the automobile approaching from the east on the Gravel Pit road and make the turn on to Branchville Road at a speed of about 5 or 8 miles per hour; the crossing lights were flashing and the engine whistle was blowing but they were unable to say whether or not the crossing bell was ringing. The automobile continued upon the crossing at about the same speed directly in front of the approaching train.

Mr. Lloyd Cark stated that while he did not see the collision, he did see the automobile approaching the crossing, on the Gravel Pit Road, at a speed of about 5 miles per hour, at which time the crossing lights were flashing and the crossing bell was ringing and the engine whistle was blowing.

Mr. R. G. Darby stated that he was well acquainted with the driver of the automobile and had been in conversation with him for a period of about 2 hours just before the accident. He said Holloman seemed to be in good spirits and did not appear to be worried or upset about anything and appeared normal in all respects; he further stated that the driver of the car had been using the crossing nearly every day since last spring and should have been thoroughly familiar with the crossing.

Inspection of the track by the Commission's inspectors disclosed the first mark of derailment to be a flange mark on the ties between the rails 74½ feet west of the center line of the crossing and 7 inches from the base of the left rail; a corresponding mark appeared on the tie plates and spike heads outside of the right rail. These marks, which appeared to have been made by one pair of engine-truck wheels, continued in a straight line for a distance of 2,043 feet until the left wheel encountered the turnout rail of a trailing-point crossover. West of this point flange marks of two pairs of wheels appeared about half way between the rails, 6 inches apart, and there was one flange mark 4½ inches from the end of the ties outside the right rail, the other wheel apparently having run beyond the end of the ties. These marks followed a straight

line for a distance of 1,820 feet to a macadam surface highway crossing, from which point three flange marks appeared between the rails, 9, 31 and 41 inches, respectively, from the base of the left rail. These marks followed a straight line for a distance of 1,110 feet to the point where the engine stopped. The turnout rail of the cross-over, located 2,118 feet west of the highway crossing at Branchville, was torn out and bent, and it is believed that when this occurred, the damage to the brake rigging on the locomotive resulted; aside from the damage to the cross-over, there was but slight damage to the track.

Examination of the engine by the Commission's inspectors disclosed it to be a 4-4-2 Atlantic-type locomotive equipped with brakes on the driving wheels only. The pilot was bent downward and both driver-brake adjusting rods were broken.

Discussion

It appears that the driver of the automobile had passed over this crossing a great number of times and should have been thoroughly familiar with the physical characteristics surrounding it. The crossing was protected by a bell and flashing red lights, both of which were in operation at the time, yet the driver made a sharp turn to the right at low speed 45 feet from the crossing, at which point he was directly facing the signal on the south side of the crossing and was but 35 feet distant from the signal and the bell; the locomotive whistle was blowing and, according to the statement of the fireman, when the automobile reached the eastbound track, the driver looked in the direction of the approaching train yet he apparently made no attempt to alter his speed or to stop.

A check of highway traffic over this crossing was made 5 days after the accident and it was found that between the hours of 6:45 a.m. and 6:45 p.m. 841 motor vehicles used the crossing. The peak of this traffic was between 6:45 a.m. and 7:50 a.m. when 204 motor vehicles passed over the crossing, and between 3:30 p.m. and 4:30 p.m., when 162 motor vehicles used the crossing. Of the total number of 841 motor vehicles using the crossing during the 12-hour period above referred to, 28 proceeded over the crossing while the signals were operating.

Conclusion

This accident was caused by an automobile being driven upon a highway crossing directly in front of an approaching train.

Respectfully submitted,

W. J. PATTERSON,
Director.