

INTERSTATE COMMERCE COMMISSION
WASHINGTON

REPORT NO. 3330
THE RICHMOND, FREDERICKSBURG AND POTOMAC
RAILROAD COMPANY
IN RE ACCIDENT
AT ALEXANDRIA, VA., ON
MAY 18, 1950

SUMMARY

Date: May 18, 1950

Railroad: Richmond, Fredericksburg and Potomac

Location: Alexandria, Va.

Kind of accident: Rear-end collision

Trains involved: Passenger : Passenger

Train numbers: 57 : 201

Engine numbers: 618 : 424

Consists: 16 cars : 10 cars

Estimated speeds: Standing : 8 m. p. h.

Operation: Signal indications

Track: Double; tangent; vertical curve

Weather: Raining

Time: 6:38 p. m.

Casualties: 90 injured

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

INTERSTATE COMMERCE COMMISSION

REPORT NO. 3330

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

THE RICHMOND, FREDERICKSBURG AND POTOMAC RAILROAD COMPANY

July 18, 1950

Accident at Alexandria, Va., on May 18, 1950, caused by
failure to operate the following train in accordance
with a signal indication.

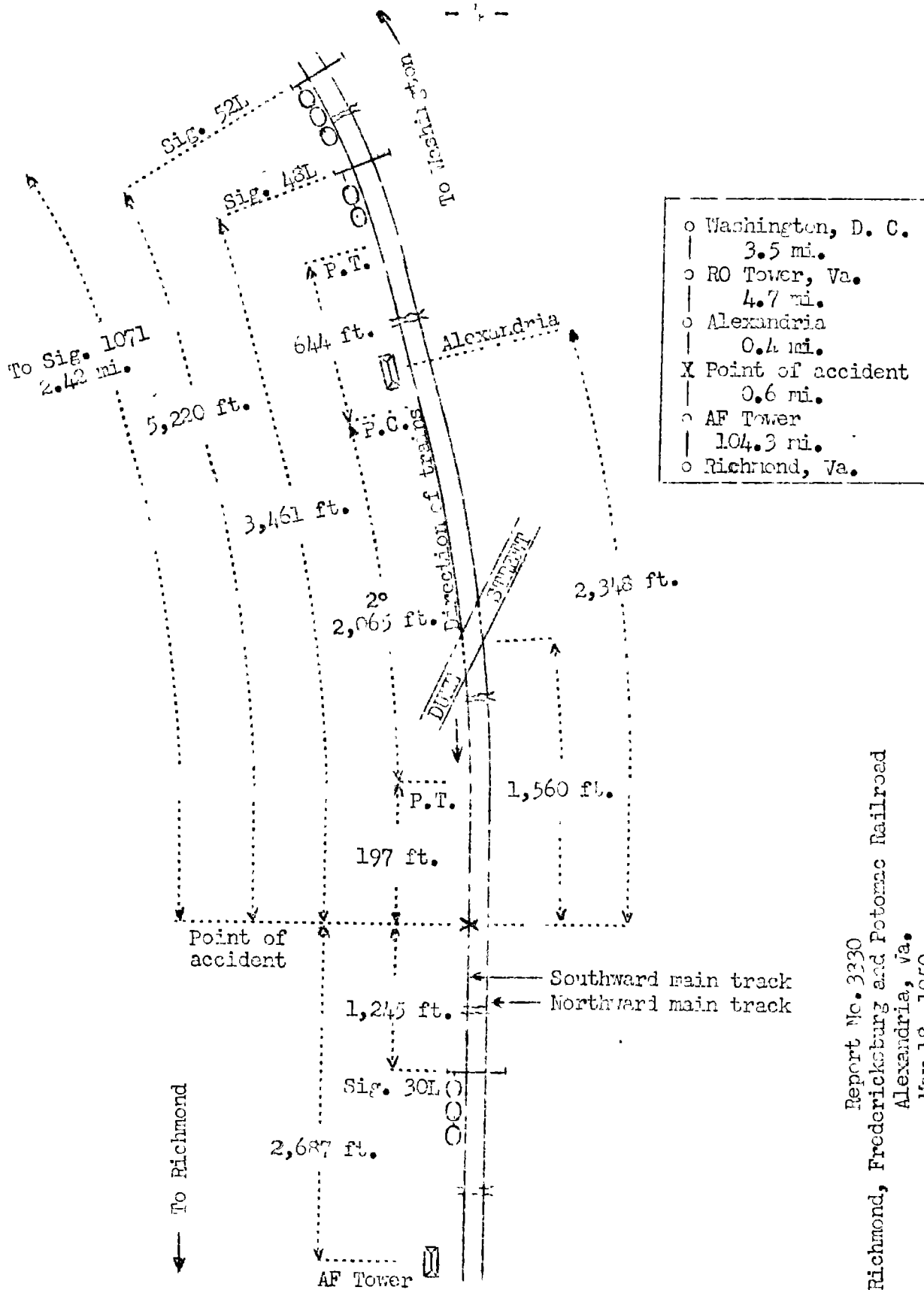
REPORT OF THE COMMISSION¹

PATTERSON, Commissioner:

On May 18, 1950, there was a rear-end collision between two passenger trains on the Richmond, Fredericksburg and Potomac Railroad at Alexandria, Va., which resulted in the injury of 53 passengers, 26 dining-car employees, 5 coach attendants, 1 Pullman employee, 1 stewardess-nurse, 1 passenger-service agent, 1 tavern-car attendant, and 2 train-service employees.

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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.



Report No. 3230
 Richmond, Fredericksburg and Potomac Railroad
 Alexandria, Va.
 May 18, 1950

Location of Accident and Method of Operation

This railroad extends between a point near RO Tower, 3.5 miles south of Washington, D. C., and Richmond, Va., 110 miles. It is a double-track line, over which trains moving with the current of traffic are operated by an automatic block-signal system, supplemented by an automatic train-control system of the continuous-inductive type with three-indication cab signals. Trains of the Chesapeake and Ohio Railway, hereafter referred to as the C. & O., regularly are operated over the Richmond, Fredericksburg and Potomac Railroad, hereafter referred to as the R. F. & P., between RO Tower and Seminary interlocking, approximately 6 miles. The accident occurred on the southward main track at a point 5.1 miles south of RO Tower and 2,348 feet south of the station at Alexandria. From the north there are, in succession, a tangent 644 feet in length, a 2° curve to the right 2,065 feet and a tangent 197 feet to the point of accident and a considerable distance southward. The grade for south-bound trains is, successively, level 800 feet, 0.27 percent ascending 700 feet, 0.74 percent ascending 1,400 feet and then there is a vertical curve 159 feet to the point of accident and 341 feet southward.

Automatic signal 1071 and semi-automatic signals 52L and 48L, governing south-bound movements on the southward main track, are located, respectively, 2.42 miles, 5,220 feet and 3,461 feet north of the point of accident. Semi-automatic signal 30L, governing south-bound movements through AF interlocking, is located 1,245 feet south of the point of accident. These signals are of the color-light type and are continuously lighted. Signals 1071, 52L, 48L and 30L display, respectively, 4 aspects, 7 aspects, 6 aspects and 7 aspects. The aspects applicable to this investigation and their corresponding indications and names are as follows:

<u>Signal</u>	<u>Aspect</u>	<u>Indication</u>	<u>Name</u>
1071	Yellow-over-green	Proceed approaching next signal at medium speed.	Approach-medium.
52L	Yellow-over-red-over-red	Proceed prepared to stop at next signal. Train exceeding medium speed must at once reduce to that speed.	Approach.

48L	Red-over-yellow	Proceed at restricted speed	Restricting.
30L	Green-over-red-over-red	Proceed.	Clear.
30L	Red-over-red-over-red	Stop.	Stop-signal.

Signals 52L, 48L and 30L are controlled from AF interlocking located 2,687 feet south of the point of accident. The controlling circuits are so arranged that, when the block of signal 48L is occupied by a south-bound train and the route is lined for a following south-bound movement, signal 107L indicates Approach-medium, signal 52L indicates Approach, and signal 48L indicates Restricting. C. & O. engines operating between RO Tower and Seminary are not equipped with automatic train-control or cab-signal apparatus.

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

99. When a train stops under circumstances in which it may be overtaken by another train, the flagman must go back immediately with flagman's signals a sufficient distance to insure full protection, * * *

* * *

SPEEDS

MEDIUM SPEED--Not exceeding twenty-five (25) miles per hour.

RESTRICTED SPEED--Not exceeding fifteen (15) miles per hour prepared to stop short of train, obstruction or switch not properly lined and to look out for broken rail.

* * *

The maximum authorized speed for the trains involved in this accident was 70 miles per hour.

Description of Accident

No. 57, a south-bound first-class R.F. & P. passenger train, consisted of engine 618, one passenger-baggage car, one coach, six sleeping cars, one dining car, two coaches, one dining car, three coaches and one tavern-observation car, in the order named. All cars were of all-steel construction. This train departed from Washington, D. C., at 6:07 p. m., 2 minutes late, passed RO Tower at 6:20 p. m., 4 minutes late, and stopped at the station at Alexandria. About 3 minutes later it proceeded southward. When the enginemen first observed signal 30L it indicated Proceed. When the engine was about 160 feet north of signal 30L the aspect changed to indicate Stop, and the train was stopped with the front end about 250 feet south of signal 30L. About 3 minutes later the rear end was struck by No. 201.

No. 201, a south-bound first-class C. & O. passenger train, consisted of engine 494, one passenger-baggage car, three coaches, one dining car, three Pullman cars, one dining car and one Pullman car, in the order named. All cars were of all-steel construction. This train departed from Washington at 6:09 p. m., 8 minutes late, and passed RO Tower at 6:25 p. m., 13 minutes late. It passed signal 1071, which indicated Approach-medium, signal 52L, which indicated Approach, and signal 48L, which indicated Restricting, and stopped at the station of Alexandria. It then proceeded southward and while moving at an estimated speed of 8 miles per hour it struck No. 57.

No. 57 was moved southward a distance of about 10 feet. A separation occurred between the thirteenth and fourteenth cars. The fourteenth and sixteenth cars were damaged. None of the equipment was derailed. Engine 494 was slightly damaged.

The baggagemaster of No. 57 and the conductor of No. 201 were injured.

It was raining at the time of the accident, which occurred about 6:38 p. m.

Discussion

The control circuits of signal 30L are so arranged that when a power failure or an appreciable drop in voltage of the signal power supply occurs it will cause signal 30L to indicate Stop. After the power supply is restored to

normal the signal will continue to indicate Stop until the lever controlling the signal is operated to cause it to display a less restrictive aspect. As No. 57 was approaching signal 30L a momentary interruption occurred in the signal power supply and the aspect of the signal changed from Proceed to Stop. The interruption occurred during an electrical storm, which was accompanied by heavy rainfall. When the aspect changed, the engineer immediately initiated a service brake application. When the train stopped, the engineer and the fireman were in their respective positions in the cab of the engine. The conductor was in the thirteenth car, and the flagman was in the rear vestibule of the fifteenth car. The rear car did not have a vestibule, and the flagman had placed his flagging equipment in the rear vestibule of the fifteenth car. The flagman immediately alighted from the car with flagging equipment and proceeded to the rear of the train. The conductor said he observed the flagman when he alighted and also when he passed the rear of the train. The marker lights on the rear of the train were lighted. The flagman said that he first observed the headlight of No. 201 when it emerged from Duke Street underpass, about 800 feet distant. He said he immediately gave stop signals with a red light. These signals were not acknowledged and there was no apparent reduction of speed of the approaching train. The flagman said that when No. 201 was about 600 feet distant he lighted a red fusee and gave stop signals with it until the engine of No. 201 passed him. As the engine passed him he called a warning to the enginemen. He said he was about 500 feet north of the rear of his train when the engine of No. 201 passed him.

After No. 201 departed from the station at Alexandria the speed was increased until it was about 8 miles per hour. The headlight was lighted brightly but the view ahead was materially restricted by heavy rainfall and by steam caused by rainfall on the engine. The enginemen were maintaining a lookout ahead from their respective positions in the cab of the engine. The members of the train crew were in various locations throughout the cars of the train. The brakes of this train had been tested and had functioned properly when used en route. The enginemen said that the flagman of the preceding train lighted a red fusee and called a warning when the engine of the following train passed him at a point about 165 feet north of the point where the accident occurred. They said they did not observe stop signals being given before that time, and they did not see the marker lights on the rear of the preceding train. When the engineer saw the lighted red fusee he immediately initiated an emergency brake application, but the speed of the train was not materially reduced before the collision occurred.

The engineer of No. 201 said that he was aware that his train was moving through the block under a Restricting signal indication, which required that the train be so operated that it could be stopped short of a preceding train. He said he thought that the train could be stopped short of a preceding train, but immediately before the accident occurred his view of the track ahead was obscured by rain and steam.

Cause

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

Dated at Washington, D. C., this eighteenth day of July, 1960.

By the Commission, Commissioner Patterson.

(SEAL)

W. P. BARTEL,
Secretary.