

INTERSTATE COMMERCE COMMISSION

REPORT OF THE DIRECTOR OF THE BUREAU OF SAFETY CONCERNING
AN ACCIDENT ON THE BOSTON & ALBANY RAILROAD AT
BOSTON, MASS., ON OCTOBER 13, 1932

December 12, 1932.

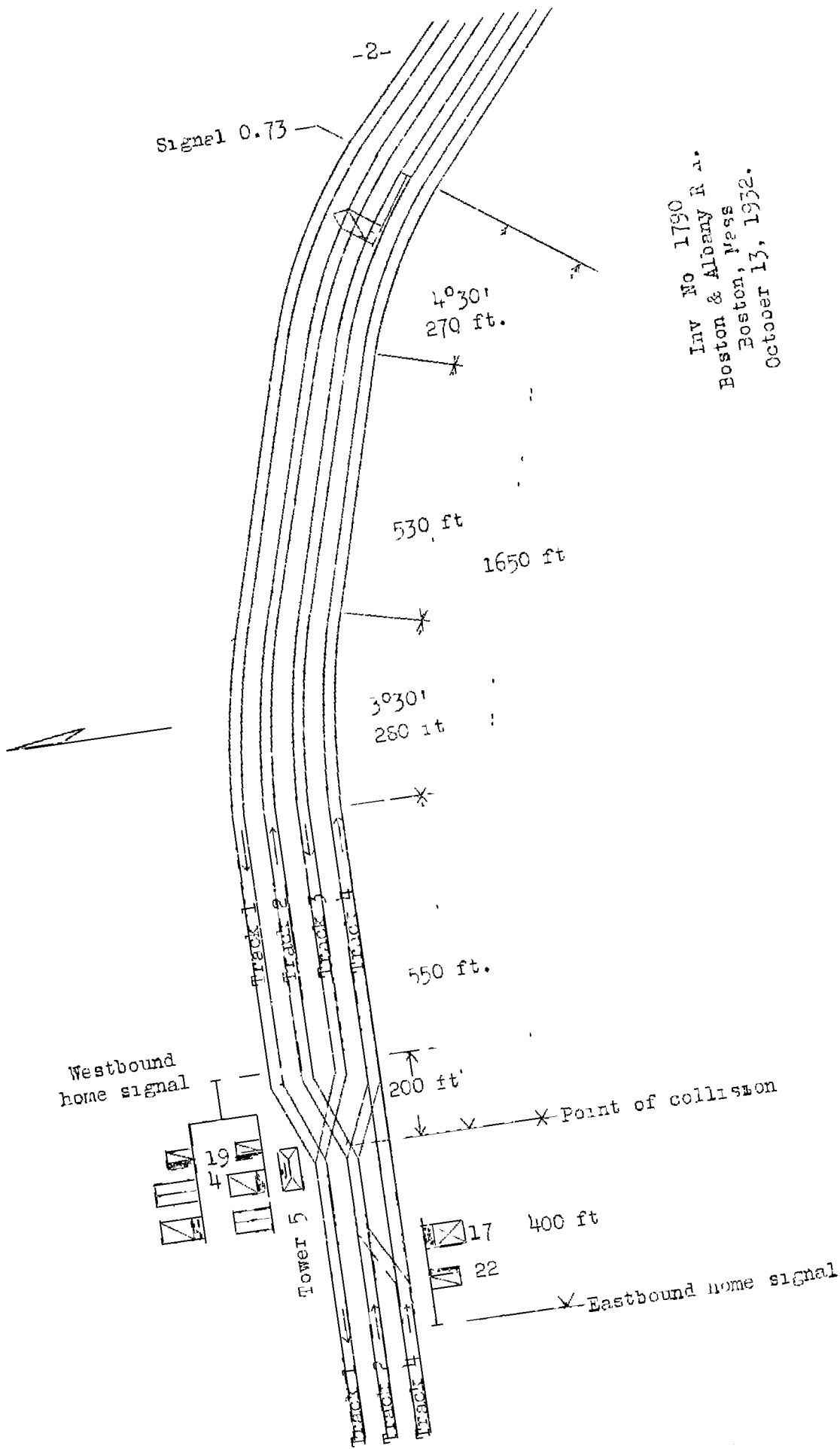
To the Commission:

On October 13, 1932, there was a collision between a switch engine hauling three cars and an empty passenger-equipment train on the Boston and Albany Railroad at Boston, Mass., which resulted in the injury of two employees.

Location and method of operation

This accident occurred on that part of the Boston Division extending between Boston and Framingham, Mass., a distance of 21.36 miles. This is a 4-track line, except for a 3-track section between towers 5 and 6, a distance of 2,200 feet, over which trains are operated by time-table, train orders, and an automatic block-signal system. The tracks are designated from north to south, 1, 2, 3, and 4, tracks 1 and 3 being westbound and tracks 2 and 4 eastbound, the 3-track section consists of track 1, westbound, track 2, eastbound switching, and track 4, eastbound. The accident occurred at tower 5, approximately 5,630 feet west of the train shed at South Station, Boston, this being the point at which the 4-track line changes to a 3-track line. Approaching the point of accident from the east, there is a $4^{\circ} 30'$ curve to the left 270 feet in length, tangent track for a distance of 530 feet, a $3^{\circ} 30'$ curve to the left 280 feet in length, and then 550 feet of tangent track to the point of accident. Approaching from the west, the track is tangent from tower 6 to the point of accident. The grade is practically level.

The switches and signals at tower 5 are controlled by a 24-lever mechanical interlocking machine having 22 working levers. The signals involved are of the 2-position, upper-quadrant, semaphore type. Signal O.73, governing westbound movements on track 3, is located 1,650 feet east of the point of accident; it is a semi-automatic signal, its two positions being stop and caution. The home signals governing westbound movements are mounted on a bracket mast located approximately 200 feet east of the point of accident. The signals involved are the left lower arm, signal 19, a calling-on signal, and the arm above it, or signal 4, a semi-automatic signal, the top arm on this signal mast is inoperative. A 2-arm signal governing eastbound movements is located approximately 400 feet west of the point of accident; the upper arm, designated



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as signal 17, is a 3-position semi-automatic signal, while the lower arm, signal 22, is a calling-on signal. Approaching from the east on track 3, signal 0.73 can be seen for a distance of 700 feet, and the home signals can be seen for a distance of 840 feet.

The weather was clear at the time of the accident, which occurred about 9.51 a.m.

Description

Eastbound switch engine 57, backing up and hauling three cars, was in charge of Conductor Madden and Engineman Smith. After leaving Huntingdon yard at tower 6 it proceeded on track 4 to the eastbound home signal at tower 5, where it was held for a few minutes awaiting the passage of first-class train No. 73, due to depart from South Station at 9.45 a.m. After the passage of this train the route was lined for engine 57 and the cars to cross over from track 4 to track 2, with signal 22 displaying a caution indication, and while making this movement it was struck by the empty equipment of train No. 274.

First-class train No. 274 arrived at South Station at 9.40 a.m., on time, and after discharging the passengers the equipment of this train, which consisted of engine 312 and three coaches, in charge of Engineman Thompson and Trainmen Kearns and Curry, departed from the South Station in a back-up movement, soon after the departure of train No. 73, en route to Exeter Street yard, located west of tower 6. Traveling on track 3 it passed signal 0.73 displaying a caution indication, passed home signals 4 and 19 displaying stop indications, became derailed at a movable point frog, and collided with the tender of engine 57 while traveling at a speed estimated to have been between 10 and 25 miles per hour.

The lead end of the first coach struck the rear end of the tender of the switch engine approximately 75 feet west of the frog, resulting in the car being tipped on its right side on track 1. The tender of the switch engine telescoped the cab, the frame of the tender being swung around at right angles to the track. The lead end of the second car was derailed. None of the remaining equipment in either train was derailed. The employees injured were the engineman and fireman of the switch engine.

Summary of evidence

Conductor Madden, of switch engine 57, stated that after waiting at the home signal about five minutes they received a clear indication and proceeded at a speed of about 5 or 6 miles per hour. Conductor Madden was riding on the fireman's seatbox and when he first saw the draft of empty equipment it was coming by the westbound home signals at a speed of about 20 miles

per hour and he told the engineman that he did not think that it was going to stop. His own engine received a stop signal from the towerman but the engineman had already applied the brakes, and they had practically stopped when the collision occurred. Conductor Madden thought the speed of the draft might have been about 5 miles per hour at the time of the collision, although he did not have much of an opportunity to notice its speed at that time.

Trainman Kearns, of train No. 274, who was in charge of the back-up pipe on the lead car, stated that an air-brake test was made before departing from the station, the brakes first being applied from the engine and then from the rear end of the train. After stopping at the starter signal, all signals were clear until they reached signal 0.73, which was displaying a caution indication. Trainman Kearns stated that he was standing on the second stop on the south side near the back-up pipe and after passing signal 0.73 he turned to Trainman Curry, who was standing in the doorway of the car, and asked him about the next draft they were to operate, and when he again looked ahead he saw the home signal displaying a stop indication, only 75 or 100 feet distant; he immediately applied the air brakes in emergency. The train was traveling at a good rate of speed and he estimated the speed at the time of the collision to have been about 25 miles per hour, and that the lead car was derailed before the collision occurred. Trainman Kearns further stated that when he received a caution indication he was not in the habit of reducing speed immediately but would wait until he saw the indication of the next signal. The statements of Trainman Curry practically corroborated those of Trainman Kearns, when he saw the home signal at tower 5 they had practically reached it, and he called "stop" and Trainman Kearns applied the brakes in emergency.

Engineman Thompson and Fireman Mills, of train No. 274, did not see the signal indications approaching tower 5. The engineman shut off steam in the vicinity of signal 0.73 and the train was drifting at the time of the collision. They both stated that they did not feel an air-brake application approaching the tower, and estimated the speed of their train to have been between 10 and 15 miles per hour at the time of the collision.

Towerman Manoney, on duty at tower 5 at the time of the accident, stated that after holding the switch engine and its cars at the eastbound home signal until after the passage of train No. 73, he lined the route for the switching movement to be made from track 4 to track 2 with signal 22, displaying a caution indication, while the westbound home signals displayed stop indications and signal 0.73 a caution indication. After the switch engine had started to make this movement Towerman Manoney heard a click on the repeater, indicating that train

No. 274 had passed signal O.73, and on looking out he saw this train approaching at a high rate of speed, it then being about at Arlington Street bridge or 800 feet from the point of accident. He saw that it was not going to stop and rushed over to the window and signaled to the switch engine to stop, and the switch engine was stopped before the collision occurred. Towerman Mahoney estimated the speed of the draft to have been about 20 miles per hour.

Conclusions

This accident was caused by the failure of Trainmen Kearns and Curry, of the equipment train, properly to observe and obey signal indications.

Rule 70 (a) of the book of rules of the Boston Terminal Company provides that "when a train is to be backed into or out of the station, or through the yard, two experienced men must be stationed on the front platform of the leading car, who will observe all signals affecting their train, will call aloud to each other the indications, and will be held equally responsible for disregarding same". The time-table restricts the speed of engines pushing passenger drafts to 25 miles per hour, while the book of rules provides that on receiving a caution, or approach signal, the train affected may "proceed at a speed reduced to not exceed one-half the maximum authorized at point involved."

Under these provisions the speed of the equipment train should have been reduced to not more than $12\frac{1}{2}$ miles per hour at signal O.73, instead of doing so, however, Trainmen Kearns and Curry called the approach indication, failed to reduce speed, and then became engrossed in conversation and failed to observe the stop indication at the home signal until they had nearly reached it. It was then too late to avert the accident.

Attention has been called often to the necessity for taking positive action at the distant or caution signal location with a view to bringing the speed of a train under control and the rules of many railroads, including the Boston & Albany, now provide for the taking of such action. Rigid enforcement of a rule of this character would nearly eliminate the possibility of the occurrence of accidents of the kind involved in this case.

Respectfully submitted,

W. P. BORLAND,

Director.