

## INTERSTATE COMMERCE COMMISSION

REPORT OF THE DIRECTOR OF THE BUREAU OF SAFETY IN RE  
INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON THE  
NEW YORK CENTRAL RAILROAD AT ELKHART, IND., ON  
JANUARY 27, 1932

March 11, 1932.

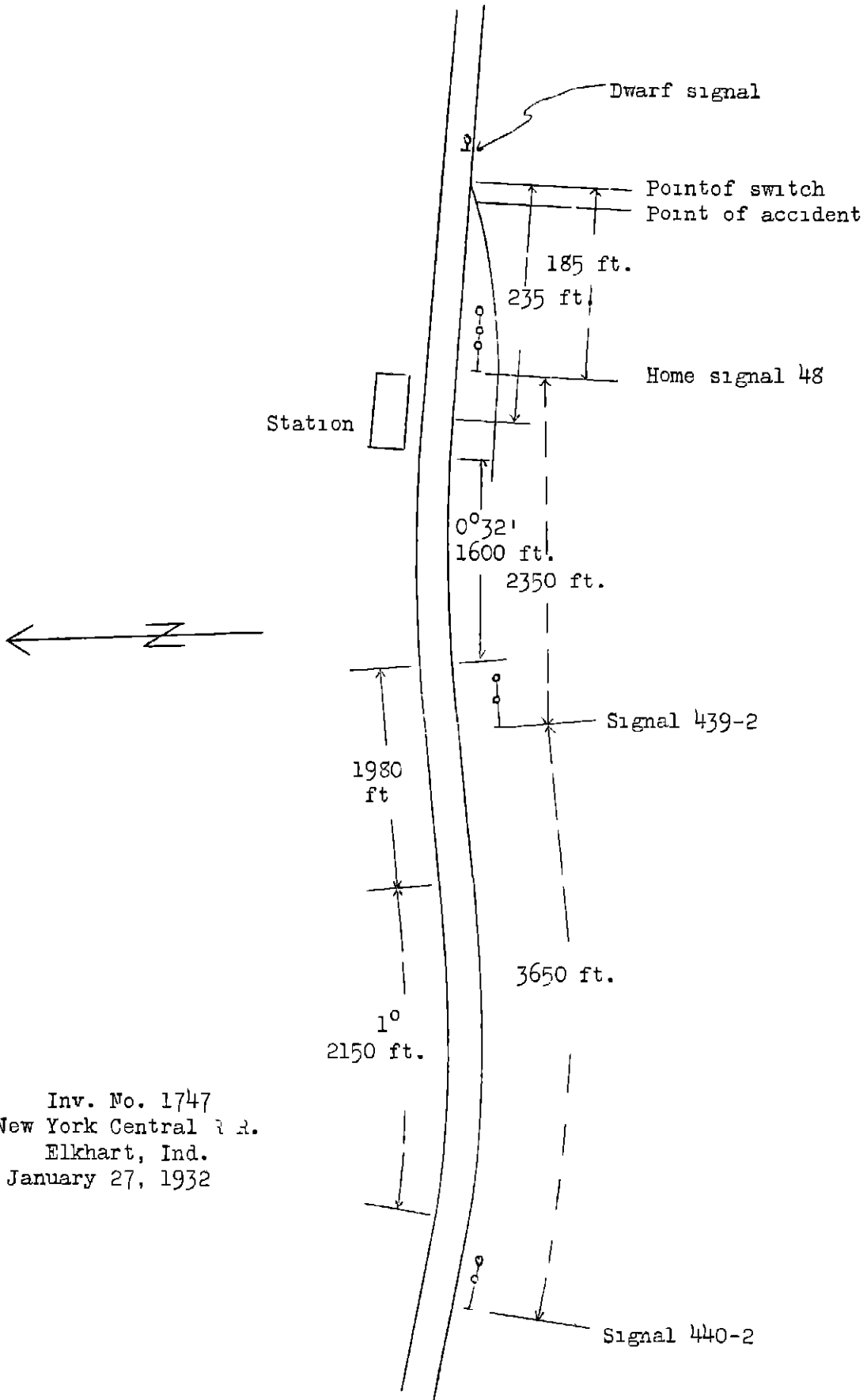
To the Commission:

On January 27, 1932, there was a rear-end collision between a passenger train of the Cleveland, Cincinnati, Chicago & St. Louis Railway and a passenger train of the New York Central Railroad on the tracks of the latter railroad at Elkhart, Ind., which resulted in the injury of 2 passengers, 6 employees, 4 mail clerks, and 1 trespasser.

## Location and method of operation

This accident occurred on the Western Division, extending between Chicago, Ill., and Elkhart, Ind., a distance of 100.56 miles, in the vicinity of the point of accident this is a double-track line over which trains are operated by time-table, train orders, and an automatic block-signal and train-stop system, the latter being of the intermittent-inductive type. The switch which connects passenger yard track 1 with the eastbound main track, which it parallels, is situated at a point about 235 feet east of the station at Elkhart and it was at a point about 10 feet west of this switch that the collision occurred. Approaching this point from the west, the track is tangent for a considerable distance, followed by a  $1^{\circ}$  curve to the left 2,150 feet in length, tangent track for a distance of 1,980 feet, a  $0^{\circ} 32'$  curve to the right 1,600 feet in length, and then 250 feet of tangent to the point of accident. The grade for eastbound trains is 0.11 per cent ascending for a distance of approximately 1,850 feet west of the point of accident.

The route from the yard track to the eastbound main track is controlled from an interlocking tower located about 700 feet east of the station and such movements are governed by a dwarf signal located just east of the switch. The other signals involved are interlocking home signal 48, located 185 feet west of the switch, automatic signal 439-2, located approximately 2,350 feet west of the home signal, and automatic signal 440-2, located approximately 3,650 feet west of signal 439-2. The two automatic signals are of the two-panel, color-light type, signal 440-2 being equipped with a marker, and the home signal is of the three-panel color-light type, the top panel displaying a fixed red



Inv. No. 1747  
New York Central R.R.  
Elkhart, Ind.  
January 27, 1932

indication. The circuits are so arranged that when the home signal indicates stop signal 440-2 displays on the top panel a yellow light and on the lower panel a green light, indicating "approach next signal at restricted speed", while signal 439-2 displays a yellow light on the top panel and a red light on the lower panel, indicating "proceed at a speed reduced to not exceeding one-half the maximum authorized at point involved (not exceeding thirty miles per hour) prepared to stop at the next signal." Signal 440-2 can be seen by an engineman of an approaching eastbound train for a long distance and signal 439-2 can be seen at a distance of 2,400 feet.

Day was breaking, and there was a misty rain at the time of the accident, which occurred at 6.32 a. m.

#### Description

Eastbound New York Central passenger train No. 18 consisted of 1 combination mail and baggage car, 1 baggage car, and 1 coach, all of steel construction, hauled by engine 4755, and was in charge of Conductor Van Gilder and Engineman Hout. This train was made up on the yard track and departed at 6.30 a. m., on time, after having received a proceed indication from the dwarf signal, and had passed practically through the switch when it was struck by Big Four train No. 372 while traveling at a speed estimated to have been 8 or 10 miles per hour.

Eastbound Big Four passenger train No. 372 consisted of gas-electric motor car M-1210 and one coach, both of steel construction, and was in charge of Conductor Mullinix and Motorman Kaiser. This train departed from Mishawaka, 11.11 miles west of Elkhart at 6.19 a. m., 11 minutes late, passed WG Tower, 4.82 miles from Elkhart, at 6.28 a. m., 11 minutes late, passed signal 440-2, displaying yellow over green, passed signal 439-2, displaying yellow over red, passed home signal 48 displaying a stop indication, and collided with the rear end of train No. 18 while traveling at a speed estimated by the motorman to have been about 15 miles per hour.

The motor car struck the left rear corner of the last car in NYC train No. 18, demolishing that side of the vestibule and derailing the rear truck of that car. The coupler between the engine and first car in train No. 18 was pulled out and the engine traveled a short distance before it was stopped. The front end of motor car M-1210, of Big Four train No. 372, was badly damaged and the rear end was partly telescoped by the coach. The rear pair of wheels of the motor car was derailed. The employees injured were the motorman, baggageman and conductor of the Big Four train, and the conductor, joint baggageman and expressman, and an engineman deadheading on the NYC train.

Summary of evidence

Motorman Kaiser, of Big Four train No. 372, stated that approaching signal 440-2 he received a clear or green indication and was operating his train at a speed of 60 miles per hour, as he approached signal 439-2 he saw it displaying a caution or yellow indication and could see it for quite a distance, just before he reached it he closed the throttle, as he had had it wide open until that time, operated the forestalling lever of the automatic train-stop device, and then realized that the train was traveling too fast and applied the brakes in emergency. He estimated the speed to have been 15 miles per hour at the time of the collision. Motorman Kaiser did not remember having operated the forestalling lever at signal 440-2, which would have been necessary with signal 48 displaying a stop indication, and said that in the past he had always entered these two blocks approaching Elkhart with the signals displaying yellow indications, and that on this occasion when he reached signal 439-2 he either became confused or misjudged the signal or his location, as he thought he had another block in which to stop his train. He was unable to state on which panel, the upper or the lower, he saw the light indications, except that he said the light at signal 440-2 was green and the light at signal 439-2 was yellow. Motorman Kaiser stated that due to motor trouble he was delayed 11 minutes in departing from South Bend, that the brakes were tested and found to be working properly, and that no trouble had been experienced in making the stop at Mishawaka. He further stated that he was familiar with the territory in which the accident occurred, and while he had not made this particular run within the last six months he had operated a local over this territory occasionally within that period, and had had the same run for three months during the previous winter.

Conductor Mullinix, of Big Four train No. 372, stated that approaching Elkhart the speed was about 60 miles per hour and after they passed signal 439-2 he noticed what seemed to him to be a service application of the air brakes and thought that the motorman was going to make a station stop; he got up with the intention of calling the station, saw they were already at the station and then realized that the train could not be stopped. The statements of Baggage-man Petty brought out nothing additional of importance.

Engineman Hout, of NYC train No. 18, stated that as soon as he received a proceed indication on the dwarf signal he departed from passenger yard track 1, which was at 6.30 a. m. He operated his train very slowly through the switch and thought probably two minutes elapsed from the time he started until the time of the collision, and that his train

had attained a speed of 8 or 10 miles per hour. Fireman Tooker estimated the speed of their train to have been 8 or 10 miles per hour at the time of the collision, while Conductor Van Gilder estimated it to have been 7 or 8 miles per hour.

Operator Baker, on duty at the tower at Elkhart, stated that at 6.25 a. m. he was advised by the station master that Big Four train No. 372 would be late, and at 6.29 a. m. he lined the route for NYC train No. 18 to depart from the passenger yard track. At that time the home signal governing eastbound movements indicated stop and had been in that condition since the departure of another train at 4.35 a. m.

Fireman Gorsuch had just come out of the station when he saw the Big Four train approaching and stated that it was traveling at a high rate of speed, it passed him at a speed of 35 or 40 miles per hour, with the brakes applied on the motor car but not on the coach, the sound of the motor indicated that it was working and fire was flying from the exhaust stack.

Road Foreman of Engines Gilchrist, of the Big Four Railway, had come to Elkhart for the express purpose of riding with Motorman Kaiser and was in the telegraph office when, at 6.28 a. m., he looked at his watch and train No. 372 was not in sight. He was on the platform, watching train No. 18 pull out, when train No. 372 passed him at a speed between 25 and 30 miles per hour. Train No. 18 had started to depart at 6.30 a. m. and when the collision occurred he again looked at his watch and it was then 6.32 a. m. As train No. 372 passed him the motor was not running, fire was flying from the motor-car wheels and from the wheels of the front truck of the coach, and after the collision he saw that the brake-cylinder pistons were out on the coach and the motor car, the piston travel on the motor car being 6 or 7 inches.

Assistant Supervisor of Air Brakes Jackson stated that he arrived at the scene of the accident about seven minutes after its occurrence and his inspection of the equipment disclosed the air connection between the motor car and the coach to be in proper working condition, the brakes were applied on the coach, but not on the motor car, the angle cocks having been broken off in the accident. After repairs were made, however, a test showed that the brakes were working properly. Supervisor Jackson stated that there was no question in his mind that train No. 372 had full braking power on entering Elkhart. Car Inspector Krywick made an inspection of the brake equipment on the coach of train No. 372 on the afternoon of the day of the accident and found nothing wrong.

Assistant Roundhouse Foreman McCollum, on night duty at South Bend, stated that when motor car M-1210 came into the roundhouse on the night previous to the occurrence of the accident an inductor test of the automatic train-stop equipment was made which indicated that it was in proper operative condition.

Assistant Signal Supervisor Miles stated that he made a careful check of the signals, inductors, and everything connected with the signal operation, and found the signal apparatus in proper working order. Signal 439-2 is so arranged that regardless of what indication it may display, it is necessary to operate the forestalling feature of the automatic train-stop device in order to avoid an automatic application of the brakes when passing the inductor at that location, at signal 440-2, an indication of green over red would not require forestalling, but with home signal 48 at stop, which was the case in this instance, signal 440-2 would display yellow over green, and with the automatic train-stop apparatus functioning as intended, this indication would require forestalling, or else there would be an automatic application of the brakes at this point.

Signal Supervisor Inwood stated that with the route and signals lined for the movement of train No. 372, it would require an interval of two minutes, after the home signal had been restored to stop position, before the line-up could be changed so as to allow the movement of train No. 18 from the yard track, and that it would take 15 seconds additional to complete the change.

#### Conclusions

This accident was caused by the failure of Motorman Kaiser, of Big Four train No. 372, properly to observe and obey signal indications.

The operator at Elkhart lined the route for NYC train No. 18 to depart from the passenger yard track at 6.29 a. m., and as train No. 372 did not pass WG Tower, 4.82 miles west of Elkhart, until 6.28 a. m., it is evident that signal 440-2 was displaying a yellow over green indication when train No. 372 was still a long distance west of it, subsequent tests having disclosed that the signal and automatic train-stop equipment was in proper operating condition. The evidence indicates that signal 440-2 displayed a yellow light over a green light, meaning to approach the next signal at restricted speed; that signal 439-2 displayed a yellow light over a red light, meaning to proceed at reduced speed, not exceeding 30 miles per hour, prepared to stop at the next signal, and that home signal 48 displayed red lights, meaning "stop". According to the statements of Motorman Kaiser, however, he saw only a green light, which

he took for a clear indication, at signal 440-2, and a yellow light at signal 439-2, and he did not remember having forestalled the operation of the automatic train-stop device at signal 440-2, which would have been necessary in order to have prevented an application of the brakes at that point. While he saw the yellow light at signal 439-2 for some distance, he did not reduce the speed of his train, continuing at a speed of about 60 miles per hour until he had practically reached the signal, when he closed the throttle and operated the forestalling lever of the automatic train-stop device, then realizing that his speed was too high, he applied the air brakes in emergency, but too late to avert the accident. No explanation was offered as to how Motorman Kaiser came to misread signal 440-2 or to forget that he operated the forestaller, while as to signal 439-2 he stated that he either became confused or misjudged the signal, and thought he had another block in which to stop his train.

Attention is called to the fact that Motorman Kaiser also failed to comply with the requirement of the rules that an engineman must not forestall until after a signal indication has been observed and is being obeyed, he failed to take the necessary action at signal 440-2 to bring his train under control and to approach signal 439-2 at restricted speed, and at signal 439-2 he again failed to comply with the rule by forestalling an application of the brakes before he had obeyed the indication.

All of the employees involved were experienced men and at the time of the accident none of them had been on duty in violation of any of the provisions of the hours of service law.

Respectfully submitted,

W. P. BORLAND

Director.