

RAILROAD ACCIDENT INVESTIGATION

Report No. 3956

NEW YORK CENTRAL RAILROAD COMPANY

WEST CARROLLTON, O.

JUNE 16, 1962

INTERSTATE COMMERCE COMMISSION

Washington

S U M M A R Y

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DATE:	June 16, 1962	
RAILROAD:	New York Central	
LOCATION:	West Carrollton, O.	
KIND OF ACCIDENT:	Rear-end collision	
TRAINS INVOLVED:	Freight	Freight
TRAIN NUMBERS:	Extra 1717 West	Extra 5008 West
LOCOMOTIVE NUMBERS:	Diesel-electric units 1717, 1872, 1694	Diesel-electric units 5008, 2426, 1661
CONSISTS:	136 cars, caboose	Caboose
SPEEDS:	Standing	38 m.p.h.
OPERATION:	Signal indications	
TRACKS:	Double; 1°00' curve; 0.12 percent ascending grade westward	
WEATHER:	Clear	
TIME:	6:25 p.m.	
CASUALTIES:	2 killed	
CAUSE:	Failure to operate the following train in accordance with signal indications	

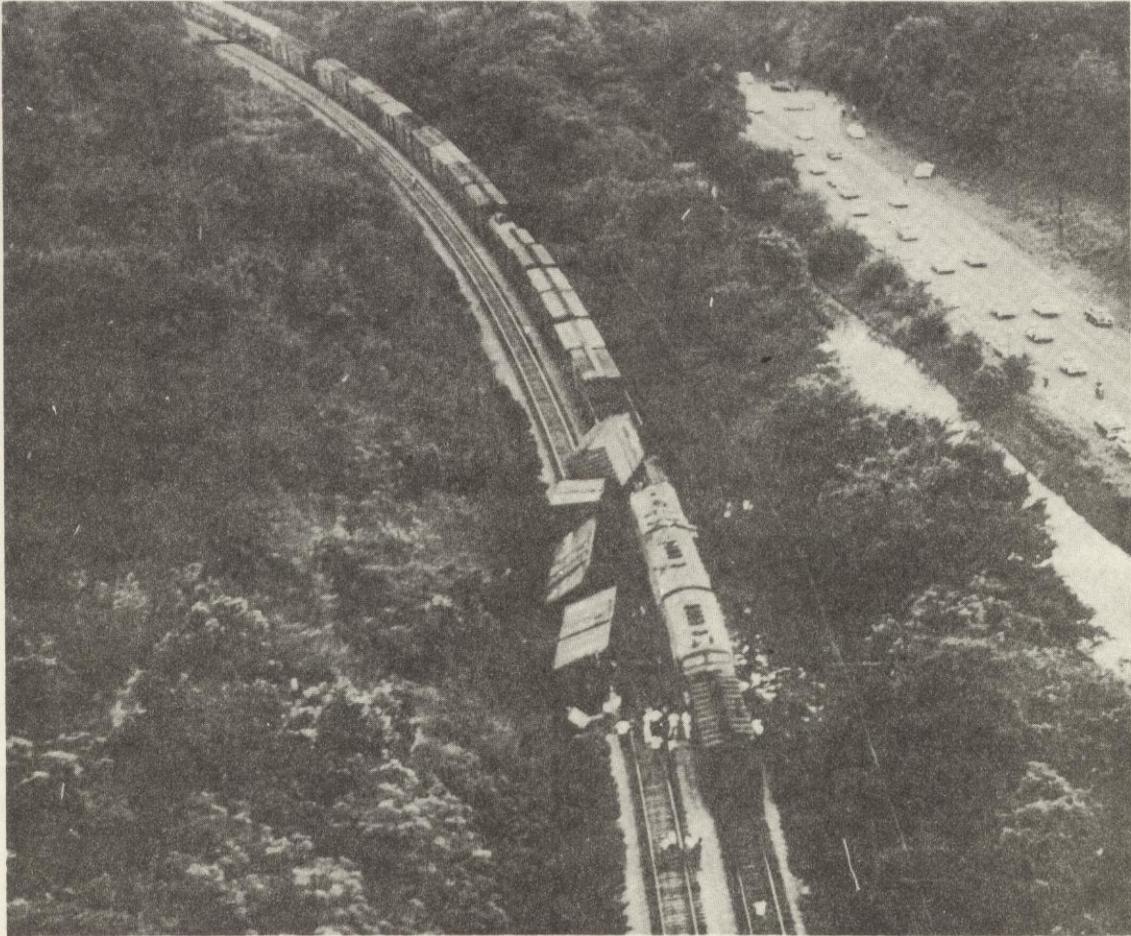


Photo shows the 3 diesel-electric units and the caboose of Extra 5008 West on westward main track in right foreground. Rear 4 cars of Extra 1717 West shown in various positions along eastward main track. Destroyed caboose of latter train is not visible.



First diesel-electric unit of Extra 5008 West.

INTERSTATE COMMERCE COMMISSION

REPORT NO. 3956

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

THE NEW YORK CENTRAL RAILROAD COMPANY

January 10, 1963

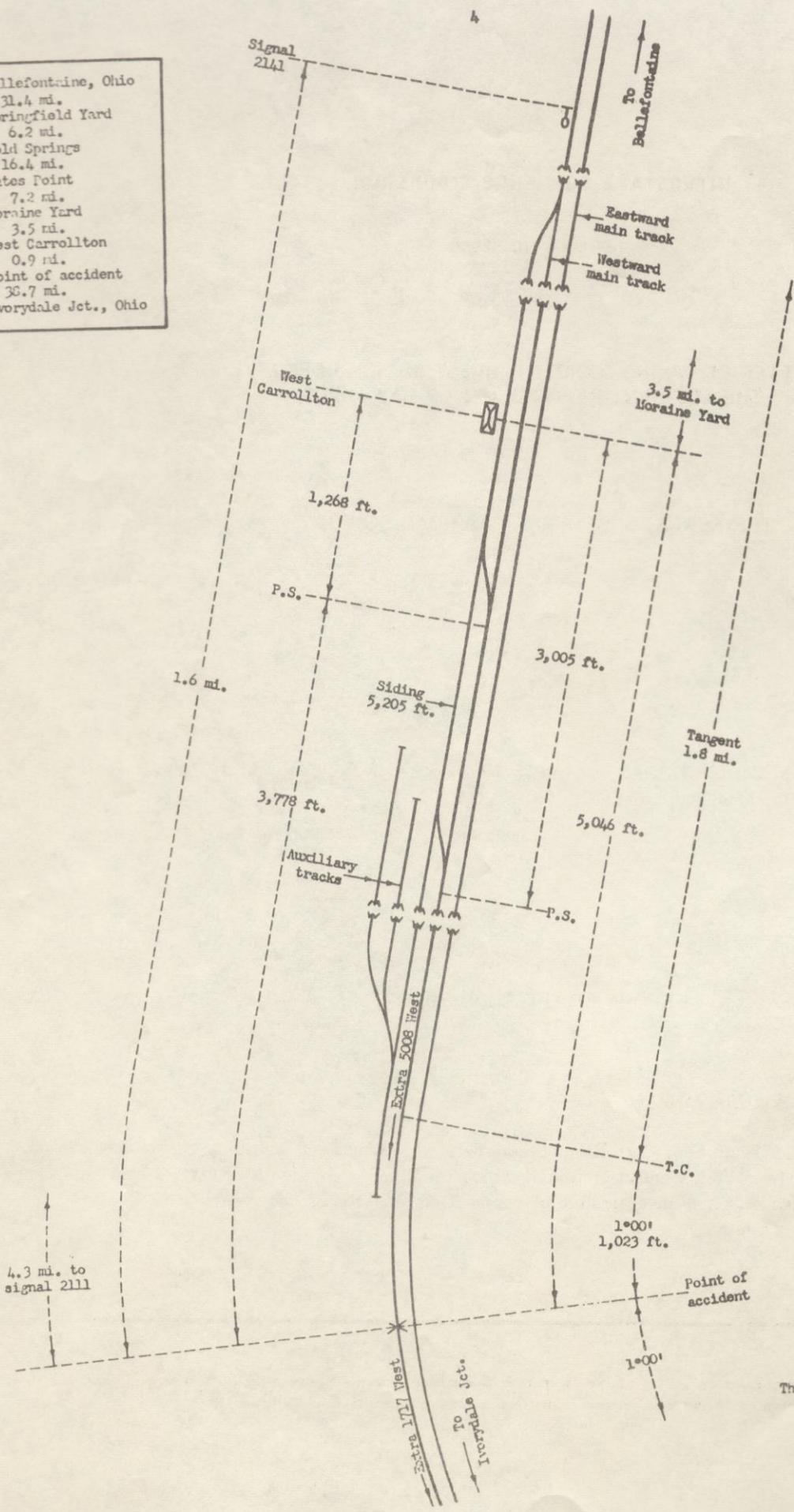
Accident at West Carrollton, Ohio, on June 16, 1962, caused by failure to operate the following train in accordance with signal indications.

REPORT OF THE COMMISSION¹*SAFETY AND SERVICE BOARD NO. 1:*

On June 16, 1962, at West Carrollton, Ohio, there was a rear-end collision between two freight trains on the New York Central Railroad, which resulted in the death of 2 train-service employees. This accident was investigated in conjunction with representatives of the Public Utilities Commission of Ohio.

¹Under authority of section 17 (2) of the *Interstate Commerce Act* the above-entitled proceeding was referred by the Commission to Safety and Service Board No. 1 for consideration and disposition.

- Bellefontaine, Ohio
- Springfield Yard
- Cold Springs
- Tates Point
- Moraine Yard
- West Carrollton
- Point of accident
- Ivorydale Jct., Ohio



The New York Central Railroad
 West Carrollton, Ohio
 June 16, 1962

Location of Accident and Method of Operation

This accident occurred on that part of the Ohio Central Division extending between Bellefontaine and Ivorydale Jct., Ohio, 104.3 miles. In the vicinity of the point of accident this is a double-track line over which trains moving with the current of traffic are operated by signal indications of an automatic block-signal system. At West Carrollton, 64.7 miles west of Bellefontaine, a siding 5,205 feet in length parallels the westward main track on the north. The west switch of this siding is 3,005 feet west of the station. A crossover connects the siding with the westward main track. The west switch of this crossover is trailing point for westbound movements on the westward main track and is located 1,268 feet west of the station.

The accident occurred on the westward main track 5,046 feet west of the station at West Carrollton and 3,778 feet west of the west switch of the crossover. From the east on the westward main track there are, in succession, a tangent 1.8 miles in length, and a 1°00' curve to the left 1,023 feet to the point of accident and a considerable distance westward. In the vicinity of the accident the grade for westbound trains is 0.12 percent ascending.

At West Carrollton, several auxiliary tracks parallel the siding on the north as shown in the sketch at the front of this report.

Approximately 3.5 miles east of West Carrollton a system of yard tracks, designated as Moraine Yard, is located on the south side of the main tracks. A series of crossovers connects Moraine Yard and both main tracks at a point about 3.2 miles east of the station at West Carrollton.

Automatic signals 2111 and 2141, governing westbound movements on the westward main track, are located 4.3 and 1.6 miles east of the point of accident, respectively. These signals are of the color-light type and are approach lighted. The aspect applicable to this investigation and the corresponding indication and name are as follows:

Signal	Aspect	Indication	Name
2111 2141	Red-over-red diagonally	Stop, Then Proceed at Restricted Speed	Stop and Proceed

The circuits are so arranged that signal 2111 or signal 2141 displays a Stop and Proceed aspect when its block is occupied.

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

SLOW SPEED. - A speed not exceeding fifteen miles per hour.

RESTRICTED SPEED - A speed not exceeding that which will enable a train to stop short of train, obstruction, or switch not properly lined * * * and not exceeding slow speed

33. All members of engine and train crew must, when practicable, communicate to each other the indication of each signal affecting the movement of their train or engine.

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, placing two torpedoes, and when necessary, in addition, displaying lighted fuseses. * * *

* * *

Note. - When trains are operating under Automatic Block Signal System Rules, the requirements of Rule 99, in so far as protecting against following trains is concerned, will have been complied with when full protection is afforded against trains moving at Restricted Speed.

514. A train or engine entering a block between signals must be protected as required by the rules and must proceed at restricted speed to the next signal in advance.

The maximum authorized speed for freight trains in the vicinity of the point of accident is 50 miles per hour.

At Cold Springs, 37.6 miles west of Bellefontaine, a single-track line connects with the double-track line involved. Springfield Yard is located on the single-track line at a point 6.2 miles distant from Cold Springs.

Description of Accident

Extra 1717 West, a westbound freight train, consisted of car-body type diesel-electric units 1717, 1872 and 1694, coupled in multiple-unit control, 136 cars and a caboose. This train departed from Bellefontaine at 4:05 p.m., passed Cold Springs at 5:13 p.m., passed Bates Point, the last open office, 54 miles west of Bellefontaine, at 5:35 p.m., passed signal 2111 which indicated Proceed, and, about 6:00 p.m., passed Moraine Yard, where Extra 5008 West was standing on a yard track clear of both main tracks. Extra 1717 West then passed signal 2141 which indicated Proceed, passed the siding at West Carrollton and, about 6:05 p.m., stopped on the westward main track with the rear end in the block of signal 2141. About 20 minutes later, while this train was standing on the westward main track, the rear end was struck by Extra 5008 West at a point 5,046 feet west of the station at West Carrollton.

Extra 5008 West, a westbound local freight train, departed from Springfield Yard on the single-track line at 4:27 p.m., entered the double-track line and passed Cold Springs at 4:42 p.m., ahead of Extra 1717 West, and proceeded to Moraine Yard, where it entered yard tracks for switching operations and to clear the westward main track for Extra 1717 West. About 6:00 p.m., immediately after Extra 1717 West had passed, Extra 5008 West, consisting of car-body type diesel-electric units 5008, 2426 and 1661, coupled in multiple-unit control, 6 cars and a caboose, entered the series of crossovers at Moraine Yard, entered the westward main track in the block of signal 2111, proceeded westward, stopped short of signal 2141 which was displaying a Stop and Proceed aspect, passed this signal which continued displaying a Stop-and-Proceed aspect, passed the station at West Carrollton and, about 6:15 p.m., stopped short of the crossover connecting the westward main track to the siding at West Carrollton. The 6 cars were then removed from the train and placed on an auxiliary track north of the siding, after which the locomotive with the caboose departed on the westward main track from the crossover. Approximately 1 minute later, while moving on the westward main track at a speed of 38 miles per hour, as indicated by the tape of the speed-recording device of the 3rd diesel-electric unit, the locomotive struck the rear end of Extra 1717 West at a point 3,778 feet west of the west switch of the crossover.

The caboose of Extra 1717 West and the 133rd to the 136th car, inclusive, were derailed and stopped in various positions on the structure of both main tracks as shown in a photograph at the front of this report. Of this derailed equipment, the caboose and 3 cars were destroyed, and 1 car was slightly damaged.

The 1st diesel-electric unit of Extra 5008 West was derailed. It stopped upright on and in line with the structure of the westward main track, and with the front end 174 feet west of the point of accident. It was heavily damaged.

The engineer and the fireman of Extra 5008 West were killed.

The weather was clear at the time of the accident, which occurred about 6:25 p.m.

In the vicinity of the accident the main tracks are laid in a side-hill cut, and in this vicinity there is a heavy growth of trees and bushes on each side of the track structure. Because of this growth, the wall of the side-hill cut, and the curvature of the tracks, the enginemen of a westbound train cannot observe whether the westward main track is occupied at the point of accident until their train reaches a point approximately 1,100 feet distant.

Discussion

As Extra 1717 West was approaching the point where the accident occurred the enginemen and the front brakeman were in the control compartment at the front of the locomotive, and the conductor and the flagman were in the caboose. The brakes had been tested and had functioned properly. However, soon after the train departed from Bellefontaine the engineer experienced difficulty with the brake system because of a defect in an air pipe connected to the main reservoir of the 1st diesel-electric unit. This train passed signal 2111 about 6:00 p.m. and as it proceeded westward in the block of this signal and passed Moraine Yard, all the members of the crew observed Extra 5008 West standing on a yard track clear of both main tracks. The conductor said he advised the flagman at this time that Extra 5008 West would follow their train westward from Moraine Yard and that he might be required to provide protection against it. Extra 1717 West then passed signal 2141 and as it was moving in the vicinity of the siding at West Carrollton, an undesired application of the brakes occurred as a result of the defect in the air pipe, and the train stopped with the rear end in the block of signal 2141 and 3,778 feet west of the west switch of the crossover connecting the westward main track to the siding at West Carrollton. The accident occurred approximately 20 minutes later, soon after the enginemen had re-arranged the controls for operation of the locomotive from the control compartment of the 2nd diesel-electric unit. Both enginemen and the front brakeman were unaware of the collision until some time after it occurred.

The flagman of Extra 1717 West said that he alighted from the caboose when the train stopped on the westward main track, and that he immediately proceeded eastward on the 1⁰⁰⁰' curve with fuses, torpedoes, and a red flag to provide protection against following trains. When the flagman reached a point about 200 feet to the rear of the train, the conductor also alighted from the caboose and proceeded toward the front of the train. He said that upon reaching a point in the vicinity of the 9th car ahead of the caboose he heard an eastbound train approaching on the eastward main track, and that after this train passed he continued walking westward. The accident occurred while the conductor was proceeding toward the front of the train, and because of the restricted range of vision along the curve he was unaware of the accident until some time after it occurred. The flagman said that he placed two torpedoes on the north rail of the westward main track when he reached a point approximately 300 feet to the rear of the caboose, and that he thought his range of vision eastward from this point extended about 700 feet to the east end of the curve or somewhat farther. Soon after he placed the two torpedoes on the north rail, the flagman heard the sound of the train approaching on the eastward main track, and at this time he thought it was caused by forward movement of his train. He immediately removed the two torpedoes from the rails and returned westward toward his train, but before reaching the caboose he realized that his train was not proceeding westward and that an eastbound train was approaching on the eastward main track. He said that he then returned to the location of where the two torpedoes had been placed, and that as he was about to replace these torpedoes on the north rail he observed a westbound locomotive approaching in the vicinity of the east end of the curve, apparently at a distance of approximately 700 feet. He said that he immediately gave the enginemen of the approaching locomotive stop signals with the red flag, and that he neither saw nor heard any acknowledgment of these signals. He said that he started to light a fusee as the locomotive closely approached him, and that before the fusee could

be lighted he observed a member of the crew on the locomotive descending the ladder on the fireman's side of the control compartment of the 1st diesel-electric unit. Upon observing this, the flagman apparently realized that the approaching locomotive was moving at a speed which would prevent it from being stopped short of the point where he was standing, and he ran southward from the westward main track without having lighted the fusee. Immediately thereafter the locomotive of Extra 5008 West passed the flagman and struck the rear end of the preceding train.

Extra 5008 West, consisting of three diesel-electric units and a caboose, departed westward from Springfield Yard at 4:27 p.m. on the day of the accident, and about 5:25 p.m. it stopped on the westward main track at Moraine Yard. This train then crossed over to the eastward main track and entered Moraine Yard to clear the westward main track for Extra 1717 West and to pick up six cars destined for West Carrollton. About 5:55 p.m., after the six cars had been assembled in the train and the brakes had been tested, Extra 5008 West was prepared to depart westward from Moraine Yard after Extra 1717 West passed. The latter train passed on the westward main track about 6:00 p.m. and immediately afterward Extra 5008 West re-entered the westward main track in the block of signal 2111, and proceeded westward toward West Carrollton. The enginemen and the front brakeman were in the control compartment at the front of the locomotive, and the conductor and the flagman were in the caboose. The headlight was lighted. The front brakeman said that the train was stopped short of signal 2141, which was displaying a Stop-and-Proceed aspect as a result of Extra 1717 West occupying the block, and that he heard both the engineer and the fireman call this aspect to each other. The locomotive then passed signal 2141, which continued to display a Stop-and-Proceed aspect, and proceeded toward West Carrollton. The train stopped momentarily at the West Carrollton station while the conductor left the waybills of the six cars. It then proceeded westward and stopped on the westward main track short of the crossover connecting this track to the siding, and set out the six cars on an auxiliary track located north of the siding. After the locomotive was recoupled to the caboose a brake test was made. The conductor, the flagman and the front brakeman then boarded the caboose and the train departed westward. They said that they did not at this time make any observation of the air gauge in the caboose.

As Extra 5008 West proceeded westward from the crossover in the block of signal 2141, its speed was rapidly increased to about 50 miles per hour. During the interval in which the speed was being increased the conductor, the flagman and the front brakeman seated themselves at various locations in the caboose and took no exception to the excessive rate of speed. Although the train had entered the westward main track at Moraine Yard immediately after Extra 1717 West passed, and had stopped soon thereafter at signal 2141, the conductor and the flagman said they were unaware that their train had passed signal 2141 while this signal was displaying a Stop-and-Proceed aspect and thus were unaware that their train was restricted from exceeding a speed of 15 miles per hour while moving in the block of signal 2141 and took no further action. The conductor and the flagman said that they were unaware of anything being wrong until they felt the brakes become applied in emergency immediately before the collision occurred.

Examination of the control compartment of the first diesel-electric unit of Extra 5008 West disclosed that because of damage resulting from the collision the position of the controls at the time of the accident could not be determined. The pressure-regulating device was found to be adjusted to maintain brake-pipe pressure at 72 pounds instead of 110 pounds as required by the carrier's air brake rules when a locomotive is being operated with a caboose only. The position of the rotair valve on this locomotive unit could not be determined because of its damaged condition. However, the rotair valves on the trailing units were found in freight lap position instead of in passenger lap position, as required under the circumstances in which the locomotive was being operated at the time of the accident.

The speed-recording device of the 1st diesel-electric unit of Extra 5008 West was badly damaged and its tape could not be analyzed. An analysis of the tape of the speed-recording device of the 3rd locomotive unit indicates that after the locomotive entered the westward main track between signals at Moraine Yard a speed of 40 miles per hour was attained before the train was stopped at a point immediately east of signal 2141, which indicated Stop-and-Proceed. According to the tape this train then attained a speed of 33 miles per hour between this signal and the station at West Carrollton and a speed of 50 miles per hour after it departed from the vicinity of the cross-over, approximately 3,000 feet west of the station. The speed of the train was reduced to about 38 miles per hour at the point of collision, apparently as a result of the emergency application of the brakes which was made immediately before the accident occurred.

Under the rules the flagman of Extra 1717 West was required to go back immediately after that train was stopped, a sufficient distance to insure full protection against following trains, which in the instant case, under Automatic Block Signal System Rules should have been moving at restricted speed. Extra 5008 West entered the block of signal 2111 between that signal and signal 2141 and passed the latter signal while it was displaying its most restrictive aspect. Under these circumstances Extra 5008 West was required to be operated at restricted speed, not exceeding 15 miles per hour, and in such manner that it could be stopped short of a preceding train at any point throughout the distance between Moraine Yard and signal 2141 and also in the block of that signal. The engineer and the fireman of Extra 5008 West were killed in the accident and it could not be determined why the speed of this train was not properly controlled in accordance with these requirements.

Cause

This accident was caused by failure to operate the following train in accordance with signal indications.

Dated at Washington, D. C., this tenth
day of January, 1963.

By the Commission, Safety and Service Board No. 1.

(SEAL)

HAROLD D. McCOY,

Secretary.