

INTERSTATE COMMERCE COMMISSION  
WASHINGTON

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REPORT OF THE DIRECTOR  
BUREAU OF SAFETY

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ACCIDENT ON THE  
INDIANA HARBOR BELT RAILROAD

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BROADVIEW, ILL.

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OCTOBER 10, 1940

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INVESTIGATION NO. 2452

SUMMARY

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Inv-2452

Railroad: Indiana Harbor Belt  
Date: October 10, 1940  
Location: Broadview, Ill.  
Kind of accident: Side collision  
Trains involved: Freight : Freight  
Train numbers: Extra 416 East : Extra 407 West  
Engine numbers: 416 : 407  
Consist: 38 cars and : 69 cars and  
caboose : caboose  
Speed: 5-10 m. p. h. : 15-35 m. p. h.  
Operation: Operating rules only  
Track: Double; tangent; 0.40 percent  
ascending grade westward  
Weather: Intermittent fog  
Time: About 5:30 a. m.  
Casualties: 2 killed; 3 injured  
Cause: Failure to control speed of west-bound  
train properly while moving within  
yard limits

Inv-2452

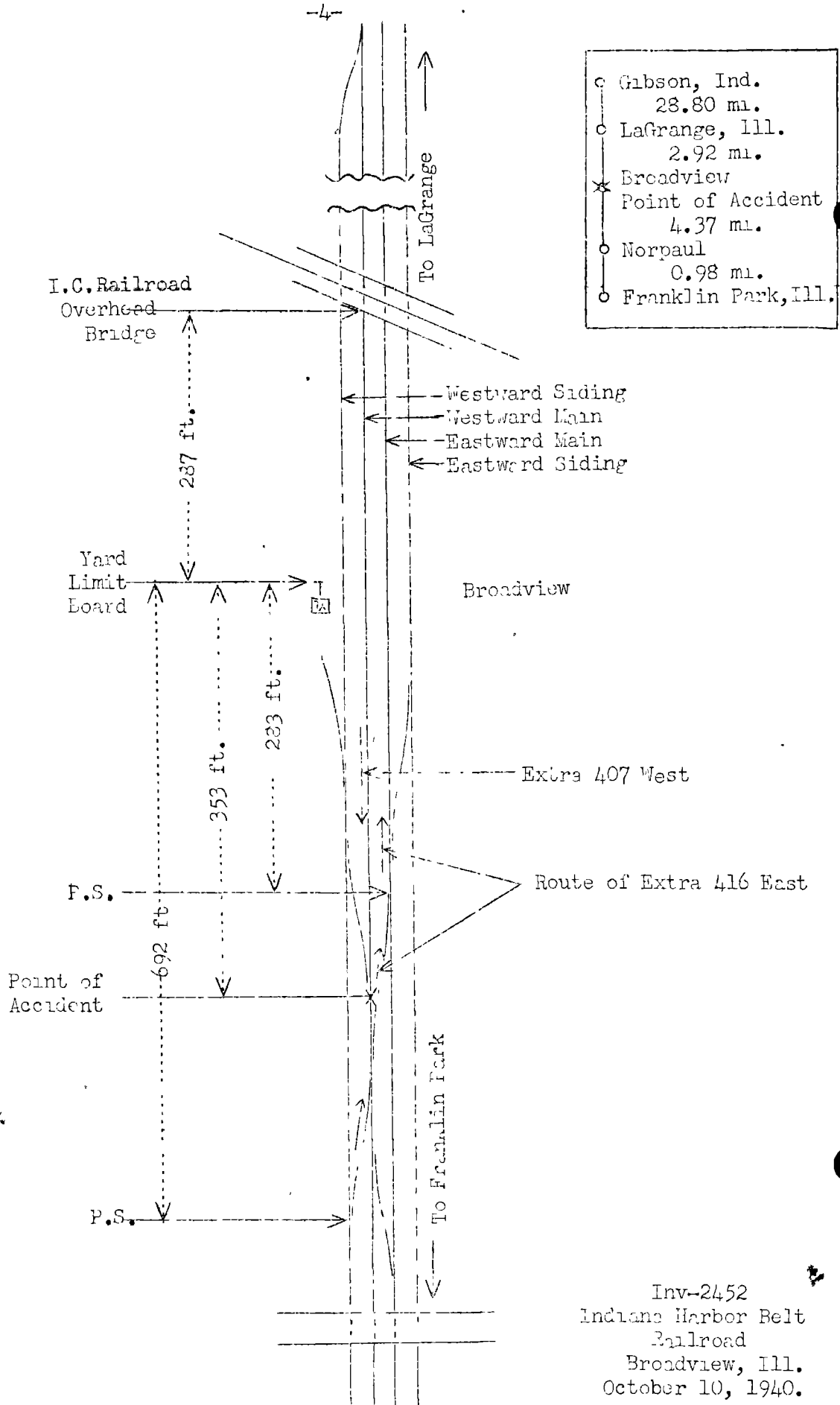
December 4, 1940.

To the Commission:

On October 10, 1940, there was a side collision between two freight trains on the Indiana Harbor Belt Railroad at Broadview, Ill., which resulted in the death of two employees and the injury of three employees. This accident was investigated in conjunction with a representative of the Illinois Commerce Commission.

#### Location and Method of Operation

This accident occurred on that part of the railroad designated as the Franklin Park Line which extends between Gibson, Ind., and Franklin Park, Ill., a distance of 37.07 miles. In the vicinity of the point of accident this is a double-track line over which trains are operated by operating rules without the use of train orders except for movements against the current of traffic; there is no block system in use and there are no schedules in effect. Yard limits extend eastward from Franklin Park to Broadview, a distance of 5.35 miles. The accident occurred within yard limits on the westward main track at a point 353 feet west of the east yard-limit sign at Broadview. In the vicinity of the point of accident four parallel tracks are designated from north to south as the westward siding, the westward main track, the eastward main track, and the eastward siding. A crossover, which is trailing for movements with the current of traffic, connects the eastward and the westward main tracks; the east and west switches are located 283 and 484 feet, respectively, west of the yard-limit sign. A facing-point crossover for westward movements on the westward main track connects the westward main track and the westward siding; the east and west switches of this crossover are located 492 and 692 feet, respectively, west of the yard-limit sign. All main track switch-stands of these crossovers are of the low-stand type; they are equipped with lamps which display red aspects when the switches are lined for the crossovers. The red lenses of the lamps are 4-3/4 inches in diameter, are 1.7 feet above the tops of the ties, and are surrounded by red discs 10 inches in diameter. The switch-stands of the main-track crossover are located between the main tracks; the switch-stand of the east switch of the crossover to the siding is located between the westward main track and the siding; the switch-stand of the west switch of this crossover is located on the north side of the siding. It is equipped with a lamp and a banner which display yellow aspects when the switch is lined for the crossover. The lens of the lamp and the center of the banner are 9 feet and 7-1/2 feet, respectively, above the top of the ties. The



- Gibson, Ind. 28.80 mi.
- LaGrange, Ill. 2.92 mi.
- ✱ Broadview Point of Accident 4.37 mi.
- Norpaul 0.98 mi.
- Franklin Park, Ill.

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yellow lens and the yellow banner are, respectively, 4-3/4 inches and 15 inches in diameter.

As the point of accident is approached from the east the track is tangent more than 1 mile to the point of accident and some distance beyond. The grade for west-bound trains is, in succession, level 4,200 feet, 0.19 percent descending 800 feet, and 0.40 percent ascending 565 feet to the point of accident and some distance beyond.

Rules for the Government of the Operating Department read as follows:

93. Within yard limits the main track may be used, protecting against first class trains.

All other trains and engines must move within yard limits prepared to stop unless the main track is seen or known to be clear.

Note.-Yard limits will be indicated by yard limit boards.

The maximum authorized speed for freight trains at the point of accident is 40 miles per hour.

It was hazy and there were occasional fog pockets at the time of the accident, which occurred about 5:30 a. m.

#### Description

Extra 416, an east-bound freight train, with Engine Foreman Rose and Engineman Raines in charge, consisted of engine 416 and a caboose. This train departed from Norpaul, 4.37 miles west of Broadview, at 2:45 a. m., according to the train sheet, picked up 18 loaded cars at Proviso Yard, departed from Melrose, 2.06 miles west of Broadview, about 5 a. m., and stopped at Broadview about 5:10 a. m., according to the statements of the crew. The engine and first 5 cars moved eastward on the eastward main track, backed westward across the westward main track to the westward siding where 20 cars were picked up, and the engine and 25 cars were moving eastward through the crossovers at a speed estimated between 5 and 10 miles per hour when the eighteenth car was struck by Extra 407 West.

Extra 407, a west-bound freight train, with Engine Foreman Dahlkamp and Engineman Ernest in charge, consisted of engine 407, 37 loaded and 32 empty cars and a caboose. This train departed from Gibson, 31.72 miles east of Broadview, at 3:32 a. m., according to the train sheet, passed LaGrange, the last open of-

rice, 2.92 miles east of Broadview, at 5:20 a. m., passed the east yard-limit sign at Broadview, passed the clearance point of the main-track crossover, and, while moving at a speed estimated to have been between 15 and 35 miles per hour, collided with Extra 416 East.

Engine 407 was derailed and stopped on its right side, facing eastward, diagonally across the eastward main track and the eastward siding, at a point 175 feet west of the point of collision. The engine whistle and the right blow-off cock were broken off. The drawbar between the engine and tender was broken and the tender became detached from the engine and stopped on its side on the crossover between the westward siding and the westward main track. The first three cars of Extra 407 were derailed and badly damaged. The front truck of the fourth car was derailed. The eighteenth car of Extra 416 was slightly damaged but was not derailed. The nineteenth, twentieth, and the twenty-first cars, derailed and badly damaged, stopped at various angles across the four tracks. The east truck of the twenty-second car was derailed.

The employees killed were the fireman and a yardman of Extra 407, and the employees injured were the engineman, the engine foreman and a yardman of Extra 407.

#### Summary of Evidence

Engineman Raines, of Extra 416, stated that at Broadview his train stopped on the eastward main track. The engine with 5 cars backed through the crossovers to the westward siding and coupled to 20 cars. His engine with 25 cars started to return to the eastward main track and had moved 8 or 10 car lengths when he heard the engine exhaust of an approaching west-bound train. When the approaching train was about 15 car lengths distant he extinguished the headlight of his engine because he thought it would aid the vision of the engineman of the west-bound train. Engineman Raines said that when the engines passed each other his engine was moving at a speed of 8 or 9 miles per hour and the west-bound train was moving at a speed of about 35 miles per hour; the west-bound engine was working steam and the brakes were not applied, but he heard them become applied at the time of the accident, which occurred about 5:30 a. m. There were intermittent fog pockets in the vicinity of the point of accident. He said the rules required a train to be operated within yard limits prepared to stop short of train or obstruction. Within yard limits crossover movements can be made without flag protection.

Fireman Sandford, of Extra 416, stated that at Broadview, before his engine backed through the crossovers to the westward siding, a lighted fusee was placed on the westward track. When

his engine was moving eastward on the crossovers, he was tending the fire but he heard the west-bound engine working steam as it passed his engine. He said that he had not been examined on the rules; however, he understood that within yard limits trains are required to move prepared to stop unless the track is seen to be clear and that flag protection is not required.

Engine Foreman Rose, of Extra 416, stated that his train arrived at Broadview about 5:10 a. m. He called the train dispatcher immediately to obtain permission for his engine to cross over to the westward siding to move 20 cars from that track; at that time a west-bound train was passing on the westward track. As soon as the west-bound train had passed, the dispatcher gave permission to cross to the westward siding and informed him that the next west-bound train had not been reported by LaGrange. The rear yardman placed a lighted fusee on the westward main track opposite the east switch of the main-track crossover. The engine, with 5 cars, backed to the westward siding and after coupling to 20 cars, the engine, with 25 cars, proceeded toward the eastward main track and had moved 7 or 8 car lengths when the engine foreman heard the exhaust of an approaching west-bound train. According to the exhaust of its engine he thought the approaching train was moving at a speed of about 35 miles per hour. His view of the west-bound train was obscured by the front portion of his train moving through the crossovers, but he heard the engine of that train working steam until the collision occurred. The engine foreman said that at the time of the accident the speed of his train was 7 or 8 miles per hour. There were intermittent fog pockets and day was breaking at the time of the accident, which occurred about 5:30 a. m. All the switch lights involved were burning, and just before his engine started the eastward movement the fusee still was burning. At Broadview his crew used lanterns to transmit signals and there was no difficulty in distinguishing the signals. He said that flag protection is not required within yard limits but a lighted fusee was placed as an added precaution. He stated that trains should be operated within yard limits only as the way is seen or known to be clear

Yardman Drury, of Extra 416, corroborated the statement of his engine foreman and added that before his engine backed to the westward siding he placed a lighted fusee on the westward main track; however, it is not necessary to provide flag protection within yard limits. He heard the west-bound engine working steam until the accident occurred. He said that within yard limits trains were required at all times to be operated prepared to stop short of obstruction.

Yardman Esposito, of Extra 416, stated that when he boarded his engine as it started to move the 25 cars from the westward siding to the eastward main track, a fusee was burning on the

westward track. When his engine was near the Illinois Central Railroad overhead bridge, located 287 feet east of the yard-limit sign, he observed Extra 407 approaching on the westward main track; at this time the engineman of engine 416 extinguished the headlight. The engine of Extra 407 passed his engine too rapidly for him to attract the attention of anyone on engine 407. He said the switch lamps at Broadview were burning. The weather was hazy but vision was not materially restricted.

Engineman Ernest, of Extra 407, stated that at Gibson an air-brake test was made and the brakes functioned properly en route. When his train was approaching Broadview day was breaking and there were intermittent fog pockets. He was maintaining a lookout ahead and from a point about 1 mile distant he saw the headlight of an east-bound train. Near Broadview the fireman and the yardman, who were seated on the left side of the cab, remarked that the headlight of the east-bound train was extinguished and that this train was clear of the westward main track. Engineman Ernest continued to work steam on his engine. Soon after the engines passed each other his fireman and the yardman both called a warning that the east-bound train was moving on the crossover and he immediately placed the brake valve in emergency position. He said that the speed of his train was about 15 miles per hour when the engines passed each other and at the time of the accident the speed had not been reduced appreciably. He said that he observed the east-bound engine when it was about 10 car lengths distant but he did not see a fusee or the indications of the switch lamps at the crossovers. He understood that the yard-limit rule required him to operate his train under control within yard limits unless the way is seen or known to be clear and said that if he had complied with this rule he could have stopped his train in time to avert the accident. He understood also that flag protection was not required within yard limits, but he said that nevertheless trains in yard limits always furnished flag protection. He stated that he had sufficient rest before going on duty and that he was alert and in good health when his train approached Broadview.

Engine Foreman Dahlkamp, of Extra 407, stated that he was on the rear platform of the caboose at the time of the accident. He said the air brakes were not applied prior to the collision and he was of the opinion the speed of his train was about 35 miles per hour and was increasing at the time of the accident. After the accident occurred he walked toward the front end and observed fog pockets at points approximately 800 feet and 1,600 feet east of the point of accident. He said that within yard limits the rules require that a train be operated prepared to stop unless the way is seen or known to be clear and if his train had been operated in accordance with this rule the accident would have been averted. He understood that the rules did not require flag protection within yard limits.



Yardman Griffin, of Extra 407, corroborated the statement of his engine foreman.

Road Foreman of Engines Stockwell stated that he arrived at the scene of the accident about 6:40 a. m. The throttle of engine 407 was half open on the quadrant and the quadrant was not damaged. The throttle extension-rod was broken off near the front-end throttle-box. The automatic brake-valve was in emergency position; the independent brake-valve was in lap position; neither valve was damaged. The reverse gear was in position for forward motion.

#### Discussion

According to the evidence, Extra 416 West stopped on the eastward main track at Broadview to pick up 20 cars from the westward siding at that point. A west-bound train was passing and the train dispatcher informed the engine foreman of Extra 416 that the next west-bound train was not reported by LeGrange, approximately 3 miles east of Broadview. The engine, with 5 cars, backed to the westward siding and the engine, with 25 cars, had moved eastward 8 or 10 car lengths when the engine crew heard the exhaust of Extra 407 West. When the engines were about 15 car lengths apart the engine man of Extra 416 extinguished the headlight on his engine, his purpose being to avoid interference with the view of the engine man of the west-bound train. As the train crew of Extra 416 were on the west side of the cars moving through the crossovers, they were unable to give signals to the west-bound train. Extra 407 struck the eighteenth car of Extra 416 when at a point 353 feet west of the east yard-limit sign.

According to the statement of the engine man of Extra 407 West, he was operating his train at a speed of about 15 miles per hour when it entered the yard limits at Broadview. He thought Extra 416 was clear of the crossover switches when the engine man of that train extinguished the headlight, and he said that his fireman and the yardman, who were killed in the accident, were of the same opinion. Shortly before the collision occurred the engine crew of Extra 407 observed that Extra 416 was not clear of the crossover and the engine man placed the brake valve in emergency position. The preponderance of evidence, however, was to the effect that Extra 407 passed the yard-limit sign at a speed of about 35 miles per hour, although intermittent fog prevailed in that vicinity, and it continued to work steam until the collision occurred.

All the employees involved understood that the rules required trains to be operated within yard limits prepared to stop unless the main track was seen or known to be clear. Nevertheless, the engine man of the west-bound train was operating his

train at nearly maximum authorized speed even though apparently none of the three members of the crew on the engine could see the obstruction on the track only a short distance ahead. However, the fact that the headlight of the east-bound train was extinguished led the engineman of the west-bound train to believe it was not fouling the westward main track. While flag protection within yard limits was not required, the engineman of the west-bound train said it was common practice for trains working within yard limits to furnish flag protection and the fact that in this instance a burning fusee was placed near the crossover before the east-bound train began the crossover movement appears to support this statement. It is apparent that if the west-bound train had passed the yard-limit sign and continued at a rate of speed at which the train could be stopped within the range of vision, as required by the rules, this accident would have been prevented. The facts in this case indicate the need of closer supervision to insure proper enforcement of the yard-limit rule.

#### Conclusion

This accident was caused by failure to control the speed of the west-bound train properly while moving within yard limits.

Respectfully submitted,

S. N. MILLS,

Director.