

INTERSTATE COMMERCE COMMISSION
WASHINGTON

INVESTIGATION NO. 3126
INDIANA HARBOR BELT RAILROAD COMPANY
AND
GRAND TRUNK WESTERN RAILROAD COMPANY
REPORT IN RE ACCIDENT
AT BLUE ISLAND, ILL., ON
SEPTEMBER 6, 1947

SUMMARY

Railroads: Indiana Harbor Belt : Grand Trunk Western

Date: September 6, 1947

Location: Blue Island, Ill.

Kind of accident: Side collision

Trains involved: Freight : Freight : Freight

Train numbers: Extra 1450 : Extra 1459 : Extra 6316
West East East

Engine numbers: 1450 : 1459 : 6316

Consists: 29 cars, : 77 cars, : 20 cars,
caboose caboose caboose

Estimated speeds: 15 m. p. h. : 15 m. p. h. : 25 m. p. h.

Operation: Interlocking

Tracks: Double; tangent; level : Double;
tangent;
level

Weather: Clear

Time: 3:45 p. m.

Casualties: 1 killed; 1 injured

Cause: Failure to operate the Grand Trunk Western train in accordance with interlocking signal indications

INTERSTATE COMMERCE COMMISSION

INVESTIGATION NO. 3126

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

INDIANA HARBOR BELT RAILROAD COMPANY
AND
GRAND TRUNK WESTERN RAILROAD COMPANY

October 30, 1947

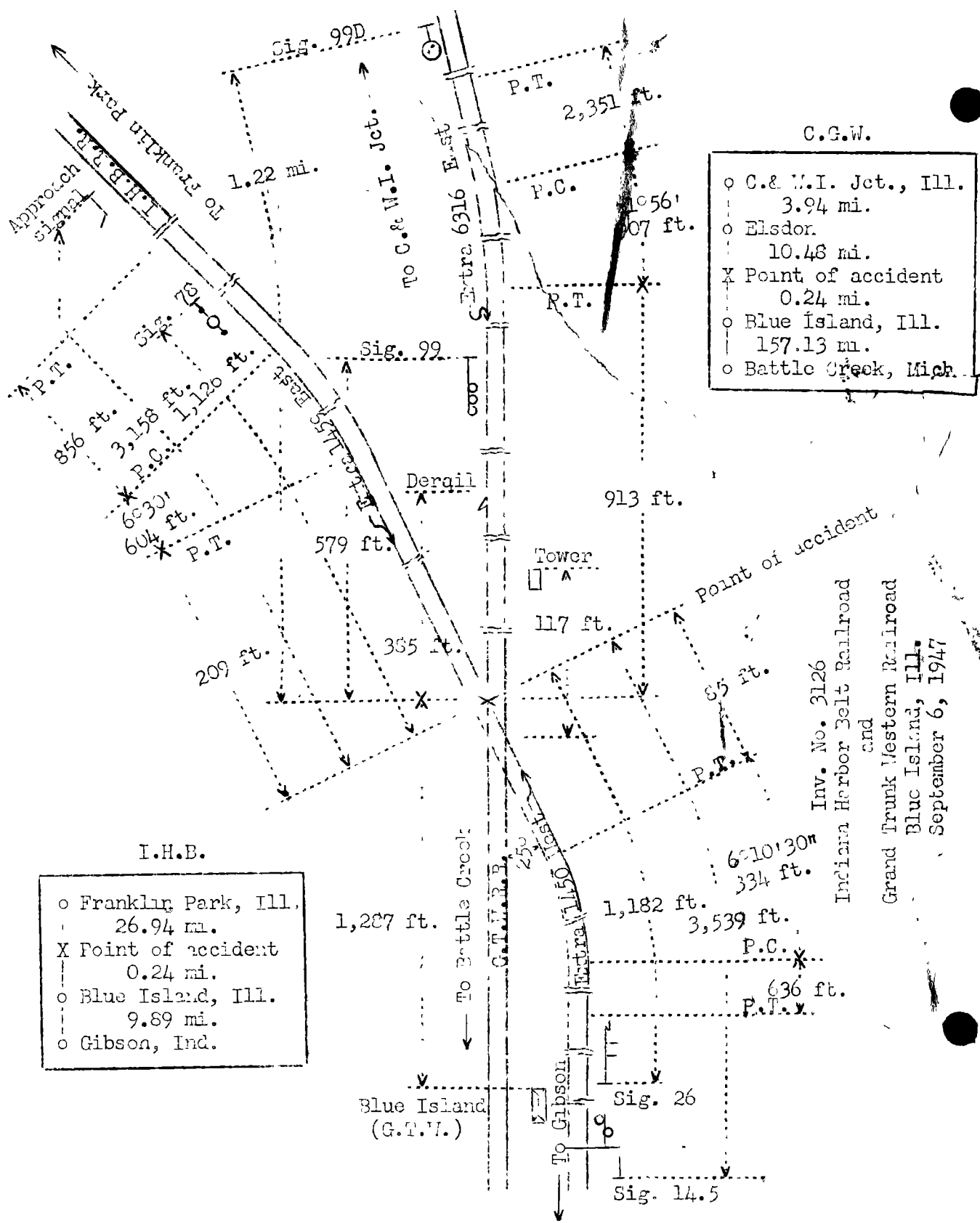
Accident at Blue Island, Ill., on September 6, 1947,
caused by failure to operate the Grand Trunk
Western train in accordance with interlocking
signal indications.

REPORT OF THE COMMISSION¹

PATTERSON, Commissioner:

On September 6, 1947, there was a side collision between two freight trains of the Indiana Harbor Belt Railroad and a freight train of the Grand Trunk Western Railroad at Blue Island, Ill., which resulted in the death of one employee, and the injury of one employee. This accident was investigated in conjunction with a representative of the Illinois Commerce Commission.

¹ 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.



- C.G.W.
- o C. & M. I. Jct., Ill. 3.94 mi.
 - o Elsdor 10.48 mi.
 - X Point of accident 0.24 mi.
 - o Blue Island, Ill. 157.13 mi.
 - o Battle Creek, Mich.

- I.H.B.
- o Franklin Park, Ill. 26.94 mi.
 - X Point of accident 0.24 mi.
 - o Blue Island, Ill. 9.89 mi.
 - o Gibson, Ind.

Inv. No. 3126
 Indiana Harbor Belt Railroad
 and
 Grand Trunk Western Railroad
 Blue Island, Ill.
 September 6, 1947

Location of Accident and Method of Operation

This accident occurred 1,287 feet west of the Grand Trunk Western station at Blue Island, Ill., at the intersection of a line of the Indiana Harbor Belt Railroad and a line of the Grand Trunk Western Railroad. The crossing is located on that part of the I.H.B. extending between Franklin Park, Ill., and Gibson, Ind., 37.07 miles, and on that part of the Chicago Division of the G.T.W. extending between C.& W.I. Jct., Ill., and Battle Creek, Mich., 171.79 miles, and it is 26.94 miles east of Franklin Park and 14.42 miles east of C.& W.I. Jct. In the vicinity of the point of accident both are double-track lines. In this vicinity trains on the I.H.B. are operated by operating rules. There are no time-table schedules in effect. On the G.T.W., trains moving with the current of traffic are operated by signal indications. The crossing is protected by interlocking signals. The main tracks intersect at an angle of 25 degrees, at a point 117 feet east of the tower, which is located in the northeast angle of the crossing. The I.H.B. tracks extend northwest and southeast, and the G.T.W. tracks extend north and south. Time-table directions on both roads are eastward and westward, and are hereinafter used in this report. From the east on the I.H.B. there are, in succession, a tangent 636 feet in length, a $6^{\circ}10'30''$ curve to the left 334 feet, and a tangent 85 feet to the point of accident and 209 feet westward. The grade is practically level. From the west on the I.H.B. there is a tangent 856 feet in length, a $6^{\circ}30'$ curve to the right 604 feet, and then the tangent on which the accident occurred. The grade is practically level. From the west on the G.T.W. there are, in succession, a tangent 2,351 feet in length, a $1^{\circ}56'$ curve to the right 907 feet, and a tangent 913 feet to the point of accident and a considerable distance eastward. The grade is practically level.

On the I.H.B., approach signal 14.5 and home signal 26, governing west-bound movements on the westward main track, are, respectively, 3,539 feet and 1,182 feet east of the crossing. The eastward approach signal and home signal 78, governing east-bound movements on the eastward main track, are, respectively, 3,158 feet and 1,126 feet west of the crossing. Signal 14.5 is of the two-unit, three-indication, color-light type, and is approach lighted. Signal 26 is of the three-arm, mechanical, two-position, upper quadrant, semaphore type, and is continuously lighted. The eastward approach signal is of the one-arm, semaphore type, fixed at 45° in the upper quadrant, and is continuously lighted. Signal 78 is of the four-indication, color-position-light type, and is continuously lighted. On the G.T.W., approach signal

99D and home signal 99, governing east-bound movements on the eastward main track, are, respectively, 1.22 miles and 579 feet west of the crossing. Signal 99D is of the automatic, three-indication, color-light type. Signal 99 is of the semi-automatic, three-indication, color-light type. Those signals are approach lighted. The involved day aspects and corresponding indications and names of the signals involved are as follows:

<u>Signal</u>	<u>Aspect</u>	<u>Indication</u>	<u>Name</u>
14.5	Yellow-over-red, staggered	Proceed preparing to stop at next signal. Train exceeding medium speed must at once reduce to that speed. * * *	
26	Vertical-over-horizontal-over-horizontal	Proceed.	
Eastward approach-signal	45 degrees	Proceed preparing to stop at next signal. Train exceeding medium speed must at once reduce to that speed. * * *	Fixed Distant Signal.
78	White marker over-yellow-over-yellow, staggered	Proceed preparing to stop at next signal. Train exceeding medium speed must at once reduce to that speed. * * *	Approach.
99D	Yellow	Proceed with caution via main route, prepared to stop at next signal.	Approach signal.
99	Red-over-red-over-red	Stop.	Stop signal.

The interlocking machine is of the mechanical type, and consists of 68 working levers in a 100-lever frame. Electric time and indication locking are provided in conjunction with the I.H.B. and G.T.W. home signals. Audible and visible annunciators are actuated to indicate approaching movements on the I.H.B. when an east-bound train enters the circuit

1.19 miles west of the tower, and to indicate approaching movements when a west-bound train enters the circuit 1.68 miles east of the tower. Audible and visible annunciators are actuated to indicate approaching movements on the G.T.W. when an east-bound train enters the circuit 4.28 miles west of the tower.

A split switch-point derail is located on the G.T.W. eastward main track at a point 385 feet west of the crossing.

Operating rules of the G.T.W. read in part as follows:

DEFINITIONS

* * *

FIXED SIGNAL--A signal of fixed location indicating a condition affecting the movement of a train.

* * *

98. Trains must approach * * * interlocked railway crossings at grade * * * prepared to stop unless * * * signals indicate proceed and track is clear.

628. No portion of a train or engine shall pass a signal indicating "Stop" * * *

In the vicinity of the point of accident the maximum authorized speeds were 25 miles per hour for the I.H.B. trains and 40 miles per hour for the G.T.W. train.

Description of Accident

Extra 1450 West, a west-bound I.H.B. freight train consisting of engine 1450, 29 cars and a caboose, moving on the I.H.B. westward main track, passed signal 14.5, which displayed proceed-preparing-to-stop-at-next-signal, passed signal 26, which displayed proceed, and while moving over the crossing at an estimated speed of 15 miles per hour the twenty-eighth car was struck by G.T.W. Extra 6316 East.

Extra 1459 East, an east-bound I.H.B. freight train consisting of engine 1459, 77 cars and a caboose, moving on the I.H.B. eastward main track, passed the eastward approach signal, which displayed approach, passed signal 78, which displayed proceed-preparing-to-stop-at-next-signal, and while moving over the crossing at an estimated speed of 15 miles per hour the thirteenth car was struck by the wreckage of the equipment of Extra 1450 West.

Extra 6316 East, an east-bound G.T.W. freight train consisting of engine 6316, 20 cars and a caboose, departed from Elsdon, the last open office, 10.48 miles west of the crossing, at 3:27 p. m., passed signal 99D, which displayed proceed-with-caution-via-main-route-prepared-to-stop-at-next-signal, passed signal 99, which displayed stop, and while moving on the G.T.W. eastward main track at an estimated speed of 30 miles per hour it was derailed at the derail. The equipment continued to move in line with the track, and was moving at an estimated speed of 25 miles per hour when it struck the twenty-eighth car of Extra 1450 West.

The twenty-seventh to twenty-ninth cars, inclusive, of Extra 1450 West, the thirteenth to sixteenth cars, inclusive, of Extra 1459 East, and the engine and the second and third cars of Extra 6316 East were derailed. The derailed equipment was considerably damaged. The engine of Extra 6316 East stopped upright and in line with the G.T.W. main tracks, with the front end 227 feet east of the point of collision.

The fireman of Extra 6316 East was killed, and the engineer was injured.

The weather was clear at the time of the accident, which occurred about 3:45 p. m.

Discussion

The crossing involved is protected by an interlocking, which is so arranged that, when the route is lined for movement over the crossing on the I.H.B., the I.H.B. approach and home signals display permissive indications, the G.T.W. approach signals display approach and the G.T.W. home signals display stop. In addition, the route cannot be changed for movement on the G.T.W. over the crossing until the time release has operated an interval of three minutes.

About 3:37 p. m. the route was lined for movement of the I.H.B. trains over the crossing. The west-bound and the east-bound I.H.B. trains passed their respective approach and home signals, which displayed proper permissive indications, and these trains were moving over the crossing when the engine of the G.T.W. train struck the twenty-eighth car of the west-bound I.H.B. train, and the wreckage struck the thirteenth car of the east-bound I.H.B. train.

The engineer of G.T.W. Extra 6316 East said that when his train was approaching the eastward approach signal the speed was about 40 miles per hour, and the enginemen and the

front brakeman were maintaining a lookout ahead. The engineer first saw the approach indication displayed by the approach signal, located 1.11 miles west of the home signal, when the engine was about three-fourths mile west of the approach signal. He said that when the engine was about 440 feet west of the approach signal he made a 10-pound brake-pipe reduction and, soon afterward, a second reduction of 10 pounds was made, and this brake application was not released. The engineer thought the speed of the train was being controlled properly until he saw the stop indication displayed by the home signal, then he moved the brake valve to emergency position. He estimated the speed of his train as about 25 miles per hour when the engine passed the home signal. The enginemen and the front brakeman jumped from the engine just before the collision occurred, and the fireman was killed. The conductor and the flagman were in the caboose, and they were not aware of anything being wrong until the brakes were applied in emergency. The brakes of this train had been tested and had functioned properly.

Cause

It is found that this accident was caused by failure to operate the Grand Trunk Western train in accordance with interlocking signal indications.

Dated at Washington, D. C., this thirtieth day of October, 1947.

By the Commission, Commissioner Patterson.

(SEAL)

W. P. BARTEL,

Secretary.