

INTERSTATE COMMERCE COMMISSION
WASHINGTON

REPORT NO. 3597
TERMINAL RAILROAD ASSOCIATION OF ST. LOUIS
IN RE ACCIDENT
AT ST. LOUIS, MO , ON
OCTOBER 18, 1954

SUMMARY

Date: October 18, 1954

Railroad: Terminal Railroad Association of St. Louis

Location: St. Louis, Mo.

Kind of accident: Side collision

Trains involved: Freight • Passenger

Train numbers: Extra 1216 East • 1

Engine numbers: Diesel-electric unit 1216 Wabash Diesel-electric unit 1008

Consists: 6 cars, caboose • 6 cars

Speeds: Standing 10-15 m. p. h.

Operation: Interlocking

Tracks: Double, 9°35' curve, 1.50 percent ascending grade eastward • Double, tangent, 1.50 percent ascending grade eastward

Weather: Clear

Time: 3 35 p. m.

Casualties: 61 injured

Cause: Failure to operate freight train in accordance with a signal indication

- 8 -

INTERSTATE COMMERCE COMMISSION

REPORT NO. 3597

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

TERMINAL RAILROAD ASSOCIATION OF ST. LOUIS

December 8, 1954

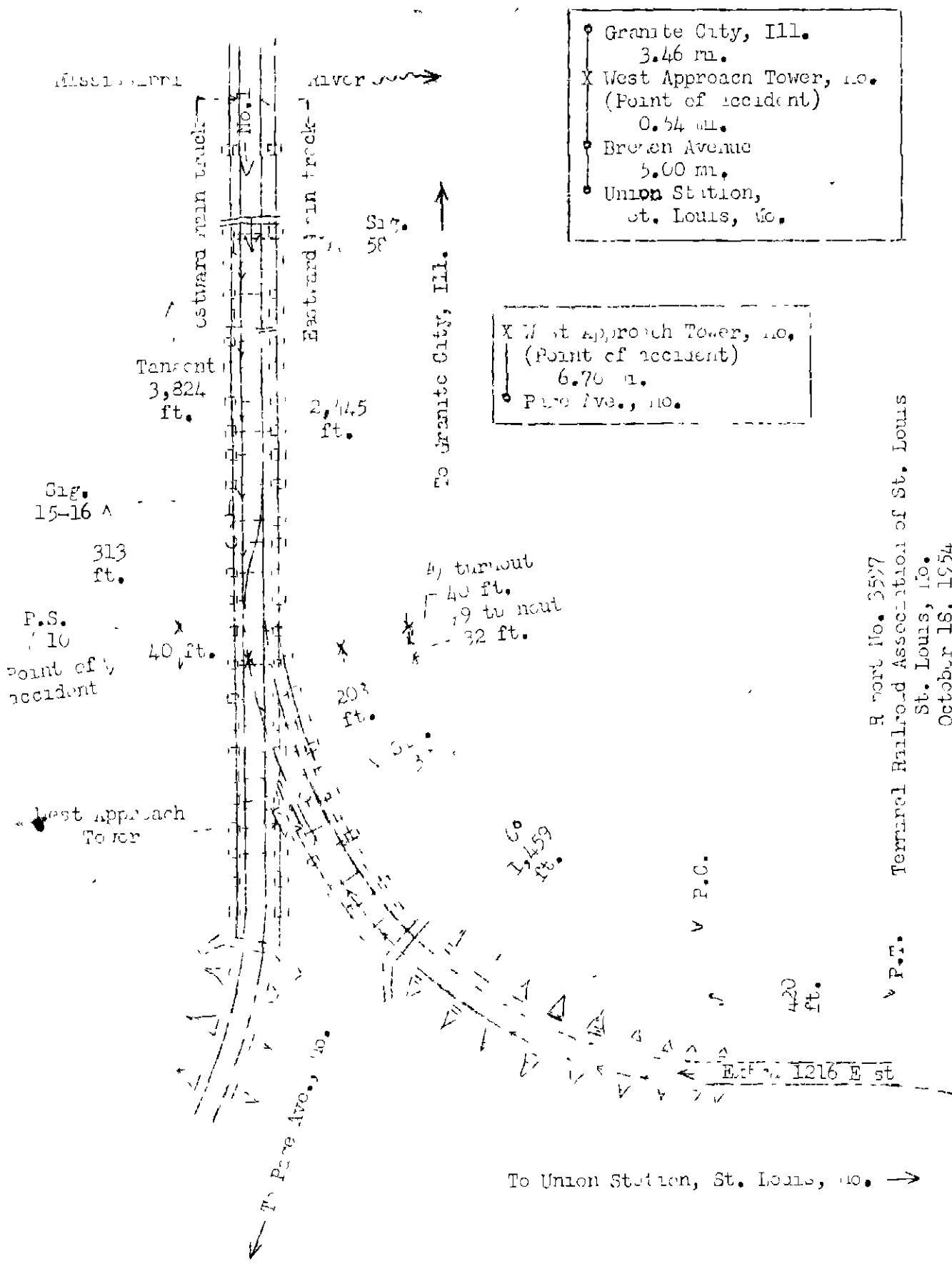
Accident at St. Louis, Mo., on October 18, 1954, caused by
failure to operate the freight train in accordance
with a signal indication.

REPORT OF THE COMMISSION¹

CLARKE, Commissioner:

On October 18, 1954, there was a side collision between a freight train and a passenger train on the line of the Terminal Railroad Association of St. Louis, at St. Louis, Mo., which resulted in the injury of 47 passengers, 3 postal employees, 4 dining-car employees, 1 Pullman Company employee, 1 train porter, and 5 train-service employees.

¹
Under authority of section 17 (2) of the Interstate Commerce Act the above-entitled proceeding was referred by the Commission to Commissioner Clarke for consideration and disposition.



Granite City, Ill.
 3.46 mi.
 X West Approach Tower, no.
 (Point of accident)
 0.54 mi.
 Brean Avenue
 5.00 mi.
 Union Station,
 St. Louis, Mo.

X West Approach Tower, no.
 (Point of accident)
 6.70 mi.
 Pure Ave., no.

Report No. 3597
 Terminal Railroad Association of St. Louis
 St. Louis, Mo.
 October 16, 1954

To Union Station, St. Louis, Mo. →

Location of Accident and Method of Operation

This accident occurred on that part of the railroad extending between Union Station, St. Louis, Mo., and Granite City, Ill., 9.00 miles. This line crosses the Mississippi River on Merchants Bridge. In the vicinity of the point of accident it is a double-track line, over which trains moving with the current of traffic are operated by signal indications. Between Brezen Avenue, 5.00 miles east of Union Station, and West Approach Tower, located on the west approach to Merchants Bridge and 5.54 miles east of Union Station, trains moving against the current of traffic are operated by train orders and a manual block-signal system. At West Approach Tower, a double-track line which extends eastward from Page Avenue, 6.76 miles west of West Approach Tower, converges with the Union Station-Granite City line. Passenger trains of the Wabash Railway regularly are operated between Page Avenue and Granite City. The westward main track of the Page Avenue-West Approach Tower line connects with the westward main track of the Union Station-Granite City line at switch 10. East of this switch, which is facing-point for west-bound movements, a trailing-point crossover connects the two main tracks. Switch 10 and the switches of the crossover are within interlocking limits. The accident occurred 40 feet west of the point-of-switch of switch 10. From the west on the westward main track of the Union Station-Granite City line there are, in succession, a tangent 420 feet in length, a 6° curve to the right 1,459 feet, and a No. 9 turnout to the right 32 feet to the point of accident and 40 feet eastward. The westward main track is tangent throughout a distance of 3,824 feet immediately east of switch 10. The grade is 1.50 percent ascending eastward at the point of accident.

Interlocking signal 3, governing east-bound movements on the westward main track of the Union Station-Granite City line, and automatic signal 58 and interlocking signal 15-16, governing west-bound movements on the westward main track, are located, respectively, 208 feet west, 2,445 feet east, and 313 feet east of the point of accident. These signals are of the searchlight type. Signal 3, a single-unit dwarf signal, is located on the south side of the westward main track. The aspects of these signals applicable to this investigation and the corresponding indications and names are as follows:

<u>Signal</u>	<u>Aspect</u>	<u>Indication</u>	<u>Name</u>
3	Red	Stop.	Stop.

3	Yellow	Proceed under control.	Restricting.
58	Green	Proceed.	Clear.
15-16	Green-over-red	Proceed.	Clear.

Signal 3 displays yellow as its most favorable aspect. This aspect is displayed when the lever controlling the signal is in reverse position whether the track in advance of the signal is occupied or unoccupied.

The interlocking station at West Approach Tower is located on the north side of the Union Station-Granite City line opposite signal 3. The interlocking is of the mechanical type. Mechanical, time, route, and signal indication locking are provided. The mechanical locking and the control circuits are so arranged that a controlled signal can display an aspect to proceed only when a route is properly lined and all signals governing opposing movements and movements through conflicting routes are displaying aspects to stop. If a controlled signal displays an aspect to proceed, the route cannot be lined for an opposing movement or a conflicting movement until the train for which the signal was displayed has passed through the interlocking limits or until a predetermined time interval has elapsed after the signal has been caused to display an aspect to stop.

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

DEFINITIONS.

TRAIN UNDER CONTROL—Proceed, prepared to stop short of train, engine, obstruction or switch not properly lined, but not exceeding 15 miles per hour.

34. All members of engine and train crews must, when practicable, communicate to each other by its name the indication of each signal affecting the movement of their train or engine. * * *

The maximum authorized speed for trains in the vicinity of the point of accident is 15 miles per hour.

Description of Accident

Extra 1216 East, an east-bound Terminal Railroad Association of St. Louis freight train en route from Bremen Avenue to a yard east of Merchants Bridge, consisted of Diesel-electric unit 1216, six cars, and a caboose. This train departed from Bremen Avenue on the westward main track at 3:33 p. m., passed signal 3, which indicated Stop, and stopped with the east end of the locomotive 40 feet west of the point-of-switch of switch 10. Immediately afterward it was struck by No. 1.

No. 1, a west-bound Wabash passenger train, consisted of Diesel-electric unit 1008, one baggage-mail car, one baggage car, one buffet-chair car, one chair car, one cafe-lounge car, and one parlor-observation car, in the order named. This train passed Granite City at 3:29 p. m., 12 minutes late, passed signals 58 and 15-16, each of which indicated Proceed, and while moving at an estimated speed of 10 to 15 miles per hour it struck Extra 1216 East.

No equipment of either train was derailed. Extra 1216 East was moved westward a distance of 73 feet by the force of the impact. The locomotive was somewhat damaged, and the caboose was slightly damaged. No. 1 stopped with the front of the locomotive 23 feet west of the point of accident. The couplers were broken and separations occurred between the second and third cars and between the third and fourth cars. The locomotive and the third car were considerably damaged, and the other cars were somewhat damaged.

Two yard brakemen of Extra 1216 East and the engineer, the fireman, and the flagman of No. 1 were injured.

The weather was clear at the time of the accident, which occurred about 3:35 p. m.

Discussion

Because of maintenance work which was being performed on the west approach to Merchants Bridge on the day of the accident, the eastward main track between Bremen Avenue and West Approach Tower was taken out of service and between these points trains in both directions were operated on the westward main track. At 3:30 p. m. the train dispatcher issued train-order authority to the crew of Extra 1216 East to operate on the westward main track from Bremen Avenue to West Approach Tower. The train departed from Bremen Avenue at 3:33 p. m.

As Extra 1216 East was approaching West Approach Tower the enginemen, the yard conductor, and one yard brakeman were in the control compartment at the east end of the locomotive. One yard brakeman was in the caboose. The locomotive, which was of the switcher type, was headed westward and moving in backward motion. The employees on the locomotive estimated that the train was moving at a speed of 8 or 10 miles per hour. They said that when the locomotive reached a point about 150 feet west of signal 3 they observed that the signal indicated Proceed-under-control. All of the employees on the locomotive except the yard conductor called the indication of the signal. The yard brakeman said that after he saw the signal he moved to a position from which the signal was no longer visible to him. The other employees on the locomotive said that there was no change in the indication of the signal as the locomotive approached. These employees said that their attention was directed toward a number of men who were working on and near the tracks in the vicinity of West Approach Tower and they did not see No. 1 until approximately the time that their locomotive passed the interlocking station. The yard conductor then observed that No. 1 was passing signal 15-16. He called a warning, and the engineer immediately made an application of the brakes. The train stopped with the east end of the locomotive 40 feet west of the point-of-switch of switch 10. Immediately afterward it was struck by No. 1. The employees on the locomotive said they did not see a stop signal given by any one before the collision occurred.

As No. 1 was approaching the point where the accident occurred the speed was approximately 18 miles per hour. The enginemen were maintaining a lookout ahead from the control compartment at the front of the locomotive, and the members of the train crew were in the cars of the train. Signals 58 and 15-16 each indicated Proceed, and the enginemen called the indications. The enginemen said they first became aware that Extra 1216 East was routed toward the track on which their train was moving at approximately the time the front of that train passed West Approach Tower. The engineer then made an emergency application of the brakes. He thought the speed of his train had been reduced to about 7 miles per hour and that Extra 1216 East was in motion when the collision occurred. However, from the amount of damage to the equipment of No. 1 as a result of the collision, it appears that the speed was somewhat higher than the engineer's estimate.

The operator at West Approach Tower said he lined the route for No. 1 about 3 minutes before the accident occurred. He intended to hold Extra 1216 East at signal 3 until after No. 1 had passed through the interlocking and then route that train to the eastward main track via switch 10 and the crossover east of switch 10. As Extra 1216 East was closely approaching signal 3 he became aware that it would not stop short of the signal. He ran to the platform at the west end of the interlocking station and gave stop signals, but the locomotive was passing as he reached the door and he was unable to attract the attention of the crew.

After the accident occurred it was found that signal 3 indicated Stop. The levers of the interlocking machine were in position for the route as established for the movement of No. 1 from the westward main track of the Union Station-Granite City line to the westward main track of the Page Avenue-West Approach Tower line. The switches in the route and the related apparatus were in correspondence with the positions of the levers. In tests which were made after the accident occurred the interlocking apparatus and signal system functioned as intended and no defective condition was found. While the route was lined for the movement of No. 1 a conflicting route could not be established, and from this it appears that Extra 1216 East passed signal 3 while that signal indicated Stop.

On the three consecutive days immediately following the day of the accident observations were made by the assistant superintendent and the assistant road foreman of engines to determine whether there was any condition present which would cause the aspect of signal 3 to appear to be other than red while the signal indicated Stop. These observations were made at approximately the time of day at which the accident occurred. The sun was shining and the weather conditions were similar to those which prevailed at the time of the accident. It was found that as a locomotive similar to locomotive 1216 approached the signal from the west on the westward main track the red aspect of the signal was visible from the control compartment throughout a distance of approximately 500 feet immediately west of the signal. The assistant road foreman of engines said that at one point as the locomotive moved on the curve the color of the aspect appeared to fade slightly for an instant but did not appear to be any color other than red. The assistant superintendent said that there appeared to be no change in the color of aspect from the time it became visible to him until the locomotive passed the signal.

Cause

This accident was caused by failure to operate the freight train in accordance with a signal indication.

Dated at Washington, D. C., this eighth day of December, 1954.

By the Commission, Commissioner Clarke.

(SEAL)

GEORGE W. LAIRD,
Secretary.