

INTERSTATE COMMERCE COMMISSION
WASHINGTON

REPORT NO. 3526
CHICAGO, ROCK ISLAND AND PACIFIC
RAILROAD COMPANY
IN RE ACCIDENT
NEAR CLINE, KANS., ON
JUNE 27, 1953

SUMMARY

Date: June 27, 1953

Railroad: Chicago, Rock Island and Pacific

Location: Cline, Kans.

Kind of accident: Collision

Equipment involved: Passenger train : Motor-truck

Train number: 509 :

Engine number: Diesel-electric :
unit 627

Consist: 7 cars :

Estimated speeds: 65 m. p. h. : 5 m. p. h.

Operation: Signal indications

Track: Single; tangent; 0.70 percent
descending grade southward

Highway: Tangent; crosses track at angle of
59°30'; 0.4 percent ascending
grade westward

Weather: Clear

Time: 1:05 p. m.

Casualties: 3 killed; 4 injured

Cause: Motor-truck occupying rail-highway
grade crossing immediately in front
of approaching train

INTERSTATE COMMERCE COMMISSION

REPORT NO. 3526

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

CHICAGO, ROCK ISLAND AND PACIFIC RAILROAD COMPANY

July 29, 1953

Accident near Cline, Kans., on June 27, 1953, caused by
a motor-truck occupying a rail-highway grade
crossing immediately in front of an approaching
train.

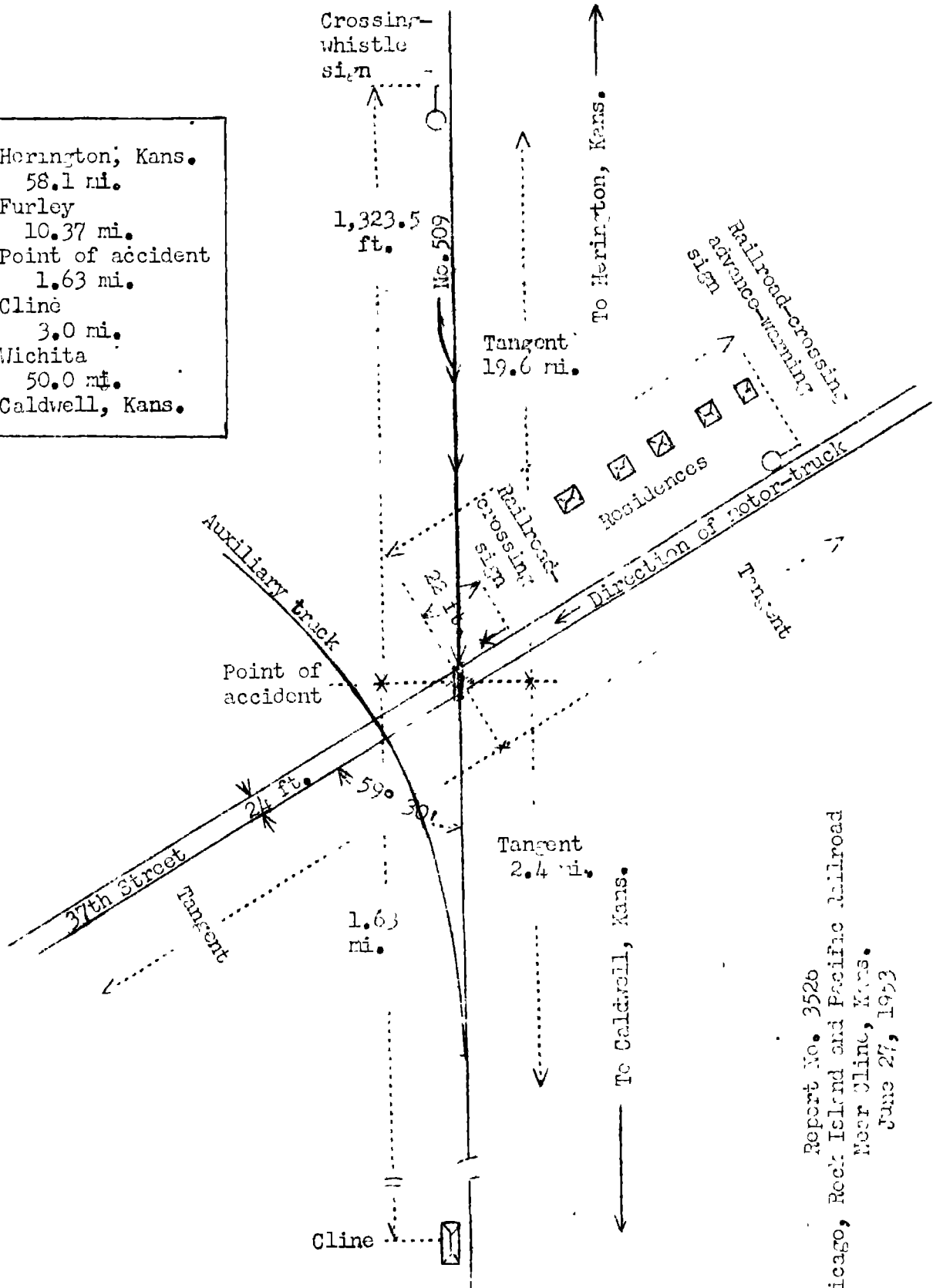
REPORT OF THE COMMISSION¹

JOHNSON, Chairman:

On June 27, 1953, there was a collision between a
passenger train on the Chicago, Rock Island and Pacific
Railroad and a motor-truck at a rail-highway grade crossing
near Cline, Kans., which resulted in the death of the driver
of the motor-truck and two train-service employees, and the
injury of four passengers.

¹
Under authority of section 17 (2) of the Interstate Com-
merce Act the above-entitled proceeding was referred by the
Commission to Chairman Johnson for consideration and
disposition.

- Herington, Kans. 58.1 mi.
- Furley 10.37 mi.
- X Point of accident 1.63 mi.
- Cline 3.0 mi.
- Wichita 50.0 mi.
- Caldwell, Kans.



Report No. 352b
 Chicago, Rock Island and Pacific Railroad
 Near Cline, Kans.
 June 27, 1953

Location of Accident and Method of Operation

This accident occurred on that part of the Southern Division extending between Herington and Caldwell, Kans., 123.1 miles. In the vicinity of the point of accident this is a single-track line, over which trains are operated by signal indications. The accident occurred on the main track 68.5 miles south of Herington and 1.63 miles north of the station at Cline, at the point where the railroad is crossed at grade by Thirty-seventh Street, a secondary highway. Cline is 3 miles north of Wichita. From the north the track is tangent throughout a distance of 19.6 miles to the point of accident and 2.4 miles southward. The grade for south-bound trains varies between 0.20 percent ascending and 0.70 percent descending throughout a distance of 1.32 miles immediately north of the point of accident and is 0.70 percent descending at that point. The southwest angle of the intersection between Thirty-seventh Street and the railroad is $59^{\circ}30'$. Thirty-seventh Street is 24 feet wide and is surfaced with bituminous material. Planking 10 inches in width is provided on each side of each rail at the crossing. The remaining area of the crossing is surfaced with bituminous material. Thirty-seventh Street is tangent throughout a considerable distance on either side of the crossing. From the east the grade averages 0.4 percent ascending a distance of 500 feet immediately east of the track. An auxiliary track west of the main track is crossed at grade by Thirty-seventh Street immediately west of the crossing on which the accident occurred.

A circular railroad-crossing advance-warning sign 2 feet 3 inches in diameter is located to the right of the direction of west-bound highway traffic, 16 feet north of the center-line of the highway and 559 feet east of the crossing. This sign is mounted on a post, with its center 3 feet 3 inches above the level of the highway. It bears two diagonal lines intersecting at right angles and the letters "RR" in black on a yellow background. The lines and letters are provided with colorless reflector buttons. A standard cross-buck railroad-crossing sign is located to the right of the direction of west-bound traffic, 22 feet north of the center-line of the highway and 25 feet east of the center-line of the track. This sign bears the words "RAILROAD CROSSING" in 9-inch black letters on a white background. The center of the sign is 8 feet 3 inches above the level of the tops of the rails. A crossing-whistle sign for south-bound trains is located 1,323.5 feet north of the crossing.

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

14. Engine Horn or Whistle Signals * * *

Note.--The signals prescribed are illustrated by "o" for short sounds; "___" for longer sounds. * * *

Sound.	Indication.
* * *	
(1) — — o ———	Approaching public crossings at grade. (Standard sign will designate point at which signal must begin.) To be prolonged or repeated until crossing is occupied by engine or car. * * *

* * *

17. Headlights.--The standard white headlight must be displayed brightly to the front of every train by day and by night.

* * *

30. Ringing Bell.--* * * the engine bell must be rung * * * while approaching and passing public crossings at grade * * *

Motor Vehicle Laws of Kansas read in part as follows:

192. (8-566) Certain vehicles must stop at all railroad grade crossings.

(a) The driver * * * of any vehicle carrying explosive substances or flammable liquids as a cargo or part of a cargo, before crossing at grade any track or tracks of a railroad, shall stop such vehicle within fifty feet but not less than ten feet from the nearest rail of such railroad, and while so stopped shall listen and look in both directions along such track for any approaching train, and for signals indicating the approach of a train * * * and shall not proceed until he can do so safely. * * *

The maximum authorized speed for passenger trains is 79 miles per hour.

Description of Accident

No. 509, a south-bound first-class passenger train, consisted of Diesel-electric unit 627, two baggage cars, one baggage-mail car, one baggage-dining car, two coaches and one observation-parlor car, in the order named. The first three cars were of all-steel construction, and the other cars were of lightweight steel construction. The rear four cars were equipped with tightlock couplers. This train passed the south siding-switch at Furley, 9.3 miles north of the point of accident, at 12:55 p. m., 18 minutes late, and while moving at an estimated speed of 65 miles per hour it struck a motor-truck on a rail-highway grade-crossing 1.63 miles north of the station at Cline.

The vehicle involved was a tractor and semi-trailer owned by Killian Service Stations of Wichita, Kans. The driver was the sole occupant. He held Kansas driver's license No. 855-807-012-207. The tractor was a 1952 International, powered by a 6-cylinder gasoline engine. It was provided with an enclosed cab. Dual tires were provided on the rear wheels, and it was equipped with air brakes. It bore Kansas license TSG 11531 with 1953 tab. The semi-trailer was a 1941 Mopar type tank. It was equipped with a 3,990-gallon capacity tank and was mounted on a single axle. Dual tires were provided on the wheels of this axle. It was equipped with air brakes and bore Kansas license No. 6156. The total length of the tractor and semi-trailer was approximately 31 feet 6 inches. At the time of the accident the cargo consisted of 3,490 gallons of gasoline. The cargo was loaded at Potwin, Kans., and was to be distributed at service stations in and near Wichita. This vehicle approached the crossing from the east and stopped about 20 feet east of the track. It then proceeded, and while it was moving over the crossing at an estimated speed of 5 miles per hour it was struck by No. 509.

No equipment of No. 509 was derailed. A separation occurred between the second and third cars. The locomotive and the first two cars stopped with the front end 1.54 miles south of the crossing. The rear portion of the train stopped with the forward end about 3,130 feet south of the crossing. The cargo of the semi-trailer became ignited when the collision

occurred. The front end of the locomotive was damaged by the collision, and the control and engine compartments were badly damaged by explosion and fire. The first car was badly damaged and the other cars were somewhat damaged by fire.

The tractor and the semi-trailer were separated by the force of the impact. The tractor stopped 84 feet south of the center-line of the crossing and 22 feet west of the center-line of the track. The tank of the semi-trailer was ruptured by the impact of the collision. The semi-trailer overturned and stopped 26 feet south of the crossing and 3 feet east of the track. A portion of the tank stopped 227 feet south of the point of collision and east of the track. The tractor and the semi-trailer were destroyed.

The engineer, the fireman and the driver of the motor-truck were killed.

The weather was clear at the time of the accident, which occurred about 1:05 p. m.

During the 30-day period preceding the day of the accident, the average daily movement over the crossing was 10.5 trains. During the 24-hour period beginning at 12:01 a. m., July 2, 1953, 2,857 automobiles, 451 trucks, and 17 other vehicles passed over the crossing.

Diesel-electric unit 627 is equipped with HSC type brake equipment. A safety-control feature actuated by a foot-pedal is provided.

Discussion

As No. 509 was approaching the point where the accident occurred the speed was about 65 miles per hour, as estimated by the conductor. The engineer and the fireman were in the control compartment of the locomotive and the members of the train crew were at various locations in the cars of the train. The brakes of this train had been tested and had functioned properly when used en route. The engineer and the fireman were killed in the accident. Witnesses in the vicinity of the point of accident said that the pneumatic horn of the locomotive was being sounded as the train was approaching the crossing. They said that the motor-truck entered the crossing immediately in front of the approaching train and was struck by the locomotive. Members of the train crew said that the brakes of the train became applied in the vicinity of the crossing. The train was immediately enveloped in dense smoke as it entered the area where gasoline from the tank of the semi-trailer had become ignited.

Examination of the locomotive after the accident occurred disclosed that the throttle was in No. 2 position and the automatic brake valve was in running position. Windows of the control compartment and side sheets of the engine compartment had been blown out. A witness in the vicinity of the point of accident said that there was an explosion immediately after the collision occurred. Apparently gasoline from the ruptured tank of the semi-trailer entered the control and engine compartments of the locomotive as a result of the collision and vaporized sufficiently to explode when it became ignited.

Witnesses to the accident said that the motor-truck was stopped before it entered the crossing. The driver of the motor-truck was killed in the accident, and it could not be determined why the motor-truck proceeded while the train was closely approaching the crossing.

As a vehicle approaches the crossing from the east, until the vehicle reaches a point approximately 100 feet east of the crossing, the driver's view of the track north of the crossing is materially restricted by trees and buildings located north of Thirty-seventh Street and east of the track. Between points 100 feet and 50 feet immediately east of the crossing the driver of a vehicle has a view of the track north of the crossing throughout a distance of over 1/2 mile, and between a point 50 feet east of the crossing and the crossing he has a view of the track throughout a distance of approximately 1 mile. Observations made at the scene of the accident on July 2, disclosed that the headlight of the locomotive of No. 509, approaching the crossing from the north under weather conditions similar to those existing on the day of the accident, was clearly visible during a period of 37.5 seconds from the time it came into view until the locomotive occupied the track at the crossing. It was observed that a tractor and semi-trailer of the same type as that involved in the accident required a period of 8 seconds to clear the crossing when it proceeded westward after stopping at a point 15 to 20 feet east of the track at the crossing.

Cause

It is found that this accident was caused by a motor-truck occupying a rail-highway grade crossing immediately in front of an approaching train.

Dated at Washington, D. C., this twenty-ninth day of July, 1953.

By the Commission, Chairman Johnson.

(SEAL)

GEORGE W. LAIRD,
Acting Secretary.