

INTERSTATE COMMERCE COMMISSION

WASHINGTON

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REPORT NO. 3303

THE ATCHISON, TOPEKA AND SANTA FE  
RAILWAY COMPANY

IN RE ACCIDENT

AT AZUSA, CALIF., ON

DECEMBER 29, 1949

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SUMMARY

Date: December 29, 1949

Railroad: Atchison, Topeka and Santa Fe

Location: Azusa, Calif.

Kind of accident: Collision

Equipment involved: Passenger train : Motor-truck

Train number: 17 :

Engine number: Diesel-electric :  
units 37, 37A,  
37B and 37C

Consist: 12 cars :

Estimated speeds: 37 m. p. h. : 3 m. p. h.

Operation: Timetable, train orders and  
automatic block-signal system

Track: Single; tangent; 0.19 percent  
descending grade westward

Highway: Tangent; crosses track at angle of  
110°28'; 0.15 percent ascending  
grade northward

Weather: Clear

Time: 7:44 a. m.

Casualties: 1 killed; 6 injured

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

INTERSTATE COMMERCE COMMISSION

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REPORT NO. 3303

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

THE ATCHISON, TOPEKA AND SANTA FE RAILWAY COMPANY

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March 7, 1950

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Accident at Azusa, Calif., on December 29, 1949, caused  
by a motor-truck occupying a rail-highway grade-  
crossing immediately in front of an approaching  
train.

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REPORT OF THE COMMISSION<sup>1</sup>

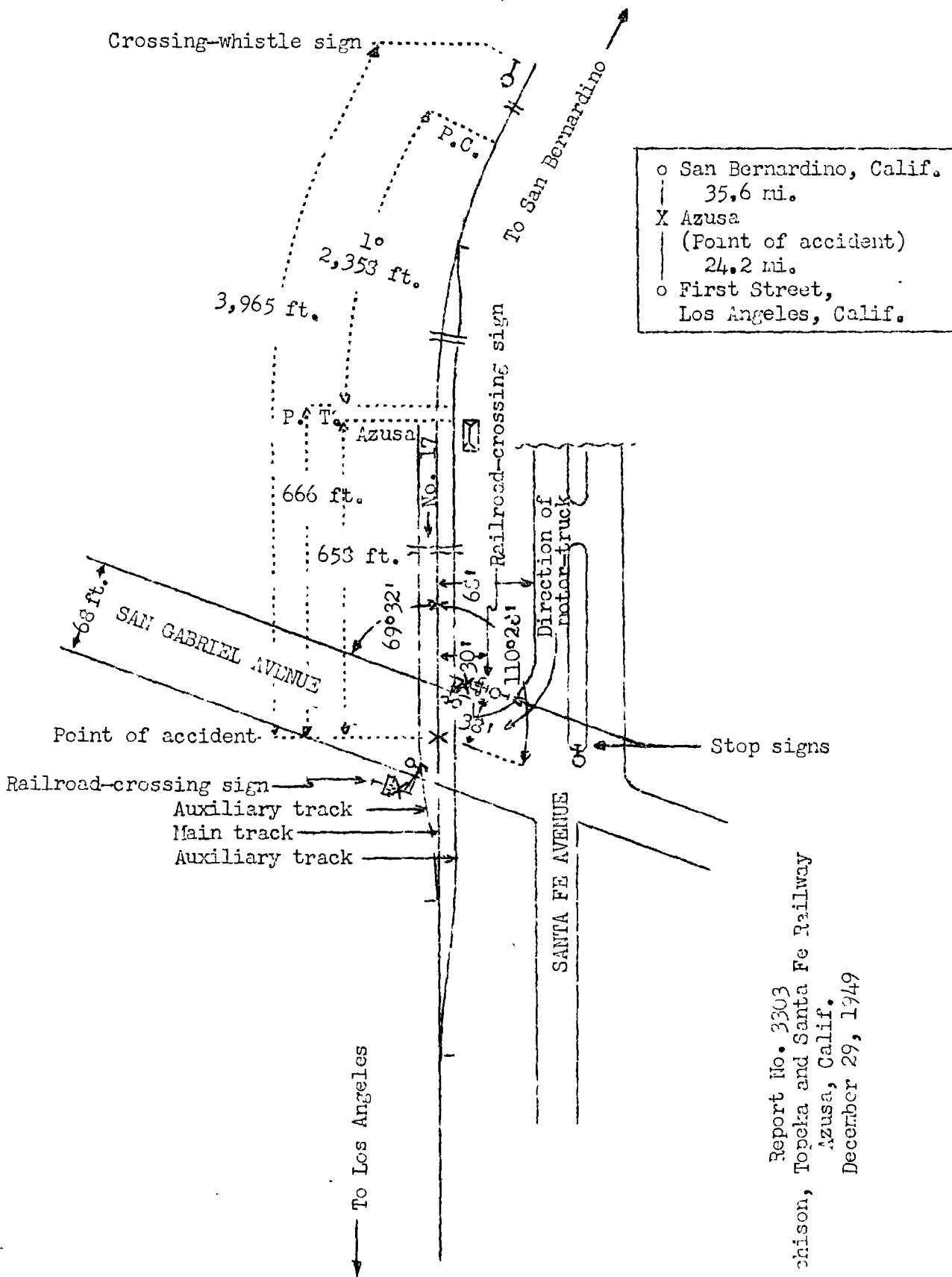
PATTERSON, Commissioner:

On December 29, 1949, there was a collision between a  
passenger train on the Atchison, Topeka and Santa Fe Railway  
and a motor-truck at a rail-highway grade-crossing at Azusa,  
Calif., which resulted in the death of the driver of the  
motor-truck, and the injury of one passenger, four train-  
service employees, and one person carried under contract.

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<sup>1</sup>

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



Report No. 3303  
 Chilson, Topeka and Santa Fe Railway  
 Azusa, Calif.  
 December 29, 1949

Location of Accident and Method of Operation

This accident occurred on that part of the Los Angeles Division extending between San Bernardino and First Street, Los Angeles, Calif., 59.8 miles. In the vicinity of the point of accident this is a single-track line, over which trains are operated by timetable, train orders and an automatic block-signal system. The accident occurred on the main track at a point 35.6 miles west of San Bernardino and 658 feet west of the station at Azusa, where the railroad is crossed at grade by San Gabriel Avenue. At this point an auxiliary track parallels the main track on the south, and another auxiliary track is located north of the main track. From the east on the main track there is a 1° curve to the left 2,358 feet in length, and then a tangent extending 666 feet to the point of accident and a considerable distance westward. The grade for west-bound trains varies between 1.23 percent and 0.19 percent descending throughout a distance of 1 mile immediately east of the point of accident, and is 0.19 percent descending at that point. The angle of intersection between San Gabriel Avenue and the railroad southeast of the crossing is 110°28'. San Gabriel Avenue is 68 feet wide. The crossing is surfaced with asphalt to the level of the tops of the rails. San Gabriel Avenue is tangent a considerable distance on either side of the crossing. From the south the grade is, successively, 1.48 percent ascending 100 feet, 2.47 percent ascending 85 feet to the center-line of the auxiliary track south of the main track, and 0.15 percent ascending to the center-line of the main track. In the vicinity of the point of accident Santa Fe Avenue parallels the railroad on the south. The north edge of this street is 68 feet south of the center-line of the main track.

A standard cross-buck railroad-crossing sign is located to the right of the direction of north-bound traffic on San Gabriel Avenue, 38 feet east of the center-line of the street and 30 feet south of the center-line of the main track. This sign is mounted on a mast, 11.4 feet above the level of the street, and bears the words "RAILROAD CROSSING" in black on a white background. A sign bearing the numeral "3" over the word "TRACKS", in black on a white background, is mounted on the same mast, 7.1 feet above the level of the street. A warning signal, consisting of a circular white banner with a 1-inch black border, is suspended from a cantilever bracket attached to this mast. The banner is 14.7 feet above the level of the street. The warning aspect is displayed by the

swinging of the banner and the illumination of a red light at its center. A warning bell sounds when the signal is in operation. A similar railroad-crossing sign is located to the right of the direction of south-bound traffic, in the northwest angle of the intersection. The warning signals are arranged for automatic operation when a west-bound train occupies any portion of the main track throughout a distance of 2,082 feet immediately east of the crossing. A crossing-whistle sign for west-bound trains is located 3,965 feet east of the crossing.

A standard highway stop sign, consisting of an octagonal sign bearing the word "STOP" in white reflectorized letters on a red background, is located in the southeast angle of the intersection of San Gabriel Avenue and the railroad, in line with and 10 feet south of the railroad-crossing sign. A similar stop sign is located on Santa Fe Avenue, at the entrance to San Gabriel Avenue.

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

14. Engine 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, \* \* \* to be prolonged or repeated until crossing is reached.

\* \* \*

30. The engine bell must be rung \* \* \* while approaching and passing public crossings at grade \* \* \*.

The Vehicle Code of the State of California reads in part as follows:

Chapter 12. Special Stops Required

575. Obedience to Signal Indicating Approach of Train. (a) Whenever any person driving a vehicle upon a highway approaches \* \* \* steam railway grade crossing and a clearly visible electric or mechanical signal device gives warning of the immediate approach of a railway train \* \* \* the driver of such vehicle shall stop within 50 feet but not less than 10 feet from the nearest track of such railway but need not remain standing if he can proceed in safety.

\* \* \*

576. Certain Vehicles Must Stop at All Railway Grade Crossings. (a) The driver \* \* \* of any motor tank truck, tank trailer or tank semitrailer, used in the transportation of inflammable liquids \* \* \* as a cargo or part of a cargo, whether loaded or empty, before crossing at grade any track or tracks of a steam railway \* \* \* shall stop such vehicle not less than ten nor more than fifty feet from the nearest rail of such track and while so stopped shall listen, and look in both directions along such track, for any approaching railway train \* \* \* or other vehicle using such rails before traversing such crossing \* \* \*.

\* \* \*

577. Vehicles Must Stop at Through Highways. The driver of any vehicle upon approaching any entrance of a highway or intersection, or railroad grade crossing, signposted with a stop sign as provided in this code, \* \* \* shall stop:

\* \* \*

(b) Before entering a highway railroad grade crossing.

The maximum authorized speed for the train involved was 100 miles per hour, but was restricted to 40 miles per hour in the immediate vicinity of the point of accident.

Description of Accident

No. 17, a west-bound first-class passenger train, consisted of Diesel-electric units 37, 37A, 37B, and 37C, coupled in multiple-unit control, one baggage car, one mail car, one baggage-club car, three sleeping cars, one lounge car, one dining car, and four sleeping cars, in the order named. All cars were of light-weight construction. This train passed the station at Azusa at 7:44 a. m., 1 minute late, and while moving at a speed of 37 miles per hour, as indicated by the tape of the speed recording device, it struck a motor-truck on a rail-highway grade-crossing 658 feet west of the station at Azusa.

The vehicle involved was a motor-truck and trailer owned by the Asbury Transportation Company, Los Angeles, Calif. The driver was the sole occupant. The truck was a Peterbilt Diesel-powered 6-cylinder model 2443. It bore California license No. FF-2624. It was equipped with a single axle and single tires at the front and twin axles and dual tires at the rear, and was provided with an enclosed steel cab. The trailer was a Utility model 2543. It bore California license No. 24538. It was equipped with a single axle and dual tires at the front and rear. The truck and the trailer were equipped with Westinghouse air brakes. A steel tank having a capacity of 3,000 gallons was mounted on the truck, and a steel tank having a capacity of 4,000 gallons was mounted on the trailer. At the time of the accident the cargo of the truck and trailer consisted of 6,800 gallons of gasoline. It was loaded at El Segundo, Calif., and was en route to the distributing center of the Standard Oil Company at Azusa. The total weight of the truck, trailer, and cargo was 74,800 pounds, and the total length of the truck and trailer, coupled, was 60 feet. This vehicle was moving north on San Gabriel Avenue at a speed of about 3 miles per hour when the truck was struck by No. 17.

No. 17 was not derailed. It stopped with the front of the first Diesel-electric unit 395 feet west of the center-line of San Gabriel Avenue. The first and second Diesel-electric units and the first car were damaged as a result of the collision. Each of the Diesel-electric units and the first and second cars were damaged by fire.

The truck stopped 100 feet west of the center-line of the street and 8 feet north of the center-line of the main track. The tank was torn from the chassis of the truck and stopped 170 feet west of the center-line of the street and 8



feet south of the center-line of the main track. The tank was punctured, and escaping gasoline became ignited. Both the truck and the tank were destroyed. The trailer remained on the street, south of the main track, and was not damaged.

The engineer, the fireman, the conductor, and the flagman of No. 17 were injured.

The weather was clear at the time of the accident, which occurred at 7:44 a. m.

During the 30-day period preceding the day of the accident, the average daily movement over the crossing was 14.2 trains. During the 24-hour period beginning at 12 o'clock noon, January 16, 1950, 973 automobiles, 169 trucks, and 6 school buses passed over the crossing.

#### Discussion

As No. 17 was approaching the point where the accident occurred the speed was 37 miles per hour. The headlight was lighted brightly. The enginemen were maintaining a lookout ahead from their respective positions in the control compartment at the front of the first Diesel-electric unit, and the members of the train crew were in various locations throughout the cars of the train. The brakes of the train had been tested and had functioned properly when used en route. The grade-crossing whistle-signal was sounded on the pneumatic horn and the engine bell was ringing throughout a distance of about 4,000 feet east of the crossing. The fireman observed the motor-truck as it was moving westward on Santa Fe Avenue. He also observed that the warning signals at the crossing were operating, and he assumed that if the motor-truck turned north on San Gabriel Avenue it would stop short of the crossing. As the train closely approached the crossing the enginemen's view of the motor-truck was obscured by four freight cars which were on the auxiliary track south of the main track. The west end of the most westerly car was about 30 feet east of the edge of the crossing. The enginemen first became aware that the motor-truck was entering the crossing when they observed it move slowly on the main track directly in front of the train. The engineer at once initiated an emergency brake application. The collision occurred immediately afterward.

Just before the motor-truck entered the intersection the driver could have obtained a view of the main track between the station at Azusa and a point about 300 feet east of the crossing, but his view of the track between points about 300 feet and 30 feet east of the crossing was obscured by the cars on the auxiliary track. As the motor-truck crossed the auxiliary track the driver's view of the main track east of the west end of the cars was obscured until the cab of the truck passed the end of the cars. Witnesses to the accident who were questioned during the investigation said that the crossing warning signals were operating and the warning bells were ringing before the motor-truck occupied the crossing. They said that they did not observe the motor-truck until it was about to occupy the crossing but its position at that time indicated that it had entered San Gabriel Avenue from Santa Fe Avenue.

The laws of the State of California require that, under the conditions existing at the crossing in question, the motor-truck be stopped within 50 feet of the nearest track but not less than 10 feet. A person who witnessed the accident said that the motor-truck did not stop after it entered San Gabriel Avenue.

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 seventh  
day of March, 1950.

By the Commission, Commissioner Patterson.

(SEAL)

W. P. BARTEL,  
Secretary.