

ORIGINAL

Decision No. 85899

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Investigation on the Commission's own motion into the status, safety, maintenance, use and protection of a grade crossing over a track of The Atchison, Topeka and Santa Fe Railway Company at Standard Avenue, State Route 17, in the City of Richmond, Contra Costa County.

Case No. 9891
(Filed April 1, 1975)

Richard J. Danker, for the City of Richmond;
Melvin R. Dykman, Attorney at Law, for State
of California, Department of Transportation;
and Jeffrey J. Lyon, Attorney at Law, for
The Atchison, Topeka, and Santa Fe Railway
Company; respondents.
Elinore C. Morgan, Attorney at Law, and Robert W.
Stich, for the Commission staff.

O P I N I O N

This is an investigation instituted by the Commission to determine whether the public health, safety, or welfare require relocating, widening, closing, altering, or installing additional protective devices at the crossing of The Atchison, Topeka and Santa Fe Railway Company (Santa Fe) tracks and Standard Avenue (Crossing No. 2-1190.2), in the city of Richmond, county of Contra Costa.

A public hearing was held in this matter before Examiner Fraser at San Francisco on July 28, October 7, 8, and November 3, 1975. It was submitted on the last day of hearing after oral argument by the parties. Evidence was presented by the staff, the city of Richmond, the Department of Transportation, and Santa Fe.

The crossing is at grade and includes three tracks, with only one currently in use. Standard Avenue has three through traffic lanes in each direction, plus an additional eastbound lane through the crossing for left turns at Garrard Boulevard, which is one block east of the crossing. The crossing borders the southern edge of a large railroad storage yard, which prompts frequent train or engine movements into, across, or near enough to the vehicle lanes to activate the warning lights. One switch is 33 feet from the north edge of the crossing; a locomotive moving onto this switch track would back into the crossing until the switch was activated, then move forward along the switch track. During the 16-hour period checked, 0600 to 2200 hours, there were 62 instances of signal actuation. Twenty of these movements were made by trains or locomotives which left the yard and approached the north curb or partially entered the crossing (westbound lanes), 23 were through the crossing, and 19 were back and forth movements over the vehicle right-of-way. The existing warning devices consist of two Standard No. 8-A cantilever flashing lights at the road edges installed in February 1954, and two Standard No. 8 flashing light signals in the medians installed in May 1962. None of the foregoing signals have backlights, and the cantilevers extend only to the center of the curb lane. The east side of the crossing is not illuminated. The west side has some illumination from a single light standard located 160 feet west of the crossing. Traffic counts were recorded every hour on a 24-hour basis, on Thursday, August 9, 1973 and Tuesday, August 14, 1973. The total westbound traffic was 14,170 vehicles on the first day and 14,090 vehicles on the second day. The eastbound traffic totaled 12,890 and 12,550 on the same two days. The crossing is in continuous use, with the busiest periods extending from 6:00 a.m. through 7:00 p.m. There were 26 train-vehicle accidents at the crossing

between March 7, 1965 and June 19, 1975. The majority of the accidents occurred at night. There were no deaths, but 11 injuries resulted from 10 of the accidents. At 2:00 a.m. on October 2, 1975 a 1967 Lincoln hit the side of a train, which was moving through the crossing. The Lincoln hit the train at an estimated speed of 50 miles an hour. The car was demolished and both occupants were killed. Witnesses indicated that the vehicle entered the crossing without making any attempt to decrease speed or stop. The posted vehicular speed limit through the crossing is 40 miles per hour. Observations made at the crossing indicate that eastbound vehicles often exceed the speed limit, since Standard Avenue becomes the Richmond-San Rafael Bridge approach west of the crossing. Traffic is frequently backed up through the crossing at peak periods due to the operation of the traffic signals at nearby intersections. Train speed near and in the crossing averages 5 to 10 miles an hour.

Commission Decision No. 84530 dated June 10, 1975 established the grade separation priority list for the 1975-76 fiscal year. The Standard Avenue crossing was 19 in priority out of the 105 crossings listed.

The staff presented two alternatives as possible solutions to the safety dilemma existing at the crossing.

1. Construct a grade separation at or near the location of the Standard Avenue Grade Crossing No. 2-1190.2.
2. Install automatic gates at the crossing with improved track circuits to minimize gate arm downtime and in addition:
 - a. Improve cantilevers by installing longer arms and backlights.
 - b. Install the larger 12-inch light roundels in all flashing lights.

- c. Install train-actuated Advance Warning illuminated signs indicating "Prepare to Stop" or "Railroad Crossing Ahead".
- d. Install additional street lights or flood lights at the crossing.
- e. Paint "Zebra" striping and "Keep Clear" notice on the pavement in the crossing area.

City of Richmond

A traffic engineer testified that Garrard Avenue is 400 feet east and Castro Street 1,100 feet west of the crossing. Both streets parallel the tracks and intersect Standard Avenue at a right angle; the installation of gates will stop traffic on Standard Avenue whenever the gates are down and increase congestion on Garrard and Castro; the backed-up traffic will prompt drivers to seek alternate routes through nearby residential areas over streets that are not designed for heavy traffic. These factors will increase the risk of accidents and delay all through traffic in both directions; the city therefore opposes the installation of gates and accepts all other staff recommendations.

Department of Transportation

An engineer testified that the Department does not classify Standard Avenue as dangerous; there have only been about two accidents a year at this crossing, which has frequent train movements and continuous traffic; minimal train speeds and the stops involved in switching reduce the chance of serious contact, compared to a main line crossing; if gates are installed, more congestion will result; gates are usually activated by train movements within 250 feet of the crossing; most of the trains that activate the gates by proximity will not enter the crossing; during periods of heavy traffic vehicles are frequently parked in the crossing, while waiting to proceed or make turns; a descending gate might strike the blocked vehicle, or

keep it from moving off the track; illumination is favored, since all but four of the twenty-seven accidents noted in the record occurred at night; lights should be installed so as to be activated by trains moving in proximity to the crossing and turned off when the trains move away; this would provide extra illumination only when it is needed; the Department does not favor the train actuated "Prepare to Stop" signs recommended by the staff; they cost \$20,000 each, for a total of \$40,000, and there are sufficient warning signs without them; if gates are provided, the Department favors manual operation by a member of the train crew, who would lower the gates by a lever or switch, before the train enters the crossing, and lift the gates as soon as the train clears the crossing; this system has two advantages; the crossing is only blocked when trains are moving through it and the intersection is being observed by the man who controls the gates. It was emphasized, however, that gates will cost an estimated \$50,000 to \$80,000 and will cause lengthy delays at the crossing during periods of most frequent use.

Another engineer testified that under Section 317.2 of the Streets and Highways Code (passed in 1974), State Route 17 (along Standard Avenue) will become a freeway, which would eliminate the Standard Avenue railroad crossing; the \$6 million necessary to complete the project has not been appropriated and current information does not indicate when, or whether it will be; under favorable conditions, the project will take at least three years before it is approved and ready to start. A last witness testified that installing additional street lights, larger flashing lights, and longer cantilevers with backlights at the crossing will cost about \$15,000. The expensive items are gates, or the large "Prepare to Stop" signs which are designed to be activated by train movements.

Santa Fe Railway

The regional engineer testified that Santa Fe favors closing railroad crossings that are separated in grade; crossings that cannot be closed or separated should have their warning devices and protection upgraded to the maximum; on the Standard Avenue crossing Santa Fe favors extending the cantilevers and mounting one, or more, strobe lights on top, also increasing the roundel size from 8 to 12 inches in all flashing lights and providing zebra striping on pavement as a further warning in the vicinity of the crossing; the estimated cost of installing gates ranges from \$51,555 to \$63,093, depending on the circuits and accessories installed; gates are not recommended in this instance; they would provide a continuing interference with traffic flow and the expense may not be justified; a survey made by Santa Fe's Signal Section reveals that 103 gate arms were broken in the Los Angeles area during the first three months of 1975.

Discussion

This crossing has unusual characteristics. The operation of gates will effectively block traffic on Standard Avenue and cause serious congestion at nearby intersections. Trains move in short spurts at 5 to 10 miles an hour while switching. The accident record at the crossing indicates a need for better illumination and more careful driving, rather than gates. Standard Avenue may soon be selected for conversion to a freeway, which would eliminate the railroad crossing; or it may become eligible for a grade separation allocation due to its priority on the list of crossings designated for a separation of track and roadway. Staff counsel suggested that this investigation be continued if gates are not installed and that a further hearing be scheduled after a reasonable period to determine whether the crossing will be closed or separated. It is not necessary to continue the investigation. The staff can petition to reopen the proceeding whenever it seems justified.

Findings

1. The public safety, welfare, convenience, and necessity require that the crossing at grade of Standard Avenue and the track of Santa Fe (Crossing No. 2-1190.2) in the city of Richmond be equipped as follows:

- a. Lengthen present cantilever arms over the roadway and install a strobe light on each arm or equivalent illumination.
- b. Increase roundel size from 8 to 12 inches on all flashing lights.
- c. Paint "Zebra" striping and "Keep Clear" notice on the pavement in the crossing area.

2. Since Standard Avenue is State Route No. 17, the cost of lengthening and providing illumination on the cantilevers and the cost of installing larger roundels will be charged 50 percent to the State Department of Transportation and 50 percent to Santa Fe. The annual cost of maintenance will be divided as the cost of installation. ✓

3. The cost of painting the pavement will be borne entirely by the State Department of Transportation. ✓

4. The expense of automatic gates is not justified where the crossing has been selected to be closed or separated; gate operation would be frequent and would seriously delay traffic; and accidents at the crossing average two a year and, with four exceptions, occurred at night.

Conclusion

That protection for vehicles using the crossing should be upgraded as provided in the following order.

O R D E R

IT IS ORDERED that:

1. Within six months after the effective date of this order, The Atchison, Topeka and Santa Fe Railway Company (Santa Fe) shall install 12-inch roundels in place of 8-inch roundels on all flashing

light signals at the crossing of its railroad track and Standard Avenue, State Route 17, in the city of Richmond (Crossing No. 2-1190.2). Santa Fe shall pay 50 percent of the cost of installation and maintenance, and the State of California, Department of Transportation, shall pay 50 percent.

2. Within six months after the effective date of this order, Santa Fe shall install longer cantilevers over the roadway and mount strobe light, or equivalent illumination, on each cantilever arm. The cost of this installation, and the maintenance thereof, will be 50 percent to the State of California, Department of Transportation, and 50 percent to Santa Fe.

3. Within six months after the effective date of this order, the State of California, Department of Transportation, shall paint "Zebra" striping and "Keep Clear" notices on the pavement in the crossing area. The State of California, Department of Transportation, shall pay 100 percent of the cost thereof.

The effective date of this order shall be twenty days after the date hereof.

Dated at San Francisco, California, this 2nd day of JUNE, 1976.

William J. Sweeney, Jr. President
Leon L. Sturgeon
Don
Paul Bateman Commissioners