

ORIGINALDecision No. 67887

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Investigation on the Commission's own motion into the safety, maintenance, operation, use and protection of all public grade crossings over the Southern Pacific Company's El Paso Line between Los Angeles and Ontario, the Union Pacific Railroad Company's main line between Los Angeles and Ontario, and The Atchison, Topeka and Santa Fe Railway Company's main line between Los Angeles and Upland and between Los Angeles and La Mirada.

Case No. 7521
(Filed January 2, 1963)

Investigation on the Commission's own motion into the safety, maintenance, operations, use and protection of grade crossings over the Pacific Electric Railway Company's tracks in the Cities of La Verne and Pomona at: White Avenue, Crossing No. 6T-29.18; San Antonio Avenue, Crossing No. 6T-30.76; Garey Avenue (St. Rte. 19), Crossing No. 6T-30.08

Case No. 7739
(Filed October 4, 1963)

Marshall W. Vorkink, for Union Pacific Railroad Company; Harold S. Lentz, for Southern Pacific Company and Pacific Electric Railway Company; and John J. Balluff and Richard K. Knowlton, by Richard K. Knowlton, for The Atchison, Topeka and Santa Fe Railway Company; respondents.

Thomas V. Tarbet, for City of Los Angeles; Harold W. Kennedy, by Ronald L. Schneider, for County of Los Angeles; George D. Moe and Warren P. Marsden, by George D. Moe, for State Department of Public Works; Graham K. Mitchell, for Brotherhood of Locomotive Engineers; R. G. Spencer, for City of Pasadena; Howard D. Tinton, for City of Glendora; C. E. Lortz, for City of Arcadia; Robert L. Poff, for City of Duarte; Paul D. Foxworthy and Robert Sandwick, for City of Azusa; William V. Ellis, for California Legislative Board, BLF & E, AFL, CIO; Lowell D. Brandt, for City of La Verne; Robert B. Carleson, for City of San Dimas; Lawrence A. Coleman, for City of Upland; Richard C. Garner, for City of Montclair; Robert C. Gustaveson, for City of Pomona; Byron Johnson, for City of Claremont; Harold J. Martin, for City of Ontario; and Robert S. Kope, for City of Industry; interested parties.

Elmer Sjostrom and W. F. Hibbard, for the Commission staff.

O P I N I O N

The Commission, upon its own motion, on January 2, 1963, instituted an investigation into the safety, maintenance, operations, use and protection of railroad crossings in the eastern part of Los Angeles County and the western part of San Bernardino County for the following purposes:

1. To determine whether or not the public safety and health require the abolishment of the aforesaid crossings, or any of them.

2. To determine whether or not the public safety and health require the reconstruction, relocation or alteration of the aforesaid crossings, or require the installation and maintenance of additional protective devices thereat, or require alteration of existing protective devices.

3. To prescribe the terms on which any such crossing, reconstruction, relocation, alteration, installation or maintenance of protection shall be done, and to make such apportionment of cost among the parties hereto, or any of them, which appears just and equitable.

4. To enter any other order that may be appropriate in the lawful exercise of the Commission's jurisdiction.

Counsel for Southern Pacific Company, Union Pacific Railroad Company, The Atchison, Topeka and Santa Fe Railway Company, and the Department of Public Works of the State of California were present at all the hearings.

The matter was consolidated with Case No. 7739, which is a Commission investigation into the protection of the railroad crossings of the Pacific Electric Railway Company located in La Verne and Pomona at White Avenue, San Antonio Avenue and Garey Avenue.

The record shows that all of the railroads, cities and public agencies involved were duly served with notice of the hearings to be held and the purpose thereof, and the public agencies so served are as follows: Department of Public Works of the State of California, the County of Los Angeles, the County of San Bernardino, the City of Los Angeles, the City of Ontario, the City of Montebello, the City of Pico Rivera, the City of Claremont, the City of Glendora, the City of Azusa, the City of Monrovia, the City of Arcadia, the City of Commerce, the City of Alhambra, the City of San Gabriel, the City of Temple City, the City of Rosemead, the City of El Monte, the City of Industry, the City of La Puente, the City of Pomona, the City of Montclair, the City of Upland, the City of La Verne, the City of San Dimas, the City of Irwindale, the City of Duarte, the City of Pasadena, the City of South Pasadena, and the City of Santa Fe Springs.

Public hearings were held before Examiner DeWolf at Los Angeles on October 21 to 25, 1963, inclusive; at El Monte on October 29, 1963; at Pomona on November 12, 1963; at Pico Rivera on November 19, 1963; at Los Angeles on January 27 to 31, 1964, inclusive, and on March 9 to 13, 1964, inclusive. On March 13, 1964, both matters were submitted upon receipt of concurrent opening briefs in ninety days and reply briefs thereafter in thirty days. By letter of the Commission, dated March 19, 1964, the opening brief was required to be filed twenty days after receipt of transcript and concurrent reply brief ten days after the date for receipt of opening brief. The Commission staff did not file an opening brief but did file a reply brief. A motion was made to strike the reply brief of the Commission staff, or, in the alternative, for permission to file a further reply brief, and time was extended to file the further reply brief to and including May 28, 1964. A motion for a proposed report by the railroads was denied on March 24, 1964.

At the close of the hearing counsel for the railroads requested twenty days' time to file a written motion to strike portions of the staff's Exhibit 1. The briefs of all parties together with late-filed exhibits and the motion to strike are now on file, and this matter is ready for decision.

A Commission staff witness testified concerning the study he made at the request of the Commission of the crossings involved in these cases, and his report was received in evidence and marked Exhibit 1. This report is divided into twelve parts, as follows: Introduction, Description of Area and Population, Impact of Freeway Development and Street Widening, Railroad Operations, Existing

Crossing Protection and Recommended Improvements, Crossing Closures, Approach Warning Time, Traffic Signal Coordination with Train Movements, Train Speeds, Grade Crossing Protection Fund, Scheduling of Crossing Improvement Programs and Changes in Train Speed, and Summary of Recommendations for Crossing Improvements and Train Operations in San Gabriel and Pomona Valleys.

Exhibit 1 also contains nine appendices giving grade crossing information for all of the crossings of each of the railroad lines involved and this information consists of the crossing number, location, public agency involved, number of tracks, passenger train speeds, present protection and date of installation, daily vehicular counts, train-vehicle accidents in five years, number of deaths and number of injuries. In the back of Exhibit 1 are six detailed maps of the area involved showing the location of the crossings.

Exhibit 2 is a Commission Staff Memorandum, dated December 7, 1961, on the subject of "Installation of Automatic Gates". Exhibit 3 is a two-page memorandum, dated July 24, 1959, entitled "Rail-Highway Traffic Volume Charts" and "Warrants for the Installation of Automatic Protection", and four charts on separate pages attached. Exhibit 4 is a list of crossing protection improvements, dated October 23, 1963. Exhibit 5 is a map of the crossings in the City of Pomona. Exhibit 6 is a copy of a resolution of the City Council of the City of Claremont urging adoption of the recommendations of the Commission staff in Exhibit 1. Exhibit 7 is a multi-page booklet introduced by the Southern Pacific Company

and Pacific Electric Railway Company describing their main track grade crossings and containing photographs of all the crossings, made from a helicopter at approximately 900-foot elevation and also detailed description of these crossings, with accident and traffic records. Exhibit 8 is a plat of proposed crossing protection of the Southern Pacific Company at the intersections of four streets in the vicinity of Valley Boulevard. Exhibit 9 is the engineering data of the Union Pacific Railroad Company in two volumes, and also contains many photographs of all of the crossings of the Union Pacific Railroad. Exhibit 10 is an automatic gate rating chart of the Union Pacific Railroad Company. Exhibit 11 is a booklet of performance data of automatic crossing gates. Exhibit 12 is Southern Pacific Company's Los Angeles Division timetable, effective October 27, 1963. Exhibit 13 is Southern Pacific Company's special instructions, dated April 28, 1963. Exhibit 14 is a street map of the City of Pomona and nearby cities. Exhibit 15 is a freeway map of Los Angeles and Orange counties. Exhibit 16 is a multi-page booklet of statistical data by a transportation analyst of the Southern Pacific Company, dated March 9, 1964. Exhibit 17 is a letter, dated March 9, 1964, and a copy of the minutes of the City Council of the City of Ontario opposing the closing of Plum Avenue. Exhibit 18 is a multi-page booklet with maps, photographs and recommendations of The Atchison, Topeka and Santa Fe Railway Company, dated February 15, 1964. Exhibit 19 is a City of La Verne map filed by the City showing Fulton Road crossing with the Santa Fe and Pacific Electric Railway tracks and proposed street improvements marked in colors.

Exhibit 20, by the Santa Fe Railway, is a review of accident experience. Exhibit 21 is three photographs of the Ontario Feed and Milling Co. showing its relationship to the Plum Avenue crossing. Exhibit 22 is a plat of Ontario Feed and Milling Co. at Plum Avenue crossing. Exhibit 23, by R. J. Marpert, employed at General Electric Plant, is a blueprint of Plum Avenue and other streets crossing Main Street in Ontario. Exhibit 24, by the Commission staff, is a comparison of populations per acre of the San Fernando, Pomona and San Gabriel Valleys. Exhibit 25, by the Commission staff, is a quotation from the I.C.C. report in Docket No. 33440.

The geographic area covered by these matters extends 40 miles from Central Los Angeles to Upland and Ontario, on the east, and 15 miles from Pasadena to Whittier, on the south. Also involved is the area between Los Angeles and La Mirada, a distance of 19 miles. The area is principally urban in character, as indicated by the layout of streets, highways and freeways. There are approximately 2,500,000 people living in this section of Los Angeles County, a little more than one-third of the total county population. In addition, there are approximately 100,000 people in the Upland, Ontario, Montclair and Chino sections of San Bernardino County. The population growth in recent years in this area of the County has been extensive. By 1970 it is estimated by the State Department of Finance that Los Angeles County's population will be 7,630,800, or 17 per cent greater than the present number.

In addition to the present freeways serving the area, the State is constructing new freeways in the San Gabriel and

Pomona Valleys as follows: Foothill Freeway, Pomona Freeway, San Gabriel River Freeway and Brea Canyon Freeway.

There are grade crossing problems created by freeway construction, and similar ones arising from increased traffic on surface streets, which are being widened to overcome their present deficiencies.

The Southern Pacific Company, Union Pacific Railroad Company, and The Atchison, Topeka and Santa Fe Railway Company are the principal railroads in Southern California. For the most part, the lines involved are single track, with passing tracks, sidings and spurs as required. Maximum permitted timetable speeds range from 12 to 90 miles per hour.

The approximate number of passenger trains and freight trains operated daily on each line is shown below:

	Southern Pacific	Santa Fe		Union Pacific	Total
		Via Pasadena	Via La Mirada		
Passenger Trains	6	5	13	8	32
Freight Trains					
Through	20	0	23	9	52
Local	8	4	4	2	18
Total	34	9	40	19	102

In addition, switching operations are performed at various points by local freights or switchers. Pacific Electric Railway Company also operates its San Bernardino line through this area; however, there are only three grade crossings on that line involved here, and these are near Santa Fe crossings over the same streets.

Commission Staff Recommendations

The Commission staff made certain recommendations with respect to crossings involved in these proceedings which are alleged to be based on the following propositions:

1. All public grade crossings should be equipped with automatic protective devices.
2. No. 3 wigwags should be replaced by Standard No. 8 flashing lights or automatic gates.
3. Automatic gates should be installed as a supplement to Standard No. 8 flashing light signals at all crossings unless special conditions warrant other protection.
4. Crossings should be closed where public convenience and necessity do not require the crossing.

Temporary exceptions were made for parts of:

Pasadena

Between Holliston Avenue and Walnut Street, both inclusive, where 18 crossings are affected by proposed freeway and grade separation construction, and

Los Angeles

In the Highland Park section of Los Angeles, between South Avenue 61 and Avenue 33, nineteen crossings may be involved in a proposal to shift the Santa Fe operations to the general alignment of the Union Pacific. The Santa Fe line through this area could then be abandoned.

The Commission staff recommended closure of the following crossings:

Pasadena - Oak Avenue, Crossing No. 2-128.9, and

Azusa - Soldano Avenue, Crossing No. 2-116.65.

The Commission staff further recommended that the railroads be granted an exception to the provisions of General Order No. 75-B, for crossings here involved, and be required to adjust the approach circuits and timing relays at all such crossings

which are or will be equipped with automatic gates so that the gate arms will be in a lowered position for approximately 25 seconds with limits of from 20 to 30 seconds in advance of the normally fastest train.

The Commission staff further recommended that at a railroad grade crossing within approximately 200 feet of a signalized street intersection and which is protected with automatic gates, a green clearance period be provided by the traffic signals so that all vehicles will be promptly cleared from the track area.

The Commission staff further recommended that the maximum permitted train speed at grade crossings be 60 miles per hour with lower speeds in certain areas.

The staff recommended that the 60 mile per hour maximum speed over grade crossings be established at once; except that where present permitted speeds are lower than 60 miles per hour the latter speed should be permitted only after the recommended improvements in protection are completed at each crossing, including the revision of circuits to provide the 25-second gate extended warning time and green clearance period for adjacent traffic signals, if any.

The Commission staff recommended that any city or county participating in the installation or upgrading of automatic protective devices, as recommended, be reimbursed for one half of its share of such expense from the Grade Crossing Protection fund.

The staff recommendations are summarized as follows:

1. The specified automatic protection be installed by the railroads indicated at grade crossings as scheduled in appendices F through I of Exhibit 1.

2. The cost of installing such protective devices be allocated 50 per cent to the railroad involved and 50 per cent to the public agency involved. Where more than one public agency is involved at a crossing, the latter 50 per cent be divided equally between the affected public agencies.

3. Maintenance expense of the above-mentioned crossing protective devices be borne 100 per cent by the railroad affected.

4. That certain crossing be closed and barricaded to vehicular traffic by the railroad involved, at its expense, and reclassified as pedestrian crossings.

5. Where gate protected crossings are within 200 feet of a signalized street intersection, the traffic signals be interconnected with the automatic crossing protection.

6. Maximum train speeds at grade crossings be established.

7. Approach circuits and timing relays at all gate protected crossings be adjusted so that the gate arms will be in a lowered position for approximately 25 seconds with limits of from 20 to 30 seconds in advance of the normally fastest train.

Position of Railroads and Public Agencies

Numerous public agencies appearing at the hearings joined in the recommendations of the Commission staff for the protection of the crossings herein. Exhibit 1 was distributed to all of the public agencies and none of them filed any objections thereto. Evidence was offered by the City of Pasadena as to certain crossings which will be affected by the freeway through that city, and other cities objected to the closing of various crossings, all of which have been considered.

Exhibit 7 presents data on the 70 Southern Pacific Company grade crossings and the three grade crossings of Pacific Electric Railway Company involved here. Photographs were made by a Southern Pacific staff photographer from a helicopter from an altitude of approximately 900 feet. The streets are along the vertical axis of the photo with the railroad along the horizontal axis. The prints are unretouched, with the exception of the addition of an arrow indicating approximate compass North and a street identification.

The Southern Pacific Company objects to the blanket recommendation that all crossings involved in these cases be controlled so as to give a minimum warning time of 40 seconds.

The Company points out that there are a number of locations included in these proceedings where busy streets parallel the railroad, or have other conditions, which make it difficult for vehicles on the cross street to cross or enter the traffic stream, presenting the possibility of traffic "back-ups" onto the railroad.

The Southern Pacific Company train speeds have been increasing through technological improvements in rolling stock, track and signals. Presently the Company has no plans to operate freight trains at a speed in excess of 65 miles per hour in this area. Should there be evidence justifying a limitation on speed by the Commission, it is Southern Pacific's position that the speed restriction should be no less than 65 miles per hour in metropolitan or urban areas. It is recognized that railroad operating conditions will result in lower speed limits in certain areas.

The Southern Pacific Company's position on allocation of costs states that the installation costs of improved or additional crossing protective devices be assumed 50 per cent by Southern Pacific and 50 per cent by the public agency or agencies involved where such improvement or addition is warranted on existing grade crossings, and where major widening or improvement of the crossing is not contemplated.

The Southern Pacific Company makes three descriptive divisions for their crossings, a Construction Phase - either I, II or III - Phase I includes those crossings recommended for improvement as rapidly as reasonably possible within approximately the first two years after a decision by the Commission. Included in Phase I are those crossings concerning which Southern Pacific offered a stipulation that gates would be installed, at the beginning of this proceeding. Phase II includes those crossings which, insofar as can be foreseen at the present time, appear to warrant improved protection within approximately the third year after a decision. Phase III is assigned to those crossings where the need for improved protection cannot be foreseen at this time.

In general the Southern Pacific Company agrees with the crossing protection recommended by the staff as set forth in Appendix A attached hereto for the year 1965, and half of those for 1966, but it places in its Phase III eleven crossings where it cannot see any need for improved protection in the future, although all of these crossings carry the same heavy rail traffic.

The recommended protection for three crossings of the Pacific Electric Railway was not opposed and the same is set forth in Appendix B to this decision.

The position of the Santa Fe Railway does not substantially differ from the Southern Pacific and is set forth in Exhibit 18 wherein it is stated that the Company formed a crossing survey team for the purpose of studying the 142 crossings involved on its 2nd District between Los Angeles and Upland and on its 3rd District between Los Angeles and La Mirada. Particular emphasis was placed on the 83 crossings where the Commission staff had recommended changes in crossing protection or the closing of the crossing. The primary objective of the Santa Fe study was to determine which of the crossings presented serious grade crossing hazards so as to warrant the installation of additional protection devices at the present time or in the immediate future. Secondary objectives were to determine which crossings have lost their functional usefulness with respect to existing vehicle traffic flows so as to warrant their closing, and whether any crossing experience warrants, at this time, the substantial expense of extension of automatic gate warning time at crossings presently gated or recommended to be so protected.

The recommendations of Santa Fe as individually set forth in Exhibit 18 call for the installation of automatic gates at 24 crossings (including Myrtle Avenue in Monrovia where such installation has been completed), the installation of No. 8 Flashing Lights at 38 crossings, an additional set of such lights at Gladstone Avenue in Glendora, no change in protection at 12 crossings and the closing of 8 crossings.

The Santa Fe made a detailed study of the cost of upgrading crossing protection pursuant to its recommendations as well as those proposed by the Commission staff in Exhibit 1 of these proceedings. These estimates amount to \$421,761 for the Santa Fe's share pursuant to its recommendations, or \$623,696 for the railway's share on the basis of the staff's recommendations, not including the extension of gate warning time.

The scheduling of the installation of additional protection devices as proposed by Santa Fe roughly follows that suggested by the staff's Exhibit 1. However, two general exceptions can be noted in several instances, particularly where no automatic protection now exists, Santa Fe suggests expediting the installation of automatic protection, and where the City of Pasadena in line with its study of proposed freeway construction has recommended installation dates, Santa Fe suggests that such scheduling be adopted.

The Santa Fe agrees with eleven of the staff recommendations for 1965 and disagrees with seven; for the year 1966 it agrees with ten and disagrees with ten; for the year 1967, it agrees with ten and disagrees with nine, and for 1968 seven are agreed with and 12 are disagreed with. No comprehensive plan in lieu of the staff's proposals is offered to modernize all of the mainline crossings of the Santa Fe.

The Union Pacific Railroad presented Exhibit 9 in two volumes setting forth data concerning the crossings on its main lines and concurs in part with the recommendations of the Public Utilities Commission staff contained in Exhibit 1. The Union Pacific recommends automatic protection for individual crossings as specified including nine new sets of automatic gates and two new

No. 8 Flasher installations. It is opposed to any increase in gate warning time especially at crossings where there are no adjacent stop signs, or parallel streets which would cause the traffic to back up. The Union Pacific Railroad joined in arguments with the other railroads in regard to the other issues of apportionment of costs and train speeds.

The Union Pacific Company recommendations were arrived at by a complicated mathematical formula composed of many factors which were given artificial numerical values and were added together and then reduced by a square root procedure to give a comparative rating for the hazard of each crossing. The Company classified 16 crossings as having adequate protection and substantially agreed with the recommendations of the Commission staff with respect to 12 crossings.

There are six major issues presented by the evidence adduced at the hearing in this case.

1. Do the public need, health and safety require a progressive plan for the improvement of crossing protection at the crossings listed in the orders instituting these investigations for which there may be now no present and immediate need, but which population and traffic growth indicate will be needed in the future?
2. What type of protection should be installed?
3. Should the gate warning time be extended at all gated crossings in this area, or only at those crossings where a traffic back-up problem exists?
4. What if any train speeds should be fixed by the Commission?
5. Which crossings should be closed?
6. How the costs of installation of crossing protection should be apportioned?

Upon consideration of the evidence, the Commission finds as follows:

1. All of the railroad crossings involved in these proceedings, except the three Pacific Electric crossings, are main line trans-continental routes and carry numerous passenger trains, some of which on each line are high speed limited transcontinental streamliners, now running at timetable speeds in places up to 90 miles per hour and carry 52 long and heavy freight trains per day.

2. Many of the existing protective and traffic control devices now located at the several grade crossings more particularly described in the following order do not afford adequate protection to the public, also many of said crossings are now unduly hazardous, and each of said crossings will in the future be more congested, and public necessity, health and safety require the installation of improved crossing signal protection as set forth in the following order.

3. The public interest requires that the several grade crossings described in the following order should be so improved as to keep pace with the growth of the areas involved and it will be in the public interest and will be equitable to program the future improvement of the protection of these crossings and intersections for the years 1965 through 1968 as set forth in the following order.

4. Certain crossings which have a low daily vehicular traffic count and which are near to other convenient crossings should be closed and five such crossings are listed as follows:

Number			
3-37.6	Laurel Avenue - Ontario - Daily Traffic Count	Union Pacific	1,002
2-128.9	Oak Avenue - Pasadena Daily Traffic Count	The Atchison, Topeka & Santa Fe	602
2-116.65	Soldano Avenue - Azusa Daily Traffic Count	The Atchison, Topeka & Santa Fe	398
2-114.6	Carroll Avenue - Glendora Daily Traffic Count	The Atchison, Topeka & Santa Fe	750
2-110.5	Acacia Street - San Dimas Daily Traffic Count	The Atchison, Topeka & Santa Fe	784

There are other crossings having a low traffic count which can be closed contingent upon construction of grade separations and other highway improvements.

5. Where gate protected crossings are now, or in the future within 200 feet of a signalized street intersection, the traffic signals and the railroad signals should be interconnected so that a green clearance period will be provided by the traffic signals so that all vehicles may be cleared from the track area and the railroad approach circuits and timing relays should be adjusted so that the gate arms will be in a lowered position for approximately 25 seconds with limits of from 20 to 30 seconds in advance of the normally fastest train.

6. A speed limit of 65 miles per hour at the crossings here involved, with certain exceptions, is a reasonable speed limit, when the crossing protection herein ordered has been installed.

7. The public interest requires that the cost of installing automatic grade crossing signals at all of these crossings should be apportioned 50 per cent to the railroad involved and 50 per cent to the public agency involved, which apportionment we hereby find to be equitable.

8. Automatic crossing protection at grade crossings results in benefits to the railroads and the public. Such installations reduce accidents and damage claims for all concerned. They permit trains to operate unimpeded and, in some instances, at higher speeds.

9. The State of California has experienced a tremendous population growth and industrial development in the past 20 years, as a result thereof there has been a corresponding increase in vehicular use of railroad crossings, requiring many of them to be upgraded; and these same factors also contribute to the economic growth and development of the railroads.

10. The railroads have always enjoyed an unimpaired right of way over their tracks but concomitantly they acquired the duty of providing protective signal devices where the public safety so required. Such practice has been modified at times, by public agencies under particular circumstances sharing installation costs on automatic protective devices. The public convenience, interest and safety places upon the railroads the duty to maintain protection at crossings and to pay the entire cost of the same.

Based upon the foregoing findings of fact, and in conformity with the policy and holding announced in Decision No. 66454, dated December 10, 1963, and Decision No. 66881, dated February 25, 1964, we conclude that the cost of maintaining protective devices at the crossings, here concerned, should be borne exclusively by the railroad.

Respondents' motion to strike portions of Exhibit 1 should be denied.

O R D E R

IT IS ORDERED that:

1. The Southern Pacific Company shall install automatic signal protection at its main line grade crossings prior to June 30 of each year of 1965, 1966, 1967 and 1968 as provided for each crossing described in Appendix A attached hereto. The Pacific Electric Railway Company shall coordinate the present flashing lights concurrent with installation of automatic gates at adjacent Atchison, Topeka and Santa Fe crossings, prior to June 30, 1968, at its crossings set forth in Appendix B. The Atchison, Topeka and Santa Fe Railway Company shall install automatic signal protection at its main line grade crossings prior to June 30 of each year of 1965, 1966, 1967 and 1968 as provided for each crossing described in Appendix C attached hereto. The Union Pacific Railroad Company shall install automatic signal protection at its main line grade crossings prior to June 30 of each year of 1965, 1966, 1967 and 1968 as provided for each crossing described in Appendix D attached hereto.

2. Where gate protected crossings are now or in the future within 200 feet of a signalized intersection, the approach circuits and timing relays shall be adjusted so that the gate arms will be in a lowered position for approximately 25 seconds with limits of from 20 to 30 seconds in advance of the normally fastest train.

3. Where gate protected crossings are now or in the future within 200 feet of a signalized street intersection, the respective traffic signals and railroad signals shall be interconnected so that in the preemption phase initiated by an approaching train the traffic signals shall first display a green interval of sufficient length to clear all vehicles from the track area.

4. The railroad involved shall, on or before June 30, 1966, comply with the provisions of ordering paragraph 2 at those crossings already equipped with automatic gates.

5. The public agency involved shall on or before June 30, 1966, comply with the provisions of ordering paragraph 3 at those crossings already equipped with automatic gates.

6. Southern Pacific Company, Union Pacific Railroad Company, and The Atchison, Topeka & Santa Fe Railway Company within thirty days after the effective date of this order shall restrict the speed of their trains at all grade crossings as indicated below:

<u>Railroads and Territories</u>	<u>Maximum Speeds for Passenger or Freight Trains</u>
A. <u>Southern Pacific Company</u>	
(1) Between Los Angeles and Mission Road and Eastlake, Los Angeles	30 miles per hour
(2) Between San Pablo Street, Los Angeles, and Ontario (Archibald Avenue) incl.	65 miles per hour
B. <u>Union Pacific Railroad Company</u>	
Between Los Angeles and Ontario (Vineyard Ave.), incl.	65 miles per hour
C. <u>The Atchison, Topeka and Santa Fe Railway Company</u>	
(1) Between Los Angeles and Chapman, incl. (Near Pasadena East City Limit)	30 miles per hour
(2) Between Chapman and Upland (Campus Ave.), incl.	65 miles per hour
(3) Between Los Angeles and La Mirada (Alondra Blvd.), incl.	65 miles per hour

Notes:

- (a) Present train speeds of less than 65 miles per hour, as required by ordinance in certain cities, shall be continued in effect until the improvement in automatic protection or closure ordered herein is accomplished at the crossing in question.
- (b) In Pasadena, between Holliston Avenue and Walnut Street, both inclusive, trains speeds shall remain as at present as long as operations are over grade crossings. After relocation of tracks and elimination of grade crossings in connection with freeway construction through this area, the 30 miles per hour speed limit in C.(1) above will not be applicable at the separated crossings.
- (c) In the Highland Park section of Los Angeles City, train speed shall remain as at present pending further study of the proposed consolidation of operations by all concerned.

7. The railroad crossings hereinafter described shall be physically closed to vehicular traffic, the work to be performed and the costs to be borne by the railroad involved.

a. The following crossings are to be closed on or before sixty days after the effective date of this order:

Laurel Avenue, Ontario	Union Pacific No. 3-37.6 and Southern Pacific No. B-520.0
Oak Avenue, Pasadena	Santa Fe No. 2-128.9
Soldano Avenue, Azusa	Santa Fe No. 2-114.65
Carroll Avenue, Glendora	Santa Fe No. 2-114.6
Acacia Street, San Dimas	Santa Fe No. 2-110.5

b. The Hatcher Street crossing, Union Pacific No. 3-20.3, and Railroad Street crossing, Union Pacific No. 3-22.1, in the City of Industry, are to be closed within one year after the effective date of this order.

c. The Jellick Avenue crossing, Union Pacific No. 3-21.7, is to be closed concurrent with the opening of a separated crossing at Fullerton Road, in the City of Industry.

d. The Laurel Avenue and the Oak Avenue crossings, described in a. above, are to remain open to pedestrian traffic and otherwise all pavement within the right of way of said crossings shall be removed and the right of way shall be barricaded. Costs of such work shall be borne by the railroad involved.

8. Installation cost for the signal work specified in paragraph 1 hereof as well as the cost to revise approach circuits shall be apportioned 50 per cent to the railroad involved and 50 per cent to the public agency or agencies involved.

9. Maintenance cost of signals, circuits and gates shall be borne by the railroad company involved.

Southern Pacific Company shall install the prescribed automatic protection at its crossings listed hereinafter, on or before the dates indicated:

<u>Crossing No. and Street Name</u>	<u>Public Agency Involved</u>	<u>Protection</u>
<u>JUNE 30, 1965</u>		
B-483.65 Hancock Street	Los Angeles City	Automatic Gate
B-483.7 Mission Road and Eastlake	Los Angeles City	Automatic Gates
B-484.0 San Pablo Street	Los Angeles City	Automatic Gates
B-484.75 Vineburn Avenue	Los Angeles City	Automatic Gates
B-485.0 Worth-Boca Street	Los Angeles City	Automatic Gates
B-487.3 Westminster Avenue	Alhambra	Automatic Gates
B-488.0 Marengo Avenue	Alhambra	Automatic Gates
B-490.7 Del Mar Avenue	San Gabriel	Automatic Gates
B-491.2 San Gabriel Blvd.	San Gabriel	(Completed) Automatic Gates
B-492.6 Encinita Avenue	Rosemead and Temple City	(Completed) Automatic Gates
B-492.7 Lower Azusa Road	Rosemead and Temple City	(Completed) Automatic Gates
B-510.2 Pomona Blvd.	Los Angeles County	Automatic Gates
B-515.9 East End Avenue	Pomona	Automatic Gate*
B-522.4 Vineyard Avenue	Ontario	Automatic Gates
<u>JUNE 30, 1966</u>		
B-483.3 Workman Street	Los Angeles City	Automatic Gates
B-483.4 Sichel Street	Los Angeles City	Automatic Gates
B-483.5 Griffin Avenue	Los Angeles City	Automatic Gates
B-483.6 Johnston Street	Los Angeles City	Automatic Gates
B-488.2 Marguerita Avenue	Alhambra	Automatic Gates
B-488.8 Sixth Street	Alhambra	Automatic Gates
B-488.9 Fourth Street	Alhambra	Automatic Gates
B-490.2 Ramona Street	San Gabriel	Automatic Gates
B-490.3 Mission Drive	San Gabriel	Automatic Gates
B-491.6 Walnut Grove Avenue	Rosemead and Los Angeles County	Automatic Gates
B-492.3 Temple City Blvd.	Rosemead, Temple City and El Monte	Automatic Gates
B-493.6 Baldwin Ave.	El Monte	Automatic Gates
B-494.8 Tyler Ave.	El Monte	Automatic Gates
B-517.4 Monte Vista Ave.	Montclair	Automatic Gates

To be interconnected with similar devices to be installed by Union Pacific Rr. Co. at its adjacent crossing of the same street. plus one Standard No. 8

Southern Pacific Company shall install the prescribed automatic protection at its crossings listed hereinafter, on or before the dates indicated:

<u>Crossing No. and Street Name</u>	<u>Public Agency Involved</u>	<u>Protection</u>
<u>JUNE 30, 1967</u>		
B-496.0 Cogswell Road	El Monte	Automatic Gates
B-495.0 Cypress Avenue	El Monte	Automatic Gates
B-497.1 Rivergrade Road	Industry and Los Angeles County	Automatic Gates
B-497.8 Vineland Avenue	Industry & L.A. Co.	Automatic Gates
B-498.8 Orange Avenue	Industry & L.A. Co.	Automatic Gates
B-499.2 Sunset Avenue	Industry & L.A. Co.	Automatic Gates
B-499.6 California Avenue	Industry & L.A. Co.	Automatic Gates
B-500.9 Stimson Avenue	Industry & La Puente	Automatic Gates
B-504.8 Nogales Avenue	Industry & L.A. Co.	Automatic Gates
B-508.0 Brea Canyon Road	Industry & L.A. Co.	Automatic Gates
B-513.6 Hamilton Boulevard	Pomona	Automatic Gate*
B-514.7 Palomares Street	Pomona	Automatic Gate*
B-515.2 San Antonio Avenue	Pomona	Automatic Gate*
B-517.9 Central Avenue	Montclair	Automatic Gate*
<u>JUNE 30, 1968</u>		
B-505.7 Water Street	Los Angeles County	Automatic Gates
B-506.7 Lemon Avenue	Los Angeles County	Automatic Gates
B-519.0 Mountain Avenue	Ontario	Automatic Gates
B-519.6 San Antonio Avenue	Ontario	Automatic Gates
B-519.8 Vine Avenue	Ontario	Automatic Gates
B-520.2 Plum Avenue	Ontario	Automatic Gates
B-520.4 Sultana Avenue	Ontario	Automatic Gates
B-520.7 Campus Avenue	Ontario	Automatic Gates
B-520.9 Bon View Avenue	Ontario	Automatic Gates
B-523.4 Archibald Avenue	Ontario and San Bernardino Co.	Automatic Gates

*To be interconnected with similar devices to be installed by Union Pacific Rr. Co. at its adjacent crossing of the same street.

NOTE: "Automatic Gates" are defined as two or more Standard No. 8 flashing light signals (General Order No. 75-B), supplemented with automatic gate arms.

APPENDIX B

Pacific Electric Railway Company shall make the prescribed improvements in protection at its crossings listed hereinafter, on or before the date indicated:

<u>Crossing No. and Street Name</u>	<u>Public Agency Involved</u>	<u>Improvements in Protection</u>
<u>JUNE 30, 1968</u>		
6T-29.18 White Avenue	La Verne	Coordinate present No. 8 flashing lights with automatic gates at adjacent AT&SF crossing.
6T-30.08 Garey Avenue (State Route 19)	State	Coordinate present No. 8 flashing lights with automatic gates at adjacent AT&SF crossing.
6T-30.76 San Antonio Avenue	Pomona	Coordinate present No. 8 flashing lights with automatic gates at adjacent AT&SF crossing.

The Atchison, Topeka and Santa Fe Railway Company shall install the prescribed automatic protection at its crossings listed hereinafter, on or before the dates indicated:

<u>Crossing No. and Street Name</u>	<u>Public Agency Involved</u>	<u>Protection</u>
<u>JUNE 30, 1965</u>		
2-120.4 Highland Avenue	Irwindale and Duarte	Automatic Gates (Completed)
2-122.4 Myrtle Avenue	Monrovia	Automatic Gates (Completed)
2-124.3 Santa Anita Avenue	Arcadia	Automatic Gates
2-129.1 Allen Avenue	Pasadena	Automatic Gates
2-129.4 Sierra Bonita Ave.	Pasadena	Automatic Gates
2-129.6 Hill Avenue	Pasadena	Automatic Gates
2-129.75 Chester Avenue	Pasadena	2 No. 8 flashing lights
2-130.4 El Molino Avenue	Pasadena	2 No. 8 flashing lights
2-130.7 Los Robles Avenue	Pasadena	2 No. 8 flashing lights
2-130.8 Euclid Avenue	Pasadena	2 No. 8 flashing lights
2-131.1 Walnut Street	Pasadena	2 No. 8 flashing lights
2-131.2 Holly Street	Pasadena	Automatic Gates
2-131.5 Green Street	Pasadena	Automatic Gates
2-131.8 Del Mar Street	Pasadena	Automatic Gates (Completed)
2-134.5 Pasadena Avenue	South Pasadena	Automatic Gates
2-134.51 Pasadena Avenue	South Pasadena	Automatic Gates
2-134.8 Arroyo Verde Road	South Pasadena	2 No. 8 flashing lights
2-135.7 Avenue 60	Los Angeles City	2 No. 8 flashing lights
2-151.3 Serapis Avenue	Pico Rivera	Automatic Gates
2-151.45 Passons Boulevard	Pico Rivera	Automatic Gates
<u>JUNE 30, 1966</u>		
2-101.0 Euclid Avenue (State Route 192)	State	Automatic Gates
2-122.1 California Avenue	Monrovia	Automatic Gates
2-122.6 Magnolia Avenue	Monrovia	Automatic Gates
2-122.9 Mayflower Avenue	Monrovia	Automatic Gates
2-128.3 Santa Anita Avenue (State Route 9)	State	Automatic Gates

The Atchison, Topeka and Santa Fe Railway Company shall install the prescribed automatic protection at its crossings listed hereinafter, on or before the dates indicated:

<u>Crossing No. and Street Name</u>	<u>Public Agency Involved</u>	<u>Protection</u>
<u>JUNE 30, 1966 (Continued)</u>		
2-127.9 Daisy Street	Pasadena	Automatic Gates
2-128.2 Vinedo Street	Pasadena	Automatic Gates
2-128.5 Sierra Madre Blvd.	Pasadena	Automatic Gates
2-128.8 Craig Avenue	Pasadena	Automatic Gates
2-128.93 Foothill Blvd. Ext.	Pasadena	Automatic Gates
2-131.9 Bellevue Drive	Pasadena	2 No. 8 flashing lights
2-132.1 California Street	Pasadena	Automatic Gates
2-132.3 Fillmore Street	Pasadena	2 No. 8 flashing lights
2-132.5 Glenarm Street	Pasadena	Automatic Gates
2-133.4 Fremont Ave. and Grevelia Street	South Pasadena	Automatic Gates
2-133.45 Magnolia Street	South Pasadena	2 No. 8 flashing lights
2-133.5 Fairview Avenue	South Pasadena	2 No. 8 flashing lights
2-133.6 Hope Street	South Pasadena	2 No. 8 flashing lights
2-133.7 Mission Street and Meridian Avenue	South Pasadena	Automatic Gates (2 sets)
2-133.8 El Centro Street	South Pasadena	Automatic Gates plus 1 No. 8 flashing light
<u>JUNE 30, 1967</u>		
2-110.2 Monte Vista Street	San Dimas	2 No. 8 flashing lights
2-110.3 Cataract & Bonita	San Dimas	Automatic Gates (2 sets)
2-110.6 Eucla Avenue	San Dimas	2 No. 8 flashing lights
2-111.4 Gladstone Avenue	San Dimas and Glendora	Automatic Gates
2-111.7 Lone Hill Avenue	Glendora and Los Angeles County	2 No. 8 flashing lights, with automatic gates to be added when street is widened to 84 ft.
2-113.2 Loraine Avenue	Glendora and Los Angeles County	Automatic Gates
2-113.4 Ellwood Avenue	Glendora	2 No. 8 flashing lights
2-113.6 Glenwood Avenue	Glendora	2 No. 8 flashing lights
2-114.0 Pasadena Avenue	Glendora	2 No. 8 flashing lights
2-114.2 Glendora Avenue	Glendora	Automatic Gates
2-114.4 Ada Ave.-Vermont Ave.	Glendora	Automatic Gates

The Atchison, Topeka and Santa Fe Railway Company shall install the prescribed automatic protection at its crossings listed hereinafter, on or before the dates indicated:

<u>Crossing No. and Street Name</u>	<u>Public Agency Involved</u>	<u>Protection</u>
<u>JUNE 30, 1967 (Continued)</u>		
2-114.8 Foothill Blvd. & Grand Avenue	Glendora and Los Angeles County	Automatic Gates (2 sets)
2-115.4 Ben Lomond Avenue	Los Angeles County	2 No. 8 flashing lights.
2-116.6 Pasadena Avenue	Azusa	Automatic Gates
2-116.8 Alameda Avenue	Azusa	2 No. 8 flashing lights
2-116.9 Azusa Avenue (State Route 62)	State	Automatic Gates
2-117.0 San Gabriel Avenue (State Route 62)	State	Automatic Gates
2-117.6 Virginia Avenue	Azusa	Automatic Gates
2-118.5 Irwindale Avenue	Irwindale	Automatic Gates
<u>JUNE 30, 1968</u>		
2-100.5 Campus Avenue	Upland	Automatic Gates
2-100.8 Sultana Avenue	Upland	2 No. 8 flashing lights
2-101.6 San Antonio Avenue	Upland	Automatic Gates
2-102.1 Mountain Avenue	Upland	Automatic Gates
2-102.7 Benson Avenue	San Bernardino Co., Upland and Montclair	2 No. 8 flashing lights
2-103.2 Central Avenue	San Bernardino Co. and Montclair	Automatic Gates
2-104.2 Mills Avenue	Claremont	Automatic Gates
2-104.7 College Avenue	Claremont	Automatic Gates
2-105.9 San Antonio Avenue	Pomona	Automatic Gates**
2-106.6 Garey Ave., Pomona (State Route 19)	State	Automatic Gates**
2-107.1 Fulton Road	Pomona & La Verne	2 No. 8 flashing lights

** Coordinate with present No. 8 flashing light signals at adjacent Pacific Electric Ry. crossings.

The Atchison, Topeka and Santa Fe Railway Company shall install the prescribed automatic protection at its crossings listed hereinafter, on or before the dates indicated:

<u>Crossing No. and Street Name</u>	<u>Public Agency Involved</u>	<u>Protection</u>
<u>JUNE 30, 1968 (Continued)</u>		
2-107.5 White Avenue	La Verne	Automatic Gates**
2-107.9 "E" Street	La Verne	Automatic Gates
2-108.0 "D" Street	La Verne	Automatic Gates
2-108.8 Carrion Road	La Verne	2 No. 8 flashing lights
2-109.8 Walnut Avenue	San Dimas	2 No. 8 flashing lights
2-110.1 San Dimas Avenue	San Dimas	Automatic Gates
2-127.2 Halstead Street	Los Angeles County	(Close if Sierra (Madre Villa is opened as a new separation; otherwise, (Automatic Gates)
2-127.6 Kimmeloa Avenue	Pasadena and Los Angeles County	(Automatic Gates)

** Coordinate with present No. 8 flashing light signals at adjacent Pacific Electric Ry. crossings.

NOTE: "Automatic Gates" are defined as two or more Standard No. 8 flashing light signals (General Order No. 75-B), supplemented with automatic gate arms.

Union Pacific Railroad Company shall install the prescribed automatic protection at its crossings listed hereinafter, on or before the dates indicated:

<u>Crossing No. and Street Name</u>	<u>Public Agency Involved</u>	<u>Protection</u>
<u>JUNE 30, 1965</u>		
3-8.0 Maple Avenue	Montebello	Automatic Gates
3-8.3 Greenwood Avenue	Montebello	Automatic Gates
3-8.5 Montebello Blvd.	Montebello	Automatic Gates
3-9.8 Lexington Road	Pico Rivera	Automatic Gates
3-12.3 Rose Hills Road	Industry & Los Angeles County	Automatic Gates
3-13.9 Workman Mill Road (State Route 170)	State	Automatic Gates
3-16.4 7th Avenue	Industry	Automatic Gates
3-18.3 Stinson Avenue	Industry	Automatic Gates
3-19.9 Anaheim-Puente Road	Industry	Automatic Gates
3-33.5 East End Avenue	Pomona	Automatic Gate*
<u>JUNE 30, 1966</u>		
3-22.4 Nogales Avenue	Industry & Los Angeles County	Automatic Gates
3-23.4 Water Street	Industry & Los Angeles County	Automatic Gates
3-24.4 Lemon Avenue	Industry & Los Angeles County	Automatic Gates
3-24.9 Brea Canyon Road	Industry & Los Angeles County	Automatic Gates
3-35.0 Monte Vista Street	Montclair	*Automatic Gate & *1 No.8 flashing light
3-37.1 San Antonio Avenue	Ontario	Automatic Gates
3-37.4 Vine Avenue	Ontario	Automatic Gates
3-37.7 Euclid Avenue (State Route 192)	State	Automatic Gates

* To be interconnected with similar devices to be installed by Southern Pacific Company at its adjacent crossing of the same street.

Union Pacific Railroad Company shall install the prescribed automatic protection at its crossings listed hereinafter, on or before the dates indicated:

<u>Crossing No. and Street Name</u>	<u>Public Agency Involved</u>	<u>Protection</u>
<u>JUNE 30, 1967</u>		
3-31.9 Hamilton Blvd.	Pomona	Automatic Gate*
3-32.3 Palomares Street	Pomona	Automatic Gate*
3-32.8 San Antonio Blvd.	Pomona	Automatic Gate*
3-35.5 Central Avenue	Montclair	Automatic Gate*
3-38.0 Sultana Avenue	Ontario	Automatic Gates
3-38.3 Campus Avenue	Ontario	Automatic Gates
3-38.5 Bon View Avenue	Ontario	Automatic Gates
3-39.0 Grove Avenue	Ontario	2 No. 8 flashing lights
3-40.1 Vineyard Avenue	Ontario	Automatic Gates

*To be interconnected with similar devices to be installed by Southern Pacific Company at its adjacent crossing of the same street.

NOTE: "Automatic Gates" are defined as two or more Standard No. 8 flashing light signals (General Order No. 75-3), supplemented with automatic gate arms.