

Decision No. 25588.

BEFORE THE RAILROAD COMMISSION OF THE STATE OF CALIFORNIA.

In the Matter of the Application of the People of the State of California, on relation of the Department of Public Works, for an order authorizing the construction of a crossing at separated grades of the State highway and the Southern Pacific Railroad near Madrone, in Santa Clara County, California.

ORIGINAL

Application No. 18301.

Frank B. Durkee, for Applicant.
H. W. Hobbs, for Southern Pacific Company.

SEAVEY, COMMISSIONER:

O P I N I O N

In this proceeding the Department of Public Works seeks an order authorizing the construction of a grade separation of State Highway No. 2 with Southern Pacific Company's main line tracks, Coast Division, in the vicinity of Madrone, Santa Clara County, State of California. Public hearings were conducted in this matter which is under submission and now ready for decision.

State Highway Route No. 2 is the main paved highway between San Francisco and Los Angeles via the Coast Route. In the United States Bureau of Public Roads it is recorded as U. S. Route No. 101. The state is spending considerable money on this highway in the way of improving the alignment, grades, pavement and shoulders. In the vicinity of Madrone the Department is working to a standard of 20 ft. pavement with 6 ft. shoulders. The section within

the limits of the proposed project, which is approximately three-quarters of a mile in length, is now paved to a width of 20 ft. with 2 ft. shoulders; however, this pavement is in poor condition and must in the near future be renewed.

The record shows that the daily vehicular traffic on this highway varies from 3,000 to 6,000, 14% of which is truck and bus traffic; nearly 30% of the total traffic passes through Madrone between the hours of 6:00 P.M. and 6:00 A.M.

The railroad involved is the Southern Pacific Company's Coast Line between San Francisco and Los Angeles. At the proposed grade separation there is a single track and the record shows there is no plan for additional tracks in the immediate future. The normal daily train movement over this track consists of ten passenger trains and eight freight trains, with extra trains both passenger and freight during times of peak travel. These trains normally travel at high rates of speed in the vicinity of the proposed separation.

At this time the grade crossing to be replaced (No.E-69.4) is protected with one wigwag, illuminated overhead advance warning signs and pavement markings. The estimated cost of this protection is slightly in excess of \$1,600., which is maintained at an annual expense of over \$400.

Applicant proposes to construct an undergrade crossing at a point approximately 1,700 ft. south of the existing grade crossing. In view of the fact that the highway and railroad are parallel in the vicinity of the proposed separation, it has been

necessary to acquire new right of way for the highway in order to obtain desirable approaches for the proposed separation.

The following estimates show the cost of different segregations of the proposed project, as well as the cost of improving the highway at its existing location:

Estimated cost of constructing the highway on the new line, including the subway, having a driveway width of 44 ft., pavement throughout and all road changes, is \$129,000.; without pavement the cost would be \$83,000. Total length of this improvement is approximately 4,400 ft.

Estimated cost of that portion of the project located within the limits of the depressed section and including a separation with a driveway width of 44 ft., but excluding pavement, is \$70,000. Total length of this improvement is approximately 1,700 ft.

Estimated cost of that portion of the project located within the limits of the depressed section and including a separation with a driveway width of 24 ft., but excluding pavement, is \$49,000. Total length of this improvement is approximately 1,700 ft.

Estimated cost of improving the state highway on the existing route within the limits of the project under consideration with a 20 ft. pavement and 6 ft. shoulders and a grade crossing over the railroad, is \$21,000. Total length of this improvement is approximately 4,100 ft.

Southern Pacific Company's Exhibit No. 32 deals with an economic study which shows that by capitalizing the estimated losses and cost due to traffic delay at the crossing, grade crossing accidents, and the maintenance of the crossing and protection, there is justification for the expenditure of money to cover the cost of the entire project, excluding pavement, and providing for a separation having a driveway width of either 24 ft. or 34 ft. A similar study shown on Southern Pacific Company's Exhibit No. 31 shows that the present economic savings which would accrue from a grade separation at this location would not justify an expenditure

sufficient to provide a subway driveway width of 44 feet as proposed by applicant.

In considering the economical justification of the proposed improvements, the studies deal with the various elements to show advantages and disadvantages that would accrue to the public and the railroad if a separation were constructed as proposed herein. On the side of advantages are shown the elimination of accidents, expense of maintaining the grade crossing and protection, and interference to the free flow of traffic on the highway and railroad. On the side of disadvantages are shown the expense of constructing and maintaining a grade separation, including initial cost, interest, depreciation and maintenance.

In the studies presented dealing with the economic justification of the proposed separation, the delay to vehicular traffic is divided into two classes; viz., that resulting from train interference and that from safety stops in compliance with the requirements of Section 135 of the California Vehicle Act, by busses carrying passengers for hire and trucks carrying explosives or inflammables. Traffic counts, including delay to vehicular traffic at the grade crossings involved, were introduced by both applicant and Southern Pacific Company. Applicant's Exhibit No. 9 shows that the vehicular delay due to train interference amounts to 1,140 vehicle hours per year, whereas Southern Pacific Company's Exhibit No. 28 shows this class of delay to amount to 445 vehicle hours. A portion of this material difference in estimated annual delay may be accounted for by the fact that the traffic counts were made at different times of the year. Applicant's count was taken over a five-day period during the latter part of September, 1932, four of these days covering a 16-hour count and one a 24-hour count, whereas the

Southern Pacific Company's count was taken over a seven-day period, 24-hour count, during the latter part of August, 1932. In each case the annual delay estimates were based upon these specific checks.

With respect to delay due to safety stops, both the estimates of applicant and Southern Pacific Company show this economic loss to be approximately \$350. per year.

A grade separation would eliminate the present grade crossing and protection expense at this location shown above to be some \$400. per year, approximately half of which is borne by the railroad and the remainder by the state. In figuring grade crossing protection, however, it should be pointed out that this crossing is now protected by only one wigwag. If it were to remain at grade, due to its importance, consideration should be given to providing an additional automatic signal, which would entail additional expense and should be taken into consideration in apportioning the savings to the railroad.

The record shows that this grade crossing has been the scene of fourteen accidents during the past seven years, resulting in the death of five persons and injury to seven others. Southern Pacific Company's Exhibit No. 31 shows the estimated annual economic loss resulting from grade crossing accidents to be approximately \$3,800. This is another important item which would be eliminated by a grade separation.

Summing up the economic savings that would accrue from a grade separation at this point, as shown by the record in this case, we find the annual benefits, as measured in money, to be approximately \$5,500. The economic disadvantages offsetting the

advantages of a grade separation at this point consist of the cost of constructing a separation, together with an allowance for depreciation and interest. Assuming that a separation is constructed, providing a driveway width of 44 feet, the annual estimated cost would be approximately \$4,500., based upon a total cost of \$70,000., which includes the cost of the structure within the depressed section with 5% interest on the investment and a reasonable allowance for depreciation and maintenance. On a similar study covering the entire project, exclusive of pavement and providing for a separation having a driveway width of 44 feet, the annual cost would be approximately \$4,850.

While the railroad is not opposed to the granting of this application, it takes the position that the apportionment of cost of improvement should be based upon the benefits to the parties; namely, the railroad and the applicant. Southern Pacific Company's Exhibits Nos. 31 and 32 deal with an economic study and apportionment of advantages and disadvantages to the parties. The total gross annual monetary values of the advantages, as shown on these exhibits, amount to \$5,712., and the total disadvantages, \$7,060. (Exhibit No. 31), which represent depreciation, maintenance and interest on a project costing \$118,000. which provides for a separation having a driveway width of 44 feet. In a similar study dealing with a project having a driveway width of 34 feet and costing \$105,050. (Exhibit No. 32), the total annual charges consisting of depreciation, maintenance and interest amount to \$6,034.

With respect to apportioning the advantages to the parties, Southern Pacific Company's Exhibits Nos. 31 and 32 show that 5.3%

of the monetary advantages flow to the railroad and the remainder to the general public.

The largest single item shown under advantages is the monetary loss due to accidents, amounting to \$3,700. per year, which includes allowance for fatalities, personal injuries, property damage and incidental expenses. In the company's economic study 95% of this item is credited to the public and 5% to the railroad. The railroad's benefits are limited to its property damage and cost of investigations amounting to an annual charge of \$100. To such an allocation of expense for this particular item we cannot subscribe, as it appears reasonable to assume that the railroad and public should share equally the responsibility of eliminating accidents. With respect to allocating the expense of delay to both vehicular and train traffic at this crossing, due both to train interference and legal safety stops, Southern Pacific Company credits to the public's side the advantages of eliminating delay to vehicular traffic and to the railroad's side the advantages accruing from the elimination of delay to rail traffic. This conclusion is supported by a practical application of existing conditions as each of those two parties now assume their respective losses due to delay.

Southern Pacific Company contends that a subway having a driveway width of 34 feet would provide ample capacity for the present traffic flowing on this highway as well as provide for the future traffic that should be considered at this time. In support of this position, traffic counts at a number of locations where large volumes of traffic pass through restricted sections were introduced. These counts, however, involve traffic more or less under speed control which is not the case with the project under consideration. In view of the

comparatively large volume of vehicular traffic now flowing over this highway at high rates of speed and the curved alignment within the depressed section, it is concluded that applicant's plan to construct a subway having a driveway width of 44 feet is reasonable.

Summing up the total advantages and disadvantages as set forth in the record in this proceeding, it is concluded that public convenience and necessity justify the granting of this application. With respect to apportionment of cost, after carefully considering the advantages, disadvantages and obligations of the parties, it is concluded that the expense of constructing the separation within the limits of the entire project, as shown on applicant's Exhibit No. 4, exclusive of pavement, should be borne 40% by the railroad, and the remainder, including the pavement, should be borne by applicant. This apportionment of cost is predicated on a subway having a driveway width of 44 feet.

The following form of order is recommended.

O R D E R

A public hearing having been held in the above entitled proceeding and the matter being now ready for decision,

IT IS HEREBY ORDERED that the People of the State of California on relation of the Department of Public Works, Division of Highways are hereby authorized to construct a state highway known as Road IV-Santa Clara-2-B at separated grade under the main line track of Southern Pacific Company in the vicinity of Madrone, County of Santa Clara, State of California, at the location more particularly shown by the plan (Exhibit No. 4) filed in this proceeding, subject to the following conditions:

- (1) The above separation shall be identified as Crossing No. E-69.7-B.
- (2) The entire expense of constructing said grade separation project including line changes of highway between Highway Commission stations 951+00 and 995+00, but excluding the pavement, shall be borne 60% by applicant and 40% by Southern Pacific Company. The entire cost of paving shall be borne by applicant.
- (3) Applicant shall file with this Commission within one hundred twenty (120) days from the date hereof a copy of an agreement entered into between it and Southern Pacific Company, covering the terms of construction and maintenance of said grade separation.
- (4) Applicant shall file, for approval, within one hundred twenty (120) days from the date hereof and prior to the commencement of construction, a set of plans for said separation, which plans shall have been approved by Southern Pacific Company.
- (5) Said separation shall be constructed of a width of approximately 44 feet and with clearances conforming to the provisions of our General Order No. 26-C.
- (6) Prior to the beginning of actual construction of the separation herein authorized, applicant shall file with this Commission a certified copy of an appropriate ordinance or resolution, duly and regularly passed, instituting all necessary steps to legally abandon and effectively close the existing state highway crossing in the vicinity of Madrone and identified as Crossing No. E-69.4. Upon the completion of the separation herein authorized and upon its being opened to public use and travel, said Crossing No. E-69.4 shall be legally abandoned and effectively closed to public use and travel.
- (7) Applicant shall, within thirty (30) days thereafter, notify this Commission, in writing, of the completion of the installation of said separation and of its compliance with the conditions hereof.
- (8) The authorization herein granted shall lapse and become void if not exercised within one (1) year from the date hereof unless further time is granted by subsequent order.

The authority herein granted shall become effective

on the date hereof.

The foregoing opinion and order is hereby approved and ordered filed as the opinion and order of the Railroad Commission of the State of California.

Dated at San Francisco, California, this 30th day of January, 1933.

C. C. Seaver
Leon Whidby
M. J. Linn
W. B. Haines
W. H. Moore
Commissioners.