

Decision No. 17866**ORIGINAL**

BEFORE THE RAILROAD COMMISSION OF THE STATE OF CALIFORNIA

In the Matter of the Investigation
 on the Commission's own motion in-
 to the reasonableness of proposed
 standards for protection of cross-
 ings of highways with railroads and
 street railroads.

Case No. 2292.

Fred E. Pettit, Jr., for Los Angeles and Salt Lake
 Railroad Co.
 James S. Moore, Jr., for The Western Pacific Rail-
 road Company, Tidewater Southern Railway Com-
 pany, and Sacramento Northern Railway Co.
 E. T. Lucey and W. W. Kelly for The Atchison, Topeka
 and Santa Fe Railway Company.
 E. J. Foulds and H. W. Hobbs for Southern Pacific
 Company, Stockton Electric Railroad Co., Visalia
 Electric Railroad Co., Peninsular Railway Co.,
 Fresno Traction Company, San Jose Railroad Co.,
 and Holton Interurban Railroad Co.
 H. A. Mitchell for San Francisco-Sacramento Railroad Co.,
 H. G. Weeks, for the Los Angeles Railway Corporation.
 Frank Karr, for Pacific Electric Railway Company.
 E. H. Hicks for Northwestern Pacific Railroad Company.
 S. Mitchell, for the State Highway Commission.
 John R. Berryman, Jr., for Automobile Club of Southern
 California.
 Archer Bowden, City Attorney, for City of San Jose.
 J. Ogden Marsh, for Board of Public Utilities, City
 of Los Angeles.
 C. M. Hemphill, for the City of Oakland.
 Ivores R. Dains, for Market Street Railway Co.
 C. E. Brown, for San Francisco, Napa & Calistoga
 Railway Co.
 Frank Rae, for City of Berkeley.
 George D. Sandford, for California State Automobile
 Association.
 Platt Kent, for The Atchison, Topeka and Santa Fe Railway
 Company.
 A. H. McKeen and L. T. Jackson, for Los Angeles and Salt
 Lake Railroad Company.

WEITSELL AND LOUETTIT, COMMISSIONERS;

O P I N I O N

This is an investigation instituted on the Commission's

own notion into the reasonableness of proposed standards for the protection of crossings at grade of public roads, highways and streets with railroads and street railroads in the State of California, necessary to reasonably safeguard the health and safety of the employees, passengers and customers of common carriers and of the public.

Public hearings were held in San Francisco on December 3rd and December 21st, 1926.

The Commission called a general conference in 1925 for the purpose of considering, in a preliminary manner, the matter of standardization of warning aspects of protective devices at grade crossings. The Commission's Engineers made certain definite suggestions and the representatives of the carriers requested that certain other features be studied. Further studies were made by the carriers and the results of those studies were presented informally to the Commission. Also since that time the Commission's Engineering Department has further studied the matter and prepared a draft of a proposed General Order on this subject, which was introduced in evidence at the hearing on December 3rd and identified in this proceeding as Commission's Exhibit No. 1.

During the course of the hearing on that date it was suggested that the formal proceedings might be shortened by having a committee representing the carriers go into an informal conference with representatives of the other interested parties and the Commission's Engineers, both as to principles and as to details involved in Commission's Exhibit No. 1. Such a conference was accordingly arranged.

At the adjourned hearing on December 21st, 1926, Commission's Exhibit No. 2 was presented, which embodied all the provisions on which the conference was able to agree. It developed

that the conference was unable to agree on the color design of the wig-wag banner shown on Standard No. 3 and Standard No. 4 in Section 6 of Commission's Exhibit No. 1. The red banner proposed in Commission's Exhibit No. 1 is satisfactory to and approved by the Commission's Engineers and all of the railroads participating in the conference with the exception of the Los Angeles and Salt Lake Railroad Company and The Atchison, Topeka and Santa Fe Railway Company.

The entire matter, therefore, has been reduced to one issue, namely, whether the standard banner for wig-wags shall be painted red, as is now the case with the majority of the wig-wag installations, or shall be painted black and white, as proposed by the signal section of the American Railway Association and urged by the Salt Lake and Santa Fe Companies.

In discussing this issue, it appears appropriate to consider the merits of the two color schemes proposed, first in relation to their visibility and arrestiveness, second in relation to the use of red as a danger or stop color for highways, third in relation to existing highway grade crossing approach signs and fourth in relation to uniformity in this State and throughout the United States.

The testimony shows that the relative visibility of the two proposed markings is approximately equal, while the arrestiveness of the red banner appears to be greater than that of the black and white against the backgrounds usually encountered at grade crossings.

Considerable evidence was adduced as to the propriety of the use of a red banner on a two-position wig-wag in view of the proposal to restrict the use of a red color along highways to points of danger. It appears that on the one hand a red

banner of a two-position wig-wag suspended stationary at a crossing when no train is approaching would give an undesired danger warning, while on the other hand a black and white banner swinging to indicate the approach of a train during the daytime would, under this theory, give no danger indication whatsoever. It appears that while the red banner may not be theoretically in accordance with the rule to limit the use of red to points of actual danger where highway traffic should stop, it is, in this regard, the most desirable of the two proposals.

The American Railway Association standard, according to testimony, is the same as that used on the highway advance signs generally used throughout the United States as a distant or advance warning to highway traffic of the approach to a grade crossing. This sign, the record shows, has for some years been in general use as a cautionary sign but not as a stop sign. The use of such a sign as an advance or distant warning for railroad crossings is required by law in this state. It appears that the use of this same symbol as a stop sign, therefore, might lead to a certain amount of confusion.

The record shows that a large majority of the wig-wags now installed, not only in California but throughout the United States, have the banner painted red, this color having been developed through the experimental stages of the wig-wag to a point where for all practical purposes it has become the standard or most usual form of indication to the highway user. It appears that during the past few years a committee of the Signal Section of the American Railway Association proposed the use of the black and white banner, and that this type has been adopted by some of the western railroads as their standard for future installation, in which are

included the Salt Lake and Santa Fe railroads, two carriers having lines in California. The customary color for wig-wag banners on all of the remaining lines in California, including the Southern Pacific and Pacific Electric, is red. It appears that there are between 2,000 and 2,500 wig-wags now installed in this state and it is estimated that these constitute a very considerable portion of the total number in the United States. The entire purpose of the wig-wag signal when installed is to apprise the users of the highways of the existence of danger at grade crossings. It is primarily a highway signal and not a railroad signal. Its aspect should, therefore, be such as to attract a maximum of attention from the vehicle operator.

It appears that for all practical purposes the traveling public, particularly in this state and generally throughout the United States, recognize the swinging red banner and red light as the indication announcing the approach of a train at a railroad grade crossing. Before changing this color there should be a certainty that the substitutional color or design is so materially better than that now existing that the confusion to the traveling public during the years in which such a change of aspect must necessarily take to become completely effective, is warranted. It is concluded from a consideration of all of the evidence in this proceeding that the American Railway Association standard is not superior to the proposed standard and that the change in the color of the banner is not justified.

We have of the opinion that the safety of the public demands carrying into effect the requirements substantially as shown on Commission's Exhibit No. 1 and as amended by Commission's Exhibit No. 2.

The following form of order is therefore recommended:

ORDER

An investigation having been instituted on the Commission's own motion into the reasonableness of the proposed standards for the protection of crossings at grade of public roads, highways and streets with railroads and street railroads, and the matter being under submission and ready for decision,

The Railroad Commission of the State of California hereby finds as a fact that the proposed rules and regulations establishing standards for protection of crossings of public roads, highways and streets with railroads and street railroads as prescribed in this Commission's General Order No. 75 are reasonable, just and necessary for the public health and safety. Basing its order on the above findings of fact,

IT IS HEREBY ORDERED that all construction, reconstruction and operation of protection of railroad and street railroad crossings with public roads, highways and streets coming within the jurisdiction of this Commission on and after February 1, 1927, shall conform to regulations governing the protection of crossings at grade of railroads and street railroads with public roads, highways and streets in the State of California prescribed by the Railroad Commission of the State of California in its General Order NO. 75.

The effective date of this order shall be February
1, 1927.

The foregoing opinion and order are 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 12th day
of January, 1927.

Edward East
H. B. Boudige
Ch. J. J. J.
Leon O. O'Connell
Thos. J. J. J.
Commissioners.