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PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

SAFETY DIVISION

RESOLUTION SX-4
November 20, 1991

R E S O L U T I O N

RESOLUTION SX-4, PURSUANT TO SECTION 12.2 OF GENERAL ORDER NO. 75-C AUTHORIZING THE SACRAMENTO REGIONAL TRANSIT DISTRICT TO CONDUCT A TRIAL INSTALLATION OF EXPERIMENTAL GRADE CROSSING CONTROL APPARATUS AT TWO NEAR-SIDE STATION CROSSING LOCATIONS IN THE CITY OF SACRAMENTO AND THE COUNTY OF SACRAMENTO.

SUMMARY

The Sacramento Regional Transit District (SRTD), by letter dated April 11, 1991, requests authority to modify grade crossing signal activation circuitry at two locations on its light rail system to enhance vehicular traffic flow. The two locations are at 65th Street (PUC No. 83E-4.55), and at Watt Avenue (PUC No. 83E-7.58). These are both "near-side station" locations, where stations are located a short distance from an at-grade street crossing, and the station falls within the limits of the track circuit for the automatic warning devices at the crossing. This resolution authorizes the proposed modifications on a temporary basis.

DISCUSSION

65th Street is within the City of Sacramento. Watt Avenue is in Sacramento County. There are three tracks at each crossing - A Southern Pacific Transportation Company (SPT) spur track in addition to two SRTD light rail system tracks (one for each direction).

Modifications proposed include holding the gates up and delaying activation of crossing signals whenever "inbound" light rail vehicles (LRVs) stop at the station before crossing the street. Inbound LRVs are those heading toward downtown Sacramento. Outbound LRVs, coming from downtown, cross the street before arriving at the station and thus the station is on the "far side" for operations in this direction. No modifications are proposed for outbound movements.

The delay, or forestalling, in activation of crossing signals for inbound LRVs stopped at near-side stations should reduce the time the crossings are closed to vehicles and pedestrians. Improved traffic flow with less delay and congestion for motorists can be expected to result from this change.

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SRTD proposes to accomplish forestalling by use of a timer which will delay activation of the crossing signals and gates for a predetermined amount of time after an inbound train enters the track circuit for the crossing. With this system, automatic control circuitry is bypassed which otherwise ensures the gates are lowered before inbound LRVs cross the street. A wayside signal or indicator is to be installed between the station and the crossing to warn and remind LRV operators not to proceed over the grade crossing until a minimum warning time has been provided to motorists and the gates are lowered.

Because the safety of fully automatic operation will be lost when the bypass system is actuated, the demonstration will determine if the substitution of manual operating procedures provides an adequate level of public safety. LRVs within grade crossing warning device track circuit detection limits, approaching a near-side station when the forestalling equipment is in use, must stop at the station for the minimum crossing signal warning time to elapse before the train makes its crossing. To test compliance with this requirement, train movements over the crossing and crossing signal activation will be recorded and analyzed.

The demonstration will also include a study of the effect on motor vehicle delays and queuing at the crossing. The effects of the delayed gate activation will be a consideration in evaluating whether the installations should become permanent and whether similar installations should be considered at other near-side station locations.

In its application letter, SRTD asked for a six month demonstration period. Subsequent discussions revealed that a one year period might better serve public interest. The first six months will allow SRTD time to test the validity of the proposal and submit a report to this Commission documenting the trial results; the next six months will allow SRTD time to request authorization from this Commission to make the installations permanent, will allow the Safety Division staff time to evaluate the demonstration, the report, and any resulting request for permanent authorization, and will allow the Commission time to act on such request, all without need to remove the equipment and then re-install it if permanent installation proves to be in the best public interest.

PROTESTS

By letters dated August 15, October 3, and October 4, 1991, SPT, the County of Sacramento, and the City of Sacramento, respectively, each indicated no objection to SRTD's proposal.

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PINDINGS

1. SRTD requests authority to conduct a demonstration project which will modify grade crossing signal activation circuitry at two locations on its light rail system to enhance vehicular traffic flow.
2. A Safety Oversight Plan for the trial installation has been prepared by the Rail Transit Safety Branch which sets forth document submittal, sampling inspection, and witness point requirements.
3. A period of one year should be allowed for the demonstration project.

THEREFORE, IT IS ORDERED THAT:

The Sacramento Regional Transit District (SRTD) be granted authority for a period of one year to install equipment which would delay operation of flashing lights and gates by inbound light rail trains at grade crossings at 65th Street and Watt Avenue, in the City of Sacramento and the County of Sacramento, respectively. The equipment shall be installed, operated, and maintained as specified in the application letter, design drawings, and design specifications submitted by SRTD. Data shall be recorded for each near-side station train movement, each actuation of the crossing automatic warning devices, and each actuation of the wayside indicator, and checked for operator compliance with operating rules and procedures.

The following requirements shall apply:

1. A wayside indicator shall be installed between the station and the crossing, visible to the trolley operator for at least the length of the near-side station platform, which can display either a "stop" or "proceed" indication. The indicator shall be controlled in such a manner that it shall display a "stop" indication upon activation of the inbound approach circuit (NBAR), and shall not change to show a "proceed" indication until after an inbound LRV has approached and stopped at the station, the gates and signals at the crossing have been actuated, and sufficient warning time is provided to motorists at the crossing as required by General Order 75-C.
2. At a minimum, at each crossing location the following operational data shall be automatically recorded by an event

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recorder for each near side station bound train movement: (1) the time NBAR is de-energized, (2) the time the crossing relay (XR) released, (3) the time the gate down latch-out stick relay (GDOSR) energizes, and (4) the time the train occupied the island track circuit.

3. SRTD shall prepare a preventive maintenance program for the equipment used for this trial installation. This program shall include scheduled periodic checks of the operational data recorded at each crossing to verify that the train operators continue to correctly follow the prescribed operating rules and procedures, and that the equipment continues to operate properly.

4. During the trial period, SRTD shall comply with the requirements of the "CPUC Safety Oversight Plan For The Sacramento Regional Transit District Near Side Station Grade Crossing Demonstration Project" dated October, 1991. Appendix A of this plan lists document submittal requirements; Appendix B lists inspection requirements; and Appendix C lists witness point requirements.

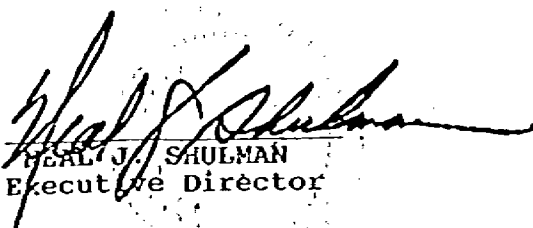
5. Within six months of the initiation of the project, SRTD shall file a final report on the results of the trial installation with the Commission's Safety Division. At a minimum, the report shall state: the benefits anticipated; to what extent they were realized; what parameters were adjusted during the course of the trial; and to what extent operator compliance with operating rules was a problem.

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This resolution is effective today.

I hereby certify that this resolution was adopted by the
Public Utilities Commission at its regular conference on
November 20, 1991.

The following Commissioners approved it.



GERALD J. SHULMAN
Executive Director

PATRICIA M. ECKERT
President
DANIEL Wm. FESSLER
NORMAN D. SHUMWAY
Commissioners

Commissioner John B. Ohanian,
being necessarily absent, did
not participate.