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**NATIONAL TRANSPORTATION SAFETY BOARD**  
WASHINGTON, D.C.

ISSUED: October 27, 1982

Forwarded to:

Honorable W. H. Dempsey  
President and Chief Executive Officer  
Association of American Railroads  
1920 L Street, N.W.  
Washington, D.C. 20036

SAFETY RECOMMENDATION(S)

H-82-56

About 2:18 a.m., on Sunday, March 14, 1982, a privately owned southbound Ford van was struck by an eastbound commuter passenger train at a railroad/highway grade crossing on Herricks Road and the main line of the Long Island Railroad in Mineola, Nassau County, New York. The Ford van, occupied by a teenage driver and nine teenage passengers, had been driven around a properly functioning lowered gate with flashing lights onto the crossing. Following the impact, a minor fire was ignited in the van's motor compartment. The fire was quickly extinguished by a local fire department. Nine of the van occupants were killed and one passenger was critically injured. There were no reported injuries to the passengers or crew aboard the commuter train. 1/

The 6.5-foot space between the end of the gate arm and the centerline of the southbound approach to the Herricks Road crossing is more than one-half the width of the 11-foot-wide left lane. Because of the short gate arm, a driver is able to maneuver his vehicle around the lowered gate arm without much difficulty. On the south side of the grade crossing, a 3.5-foot space existed between the end of the lowered gate arm and the centerline on the northbound approach. In addition, the roadway changes direction (5 degrees) within the railroad right-of-way, off-setting the northbound centerline about 3 to 4 feet to the east of the southbound centerline. The 3.5-foot space, the change of direction in the roadway, and the fact that the gates are not perpendicular to the centerline created a gap between the end of the arms and a plane perpendicular to the southbound centerline of about 13 feet. The Safety Board believes that such a wide gap should not exist and that as a possible short term preventive measure longer gate arms should be installed.

The Federal Highway Administration's (FHWA) Manual on Uniform Traffic Control Devices (MUTCD) does not make any recommendations on the length of railroad/highway crossing gate arms, and in the MUTCD's typical location plan (figure 8-7 of the MUTCD), the gate extends only partway to the centerline. Accompanying another figure in the MUTCD (figure 8-5) is the statement that the length of the gate is to be "...appropriate for approaching traffic," but there are no further specifications.

The Railroad Highway Grade Crossing Handbook (FHWA-TS-78-214) illustrates a maximum distance of 6 feet from the end of the crossing gate to the center of the road or the median; it does not recommend a minimum distance. Standards vary throughout the country.

1/ For more detailed information, read: "Highway Accident Report: Long Island Railroad Commuter Train/Ford Van Collision, Mineola, New York, March 14, 1982" (NTSB ~~HAT-82-67~~).

RHR82-2

The Santa Fe Railroad's Grade Crossing Warning Design Book indicates that the gap could vary between 6 inches and 3 feet. The Southern Pacific standard is 18 inches plus or minus 6 inches. The Long Island Railroad (LIRR) standard specifies that the gap between the end of the crossing gate and the center of the road or median be 6 inches.

The New York State Manual on Uniform Traffic Control Devices (NYS MUTCD) gives various criteria regarding the location of the end of the gate arm. Section 330.8(c) states: "When lowered, the gates...shall effectively block all lanes of approaching vehicular traffic." This section further refers to figure SS-5 which shows the lowered gate arm short of the roadway centerline with the difference to "...be determined as required." In an appendix to the NYS MUTCD, a figure (TS-8) shows the gate arm extending to the roadway centerline.


The Association of American Railroads and the FHWA should collaborate in studying the problem of motorists driving around lowered gates and establish a standard that would set an appropriate gap spacing from the end of the crossing gate to the center of the roadway. This standard should be incorporated into the FHWA's MUTCD and the AAR's recommended practices.

As a result of its complete investigation of the accident, the National Transportation Safety Board recommends that the Association of American Railroads:

In coordination with the Federal Highway Administration, study the problem presented by the lack of a standard distance gap between the end of crossing gates and the middle of the road or median, and establish and incorporate such a standard distance into the Association's recommended practices. (Class III, Long Term Action) (H-82-56)

The National Transportation Safety Board is an independent Federal agency with the statutory responsibility "...to promote transportation safety by conducting independent accident investigations and by formulating safety improvement recommendations." (P.L. 93-633). The Safety Board is vitally interested in any actions taken as a result of its safety recommendation(s). Therefore, we would appreciate a response from you regarding action taken or contemplated with respect to the recommendation(s) in this letter.

BURNETT, Chairman, GOLDMAN, Vice Chairman, and McADAMS and ENGEN, Members, concurred in this recommendation. BURSLEY, Member, did not participate.

  
By: Jim Burnett  
Chairman