

H-256

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C.

ISSUED: October 24, 1980

Forwarded to:

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SAFETY RECOMMENDATION(S)

H-80-68

The National Transportation Safety Board has conducted a study evaluating the adequacy of bridge and highway barrier systems. The report reviews the Safety Board's past accident investigation in this area, analyzes the results of recent crash-testing sponsored by the Federal Highway Administration (FHWA), and makes recommendations concerning performance standards for traffic barriers. 1/

The Safety Board's evaluation found that the FHWA and the American Association of State Highway and Transportation Officials (AASHTO) have published policies, guidelines, and specifications for traffic barrier systems, including both bridge and highway barriers. In addition, the FHWA and the AASHTO have developed and published crash-test procedures and performance criteria that provide for a reasonable assessment of a traffic barrier's safe performance. However, the only specifications that are required to be used in designing traffic barrier systems for Federal-aid highways are certain geometrical and strength specifications for bridge barriers. Furthermore, the AASHTO/FHWA specifications do not require that traffic barrier systems be crash-tested to ensure that they both contain and safely redirect striking vehicles and that they do so without producing crash forces on vehicle occupants that could cause injury or death. Few States make use of the suggested crash-test procedures or performance evaluation criteria to determine the safety performance of barriers to be placed either on Federal-aid or other highways and bridges.

1/ For more detailed information read "Safety Effectiveness Evaluation of Traffic Barrier Systems" (NTSB-SEE-80-5).

Crash-test research requested by the Safety Board and recently completed by the FHWA clearly demonstrates that typical bridge barrier systems currently in widespread use do not contain and safely redirect vehicles. Crash-test research indicates that serious problems may exist in the compatibility between barrier systems and vehicles, particularly front-wheel-drive subcompacts and schoolbuses. The Safety Board believes that this problem has not been adequately addressed by the FHWA, the National Highway Traffic Safety Administration, and the automobile industry.

The Safety Board has repeatedly recommended that the FHWA establish mandatory crash-testing and performance standards. In testimony given at Safety Board public hearings, FHWA safety and research officials and other research engineers have stated that performance testing for traffic barrier systems is necessary.

Therefore, the National Transportation Safety Board recommends that the Motor Vehicle Manufacturers Association, the Truck Body and Equipment Association, Inc., and the Automobile Importers of America:

Cooperate with the Department of Transportation in determining the nature of the hazard posed by front wheels of small front-wheel-drive vehicles being snagged when impacting traffic barrier systems and the failure of front axles and wheels of schoolbus-type vehicles in such impacts. (Class II, Priority Action) (H-80-68)

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

By: 
James B. King
Chairman