

UNITED STATES OF AMERICA
NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C.

ISSUED: December 12, 1972

Adopted by the NATIONAL TRANSPORTATION SAFETY BOARD
at its office in Washington, D. C.
on the 22nd day of November 1972.

FORWARDED TO:)
Federal Highway Administration)
American Association of State)
Highway Officials)
International Bridge, Tunnel)
and Turnpike Association)

SAFETY RECOMMENDATION H-72-48

On November 7, 1972, a span adjacent to the draw of the Sidney Lanier Bridge in Brunswick, Georgia, was struck by an ocean-going vessel, and 450 feet of the bridge collapsed into the Brunswick River. Eight automobiles and two tractor-semitrailers fell with the bridge, resulting in 10 fatalities and eight persons hospitalized.

The warning gate for southbound motor-vehicle traffic was located 150 feet back from the draw. This location allowed a line of motor vehicles waiting for the draw to close to accumulate on the bridge over water that is 35 feet deep. When the collision occurred and the bridge collapsed, these vehicles had no escape available.

The avoidable consequences of this accident demonstrate the presence of safety hazards which exist at many similar bridges throughout the Nation. Those hazards are (1) piers and spans that are vulnerable to impact by large marine vessels, (2) a high frequency of bridge openings due to heavy marine traffic, and (3) the stopping of vehicular traffic on sections of the bridge that may collapse upon impact by marine vessels. Therefore, it is likely that this type of accident will recur.

Present Federal Highway Administration policy concerning bridges of the Sidney Lanier type (PPM 21-15, "Traffic Control Devices on Federal-Aid and Other Streets and Highways," dated June 29, 1972) calls for "protection for traffic in the form of resistance gates and warning gates. The resistance gates shall be of an energy-absorbing type and normally shall be located 50 feet or more from the draw opening." The guidelines also state: "The warning gates preferably shall be of light-weight construction. They shall be located 100 feet or more from the resistance gates, or when no resistance gates are used, 100 feet from the draw opening." The Sidney Lanier Bridge had warning

gates 150 feet from the draw opening which met this requirement. This permitted waiting traffic to stand on a section of the bridge, behind the warning gates, on a span vulnerable to impact by an errant vessel.

Bridge structures which collapse when they are struck by large marine vessels are a matter of growing concern. An analysis of this problem and the development of possible countermeasures would entail a major study and require a considerable amount of time. Although the destruction of bridges is a matter of significance, the saving of lives in such accidents is of immediate priority.

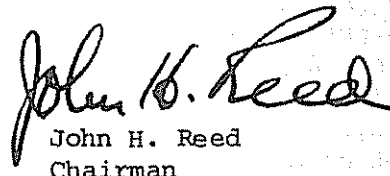
The National Transportation Safety Board therefore recommends that the Federal Highway Administration, the American Association of State Highway Officials, and the International Bridge, Tunnel and Turnpike Association:

Establish policies and standards to insure that standard traffic control devices (gate, signals, signs, and pavement markings) are installed on movable bridges at locations which will halt traffic on a section of the bridge that is not subject to impact by large marine vessels. Such positioning of warning systems will prevent vehicles from being on those portions of such bridges which may collapse when they are struck by a marine vessel. H-72-48

This recommendation will be released to the public on the issue date shown above. No public dissemination of the contents of this document should be made prior to that date.

Reed, Chairman, McAdams, Burgess and Haley, Members, concurred in the above recommendation. Thayer, Member, was absent, not voting.

By:


John H. Reed
Chairman