

Log H-325

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C.

ISSUED: May 17, 1983

Forwarded to:

Commissioner Tom Foerster
Chairman of the Board of Commissioners
Allegheny County
119 Courthouse
Pittsburgh, Pennsylvania 15219

SAFETY RECOMMENDATION(S)
H-83-22

About 6:50 a.m., on September 21, 1981, a Gulf Oil Company tractor-cargo tank semitrailer, transporting 8,300 gallons of gasoline, slid and tipped over on dry pavement as the truckdriver attempted to negotiate a 220-foot-radius right curve on the southbound approach to the Fleming Park Bridge in Allegheny County, Pennsylvania, at an estimated speed of about 45 mph. The truck started to tip over in the right lane of the two-lane approach. It then slid across the left lane, onto and over a 7-inch-high curb, and then over a 13-inch-high concrete divider into the path of an oncoming bus. Upon impact, the gasoline cargo ignited, and flames engulfed the truck, the bus, and part of the bridge. Although the truckdriver, busdriver, and all nine bus passengers escaped from the burning wreckage, three persons were injured seriously. Both the bus and tractor-cargo tank semitrailer were destroyed, and the main supporting members, endposts, and other critical bridge elements were damaged severely.

At the time of the accident, the posted speed limit on the approach to the bridge was 55 mph, a speed which exceeds the critical speed for the 220-foot-radius curve and the tipover speed for the accident vehicle. The Safety Board calculated the safe speed for the right curve to be 27 mph. Although only five accidents were reported in this area from 1979 to 1980, the median barrier appeared to have been struck many more times.

The Federal Highway Administration's (FHWA) Manual on Uniform Traffic Control Devices (MUTCD) states that a warning curve sign or turn sign should be used where engineering investigations of roadway, geometric, and operating conditions show that the recommended safe speed is less than the speed limit established by law or regulation for that section of highway.

After the accident, the bridge was closed to all traffic; currently, only one lane of traffic in each direction is allowed on the bridge. In addition to the lane restrictions, two right-curve maintenance warning signs, each supplemented with a 25-mph advisory speed plate, have been erected in advance of the southbound approach curve. The curve itself has been signed with 15-mph regulatory signs. Although this temporary signing is not in strict conformance with the MUTCD, it appears adequate to assure safety on the curved approach to the bridge. There have been no serious injury or major property damage accidents since the imposition of the temporary restrictions.

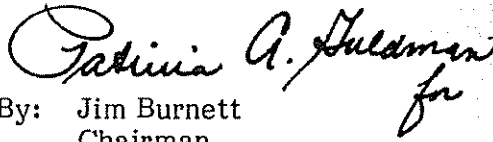
The Safety Board is aware that a construction program is planned and that the bridge will ultimately be reopened to four-lane operation. The Safety Board believes that a traffic engineering study is needed to define the safe speed and the appropriate signing in accordance with the MUTCD in the vicinity of the approach curve before the full traffic capacity is restored. This study should consider that about 20 to 30 percent of the 13,700 vehicles per day that cross the bridge consist of trucks, many of which have a high center of gravity and carry hazardous materials.

Therefore, the National Transportation Safety Board recommends that Allegheny County:

Conduct a traffic engineering investigation of the approaches to the Fleming Park Bridge to determine the safe speed for the approaches, and post signing as appropriate before the bridge is reopened to full traffic capacity. (Class II, Priority Action) (H-83-22)

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 recommendations, and would appreciate a response from you regarding action taken or contemplated with respect to the recommendation 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