

Log #1-312
SP-70

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C.

ISSUED: October 18, 1982

Forwarded to:

Honorable Richard W. Riley
Governor of South Carolina
Columbia, South Carolina 29211

SAFETY RECOMMENDATION(S)

H-82-40 through -44

About 11:45 a.m. eastern standard time on November 12, 1981, an eastbound tractor-semitrailer, in the right traffic lane of Interstate 26 (I-26), near Orangeburg, South Carolina, ran through channelizing traffic cones for a highway work zone and into a parked State highway patrol car, which was being used in traffic control. The patrol car's rotating blue light and flashing red lights were activated. The highway alignment was straight allowing an unrestricted sight distance. The roadway was dry under fair skies. The right side of the truck overrode the left side of the patrol car and fatally injured the police officer seated in the driver's seat. The driver of the truck was slightly injured; none of the highway work crew was involved in the accident.

The truckdriver stated that he did not recall approaching the accident site and believed that he either fell asleep or blacked out. His last physical examination on February 13, 1981, indicated that he was medically qualified to drive a truck in interstate commerce. However, an examination five days after the accident revealed that he had a blood sugar level of 55 milligrams per deciliter (mgm/dl). According to a medical chart published by the Bionetics Medical Laboratory of Washington, D.C., a safe blood sugar range is between 60 and 120 mgm/dl. A person with a low blood sugar level would be a borderline hypoglycemic and could suffer blackout spells.

Traffic control was being provided by the traffic cones and the patrol car for a resurfacing project in the eastbound right lane of the four-lane divided highway. The project was scheduled to take about 2 hours. The traffic cones had been placed along the line separating the two lanes from the westerly end of the work site to a point just to the rear of the patrol car, a distance of 535 feet. Two additional cones, one 20 feet west of the patrol car in the center of the right lane and one 40 feet west on the outer (southern) edge line, provided a 40-foot taper to the lane closure. In addition, a portable sign with the legend "ROAD WORK AHEAD - 20 MPH" had been placed facing traffic near the front of the patrol car.

The National Transportation Safety Board's investigation revealed that the channelization and signing did not conform with the 1978 Manual on Uniform Traffic Control Devices (MUTCD) which has been approved by the Federal Highway Administration (FHWA) as the national standard for all highways open to public travel. The channelization and signing also did not conform with the 1976 South Carolina Manual on Uniform Traffic Control Devices for Streets and Highways (SCMUTCD). While the manuals differ slightly in the traffic control requirements for work zones, the actual traffic control used at the work site fell far below the principles and standards promulgated in either manual. For example, both manuals recommend a channelization taper equal to the product of the posted speed limit (or 85 percentile speed) and the width

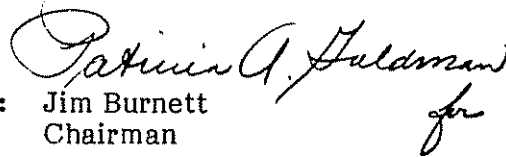
Issue instructions to all maintenance crews and highway patrol officers that they are to follow the recommended practices for traffic controls in work zones as promulgated in the Manual on Uniform Traffic Control Devices and/or the South Carolina Manual on Uniform Traffic Control Devices. (Class II, Priority Action) (H-82-42)

In cooperation with the Federal Highway Administration train supervisors of maintenance crews and highway patrol officers in the proper use of traffic control devices in maintenance operations. (Class II, Priority Action) (H-82-43)

Prohibit the practice of using highway patrol vehicles in construction and maintenance zones as a substitute for the traffic control devices specified in the Manual on Uniform Traffic Control Devices. (Class II, Priority Action) (H-82-44)

BURNETT, Chairman, GOLDMAN, Vice Chairman, and McADAMS, BURSLEY, and ENGEN, Members, concurred in these recommendations.

By: Jim Burnett
Chairman



Patricia A. Goldman
for