H-174

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C.

ISSUED: December 27, 1978

Forwarded to:

Honorable Thomas B. Webb, Jr.
Secretary
Department of Transportation
Haydon Burns Building
Tallahassee, Florida 32304

SAFETY RECOMMENDATION(S)

H-78-78

At 8:25 p.m. on October 2, 1977, westbound Amtrak passenger train No. 57 struck a northbound pickup truck at a railroad/highway grade crossing in Plant City, Florida. The crossing was equipped with red flashing signals, which were operating prior to and at the time of the accident. The train was traveling at 70 mph in a 79-mph speed zone; the pickup truck was traveling at 50 mph in a posted 45-mph speed zone. The 10 occupants of the pickup truck died in the crash. None of the traincrew or its 30 passengers was injured. 1/

An autopsy of the driver of the pickup truck disclosed a 0.14-percent blood alcohol level. The Florida traffic code states that blood alcohol level of 0.10 percent or more is prima facie evidence of driving while under the influence of alcohol.

On the north approach to the Turkey Creek Road grade crossing, the westbound train was not visible to the northbound driver until she passed a stand of trees 400 feet south of the grade crossing. At that point the train was 559 feet from the crossing and there was no way the train could have stopped. The pickup truck could have stopped short of the crossing after the train became visible, but the time and distance available were marginal.

The flashing light warning signal for the Turkey Creek crossing is activated by approaching trains when they are 2,808 feet from the crossing. The tracks are used by both high-speed passenger (4.5 per day) and slower-moving freight trains (8.4 per day). The elapsed time between

1/ For more detailed information read: "Railroad/Highway Accident Report: Seaboard Coast Line/Amtrak Passenger Train/Pickup Truck Collision, Plant City, Florida, October 2, 1977" (NTSB-RHR-78-2).

the activation of the warning signal and the arrival of the train at the crossing is inversely proportional to the speed of the train. The accident train traveling at 70 mph reached the crossing in 27.4 seconds after activating the signal. The freight train traveling at 20 mph would, by comparison, require 1.5 minutes to reach the crossing.

The fact that there are twice as many freight trains as passenger trains using this crossing may have been a contributing factor in this accident. The variance in warning times may have influenced the truckdriver's attitude, judgment, and decision-making, especially in her impaired mental condition.

The Association of American Railroads 2/ and the Federal Highway Administration 3/ each have guidelines that recommend that where speeds of different trains on a given track vary consistently under normal operation, special devices or circuits should be installed to provide reasonably uniform notice in advance of all train movements over the crossing.

The Florida DOT should cooperate with Plant City and the SCL Railroad Company to insure that the improvement plans for upgrading the Turkey Creek crossing include a provision for the installation of the necessary devices or circuitry to provide for uniform warning signal times for various train speeds.

The Florida DOT reports four accidents at this crossing resulting in two fatalities and two injuries since 1971. The 1977 report of a diagnostic team, including Florida DOT, Amtrak, and SCL personnel, had recommended that the Turkey Creek crossing be treated as a first priority for the installation of gates and cantilever lights.

Therefore, the National Transportation Safety Board recommends that the Florida Department of Transportation:

2/ "Recommended Practices for Railroad/Highway Grade Crossing Warning Systems," Bulletin No. 7, Published by the Communication and Signal Section, Association of American Railroads, 1974.

3/ Manual on Uniform Traffic Control Devices, Part VIII, 8C-5, dated April 1, 1978, FHWA.

Insure that the improvement plans for upgrading the Turkey Creek Road railroad/highway grade crossing, as well as all crossings on the 240 miles of track between Jacksonville and Tampa, Florida, include provisions for uniform warning times for various train speeds in conformity with the American Association of Railroads and Federal Highway Administration guidelines. (Class II, Priority Action) (H-78-78)

KING, Chairman, DRIVER, Vice Chairman, McADAMS and HOGUE, Members, concurred in the above recommendation.

By: James B. King
Chairman

H-175

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C.

ISSUED: December 27, 1978

Forwarded to:

Mr. Prime F. Osborn
President and Chief Executive Officer
Seaboard Coast Line Railroad Company
500 Water Street
Jacksonville, Florida 32202

SAFETY RECOMMENDATION(S)

H-78-79

At 8:25 p.m. on October 2, 1977, westbound Amtrak passenger train No. 57 struck a northbound pickup truck at a railroad/highway grade crossing in Plant City, Florida. The crossing was equipped with red flashing signals, which were operating. The train was traveling at 70 mph in a 79-mph speed zone; the pickup truck was traveling at 50 mph in a 45-mph speed zone. The 10 occupants of the pickup truck died in the crash and fire that followed. None of the traincrew or its 30 passengers was injured. 1/

On the northbound approach to the Turkey Creek Road crossing, the westbound train was not visible to the driver until she passed a stand of trees 400 feet south of the grade crossing. At that point the train was 559 feet from the crossing. There was no way the train could stop. The pickup truck could have stopped short of the crossing after the train became visible, but there was no time available for hesitation on the part of the driver.

Since 1971, the Florida Department of Transportation (DOT) reports four accidents at this crossing, which have resulted in two fatalities and two injuries. In 1977, a diagnostic team, including experts from the Florida DOT, Amtrak, and SCL personnel, had recommended that the Turkey Creek crossing be treated as a first priority for installation of gates and cantilever lights. The Jacksonville/Tampa high-speed train corridor traverses 240 miles of track and contains 271 crossings at grade, or 1.13 crossings per mile of track. By comparison, on the entire Amtrak system there are 0.61 grade crossings per mile of track.

1/ For more detailed information read: "Railroad/Highway Accident Report: Seaboard Coast Line/Amtrak Passenger Train/Pickup Truck Collision, Plant City, Florida, October 2, 1977" (NTSB-RHR-78-2).

Also the crossing accidents ratio on the overall Amtrak system is 1.06 per 100 miles of track, while the ratio is 6.9 per 100 miles of track in the Jacksonville/Tampa corridor. Although Amtrak operates in 46 States, 17.8 percent of all of its grade crossing accidents during 1975, 1976, and 1977 occurred in Florida. The corridor is an area that needs study and corrective action.

Therefore, the National Transportation Safety Board recommends that the Seaboard Coast Line Railroad Company:

> Cooperate with the city of Plant City to expedite the installation of the recommended reflectorized, lighted automatic railroad/highway grade crossing gates and cantilever light signals at the Turkey Creek crossing in Plant City, Florida. (Class II, Priority Action) (H-78-79)

KING, Chairman, DRIVER, Vice Chairman, McADAMS and HOGUE, Members, concurred in the above recommendation.

By: James B. King
Chairman