

# NATIONAL TRANSPORTATION SAFETY BOARD

WASHINGTON, D.C.

## Railroad Accident Brief Report

CHI 97 FR 010  
GRADE CROSSING COLLISION/DERAILMENT  
DALLAS AREA RAPID TRANSIT  
DALLAS, TEXAS  
JUNE 3, 1997

Dallas Area Rapid Transit (DART) train No. 114, consisting of two articulated light-rail-vehicles (LRV) struck a Caterpillar front-end loader (earth moving machine) at the intersection of Lancaster Road and Fordham Road in Dallas, Texas at 4:55 p.m., central daylight time, on June 3, 1997. The train was traveling at a recorded speed of 37 mph in 35-mph territory when the accident occurred. The lead wheels of the lead car, LRV 114, were derailed, and 19 of the 20 passengers on the train sustained minor injuries. The operator of the front-end loader sustained a broken arm, lacerations and contusions. The damages associated with the accident were about \$920,166.

The tracks were in the median of the highway, and trains operated in the same direction as the vehicular traffic (meaning trains approached the crossings from the rear of left turning vehicles). The grade crossing protection was provided by highway traffic signals which were interlocked with railroad signals at the crossings.

When the traffic signals on Fordham Road display a proceed indication, the train signals would display a stop indication. The train signals were also at the stop indication when the left-turn signals on Lancaster Road were displayed. The signal system was designed with a 1-second delay between the time the left turn signal turned red, until the train signal turned to proceed. Postaccident tests and inspection of the signal system conducted by highway signal maintenance technicians and a highway signal engineer with the City of Dallas indicated that the signals at the accident intersection operated as designed.

The train operator stated that as the train approached the crossing he observed that all the traffic signals for northbound through traffic on Lancaster Road, as well as for left-turning traffic, were red. There was highway traffic stopped in all lanes, with the front-end loader stopped in the left turn lane. As the train neared the crossing, the traffic signals for northbound through traffic on

Lancaster Road turned to green, and the train signal also turned to proceed. The left turn arrow stayed at red.

The train operator stated that when the traffic signals turned to green, the vehicles in all three lanes, including the front-end loader in the left turn lane, began to move, and the loader turned directly in front of the train, even though the left turn arrow was still red. The driver of the front-end loader stated that he could not remember anything, and he did not recall the color of the left turn arrow.

### **PROBABLE CAUSE**

The National Transportation Safety Board determines that the probable cause of this accident was the driver of the front-end loader for some unknown reason proceeded through a red traffic light and turned left, directly into the path of the oncoming train.

Adopted: August 18, 1998