



National Transportation Safety Board

Washington, D.C. 20594

Safety Recommendation

Date: August 8, 2002

In reply refer to: H-02-09 through -11

Mr. John Horsley
Executive Director
American Association of State Highway and Transportation Officials
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The National Transportation Safety Board is an independent Federal agency charged by Congress with investigating transportation accidents, determining their probable cause, and making recommendations to prevent similar accidents from occurring. We are providing the following information to urge your organization to take action on the safety recommendations in this letter. The Safety Board is vitally interested in these recommendations because they are designed to prevent accidents and save lives.

These recommendations address the adequacy of the railroad notification requirement and the consistency and availability of information regarding railroad notification. The recommendations are derived from the Safety Board's investigation of the November 17, 2000, tractor-trailer combination vehicle and train collision in Intercession City, Florida,¹ and are consistent with the evidence we found and the analysis we performed. As a result of this investigation, the Safety Board has issued eight safety recommendations, three of which are addressed to the American Association of State Highway and Transportation Officials (AASHTO). Information supporting the recommendations is discussed below. The Safety Board would appreciate a response from you within 90 days addressing the actions you have taken or intend to take to implement our recommendations.

On November 17, 2000, about 4:35 p.m., eastern standard time, near Intercession City, Florida, a 23-axle, heavy-haul vehicle, operated by Molnar Worldwide Heavy Haul Company (Molnar), was delivering a condenser to the Kissimmee Utility Authority Cane Island Power Plant. The private access road to the plant crossed over a single railroad track owned by CSX Transportation, Inc. (CSXT). As the vehicle, traveling between 1 and 3 mph, crossed the tracks, the crossing warning devices activated and the gates came down on the load. Seconds later, Amtrak train 97, operated by the National Railroad Passenger Corporation, collided with the right side of the rear towed four-axle tractor. No injuries occurred. The collision destroyed the tractor and caused over \$200,000 damage to the train and crossing signals.

¹ For additional information, read National Transportation Safety Board, *Collision Between Amtrak Train 97 and Molnar Worldwide Heavy Haul Company Tractor-Trailer Combination Vehicle at Highway-Rail Grade Crossing in Intercession City, Florida, on November 17, 2000*, Highway Accident Report NTSB/HAR-02/02 (Washington, DC: NTSB, 2002).

The National Transportation Safety Board investigated a similar accident that occurred on November 30, 1993, at the same location.² In that accident, an overdimension, low-clearance vehicle operated by Rountree Transport and Rigging, Inc., was en route to deliver an 82-ton turbine to the electricity generating plant. The cargo deck of the transporter bottomed out on the roadway surface as the vehicle moved across the tracks. To gain sufficient clearance, the four-member truck crew shimmed the transporter while the cargo deck was on the tracks. About 12:40 p.m., the lights and bells at the grade crossing activated; the crossing gates descended, striking the turbine. Seconds later, Amtrak train 88, carrying 10 crewmembers and 89 passengers, struck the side of the cargo deck and the turbine. Six people sustained serious injuries and 53 suffered minor injuries. The vehicle and turbine were destroyed; the locomotive and first three railcars were damaged extensively. Total damage exceeded \$14 million.

The National Transportation Safety Board determined that the probable cause of the November 2000 collision of Amtrak train 97 with the tractor-combination vehicle was the failure of the Kissimmee Utility Authority, its construction contractors and subcontractors, and the motor carrier to provide for the safe passage of the load over the grade crossing.

Molnar obtained specialized moving permits from 10 States: Utah, Wyoming, Colorado, Kansas, Oklahoma, Arkansas, Mississippi, Alabama, Georgia, and Florida. Molnar used State Permits Company, Akron, Ohio, a private permit service, for the Georgia and Mississippi permits³ and obtained the remaining permits directly from the other eight States. Each permit specified the authorized routes, dates, and times for movement of the load.

Some States, including Florida, require that slow-moving (less than 10 mph) or low-clearance (8 to 9 inches) vehicles notify railroads before crossing their tracks. The Florida ordinance (Florida State Statute [FSS] 316.170) was modeled on the *Uniform Vehicle Code*, Section 11-703, published by the National Committee on Uniform Traffic Laws and Ordinances (NCUTLO).⁴ According to the “Foreword” of the 1987 edition of the *Uniform Vehicle Code*,⁵ the set of motor vehicle laws was first published in 1926 and was designed and advanced as a comprehensive guide or standard for State motor vehicle and traffic laws. The NCUTLO general counsel said that the railroad notification model law has been in effect for more than 30 years and no information is available concerning the history of the law or how vehicle speed and ground clearance criteria were first determined.

The only information on the Florida permit regarding railroad notification requirements was a statement that the “movement shall be in compliance with W/FS 316.08, 316.170, and F.A.C. rule 14-26.” Neither the text of the referenced statutes was on the permit (or on an attachment) nor was a telephone number listed for contacting the railroad. According to the

² For additional information, read National Transportation Safety Board, *Collision of Amtrak Train No. 88 With Rountree Transport and Rigging, Inc., Vehicle on CSX Transportation, Inc., Railroad Near Intercession City, Florida, November 30, 1993*, Highway Accident Report NTSB/HAR-95/01 (Washington, DC: NTSB, 1995).

³ Private permit services are often used to obtain permits by transporters moving loads interstate when the permit process is complicated or the transporting company is unfamiliar with the permitting process for a particular State.

⁴ The National Committee on Uniform Traffic Laws and Ordinances is a private, nonprofit membership organization dedicated to providing uniformity of traffic laws and regulations. Reference: <www.ncutlo.org/news.html>.

⁵ *Uniform Vehicle Code and Model Traffic Ordinance 1987*, National Committee on Uniform Traffic Laws and Ordinances, Evanston, Illinois.

Molnar Safety Director, the company made several attempts to determine the text of these sections. Molnar called the permit office of the Florida Department of Transportation (FLDOT) and the CSXT and stated that it was unable to get any information from either source. According to Molnar, one agency told the company “go look it up in the local library.” Safety Board investigators called several FLDOT offices (permit, highway, and railroad) and were unable to obtain information regarding the Florida railroad notification requirement.

The Safety Board’s report of the investigation of the November 30, 1993, accident in Intercession City found that when FLDOT issues permits, “it does not advise applicants that Florida law requires operators of certain low-clearance vehicles to provide railroads with advance notification of the applicant’s intent to travel over grade crossings.” The Safety Board recommended that AASHTO encourage the States to revise their permit documents to state that compliance with this notification requirement is a condition of permitting. On June 28, 1996, Florida revised its permit form to include the reference to the applicable statute.

In addition, the FLDOT Railroad Division published the brochure *Florida Department of Transportation Low-clearance Information – Don’t Get Hung Up On The Tracks*.⁶ The brochure lists the railroad contact telephone numbers and emergency police and highway patrol telephone numbers and also includes the text of FSS 316.170. A FLDOT Railroad Division representative said that the brochure was provided to permit applicants through the FLDOT permit office. According to a representative of the FLDOT permit office, the brochure was available at one time only, some time before 1997, and, not being in stock, is not sent to permit applicants.

This representative also indicated that from May to July 2001, the permit office sent a one-page document with the text of FSSs 316.170 and 316.550 (requirement to obtain a permit for oversize vehicles) to the private permit service companies with which they conduct business. In addition, the permit office attaches this document to each issued permit.

The need to notify the railroad to obtain safe passage at a given highway-rail grade crossing should be evaluated individually for each at-risk vehicle. The evaluation should take into account the compatibility of the crossing configuration, including approach and departure grades, and the proximity to turns, as well as the vehicle configuration, including ground clearance, axle spacing, overall length, and vehicle speed.

The data needed to perform this evaluation are currently found in different places and are not readily available to all participants in the process. The States should have the public crossing configuration information, although the approach and departure grade records may not be current. Many States require a route survey only when the vehicle and load exceed a certain height. Yet route surveys are important to an evaluation of the need to notify the railroad before crossing and should routinely be part of this process. The American Association of Railroads/Federal Railroad Administration Highway-Rail Grade Crossing Inventory is available on the internet. Although the inventory provides information about the proximity of an intersection, it does not include approach and departure grades or whether the crossing is humped. In addition, vehicle operators may not be aware the inventory exists.

⁶ Florida Department of Transportation, revised December 1997.

The vehicle operator should know the configuration of the vehicle. Most States do not collect information about ground clearance or operating speed as part of the permit application process. The only point in the process at which all information becomes readily available is when the vehicle is at the crossing. Even then, the operator can notify the railroad only if an emergency number is posted at the crossing and if telephone access is available. Arrangements for a given railroad to protect the crossing take time (in the case of CSXT, 2 weeks) and, generally, space to safely park the vehicle is not available.

The notification process should be consistent and user-friendly for all participants. The vehicle operator needs to know when it is necessary to notify the railroad, which railroad to notify, and how to do so. Currently, the sources of information about railroad notification requirements provide inconsistent guidance.

The Safety Board examined the railroad notification requirements of the 10 States traversed by the slow-moving, low-clearance vehicle convoy during the movement of this oversize/overweight load. Investigators reviewed four separate sources of information available to a motor carrier when planning the movement of an oversize/overweight load: (1) the permit offices from the 10 States that issued permits for this accident load; (2) the Specialized Carriers & Rigging Association (SC&RA) guide entitled *Oversize/Overweight Permit Manual*⁷ (updated quarterly, according to the SC&RA, from information provided by the individual State permit offices); (3) the Federal Railroad Administration (FRA) publication entitled *Compilation of State Laws and Regulations Affecting Highway-Rail Grade Crossings*⁸ (also available on the FRA Web site); and, (4) the text of each State's motor vehicle laws.

Eight of the 10 States have statutes in their motor vehicle codes requiring railroad notification. Of the eight, only one State permit office indicated that the State had such a requirement. The SC&RA publication indicated that four States had a requirement, and the FRA document listed six States as having such a requirement.

The Safety Board also contacted the remaining 40 States in February 2002 about their railroad notification requirements. Among all 50 States, 34 have statutes in their motor vehicle codes that require railroad notification. Of these 34, only 10 State permit offices indicated that a requirement existed in their States.

No State requires information about ground clearance or normal operating speed as part of the permit application process. Several State permit office representatives indicated that because such information is not gathered as part of their permit process, they do not know whether a vehicle is a low-clearance or slow-moving vehicle that meets the requirements of the railroad notification statutes. Alaska, Montana, New York, Utah, and Washington have requirements for notifying the railroad before traversing a highway-rail grade crossing based on size or weight dimensions, but not for low-clearance vehicles. Oregon adopted a regulation in 2002 that makes it an offense to obstruct a highway-rail grade crossing if a vehicle "fails to negotiate the rail grade crossing because of insufficient undercarriage clearance." (ORS [Oregon Statute] 811.475)

⁷ Specialized Carriers & Rigging Association, *Oversize/Overweight Permit Manual* (Fairfax, Virginia: September 2000).

⁸ U.S. Department of Transportation, Federal Railroad Administration, *Compilation of State Laws and Regulations Affecting Highway-Rail Grade Crossings*, 3rd edition, January 6, 2000.

All States have a provision on their permits indicating that transporters are required to comply with all State laws and regulations and that the transporter is responsible for the safe movement of the load on the highways.

In 24 of 34 States that have railroad notification requirements, the person contacted in the State permitting office did not know the State had railroad notification requirements. In addition, the data in the two published resources are not consistent with State statutes. Thus, the likelihood that a State will make the vehicle operator aware of the requirement is not great. Even if vehicle operators are aware of the State notification requirement, they are not told which railroad to notify. The Safety Board concludes that accurate and complete information pertaining to the requirement for low-clearance or slow-moving vehicles to notify the railroad prior to traversing grade crossings is lacking. The Safety Board has recommended that the class 1 and regional railroads provide easily accessed contact and notification information for use by vehicle operators requiring railroad assistance to ensure safety at grade crossings. (H-02-12) In addition, the Board has recommended that the FHWA and NCTLO should revise the *Uniform Vehicle Code*, Section 11-703, to define which vehicles, under what circumstances, need to notify the railroad before crossing a highway-rail grade crossing. (H-02-07)

The Safety Board considers that once the *Uniform Vehicle Code*, Section 11-703, "Moving Heavy Equipment at Railroad Grade Crossings," has been revised, the States should adopt the revised *Uniform Vehicle Code*, Section 11-703, and require operators of low-clearance and slow-moving vehicles to conduct route surveys. The AASHTO Highway Subcommittee on Highway Transport is concerned with the relationship between commercial vehicle operations and the Nation's highway systems, and this AASHTO subcommittee deals with permitting issues. Therefore, the Safety Board believes that AASHTO should encourage the States, once the *Uniform Vehicle Code*, Section 11-703, has been revised, (a) to adopt the revised *Uniform Vehicle Code*, Section 11-703, (b) to include vehicle ground clearance as part of the permitting process, and (c) to require permitted slow-moving vehicles and those permitted vehicles that do not meet the ground-clearance provisions of the *Uniform Vehicle Code* to conduct route surveys. To avoid problems in determining the text of State railroad notification requirements, the States should include the text of the revised *Uniform Vehicle Code*, Section 11-703, on the face of permits. Therefore, the Safety Board believes that AASHTO should encourage the States, once the revised *Uniform Vehicle Code*, Section 11-703, has been adopted, to include the text of the revised State statute on the face of permits.

In this accident, government officials missed several opportunities to inform the carrier of the railroad notification requirement, and the carrier found it difficult to discover the requirements on its own. Critical information, such as railroad notification requirements, should be easily available, frequently advertised, and regularly provided to motor carriers needing the information. Consequently, State employees who interface with the heavy-hauling industry should be knowledgeable about the State's railroad notification requirements. Therefore, the Safety Board believes that AASHTO should encourage the States to conduct initial and recurrent training for State employees in the permit offices and State employees involved in commercial vehicle enforcement regarding the railroad notification requirements.

Therefore, the National Transportation Safety Board recommends that the American Association of State Highway and Transportation Officials:

Encourage the States, once the *Uniform Vehicle Code*, Section 11-703, has been revised, (a) to adopt the revised *Uniform Vehicle Code*, Section 11-703, (b) to include vehicle ground clearance as part of the permitting process, and (c) to require permitted slow-moving vehicles and those permitted vehicles that do not meet the ground-clearance provisions of the *Uniform Vehicle Code* to conduct route surveys. (H-02-09)

Encourage the States, once the revised *Uniform Vehicle Code*, Section 11-703, has been adopted, to include the text of the revised State statute on the face of permits. (H-02-10)

Encourage the States to conduct initial and recurrent training for State employees in the permit offices and State employees involved in commercial vehicle enforcement regarding the railroad notification requirements. (H-02-11)

The Safety Board also issued safety recommendations to the Federal Highway Administration, Federal Motor Carrier Safety Administration, National Committee on Uniform Traffic Laws and Ordinances, Kissimmee Utility Authority, and all class 1 and regional railroads. In your response to this letter, please refer to Safety Recommendations H-02-09 through -11. If you need additional information, you may call (202) 314-6177.

Chairman BLAKEY, Vice Chairman CARMODY, and Members HAMMERSCHMIDT, GOGLIA, and BLACK concurred in these recommendations.

Original Signed

By: Marion C. Blakey
Chairman