



# National Transportation Safety Board

Washington, D.C. 20594

## Safety Recommendation

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**Date:** November 30, 1998

**In Reply Refer To:** H-98-43 through -46

Honorable Rodney E. Slater  
Secretary  
U.S. Department of Transportation  
Washington, D.C. 20590

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Recently, the National Transportation Safety Board has investigated transit bus accidents in Normandy, Missouri; Cosmopolis, Washington; New York, New York; and Nashville, Tennessee.<sup>1</sup> The Normandy, New York, and Nashville accidents exposed various operational deficiencies such as unqualified drivers, drivers with hazardous medical conditions, inadequate maintenance practices, and the operation of buses with mechanical defects. The Cosmopolis accident revealed that certain laws and school transportation safety operational practices are not applicable to transit operations.<sup>2</sup> Had these deficiencies been found during other types of bus operations,<sup>3</sup> which fall under Federal and State government safety regulations, sanctions could have been imposed, such as assessing fines, taking the buses out of service, or suspending the company operations. However, no such Federal regulations are in place for transit buses. Of the four accident locations, only New York conducts some type of oversight of transit bus operations.

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<sup>1</sup>For more detailed information, read Highway Accident Summary Report—*Transit Bus Collision with Pedestrians, Normandy, Missouri, June 11, 1997* (NTSB/HAR-98/01/SUM); Highway Accident/Incident Summary Report—*Collision with a Pedestrian by a Utility Truck near Cosmopolis, Washington, November 26, 1996* (NTSB/HAR-97/01/SUM); and National Transportation Safety Board Accident Investigations—*Transit Bus Collision with Pedestrian in New York City, New York, October 2, 1997* (HWY98FH019) and *Transit Bus Collision with Multiple Vehicles in Nashville, Tennessee, August 31, 1998* (HWY98FH042).

<sup>2</sup>Laws that require traffic to stop for school buses that are loading or discharging students are not in effect for transit buses. A transit bus is neither painted yellow, equipped with stop arms or bars, nor required to have its driver ensure that children are safely out of the roadway after exiting the bus.

<sup>3</sup>Interstate motor coach or charter buses.

As a result of the Normandy, Missouri, accident in which four pedestrians were killed and three injured, the Safety Board held a public hearing on March 3 and 4, 1998, to determine the extent of transit bus safety oversight. During the public hearing, witnesses representing State and Federal government agencies testified as well as representatives from several transit agencies, member service organizations, and State associations. The participants in the hearing discussed transit agency self-regulation, the extent of Federal and State safety oversight, accident data, pupil transportation, and driver selection and qualification.

After the Safety Board conducted several accident investigations involving transit buses and held the public hearing on transit bus safety in March 1998, it found that substantial safety deficiencies and little Federal or State government safety oversight exist within the transit bus industry. The Safety Board understands that the Federal Government is spending \$6.34 billion to subsidize the operation of transit agencies;<sup>4</sup> yet, its safety oversight of transit bus operations is essentially nonexistent. The public expects that transit bus operations, whether publicly owned or subsidized, are safe.<sup>5</sup>

The above four accidents, which occurred in different parts of the country, highlight significant safety problems in the transit bus industry. The Safety Board is concerned that the Federal Government provides significant funding for public transit operations without ensuring adequate safety oversight. Federal Transit Administration (FTA) officials stated that they have three methods to assess the safety of the transit bus agencies that receive Federal funding. However, none of these methods provides a comprehensive assessment of transit bus safety throughout the country or a remedy for any of the problems that may exist.

One method is the sharing of safety information among transit agencies, which enables the agencies to perform self-assessments of their operational safety. This information is composed of data that are reported annually to the FTA by each transit agency receiving Federal funds. Unfortunately, some of the data may be 2 years old before it is available and may not be accurate or sufficient for transit bus agencies to thoroughly compare the safety of their operations with that of other agencies.

Another method containing a safety component is a program of triennial reviews, which are employed to measure the responsible use of Federal funds. The reviews were legislated by the U.S. Congress because of a concern that the FTA was not adequately monitoring the use of Federal funds. The FTA hires contractors to perform the triennial reviews of all (about 550 urban) transit agencies directly receiving Federal funds. (The other transit agencies receive Federal funding administered through the States.) The Office of Oversight within the Office of Program Management oversees the contractors. The Office of Safety and Security does not participate in the triennial review process.

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<sup>4</sup>Of this amount, over \$2.5 billion is provided for transit bus operations.

<sup>5</sup>For more detailed information, read Special Investigation Report—*Transit Bus Safety Oversight* (NTSB/SIR-98/03).

In conducting the reviews, contractors go to each transit agency and ask questions to ascertain whether the transit agency is performing certain required functions. Subject questions include whether the agency is in compliance with the American Disabilities Act, the Buy America law, the Service Equity laws, and the Disadvantaged Business Enterprise regulations; few questions concern transportation safety programs. The contractor makes no assessment of the effectiveness of the safety programs at the transit agency. Transit funding is not dependent on the results of the responses to the safety questions posed during the triennial review.

According to the FTA, its primary role is to provide capital for operational assistance to transit programs. The Safety Board is concerned that funding is occurring without any reasonable checks to ensure that Federal funds are being used in the public's best interest and that the public's safety on transit buses is not being compromised. The FTA considers its primary responsibility to be the disbursement of Federal funds and, as such, engages in a cooperative partnership with the transit industry. The FTA stated at the public hearing that it has traditionally looked either to State regulation, if it exists, or to self-regulation by the transit industry to safeguard the public's use of these transportation systems.

The FTA has no method to ensure safety, which is specifically focused on operations within transit bus agencies. For the FTA to have an effective safety oversight program, it would need to ensure that 1) safety plans are required and implemented, 2) the Office of Safety and Security is included in the triennial review process to ensure that safety plans are complete and in use for all fund-recipient operations, and 3) all safety deficiencies are corrected within transit bus agencies. The Safety Board concludes that the FTA is unable to identify situations that may lead to unsafe conditions on buses for the traveling public or to resolve any unsafe conditions because of a lack of effective safety oversight and enforcement. The Safety Board, therefore, believes that the DOT should develop and implement an oversight program to assess and ensure the safety of transit bus operations that receive Federal funding.

Before 1990, the FTA did not collect data on transit bus operations; only data on rail rapid transit were collected. Currently, however, all public transit agencies receiving Federal assistance under the FTA's formula program must report accident data to retain eligibility for Federal funds. The FTA accident data only contain the number of fatalities, injuries, and incidents in the given year;<sup>6</sup> and, therefore, this accident data can only be used to establish numeric trends in the occurrences of fatalities that result from noncollisions and from collisions with vehicles, objects, and people. The FTA requires the reporting of transit bus incidents that meet the following criteria:

- any event involving property damage exceeding \$1,000;
- any incident requiring medical treatment of a passenger or an employee, either on site or in a hospital; or
- any fatality resulting from the event occurring within 30 days.

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<sup>6</sup>The FTA plans to publish a Notice of Proposed Rulemaking to expand the data fields collected.

The FTA obtains summary accounts from the transit operators, who report data for their previous fiscal year, which vary across transit agencies. The FTA, however, reports the data by calendar year. By the time the FTA collects and collates the data for a report, it is almost 2 years old. Because of the different reporting timetables allowed by the FTA, accident data from transit agencies are routinely being discounted from the FTA statistical database.

The National Highway Traffic Safety Administration (NHTSA) Fatality Analysis Reporting System (FARS) only collects accident data that involve fatalities. In the FARS database, an accident must involve a motor vehicle traveling on a roadway open to the public and result in the death of a person, either an occupant of a vehicle or a nonmotorist, within 30 days of the accident. FARS is based on police reports, medical examiner and death records, and other reports, which are related by calendar year. Each accident maintained in FARS has more than 100 coded data elements that characterize the accident, the vehicles, and the people involved in fatal accidents.

In 1996, the FARS database reported 126 fatalities in transit bus collisions (5 of these were passengers on a transit bus; the others were either pedestrians or people in other vehicles). That same year, the FTA reported 83 fatalities in transit bus accidents (it is impossible to determine where the fatal injuries occurred based on the FTA data). The FTA has maintained that the number of transit bus fatalities has steadily decreased; however, the FARS data indicate that the number of fatalities has not decreased. The differences in the number of fatalities may be explained by the differences in the databases.

The FTA fatality data also are not as comprehensive as FARS data and lack a tracking program for injury severity, contributing factors, vehicle actions, driver actions, or other safety-related factors. Still, the FTA data provide more accurate injury counts for accidents than do the FARS data. FARS does not present all injury data, only that injury data for people involved in a fatal accident.

Before 1984, the Federal Highway Administration (FHWA) had the authority to conduct safety oversight of transit bus operations. In 1984, the U.S. Congress passed the Motor Carrier Safety Act, which specifically exempted passenger carrier operations that were part of Federal, State, or quasi-public operations. In May 1988, the FHWA issued a rulemaking, to the same effect as the 1984 act, including the same exemptions in the Federal Motor Carrier Safety Regulations.<sup>7</sup> The FHWA currently has no authority to perform any safety reviews or inspections of transit bus operations.

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<sup>7</sup>Title 49 *Code of Federal Regulations* Part 390.3(f)(2) exempts, with the exception of the recordkeeping requirements of Part 390.15, transportation performed by the Federal Government, a State or any political subdivision of a State, or an agency, established under a compact between States that has been approved by the U.S. Congress.

The FHWA collects bus accident data from State and local enforcement agencies. However, FHWA representatives testified during the hearing that approximately one-third of this data is not reported to the database by State or local enforcement personnel and that the data do not distinguish between transit and other types of buses.

As discussed above, the reporting and collection system that the FTA is using lends itself to discrepancies in the FTA final reports. The FTA data also are of limited value, can be used only to identify numeric trends of transit bus accidents, and are not useable to identify the underlying causes of or contributing factors to these trends. Therefore, the Safety Board concludes that the accident data presented by the FTA, NHTSA, and the FHWA do not accurately portray the transit bus industry's safety record due to the data limitations of each and, in the case of the FTA, the lack of timeliness. In addition, the Safety Board concludes that the lack of accurate and sufficient data within the transit bus industry prevents a thorough assessment of transit bus safety. Consequently, the Safety Board believes that the DOT should collect accurate, timely, and sufficient data so that thorough assessments can be made relating to transit bus safety. Furthermore, the Safety Board believes that as part of the oversight program, the DOT should evaluate the collected data to identify the underlying causes of transit bus accidents that could lead to the identification of safety deficiencies at transit agencies.

Although safety programs at the Federal level are essentially nonexistent and the State programs vary, the American Public Transit Association (APTA) has developed two programs to provide for safe operations at its member transit agencies. However, these programs are not available to all transit agencies (only to APTA membership, which is less than 10 percent of all transit agencies) and have a fee associated with them.

APTA has drafted the Bus Safety Management Program (BSMP), a system safety program that will be applicable to transit bus operations, as well as the *Manual for the Development of Bus Transit System Safety Program Plans*. The BSMP is similar to the APTA rail rapid transit system safety program, on which the FTA State Safety Oversight of Rail Fixed Guideway Systems Program was modeled. The BSMP will help transit agencies set up a safety program in conformance with the *Manual for the Development of Bus Transit System Safety Program Plans*. APTA will then examine each system safety program on a triennial basis and evaluate whether the transit agency has: a system safety program plan that is in conformance with the APTA *Manual for the Development of Bus Transit System Safety Program Plans*; its system safety program plan fully implemented; and conducted an internal safety audit program to identify, track, and resolve safety program deficiencies. However, compliance with the safety oversight of operations will still be the responsibility of the individual transit agency even with the implementation of the BSMP.

In 1993, APTA conducted a survey of the hiring practices of various transit agencies because of concerns within the transit industry about the ratio of accident and employee-retention rates of newly hired drivers compared with experienced drivers. Over 100 agencies responded to the survey, resulting in the APTA conclusion that the then-existing recruiting and hiring

practices were extremely diverse. In December 1994, APTA published the final report *Bus Operator Selection System*<sup>8</sup> (BOSS), which details a selection system that could be adopted by a transit agency and allow the recruitment of drivers who would be more likely to maintain stable attendance and employment records. In addition to employment stability, according to APTA, this system would also reduce the accident rates typically experienced with new operators, as has been encountered by those transit agencies that evaluated the system.

Since its inception, BOSS has been implemented at 31 agencies, including the New York City Transit Authority, and numerous agencies are in the process of implementing this selection system. According to APTA testimony at the public hearing, program start-up requires a major commitment on the part of the transit agency to internally probe its processes and to involve its human resource and operations people in preparing for implementation. Additionally, the BOSS program has a cost factor associated with it for the ongoing support of the consultant who developed it. APTA believes that because of these factors, the BOSS program will probably require time to be universally accepted and applied but eventually all APTA transit agency members will use the program.

At the public hearing, the Community Transportation Association of America (CTAA) voiced its concern that the BOSS program primarily addresses the problems facing the APTA membership. The CTAA emphasized that New York City alone hires about 1,200 bus operators annually and the rural transit network nationwide totals only between 6,000 and 7,000 bus operators. The number difference in hiring demands results in different training and recruitment needs for smaller rural transit systems. The typical CTAA member employs a total of six busdrivers, whose employment involves low turnover and wages.<sup>9</sup> The CTAA also testified that because its members operate in rural areas, the labor market is limited and many of the operators believe that they are almost forced to hire the available drivers and then attempt to train them to be qualified safe bus operators.

While APTA has taken steps to ensure that uniform safety and qualifications will be applied to its member transit bus agencies, this only represents 10 percent of all transit agencies. Consequently, the Safety Board concludes that a model comprehensive safety program is not available for all transit bus agencies, only urban transit agencies that are members of APTA. Therefore, the Safety Board believes the DOT, APTA, the CTAA, and the American Association of State Highway and Transportation Officials, in cooperation, should develop a model comprehensive safety program(s) and provide it to all transit agencies.

Therefore, the National Transportation Safety Board recommends that the U.S. Department of Transportation:

Develop and implement an oversight program to assess and ensure the safety of transit bus operations that receive Federal funding. (H-98-43)

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<sup>8</sup>APTA contracted Landy Jacobs, Inc., a human resource consulting firm based in State College, Pennsylvania, to develop this project.

<sup>9</sup>Approximately 10 percent of the CTAA's membership only pay their busdrivers minimum wage.

Collect accurate, timely, and sufficient data so that thorough assessments can be made relating to transit bus safety. (H-98-44)

Evaluate the collected data, as part of the oversight program, to identify the underlying causes of transit bus accidents that could lead to the identification of safety deficiencies at transit agencies. (H-98-45)

Develop, in cooperation with the American Public Transit Association, the Community Transportation Association of America, and the American Association of State Highway and Transportation Officials, a model comprehensive safety program(s) and provide it to all transit agencies. (H-98-46)

Also, the Safety Board issued Safety Recommendations H-98-47 to the American Public Transit Association, H-98-48 to the Community Transportation Association of America, and H-98-49 to the American Association of State Highway and Transportation Officials. If you need additional information, you may call (202) 314-6441.

Chairman HALL, Vice Chairman FRANCIS, and Members HAMMERSCHMIDT, GOGLIA, and BLACK concurred in these recommendations.

By: Jim Hall  
Chairman