

STATEMENT OF WILLIAM GENTRY

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AND ON BEHALF OF AMERICAN BUS ASSOCIATION AND UNITED MOTORCOACH
ASSOCIATION

SUBCOMMITTEE ON HIGHWAYS AND TRANSIT

HOUSE TRANSPORTATION AND INFRASTRUCTURE COMMITTEE

UNITED STATES HOUSE OF REPRESENTATIVES

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My name is Bill Gentry and I am the owner and President of Gentry Trailways in Knoxville, TN. We furnish school bus transportation to our local school district and local and interstate charter and tour travel with over-the-road motorcoaches. We take great pride in serving our community safely and economically for over 50 years.

Chairman Duncan, Ranking Member DeFazio, and Members of the Subcommittee, thank you for this opportunity to testify. On behalf of the members of the American Bus Association and the United Motorcoach Association, we appreciate you calling this hearing today and the opportunity to represent the motorcoach travel and tourism industry and our perspectives regarding the Federal Motor Carrier Safety Administration's Compliance Safety and Accountability Program, better known as CSA.

Among professionals in passenger transportation safety, hopes were high that CSA would afford new and improved tools to better predict the likelihood of commercial motor vehicle crashes. When CSA was launched, FMCSA stated: "It introduces a new enforcement and compliance model that allows FMCSA and its State Partners to contact a larger number of carriers earlier in order to address safety problems before crashes occur." Unfortunately, at this point independent studies and anecdotal evidence suggest CSA may fall severely short of its intended goal of significantly reducing commercial motor vehicle crashes.

Like its predecessor, CSA is rooted in compliance and the associated enforcement of the most rudimentary rules that are decades old and may not reflect progressive risk management stratagems and actuarial science. In other words, we placed an old engine in a new motorcoach and are expecting better performance. If anything, CSA cries out for improved methods for passenger carrier crash prediction and tools passenger carriers can utilize to mitigate their risk. Instead, the enforcement community remains entrenched in tactics that more resemble a "gotcha" mindset that generates revenue from fines rather than employing methods that truly reduce the possibility of a commercial motor vehicle crash. We do not believe the current data fed into CSA and the current prioritization scheme will result in a significant reduction in crashes.

Recently, Congress authorized \$251,000,000 in Moving Ahead for Progress in the 21st Century (MAP-21) for FY 2013 to inspect commercial motor vehicles and drivers in the field. Routine inspections for a motorcoach include examining a driver's licensing, medical certificate, log books and the vehicle's emergency exits, headlamps, turn signals, emergency flashers, windshield, brake components, engine compartment and air pressure. All of these items are basic components of safe operations and command attention. Unfortunately, compliance or noncompliance with these items is rarely significant as indicators of a commercial motor vehicle driver crash. CSA lacks useful data for passenger carriers to mitigate crashes. Moreover, the consumers of passenger carrier services are left with algorithms and scores that are nearly impossible to decipher when selecting a safe passenger carrier.

Studies indicate that vehicle defects are responsible for less than 2% of commercial motor vehicle accidents. Over 95% of commercial motor vehicle accidents are caused by driver error. But there are stark differences in the significance of the type of driver error and its relation to crash causation. The American Transportation Research Institute reports that a conviction for "Failure to Use/Improper Signal" increases the likelihood of a commercial motor vehicle crash by 96%. Conversely, any "out-of-service" violation normally detected at a destination or roadside inspection increases the likelihood of a driver's involvement in a subsequent commercial motor vehicle by 26%. A "Past Crash" or "Improper Passing" violation increases the likelihood of driver's involvement in a crash by 88% while a "Size and Weight" violation increases the likelihood of an accident by 18% and a "Disqualified Driver" or "Medical Certificate" violation rates as "non-significant".

All of the highest indicators of an increased propensity for an accident relate to basic traffic law enforcement. In July 2009, the American Bus Association's Bus Industry Safety Council (BISC) implored the enforcement community at the International Association of Chiefs of Police meeting to issue citations when drivers violate basic traffic laws and insist that courts avoid reducing or modifying the original charges. It is a common complaint of owners of passenger carrier companies that law enforcement seems to ignore drivers who violate speed limits or drivers that follow other vehicles too close, while on the other hand issuing tickets for burned-out tail lights that increases a carriers' Safety Measurement Scores that may eventually trigger an FMCSA intervention.

CSA also fails to recognize the vast differences in the level of State participation in inspection activity. Many carriers' base of operation are in States lacking any formal passenger carrier inspection programs and therefore have very low contact with carriers while other states have substantial inspection activity. Make no mistake about it; the passenger carrier business is a national business. Tour operators routinely select passenger carriers from states hundreds of miles from the trip origination. It would not be surprising to find a carrier with better scores in Mississippi due to low enforcement contact compared to a high contact state such as New York. Is a passenger carrier safer that receives little or no inspection activity and therefore has no violations safer than a passenger carrier whose base of operation is in a high contact state? Additional disparities develop when the CSA scores do not take into account carriers' urban or rural bases of operations; miles traveled and in what regions those miles are traveled.

Often, when drivers incur traffic violations there are further disparities within CSA's Safety Measurement System. Passenger carriers with very low tolerance for traffic infractions routinely terminate drivers in an effort to eliminate the increased likelihood of a crash. Unfortunately, CSA's Safety Measurement Scores do not reflect the elimination of the risk when the driver is dismissed and the operator must endure the punitive scores associated with the violation for two years and which may subject the company to an agency intervention. Meanwhile the dismissed driver simply finds a carrier with more tolerance for drivers with traffic infractions; thus taking his increased likelihood for crashes with him. CSA in no way mitigates these disparities nor identifies the carrier with the increased propensity for an accident. Inconsistencies revolve around the differences in training, skill, supervision and experience of the officer inspecting the commercial motor vehicle. Should the inspecting officer err in some respect (e.g. wrongful assignment of a violation, a misinterpretation or mistake in law) the carrier's appeal process is arduous and time consuming. Any appeal is submitted via an online system once the violation appears on the carriers' safety record. Plainly stated, the system presumes the operator or driver at-fault on all violations. Furthermore, the appeal is reviewed by the very officer that issued the violation. States have various response times to the appeal and supervision over the appeal. Recently, FMCSA introduced an appellate process that may prove promising; but adds yet another layer of time-consuming bureaucracy. Meanwhile, as the information concerning the violation is public, passenger carriers must suffer the adverse consequences of consumers and insurers viewing violations that are in dispute as well as the costs in time and resources of getting the violation removed.

Perhaps CSA's most controversial subject is the issue of crashes. Simply stated all crashes, regardless of accountability, are the number one indicator that a commercial motor vehicle company and/or driver will incur another crash. In the past, FMCSA has collected information regarding all crashes. If the crashes associated with a carrier reached a certain threshold, an intervention occurred that evaluated the carrier's compliance with the Federal Motor Carrier Safety Regulations. Further evaluation of crashes was done to determine "preventability". We believe this system worked relatively well. However, the CSA system is problematic. First of all, consumers of commercial passenger carrier services are encouraged to evaluate a carrier's Safety Measurement System scores, including crash data. Unfortunately, the data contains no information regarding the severity or accountability of a crash. Unfiltered, the information cannot serve as credible consumer information upon which a carrier selection can be made. While ABA and UMA believe that crash data serves a critical role in predicting a carrier's propensity for an accident; the information in its current form is inappropriate for consumers and should be restricted to enforcement and the motor carrier's view only. Congress recently passed legislation that would require the FMCSA to develop an easy to understand rating system for consumers of passenger carrier services that would presumably reflect a carrier's propensity for a crash. ABA and UMA feel the development of this rating system should be prioritized by FMCSA leadership in order to meet the eighteen month deadline imposed by Congress.

There is one final issue that must be raised. Current law requires that States will ensure that, except in the case of an imminent or obvious safety hazard, an inspection of a vehicle transporting passengers for a motor carrier of passengers is conducted at a station, terminal, border crossing, maintenance facility, destination, or other location where motor carriers may make planned stops. Congress will be disappointed to learn that FMCSA is advising States that

they may conduct passenger carrier vehicle and driver inspections at State weigh "stations"; subverting the will of Congress to protect passengers from safety hazards, delayed schedules and interfering with passengers' ability to find proper accommodations during inspections. The recently passed MAP-21 not only reiterates the prohibition against weigh station inspections but further states under Sec.32504 (ii) "Impoundment and Immobilization of Commercial Motor Vehicles for Imminent Hazard": "Enforcement shall not unreasonably interfere with the ability of a shipper, broker, or other party to arrange for the alternative transportation of any cargo or passenger being transported at the time the commercial vehicle is immobilized. In the case of a commercial vehicle transporting passengers, the Secretary or authorized State official shall provide reasonable, temporary, and secure shelter and accommodations for passengers in transit." It is our position that no weigh station was designed to accommodate 57 passengers, some of which may be very young, senior citizens or disabled.

Anecdotal evidence exists that CSA has changed behaviors and improved compliance with the Federal Motor Carrier Safety Regulations as interpreted by the North American Standard Out-of-Service Criteria. Our reservations with CSA concern its limited effect of reducing passenger carrier crashes through expensive and somewhat antiquated methods. Perhaps CSA's best feature is its flexibility and adaptability. The leadership at FMCSA has been responsive to recommendations and already CSA has evolved significantly since its entry in December 2010 and we applaud the FMCSA leadership for its willingness to listen to the industry.

We have two final recommendations for CSA. First, we recommend that the Government Accountability Office (GAO) engage the services of the American Academy of Actuaries in an effort to more effectively explore the link between the most significant causes of commercial motor vehicle crashes and the CSA's Safety Measurement System.

Second, under CSA, carriers are placed into peer groups (i.e., other carriers with similar numbers of inspections or size) and ranked according to performance. The rankings determine which carriers may not be complying, through inspections, with the Federal Motor Carrier Safety Regulations and therefore prioritized for intervention. However, passenger carriers are included in the peer rating system with the much larger population of trucks. Given the nature of passenger carriers whose fleets may be typically smaller, travel fewer miles, and have a variety of risk exposures; we recommend that passenger carriers be rated within a passenger carriers peer group to more readily identify passenger carriers for interventions.

In conclusion, we believe CSA is well-intended, but has room for significant improvement and we look forward to working with the Committee and the FMCSA to achieve its intended goals.

On behalf of the members of the American Bus Association and the United Motorcoach Association, I appreciate this opportunity to express our views regarding this important subject and to answer any questions you may have.

ABA represents motorcoach and tour companies in the United States and Canada. Its members operate charter, tour, regular route, airport express, special operations and contract services (commuter, school, transit). Another 2,800 member organizations represent the travel and tourism industry and suppliers of bus products and services who work in partnership with the North American motorcoach industry.

Founded in 1971, the United Motorcoach Association (UMA) is the nation's largest association of bus and motorcoach companies and industry suppliers with over 1,200 members located across North America. Our Members represents the full spectrum of bus and motorcoach operations; from small family charter and tour - to nationwide scheduled and commuter service operations. The United States Small Business Administration estimates over 90% of all privately owned bus and motorcoach companies meet the definition of "small business."

**SUPPLEMENTAL MATERIAL PROVIDED BY THE UNITED
MOTOROACH ASSOCIATION**

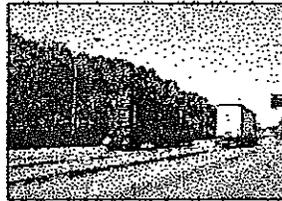
American Transportation Research Institute, "Predicting Truck Crash Involvement: A 2011 Update", April 2011.

Federal Motor Carrier Safety Administration Analysis Brief, "The Bus Crash Causation Study", January 2010 (Publication No. FMCSA-RRA-10-003).

**SUPPLEMENTAL MATERIAL PROVIDED BY THE AMERICAN
BUS ASSOCIATION**

American Bus Association letter of September 10, 2012 to Federal Motor Carrier Safety Administrator Re: Roadside Bus Inspections.

Research Results



Predicting Truck Crash Involvement: A 2011 Update

The Problem

Despite fatal truck crash totals reaching their lowest levels in U.S. DOT recorded history in 2009, both industry and government remain convinced there is room for improvement. Reacting to recent research which has highlighted the pivotal role that driver-related factors play in truck crashes, it is clear that efforts aimed at further reducing preventable crashes must focus in large part on driver behaviors.

In 2005, ATRI conducted research that identified specific truck driver behaviors that are most predictive of future truck crash involvement.¹ Numerous factors could have changed these relationships over the past five years, however. Therefore, an updated analysis was warranted to discern which truck driver behaviors from the original study continue to hold predictive value in terms of crash involvement.

Research Goal

The main objective of this research was the identification of specific types of driver behaviors (violations, convictions and crashes) that are most highly correlated with future crash involvement. The Research Team examined to what extent drivers with certain driving records in one year (2008) were more likely to be involved in a truck crash in the following 12 months (2009), compared to drivers who did not have the same violations, convictions or prior crash history. Additionally, the Research Team sought to determine how the updated 2011 findings relate to those from ATRI's 2005 study.

Methodology

This research replicated a first-of-its-kind ATRI study which analyzed several driver-specific databases to statistically relate those data to future crash probability at the driver level of analysis. Data sources included the Motor Carrier Management Information System (MCMIS) and the Commercial Drivers License Information System (CDLIS).

For the purposes of this research, crash involvement was used as the dependent variable. The independent variables were driver-specific performance indicators mined from the data including: specific road inspection violation information; driver traffic conviction information; as well as past crash involvement information.

Driver data were gathered from a two-year time frame (2008-2009) and analyzed across those years to determine the future crash predictability of violations, convictions and crashes which occurred the previous year. Individual chi-square analyses were used to assess whether there was a significant difference in future crash rates for drivers based on their past violations, convictions and/or crash information.

Findings

This study's findings were based on data from 587,772 U.S. truck drivers. The analysis shows that a "failure to use/improper signal" conviction was the leading conviction associated with an increased likelihood of a future crash. When a truck driver was convicted of this offense, the driver's likelihood of a future crash increased 96 percent. Ten additional convictions were also significant crash predictors; of these, eight had an associated crash likelihood increase between 56 and

¹ American Transportation Research Institute, Predicting Truck Crash Involvement: Developing a Commercial Driver Behavior-Based Model and Recommended Countermeasures. Alexandria, VA. October 2005.

84 percent, while two registered between 36 to 40 percent.

In relation to driver violations, an improper passing violation had the strongest association with crash involvement. Drivers with this violation were 88 percent more likely than their peers to be involved in a crash. Seven additional violations had significant crash associations, with five ranging in magnitude between 38 and 45 percent and two between 18 and 21 percent.

Finally, the results indicated that drivers who had a past crash also had a significant 88 percent increase in their likelihood of a future crash. Table 1 ranks the top 10 driver events by the percentage increase in the likelihood of a future crash.

Table 1

If a driver had:	Increase in Crash Likelihood
A Failure to Use / Improper Signal conviction	96%
A Past Crash	88%
An Improper Passing violation	88%
An Improper Turn conviction	84%
An Improper or Erratic Lane Change conviction	80%
An Improper Lane / Location conviction	68%
A Failure to Obey Traffic Sign conviction	68%
A Speeding More Than 15 Miles over Speed Limit conviction	67%
Any conviction	65%
A Reckless / Careless / Inattentive / Negligent Driving conviction	64%

Conclusions drawn from this 2011 updated report include an acknowledgement that driver behaviors, while still associated with crash involvement, appear to be less strongly related than in ATRI's original report, when three predictors were found to more than double crash risk. Moreover, while many of the 2005 behaviors demonstrated similar patterns in the analysis update, a number of the most predictive behaviors from 2005 were replaced by new behaviors. Theories are proposed for these changes, with an emphasis on the finding that roadside inspected drivers generally had much safer records in the 2011 study, as evidenced by the lower proportion of drivers being issued violations (see Table 2).

Table 2

Violation:	Percent of Drivers with Violation (2005 Study)*	Percent of Drivers with Violation (2011 Study)*	Percent Change
Improper Passing	0.49%	0.11%	-78.02%
False or No Log Book	44.44%	20.10%	-54.77%
Speeding	25.04%	11.86%	-52.28%
Failure to Yield Right of Way	0.27%	0.14%	-48.07%
Disqualified Driver	1.65%	0.86%	-47.92%
Improper Turns	0.16%	0.08%	-46.86%
Following Too Close	1.42%	0.80%	-43.74%
Medical Certificate	10.59%	6.19%	-41.53%
Reckless Driving	0.10%	0.06%	-39.89%
Size and Weight	23.88%	14.52%	-39.19%
Moving	44.50%	27.49%	-38.23%
Improper Lane Change	1.02%	0.64%	-37.44%
Failure to Obey Traffic Control Device	3.44%	2.52%	-26.81%
Hours-of-Service	20.50%	17.32%	-15.51%
Any OOS violation	37.95%	34.74%	-8.45%

*Figures are calculated using only those drivers in the study who had a Roadside Inspection in 2002-2003 and 2008, respectively

Finally, the report provides recommendations for how the industry can apply the current study's findings to continue to reduce the occurrence of crashes and crash-related behaviors. ATRI developed a formula for identifying "top tier" enforcement states, which highlight those states that contribute proportionally more to the nation's traffic enforcement activity totals than truck crash statistic totals.

Overall, the findings in this report suggest that driver interventions and industry innovations are capable of altering the magnitude and even the presence of the linkage between behaviors and future exposure to crashes. By becoming aware of problem behaviors, carriers and enforcement agencies are able to address those issues prior to them leading to serious consequences. The converse is also true, however, as lower priority behaviors, if ignored, may begin to play an increasing role in crash involvement.

To receive a copy of this report and other ATRI studies, please visit: WWW.ATRI-ONLINE.ORG



ATRI's primary mission is to conduct and support research in the transportation field, with an emphasis on the trucking industry's essential role in the U.S. and international marketplace.



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ANALYSIS BRIEF

Federal Motor Carrier Safety Administration

THE BUS CRASH CAUSATION STUDY

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Summary

The Motor Carrier Safety Improvement Act of 1999 mandated a study to determine the causes of, and factors contributing to, crashes involving commercial motor vehicles and directed the Secretary of Transportation to transmit the results of the study to Congress. In response, the Federal Motor Carrier Safety Administration and the National Highway Traffic Safety Administration conducted a three-year study of large truck crashes—the Large Truck Crash Causation Study—and a smaller study of bus crashes, the Bus Crash Causation Study (BCCS). This Analysis Brief summarizes the results of the BCCS. Approximately 50 people are killed and fewer than 1,000 are injured annually in cross-country and intercity bus crashes. Given those relatively small numbers of bus-related fatalities and injuries, FMCSA decided to collect crash data in northeastern New Jersey, which is part of the New York City metropolitan area and home to large fleets of various types of buses. The BCCS was designed to collect more than 400 data elements on each crash that included at least one bus and at least one fatality or injury. Data collection included crashes occurring from January 1, 2005, to December 31, 2006.

The BCCS report includes information on 40 buses involved in 39 fatal and injury crashes (Category A, crashes involving fatalities or incapacitating injuries; or Category B, crashes involving non-incapacitating injuries) that occurred in New Jersey in 2005 and 2006. The following key variables were coded for each crash: *critical event* (the event after which a crash is unavoidable); *critical reason* (the immediate reason for the critical event); and *associated factors* (all factors selected from the current understanding of conditions related to crash risk and present at the time of the crash). Human errors by bus drivers, other vehicle drivers, and pedestrians or bicyclists were assigned as the critical reasons for bus crashes in 90 percent of the cases in the BCCS. Of the 19 crashes in which the bus was assigned the critical reason for the crash, driver error was the specific reason in 15 cases. In the 20 cases for which the critical reasons were not assigned to the bus or its driver but to another (non-bus) vehicle, a pedestrian, or a bicyclist, the problem was human error.

THE BUS CRASH CAUSATION STUDY

Introduction

The Motor Carrier Safety Improvement Act of 1999 (MCSIA) mandated a study to determine the causes of, and factors contributing to, crashes involving commercial motor vehicles (CMVs). The MCSIA directed the Secretary of the U.S. Department of Transportation (DOT) to transmit the results of the study to Congress. In response, DOT's Federal Motor Carrier Safety Administration (FMCSA) and National Highway Traffic Safety Administration (NHTSA) conducted a three-year study of large truck crashes. FMCSA transmitted a report to Congress on the Large Truck Crash Causation Study (LTCCS) in March 2006. This Analysis Brief summarizes FMCSA's report to Congress providing the results of the Bus Crash Causation Study (BCCS).

Each year in the past decade, more than 4,800 people have been killed and more than 100,000 people have been injured in crashes involving large trucks. For the LTCCS, FMCSA was able to obtain a representative sample of large truck crashes by employing researchers at each of the 24 NHTSA Crashworthiness Data System (CDS) data collection sites across the Nation. In comparison, approximately 50 people are killed and fewer than 1,000 injured annually in cross-country and intercity bus crashes. Using the same data collection strategy for BCCS as LTCCS was not practical. Given the relatively small number of cross-country and intercity bus crashes resulting in fatalities or injuries and the concentration of those crashes in certain metropolitan areas, a nationally representative sample of bus crashes would have been prohibitively expensive to acquire and would have taken many years to complete.

Faced with the challenges of acquiring a representative, national sample of bus crashes, FMCSA decided to collect crash data in northeastern New Jersey, which is part of the New York City metropolitan area and home to large fleets of various types of buses. The goal was to study 50 to 100 crashes in a year. However, the paucity of bus crashes resulting in fatalities or injuries revealed

only 39 crashes involving fatalities or incapacitating injuries (Category A) or non-incapacitating injuries (Category B) in 2 years. Despite the small sample, the BCCS is the largest in-depth comprehensive examination of bus crashes ever conducted.

The BCCS database is available electronically to the public. The public copy of the database does not include data from interviews that cannot be validated by a second source. Qualified researchers, academic institutions, and government agencies will be granted full access to the database, including interview data.

Methodology

The BCCS was conducted in New Jersey by FMCSA research staff and State CMV inspectors, in conjunction with New Jersey law enforcement and public safety agencies. The BCCS was designed to collect more than 400 data elements on each crash that included at least one bus and at least one fatality or injury. Generally, the study did not include crashes involving New Jersey transit buses or school buses transporting children from home to school, because most of FMCSA's safety regulations do not apply to those vehicle types. The only exception was to include transit and school buses if the crash involved at least one fatality.

Data collection included crashes occurring from January 1, 2005, to December 31, 2006. Buses are defined as vehicles designed or used to transport 9 to 15 people (including the driver) for compensation or more than 15 people for any purpose. New Jersey was selected as the data collection site for the following reasons: a high volume and wide variety of bus traffic; a high level of interest in bus crashes expressed by Federal, State, and local New Jersey government officials; and a strong State bus safety program. To ensure data quality, crash-site investigations began as soon as possible after the crash.

FMCSA developed the BCCS database using a methodology modeled on the LTCCS and

focused on pre-crash factors. State and local police agencies notified an FMCSA researcher when a crash occurred. Data collection was performed at each crash site by a two-person team consisting of a trained researcher and a New Jersey State bus inspector who conducted a North American Standard Level 1 inspection of the bus and bus driver involved in the crash. The researcher and bus inspector collected driver, passenger, and witness interviews at the crash scene. Crash forms were used to record extensive data, including the following:

- Location, time, date, and sequence of the crash event and collision measurements
- Bus and bus driver inspection results
- Roadway conditions, weather conditions, and traffic conditions
- Pre-crash events
- Driver age, sex, physical characteristics, and injury severity
- Drivers' use of drugs or alcohol.

Additional interview data were collected by telephone from the motor carrier responsible for the bus and from the drivers of other vehicles involved in the crash after leaving the crash scene. Researchers also reviewed police crash reports, hospital records, and coroners' reports for fatal crashes. The researcher often revisited a crash scene to refine scene diagrams and search for additional data. Crash case data were provided to FMCSA crash experts for coding, and difficult cases were reviewed by FMCSA New Jersey Division and Headquarters staff before being included in the electronic study database.

Crash Characteristics

This report includes information on 40 buses involved in 39 fatal and Category A or Category B injury crashes occurring in New Jersey in 2005 and 2006. Nationally, during this same time span, buses were involved in 5.6 percent of all large truck and bus fatal crashes; but in New Jersey, buses were involved in 14.5 percent of all truck and bus fatal crashes. Due to the small sample of 39 crashes, only

whole numbers are used in the discussion of the BCCS data. There were 14 crashes involving at least one fatality and 25 crashes involving at least one A or B injury.

Eighteen of the 39 crashes included in this report involved a collision between a bus and a passenger vehicle (i.e., passenger car, pickup truck, van, or sport utility vehicle). In other crashes with motor vehicles, three buses collided with commercial trucks, two collided with motorcycles, one collided with a light rail car, and one was a crash between two buses. In eight cases, the bus hit a pedestrian, and in two cases the bus hit a bicyclist. There were four single-vehicle crashes, and in two of the crashes the buses caught fire.

Table 1 presents data on the bus body type for the 40 buses involved in the 39 crashes. More than half of these buses were motorcoaches (intercity buses).

Table 2 presents data on the bus operation for the 40 buses involved in the 39 crashes. Most of the buses were being used in charter or intercity regular route service. Examples of "other" operation types include a van carrying mentally disabled adults to a group home after a day trip and a condominium complex operating a bus service.

Table 1 Bus Body Type

Body Type	Number
Motorcoach	26
Transit bus	5
School bus	3
Large van	3
Small bus	3
Total	40

THE BUS CRASH CAUSATION STUDY

Table 2: Bus Operation

Operation Type	Number
Charter	16
Intercity regular route	10
Private/business	4
Transit	4
School	2
Other	4
Total	40

Coding Crash Data

The following key variables were coded for each crash:

Critical event: The event after which a crash is unavoidable. The critical event is the action or event that put the vehicle or vehicles on a course that made the collision unavoidable, given reasonable driving skills and vehicle handling. One vehicle in each crash is coded with the critical event. Examples of critical events include "lane change/run off road" and "loss of control."

Critical reason: The immediate reason for the critical event. The reason is coded to the vehicle that was coded with the critical event. The reason can be assigned to the driver, vehicle, or environmental conditions leading to the critical event. Possible critical reasons include: driver condition and decisions; vehicle failure; and environmental conditions, including weather and roadway conditions or roadway design features.

Associated factors: All factors selected from the current understanding of conditions related to crash risk and present at the time of the crash. No judgment is made as to whether the factor is related to the particular crash, just whether it was present during the crash event. Associated factors

are considered in conjunction with the assignment of a critical reason to identify the range of events that lead to a crash. The associated factors provide sufficient information to describe comprehensively the circumstances of the crash. Examples of associated factors include fatigue, making an illegal maneuver, and inattention.

In addition to the analysis of crash events provided in this report, there are narrative descriptions included with each of the 39 crash case files. The tables in the following section focus on critical events, critical reasons, and associated factors for all cases included in the BCCS. Although critical events, critical reasons, and associated factors do not define the cause of a crash independently, when they are considered together, they provide researchers with the information needed for reasonable reconstruction of the crash events and assessment of crash causation.

Results

Table 3 provides a breakdown by critical event of the 19 crashes where the critical reason was assigned to the bus. "Traveling too fast" means the driver was traveling too fast for the conditions at the time of

Table 3: Crashes by Critical Events Where the Bus Was Coded with the Critical Reason

Event	Number
Pedestrian entering traffic lane	5
Lane change/run off road	4
Other vehicle stopped in lane	3
Traveling too fast for conditions	3
Other	4
Total	19

the crash, which may or may not be related to the speed limit. Other events included a bicycle in the roadway and a bus crossing through an intersection.

Table 4 shows the coding of critical reasons assigned to a bus. In 15 of the 19 cases, the critical reason was assigned to the bus driver, including 10 incidents in which the driver was coded with either inadequate surveillance (failed to look; looked but did not see) or inattention (attention wandered from driving task), both of which fall into the category of failing to recognize and react to a situation to avoid a collision. The only critical reasons assigned to the buses were fires on two buses and one incident of failed brakes. In one case, environmental conditions

(e.g., roadway condition and design or adverse weather conditions) were coded as the crash critical event.

In the remaining 20 crashes, the critical reasons were not assigned to the bus or its driver. Other vehicles involved in the crashes were assigned the critical reason in 16 of the cases, and pedestrians were assigned the critical reason in 4 of the cases. In each of those 20 cases, the critical reason was assigned to the people involved, as opposed to vehicle failure or adverse environmental conditions. The drivers of the other vehicles were coded with traveling too fast or too slow (5 crashes), being unable to perform the driving task due to falling asleep or illness (4 crashes), being inattentive or distracted (3 crashes), and other factors (4 crashes). In all 4 of the crashes where pedestrians were coded with the critical reason, the critical reason was inattention.

Table 4.
Coding of Critical Reasons to Buses

Reason	Number
Driver	
Inadequate surveillance	6
Inattention	4
Following too close	2
Other	3
Driver total	15
Vehicle	
Bus fire	2
Brakes failed	1
Vehicle total	3
Environment	
Ice on the road	1
Environment total	1
Total assigned to buses	19

Table 5 shows those associated factors that were coded more than once among all bus drivers in the study. Note that some factors coded for the drivers as being present before the crash were later judged also to be the critical reason for the crash. For example, inadequate surveillance was coded for 10 of the 40 bus drivers and was judged to be the critical reason for 6 crashes. The associated factors are listed in descending order according to how often they were coded for the bus drivers.

Each of the following eight associated factors was cited only one time: aggressive driving; driver distracted by conversation; driver was uncomfortable with passengers; driver made a false assumption; fatigue; illness; traveling too slow; and line of sight obstructed inside the bus.

State bus inspectors conducted a driver and vehicle safety inspection of each bus involved in a crash. The inspections determined whether serious safety problems existed before the crashes happened. These safety problems, if discovered before the crash, would have been enough for the inspector to place the bus out of service until the problems were corrected.

THE BUS CRASH CAUSATION STUDY

The pre-crash out-of-service (OOS) violations identified by State bus inspectors are shown in Table 6. Five of the bus drivers coded with the crash critical reason were each cited for one driver OOS violation. None of the drivers of the 21 buses that were not assigned the crash critical reason was cited with a driver OOS violation. Five buses coded with the crash critical reason had 12 vehicle OOS violations, and only 2 of the 21 buses *not* coded with the critical reason for the crash had vehicle OOS violations.

Table 5
Associated Factors Coded to Bus Drivers

Associated Factor	Number
Line of sight obstructed by vehicle, object, sign	22
In a hurry	16
Inadequate evasive action taken	15
Uncomfortable/unfamiliar with the road	11
Inadequate surveillance	10
Made an illegal maneuver	9
Prescription drug use	8
Driver had vision problems	6
Inattention/distraction	5
Impending problem masked by traffic flow	4
Distracted by a person, object, or event	4
Line of sight obscured by weather, poor light	4
Misjudged gap or velocity	4
Following too close	3
Driver had hearing problems	2
Travelling too fast	2

Of the 18 bus vehicle OOS violations, 6 involved brakes, 3 involved repair and maintenance problems, and 3 involved lighting devices violations. Other bus OOS violations included problems with the function or condition of steering, suspension, frame, axle, windshield, or emergency exit. Of the 18 bus vehicle OOS violations, 12 were assigned to the buses that were coded with the crash critical reason.

Three of the 19 drivers for the buses coded with the critical reason either carried an expired medical certificate or did not have a medical certificate. It is worth noting that not being able to present a medical certification is not an OOS violation. For 28 of the 40 drivers in the BCCS, data about medical certification were unknown.

Conclusion

Human errors by bus drivers, other vehicle drivers, and pedestrians or bicyclists were assigned as the critical reasons for bus crashes in 90 percent of the cases in the BCCS. Of the 19 crashes in which the bus was assigned the critical reason for the crash, driver error was the specific reason in 15 cases. In the 20 cases for which the critical reasons were not assigned to the bus or its driver but to another (non-bus) vehicle, a pedestrian, or a bicyclist, the problem was human error. The only cases for which the critical reason was not assigned to a driver, pedestrian, or bicyclist were two cases in which the buses caught fire, one case in which the bus brakes failed, and one case in which ice on the roadway resulted in a crash.

These results are very similar to the results in the LTCCS. In that study of 963 fatal and injury crashes involving large trucks, when the critical reason was assigned to the truck, it was assigned to the driver in 88 percent of the cases. When the critical reason was assigned to another vehicle—almost always a passenger vehicle—the reason was coded to the driver in 92 percent of the crashes. The only major difference between the studies is the almost total lack of pedestrians and bicyclists in the truck study.

Although the BCCS cannot be considered a representative sample of bus crashes (unlike the larger LTCCS, which was a nationally representative sample of fatal and injury crashes involving large trucks), it stands as an important study that has yielded worthwhile insight into crash risk factors for buses. Many of the human errors assigned to bus drivers, including inattention, distraction, haste, and misjudgments, are not violations of laws or regulations. On the other hand, some of the human errors are chargeable offenses—such as making illegal maneuvers and following too close. In many instances, human errors were accompanied by Federal OOS violations, such as violations of hours-of-service regulations or vehicle safety standards.

While better enforcement can improve the safety climate, producing safer drivers cannot be ensured solely by police enforcement actions. Finally, numerous vehicle OOS violations were found in BCCS post-crash inspections. The interaction of defective vehicles with driver errors cannot be ignored in assessing reasons for the crashes.

Table 6

Driver and Vehicle Out-of-Service Violations for All Buses in the Study

Violation	Number of Buses Coded with Critical Reason	Number of Buses Not Coded with Critical Reason	Total
Driver violations			
No commercial drivers license (CDL)	1	0	
10-hour rule	1	0	
No passenger endorsement on CDL	1	0	
Reckless operation	2	0	
Total driver violations			5
Vehicle violations			
Brakes	5	1	
Repair and maintenance	2	1	
Lighting devices	2	1	
Other	3	3	
Total vehicle violations			18
Total OOS violations			23

ANALYSIS BRIEF

Federal Motor Carrier Safety Administration



Office of Analysis, Research and Technology Federal Motor Carrier Safety Administration

The primary mission of the Federal Motor Carrier Safety Administration (FMCSA) is to reduce crashes, injuries and fatalities involving large trucks and buses. In carrying out its safety mandate, FMCSA develops and enforces data-driven regulations that balance motor carrier (truck and bus companies) safety with industry efficiency; harnesses safety information systems to focus on higher risk carriers in enforcing the safety regulations; targets educational messages to carriers, commercial drivers, and the public; and partners with stakeholders including Federal, State, and local enforcement agencies, the motor carrier industry, safety groups, and organized labor on efforts to reduce bus and truck-related crashes.

The mission of the Office of Analysis, Research and Technology is to reduce the number and severity of commercial motor vehicle crashes and enhance the efficiency of CMV operation by conducting systematic studies directed toward fuller scientific discovery, knowledge, or understanding; adopting, testing, and deploying innovative roadside practices and technology; analyzing trends, costs, fatalities and injuries in large truck and bus crashes; monitoring data quality; and preparing economic and environmental analyses for FMCSA's rulemakings.

This Analysis Brief was produced by the Analysis Division in FMCSA's Office of Analysis, Research and Technology. The Analysis Division provides the transportation industry and the public with analytical reports on trends, costs, and fatalities and injuries in large truck and bus crashes. The division also monitors data quality to ensure an accurate measurement of safety performance, so effective countermeasures can be developed to reduce the occurrence and severity of commercial motor vehicle crashes. In addition, the Analysis Division prepares all the economic and environmental analyses for FMCSA's significant rulemakings to ensure changes to motor carrier regulations are based on sound analysis and data.

ART
Office of Analysis,
Research and
Technology
Federal Motor Carrier
Safety Administration

MC-RR
1200 New Jersey Avenue, SE
Washington, DC 20590

For more information
contact the Analysis Division
at (202) 366-4839
or visit our web sites at
www.fmcsa.dot.gov
at fmcsa.dot.gov



AMERICAN BUS ASSOCIATION
Representing the motorcoach, tour and travel industry

September 10, 2012

VIA ELECTRONIC MAIL

Hon. Anne Ferro
Administrator
Federal Motor Carrier Safety Administration
1200 New Jersey Avenue, S.E.
Washington, D.C. 20590

Re: Roadside Bus Inspections

Dear Administrator Ferro:

The American Bus Association ("ABA") is strongly opposed to the FMCSA's recent policy guidance that encourages states to conduct roadside inspections of intercity buses at weigh stations. A copy of the June 27, 2012 Memorandum from William Quade setting out this policy is attached. This position clearly violates federal law and is bad public policy.

As you know, this directly contravenes federal statutory and regulatory requirements. Section 4106 (a) of SAFETEA-LU added a new requirement for state motor carrier safety assistance grants as follows:

[E]xcept in the case of an imminent or obvious safety hazard, ensures that an inspection of a vehicle transporting passengers for a motor carrier of passengers is conducted at a station, terminal, border crossing, maintenance facility, destination, or other location where a motor carrier may make a planned stop.

Codified at 49 U.S.C. § 31102(b)(1)(X). The FMCSA has incorporated this statutory requirement into its regulatory grant provisions at 49 C.F.R. § 350.201(y).

The FMCSA's new justification for these inspections en route is that the word "station" in the statute and regulation may be read broadly to include a roadside "weigh station." This is not consistent with either the wording or the intent of the provision.

The reference to a "station" is the first item of a list of places where a vehicle transporting passengers may lawfully be stopped for an inspection, concluding with "or other location where a motor carrier may make a planned stop." A motor carrier never has a vehicle transporting passengers make a planned stop at a weigh station—such stops would only be at the direction of a state motor carrier safety officer. Furthermore, in the context of a paragraph referring solely to limitations on vehicles transporting passengers, the term "station" clearly refers to a bus station, or terminal, not to any location where state officials themselves set up scales and require an inspection protocol. None of those facilities provide sanitation services for passengers or reasonable accommodation for passengers with disabilities. The FMCSA's interpretation would allow the agency and the states to conduct inspections of motorcoaches not just at weigh stations but at service stations, fire stations, and railroad stations. That is not what Congress had in mind in banning state officials from conducting random roadside inspections of intercity buses.

The prohibition exists for the same reason that the Federal Aviation Administration does not conduct random inspections of airplanes when they are loaded with passengers and ready to take off: Congress has determined that the inconvenience to passengers and disruption to travel schedules is greater than the benefits of a truly random inspection program.

The FMCSA's argument that "stations" includes "weigh stations" collapses completely based on the legislative history of the most recent motor carrier safety authorizing legislation, Pub. L. No. 112-141. Section 32601 of S. 1813, as passed by the Senate, would have amended the statutory state motor carrier safety assistance grant criteria in 49 U.S.C. § 31102(b)(1)(X) to specifically provide that inspections of passenger vehicles may be conducted at "weigh stations," in addition to "stations." The relevant section stated:

(X) except in the case of an imminent or obvious safety hazard, ensures that an inspection of a vehicle transporting passengers for a motor carrier of passengers is conducted at a *station*, terminal, border crossing, maintenance facility, destination, rest stop, turnpike service area, *weigh station*, rest stop, turnpike service area, or a location where adequate food, shelter, and sanitation facilities are available for passengers, and reasonable accommodation is available for passengers with disabilities.

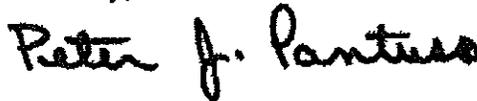
This provision was removed in its entirety by the conference committee and the SAFETEA-LU language remains unchanged. The removal of this language is a clear and unequivocal indication that the conferees did not intend FMCSA to expand its bus inspections to "weigh stations" or any of the other locations added by the Senate language. Furthermore, the fact that the Senate used both "station" and "weigh station" in that provision is compelling evidence that the Congress intended for those terms to mean different things, and that a weigh station was never intended by Congress to simply be another type of station where bus inspections may be performed.

ABA fully supports increased inspections of motorcoaches and the association has lobbied for additional programs and funding for FMCSA to address illegal and unsafe bus operators, including designated funding under MCSAP for increased bus inspections and authority for FMCSA to hire third-party inspectors to assist with the workload. While ABA is sympathetic to the agency's urgent need to combat unsafe bus operations, we cannot allow the agency to ignore the specific restrictions in the law on inspections. Of course, state inspectors remain authorized to stop at bus at any time and at any place when there is an imminent or obvious safety hazard.

ABA asks that you rescind this policy directive immediately because it directly conflicts with the statutory language of SAFETEA-LU and the clear legislative history of MAP-21. We further ask you to advise FMCSA officials, and your state partners, that such random bus inspections at weigh stations are not permitted under federal law, and direct them to comply with those requirements immediately.

Thank you for your prompt attention to this matter.

Sincerely,



Peter J. Pantuso
President and CEO

**American Bus Association
111 K Street, NE 9th Floor
Washington, DC 20002
Direct: 202-218-7229**

Cc:

Bill Bronrott, Deputy Administrator
Bill Quade, Associate Administrator for Enforcement
Jack Van Steenburg, Assistant Administrator and Chief Safety Officer

COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE
Truth in Testimony Disclosure

Pursuant to clause 2(e)(5) of House Rule XI, in the case of a witness appearing in a nongovernmental capacity, a written statement of proposed testimony shall include: (1) a curriculum vitae; and (2) a disclosure of the amount and source (by agency and program) of each Federal grant (or subgrant thereof) or contract (or subcontract thereof) received during the current fiscal year or either of the two previous fiscal years by the witness or by an entity represented by the witness. Such statements, with appropriate redaction to protect the privacy of the witness, shall be made publicly available in electronic form not later than one day after the witness appears.

(1) Name:

William W. Coentry Jr.

(2) Other than yourself, name of entity you are representing:

American Bus Association, United Motorcoach Association

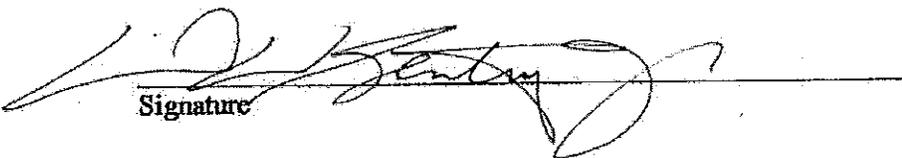
(3) Are you testifying on behalf of an entity other than a Government (federal, state, local) entity?

YES

If yes, please provide the information requested below and attach your curriculum vitae.

NO

(4) Please list the amount and source (by agency and program) of each Federal grant (or subgrant thereof) or contract (or subcontract thereof) received during the current fiscal year or either of the two previous fiscal years by you or by the entity you are representing:


Signature

9/11/2012
Date



Community Anti-Terrorism Training Institute

Community Anti-Terrorism Training Institute, Inc. is a 501(c)(3) non-profit organization. All proceeds from the sale of our products and services are used to support our training programs.

PO Box 1538 Hightstown, NJ 08520 Tel: (609) 448-9655 Fax: (609) 448-9656
www.cateyes.us

September 4, 2012

To whom this may concern;

1. Our company is the grant writers and administrators for Gentry Trailways. Gentry Trailways was awarded grant funding in the amount of \$106,446 from the Fiscal Year 2010 Intercity Bus Security Grant Program (IBSGP) for security investments from the US Department of Homeland Security. These funds will enhance the ability of intercity bus companies to assist in the prevention, protection, response, and recovery from threats or acts of terrorism.
2. Three projects were funded:
 - Project 1 consists of Facility Security Enhancements: Cameras and Fencing with a federal award amount of \$59,988.
 - Project 2 consists of Vehicle Security Enhancements: Vehicle Cameras with a federal award amount of \$26,377.
 - Project 3 consists of Training and Exercises: ALERT Team Training with a federal award amount of \$20,081.
3. Please contact our company for any further questions in regard to this grant award.

Sincerely,

Michael J. Licata
Colonel, USAF, Retired
President

Bill Gentry, President of Gentry Trailways, began working for the family business in 1977. Bill's father started the company in 1953. Gentry Trailways is a member of the American Bus Association, United Motorcoach Association and the Tennessee Motorcoach Association. Over the years, Bill has served in various leadership capacities within the motorcoach and school bus industry. Most notably, Bill is a past President of the TN Motorcoach Association and past ABA Board Member. Bill currently serves as a board member of Trailways Transportation System, Inc.

Bill was born and raised in Knoxville, TN. The Gentry Family has been a part of the Knox County community for many years. Gentry Trailways has been transporting Knox County students to school since 1953 on yellow school buses. Bill is member of Optimist International, an association dedicated to helping youths through service learning projects. Bill is married with 2 children and 1 grandchild.