

***RECOMMENDATIONS FROM
THE GOVERNOR'S STUDY
GROUP ON SCHOOL BUS
SEAT BELTS***



February 28, 2007

TIME LINE

1. Governor Bob Riley Initiated Action
 - A. Four-student fatality crash in Huntsville, November 20, 2006
 - B. Seven-member study group appointed, December 14, 2006
 - C. Organizational meeting held, January 10, 2007

2. Study Group Held Hearings in Huntsville, February 5-6, 2007
 - A. Seventeen (17) "expert" witnesses made presentations
 - B. Nine (9) citizens made presentations

3. Study Group Met in Montgomery on February 14, 2007, 8:30—11:30 a.m.

4. Study Group Delivered Report to Governor Riley on February 28, 2007

INTRODUCTION

In Huntsville, Alabama, on Monday, November 20, 2006, at approximately 10:10 a.m., a 1990 Toyota Celica driven by a seventeen-year-old high school student made contact with a school bus, owned by Laidlaw Company, contractor for student transportation with the Huntsville City Board of Education, carrying 43 high school students. The driver of the bus who was not wearing his seat belt was ejected from the bus. The bus, out of control, rode a 32-inch high concrete rail approximately 117 feet before going over the rail and falling approximately 30 feet, nose first, onto the ground below. Tragically, four high school students were killed with 38 other passengers sustaining serious to minor injuries¹. One student was not injured. Twenty-three of the students sent to the hospital for injuries were released from the hospital the same day.

Struck by the loss of life in Huntsville as well as the injuries to the surviving students, Governor Bob Riley asked seven people in a letter dated December 14, 2006, to serve in a study group capacity "to examine the issue of seat belts on school buses . . ." The charge from the Governor was to examine arguments for and against seat belts and data supporting both arguments, review the steps taken by other states, consider presentations from qualified experts in the field, and prepare a recommendation on what action, if any, needs to be taken to better protect school bus passengers in Alabama. Governor Riley asked for a report and recommendations by March 2, 2007.

The study group, members of which are shown below, met on January 10, February 5-6, and February 14, 2007.

- ◆ Dr. Mary Jane Caylor, Member, State Board of Education, District VIII
- ◆ The Honorable Richard Dorrough, Commissioner, Alabama Department of Children's Affairs
- ◆ Mr. Joe Lightsey, Director, Student Transportation, Alabama Department of Education
- ◆ Mr. Joe McInnes, Director, Alabama Department of Transportation
- ◆ Dr. Ann Roy Moore, Superintendent, Huntsville City Schools
- ◆ Dr. Joseph B. Morton (Chairman), State Superintendent of Education, Alabama Department of Education
- ◆ Colonel Chris Murphy, Director, Alabama Department of Public Safety

This is the report of the Governor's Study Group on School Bus Seat Belts.

¹Statements by Debbie Hersman, Board Member, National Transportation Safety Board, in testimony on February 5, 2007, before the study group in public hearings held in Huntsville, Alabama.

ACKNOWLEDGEMENTS

The aid and assistance of Bryan Taylor, Taylor Nichols, and Margaret McKenzie of Governor Bob Riley's staff were invaluable in locating meeting sites, securing experts to share their expertise with the study group, and, in general, making sure that all members of the study group had anything necessary in order to meet the March 2, 2007, deadline set forth by Governor Riley.

An additional and most sincere acknowledgement goes to Mayor Loretta Spencer, City of Huntsville, for her graciousness and hospitality in hosting the study group for two days of hearings on February 5-6, 2007.

TERMINOLOGY

Seat belt	Seat belts in buses mean lap/shoulder restraints. While some action has been taken across the United States to install lap belts on school buses, the testimony of 17 expert witnesses and 9 citizens clearly indicated that no body of evidence exists that calls for the installation of lap belts on school buses.
Retrofitting	The act of installing seat belts on school buses not originally equipped with this type of equipment. The process involves altering the school bus body side walls and/or floor and adding seat belts to seats not originally equipped with seat belts or drilling holes in the bus body side walls and/or floor and fully replacing the seats.
Compartmentalization	The name for the protective envelope created by strong, closely spaced seats that have energy-absorbing high seat backs that protect occupants in the event of a crash. This is most effective in frontal crashes.
Less than 10,000 pounds gross vehicle weight rating (GVWR)	A small school bus that does not have the mass of large school buses. School buses in this weight classification must meet the requirements for school bus compartmentalization (FMVSS 208) <u>and</u> , at a minimum, be equipped with lap belts (FMVSS 209 and 210).
Greater than 10,000 pounds gross vehicle weight rating (GVWR)	A large school bus with a much greater mass than small school buses. School buses in this weight classification must meet compartmentalization requirements and <u>may</u> be equipped with seat belts.

THE CURRENT STATUS OF SCHOOL BUS SAFETY IN THE UNITED STATES

Bus Safety

Deborah Hersman, National Transportation Safety Board (NTSB) Member, indicated that school bus safety is a priority for her organization. She stated that NTSB can only launch five or six major investigations of accidents annually. The Huntsville school bus accident was one of the NTSB's investigations for 2006. Ms. Hersman indicated that the NTSB felt the National Highway Traffic Safety Administration (NHTSA) should act soon on a Notice for Proposed Rule Making that could lead to new performance standards for school buses. NHTSA has made no significant changes to its 1977 report that required compartmentalization.

On May 7, 2002, the NHTSA sent to Congress a report that contained results from extensive evaluations of school bus passenger crash protection. NHTSA is the federal regulatory agency that, generally speaking, America looks to for clear guidance and definitive recommendations on school bus safety issues in general, and passenger crash protection in particular. NHTSA reported to Congress that in the current school bus configuration lap/shoulder belt systems, if used 100 percent of the time and with no misuse, could save one life a year in accidents involving frontal crashes. NHTSA made a specific point in its report to Congress to note that if states and local school districts decide on their own to require lap/shoulder belt systems, they should be aware of "unintended consequences," including the possibility that the reduced capacity of individual school buses and the nation's school bus fleet as a whole could result in more children being killed or injured when using alternative forms of transportation to get to and from school. NHTSA also advised Congress that states and local school districts that decide to require lap/shoulder belt systems should ensure that no passengers are forced to find alternative means of transportation. Dr. Roger Saul, Director, Office of Crashworthiness Standards for NHTSA, verified this information. NHTSA has made no significant regulatory performance standards since its 1977 report, which required "compartmentalization" and generally stood behind that being a solid approach to passenger safety today. However, NHTSA, following four years of research, is considering the following: increasing seat back height from 20 inches to 24 inches and requiring buses less than 10,000 pounds to have lap/shoulder restraints. This may include seat redesigns so the lap/shoulder belts fit correctly for all passengers aged 6 to adult.

Dr. Saul indicated that NHTSA would announce a Notice of Proposed Rulemaking for school bus passenger safety in 2008. He indicated that public and industry input could last up to three years. He felt at the earliest a new performance standard could be enacted in 2010 or 2011 and that the regulations could provide up to three years for industry to make the transition and the performance standard be enacted nationwide. This could mean 2013 or 2014 would be the actual implementation of a new standard(s).

Regardless of the state, it is statistically verifiable that the transportation of students to and from school in a school bus is the safest form of transportation possible. School buses are safer than automobiles, trucks, motorcycles, bicycles, or walking. Every day in the United States 23.5 million students ride 450,000 school buses and travel 4.3 billion miles annually.

There are on average 20 deaths per year in America that are school bus related. Of those 20 deaths, 15 are pedestrian (outside the bus) and 5 are bus passengers. In Alabama, 7,000 regular route school buses travel over 58 million miles annually transporting more than 363,000 students.

Statistics for Alabama compiled by the Department of Public Safety indicate that between 1996 and 2006 (11 years), there were 1.4 million vehicle crashes in Alabama, with 4,201 of those crashes involving a school bus(es) and 669 of those crashes resulting in some type of injury. Of the 4,201 bus-related crashes, there were 21 people killed—15 in vehicles other than a bus and 6 in a bus (includes the 4 students in Huntsville). In addition to the 2006 Huntsville crash there were two other fatalities over the last 11 years. In Barbour County, in 1999, a teenage boy who was standing in the aisle of his school bus was ejected when the bus was hit in the side by a tractor trailer truck. In Tuscaloosa County, in 2000, a school bus driver was killed when the bus was impacted head on by logs from an overturned log truck.

Virtually, without failure, every speaker (expert) indicated that any state action (law) on requiring seat belts must include three things. If all three things are not included, then the status quo should be maintained. The three things are:

1. More buses, drivers, and support should be added so the number of student riders is the same. Any drop in student riders would affect any advantage that adding seat belts may yield since bus transportation is already the safest form of transportation in the U.S.
2. The bus driver should be given legal immunity for any misuse and/or non-use of seat belts and/or lap/shoulder belts by bus riders. This is not total immunity for all actions related to the job, i.e., failing a drug screening, but immunity from rider misuse and/or non-use of seat belts.
3. All students should receive instruction on the proper use of seat belts and/or lap/shoulder belts. This instruction must not only occur on the school bus, but in the classroom as well. Students should practice seat belt usage including how to buckle, release, and properly adjust.

Bus Design

Modern school buses are the safest school buses ever built. Today's buses are constructed using an integrated design strategy. Integrated school buses are designed and built strictly as school buses as compared to older buses that were simply medium duty trucks with a school bus body mounted on them. As a result of this new design strategy, modern school buses incorporate more safety features than ever before making them an even safer mode of student transportation. Alabama's school bus fleet is one of the safest fleets in the nation as a result of 97% of the buses being ten years old or newer. Newer buses also incorporate more safety technologies including safety features such as better warning systems for loading and unloading students, crossing control arms, LED lighting, higher back seats, more emergency exits, more seat padding, fire-resistant seat materials, diesel engines, automatic transmissions, better visibility, improved mirror systems, and much more.

Do No Harm

Since school buses are the safest form of transportation to transport students to and from school available today in the United States, research and expert testimony stressed that any state contemplating the requirement for school buses to have seat belts should only do so as long as it did not reduce the number of riders. The addition of seat belts to buses invariably reduces the seating capacity of the bus. The seat belts require additional room, and as a rule of thumb buses currently rated as 72-passenger capacity would be reduced to 59 if all students could fit in a space for an elementary student. A bus full of large high school students could be reduced from 72-passenger capacity to as few as 35. However, the national average on seat loss is 17 percent if lap/shoulder restraints are installed. Should any state, including Alabama, require that every bus have a seat with a seat belt for all students, that action could reduce the available seats on average 17 percent, but in some cases up to 50 percent. If additional buses were not purchased in order to accommodate the reduced seating capacity on the original number of buses then some students would have to find alternative methods of transportation. Traffic safety experts contend that an action such as this would be self-defeating due to the fact all other forms of transportation are more dangerous. Thus, the mere act of having all existing buses equipped with seat belts and not adding some buses to the existing fleet would cause more deaths and injuries than doing nothing.

Actions in Other States

1. New York has a law requiring lap belts, but does not require their use.
2. New Jersey has a law requiring lap belts and does require use.
3. Florida is implementing a law that requires lap belts and their use and is approximately 50% complete. Florida law requires belts only on newly purchased buses, so there is no retrofitting, and new bus purchases are staggered around availability of funds.
4. California has a law that requires lap/shoulder belts and their use, but it applies only to new buses. Only 3% of the buses in California currently comply with the state law that was enacted on July 1, 2005. Some school districts in California purchase used buses only so they never have to comply with the state law requiring seat belts on new buses.
5. Louisiana has a law that requires seat belts, but the law is not activated until funds are available. To date, funds have not been available.
6. North Carolina funded a pilot study that placed a total of 13 new buses in 11 different school systems representing a variety of transportation routes. Nine school systems received one bus each, and two school systems received two buses each. The cost of the bus was born by the school system and the additional cost of lap/shoulder-belted seats (\$7,700 per bus) was paid through the pilot study. Seating capacities on buses was reduced as follows: 71 passenger buses were reduced to 59 if all were elementary students. If middle students could fit into elementary spaces on the new buses, the seating capacity was also 59. If they could not fit, the capacity was reduced from 59 to 35. High school student seating capacity was reduced from 71 to 35. It was revealed that elementary students had the greatest utilization of the seat belts. The middle and high school students did not use the seat belts. The study did indicate that girls used seat belts more than boys, that seat belts did reduce bullying and improve discipline,

and that safety instruction and student compliance were issues. There is no law in North Carolina regarding seat belts.

Recommendations

1. If nothing is changed from the current status of school bus safety requirements, rules, and regulations, school buses in Alabama will still be the single safest method available in which to transport students to and from school. With a state-funded system of transportation, Alabama is a national leader in equipping school systems with modern, up- to-date, and safe school buses. Alabama's system of fleet renewal that provides funding to local school systems so they may purchase new buses on a ten-year replacement cycle guarantees that no old, extremely high mileage, or out-of-date buses transport students. This coupled with personnel background checks and training requirements for bus drivers provides Alabama with one of the safest and most modern bus fleets in the nation. However, in the area of bus safety, and making sure Alabama is doing everything possible to save lives and prevent injuries, our state, like others in America, looks to the National Highway Traffic Safety Administration (NHTSA) to provide guidance and design performance standards that manufacturers must meet in building school buses. The last major set of design/performance standards issues by NHTSA was in 1977. NHTSA has been conducting crash tests and researching school bus safety in recent years. The current estimate is that initial standards may be released in 2008 with up to three years allowed for public and industry comment and then up to an additional three years for manufacturers to adjust to any new standards issues. This could mean that school systems could have no new buses equipped with any mandated safety devices until 2013-2014. The Governor's Study Group on School Bus Seat Belts feels this is an unacceptable length of time to wait and recommends that Governor Riley work with the Alabama Congressional Delegation in order to solicit their support so that a united effort can be made to urge NHTSA to act more quickly than currently is projected and, furthermore, that Governor Riley seek the support of this effort through the National Governors Association (NGA) so that everyone concerned with school bus safety can unite on urging NHTSA to act expeditiously with regard to school bus safety design/performance standards.
2. The members of the Governor's Study Group on School Bus Seat Belts recommend that until NHTSA releases new performance standards on school bus safety that a pilot study be conducted on the use of lap/shoulder seat belts on a limited number of new school buses in Alabama beginning in FY 2008. While a pilot may not yield information regarding improving fatality rates in school bus accidents (to do so would require a bus in the study to be involved in a serious accident and everyone prays for that not to happen), the study may yield some vital information on passenger injuries, bus discipline, and other safety improvements that are yet unknown. The recommendation includes that the pilot be funded by an appropriation from the Alabama Legislature to the Alabama Department of Education; that the pilot study include all additional costs associated with reducing seating capacity due to lap/shoulder seat belts being on new buses; that when a bus capacity is lowered in the pilot study that funds are made available to fund the purchase of an additional bus and additional drivers with salary so

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FEBRUARY 28, 2007**

no expense is borne by the local school system and no reduction in ridership occurs; and that instruction is given to students in the pilot study on the proper use of seat belts. It is further recommended that funds be provided by the Alabama Legislature to the Department of Education to engage an Alabama university and/or other specialists in the field of seat belt safety to design the pilot study, collect data regarding the pilot study, analyze data, and make an annual report to the Governor beginning September 2008 and every year thereafter that the pilot study is funded. The cost of the pilot study is estimated to be \$750,000 for FY 2008. A budget for FY 2008, FY 2009, and FY 2010 is shown below.

FY 2008		
Upcharge on Buses with Seat Belts	10 @ \$10,000	\$100,000
Additional Buses due to Capacity Reduction	5 @ \$66,600	\$333,000
Additional Bus Drivers	5 @ \$25,583	\$127,915
Additional Bus Aides	5 @ \$19,681	\$98,405
Additional Fuel	5 @ \$3,563	\$17,815
Research and Administrative Costs		\$72,865
		Total \$750,000

FY 2009		
Bus Drivers for Study	5 @ \$26,863	\$134,315
Bus Aides for Study	5 @ \$20,666	\$103,330
Fuel for Study	5 @ \$3,742	\$18,710
Research and Administrative Costs		\$72,865
		Total \$329,220

FY 2010		
Bus Drivers for Study	5 @ \$28,207	\$141,035
Bus Aides for Study	5 @ \$21,700	\$108,500
Fuel for Study	5 @ \$3,930	\$19,650
Research and Administrative Costs		\$72,865
		Total \$342,050
		Grand Total \$1,421,270

Expert Witnesses

Stephan Moran, M.D., Chief of Trauma Surgery, Huntsville Hospital

Ms. Robin Leeds, Industry Specialist, National School Transportation Association

Jeff Tsai, Director, School Transportation Group, Institute for Transportation Research and Education, North Carolina State University

Martha Warren Bidez, Visiting Senior Scientist, Task Force for Child Survival and Development; Professor of Biomedical Engineering, University of Alabama at Birmingham

Deborah A. P. Hersman, Board Member, National Transportation Safety Board

Roger Saul, Ph.D., Director, Office of Crashworthiness Standards, National Highway Safety Administration

Derek Graham, President, National Association of State Directors of Pupil Transportation Services, Director of Pupil Transportation, North Carolina Department of Public Instruction

Charlie Hood, Pupil Transportation Director, Florida Department of Education

Alexandra Robinson, President, California Association of School Transportation Officials

John Davies, Director of School Transportation, Independence, Public Schools, Missouri
Member, Missouri Governor's School Bus Safety Task Force

Mike James, Alabama Coordinator, National Child Passenger Safety Board

Mike Martin, Executive Director, National Association for Pupil Transportation

Charlie Vits, Bus Market Development Manager, IMMI, Inc. (Seat Manufacturer)

Charles Gauthier, Former Executive Director, National Association of State Directors of Pupil Transportation

Pippa Abston, M.D., Ph.D., University of Alabama School of Medicine, Pediatric Division,
Assistant Professor, American Academy of Pediatrics

Purvis Johnson, President, Alabama School Transportation Association, Transportation Supervisor, Autauga County Schools

Robin Gilles, School Bus Driver, DeKalb County Schools

Mary Jo Chandler, School Bus Driver, DeKalb County Schools

Public Input

Rob Sherman, Radio Talk Show Host, Seat Belt Advocate

Lloyd Philpott, Philpo Design

Cathy Dewitt, Former Indiana Local Transportation Director

Doug Fees, Huntsville Local Attorney

Jackie Reid, Concerned Citizen

Bryan Bennett, Retired Pilot

Laurie McCauley, President-Elect, Alabama Parent Teacher Association



GOVERNOR'S STUDY GROUP ON SCHOOL BUS SEAT BELTS

LESSONS LEARNED

- ▶ New York has a law requiring lap belts but does not require their use.
- ▶ New Jersey has a law requiring lap belts and does require their use.
- ▶ Florida is implementing a law requiring lap belts and their use, does not allow retrofitting, and is 50% complete.
- ▶ California has a law that requires lap/shoulder belts and their use. It applies only to new buses. The cost of new buses is the responsibility of local school systems. The law is 3% complete.
- ▶ Louisiana has a law that requires seat belts but it is to be enacted only when state funds become available. To date, it has not been enacted.





GOVERNOR'S STUDY GROUP ON SCHOOL BUS SEAT BELTS

FINDINGS

- ▶ School buses are the safest form of student transportation in the United States and in Alabama.
- ▶ "Seat belts" means lap/shoulder restraints. No expert witness or federal/professional organization endorses lap belts only.
- ▶ "Compartmentalization" is a school bus safety design strategy that provides a protective envelope for passengers utilizing closely spaced, energy-absorbing high seat backs.
- ▶ The installation of any seat belts or new seats on existing school buses (retrofitting) is highly discouraged. This may cause body structure failure and/or void warranties.
- ▶ Any addition of seat belts to school buses should be on new buses and factory-installed with additional buses added if necessary due to a reduction in bus capacity.
- ▶ Any action addressing seat belts on school buses must not reduce the number of riders daily. All other forms of transportation for school students are more dangerous than school bus travel.

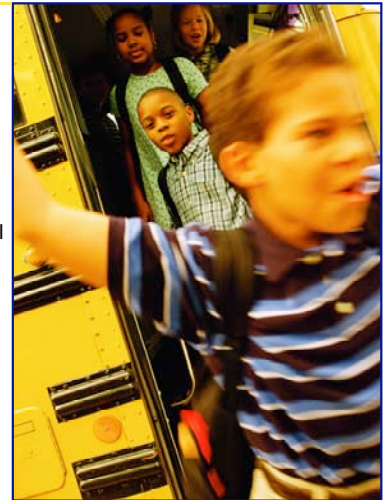




GOVERNOR'S STUDY GROUP ON SCHOOL BUS SEAT BELTS

RECOMMENDATION 1

The National Transportation Safety Board (NTSB) investigates crashes of passenger-carrying vehicles in the United States and makes findings of fact that may lead to changes in design and/or other safety changes concerning passenger safety. The National Highway Traffic Safety Administration (NHTSA) provides guidance and design/performance standards that manufacturers must meet in building school buses. The last major set of design/performance standards issued by NHTSA was in 1977. A report was sent to Congress in 2002 that contained evaluations of school bus passenger crash protection. NHTSA continues to work on design/performance standards. The Study Group recommends that Governor Riley work with the Alabama Congressional Delegation and the National Governors Association to urge NHTSA to speed up the release of new design/performance standards for school buses. The estimated implementation date of 2013 is too long to wait when the safety of America's children is at stake.





GOVERNOR'S STUDY GROUP ON SCHOOL BUS SEAT BELTS

RECOMMENDATION 2

The Study Group recommends that until NHTSA releases new design/performance standards Alabama should initiate a pilot study whereby ten new school buses would be equipped with lap/shoulder seat belts. The pilot study should be coordinated through an Alabama university and the State Department of Education; should be funded by the Alabama Legislature with local participating school systems bearing no added cost; should last at least three years or until NHTSA releases new design/performance standards; and should be designed so as not to reduce any ridership on school buses.

In addition, beginning in September 2008 and at the same time each year, a report should be given to the Governor and the Alabama Legislature regarding the findings of the pilot study.

The estimated cost of the study:

YEAR 1 – \$750,000 YEAR 2 – \$329,220 YEAR 3 – \$342,050





**GOVERNOR'S
STUDY GROUP**

**ON SCHOOL BUS
SEAT BELTS**

PILOT STUDY BUDGET

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