

SENATE STAFF ANALYSIS AND ECONOMIC IMPACT STATEMENT

(This document is based only on the provisions contained in the legislation as of the latest date listed below.)

Date: April 1, 1998 Revised: _____

Subject: School Buses/Safety Belts

	<u>Analyst</u>	<u>Staff Director</u>	<u>Reference</u>	<u>Action</u>
1.	<u>Chasteen</u>	<u>O'Farrell</u>	<u>ED</u>	<u>Favorable</u>
2.	<u>Vickers</u>	<u>Johnson</u>	<u>TR</u>	<u>Favorable/CS</u>
3.	_____	_____	<u>WM</u>	_____
4.	_____	_____	_____	_____
5.	_____	_____	_____	_____

I. Summary:

The CS requires that all school buses purchased after December 31, 1999, and used to transport students in grades pre-K through 12 be equipped with safety belts. A school bus purchased prior to December 31, 1999, is not required to be equipped with safety belts, and neither the state nor a school district will be liable for an injury to a passenger on such a bus which is caused by a passenger's failure to wear a safety belt.

The CS also provides that a school district, school bus operator under contract with a school district, or an agent or employee of a school district or operator is not liable in an action for personal injury where the injury occurred as a result of not wearing a safety belt. Similarly, school districts and bus operators are not liable in an action for personal injury by a school bus passenger for an injury caused by another passenger's use of a safety belt in a dangerous or unsafe manner. Finally, the CS provides that elementary schools are to receive first priority in the allocation of school buses equipped with seat belts.

The issue of requiring seat belts on school buses has generated considerable debate. Proponents of mandating safety belts on school buses maintain that combining existing safety features with safety belts would further enhance the safety of school buses, especially in the event of side impact and roll over crashes. Opponents of mandatory safety belts in school buses argue that because of their size, operating procedures, and unique safety design, school buses are inherently safer than other forms of transportation. Opponents contend that funds would be better spent on safety options such as driver training, higher seat backs, crossing control arms, increased enforcement of laws against passing stopped school buses, and adult school bus monitors. While both proponents and opponents point to statistical evidence in support of their position, empirical evidence regarding the effectiveness of seat belts on buses is largely inconclusive.

The CS creates a new section of the Florida Statutes.

II. Present Situation:

Current State Regulations Regarding School Buses

Section 234.02, F.S., states that maximum regard for safety and adequate protection of health are primary requirements that must be observed by school boards in routing buses, appointing drivers, and providing and operating equipment, in accordance with all requirements of law and regulations of the Commissioner of Education. This section requires that each school board designate and adopt a specific plan for adequate examination, maintenance, and repair of transportation equipment. The examination must be accomplished at least once per month while the bus is in operation. Unsafe buses must be withdrawn from service until repaired. The Florida Department of Education is authorized to inspect school buses and can require that buses not meeting specific requirements be withdrawn from service.

Section 234.03, F.S., specifies that each school board is liable for tort claims arising out of any incident or occurrence involving a school bus, with a limit on liability of \$5,000 times the rated seating capacity, or \$100,000, whichever is greater.

Section 234.051, F.S., defines a “school bus” as a motor vehicle regularly used for the transportation of pre-K through grade 12 public school students to and from school and school activities. Exceptions to the definition are: passenger cars, multipurpose passenger vehicles, and trucks as defined in Title 49, Code of Federal Regulations (CFR), part 571; and motor vehicles subject to the Federal Motor Carrier Safety Regulations in 49 CFR, and not used exclusively for the transportation of public school students. School buses which are rented, leased, purchased, or contracted for must meet applicable federal motor carrier vehicle safety standards and other specifications as may be required by the Commissioner. Students may be transported only in designated seating positions, except as otherwise provided, and must use the occupant crash protection system provided by the manufacturer. The system must meet the requirements of 49 CFR 571 or comply with the Commissioner’s specifications.

Section 316.615, F.S., requires that all motor vehicles with a seating capacity of 24 or more pupils, regularly used to transport pupils to and from school or school activities, comply with the requirements of Chapter 234, Transportation of School Children. The section defines “school” to include all public and private nursery, pre-elementary, elementary, and secondary level schools. The section requires that school bus drivers meet the physical examination requirements established by law and by rule of the Commissioner, and that such drivers pass an annual physical examination and have posted in the vehicle a certificate to drive the vehicle. As in s. 234.03, F.S., school buses must be covered by liability insurance of \$5,000 times the rated seating capacity, or \$100,000, whichever is greater.

The Debate Surrounding Seat Belts on School Buses

National statistics have consistently demonstrated that school buses constitute one of the safest forms of transportation. In fact, the National Highway Traffic Safety Administration has determined that school buses are approximately four times safer per mile traveled than private automobiles. A number of factors, including the size, design, operation, and existing safety features account for the safety of school buses. Central to current school bus safety features is the concept of “compartmentalization” which relies on high-backed padded seats, spaced close together, to confine and cushion passengers in the event of a crash. The consensus is that compartmentalization has proven to be effective in reducing injuries and fatalities, especially in instances of front or rear impact crashes.

Proponents of safety belts in large school buses acknowledge that the requirement of compartmentalization is effective in reducing fatalities and injuries, but argue that when combined with safety restraint use, fatality and injury rates could be reduced even further. They contend that safety restraints in school buses will reinforce the habit in young children with regard to wearing restraints in passenger cars. In addition, proponents assert that safety restraint use will improve on-board occupant behavior and decrease driver distractions, translating into possible avoidance of accidents. In terms of cost, proponents estimate the installation of lap belts would cost \$1,000 - \$1,500 per large school bus.

Opponents of safety belts in large school buses argue that because of their size, distinct yellow color, well-known routes, governed operating speed, and unique safety design, school buses are inherently safer than other forms of transportation, and consequently, do not need safety restraints to improve occupant safety. Opponents further contend that in the case of serious accidents, safety restraints may actually increase the likelihood of injury and could imperil occupants in accidents involving fire and rollovers. They contend that the potential “carryover” effect would be lost if drivers do not insist on restraint use resulting in children becoming desensitized to safety restraint use in other types of vehicles. In terms of cost effectiveness, opponents believe funds would be better spent on options such as driver training, higher seat backs, crossing control arms, increased enforcement of laws against passing stopped school buses, and adult school bus monitors.

The Florida Department of Education reports that during the last 5 years in Florida (through 1995-96), almost one million public school students were transported daily, traveling over one billion miles on 14,000 school buses. During that 5-year period, there have been three students and a teacher tragically killed while riding on Florida’s public school buses. Two of the students and the teacher were killed in one incident when a tire came off a truck and went through the windshield of the bus. Five students also died in the loading zone; four of these children were run over by motorists illegally passing stopped school buses. The Department reported that nationally about 15 students per year are killed on board school buses, while about 40 die outside the bus in the loading zone, two thirds as a result of being run over by their own bus. Because the loading zone around the bus is the area where fatalities are most likely to occur, Florida has concentrated its resources on driver training, improved mirror systems, and other strategies to improve loading

zone safety. Florida crash statistics from the Department of Highway Safety and Motor Vehicles indicate that there were 1,076 non-capacitating injuries and 228 incapacitating injuries involving school bus passengers during the period 1991-1996.

In the debate concerning the use of seat belts on school buses both proponents and opponents cite compelling evidence in support of their position. Various federal, state, and local entities have undertaken research on this issue. Summarized below are the major research findings and position papers relating to seat belts on school buses.

Findings in Support of Seat Belts on School Buses

Seat Belt Requirements in New York and New Jersey - The state of New York has 712 subdistricts transporting an estimated 2.5 million students per day on approximately 45,000 school buses, of which about one-half are government-owned with the remainder furnished by contractors. Since 1987, new school buses purchased in New York have been required to be equipped with seat belts. In excess of 99 percent of the fleet is now equipped with seat belts. The state law does not require that the seat belts be used; mandatory use is left to the individual subdistricts. Presently, about 43 of the subdistricts have mandated seat belt use.

The state of New Jersey has required that buses be fitted with seat belts since 1993, and that they be worn since September 1994. New Jersey's decision to require seat belts was based on a 1989 study entitled "School Bus Safety Belt Study" conducted by the New Jersey Institute of Technology, Center for Transportation Studies and Research. The report concluded that mandatory seat belt use would reduce fatalities by 22 percent and incapacitating injuries by 27 percent. The report states that seat belts are a cost-effective measure, and recommended that they be installed in all buses. Because of technical problems, retrofitting of existing school buses was determined to be undesirable. Seat belts are phased in as buses are purchased. Approximately one-third of the fleet is so equipped. It is estimated that the cost of adding seat belts to a new bus is \$1500 in New Jersey.

Both states have "hold harmless" language specifying that the school bus owner, operator, and driver cannot be held liable if a child chooses not to wear a seat belt and is injured in an accident. Anecdotal evidence indicates that discipline on buses has improved with the advent of restraints, and as a result, driver distractions are probably less, thereby improving safety. Since there have been no major accidents involving school buses in either state since their respective seat belt laws went into effect, data regarding efficacy in preventing fatalities and serious injuries is unavailable.

The Florida PTA - The Florida PTA cites the disproportionate number of fatalities and serious injuries which occur in side-impact and rollovers crashes as evidence of the need for seat belts. These are scenarios where seat belts would provide the greatest improvement in safety performance. Florida PTA also asserts that seat belts would improve behavior on the bus and help keep small children from slipping off their seats when the bus turns or goes over a bump. Citing a study by the Transportation Research Board, the Florida PTA asserts that seat belts on school buses would improve safety by 20 percent with 50 percent usage. Using the same methodology

employed by researchers in New Jersey, the organization contends that seat belts on school buses would prevent an average of .11 deaths and 10.74 incapacitating injuries each year in Florida.

The Florida PTA passed a resolution during its 1997 convention which states that the organization supports legislation requiring any new bus purchased for the purpose of transporting school children in the state of Florida be equipped with 28 inch seat backs and seat belts, and that the seat belt portion of the resolution be forwarded to the National PTA for inclusion in the National Platform. The Florida PTA provided documentation from various medical organizations which support the use of seat belts on school buses, including: the American Medical Association, Physicians for Automotive Safety, the American Academy of Pediatrics, the College of Preventative Medicine, the American Association of Oral and Maxillo Facial Surgery, the American Society for Adolescent Medicine, and the American College of Emergency Physicians.

The American Academy of Pediatrics - In a 1996 policy statement the American Academy of Pediatrics recommended the use of child safety seats and other restraint systems on school buses used to transport pre-kindergarten school children in order to keep the children secure in their seats. In agreement with a National Transportation Safety Board study, the Academy recommends that federal motor vehicle safety standards be revised to require that seat backs be 24 inches above a designated reference point (slightly more than 26 inches from the seat surface)

The Academy estimates that the use of seat belts on large buses may reduce deaths and injuries by 20 percent, with an assumption that use rates are only 50 percent. An additional benefit is that such use reinforces use in private vehicles. Acknowledging that the cost effectiveness of seat belts on buses may remain controversial, the Academy recommends the installation of seat belts on all newly purchased school buses. In addition, the Academy recommends that those districts providing seat belts should ensure the appropriate education of administrators, students, teachers, drivers, and parents in their use.

Findings Adverse to the Use of Seat Belts on School Buses

The National Highway Transportation Safety Administration - The National Highway Transportation Safety Administration (NHTSA) contends that, based on school bus crash data, a federal requirement for safety belts on buses would provide little, if any, added protection in a crash. In support of this position, NHTSA cites a 1987 study undertaken by the National Transportation Safety Board which concluded that most fatalities and injuries were due to occupant seating positions being in direct line with crash forces, and that safety belts would have done little in terms of prevention. Citing a 1989 study by the National Academy of Sciences (the Transportation Research Board report discussed below), NHTSA concluded that the overall potential benefits of requiring seat belts on large school buses are insufficient to justify a federal mandate for installation, and that funds that would have been used for such installation would be better spent on school bus safety programs and other prevention devices.

NHTSA maintains that the concept of compartmentalization is the best method for providing crash protection. The agency concludes that because the safety record of school buses is

outstanding, and because there is no compelling evidence to suggest that seat belts would provide higher levels of occupant protection, there is insufficient reason for a federal mandate for seat belts on large school buses. It should be noted that small buses, those with a gross vehicle weight rating under 10,000 pounds must be equipped with lap or lap/shoulder belts at all designated seating positions, due to the fact that these vehicles are closer in size and weight to passenger cars and trucks where seat belts are believed necessary for occupant protection.

National Transportation Safety Board Study - In a 1987 study NTSB examined 43 accidents involving large school buses. The report found that compartmentalization worked well in all types of accidents. This conclusion was based on the fact that ninety percent of the unrestrained passengers in the accidents studied received only minor or no injuries. Intrusion into the bus was responsible for all but two of the thirteen school bus passenger fatalities in the study and for all the bus driver fatalities. According to the study, school bus occupant deaths and serious or worse injuries sustained by survivors in the study were largely attributable to the occupants seating position being in direct line with the crash forces, and would not likely have been positively affected by restraints.

The study found that rollover accidents in the study were associated with higher levels of passenger injuries than non-rollovers, but to a much smaller degree than anticipated. Nearly 86 percent of all passengers involved in rollover crashes were either uninjured or received only minor injuries. The study concluded that lap belt use probably would have had little or no impact on the total number of school bus passengers who died in the crashes investigated for the study. At best, lap belt use probably would have reduced somewhat the injuries of less than one-third (8) of the 24 surviving school bus passengers with serious injuries in the study and made no change for the majority (12). At worst, it might have increased the injury to almost as many passengers with serious injures as it improved.

The Transportation Research Board - A 1989 study undertaken by the Transportation Research Board (under the auspices of the National Academy of Sciences) concluded that installing seat belts on all large school buses operated in the United States could provide a marginal increase in school bus safety. However, the committee concluded that the overall potential benefit of requiring seat belts in large school buses is insufficient to justify a federal standard mandating installation. Further, the report suggested that funds used to purchase and maintain seat belts in the nation's fleet of school buses, more than \$40 million per year, might better be spent on other school bus safety programs and devices to save more lives and reduce more injuries. It should be noted that the members of the committee examining this issue were divided in their final recommendations concerning the use of seat belts on buses.

The Center for Urban Transportation Research Report - In 1993, the University of South Florida, Center for Urban Transportation Research (CUTR) issued a report entitled "Florida School Bus Occupant Safety". The report was undertaken at the direction of the Legislature and examined the potential benefits that might be derived from the use of safety restraints in large Florida school buses. The report concluded that the effectiveness of safety restraints in large

school buses has not been proven. However, the CUTR study acknowledged that the debate is heated, and that both proponents and opponents make strong cases in support of their positions.

CUTR examined Florida school bus accident data by defining two objectives: (1) determine the frequency and distribution of accidents by four primary impact modes (frontal, rear-end, side, and rollovers); and (2) determine occupant injury severity by the same four impact modes. Based on this analysis, CUTR concluded that the data did not provide convincing evidence that safety restraints are needed in large Florida school buses. The CUTR review revealed that a considerable number of occupants received minor or moderate injuries (44,220) which reiterates the notion that the buses are a safe mode of transportation. It also concluded that the availability of safety restraints would not have made a difference with regard to nine (five occurring in a single accident) fatal injuries reported. In view of the nine fatalities (0.02 percent) and a reported 202 (0.45 percent) incapacitating injuries sustained by the 44,438 Florida school bus occupants involved in 4,732 accidents reported for the interval 1986 through 1991, CUTR concluded that serious accidents involving school buses are rare and that the effectiveness of available safety options is substantiated. The report suggest that the most cost-effective safety investment option in terms of preventing fatalities and injuries is higher seat backs.

In spite of their findings, CUTR stated that the lack of empirical evidence pertaining to the effectiveness of safety restraints in large school buses emphasizes the need for a comprehensive study to compare the fatality and injury rates among belted and unbelted school bus occupants to decisively determine their safety potential. School districts and states currently requiring safety restraints (lap-belts) provide an opportunity to compile data over the long term, and to compare the severity of injuries sustained by belted and unbelted school bus occupants. CUTR further recommended comprehensive surveys of school districts and states that require safety restraints to acquire data regarding operational experience, including liability, seat belt use/compliance, maintenance costs, vandalism of belts, influence of safety restraints on student conduct, and other information.

III. Effect of Proposed Changes:

The CS requires that all school buses purchased after December 31, 1999, and used to transport students in grades pre-K through 12 be equipped with safety belts sufficient to provide each student a separate belt. The safety belts would have to meet the same standards as those prescribed under the Florida Safety Belt Law as provided in s. 316.614, F.S. A school bus that was purchased prior to December 31, 1999, is not required to be equipped with safety belts, and neither the state nor a school district will be liable for personal injury to a passenger on such a bus which is caused by a passenger's failure to wear a safety belt.

The CS states that passengers on school buses equipped with safety belts must wear a properly adjusted and fastened belt at all times the bus is in operation. The CS also provides that a school district, school bus operator under contract with the school district, or an agent or employee of a school district or operator is not liable in an action for personal injury brought by a school bus passenger injured as a result of not wearing a safety belt. Similarly, these parties are not liable in

an action for personal injury caused by another passenger's use of a safety belt in a dangerous or unsafe manner.

The CS provides that in implementing this section, school districts must prioritize the allocation of buses equipped with safety belts to ensure that elementary schools within the district receive first priority.

IV. Constitutional Issues:

A. Municipality/County Mandates Restrictions:

None.

B. Public Records/Open Meetings Issues:

None.

C. Trust Funds Restrictions:

None.

V. Economic Impact and Fiscal Note:

A. Tax/Fee Issues:

None.

B. Private Sector Impact:

Indeterminate. It would depend on how many buses are contracted by school districts and the rate at which the buses are exchanged.

C. Government Sector Impact:

The Department of Education estimates that it would cost \$1,980 to equip a new 65-passenger bus with three sets of lap belts per seat. Assuming an annual purchase volume of 10 percent of the daily service fleet per year is 1,317 (based on 1995-96 data), it would cost \$2,607,660 annually to phase in seat belts on Florida school buses.

The Florida PTA estimates that a 65 passenger bus meeting Florida specifications can be purchased for an average of \$40,000 and can be equipped with 28" high back seats and seat belts for an additional \$1,600, based on manufacturer quotes.

VI. Technical Deficiencies:

None.

VII. Related Issues:

None.

VIII. Amendments:

None.

This Senate staff analysis does not reflect the intent or official position of the bill's sponsor or the Florida Senate.
