HOUSE TRANSPORTATION COMMITTEE HEARING ON

SEAT BELTS IN SCHOOL BUSES

DATE OF HEARING: January 16, 1986

PLACE OF HEARING: Bucks County Community College
Founders Hall, Room 239
Swamp Road
Newtown, PA 18940

CONTRACTOR: ESOTERIC, INC.

TOTAL PAGES: 96

REPRESENTATIVES PRESENT:

Roy Reinard, Bucks County, Northampton Township, 178th District

Dennis O'Brien, Philadelphia

Joe Pitts, Chester County

Ben Wilson, Bucks County

Scott Casper, Executive Director, House Transportation Committee

Paul Landis, Executive Director, Minority Transportation Committee

REPRESENTATIVE WILSON: Is George Romano here?

MR. ROMANO: Yes.

REPRESENTATIVE WILSON: Pete Kostmayer is going behind, I'm aware of that. He's supposed to be on first. If you wouldn't mind beginning the testimony, we'd appreciate it.

MR. ROMANO: Okay.

REPRESENTATIVE WILSON: We ought to introduce the members here. Could you introduce yourself and tell us where you're from.

REPRESENTATIVE REINARD: Roy Reinard Bucks County, Northampton Township, right around here; Holland, Richboro, Churchville, 178th District.

REPRESENTATIVE O'BRIEN: Dennis O'Brien from Philadelphia.

REPRESENTATIVE PITTS: Joe Pitts from Chester County.

REPRESENTATIVE WILSON: I'm Ben Wilson from Bucks County.

MR. CASPER: Scott Casper, Executive Director, House Transportation Committee.

MR. LANDIS: Paul Landis, Exucutive Director of Minority Transportation Committee.

REPRESENTATIVE WILSON: This is a statement on behalf of George Romano, Jr. for the Pennsylvania School Bus

Association for the Pennsylvania School Bus Association before the Subcommittee of the House of Transportation Committee.

MR. ROMANO: Mr. Chairman and Members of the Subcommittee: Thank you for the opportunity to appear before the subcommittee today to present the views of the Pennsylvania School Bus Association on the issue of safety belts on school buses.

My name is George Romano, Jr. and I am Secretary and General Manager of the Romano's School Bus, Inc. company located in Norristown, Pennsylvania. Our company has been in the school bus contrating business for thirty three years, beginning with two school buses in 1953. Romano's today has grown to a fleet of two hundred and twenty-nine school buses.

PSBA, Pennsylvania School Bus Association, was founded in the early 1950's to "promote and foster the highest degree of safety in the transportation of school children". The Association represents approximately fifty percent of the Commonwealth's yellow school bus fleet with memebers from all areas of the state. Private school bus contractors, many of them from second and third generation firms, represent seventy-five percent of the Commonwealth's pupil transportation.

PSBA's prime concern is the safety of the children

its members transport daily. In fact , the Association was founded, and continues, because we are able to get students to and from school in the safest possible manner. Traveling in today's well-equipped, shiny yellow bus is seven times safer than taking the same trip in your family automobile. PSBA's major objection to the issue of seat belts in school buses is that it is far from clear whether seat belts would, in fact, make school buses safer.

The National School Transportation Association, of which PSBA is affiliated with, has repeatedly urged the National Highway Traffic Safety Administration to conduct a new study both to determine whether seat belts will improve the safety of school bus occupants and to determine how the belts should be anchored and what, if any, interior design changes would be made. They have also asked the federal House and Senate Transportation Appropriations Subcommittees to adopt, in this year's appropriations process, report language directing NHTSA to conduct such a study.

In no way does PSBA's opposition to mandate seat belts stem from considerations of cost, which range from approximately $1,500 to $2,000 per large school bus, according to the various manufacturers. Over the past sixty years, owners of school bus fleets in Pennsylvania and the nation have seen laws and regulations change every year. Every company, naturally, has to comply.

Most firms did not pay for one of those changes. Every cent put into every one of the thousands of buses purchased was incorporated into bids for services and was paid for those by using the service, and ultimately, by the taxpayer of the individual school districts. Some have suggested that the school bus contracting industry opposes seat belts because of their profit motive. That simply does not make sense. The school transportation industry has never shouldered the cost of a new safety device. The purchasers of school transportation services have.

Our Association is not so much opposed to the use of safety belts in school buses if they were proven safe as it is supportive of the concept of compartmentalization. We come to this position after years of tests, experiments, and studies resulting in NHTSA concluding that compartmentalization provides an adequate level of safety protection. In contrast, there are no standards established for seat belts on large school buses. PSBA believes that compartmentalization - containing children within a structurally reinforced passenger compartment of fully padded, high-back seats and crash barriers - is preferable to any form of containment that relies upon the use of seat belts or other similar restraining devices.

Furthermore, we believe that the studies and excellent safety record of school buses support compartment-

alization. The real safety problems in school transportation - and those that need to be thoroughly addressed by the industry, schools, parents, and the public - are the fatalities and injuries that occur where children get on and off the buses - that are known as the loading zones. Those of us who work with children and school buses every day feel that every new item that is added or changed to school buses should be well tested and engineered prior to being mandated as a regulation. This is why PSBA will continue to support the compartmentalization concept until documented research establishes the seat belts on school buses will raise the level of protection for the occupants.

PSBA is concerned that many interested and well-meaning individuals are not informed of the safety record of school buses, the safest features incorporated into school bus construction, and why seat belts are not mandated or needed on school buses. For years, officials have been telling the American public that "seat belts save lives". They do, in automobiles.

There is a segment of our population - well intended, concerned people - who are calling for seat belts to be placed on all school buses in the country. At first glance, this seems like a good idea, but upon closer examination, it turns out to be simply not the case at all. The fact to keep in mind is there are major differences between auto-

mobiles and school buses, and these differences call for the different safety solutions.

There are basic differences between automobiles and school buses besides that of size. In a school bus, great effort has been made to eliminate protruding objects that could injure a passenger during a crash. Unbelted, an automobile's passenger will fly toward the point of impact in the event of a crash, colliding with any hostile objects that are in the path. The safest place to be in such an event is belted into the seat, which is designed to stay attached to the automobile frame. A school bus is different. Passengers are protected by the lack of protruding objects and by compartmentalization - the careful padding of seats, seat backs, sides and aisles. This compartmentalization is designed to cushion to students in the event of a sudden impact or swerve and the padding itself absorbs most of the impact.

There are other differences as well. The outer construction is an excellent example. A school bus is encased in a metal frame, much like a metal rib cage, unlike today's small automobiles which have very little reinforcement. In addition, the passenger compartment in buses is well above the bumper height of automobile bumpers, so the impact of a collision is not felt on the same level. This is the reason why interstate carriers, school buses, and public transit

buses are exempt from safety belt requirements. They have inherent safety advantages related to their size, weight, and the interior design that other vehicles do not normally have.

School buses are special for other reasons as well. First of all, the public is aware of them because of their shiny yellow color, flashing lights, and special markings. This automatically makes the public more cautious around this type of vehicle. Besides, these buses are normally operated at low speeds. They are particularly special because they carry a precious cargo: our children. This knowledge on the part of the bus driver and the motoring public gives this type of vehicle a large advantage when it comes to safety. With all these factors taken into account, it becomes clear that different safety devices must be considered for these two completely different types of vehicles

Every day, nearly 2.5 million Pennsylvania school children ride about seventeen thousand school buses to their schools and back again. Statistically, school buses are the safest vehicles on the road, recording the fewest fatalities per one hundred million vehicle miles. School bus occupant fatalities have declined steadily nationwide from sixty in 1978 to none in 1983. Pennsylvania has averaged two fatalities a year outside the school bus and has not had a fatality inside the school bus in over ten years. Although statistically there are few pupil fatalities on school buses -

nationally, four tenths of one percent per one hundred thousand vehicular miles in 1982-83 - the school bus industry can not afford to brag. As long as one child is killed, the quest for safety must be a never-ending process.

The fact remains, however, that the majority of fatalities in school bus related accidents do not occur on the bus. They happen before, during, and after the loading or unloading procedure. Considering the potential for accidents and the number of children who regularly ride school buses - over twenty-two million nationwide in 1982-83, it is amazing that the number of deaths or injuries is not greater.

Seat belt proponents continually stress the need for safety aboard the bus and contend that existing standards created by the compartmentalization concept are not adequate protection against side collisions and rollovers. Setting aside the question of whether or not the school bus itself is a safe vehicle, it is important to look at where children are being killed and to examine some of the reasons behind the accidents. It appears that seat belt proponents, instead of correcting the problem at its source, are looking for devices designed to protect students in case of an accident, rather than seeking ways to avoid mishaps altogether.

Instead of placing the major emphasis on student protection in the event of an accident, time, money, and

effort could best be spent on driver training and public awareness. In our view, the approximately $3.4 million it would cost to install seat belts in Pennsylvania's seventeen thousand school buses could be better spent on these types of programs.

According to national statistics for the 1982-83 school year, twenty-eight school children were killed in school bus related accidents while outside the bus. Of those, seventeen were killed by their own bus, twelve at the front and five at the rear. The remaining eleven fatalities occurred when vehicles passed, illegally, in most cases, a stopped school bus in the process of loading or unloading. In Pennyslvania, at least two children a year are killed by their own school bus or a passign motorist. Why do fatalities such as these occur?

The cause of the eleven killed by vehicles passing a stopped school bus is ignorance of the safety hazards and and a lack of awareness on the part of the motoring public. The transportation industry has not done a very good job of educating the public. In addition, the number and variety of traffic laws around the country specifying procedures to be followed when aproaching a bus loading or unloading is in itself a cause for confusion for the motorist. Not only do laws vary from state to state and locality to locality, there are also major differences in warning equipment. For

example, the eight-light warning system is not universally required; neither is the stop arm nor standard lettering such as "Stop on Signal".

Emphasis on reducing the federal deficit makes it unlikely that additional funds will be made available for school bus driver training that the industry benefitted from in the past. The end result of this lack of funding means a reduction in school bus driver training. This is particularly lamentable in light of recent studies that show the positive effects of such programs. One in particular, a California Study, concluded that school bus driver-caused accidents declined an amazing twenty percent after a driver training program was initiated in 1984. Similar studies conducted by other states show comparable findings.

The suggestion by seat belt proponents that if children are taught to buckle up on a bus, they will continue that habit into adulthood is commendable, but unrealistic. No school bus driver, operating under less than ideal conditions at the best of times, could accomplish that which only ten to fourteen percent of the nation's parents whose children ride in seat belt equipped automobiles have accomplished in the past twenty-five years since those devices were introduced. It makes more sense to concentrate energies in teaching in an environment where educational experiences have shown that learning is best accomplished. Even if seat

belts were made mandatory, in automobiles as well as in school buses, the process of teaching children the value and desirability of their use could be accomplished more effectively in a controlled educational environmnet than on a crowded school bus.

There is a solution to eliminating a great number of school bus related fatalities. It is driver education, and is an attainable goal. All a driver need do is be certain that he or she knows where the child is who is getting off and on the bus. It is that simple. By counting and not moving until they are sure, the child will not be run over. This message should constantly be in front of every school bus driver. Additional distractions, such as assuring that seat belts are properly adjusted and buckled, would only divert driver attention from this primary responsibility. If seat belt proponents direct their efforts toward accomplishing this single goal, instead of campaigning for, and promoting, additional safety equipment, it could be accomplished and the safety of the children would be greatly enhanced.

A lot of thought, care, and research went into NHTSA's standards for school bus passenger seating and crash protection. The underlying philosophy behind these standards was the premise that it is more practical and effective to put the passengers in surroundings that could absorb a great

deal of the shock and energy generated by a collision or sudden swerve than to confine the children in seats with seat belts. "The standard relies on compartmentalization between well-padded and well-constructed seats to provide occupant protection on school buses," is how NHTSA's language actually reads. These standards are applicable only to large school buses. On the smaller, van-type vehicles, seat belts are required. NHTSA also noted that, "Compartmentalization provides satisfactory protection and that a requirement for seat belts without the assurance of proper supervision of their use would not be an effective means of providing occupant protection".

Compartmentalization involves several things. It calls for higher seat backs, impact-absorbing seats , and padded reinforcement of these seats, which also must not separate from the vehicle at any attachment point. Special padding of the rear of the seats is designed to protect a child's head in the event of a sudden impact, and a special leg protection zone is specified in the construction requirements. All of this padding is required to be of thick foam rubber in order to absorb the maximum energy of the impact.

In 1983, the Federal Motor Vehicle Safety Standards of school buses were modified to increase the spacing between the seats from twenty-one inches to twenty-four inches. This was done, however, only after tests had demonstrated that

such an increase would not impair the concept of compartmentalization. Any increase beyond twenty-four inches might impair the ability of the seats to absorb energy in the manner required by the standards. The benefit of compartmentalization is that it is a passive protection system. The students do not have to do anything to afford themselves this protection. It is built into the vehicle itself. Seat belts on school buses might work under certain conditions - and there is even some argument about this - but one thing is clear; they will not do any good at all if they are not fastened, and fastened properly. With compartmentalization, the protection is automatic and effective.

A recent report by Transport Canada on crash tests it performed revealed that some types of injuries were more severe in belted than unbelted dummies in school bus crashes. A summary of the 1985 report reads, and I quote:

"The results indicated that the belted dummies experienced higher head accelerations, lower chest accelerations, and more severe neck extensions than did the unbelted ones. This indicates that if lap belts are installed on current designs of school bus seats, a greater potential for head injury may exist. Other observations suggest that a further study is required in the area of glazing strength, attachment of seats to floor, fuel filler mounting, and driver protection.

"This School Bus Safety Study indicates that careful deliberation must be exercised before deciding whether or not to add lap belts to existing designs of occupant protection systems found on today's school buses. The barrier crash tests results showed that the potential for head injury in frontal collisions increased, when lap belts were employed.

"This conclusion was reached after the subject of school bus safety was investigated in considerable detail. The investigation included a review of existing literature, discussions with bus manufacturers and operators, and a dynamic barrier crash program. The crash program provided data and photographic evidence, not before available, to compare the reaction of belted and unbelted test dummies in a frontal collision." A summary of Transport Canada's test results is included for the record.

If compartmentalization is inadequate for protecting school children, as proponents claim, PSBA supports a new study of the issue by NHTSA. However, PBSA does not support mandated seat belts without such a study, particularly in light of the 1985 Canadian crash test report. As stated above, PSBA's prime concern lies with doing whatever ensures the safest possible environment for children. Thank you.

REPRESENTATIVE WILSON: Thank you. Gentlemen, any questions?

REPRESENTATIVE PITTS: Is there any evidence of

internal injury from a lap belt on a small child?

MR. ROMANO: No, we don't have any available that I am aware of.

REPRESENTATIVE PITTS: How about the number of students per seat? Is that a factor if you use your buses interchangeably with small students and larger students?

MR. ROMANO: Yes, it is a factor, and we really haven't addressed that in here because I think that's something that's going to be addressed further down the line. We are now allowed a thirty-nine inch-wide seat, and that gives you a thirteen inch rump room, so it would be three children to a seat, and we think with three seat belts that's going to be greatly impaired, which is just going to double the cost or add to adding more equipment which, there again is just a cost factor. The burden is not going to be shared by the contractors.

REPRESENTATIVE PITTS: Thank you.

REPRESENTATIVE WILSON: On the training recommendations you have, what type and how should it be done? We have testing in Pennsylvania but not training.

MR. ROMANO: That's correct, and until recently, until this year I believe it was, we had a state-mandated program and we are still under the state-mandated program, but we have certified trainers by the state who give classroom training, and then we give on-the-road

training, but the funding for that is no longer available. Now, the school districts or the contractors have to pick that up on their own.

REPRESENTATIVE WILSON: We are saying that to get a classified license in Pennsylvania to drive a bus, you have to pass an examination...

MR. ROMANO: That's correct.

REPRESENTATIVE WILSON: Where in fact do they pick up their information, their training, their ability to pass the exam? Perhaps the exam is not tough enough to meet what you feel should be the training adequate.

MR. ROMANO: I don't think that it's the exam that's the problem. I think that it's the training process, where we need more training. We don't feel that there is enough training. The emphasis isn't on the state as it mandated that training.

REPRESENTATIVE WILSON: What I'm saying is they're passing some sort of examination now, obviously, or we wouldn't have any bus drivers.

MR. ROMANO: That's correct, you need several licenses to drive a school bus.

REPRESENTATIVE WILSON: Right. I'm saying that if we provide training and the same exam, what I fail to see is how that's going to improve their abilities if it's the same type of examination. I guess what I'm getting at, should

we not tighten up and make the exam stiffer?

MR. ROMANO: I don't think we're talking about the exam. I think if you relate the exam right back to the automobile licensing, you'll all end up with a book in your hand, and you go take a license test for your automobile, that doesn't mean when you walk out that door you're going to listen to what's in that book.

REPRESENTATIVE WILSON: That's what I'm asking. The State Police, then, should make the exam at least more difficult that would reflect on the type of training that they are receiving whether we provide it, mandate it, or not. It's just not a rote memorization of rules and regulations.

MR. CASPER: Representative Wilson, if I may on that, some of the problems with the school bus drivers, especially smaller students, walking in front of the bus and behind the bus, I had discussion with a gentleman on the phone the other night regarding this. I'm sure that when they take the school bus exam they don't have a kid walking in front or behind of the bus obviously, and perhaps that's a great deal of the problem. Perhaps a bus driver can't maneuver around certain obstacles in a test course, perhaps a bus driver - he or she - can't read regulations and requirements and be knowledgeable in that but nontheless, what is untested and perhaps since the training was cut out, that not in all instances do we have the bus driver ever

mindful that there are small bodies in the front and the back of the bus. Perhaps there has to be a counting procedure, some do I understand, but perhaps we have to zero in on the ever present memory process of that as opposed to the maneuverability and skills of a driver.

MR. ROMANO: That's what I addressed partly in here, that's what we're asking for. We're asking for further training for the driver and for funding to be extended toward that category so that we can get around the problems you talked about - not being able to see the child, why can't we see the child, and make the driver ever-aware. We're asking for more training in that area.

REPRESENTATIVE WILSON: This gets back, then, to your statistics. The numbers amazed me. I think you referred to twenty-eight.

MR. ROMANO: That's correct.

REPRESENTATIVE WILSON: Seventeen were killed by the bus itself.

MR. ROMANO: Outside.

REPRESENTATIVE WILSON: Eleven by the motorists going by...

MR. ROMANO: That's correct.

REPRESENTATIVE WILSON: And none in any accidents.

MR. ROMANO: In the last ten years inside the bus, yes.

REPRESENTATIVE WILSON: What was the major cause of those by their own bus? The kid ran under the wheels? Did the bus start out early, or what?

MR. ROMANO: I can't ever begin to answer that - all those possibilities.

REPRESENTATIVE WILSON: Does anybody have figures on that here?

MR. ROMANO: Not...

MEMBER OF AUDIENCE: We do here.

REPRESENTATIVE WILSON: You do?

MEMBER OF AUDIENCE: Yes.

REPRESENTATIVE WILSON: Okay.

MR. ROMANO: I can't answer that question.

REPRESENTATIVE WILSON: Any other questions here?

REPRESENTATIVE REINARD: Yes, Roy Reinard. Mr. Romano, are you aware of when the last time the National Highway Safety Traffic Administration did conduct a study regarding safety on school buses?

MR. ROMANO: I don't have the exact dates, no.

REPRESENTATIVE REINARD: Do you know or are you aware of whether they studied seat belts on school buses the last time they did a report?

MR. ROMANO: That I do not know.

REPRESENTATIVE REINARD: Thank you.

REPRESENTATIVE WILSON: Any other questions? Thank

you, sir, we appreciate it very much.

MR. ROMANO: Thank you.

REPRESENTATIVE WILSON: I see Congressman Kostmayer has arrived after visiting WBUX, I understand, Pete?

CONGRESSMAN KOSTMAYER: Yes, sir.

REPRESENTATIVE WILSON: Any time you're ready.

CONGRESSMAN KOSTMAYER: Thank you very much, Mr. Chairman. It's nice to see at least one Senator among these House members. Thank you very much for the opportunity to testify. I know your schedule is busy, and I appreciate the opportunity of being here, and I will try to be brief and basically summarize my testimony.

Last Saturday, Mr. Chairman, in Washington not very far from my office, a bus filled with school students swerved to avoid hitting an automobile. The bus overturned, tumbling first onto its right side, and then onto its left side, sending children and books and seat cushions flying. All forty-eight children on the bus had to be hospitalized, some with serious injuries.

In October of last year in West Chester County in New York, an eleven year-old boy died in a bus accident when the school bus went out of control and hit a boulder. The student, Paul Goodrow, was tossed into the air, slammed into the bar of the seat ahead of him. He sustained fatal injuries to the abdomen, and died on the bus.

These are only two of many cases in which seat belts could have prevented injury or death to the school children of America. Every day, twenty million children ride on school buses. Thousands of children are injured each year in school bus related accidents. Most medical experts agree that seat belts will decrease, to some extent, the number and severity of injuries suffered by the school children. School bus design standards enacted in 1977, by the National Highway Traffic Safety Administration created a safer bus - compartmentalization, which has been compared to the cushioning effects of eggs placed in an egg basket has been effective.

Last year, Mr. Chairman, HR 749, provided incentive grants for states which require the installation of seat belts in new buses. Fifty-five members of Congress have co-sponsored the bill. A number of medical and educational groups have endorsed it. This legislation would not mandate belts on school buses. It would provide Federal funds to states which chose, on their own, to require as a result of state law, belts on buses. I met with manufacturers, contractors, and drivers of school buses. All of these people are genuinely and honestly concerned about child safety, but many have expressed opposition to my proposal.

The objections to seat belts in school buses seem to fall into two categories: cost and safety. The average

cost is about a thousand dollars a bus, less than four percent of the cost of the school bus, and comes to about two dollars per student per year over the life of the bus. Some opponents of seat belts in school buses argue that they are not cost-effective and that the money could be better spent on driver training and child safety education programs. I agree with those, and under the provisions of my legislation, the funds to be appropriated could be used for these purposes as well as the installation of the belts themselves.

Those who oppose seat belts in school buses have also expressed concern about student compliance and vandalism. Over sixty school districts in the country are using seat belts in school buses. The districts that have been using belts for a year or more report high levels of student compliance and improved discipline on their buses. A recent study by the Canadian Transportation Department is often cited as proof that seat belts will do more harm than good on buses. Nothing could be further from the truth. The Canadian study had several flaws - it tested only head-on collisions at high rates of speed, used adult-sized rather than child-sized dummies, unnaturally rigid dummies, and provided no instrumentation to measure the impact of the crash on the throat area. Even so, it still showed that the belted dummies showed less severe chest injuries and that the only dummies experiencing life-threatening forces were those that were

unbelted.

The National Highway Traffic Safety Administration has advised that the results of the Canadian study should be viewed with caution. The report on safety belts in school buses in June of '85 noted that "fifty percent of occupant fatalities in school buses occur in rollover accidents, and 14.7 of the occupant fatalities occur in side impact accidents". It is in these types of accidents that seat belts might be most likely to provide additional safety margins. In addition to the immediate safety benefits, we cannot overestimate the educational value of seat belts in school buses. The positive reinforcement of wearing a seat belt on the school bus each day will help teach children that buckling-up should be a lifetime habit.

It seems to me that since automobile accidents are the number one killer of children under fourteen, seat belts on school buses merit serious consideration by the legislature for their educational benefits alone.

I appreciate the opportunity, Mr. Chairman, and to the extent that I am able I would be delighted to answer any questions that you may have.

REPRESENTATIVE WILSON: Thank you, sir. Questions, gentlemen?

REPRESENTATIVE REINARD: Congressman, I'll ask the same question I asked before. Are you aware of the last

time the National Highway Administration studied the question of seat belts on school buses?

CONGRESSMAN KOSTMAYER: I think there is reference in here to an '82 study. There may be people in the audience here who may have more precise information. I think that was the last study and I think it's fair to say that as a result of their study, they did not concur with my views - they did not issue a recommendation. They felt that seat compartmentalization at that time, and other provisions that had been taken in making school buses much safer than they have ever been before, made seat belts unnecessary.

REPRESENTATIVE REINARD: The previous speaker - and granted you weren't able to hear his comments - but the previous speaker stated that they have requested their school bus association nationally - has requested the Highway Safety folks to do an in-depth study, probably one that would be addressing some of the concerns that the Canadian study may have missed or didn't do as well. Is there any move up front for either their agency to do it on its own or for Congress to ask them to do that through resolutions of any type?

CONGRESSMAN KOSTMAYER: Well, I think that's a good suggestion, Representative, and a likely possibility in the coming years that we will be able to convince the Agency to conduct such a study, especially one which will resolve some of those flaws in the Canadian study. The primary

problem with the Canadian study is that, as I said in my testimony, the dummies were adult-sized, unduly rigid, and they were head-on collisions at high rates of speed into stone walls. That's not the type of accidents that most school buses are involved in. Most school buses are involved in rollover accidents, not accidents at high rates of speed into concrete walls, so I think that there are a lot of serious questions and I hope that the Agency will conduct a study this year to correct some of that information.

REPRESENTATIVE REINARD: All of the states would be appreciative, I'm sure, of your resolution that would provide them funds so that they would be able to implement that. I think a prudent state would make sure first off there was some sort of modified study and results and conclusions that could be drawn from that. I'm just wondering whether or not nationally, any pressure was being put on for a new comprehensive study if the last one was done in '80 or '82, and it wasn't done to the specifications that currently, today - with the new stucture of the seats, it could become more beneficial.

CONGRESSMAN KOSTMAYER: I think that everyone would agree that buses are much safer than they have ever been before. I hope that the National Highway Safety Transportation Administration would conduct a new study. I think we can certainly look to the evidence of the sixty school

districts across the country that are using seat belts in school buses, all of them with considerable success and happiness.

REPRESENTATIVE REINARD: Thank you.

REPRESENTATIVE WILSON: Any more questions here? You mentioned those sixty school districts, Pete. Is there any possiblity of getting some names for those so that we might pursue this a little further and see what their results have been?

CONGRESSMAN KOSTMAYER: Absolutely. We will provide the names of all of the school districts to you and to the Committee, Mr. Chairman.

REPRESENTATIVE WILSON: One other question I have here. In House Bill 749, would that cover the cost of these belts to anybody that says we have to have them in all new buses in, say, Pennsylvania?

CONGRESSMAN KOSTMAYER: Basically, we're only talking about new buses, we're talking about buses which would require the use of belts only as a result of legislation enacted by the legislature or the other kinds of educational programs I talked about. There is flexibility - we're talking about ten million dollars for three years over three years. I think basically, the answer to your question is yes.

REPRESENTATIVE WILSON: Thank you. Any other

questions? Thanks a lot, good to see you.

CONGRESSMAN KOSTMAYER: Chairman, members of the Committee, thank you very much.

REPRESENTATIVE WILSON: I have Joanne Doran, Chester County Transportation Association, Mike King, William Wilson, Rosemary Langmeyer of Pennridge, and Patricia Marks of Palisades.

MS. DORAN: I come in the role of Transportation Supervisor of the West Chester Area School District, and also President of the Chester County Transportation Association, and I'm Business Manager for the Pupil Transportation Association of Pennsylvania, and I represent those three areas today. I thank you for having us.

The membership of the Chester County Transportation Association appreciates the opportunity to come before you today and share a major concern to pupil transportation in the twelve school districts of Chester County. Our major goal within Chester County is to provide the safest and most cost-effective transportation within each school district. Within our Association there are experienced Transportation Supervisors who are willing to come forth and protest the installation of seat belts in school buses in the interest of students, parents, and the tax payers of the County and State.

We offer the following reasons why we feel that

seat belts should not be in our school buses: school buses are currently six times safer than the family car; fewer fatalities per one hundred million vehicle miles; insufficient information that installation of seat belts will improve our safety records; belts create new responsibilities to the bus driver; how will the usage of the seat belts be monitored; belts and buckles could become weapons; who will assist the younger child in buckling up; driver's attention is likely diverted in the discharge of students from vehicle due to difficulties with the belts.

The school bus system which uses compartmentalization protects the school bus passengers at crucial times without any effort on their part. The most vital component of this system is the seat. The seats are situated closer together and have higher, fully padded backs which provide for the compartmentalization and improved safety of each pupil transported. In the case of the front seat, a fully padded front barrier extends the full width of the seat serves the same purpose.

Since the major concern of the industry is the maximum protection of school bus passengers, the National Highway Traffic Safety Administration investigated the feasibility of redesigning the interior of the passenger compartment of the school bus. The research of that agency with crash sled tests resulted in major seating and body

design changes mandated for all school buses manufactured after April 1, 1977.

1) Seats were redesigned to specific spacing, with full padding front and back, and increased back height for maximum impact protection. These newer design seats provide a padded cavity for passengers - compartmentalization - which crash tests prove to be the most effective protection in an impact situation.

2) Bus body strength was greatly increased to enable the vehicle to withstand major impact from the side, front, and rear. Improvements were also made on the roof of school buses for rollover protection.

3) Increased protection was provided for the fuel system - tank and lines - to minimize fuel spillage during collision situations.

Despite all the passenger crash protection which is built into the school bus, there is no integral safety system for the protection of the school bus driver. The driving compartment of a school bus is an unpadded, hostile area in which many protruding surfaces could result in severe lacerations and injury in the event of an accident. Federal and state laws require that operators of school buses wear seat belts while the vehicle is in motion. This is equally important for the safety of the pupil passengers, since the seat belt keeps the driver behind the wheel during an

emergency maneuver or minor collision, therefore preventing loss of control and perhaps a second, more severe accident.

Generally, automobile collisions with school buses offer little threat of serious injury to school bus passengers for three reasons:

1) An automobile weighs less than one-seventh as much as a standard school bus.

2) The passenger compartment on a standard school bus is normally above the impact and penetration zone in an automobile collision.

3) School buses providing local service generally operate at low speeds.

How does compartmentalization work? Upon vehicle impact, an unbelted child will slide forward on the seat and into the padded back of the seat ahead, therefore distributing the forces of impact. Injuries will most likely be minor. In contrast, the lap-belted child's hips will act as a fulcrum, throwing the upper body forward with great force. This may cause severe injuries to the child's abdominal region because of the pressures involved. Compartmentalization is the answer to this issue in our opinion.

Our Transportation Association feels that the emphasis should be shifted to the area of where the students are being injured or killed. At the loading or unloading areas more students are injured or killed not on the school

bus; seven out of ten occur. A concentrated effort to improve driver awareness and educate the motoring public to the dangers involved in such areas should be examined in our opinion. We feel this issue would be a far better use of tax dollars and improve safety.

Although our Association is opposed to the passage of seat belts in school buses, we support legislation and funding to continue further investigation on this issue. Please feel free to call upon us for any further information or assistance you may desire in dealing through our Association on this matter. We thank you for the opportunity to be present and hear our opinion. Thank you.

REPRESENTATIVE WILSON: Thank you very much. Questions?

REPRESENTATIVE PITTS: Yes. You mentioned severe injuries to the child's abdominal region. Do you have any studies to indicate this type of injury from the lap belts?

MS. DORAN: At the PASBO convention last year, transportation supervisors - there was a video that the Thomas Bus Company has put out, and that is where I felt that information came from. We have acquired the tape, and our Transportation Assocation has viewed it, and that's where our opinion came from.

REPRESENTATIVE PITTS: It seems to me that one of the superintendents of Chester County mentioned a study

by medical personnel on this issue. I just wondered if you had that, I could also inquire about it. I'd like to get some copies of that.

MS. DORAN: I do have a copy of the Thomas bus crash tape where we compiled our information from. I don't have the medical study now.

REPRESENTATIVE PITTS: You mentioned belts and buckles becoming weapons. Do you mean horseplay if they're not buckled?

MS. DORAN: Yes.

REPRESENTATIVE PITTS: What could you say about the potential liability problems of that or in case of the child being injured and it not being buckled?

MS. DORAN: That concerns us from the standpoint that a seventy-two passenger vehicle, for instance, carrying a load, say, of sixty students. Who is going to enforce the fact that the child is or is not belted. If an accident should occur and that one child in one of the seats is not belted, where will the liability be? Who will be responsible - the driver, the contractor, the School District? What will happen then? We are concerned about that.

REPRESENTATIVE PITTS: All right. Thank you.

REPRESENTATIVE WILSON: Any questions? Mr. Reinard?

REPRESENTATIVE REINARD: Thank you for your testimony. I have a copy, and I'm not sure if you reviewed

it at all, but it's from the Department of Transportation National Highway Traffic Safety Administration regarding seat belts in school buses, it was issued in June of 1985. I believe that this is an overview of their previous testimony or previous reports that they have done in the past. They make a recommendation in their summary that states "In view of the effectiveness of the current safety standards and the excellent safety record of school buses, generally we do not believe that a Federal requirement of safety belts in large school buses are warranted". Are you familiar in your capacity as being in the Transportation Association of your District or your County, whether or not - have you checked into that report at all to see what elements they're really addressing there?

MS. DORAN: No, I have not. I am not familiar with that report.

REPRESENTATIVE REINARD: Okay, thank you very much.

MS. DORAN: Thank you.

REPRESENTATIVE WILSON: I have just a couple questions here. You referred on page two to crash sled tests. Congressman Kostmayer said that most accidents - and he didn't verify where his information came from - but most school bus accidents were on a rollover type of thing. Would you say that these crash sled tests were all head-on? It sounds to me like they were.

MS. DORAN: Yes. The rollover, that I think that the Congresmman spoke of were in another state. I think in Pennsylvania they are not very prevalant.

REPRESENTATIVE WILSON: What are the prevalant accidents in Pennsylvania to your knowledge?

MS. DORAN: Our group has a statistic sheet on the breakdown of every accident, and I think someone else in our group is going to refer to that.

REPRESENTATIVE WILSON: I'll remember that. Do you require any driver training of your drivers other than the Pennsylvania-okayed license?

MS. DORAN: Yes. We do.

REPRESENTATIVE WILSON: What is that?

MS. DORAN: We have ten hours classroom, and then there's a training portion before any driver goes out onto the road. There are credentials that must be acquired through the State. Now, in the West Chester area School District we are a contracted service, and our contractor does take care of all of that, but we oversee and make sure that...

REPRESENTATIVE WILSON: Does the contractor mandate that all personnel be trained under certain standards?

MS. DORAN: Yes.

REPRESENTATIVE WILSON: Or whatever he feels is necessary?

MS. DORAN: Yes. Of course, it's under the law in Pennsylvania on how a bus driver should or should not be qualified, but then we have certain qualifications that we set up - and policies.

REPRESENTATIVE WILSON: Thank you. Scott Casper?

MR. CASPER: Not directly on the subject, but in the Chester County Transportation Association, you mentioned here experienced Transportation Supervisors. Who else is in the Association?

MS. DORAN: In each one of our school districts, we have - Chester County is under I.U. 24, and we have twelve school districts. Our Association was formulated through Mr. Tom Tracey who is an Executive member of the Board on Chester County I.U. The supervisors are the members, and each one of us has our Business Manager or whoever is assigned to Transportation is also an honorary member. So in our system, it's about thirty people that make up the Transportation Association of Chester County.

MR. CASPER: Is that unique to Chester County or do other I.U.s in the state...

MS. DORAN: Throughout the state. In fact, the Pupil Transportation Association of Pennsylvania, which is our father group, they are always trying to get to a county to formulate a group such as ours and there's certain criterias that meet the standards there. You must have a

certain amount of membership to be affiliated. It's relatively new, I would say maybe within the last five years groups have come together within their Intermediate Units or their Districts or their County levels.

MR. CASPER: Excellent. Thank you.

REPRESENTATIVE WILSON: Thank you. Mike King? Montgomery/Bucks County Transportation Association of I.U. 22 and 23.

MR. KING: Thank you. Good afternoon. My name is Mike King, I'm the Director of Transportation of the Neshaminy School District and also President of the Montgomery/Bucks Pupil Transportation Association. Our organization is comprised of school districts and contract operations in Montgomery and Bucks Counties, and the purpose of our group is to further the safety and well being of students for whom we are responsible to transport to and from school each and every day.

Evidence does not prove nor disprove the contention that seat belts would make big buses any more safer than they already are. This great debate over seat belts in school buses pushes towards decisions and determinations being established on the basis of opinions rather than the outcome of scientific testing.

The results of the Canada crash test yielded data on the head-on crash only. Thomas Bus Company conducted

tests in April of 1985 of both head-on and side impact crashes. There is need for an up-to-date study of how the usage of seat belts would enhance or threaten the safety of the school pupil in all types of accidents, that is roll-over, side impact, head-on, etc.; determine the length of time involved in a bus catching fire and exploding; determine the exact amount of time it would take for children of all ages, with and without belts, to evacuate that bus. The study should provide current statistics on types of accidents; rollover, side impact, rear end, head-on, etc. This information can then be weighed and proper judgement made to determine how to offer the most pupils the least risk, for example, if out of one hundred thousand buses, three had roll-over accidents wherein seat belts would most likely reduce injury, and two hundred and seventy-five had collisions type accidents wherein bus evacuation would be a priority, it would need to be decided; do we disregard the pupils in the three buses and protect the much greater number of students in the two hundred and seventy-five buses? It is a very complex situation. We urge you to exercise prudence and sound judgement as you work your way through this complicated issue.

There has been a lot of mention made towards the twenty-eight accidents that occurred from 1974-75 through the 83-84 school year. We have brief descriptions of all twenty-eight of those accidents. I don't want to read all

twenty-eight of them, but I can read a few of them.

REPRESENTATIVE WILSON: Would you submit them, and we'll circulate them to the Committee.

MR. KING: Sure. The copies are in there in the yellow part. This yellow sheet here was a presentation that was put on at the Pennsylvania School Board Association State Conference in October of '85. It was presented by the Pupil Transportation Association of Pennsylvania by William Mathers who, at that time, was the immediate past president, Leona Flood who was the Director of Transportation from the Wissahickon School District, and Linda Hedrick, who was the Director of Transportation of Unionville/ Chadds Ford, down in Chester County and also the Executive Director of the Pupil Transportation Association of Pennsylvania.

REPRESENTATIVE WILSON: Any questions? Thank you, sir.

MR. KING: Thank you.

REPRESENTATIVE WILSON: William Wilson and Rosemary Langmeyer, Pennridge School District.

MR. WILSON: Thank you, Mr. Chairman, and members of the Committee. I am a board member of the Pennridge School Board. I have been a member of the Transportation Committee for most of my eight years. We have looked into bus specifications on several occasions during that eight

years, and this past year was more in depth relative to the legislation that Congressman Kostmayer has submitted. That intensified our study and we wrote for some additional information in addition to a copy of the Transport Canada report which I wrote and obtained from the Canadian Department of Transportation. I also included a copy of a letter that I personally sent to Mr. Kostmayer after my delving into a lot of the ramifications of seat belts in school buses, and a draft - it's a preliminary draft - I didn't have a copy of the draft that the Board officially approved, but Pennridge did approve a resolution directed primarily to Mr. Kostmayer objecting to the legislation on this issue, particularly since that legislation is done without any U.S. studies. The last studies were done in the late 1960's by UCLA who did it for the U.S. Department of Transportation, which resulted in the regulations of school bus construction in 1977.

Mr. Kostmayer alluded to the flaw in the Transport Canada study. I will say it was done on a very small basis, I think a total of six tests were involved with not too many dummies wired up for testing. It was done by Transport Canada because their records indicate that fifty-five percent, and this is according to a report that I read from the Insurance Institute for highway safety - indicates that Canadian school bus accidents occur with fifty-five percent

frontal collisions - the greatest percentage of accidents is fifty-five percent with frontal collisions, and the rest, whatever it is. So, unless Canadian driving is remarkably different, I would question that the greater majority of our accidents are rollovers.

Also the contention that recent injuries or death in New York was because a student flew and hit the metal railing on the seat in front of him - all buses that have been built since those 1977 regulations have no exposed metal railing, so it had to be an old bus that that occurred in.

My statement would be that the issue of seat belts in school buses is somewhat akin to motherhood and apple pie. None of us would want to be against seat belts in school buses on the surface. The natural assumption is that seat belts provided in and used while passengers are riding in buses automatically provides an additional protection, and that naturally assumes the increased safety would apply in school buses. Everyone wants the utmost safety for our school children, and no one here would want otherwise.

Proponents of seat belts in school bus legislation want this legislation for either or both of two reasons: one, assuming the condition that seat belts in school buses would provide greater safety for the children passengers as in the case of automobile seat belts or two, forcing school children to use seat belts in school buses will be an

educational experience so that they learn to use them while riding in the buses, hence, either now or when they're driving an automobile later on, they will be in the habit of using them. The first point is a logical continuation of the fact that we generally accept which regard the increased safety from the use of belts in automobiles. Much testing has been done regarding seat belts in automobiles to support those beliefs. There is no such data supportive of the cases of safety of seat belts in the school buses, however.

Testing was done in the late 1960's by UCLA, and that resulted in the regulations adopted in 1977 which gives us the increased safety we have in the standards today. Seat belts were disregarded at that time and compartmentalization, which was described earlier, was found to be the better and the safer means. All of our buses are made to those standards today and are found to be the better and safer means. All of our buses are made to those standards today and the school bus passenger safety is at an all-time high. There is no record of late testing in the United States, but Transport Canada has conducted tests in 1984. The conclusion of that report was that in severe frontal collisions, the use of lap belts may result in more severe head and neck injuries for the belted occupants than those who did not use seat belts. For this reason, Transport Canada, as a Federal jurisdiction, does not mandate the installation of

seat belts in the new buses and they do not plan to mandate the use of belts because the increased potential of injury posed by using seat belts on school buses.

I should note parenthetically that from reading that report and information I get, Canada does not have the same standards. They do not have the padded seats and the compartmentalization in their regulations as we do, so they are testing a little differently. They don't have the insured safety already in place that we do. In spite of that, they are not mandating seat belts. We have obtained a copy of that report and you have that, there. Others here are discussing the safety of school bus construction and cost and I won't go into that.

The question of effectiveness in school buses can also be gleaned from statistics on school bus accidents. In Pennsylvania, between 1974 and 1982 there were twenty-five student fatalities. Ninety-two percent occurred outside the school bus. At best, seat belts may have helped prevent or reduce injury to only two of those deaths, but we don't know that for sure. Obviously the seat belts would have no bearing on the other twenty-three deaths which occurred outside of the bus during that period.

Nationally, in the school year 82-83, there were reported twenty-eight school bus related deaths. None occurred inside the bus, and someone else alluded to where

those deaths occurred.

The statistics we have seen in our study, that is, our own Pennridge School Board study, of school transportation shows that there are three thousand to thirty-three hundred injuries per year in bus related accidents. That also disagrees a little bit with Mr. Kostmayer's statistics, but eighty-seven to ninety-five percent of those are not in the bus. Seat belts do not appear to be the answer to greater safety.

Many reasons for not putting seat belts in school buses include the additional expense for all school buses and their district tax payers, problems of monitoring the buses to be sure that the seat belts are fastened, discipline problems which would come from the ends of the belts being used to settle arguments, and one more item in the school bus which can be vandalized. If you talk to school bus transportation people, the vandalism in the buses is one of our biggest expenses.

Since most accidents occur to students outside of the bus, it is imperative that the driver be constantly alert as to the whereabouts of the students and approaching traffic for the greatest safety of the students, instead of checking inside of the bus to make sure that all of the seat belts are fastened.

The second point about educating children to use

seat belts in automobiles is certainly justified that it is a worthwhile project. However, there must be many other ways of stressing the lesson to students other than going to the expense and possible risk of injury in installing seat belts on the buses. If the contention that the students will not even use the belts if they are in the buses and that becomes the reality, then we have taught the negative of the very lesson we were trying to teach by instilling the students to use the belts by their practice of using them in the school buses. That is, if they don't use them in the school bus when they have them there, we've taught them already not to use them in the cars.

As a member of the Pennridge School Board Transportation Committee for most of my eight years on the Board, I am pleased to state that we have studied the specifications and safety of school buses a number of times, including the seat belt issue several times. Whereas the vast majority of our students are delivered to school and home again every day by school buses, we are vitally concerned with the safety of the students and the safety on our buses. It is our considered opinion that mandating seat belts in school buses will not increase their safety. It is our hope that greater efforts can be made in the education of motorists, students, teachers, and drivers about safe riding, conduct, and operation regarding the school buses.

It is our contention that every effort should be made to reduce or eliminate the places where most of all the accidents and injuries occur - the area immediately around the outside of the school bus.

Another member of our Board, Mr. Slotter, would continue our statement unless there are some questions now, or do you want to have the rest...

REPRESENTATIVE WILSON: I have only one. Your last sentence underlined accidents and injuries occurred in the area immeditely surrounding the bus, we seem to be finding that out. Do you have any recommendation as to how to cure that? It's hard for us to do out of Harrisburg.

MR. WILSON: I think much legislation has already been done in expanding the number of mirrors and increasing the vision around the bus. The only other thing...

REPRESENTATIVE WILSON: Put cowstops (ph) on the wheels or something?

MR. WILSON: Well, I'm not sure and there are more experts that could say that. In our in-service of school bus drivers in our district, and I don't know about others but I'm sure it's similar, we stress the importance of even counting the number of students that get off the bus, and before you pull away make sure you can count them - simple things like that, a lot of techniques to make sure that the students are away from the bus, because most of the students

are hit, and one in our own district several years ago - my daughter happened to witness it - a little first grader ran across in front of the bus, and dropped a paper and came back. The bus driver thought everyone was clear and the wheel of the bus actually ran over the chest of the child. It's those kinds of things - keeping the driver alert at all times, is one of the greatest things we have to do which involves discipline on the bus and teaching techniques to the drivers and seeing that they can account for all of the children before they pull away.

REPRESENTATIVE WILSON: Thank you. Does anyone else have a question?

MR. CASPER: One question. Number one, you had a very good presentation...

MR. WILSON: Thank you.

MR. CASPER: And I am thankful for that. I think there's a point to be made that coming out against seat belts in school buses is perhaps like going against apple pie. One thing that you mentioned I found interesting. We've heard testimony in other hearings and in other conversations that perhaps it would be wrong to retrofit and that perhaps only new school buses should be equipped with belts. You said something very interesting, you said that relating to the accident in New York where a student hit a metal top - it was perhaps an older bus - perhaps since newer buses are

compartmentalized and actually much safer, perhaps it would be a waste of time if you are going to look at putting seat belts in some form of buses - perhaps it would be a waste of time and effort putting them in new buses that are actually safer, leaving the older ones go. Also, since the fact that the student was killed in an older bus, it's a more dangerous situation.

MR. WILSON: That would be my - and I'm not familiar with the accident that was referred to...

MR. CASPER: Well, you referred to the accident with the metal top...

MR. WILSON: Yes.

MR. CASPER: Then that would have to be right - it would have to be an older bus.

MR. WILSON: Right. I was just pointing out that it was one of the items that Mr. Kostmayer brought up, and I think we're talking about two different things. That was in a bus that had to have been made prior to 1977. Retrofitting the buses and the cost was a thousand dollars to seat belt a bus. If you're going to retrofit old buses, we have estimates that run anywhere from twenty-five hundred to seven thousand dollars.

MR. CASPER: Per bus?

MR. WILSON: Per bus. It's a lot different from the thousand dollars - and maybe we should get his estimators

to do that for all of us.

MR. CASPER: Well, you keep referring to his estimators, and his testimony, and his legislation, but we've gone through this for a long time and I've never heard a seven thousand figure for retrofitting. The figures that I've heard and perhaps we have information that the leadership of the committee doesn't have and in that case, we'd be more than anxious to receive your information.

MR. WILSON: Some of the estimates are one hundred dollars per seat in a seventy-two passenger bus.

MR. CASPER: That's something we don't have, and if you have it and could document that, we would really appreciate it.

MR. WILSON: I'm reading from a previous report but I'll try to find something and maybe we can mail it to you.

MR. CASPER: We would really appreciate that. You're right, it's really a very complex situation. It's much more complicated that it is on the surface, and anything you could provide for us would be much appreciated.

MR. WILSON: One of the problems in retrofitting an old bus, you can't just bolt the seat belts to the floor. There's got to be some structure underneath, and that could be a major expense in trying to put a framework underneath the bus in order to anchor the belts.

MR. CASPER: Thank you.

MR. WILSON: Thank you.

REPRESENTATIVE WILSON: I see you have another member with you?

MR. WILSON: Yes, William Slotter.

MR. SLOTTER: Thank you Mr. Chairman and members of the committee. I am not Rosemary, as you can well tell, so you'll have to put up with me. I am William L. Slotter, Chairman of the Transportation Committee of the Pennridge School District. I am sorry, I do not have any testimony prepared for you. However, if you wish I would put this together and get this to your office.

REPRESENTATIVE WILSON: We're taping it anyhow.

MR. SLOTTER: Unfortunately, this is going to be a little disjointed. It will be somewhat repetitious because I had the grand opportunity of putting all of this together coming down here in the car.

REPRESENTATIVE WILSON: While you were driving?

MR. SLOTTER: Fortunately no, I was not driving.

MR. WILSON: He did have a seat belt on.

MR. SLOTTER: Okay, let me continue. The cost of equipping school buses with seat belts would place a large burden on our already strained financial resources. At least one major school bus manufacturer, and I understand that this is the Thomas School Bus Company, has stated that if

school buses were to be equipped with seat belts, there should be a maximum of two pupils per seat. Since many buses transport three pupils per seat, this reduces capacity and would make it necessary to purchase a significant number of additional vehicles. An expenditure of this magnitude should be made only if the need clearly exists.

The National Safety Council, each year, consistently rates school buses the safest form of public transportation, fourteen times safer than the family automobile.

Installing belts in buses would result in additional purchase, operation, and maintenance expense. The American Transportation Corporation estimates that the extra cost per bus for seat belts would be between two thousand and four thousand dollars depending upon the type of belt and the number of seats involved. I think this has to be a factor to be considered in your legislation as well.

Now, to bring forth what Mr. Wilson just stated. Thomas Built Buses estimated that it would cost one hundred dollars per passenger for a complete safety system including the belt, stronger seat frame, and stronger anchorage of the frame to the floor.

In a letter that our school district sent to Mr. Kostmayer back in March, we stated that we are concerned about the students but we also must be concerned about the cost. We feel that the cost of installing seat belts is too

great for limited safety effects. It is is reported that manufacturers are contending that seat belts should be limited to two per seat which means that our seventy-one/seventy-two passenger seats would be limited to forty-eight. That would mean we would have to purchase twenty additional buses, a major budget problem for us. In this connection, I'd like to ask, if seat belts are mandated by the legislature, will the legislature be fiscally responsible to cover the cost of:

1) Retrofitting the existing bus fleet?

2) Will they cover the cost of purchasing additional buses required for an automatically-expanded fleet?

3) Will you cover the salaries of the additional drivers required ?

4) Will you also cover the increased cost of insurance for a larger fleet?

5) Will you cover the additional cost of gasoline and oil that will be required by a larger fleet?

6) Will you also cover the additional maintenance cost of an increased fleet?

7) Will you cover the cost of additional mechanics that would be required ?

Looking into the future, additionally, will you also cover the greatly increased capital cost for replacement of an otherwise inflated fleet some time down the line, or,

as an alternative to all of this, will all of the above costs be piled on top of the already over-burdened school budget or force it on uninformed and unsuspecting tax payers?

That's the end of my testimony, gentlemen.

REPRESENTATIVE WILSON: Thank you. Are there any questions? Mr. Pitts?

REPRESENTATIVE PITTS: No.

MR. CASPER: We're going to study the issue, and we'll have to come up with some answers.

REPRESENTATIVE WILSON: I'd like to comment that yesterday I listened to another testimony by another committee on tax reform, and the representative from the School Board Association said let us alone, let us do our own thing, give us the tools to tax our people and we'll do it ourselves. Thank you.

MR. SLOTTER: Thank you very much.

REPRESENTATIVE WILSON: Patricia Marks? No Patricia Marks here from Palisades? We have Dr. Brister here now, I believe. The Doctor is from the Pennsylvania Chapter of the American Academy of Pediatrics.

DR. BRISTER: It seems I may be going against the flow here with what I have to say. We thought this was an important issue, that's why I've tried to take the time to come and speak here today. To me, it seems as though there's too many points in general in dealing with the subject.

I think they were addressed a few minutes previously. One would be from the medical standpoint of injury, and two would be from the standpoint of education.

Between the ages of one and fourteen, the leading causes of death in this country is in automobile accidents. I've already heard that the school buses are the safest way of transportation but given the statistic of being the number one killer, it's much greater than everything else combined as far as infectious diseases, congenital problems, etc., etc.. It would be impossible for me to be able to do this, but I've told parents in the office that if we could, somehow, get everybody to use their seat belts, and significantly lower that cause of death - I could probably do more in that regard that I could trying to make every diagnosis that I could with every patient that comes in any day or any hospital trip that I make. So, I think that anything as significant as death, any decrease that we could make would be a major step, and for that reason the American Academy of Pediatrics, as well as most pediatricians, certainly is for seat belts.

The second point involves injuries which are going to be much, much, more common than would be a fatality. Some people have argued against the seat belts basically, we keep hearing, because of cost. Our feeling would be that even in a minor accident, the obligation certainly is to have these children checked out in hospitals, emergency rooms,

etc., etc., so I think countering the cost of installing seat belts is the cost of medical care which, as we unfortunately all know, is very expensive. Even if it's a slight accident, anybody who is injured would probably be obligated to be sent to someone in the medical field to try and have them evaluated to make sure that the injuries are not that serious. So, I think from the cost standpoint, that might counteract the cost of installing the seat belts.

Moving on to the next factor, which we said was education. To me, there is a touch of irony that we transport kids in schools to become educated and at the same time, let something as vital as seat belt education sort of slip by. In teaching children in general, parents frequently ask me about discipline and educating them. We try and teach the standpoint of consistency. You always want to maintain the same behavior in response to what they're doing so they know what is the accepted principals. I think as far as the seat belts, you have an excellent example in that respect. We all take our three year olds, four year olds, five year olds, and immediately put them in seat belts. Any kind of parent that doesn't use a seat belt and they have a four, five, six year old, will invariably hear, "Daddy, you're not using your seat belt" and that sort of thing. So I think that the education process starts early, and I think, being a pediatrician, we have the advantage of getting the children

at a young age where we can install education into them. I think that this problem mentioned, as far as eight year olds, twelve year olds or other children who might be, let's say rowdy and who wouldn't be using them - I think that if these children were trained right from the "go" - seat belts, every time you get in the car with mother and father, every single day twice a day when you go to school, I think that this educational process would have to sink in, and, at least in our opinion, should help to make sure that the children would use the seat belts and therefore hopefully decrease the number of injuries.

They passed child restraint laws for children under four - I'm not exactly sure, you might know better than I - but from those laws and statistics there was a great increase in children who were then wearing seat belts and the number that was quoted to me was somewhere an increase from about twenty-one percent up to about sixty percent once these laws were passed and the parents realized the significance of seat belting the children.

We've heard a lot of arguments against using seat belts, and a couple of the papers that I had glimpsed at tried to pick those arguments apart one by one. One of the things that I had read somewhere was that as many as ten children a year may die in the school bus from the accident itself, and once again to our way of thinking, any fatality that could

be prevented, certainly we would want to try and do that. With all of the statistics and all of the papers, it is frequently difficult to try and separate what's the most factual in there versus - let me just step back and say that the statistics sort of can mean different things to different people. One of the other studies, although it was a few years ago, mentioned that at least in California they had one large accident back in 1976 when about twenty-six children died on a field trip. A couple of articles that I was looking at stated that they did not include those fatalities because it was on a field trip for whatever reason, as part of transporting the children to and from their homes, and to and from school.

As far as minimal injuries occurring, once again, a bruise, a fracture, whatever, I think it's the old story that when your child is involved, you're going to come home from work upset that your child got injured because of not having seat belts available to use.

As far as the arguments concerning weapons, although I'm not obviously an expert on the design of the seat belts, they are making much smaller and much more lightweight seat belts from what I read, which they feel are a lot safer as far as anybody using it as a weapon. There are two small cities in New England, one I think is Greenberg, New York, and the other in Hartland, Vermont - but in the

Greenberg, New York, study - they have been doing that for nine years, they have mandated seat belts and they claim that they have not had one reported incident of a child using it as a weapon against somebody else.

The increase in cost, of course, is one of the big issues we've heard before. The statistic that I have assumes that the school buses would last about thirteen years. They do use that figure of about a thousand dollars per school bus. Dividing that over the lifespan of the bus, it comes to about seventy-seven dollars per year per bus.

The other question was raised as far as who was going to be responsbile for having the children buckled in. As I tried to explain before, at least in my own experience with my own children and so many other people's children, most children by the time they are three or four years old, certainly five at the oldest, they get in the car and immediately put their belts on. I don't think it would really be a problem if a four year old could put his belt on.

As far as drivers possibly being worried that if an accident occurs and they didn't enforce the rule that the seat belts had to be used, although obviously I'm not a lawyer, it would seem that if the bus driver had made some sort of effort to try and have the children seat belted in, that he or she wouldn't be totally responsible if the children didn't do as they were instructed. At the same time, it seems as

though parents, teachers, principals, all should be involved in making sure that their children are seat belted and as far as the discipline goes, I think you have to treat not using seat belts as a disciplinary problem in school just as you would misbehavior in any other form and have the teachers and principals available to deal with that in that respect.

The question of liability was also raised. Once again, with the child restraint laws, my assumption would be that you would be just as liable for an injury and not having a seat belt present as you would having a seat belt present and not using it. So, I don't think that should really make a big difference.

The paper that I passed out was specifically from the American Academy of Pediatrics. It's from the Council on Child and Adolescent Health, and it's assumed from August of '84 to January of '85. On page three, they made the specific recommendations there as far as school buses in general, but certainly the one that pertains to this discussion - number three on page three - says that seat belts should be required on all newly-manufactured school buses regardless of their size and number of pupils transported. Maybe it was presented, I don't know, but on the smaller buses - sixteen passengers or less, they are mandated that seat belts in the smaller ones - so I don't think it would be too unreasonable to expect to have that on the larger

school buses.

The Academy of Pediatrics is, of course, nationwide. I'm just a member of the Pennsylvania one, and that's why I'm here today. A Dr. Joseph Zang did present similar testimony to the Federal Subcommittee on Transportation. He's the Director of the Adolescent Emergency Unit at the Children's Medical College of Virginia, and he presented it in Washington. His conclusion, along with the Committee's, was, if I can quote it, "to urge the committee to request the National Highway Traffic Safety Administration to initiate rule making or other programs to mandate seat belts in school buses.. As individual members, we ask you to vote in favor of measures such as that introduced by Representative Kostmayer which would provide incentive grants to states to adopt or enforce laws requiring the use of safety belts in school buses."

I would say that pretty much concludes what I have to say. If anybody has any questions that I might be able to answer, I will try my best.

REPRESENTATIVE PITTS: One argument against, and the concern that we have heard about seat belts in school buses is fire. This fall, not too long ago, a bus in a school district in Chester County caught fire. There were twenty-five students on the bus. Within five minutes, the bus was completely engulfed in flames. Now, if they were all wearing

seat belts and you had twenty-five small children, how would you address that concern?

DR. BRISTER: In one of the articles I read, the number quoted for fires was one half of one percent of all the total accidents. So, number one, that's a very small number. Secondly, what I keep reading over and over, and I think we have to apply it the same way for seat belts for you or I, when we're in the car. Number one, it shouldn't take that long to get the seat belts unbuckled, it would probably only take a few seconds for most people to get it unbuckled. Secondly, and it seems to be important as I keep reading it over and over again - in fires - I'm not familiar with this episode. Was there a major crash first?

REPRESENTATIVE PITTS: No.

DR. BRISTER: It just sort of went up in flames?

REPRESENTATIVE PITTS: Well, suppose it rolled over first and the child was hanging.

DR. BRISTER: In a seat belt you're more protected and what I keep reading over and over again, the people who are most apt to be able to do something are the ones that are less injured. If you get in a major crash and you strike your head and you're unconscious for five seconds or you're just a little bit woozy, it's going to take that much longer to have the coordination or the physical ability to open up the seat belt to get out.

REPRESENTATIVE PITTS: Well in this case, within thirty to forty-five seconds, all of the children had exited the bus.

DR. BRISTER: Without having a seat belt?

REPRESENTATIVE PITTS: Without having a seat belt.

DR. BRISTER: Well, I can't prove how long it would take for each child to unhook a seat belt, but in the same way, if you get twenty-five kids out in forty-five seconds, that's pretty quickly. But, if it were only a matter of a few seconds per child, I think that would be only a small number of seconds longer. That's the best I can say about that.

REPRESENTATIVE PITTS: Thank you, Doctor. Are you aware of any studies concerning internal injuries from the use of lap belts by small children?

DR. BRISTER: Not specifically that would really go against it. The issue of lap belts did come up, but it did seem to state the same thing - that children can safely wear a lap belt and children can easily apply the lap belt. I've heard, unrelated, as far as improper usage of seat belts, certainly the internal organs and the abdomen are always prone to blunt trauma, but if applied across the hips properly, the major bones in the hips should easily withstand the force of the trauma. It's not going to be directed to the liver, to the spleen, or to the other internal organs

that could then start hemorrhaging leading to the major injuries that are seen with blunt trauma.

REPRESENTATIVE PITTS: In your opinion, and I'm talking about small children and not the child restraints that cars have, but a lap belt and a buckle. Is that not a danger to a very small child using that?

DR. BRISTER: Without having much of the specifics written down saying "this study proves it", I don't think that there should be any increased risk of internal injury in a properly adjusted, properly fitted lap belt that would go over the hips and not be applying much force at all to the abdomen and to the internal organs.

REPRESENTATIVE PITTS: Thank you, Doctor.

DR. BRISTER: You're welcome.

REPRESENTATIVE WILSON: Any other questions?

MR. CASPER: The same thing I asked a previous gentleman. I know there are reasons for this, but in the recommendation that you had mentioned, number three on page three, the word "newly" is underlined.

DR. BRISTER: Right.

MR. CASPER: This is a rationale for that, but what I mentioned earlier, it seems to be a Catch 22 situation - let's do it on all newly manufactured buses that frankly, are pre-safe. The older buses that the students flew up in the air and got killed on is an older bus, and you could have

a newer bus on that route and he might not have been killed on the new bus, and to put belts on the newer buses to make them safer than safe, and the old buses that are less than safe, make them not as safe. I know Representative Wilson mentioned that you have a ten year old school bus - that's why I'm saying it's a Catch 22- the uniqueness of this situation. If an old bus, ten-twelve years old, and you're going to make the gentlemen in the school districts pay all sorts of retrofitting, and then in two years, it's gone - I think when it was mentioned that it's more than just a surface discussion, I think it's true. You have a real Catch 22 situation there and frankly, the committee members and the members of the General Assembly really have something to think about in terms of requiring new buses to have seat belts and just retrofitting the old ones and not the new ones, when they could already be scrapped. What a dilemma.

DR. BRISTER: It may be an old argument, but you have to start somewhere with what you're going to do. While maybe we can't protect everybody from now to whatever year forward, if those older buses are going to be phased out in one to four years...

MR. CASPER: In ten years they won't be there, you're saying.

DR. BRISTER: Right. At least we'll have started now and maybe we can't make major improvements within the

next three years, but that doesn't mean we shouldn't try to make them for year four, five, ten, twenty, and so on and so on.

MR. CASPER: Thank you.

DR. BRISTER: Thank you.

MR. ROMANO: Mr. Chairman, can we ask questions?

REPRESENTATIVE WILSON: No, no thank you. If you want to get him up the side there, go ahead. Thank you very much. I don't want to do that because we could be here debating this subject all day and all night, and we do have many more to go here. Peggy Adams, Executive Director of the Bucks County Consumer Protection Bureau.

MS. ADAMS: I'm Peggy Adams and I'm not the Executive Director. I'm the Chief Sealer/Director of Consumer Protection Weights and Measures. Recently I have been studying the question of seat belts in school buses. I did find that small buses and vans do have seat belts. I am certain the idea has surfaced because of the recent enactment and proposals of seat belt legislation in various states.

Since I have had an injury from an automobile accident, and I did not have my belt fastened, I have more than passing interest on this subject. I have also discussed the idea with school bus drivers, children who ride on the buses, and their parents. I have inquired as to federal safety standards. Seat belts do seem appealing. No one wants

to hear of a school bus accident. But, they do occur for one reason or another.

The first problem I found was that it would definitely limit the number of persons carried on the bus. Currently, three students sit on one bench-like seat. Use of seat belts or restraint belts would change that number to two persons per seat unless the bus is used exclusively for small children. If every child buckled up, I am certain that would lower the number of discipline problems. However, who would enforce the requirement that each child buckle his or her seat or restraint belt? School bus drivers are often caught in a Catch 22 situation that the school bus principal does not always support the driver. What penalty would be levied - a form of discipline or a fee?

The second problem is the expense to install these belts as high as one hundred dollars per seat. Many schools can barely afford the costs for the buses at this time. This cost would probably add twenty-five hundred dollars to each bus. If the buses are privately owned, leasing costs would go higher.

The third problem is the two types of belts. A restraining belt which is a lap belt consists of the belt and the fastener and the anchors for the belt. The safety belt includes a chest belt and anchorage overhead and to the seat frame. I also know that a lap belt would more likely

cause head and neck injuries.

The National Safety Council has reported a decline in school bus injuries. Closer scrutiny shows that many school bus accidents have occurred at loading zones. Children waiting to enter or who have just left school buses have been killed or injured.

I might point out that this morning's Courier Times, I don't know if anybody did this before I got here, had an accident mentioned that a nine year old Bensalem Township boy was hit as he was exiting a school bus.

REPRESENTATIVE WILSON: This morning?

MS. ADAMS: Yes. However, it seemed that the car that apparently came at the bus was out of control. The bus did have on its flashing lights, and it was kind of at a blind area at the bottom of a hill, so I'm not sure if anything could have been done about that.

Cars illegally pass school buses as the buses are unloading or discharging passengers. School bus drivers have a problem noting license plates, often not getting the entire number or not being able to read the number. Even if they do find the correct number and motor vehicle, bus drivers have generally not viewed the other driver and cannot recognize the person in court. Thus, the person goes free. In other instances, drivers don't really know or have forgotten the laws and regulations about school buses. Some

drivers pass buses just as red lights begin blinking and others stop when not required to stop.

There are federal and state standards for school buses. They have various signals and lights. The buses are unique because they are a yellow color throughout the country. Additional safety devices such as convex mirrors, stop signs swinging out of the driver's side, stop arms, etc. can be added. Instead of installation of safety belts perhaps improved and continual training programs for bus drivers and more strict inspection requirements should be mandated.

Continual and increased education of students who ride the buses must occur. They do not realize that the bus driver must focus his or her attention on the road, not on the students behavior which at times can cause a bus to stop or swerve suddenly causing a dangerous and deadly situation. Monitors or aides could be assigned to some buses to reinforce student education as to discipline, crossing at bus loading and discharge zones, etc.

School bus driver training should be reviewed. Bus drivers should be monitored as to driving habits. I know of several incidents where buses passed other vehicles at illegal speed limits or were driving past the speed limits. The school bus driver needs to be supported by parents and school principals. Otherwise, safety becomes a mockery.

The public is in need of education and a public safety awareness program. During my discussions I found that many drivers are bewildered, unknowledgeable, unsure of the laws. I don't mean school bus drivers.

Instead of advocating that all school buses have seat belts, the legislature should look into the safety aspects. No wonder the driver is bewildered. During the school year, school buses use blinking loading lights when loading and discharging students. During the summer when loading and discharging day camp students, buses are not using loading lights.

The law is not clear about buses stopping at railroad crossings at any time, empty or full. Some districts have guidelines stating that the full bus stops but the empty bus does not or the bus never or always stops. I urge the legislature to look into these areas for safer school bus safety.

School districts should be sure to enforce strict maintenance inspections. They should make an increased educational effort with all students on school bus safety and increased emphasis as to driving safety. Parents and teachers should be responsible to inform and educate the students as to school bus safety. It is imperative that they realize that unruly behavior may seem like fun but may have serious ramifications.

I urge the legislature, Penn Dot, Parent-Teacher Organizations and the media to educate everyone through a school bus safety and awareness program about our state laws. A strong educational program could probably eliminate at least half of the deaths, injuries and accidents that occur. Bucks County Department of Consumer Protection/ Weights and Measures will certainly assist in this endeavor.

Although I wish that everyone could have the right to have a choice to buckle up on a school bus for safety, I cannot advocate the large expenditures this will cost to fit each school bus with a seat belt. However, it is more cost efficient to mandate that all new school buses have seat belts when manufactured. I could agree with this type of legislation after there is a determination to what type of belt should be on each seat.

Thank you for this opportunity.

REPRESENTATIVE WILSON: Thank you, Peggy. I noted on page three you had some recommendations for us, the legislature. I would suggest you write and give us some specifics as to what you'd like to see.

MS. ADAMS: Okay, I will. Thank you.

REPRESENTATIVE WILSON: Officer Lloyd Patton, Middletown Police Department. Is Officer Patton here? Gene Zimmerman? I saw Gene come in a minute ago. Pennsylvania Bus Association, it says here. How have you been?

MR. ZIMMERMAN: Fine, how are you?

REPRESENTATIVE WILSON: Good.

MR. ZIMMERMAN: Mr. Chairman, committee members, and staff my name is Gene Zimmerman and I am Executive Director of the Pennsylvania Bus Assocation located in Harrisburg, Pennsylvania. The Pennsylvania Bus Association is composed of school bus contractors and certificated carriers and has for the past sixty-six years represented the bus industry and those who rely upon bus transportation. With me today is Mr. Franklin Levy to my left, owner and operator of the Levy School Bus Company, Inc. in Trumbauersville here in Bucks County. Levy Transportation has been in continuous operation since 1927 and currently has a fleet of over one hundred and forty vehicles under contract. They serve the Upper Perkiomen School District, Quakertown School District, New Hope-Solebury District, and Bucks County IU 22. In all but the last of those - the testimony and the comments I am going to give you are subscribed by the school districts listed. My comments today represent the official position of our association and Mr. Levy is here at the request of the school bus segment of the Pennsylvania Bus Association to answer questions you may have with respect to the technical and operational implications of seat belt utilization in school transportation vehicles.

Let me preface my further remarks by emphasizing

that the prevalent relationship between school districts and the transportation contractors who serve them is for the most part one of a cooperative partnership based upon the priorities of safety, reliability, and economy. May I also emphasize that the joint commitment to pupil safety far overshadows any other consideration.

Some opponents of school bus seat belts may quote the 1983 National Highway Traffic Safety Board when it declined recommending school bus seat belt installations noting it would "impose a financial burden on all school bus purchasers regardless of whether they intend to install belts in the buses. Under present standards districts that want belts in their buses are free to order buses so equipped or install them in vehicles they already own". It is difficult for us in the Pennsylvania Bus Association to see any validity in an argument which weighs lives of children against cost figures for seat belt installations.

If, however, dollars to be spent for seat belts were utilized in other areas of safety education and safety technology then one begins to approach cost effectiveness in terms of lives saved and devastating injuries avoided. On a nationwide basis in the years of 1981-82 and'83, one hundred and seventy-five children were killed in school bus accidents but only thirty of that number were inside school buses. This to us suggests that there are definite safety needs which

transcend the seat belt controversy, and to ignore those causative factors and the possible remedies to those one hundred and forty-five deaths constitutes a cruel injustice to families of victims and to the thousands of Pennsylvania children who depend upon us to provide safe transportation.

Proponents of school bus seat belting like to draw a parallel between the family automobile and the school bus under the assumption that what's desirable in the first instance must also afford greater safety in the second. We suggest to you that this may be both an erroneous and dangerous rationale. No proof exists that seat belts promise to save lives in school buses the way they are currently constructed. To the contrary, tests done thus far tend to indicate that the compartmentalization concept currently built into school buses affords greater protection to the head, neck, and lower chest than does seat belt utilization in school buses as they are designed at the present time.

May I, with your indulgence, repeat the last seven words of my previous sentence, "school buses as they are currently designed". I do so because we feel that this phrase constitutes the crux of the issue before you at this time. Today's school bus is the culmination of formal school bus crash-worthiness and seat belt testing in 1966. Publicity and the need to fund more extensive research and testing succeeded in involving the then newly established U.S.

Department of Transportation in standards for the construction and operation of school buses. Early tests revealed that seat structures were the greatest contributors to passenger injuries. Upon impact, unbelted passengers were thrown into unpadded iron seat rails or stanchions. On the other hand, impact forces tended to jackknife belted passengers, causing serious head and facial injuries by contact with the unpadded seat rails immediately in front of each seated position. Testing engineers determined that at least forty inches of unobstructed space immediately in front of each seated position was necessary to avoid this type of injury to passengers wearing belts - not a very practical solution since it would more than double the number of buses needed to provide the same amount of transportation.

Statistical data for the period 1976-1985 offers dramatic evidence that the compartmentalization concept has produced the safest mode of pupil transportation available thus far. To equate it with the family automobile wherein seat belts are proven safety devices is to incorrectly assume that both the structural and safety engineering for the two vehicles is highly compatible. We would caution that such an assumption is gravely in error and at best regulates pupil transportation to a high hazard guessing game.

In conclusion we want to note that none of our members of the schools that I am representing today have a

closed mind upon the subject of safe transportation. Nor would we say that further evolution of today's school bus is impossible. Perhaps the ultimate conveyance is one of incorporating seat belts and shoulder straps. If so, that vehicle will be of a vastly different design and configuration than what is today state-of-the-art.

We would suggest that this committee consider endorsement of exhaustive studies of the question based upon comprehensive and expert engineering guidelines. Belting students in a compartment could very well be a step backward resulting in higher mortality and more devastating injury to a commodity all of us want to protect and preserve.

It is with the utmost sincerity that the Pennsylvania Bus Association enlists your support for implementing research toward the end of achieving the ultimate in pupil transportation safety. We have no desire whatsoever in doing so as a delaying tactic. You have at your disposal the means whereby the interest of Pennsylvania children can best be served. If a total redesign of the school bus is what is required to afford maximum safety then as legislators, educators, contractors, school boards and communities, all of us should pursue that end with a commitment to meet the monetary outlay which such studies dictate.

I'd like to thank you for the opportunity of presenting these remarks and offer Mr. Levy and myself if

there are any questions from the members of the committee.

REPRESENTATIVE WILSON: Thank you. Any questions? Thank you. Larry Brown, President of School Bus Parts Company, Plumsteadville.

MR. BROWN: My name is Larry Brown, I am the President of School Bus Parts Company in Plumsteadville, Bucks County, Pennsylvania. We are the largest distributor and manufacturer of school bus replacement parts and safety equipment in the United States and Canada. I will start by saying that we would make a very large amount of money if seat belts were made mandatory on school buses. We currently manufacture safety harnesses for transporting handicapped students and we could turn out large quantities of seat belts within hours.

However, we do not believe that seat belts on the buses as presently designed and staffed would make any sense. Originally lap type seat belts, the type proposed for school buses, were installed in cars to prevent passengers from being thrown out of the vehicles in the event of an accident. Cars have many doors and windows compared to school buses which typically have a front and rear exit only. The lap type belt was not effective in preventing the head and upper body from pivoting forward, so that they were soon replaced by the current type belt with a shoulder strap. This type does work effectively but cannot be installed properly

in the current type of school bus with windows at shoulder level.

Seating and bus interiors on all buses manufactured since April of 1977 must meet very rigid Federal standards as to seat construction and interior design. These standards have served to give the students a much safer interior but also introduced the concept of compartmentalization. This concept envisions students being largely confined in a well padded, reasonably protected area in the event of an accident. If seat belts were installed in conjunction with this concept it provides several problems.

First, the belt will serve as a fulcrum with the head and upper body taking most of the thrust. A very, very dangerous situation as shown in both the Transport Canada and Thomas Bus Company test results conducted by Calspan Testing Labs in Buffalo, New York. Secondly, the driver in many cases will not be able to see the students so it would be impractical for him to determine whether the belts are being used or not. This would probably necessitate a matron seated in the back of the bus to determine whether the belts are being properly used and to maintain order in the bus.

Another problem is that the same bus that on the first run every morning picks up forty-eight high school students seated two per seat, then makes several other runs with seventy-two junior high school or elementary school

students seated three per seat. This requires a readjustment of the seat belt every time it is used. Also because of the constant usage they become covered with grime and dirt making them a not very appealing attraction.

Anyone who has spent much time on a bus knows that reality is very different from theory. Kids get on the bus full of energy and their behavior is a major problem for the driver. Kids throw items, trip their friends, cut the seats and do almost anything and everything in the course of a bus trip. A seat belt only becomes another item available to them for horseplay. They would buckle them across the aisle, hold their friends in with them and swing them as weapons.

The shame is that the great majority of accidents happen outside the bus, usually during loading and unloading times. The driver in a conventional school bus cannot see closer than fifteen to twenty feet from the front of the bus without the aid of mirrors and must rely totally on these mirrors, which frequently get out of adjustment, or on a count that he takes visually of the students waiting at a loading zone making sure that the same number enters the bus or that all those leaving the bus are accounted for. Front and side visibility are major problems and the possibility that the driver will be distracted from giving his full attention to this leaves me greatly concerned. The money being considered could be better spent on proper training and

items such as crossing arms that mount on the front bumper and require that kids pass considerably in front of the bus before crossing the street.

One of my greatest concerns is what happens in the event of a bad accident. In frontal accidents the driver is the most vulnerable and in the event that he is seriously injured and the bus turns on its side or upside down, the gas tank could be punctured. Who would evacuate the seventy-two panicked children - twelve or thirteen rows of them - from the endangered bus.

Another problem arises from the predisposition of our society to be a litigating society. Once seat belts were installed in buses, if a child was hurt through a vehicular accident and the seat belt was not used, the operator, whether a private company or school district, would likely be sued. Being that the school bus transportation system is a stepchild of the educational system, it is unlikely that matrons would be employed to insure usage of belts and therefore this plus claims for damages arising from the use of belts in horseplay would increase the already unbearable cost of insurance. One of the insurance companies has already released a study showing this.

The other thing lacking is any standard for seat belt installation. Some seats have four legs and others have two legs with one end bolted to the exterior wall. Some

seats are screwed into the floor while others are bolted through the floor with a nut, bolt, and washer. The floors themselves vary as some have plywood over steel construction, while others are just steel. In many cases floors would have to be reinforced to take the additional thrust.

I think that the concept of belts in buses is not right at the present time. It would create more problems than it would solve. Even the advocates who started by advocating safety through seat belts have now largely shifted to calling seat belts an extension of the process of educating children to use them in passenger cars.

Few people would profit from seat belts as we would, but in good conscience they are the wrong product at the wrong time. As the design of buses evolves and if more money were made available for supervision within buses, maybe then they would make sense.

I wanted, if I have a couple minutes, to make a couple of observations. Peter Kostmayer cited the accident in New York. Immediately after the accident, the child's parents were interviewed and they said that seat belts would not have helped in any case. It was a bus that was built before '77 and did not have the padding that is required now.

A couple of other things. With all of the talk in the industry of seat belts in school buses, nothing has been done in most states in eliminating standees. Most states

still permit kids to stand in the aisles, so seat belts don't make much sense if you have kids standing.

Another thing we found - we do business with most of the sixty districts that were cited as having installed buses. If people in the industry, different from us, go to the people to ask them how they are doing with seat belts, generally the people are very afraid to testify or to say anything because they can lose their employment. We're in a different situation. We sell them parts day-in and day-out and the things we've heard off the record or after the initial time of putting them on and really staying with it, it's dropped off considerably. It really hasn't been all that effective. That's all I have.

REPRESENTATIVE PITTS: Mr. Brown, you mentioned an insurance study showing increased costs. Do you know what insurance company that was?

MR. BROWN: I believe it was Hartford Insurance Company. I can get you a copy of that. I'd be happy to. That was within the last three months, I believe.

REPRESENTATIVE WILSON: Mr. Brown, you've talked about - and we've heard today, we're starting to get this down to some kind of consensus from all of this testimony - the driver being most prone to injury. Do you see the school buses making seat belt available or a harness available for him or her?

MR. BROWN: He does have a seat belt.

REPRESENTATIVE WILSON: They're not mandated to wear them?

MR. BROWN: Yes, they are.

REPRESENTATIVE WILSON: But do they?

MR. BROWN: Yes, they do. The problem is that he is in a position in a bus...

REPRESENTATIVE WILSON: Then it's not doing much good. If he's so prone to injury...

MR. BROWN: Well, he's the closest one. He's not in a padded area. He has all of the instruments - he has the steering wheel in front of him. He is also in the corner of the bus where the body and the chassis meet, and he is very vulnerable because the body sticks out a little bit - there is an indentation there and it usually is a frontal accident. In the great majority of accidents of the school bus, it's frontal, and he's the one who's going to take the great thrust. He's the one who's going to get an incoming car from an opposite lane.

REPRESENTATIVE WILSON: Thank you.

MR. BROWN: Any other questions?

REPRESENTATIVE WILSON: I believe that's all we have.

MR. BROWN: Thank you.

REPRESENTATIVE WILSON: This is Joyce Dierks.

Chairperson, Bucks County School Directors' Legislative Council.

MRS. DIERKS: Good afternoon and thank you for the opportunity to present testimony on behalf of the Bucks County School Directors' Legislative Council regarding legislation requiring seat belts in school buses, specifically House Bill 397, 432, and 928.

My name is Joyce B. Dierks and I am Chairperson of the Council. I also am a member of the Neshaminy School Board and I'm the Region 11 Director of Pennsylvania School Boards Association which encompasses Bucks, Chester, Delaware and Montgomery Counties. I am testifying here today on behalf of the Bucks County Legislative Council.

Our Council members commend the House Transportation Committee for conducting this hearing, and we hope that you will conduct many more public hearings across the Commonwealth before final consideration of mandatory school bus seat belt legislation. The proposed legislation has created a great deal of concern among school board members and school administrators, much of it is based upon incomplete and controversial research facts.

Let me hasten to add, however, that regardless of the response, all of us are committed to provide a safe environment for students coming and going to school as well as in school itself.

However, a review of current literature reveals contradictory reports and evidence which have resulted in raising many more questions than providing answers. Our Council has not arrived at an opinion regarding seat belts since the monthly Council meeting had occurred prior to the invitation to testify. Therefore, we would like to utilize our time today to raise questions which we believe should be answered satisfactorily before any legislation mandating seat belts on school buses is acted upon.

Because of the limited research on this topic, and I think we have heard it over and over again today, I am sure you will have heard these same questions.

First, how safe are children on today's school buses? According to the National Safety Council, there are three hundred and forty thousand school transportation vehicles in the United States which transported daily twenty-two million, one hundred thousand students - a total of three point five billion miles during the 1983-84 school year. During that school year, ten student passengers were killed in bus accidents nationwide.

Based on deaths per one hundred million miles, the National Safety Council has concluded that school buses are twice as safe as transit buses, four times as safe as trains, five times safer than scheduled airlines, and fifty-three times safer than passenger cars. The school bus safety record

is unmatched.

Here in Pennsylvania, there have been no school bus student passenger fatalities for over ten years. In Bucks County, our eight hundred and fifty-four vehicles transport eighty thousand, two hundred and sixteen public and nonpublic students seventy thousand, five hundred and eighty-nine miles every day or over twelve million miles each school year.

Second, would seat belts prevent injuries in school bus accidents? There is very little research available to answer this question. Most persons in favor of seat belts draw the analogy with car seat belt safety. In cars, which are constructed differently, seat belts make a difference. But buses have larger bumpers, are heavier, and are encased in a metal rib-like cage. The only actual test of school bus seat belts was conducted in 1985 by the Canadian government which you've heard about before, using the dummies, not the rollover effect.

In 1977, the National Highway Traffic Safety Administration issued standards which required school buses to have high and strong seats and seat backs, seat back padding, and seat spacing to reduce the chance of occupants being thrown over the seat in front. Known as compartmentalization, there was a dramatic decline in school bus deaths after the standards were issued.

Which is better - compartmentalization which cradles a child's whole body, or seat belts which restrain? Is compartmentalization effective in side crashes or rollovers? Can seat belts actually cause injuries because of the variety of body sizes which must be accommodated, and would they restrain the waists of children allowing the heads and chests to strike the seat in front causing more spinal, head, and neck injuries? Can smaller students get out of seat belts in case of a catastrophic accident such as fire or would students panic and be trapped by seat belts?

Third, how can we insure that students will wear seat belts? Here again the evidence is not clear. In the very limited number of school districts which have seat belts on buses, use is estimated at eighty percent. Proposed legislation would provide for fines of drivers who operate buses without students being buckled. How could drivers maintain control of vehicles and still make sure children are buckled in? In urban areas where traffic is already congested, would long delays at bus stops - while some students play games - further congest our highways and delay commuters going to work? Would bus route time have to be lengthened resulting in increased driver costs? Would monitors be required?

Eight years ago, a Calfornia study estimated that it would cost forty-five million dollars annually to put monitors on California school buses. How much would monitors

cost in Pennsylvania?

And if the student does not buckle up or releases buckles enroute, who is legally responsible if there is an accident and the unbuckled child is injured or killed? The driver? The school board? The Administration - or all of the above?

Fourth, would older buses have to be retrofitted? Proposed legislation requires all school buses to be seat belt equipped. While this is not a great problem on new buses, buses built prior to 1977 would cost as much as three thousand dollars per bus to retrofit. The National Highway Transportation Administration indicates that older buses may not have seats well anchored to the floor and many do not have seat padding to cover metal seat frames. Also seat construction may be inadequate to withstand forces generated by seat belts and would collapse with pupils belted in. No school bus manufacturer is willing to retrofit pre-1977 buses primarily because bus floor strength has been deteriorated by weather conditions and could not withstand the force of belted passengers in a crash situation.

Fifth, who would pay for seat belts, retrofitting, and monitors if required? As callous as it might sound, school directors must look at cost benefit ratios. We have a dual responsibility - one is to provide education programs for children and second, to be accountable to taxpayers to

make sure that taxpayers are getting the most for their tax dollar.

Seat belts cost about six dollars and twenty-five cents plus installation and about sixteen dollars per seat on new buses. Some estimates project one thousand dollars per school bus, others three thousand dollars. Pennsylvania has nineteen thousand, five hundred school vehicles and using a two thousand dollar figure, initial seat belt installation could cost almost forty million dollars, plus monitors, plus legal fees if unbuckled students are injured.

Statistics indicate that most school bus related injuries and fatalities occur outside the school bus. In fact, we just had one here in Bensalem yesterday morning. Between 1974 and 1983, there were twenty-eight student transportation related fatalities in Pennsylvania. Twenty-six of the deaths occurred as students were being discharged - either killed by the bus or another driver. Only one death occurred to a passenger in a school bus. The other death occurred while the student was a passenger in a van. Would it be more cost affective to provide better bus driver safety courses, equipment which would help drivers observe the road more clearly, better compartmentalization, and a program to enforce motorist compliance with regulations for stopped school buses?

Sixth, will teaching kids to buckle up on buses get them to buckle up more in the car? There is no evidence

to either refute or support this proposition. However, if buckling up in the car is the desired result, might the legislature be more effective by mandating seat belts be buckled in all passenger cars?

By now I think you can see why we expressed appreciation for this opportunity to air only some of many questions our Council members have regarding this proposed controversial legislation.

In addition to the questions we have posed today, we also must be concerned about the types of nuts and bolts issues with which those on the "firing line" have to deal. Recently, we acquired a list of such questions which you may or may not have seen before. I'd like to close with these questions because they provide an excellent summary of both school director and school administrator concerns.

1) What is the best way to anchor the seat belts to the seats?

2) How many anchors should be installed in each seat?

3) What buckle is best for children, the button or lever release?

4) How long is the belt life or what is the replacement period?

5) Are buckles designed to eliminate tiny fingers from being caught?

6) Are belts designed for easy cleaning and removal?

7) Should pre-April 1, 1977, buses be retrofitted for belts?

8) What evidence exists to indicate that a child would not be injured when his upper body pivots above the belt and strikes the seat ahead?

9) What is the cost benefit ratio for adding seat belts?

10) How can the driver be assured all belts are fastened properly?

11) What policy should be followed concerning mandatory use of belts?

12) What can be done about vandalism which makes belts unusable?

13) What is the potential for using the buckle as a weapon?

14) Which belts should two high school students use in a seat equipped with three belts?

15) In the event of fire, what effect would seat belts have in creating panic among small children?

16) In the event of a rollover accident, how serious are the hazards to children hanging upside down from their belts?

17) Under what circumstances are adult monitors

necessary to see that seat belts are used properly?

18) What issues regarding liability have been identified?

19) What is the cost of insuring a school bus equipped with seat belts for pupil passengers? Which companies offer such insurance?

20) Because of the seat spacing, passengers cannot climb over each other and fastened seat belts would not permit a seated passenger to slide to the outboard seat. How much disruption and delay would this cause during the loading operation? What potential would this delay have for accidents?

21) What cautions does the medical profession mention with respect to possible injuries to K to fourth grade children due to improperly fastened seat belts?

22) Does horseplay with seat belts provide any opportunities for possible injury to pupil passengers?

23) What evidence exists that the public, the school bus drivers, the State Secretary of Transportation would support the requirement for seat belts?

I don't expect answers to these questions today, but we certainly hope that you will take a look at these issues before mandating seat belts. Thank you for your time.

REPRESENTATIVE WILSON: How about if we just mandate rearward facing seats on all new buses?

MRS. DIERKS: I don't think that's a problem. Rearward facing to get them out?

REPRESENTATIVE WILSON: No, if your seat faces to the rear - and everybody's telling me you're all having frontal accidents - then you'd have the rear of the seat supporting your body, you see. If your body is then thrown backwards, you wouldn't have the same effect.

MRS. DIERKS: I could see harness-type seats would be more safe than lap-type seats because the backs are high, they're over the child's head.

REPRESENTATIVE WILSON: Right. That's what I mean. Thank you very much.

MRS. DIERKS: You're welcome.

REPRESENTATIVE WILSON: Let me explain something to those that are here. This hearing is a result of House Resolution 77 introduced by Representative Collafellow (ph) that mandates that the House Committee and - this is a small part of it - that we do hold these hearings and determine the possible validity of mandating seat belts in school buses.

Thank you very much. That concludes the list.

OFF THE RECORD

## CERTIFICATION

I HEREBY CERTIFY that the proceedings and evidence are contained fully and accurately in the testimony taken by tape recording by me upon the foregoing matter on Thursday, January 16, 1986, and that this is a correct transcript of same.

Sue C. Knorr, Reporter

Date: January 27, 1986