



Testimony of

National Transportation Safety Board

Before the

House Environment and Transportation Committee
The Maryland General Assembly

– On –

House Bill 110, Motor Vehicles - School Buses - Seat Belts

–

Annapolis, MD • February 5, 2026

Chair Korman, Vice Chair Guyton, and members of the committee, the National Transportation Safety Board (NTSB) appreciates the opportunity to provide testimony regarding House Bill (HB) 110—legislation that would require occupant restraining devices to be installed in most school buses purchased after July 1, 2030.

The NTSB is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in the other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable causes of the accidents and events we investigate and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for each accident or event we investigate. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

School bus travel is one of the safest forms of transportation in the United States. School buses are designed with a passive form of occupant protection, termed “compartmentalization,” which only requires the passenger to sit properly in the seat facing forward and functions by forming a compartment around the bus occupant. Compartmentalization is designed to contain passengers within their seating compartments during front and rear impact collisions. A key aspect of this occupant protection system is that passengers remain within the compartment prior to and during an impact so they benefit from the energy-absorbing seat design.

Unfortunately, however, we continue to see occupant protection safety issues in school bus transportation, particularly in crashes that include:

- side-impact collisions,
- rollovers in which compartmentalization is incomplete and fails to provide sufficient protection for occupants, and
- precrash bus maneuvers that move occupants out of the protective seating compartment before the crash occurs.

For example, on October 27, 2020, a freightliner truck collided with a school bus in Decatur, Tennessee, killing the bus driver and a 7-year-old passenger and injuring multiple passengers. We found that several of the school bus passengers were not seated properly, which increased their risk of injury. Lap/shoulder belts would have further mitigated the forward inertial movement of the unbelted passengers on the school bus, keeping them within the protecting seating compartment and reducing their risk of injury, especially those passengers near the impact area.

On November 21, 2016, 6 students died and more than 20 others were injured in Chattanooga, Tennessee, when a school bus struck a utility pole, rolled onto its right side, and collided with a tree. The bus was carrying 37 students from school to their drop-off locations. At the time of the crash, the bus was traveling 52 mph in a 25-mph zone, and the bus driver was on a cell phone call. The school bus passengers were at risk from the precrash vehicle motions, which threw them from their seating compartments prior to the bus striking the utility pole. This rendered compartmentalization ineffective during the rollover sequence. Therefore, we recommended that each state, including Maryland, require that lap/shoulder belts be installed in all new large school buses to best protect all occupants.

In February 2012, a school bus transporting students to Chesterfield Elementary School in Chesterfield, New Jersey, was struck at an intersection by a roll-off truck, resulting in 1 bus passenger fatality, 5 serious injuries, and 11 minor injuries. The fatally and severely injured passengers were seated in the back half of the school bus, in the area of higher impact forces and accelerations. Some students on the school bus wore their lap belts improperly or not at all. Our investigation concluded that, in severe side-impact crashes like the Chesterfield crash, properly worn lap/shoulder belts reduce injuries related to the upper body flailing that is commonly seen with lap-only belts and, therefore, provide the best protection for school bus passengers. Further, better student, parent, and school district education and training may increase the use and proper fit of passenger seat belts in school buses. Thus, we recommended that school districts provide improved information to parents and students regarding the importance of properly using seat belts on school buses.

We found that passenger lap/shoulder belts mitigated injuries after a side-impact collision and rollover involving a school bus and a pickup truck in Helena, Montana, in November 2012. The four lap/shoulder belted bus occupants were treated for minor injuries; the belts helped keep the occupants within their seating compartments and limited potentially injurious occupant-to-occupant contact. None of the bus occupants sustained concussions or other injuries that impeded their ability to evacuate, which is uncommon in rollover crashes and indicates that the lap/shoulder belts provided effective protection.

Finally, our investigation of a 2014 single vehicle school bus crash in Anaheim, California, demonstrated that the proper use of lap/shoulder belts on a school bus reduced passenger injuries. When the bus driver lost consciousness as a result of a medical condition, the school bus departed the roadway, eventually striking and dislodging a concrete light post and uprooting a tree. The bus came to rest at an angle on an embankment, leaning onto a large tree that had scraped the bus from its left front axle back to its rear axle. The tree intruded extensively into the school bus, especially near the left side emergency exit door. Importantly, two students seated in

the area of maximum intrusion were wearing their seatbelts at the time of the crash, which reduced the severity of these passengers' injuries.

School bus passenger seat belts reduce injuries and fatalities and prevent ejections in school bus crashes and rollovers, but only if the seat belts are properly worn. We recently investigated an August 13, 2025, school bus rollover crash in Leander, Texas. Investigators reviewed onboard video footage to determine seat belt use. Of the 42 passengers visible, only 6 were belted, and 4 of those were wearing only the lap portion of the lap/shoulder belt. We found that most passengers did not use the available lap/shoulder belts or five-point harnesses, resulting in occupant-to-interior and occupant-to-occupant impacts that caused injuries.

Although compartmentalization makes school buses extremely safe, passengers without properly worn lap/shoulder belts remain vulnerable to either ejection or injury within the school bus (for example, from being thrown into an intrusion area). Therefore, to protect passengers in large school buses, we recommend that Maryland amend its statute to require passenger lap/shoulder belts for all passenger seating positions in new large school buses in accordance with Federal Motor Vehicle Safety Standard 222.