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FISCAL IMPACT REPORT

ORIGINAL DATE 2/18/19

SPONSOR Brown LAST UPDATED _____ HB 554

SHORT TITLE School Bus Air Conditioning & Seat Belts SB _____

ANALYST Liu

ESTIMATED ADDITIONAL OPERATING BUDGET IMPACT (dollars in thousands)

	FY19	FY20	FY21	3 Year Total Cost	Recurring or Nonrecurring	Fund Affected
Total		\$3,260.3 - \$4,867.7	\$1,874.9 - \$2,799.2	\$5,135.2 - \$7,666.9	Recurring	General Fund or Capital Outlay Funds

(Parenthesis () Indicate Expenditure Decreases)

Relates to HB510, SB580
Conflicts with HB265, SB156, SB321

SOURCES OF INFORMATION

LFC Files

Responses Received From

Public Education Department (PED)
Department of Public Safety (DPS)

SUMMARY

Synopsis of Bill

House Bill 554 amends the Public School Code to require all school buses purchased on or after July 1, 2019, to be equipped with seat belts for all passengers and air conditioning in school districts with regularly high temperatures that would pose a risk to students. The bill further establishes legal seating capacity for school buses and requires PED to ensure all school bus drivers receive training on legal seating capacity.

FISCAL IMPLICATIONS

The bill does not make an appropriation. Current law requires school buses to be replaced every 12 years. According to the latest PED data, approximately 393 school buses are currently due or behind schedule for replacement. In prior analyses, PED indicated the cost of a school bus to be about \$85 thousand, and, according to a 2015 National Highway Traffic Safety Administration

(NHTSA) estimate, costs to install seat belts in a school bus could range between \$7,346 and \$10,296. PED estimates the costs of installing three-point seat belts on a regular 71-passenger school bus would be approximately \$7,500. The incremental costs of installing seat belts in 393 buses could be up to \$4 million.

According to monthly average temperature data from the Western Regional Climate Center, New Mexico’s hottest month is July, with average temperatures from the last century ranging between 56.9°F and 82.7°F across 258 temperature reporting stations. Approximately 19 percent of New Mexico temperature reporting stations recorded average temperatures above 79°F in July, one standard deviation above the mean of data reported for July. Costs to retrofit a school bus with air conditioning can range between \$5,000 and \$11,000. PED notes the cost would be \$8,000. Assuming 19 percent of buses will need to be retrofitted for air conditioning systems, incremental costs for 393 buses could be up to \$821.4 thousand. Actual costs, however, will depend on how PED defines “school districts in which temperatures are regularly high enough to pose a risk to students.”

The incremental costs of installing seat belts and air conditioning in 393 buses could be up to \$4.9 million. For FY20, PED requested funding to replace 387 school buses, and the executive and LFC FY20 recommendations include \$32.9 million for these replacements. PED estimates the cost of retrofitting 387 buses with seat belts (\$7,500) and air conditioners (\$8,000) would be \$5.9 million.

Bus Model Year	Estimated Number of Buses
2000 - 2007	393
2008	226
2009	198
2010	192
2011	67
2012	73
2013	130
2014	268
2015	104
2016	226

Source: PED

Starting in FY21, about 226 school buses would be scheduled for replacement from the 2008 model year and need seat belts and potentially air conditioning systems (assuming 393 buses are replaced in FY20). As such, the incremental costs of retrofitting 226 buses could be up to \$2.8 million. The state would incur these additional costs each year when replacing school buses. According to PED, if the state remains on schedule and replaces buses according to the replacement schedule, approximately 170 buses should be replaced annually. PED estimates outyear costs for retrofitting these buses would be about \$1.8 million each year.

SIGNIFICANT ISSUES

School buses are equipped with more safety equipment and must adhere to stricter standards than any other vehicle on the road. Buses are designed to protect passengers through “compartmentalization,” which includes closely spaced seats and high, energy-absorbing seat

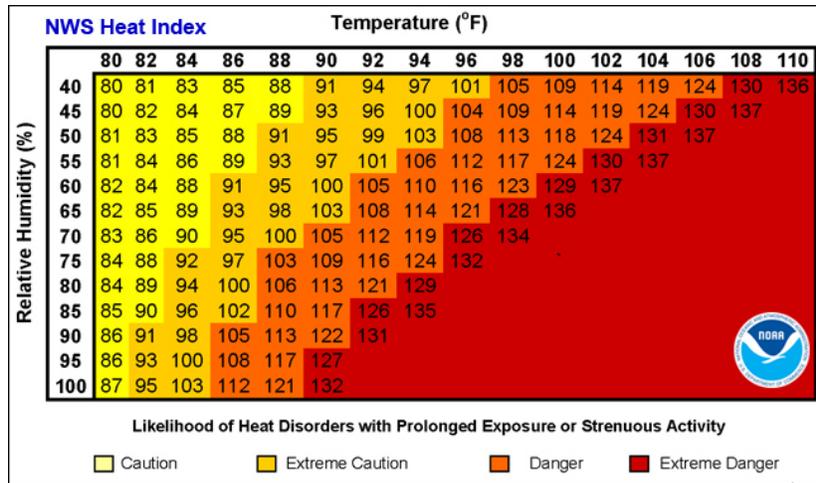
backs. The National Transportation Safety Board (NTSB) and the National Academy of Sciences confirmed the effectiveness of this design in studies of frontal and rear impacts. Concerns have been raised, however, about the effectiveness of compartmentalization in side-impact crashes. The NTSB concluded that “current compartmentalization is incomplete in that it does not protect school bus passengers during lateral impacts with vehicles of large mass and in rollovers, because in such accidents, passengers do not always remain completely within the seating compartment.” According to NHTSA, on average six student passengers die in school bus crashes each year, compared to approximately 2,000 children who are killed in motor vehicle crashes annually.

Federal regulations define two types of seat belts for school buses: lap belts and three-point belts. Lap belts are similar to belts on airplane seats that go across the passenger’s lap and are adjustable. Three-point belts are similar to belts in vehicles today, with the belt going over the shoulder and across the body, in addition to across the lap. NHTSA published a rule in 2008 increasing the minimum seat back height, requiring installation of lap/shoulder belts on small school buses, and establishing performance criteria for seat belts installed voluntarily on large buses.

NHTSA brought together student transportation stakeholders in July 2015 to discuss school bus safety, including seat belts. NHTSA Administrator Mark Rosekind announced in November 2015 that “NHTSA’s policy is that every child on every school bus should have a three-point seat belt” and that the administration would work toward achieving that goal. While it is not a new rule created by the administration, this announcement has prompted increased discussion on the topic. In 2018, NTSB recommended to states that all new large school buses be equipped with both lap and shoulder seatbelts. NTSB also recommended requiring collision-avoidance systems and automatic emergency brakes on new buses. The recommendations are not binding on government agencies or the transportation industry.

PED notes school buses in New Mexico are required to meet more stringent safety standards than any other type of bus or motor vehicle. Large school buses, weighing more than 10 thousand pounds, are built to experience a lower crash force than passenger cars. They also have elevated seats that are situated closer together, with high, padded seat backs to absorb energy in an impact.

The National Weather Service notes excessive heat can lead to heat disorders such as fatigue, sunstroke, muscle cramps, or heat exhaustion. The following index shows the likelihood of heat disorders occurring based on prolonged exposure or strenuous activity in high temperatures and humidity (NHTSA notes exposure to full sunlight can increase the index by up to 15°F in buses):



According to the New Mexico Climate Center (NMCC), mean annual temperatures in New Mexico range from 64°F in the extreme southeast to 40°F or lower in high mountains and valleys of the north. Elevation is a greater factor in determining the temperature of any specific locality than its latitude. This is shown by only a 3°F difference in mean temperature between two stations at similar elevations, one in the extreme northeast and the other in the extreme southwest; however, at two stations only 15 miles apart, but differing in elevation by 4,700 feet, the mean annual temperatures are 61°F and 45°F – a difference of 16°F or a little more than 3°F decrease in temperature for each 1,000 foot increase in elevation.

During the summer months, individual daytime temperatures quite often exceed 100°F at elevations below 5,000 feet, the average monthly maximum temperatures during July (the warmest month) range from slightly above 90°F at the lower elevations to the upper 70s at high elevations. Warmest days quite often occur in June before the thunderstorm season sets in during July and August, afternoon convective storms tend to decrease solar insolation, lowering temperatures before they reach their potential daily high. According to NMCC, the highest temperatures of record in New Mexico are 116°F at Orogrande on July 14, 1934, and at Artesia on June 29, 1918. A preponderance of clear skies and low relative humidities permit rapid cooling by radiation from the earth after sundown; consequently, nights are usually comfortable in summer. The average range between daily high and low temperatures is from 25°F to 35°F.

PED notes currently air conditioning is optional equipment for school buses. The state does not currently pay for this option; however, when a school district or contractor replaces a school bus they have the option of keeping their current bus as a spare bus or trading the bus in. The proceeds given for the trade-in are typically used for either air conditioning or dual heaters.

ADMINISTRATIVE IMPLICATIONS

PED, school districts, and contractors will be required to provide training for drivers and students in the proper use of the belts and the way to get out of the belts for quick evacuation from the bus. PED will need to develop training materials for school districts to distribute annually to students and parents about the importance of the proper use of all types of passenger seat belts on school buses, "including the potential harm of not wearing a seat belt or wearing one but not adjusting it properly." PED will also have to incorporate procedures in the NMAC 6.41.1 to require school district to have annual drills to show students how to wear seat belts properly.

CONFLICT, RELATIONSHIP

This bill relates to House Bill 510, which requires school bus attendants for students with disabilities, and Senate Bill 580, which establishes a daily salary rate for school bus drivers.

The bill conflicts with House Bill 265 and Senate Bill 156, which only require seat belts in all school buses, and Senate Bill 321, which requires air conditioning in all school buses.

TECHNICAL ISSUES

PED notes the language in the bill does not differentiate between to-and-from school buses and activity buses. The state currently does not pay for activity buses. All activity buses are purchased by school districts. If the bill is enacted school districts and contractors will be required to absorb the additional cost for the installation of air conditioning and seat belts in activity buses.

PED notes the language in the bill does not indicate what type of seat belts are to be purchased. There is a price difference between standard lap belts and three-point seat belts between to-and-from school buses and activity buses.

PED notes the bill adds maximum seat requirements. This language may not be necessary due to the fact that NMAC 6.40.2 (NN) already addresses this issue. Regulation currently requires the following:

In determining seating capacity of bus, allowable average rump width shall be:

- (a) 13-inches where 3-3 seating plan is used.
- (b) 15-inches where 3-2 seating plan is used.

PED recommends amending the language in the bill that states any school bus “built” or “manufactured” on or after July 1, 2019, in lieu of “purchased”, shall be equipped with air conditioning and seat belts.

OTHER SUBSTANTIVE ISSUES

According to PED, New Mexico currently has three bus vendors in the state. These vendors work with all the school districts and contractors. The majority of school buses are ordered and are custom-built according to the customer’s needs. On average it takes between 3 months and 6 months for a school bus to be built. However, these three vendors have stock buses on hand that are equipped and built with the current minimum New Mexico bus standards. PED notes provisions of this bill will prevent these vendors from selling any of the buses currently in stock without retrofitting them with seat belts and an ECS.

According to NCSL, eight states (Arkansas, California, Florida, Louisiana, Nevada, New Jersey, New York and Texas) have laws requiring the installation of seat belts on school buses. Arkansas, Louisiana and Texas’ laws, however, are subject to appropriations or approval or denial by local jurisdictions.

New York, the first state to require seat belts in all buses, requires lap belts on all buses manufactured after July 1, 1987, but state policy allows individual school boards to determine whether students must use the belts. California requires three-point seat belts on all school buses

manufactured after July 1, 2005, and New Jersey requires lap belts be installed on all school buses.

Florida requires all school buses purchased after December 31, 2000, be equipped with seat belts, but does not specify whether they must be lap belts or three-point seat belts. The law requires that students who are riding on a bus equipped with seat belts must wear the belts and provides immunity from liability for injuries if the student was not wearing the seat belt. Buses transporting elementary school students were prioritized to have seat belts installed.

Louisiana and Texas both require school buses to be equipped with seat belts, with Texas specifically requiring three-point seat belts. However, both laws are subject to appropriation for the purchase of such buses and both states have not provided the necessary funding to trigger these requirements. Connecticut created a program in 2010 to provide funding to school districts to help pay sales taxes on school buses equipped with three-point seat belts. School districts using school buses equipped with seat belts are required to provide written notice to parents about the availability and proper use of the belts, as well as instruct students on their use. The law also specifies that schools are not liable for injuries resulting from students' use or misuse of a seat belt.

In Alabama, the Governor's Study Group on School Bus Seat Belts and the state department of education requested a pilot program to be conducted by the University of Alabama. The Legislature allocated \$1.4 million and 12 buses with seat belts were purchased for 10 local school districts. The results of the program, published in a study in October 2010, concluded that seat belts would make school buses safer, but also found that the costs of implementing a program would be greater than the benefits.

Some school districts have reported improved student behavior on school buses with seat belts, with the Bartholomew Consolidated School Corporation of Columbus, Indiana, experiencing 90 percent to 95 percent fewer write-ups for misbehaving students.

ALTERNATIVES

The risks from exposure to high temperatures in school buses can be further mitigated through a suite of other measures, such as painting school bus rooftops white to reflect sunlight off the vehicle. Vents can be installed to reduce heat buildup, and windows can be tinted to reduce the sun's impact. School districts can also develop shorter routes or adjust transportation schedules to work around cooler months or times of day.

SL/sb