



**National  
Transportation  
Safety Board**

# Crash Prevention Technologies

David Pereira

# Overview

- NTSB history advocating crash prevention technologies
- Technologies could have prevented or mitigated these crashes
- School bus exclusion from federal safety standards

# History

- NTSB has advocated for collision avoidance systems for more than 22 years
- Crash prevention technologies can prevent crashes in both passenger and commercial vehicles
- Despite proven benefits, NHTSA has no requirement for collision avoidance systems

# Collision Avoidance Systems

- Mitigate or prevent crashes by detecting vehicles ahead
- Automatic emergency braking intervenes regardless of driver vigilance
- If Baltimore school bus was equipped
  - Impact with car would likely have been mitigated
  - Impact with transit bus would not have occurred

# Electronic Stability Control

- Ensures benefits of automatic emergency braking
- Monitors speed, acceleration, driver input, yaw
- Evaluates and intervenes with impending rollover or loss of control events
- If Chattanooga school bus was so equipped
  - Could have assisted driver in maintaining control and mitigated crash severity



# Safety Standards

- In 2015, NHTSA introduced FMVSS 136: *Electronic Stability Control Systems for Heavy Vehicles*
  - Requires electronic stability control in truck-tractors and most buses
  - Excludes school buses
- In 2017, Canada incorporated FMVSS 136
  - Includes school buses

# Summary

- Technologies can prevent or mitigate crash severity
- Had Baltimore and Chattanooga school buses been so equipped, crashes could have been prevented or mitigated
- Requirement is long overdue: looking to industry to adopt ahead of a mandate



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