



NATIONAL TRANSPORTATION SAFETY BOARD  
**Investigative Hearing**

Managing Safety on Passenger Railroads: Amtrak Overspeed Derailment – DuPont, Washington; and CSX and Amtrak Train Collision – Cayce, South Carolina.

<b>GROUP</b>	<b>G</b>
<b>EXHIBIT</b>	
<b>16</b>	

Agency / Organization

**CSXT**

Title

**Signal Presentation-Schroeder**

# CSX SIGNAL PRESENTATION

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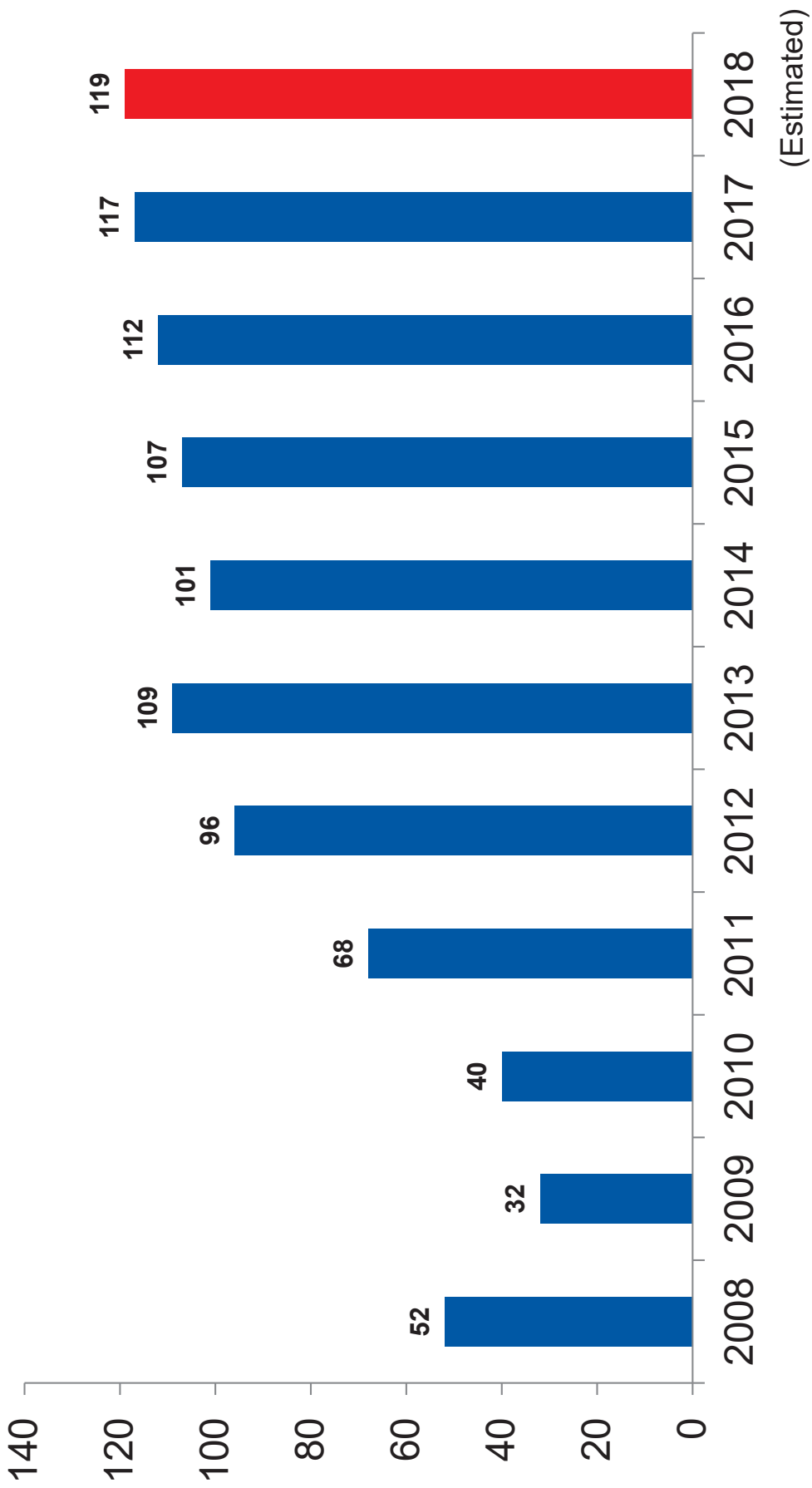
Jason Schroeder  
Assistant Chief Engineer  
NTSB Investigation Hearing  
July 10, 2018



# CSX SIGNAL CUTOVER SUMMARY

- Signal cutover occurs when converting an existing signal system to a new system
- Cutover is complete when the new system is tested and goes live
- A signal suspension is in effect during a cutover
- For decades, CSX has safely performed signal cutovers

# CSX SIGNAL CUTOVER HISTORY



## CSX SIGNAL CUTOVER SUMMARY

- Before PTC, approximately 600 track miles were involved in signal cutovers annually
- Since 2011, approximately 2,000 track miles are involved in signal cutovers annually
- Since 2011, 75% of the total number of signal cutovers are attributed to PTC implementation
- 94% of PTC-related signal cutovers are complete

# CSX SIGNAL SUSPENSION OVERVIEW

- During signal suspensions, track warrant control rules (TWC-D) are in effect
  - Approximately 6,000 miles across the CSX system
- Consistent, formalized, repetitive process
- Promotes disciplined behavior by employees
- Prevents congestion, expediting signal system restoration
- Reduces the number of cutovers
- CSX routinely reviews process through field input and benchmarking

# CSX SIGNAL SUSPENSION PROCESS

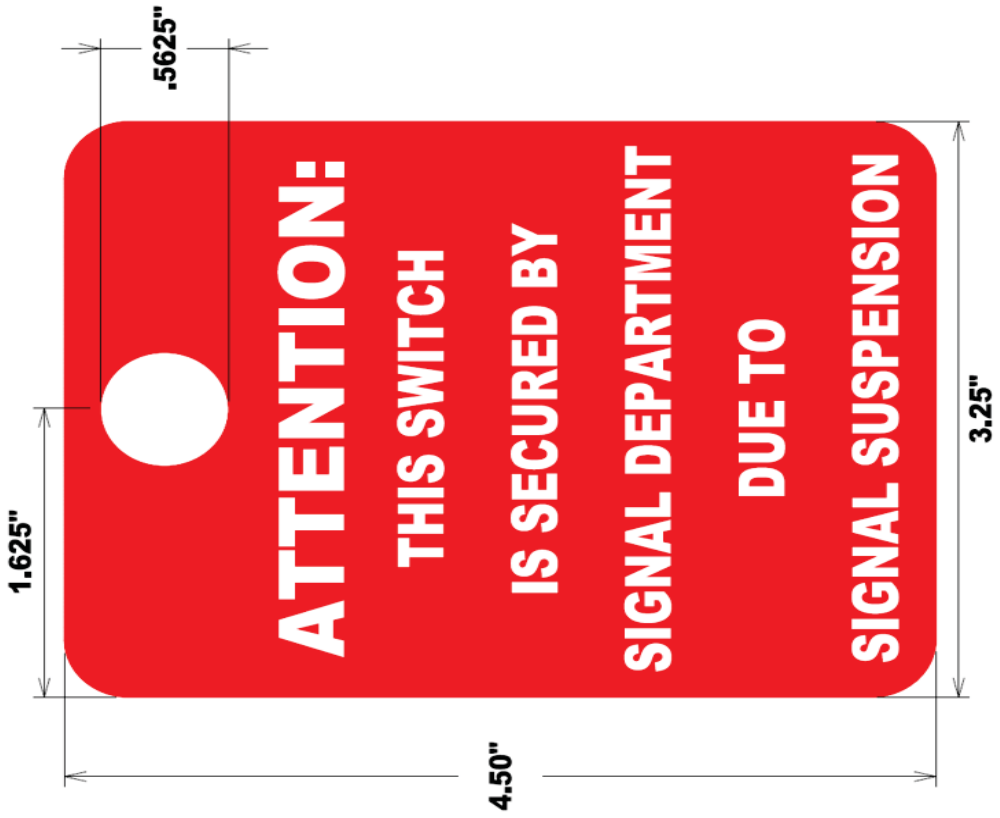
- Multiple Actions Taken:
  - Cutover planning begins 60 days out
  - 30 days prior
  - 14 days prior
  - 5 days prior
- Ongoing communication and coordination with Amtrak throughout
- Finalize signal suspension plan - GO/NO-GO decision
- Suspension bulletins activated and distributed to all stakeholders

# CSX POST-CAYCE SIGNAL SUSPENSION OPERATING PLAN

- Enhanced Job Briefings for crews and dispatchers
- Signal Department
  - New switch locking procedures
- Operations Center
  - Electronic switch tags applied
  - Dispatcher turnover to include switch status
- Train Operations
  - Eliminate unnecessary industrial and other switching
  - Planned train meets to occur outside signal suspension when possible



# CSX NEW SIGNAL SUSPENSION SWITCH TAG/LOCK





[WWW.CSX.COM](http://WWW.CSX.COM)