



# National Transportation Safety Board

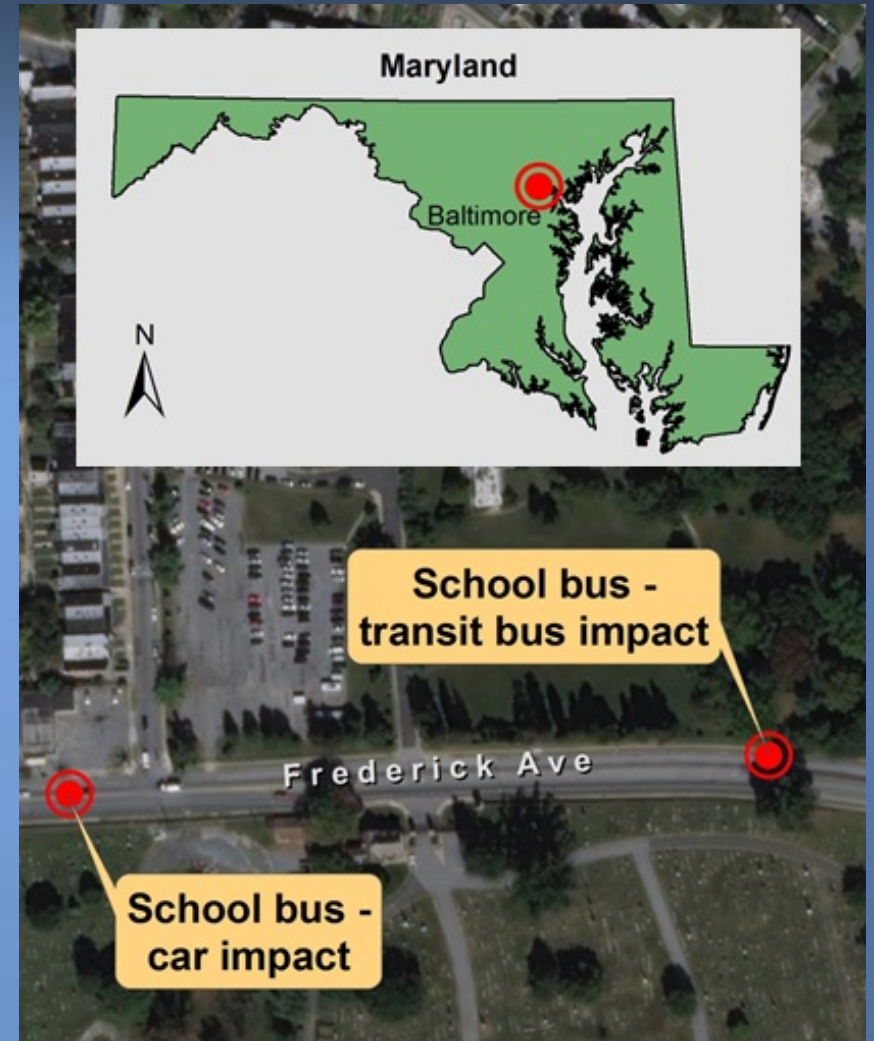
Baltimore, Maryland

November 1, 2016

Jennifer Morrison, IIC

# Baltimore, Maryland

- 2015 IC school bus
  - 67-year-old driver
  - Bus aide
  - AAAfordable Transportation LLC / BCPS
- 2012 Ford Mustang
  - 51-year-old driver
- 2005 New Flyer transit bus
  - 33-year-old driver
  - 13 passengers
  - Maryland Transit Administration



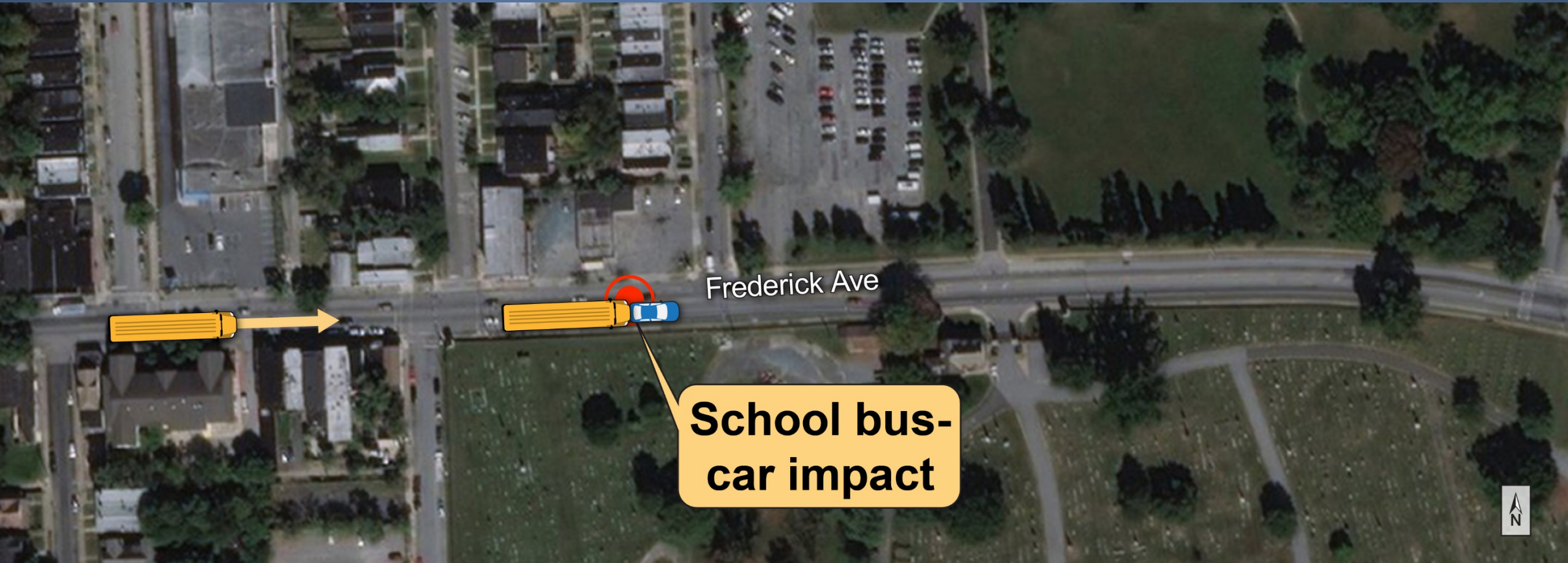


# Crash Sequence



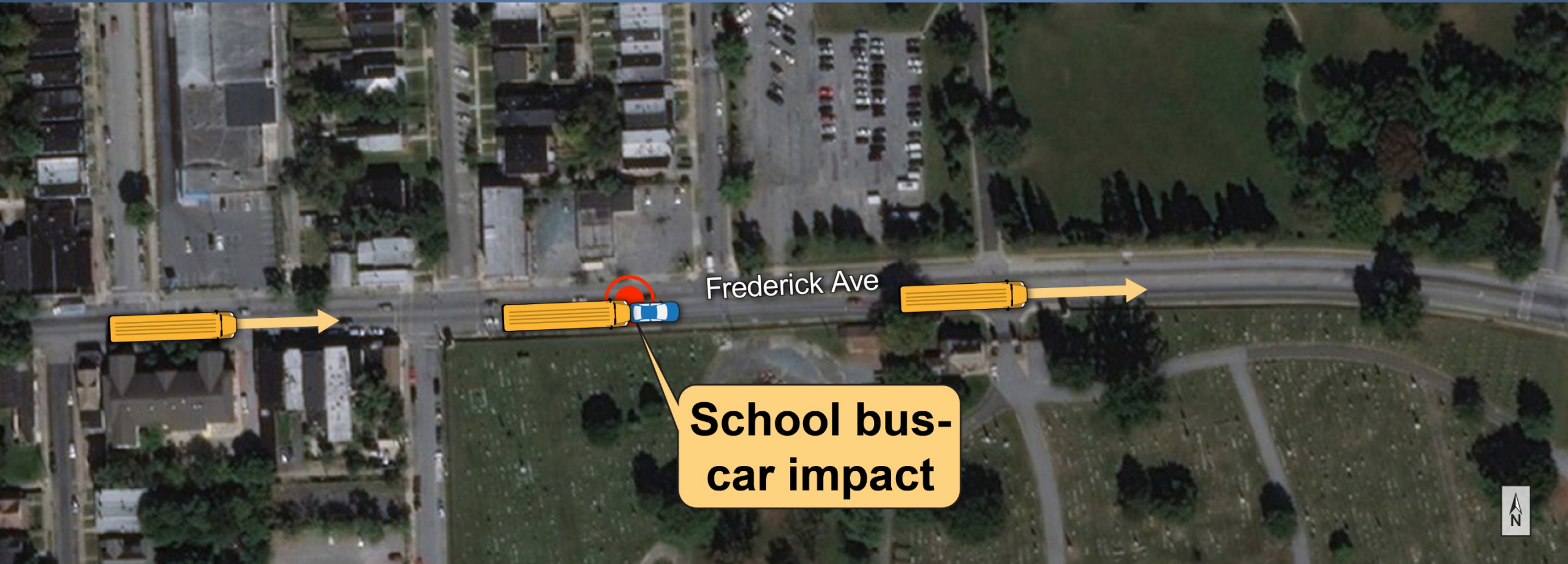


# Crash Sequence



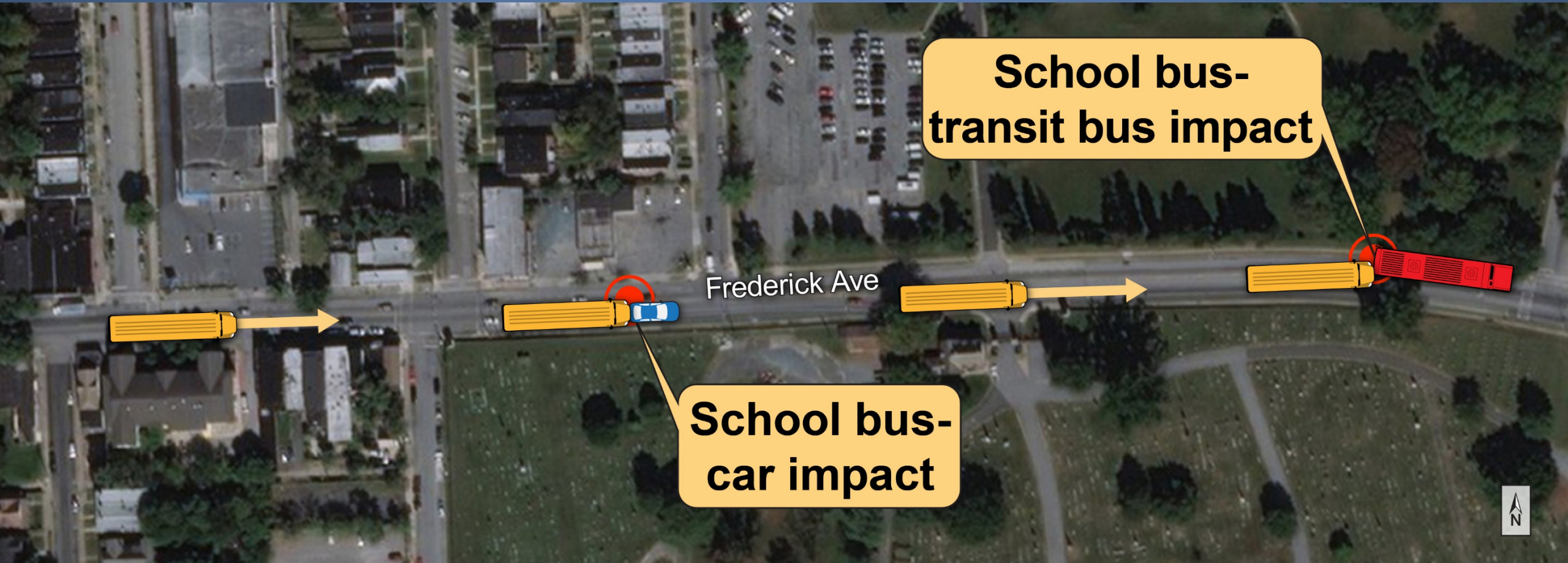


# Crash Sequence



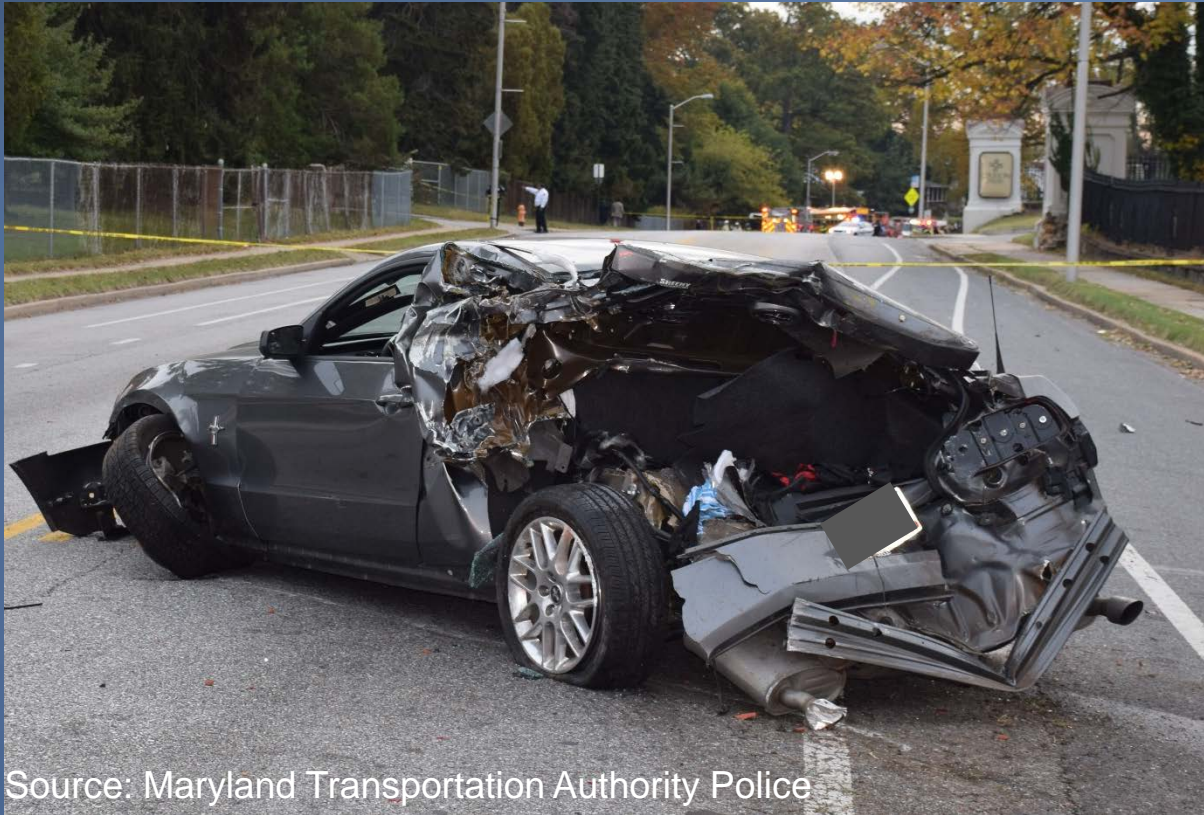


# Crash Sequence





# Crash Scene



# Injury Information

- Fatalities
  - 2 bus drivers
  - 4 transit bus passengers
- Serious injuries
  - 5 transit bus passengers
- Minor injuries
  - School bus attendant
  - 4 transit bus passengers
  - Car driver



# On-Scene Staff

- Jennifer Morrison, Investigator-in-Charge
- Rafael Marshall, PhD, Human Performance
- Michael Fox, Motor Carrier Factors
- David Pereira, Vehicle Factors
- Ronald Kaminski, Survival Factors
- David Rayburn, Highway Factors
- Keith Holloway, Media Relations
- Andrew Bucklin, Tech Support
- Lisandra Garay-Vega, PhD, Project Manager

# Report Development Staff

- Michele Beckjord, Project Manager
- Debbie Stocker, Writer-Editor
- Mary Pat McKay, MD, Medical Factors
- Dan Horak, PhD, Video Analysis
- Julie Perrot, Safety Recommendations
- Eric Emery, PhD, Mapping
- Christy Spangler, Graphics
- Jesus Cudemus, Graphics



# Parties to Investigation

- Baltimore Police Department
- Baltimore City Public Schools (BCPS)
- Maryland Transit Administration
- Maryland Transit Administration Police
- Maryland Transportation Authority Police
- New Flyer (transit bus manufacturer)
- Federal Transit Administration
- Federal Motor Carrier Safety Administration (FMCSA)

# Exclusions

- Distraction, substance impairment, fatigue
- Licensing, experience, medical condition of transit bus driver
- Mechanical condition of vehicles
- Weather
- Roadway lighting or conditions



# Safety Issues

- School bus driver fitness for duty
- School bus driver licensing
- Oversight of student transportation providers
- Crash prevention technologies
- Event data recorders



# National Transportation Safety Board