

2023 Biennial FTA State and Tribal Programs and Transit Partnerships Conference

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Presentation Purpose and Agenda

The purpose of this presentation is to provide an overview of the Federal Transit Administration's (FTA) approach to reducing safety risk in the transit industry and an update on ongoing efforts to improve transit safety.

Presentation Agenda

- Safety Risk Management (SRM) Background
- SRM Overview
- Transit Rider Assault Safety Initiative
- Bus to Person Collisions Overview
- Q&A

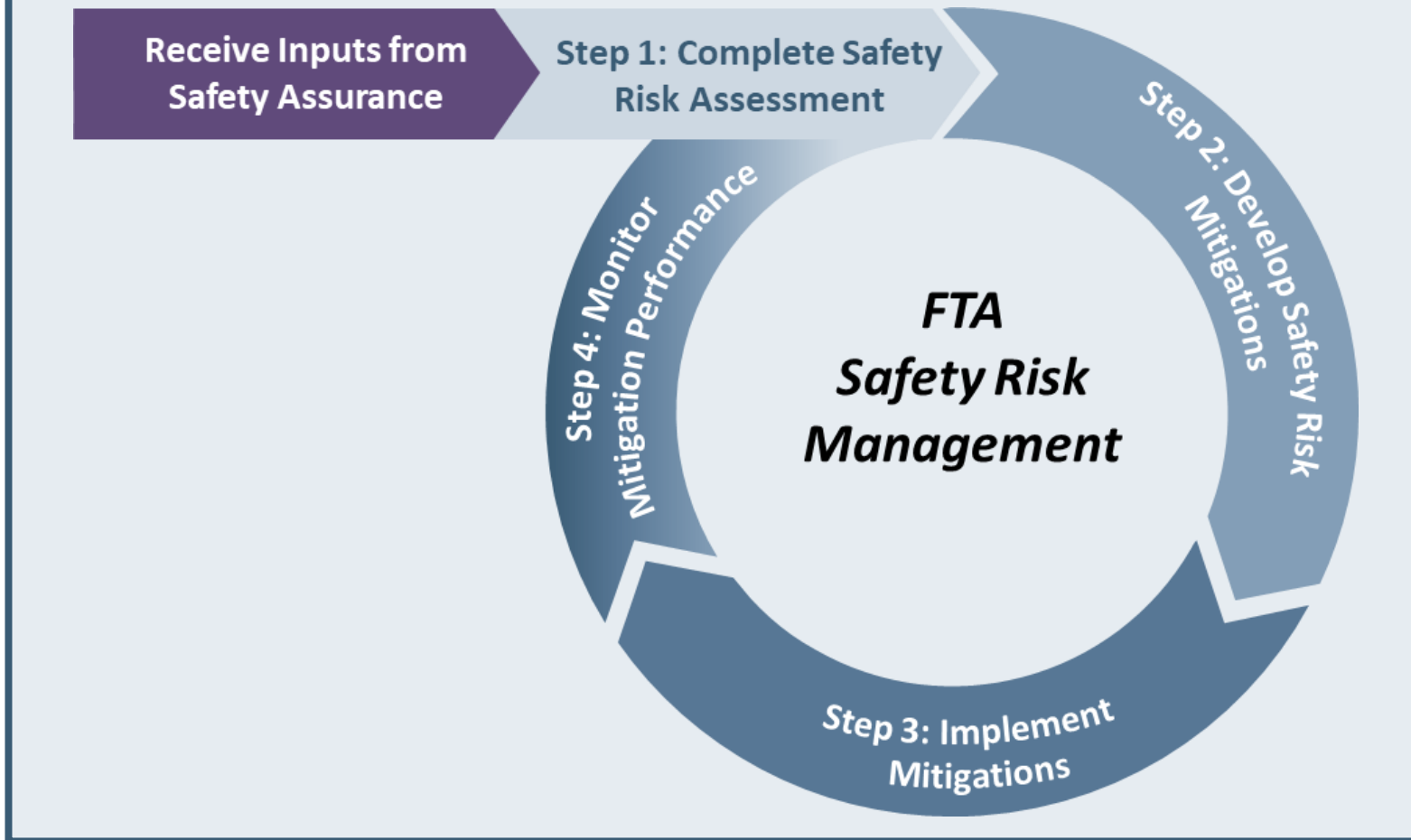
Overview of the Safety Risk Management (SRM) Program

Purpose of the Program

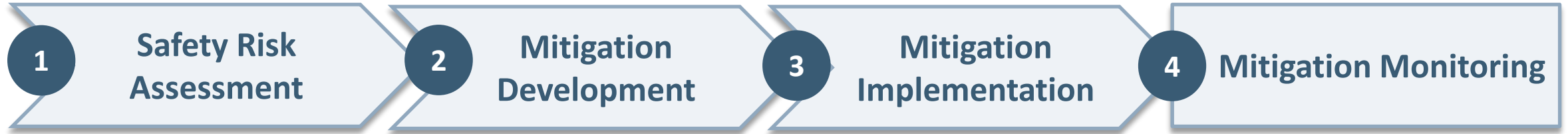
The SRM program is FTA's primary tool for identifying, analyzing, and mitigating safety risks



Four-Step Process



A Closer Look at FTA's Four-Step SRM Process



- The SRM program identifies hazards and consequences associated with the safety topic
- The SRM program conducts a data-driven assessment of overall risk

- The SRM program considers mitigation options
- The SRM program determines which mitigation(s) will be the most effective at reducing the risk associated with the safety topic

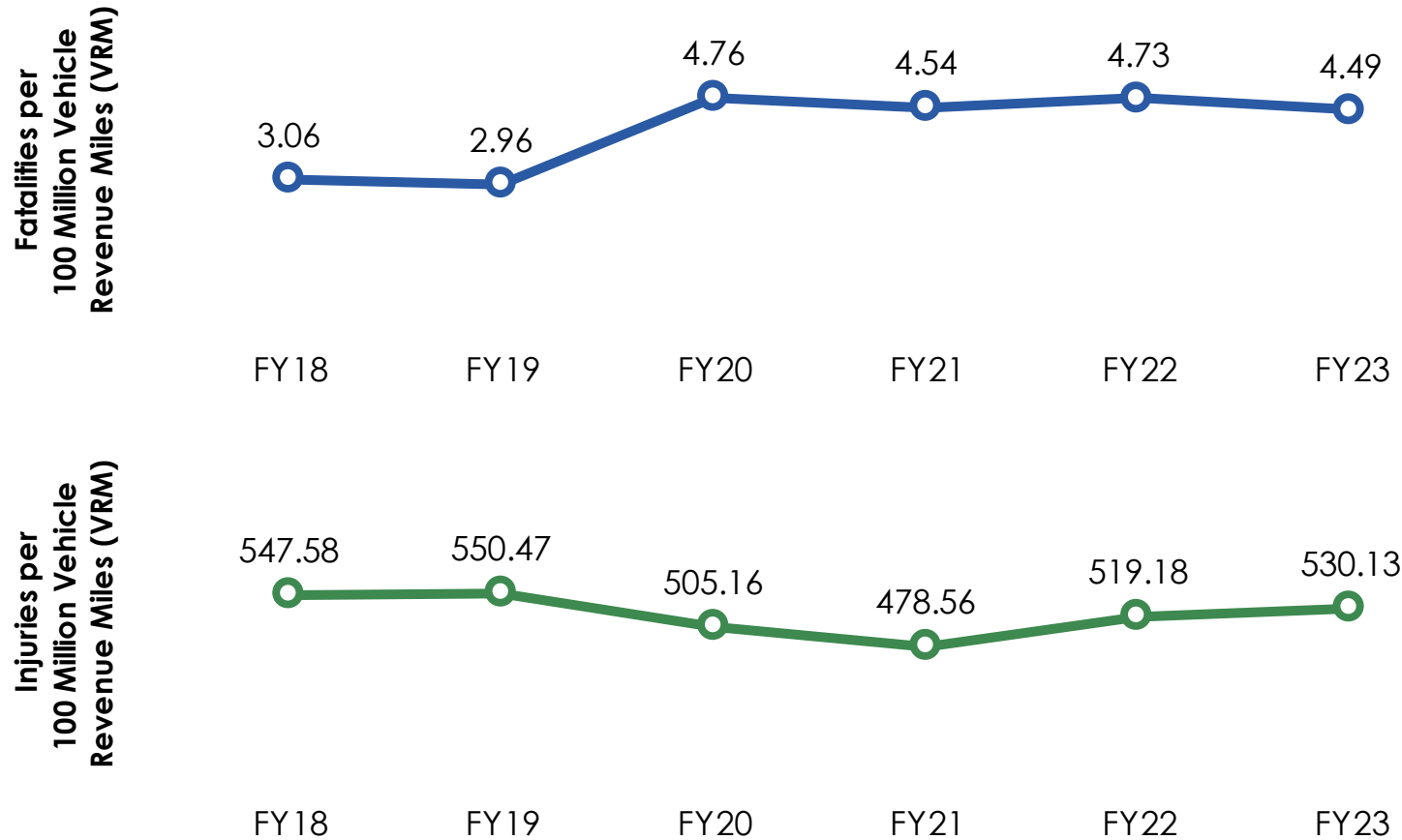
- The SRM program implements the chosen mitigations and coordinates with other FTA offices (as applicable)

- The SRM program develops a mitigation monitoring timeline
- The SRM program identifies mitigation performance measures
- The SRM program may determine the safety topic requires further analysis/mitigation

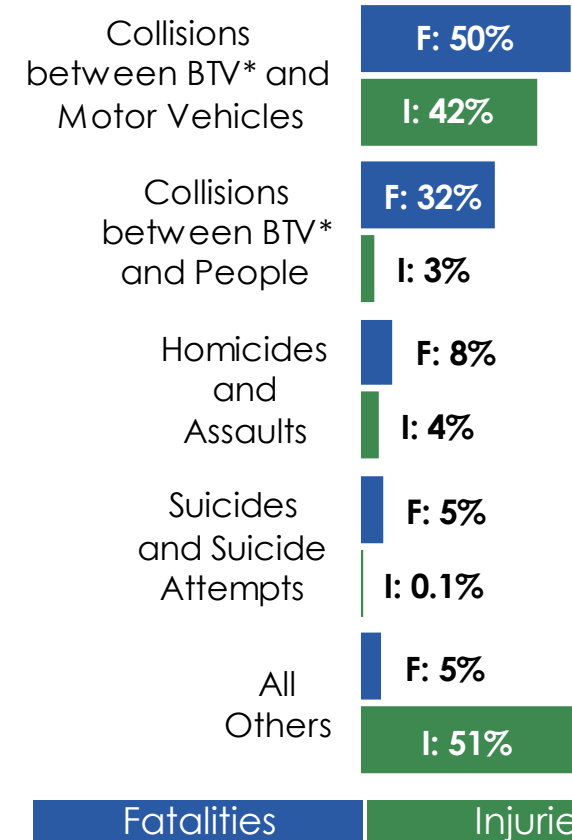
Safety Risk Management Safety Topics

Safety Topic	Step 1: Safety Risk Identification and Assessment	Step 2: Develop Mitigations	Step 3: Implement Mitigations	Step 4: Monitor Mitigation Performance
Inward- and Outward-Facing Cameras	✓	✓	✓	In progress
Roadway Worker Protection	✓	✓	In progress	
Transit Worker Assault Prevention	✓	✓	In progress	
Signal System Safety	✓	✓	✓	In progress
End-of-Railcar Door Messaging	✓	✓	✓	In progress
Bus-to-Person Collisions	✓	✓	In progress	
Transit Customer Assault Prevention	In progress			
Train-to-Privately Owned Vehicle (POV) Collisions at Rail Grade Crossings (RGX)	In progress			
Fitness for Duty	✓	✓	In progress	

State of Bus Transit Safety



Sources of Bus Fatalities



Source: National Transit Database (NTD)

FY 2022–2023 data are preliminary. FY 2023 includes Oct–Mar only

Data as of: July 5, 2023

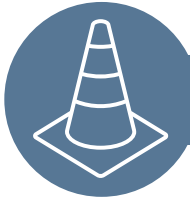
**Bus Transit Vehicles*

Transit Rider Assault Overview



Description

- Transit Rider Assault focuses on public safety events involving assault between passengers at stations, bus stops, and on transit
- Build on the Transit Worker Assault initiative



Challenges

- Members of the public must interact at stations, transit stops and on board vehicles which can lead to conflict and compromise safety
- FTA's National Transit Database does not capture many kinds of assaults
- Many important details of instances of assault are not required to be collected



Bus Customer Assaults Data Overview

Bus Customer Assault Data by Location, 2008-2022*

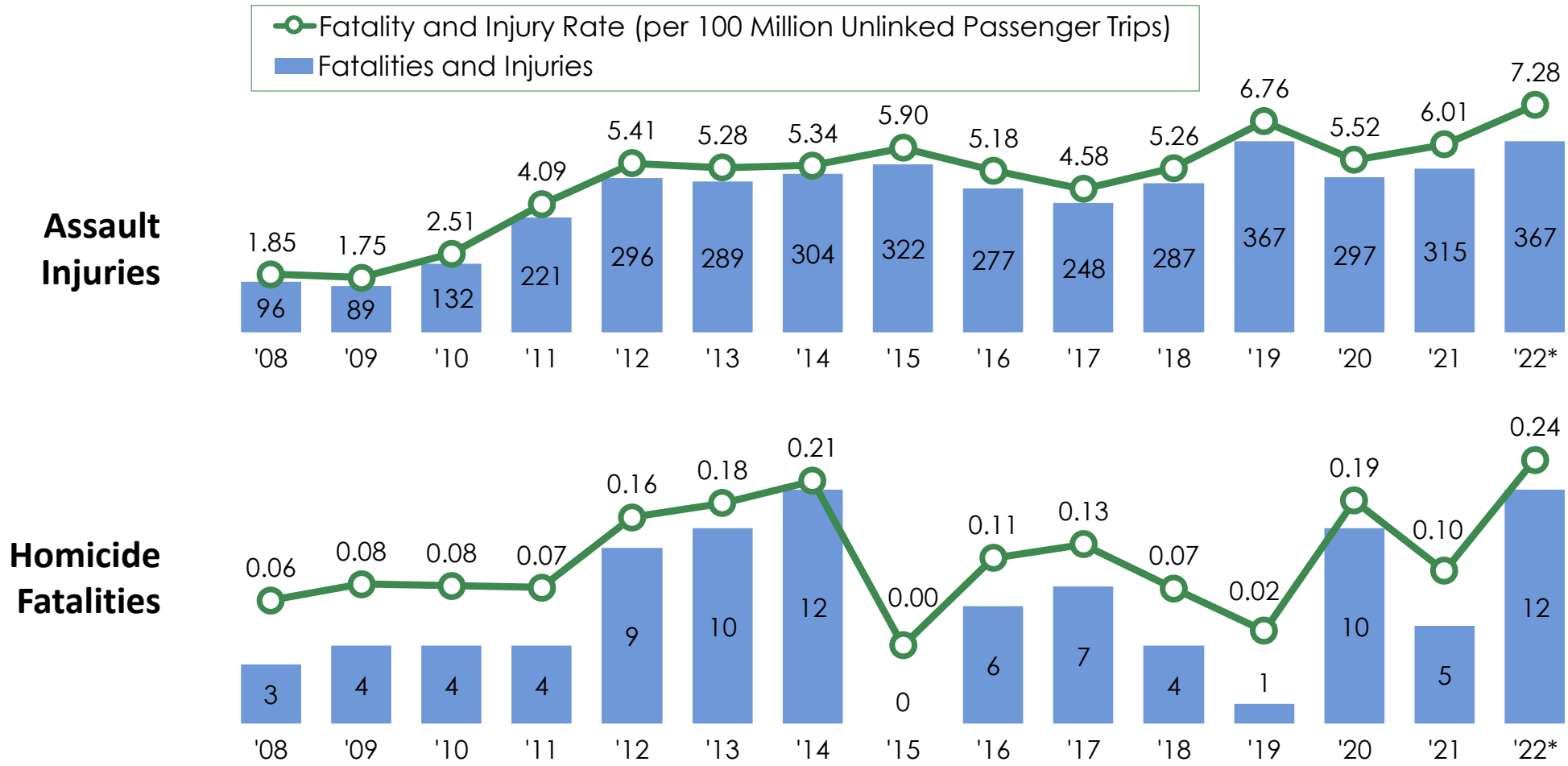
	Reportable Assault and Homicide Events	Homicide Fatalities	Assault Injuries
	6,066	91	3,907
In Vehicles	4,486	50	3,145
In Stations	1,525	36	710
All Others	55	5	52

Source: National Transit Database (NTD)

**2022 data are preliminary*

Data as of: May 2, 2023

Bus Customer Assault Trends, 2008–2022*



Source: National Transit Database (NTD)

Data as of: May 2, 2023

*2022 data are preliminary

Transit Rider Assault Next Steps

External Research

- FTA is currently conducting research to better understand the topic and inform future action:
 - Transit Worker and Rider Safety NOFO research underway
 - FTA performing qualitative research into transit rider assault in partnership with researchers from the Volpe National Transportation Center

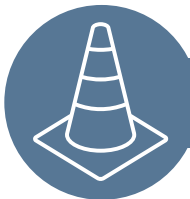


Bus-to-Person Collisions Overview



Description

- Bus-to-Person Collisions focuses on safety events involving bus collisions with people at stations, bus stops, intersections, and publicly accessible roadways
- Includes pedestrians, bicyclists, and people using other micromobility devices



Challenges

- Bus design features can obscure the field of view
- Streetscape features can obscure the view of operators
- Operators must have situational awareness of both exterior and interior surroundings



Bus-to-Person Collisions NTD Data

Bus-to-Person Collisions Data

2008 – 2021

7,298

Bus-to-Person Collisions

7,329

Injuries

Accounts for:

- 2% of all transit injuries
- 3% of bus transit injuries

537

Fatalities

Accounts for:

- 15% of all transit fatalities
- 37% of all bus transit fatalities

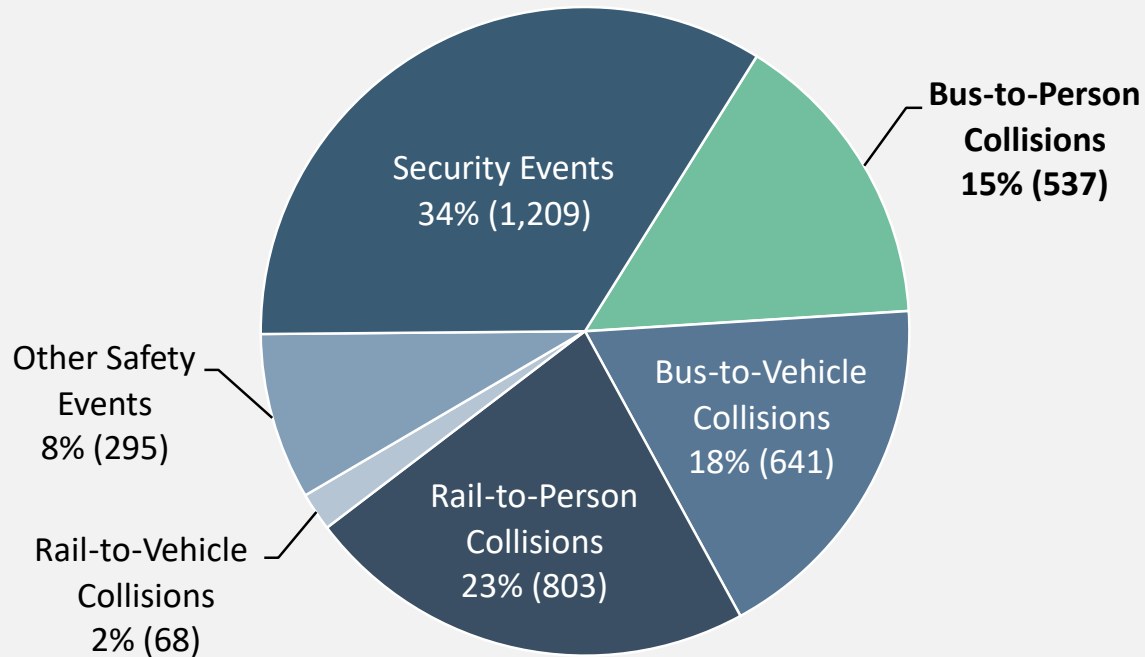
Source: National Transit Database (NTD), 2008-2021



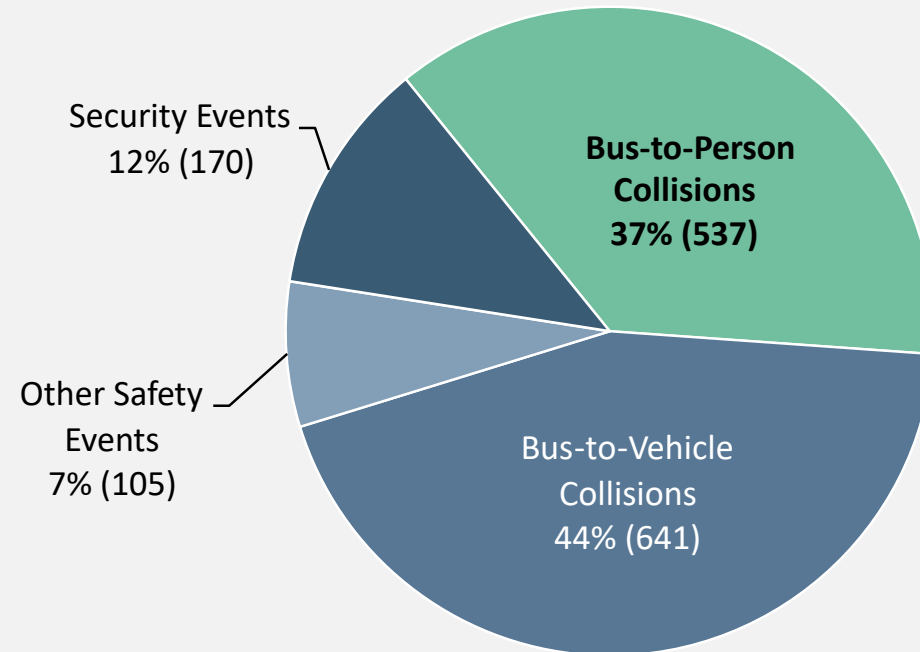
Bus-to-Person Collisions NTD Data

Transit Fatalities Data, 2008 – 2021

Transit Industry



Bus Transit

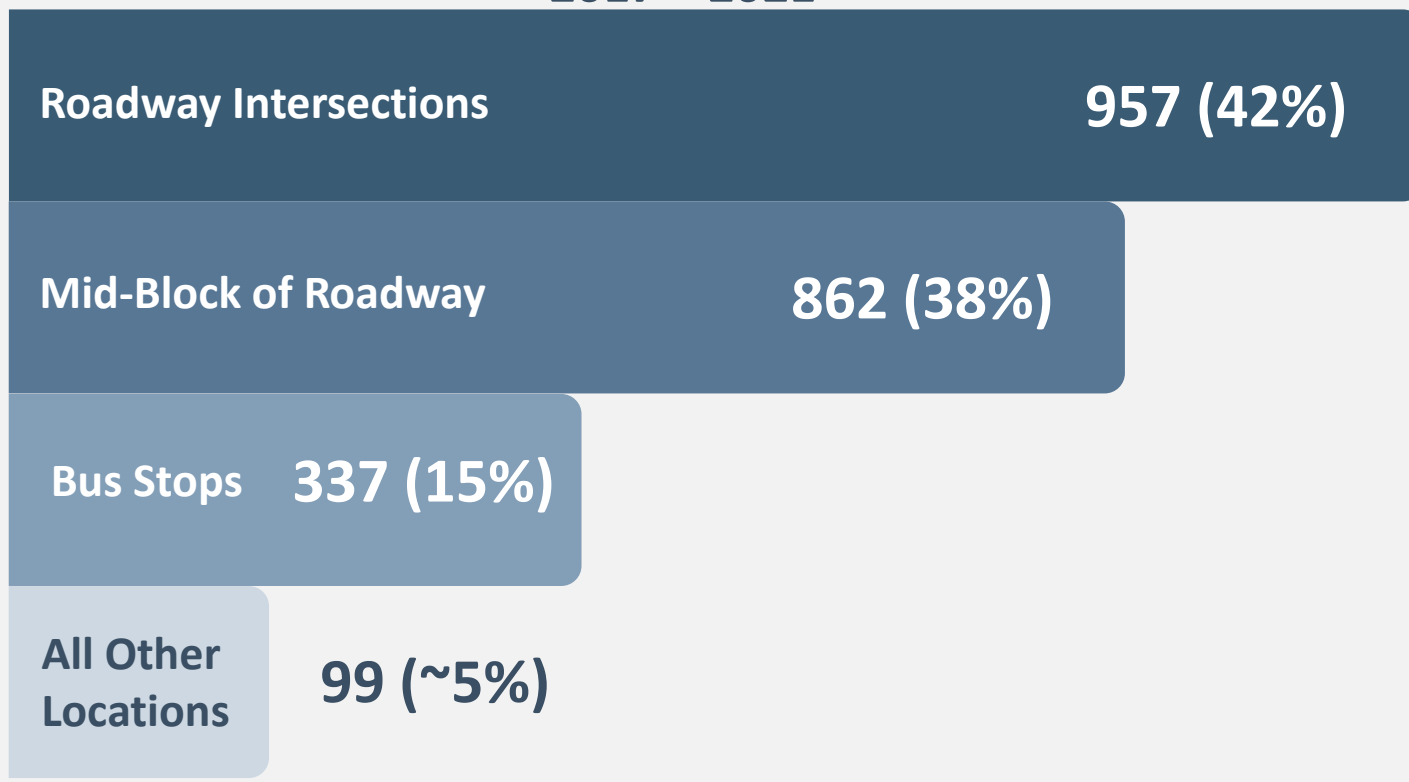


Source: National Transit Database (NTD), 2008-2021

Bus-to-Person Collisions by Location

Injuries and Fatalities Resulting from Bus-to-Person Collisions by Location

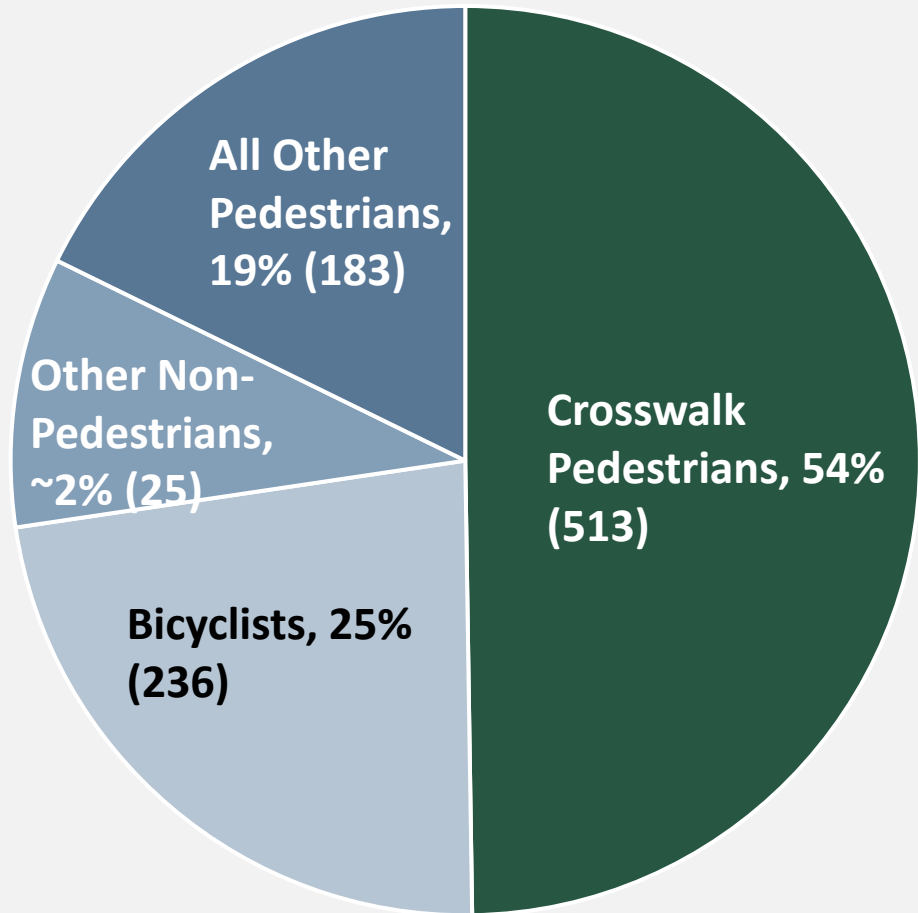
2017 – 2021



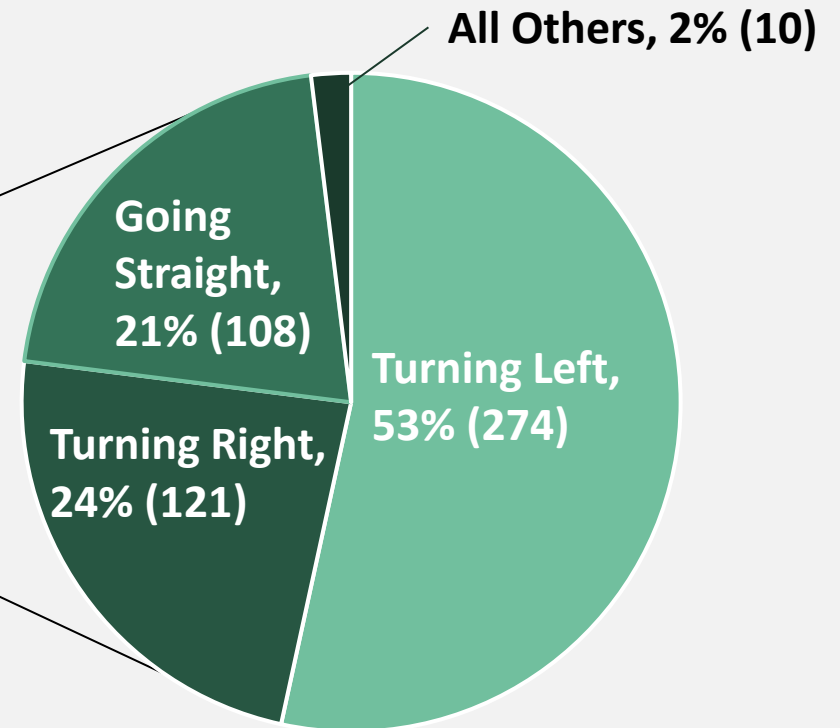
Source: NTD, 2017-2021 (new location field added in 2017)

Roadway Intersection Collisions

Intersection Bus-to-Person Collision Fatalities and Injuries (957) by Type



Crosswalk Pedestrian Fatalities and Injuries from Intersection Collisions

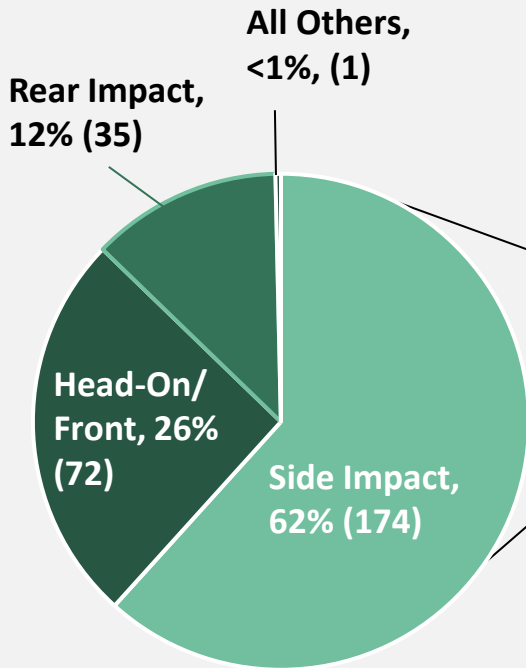


Source: NTD, 2017-2021

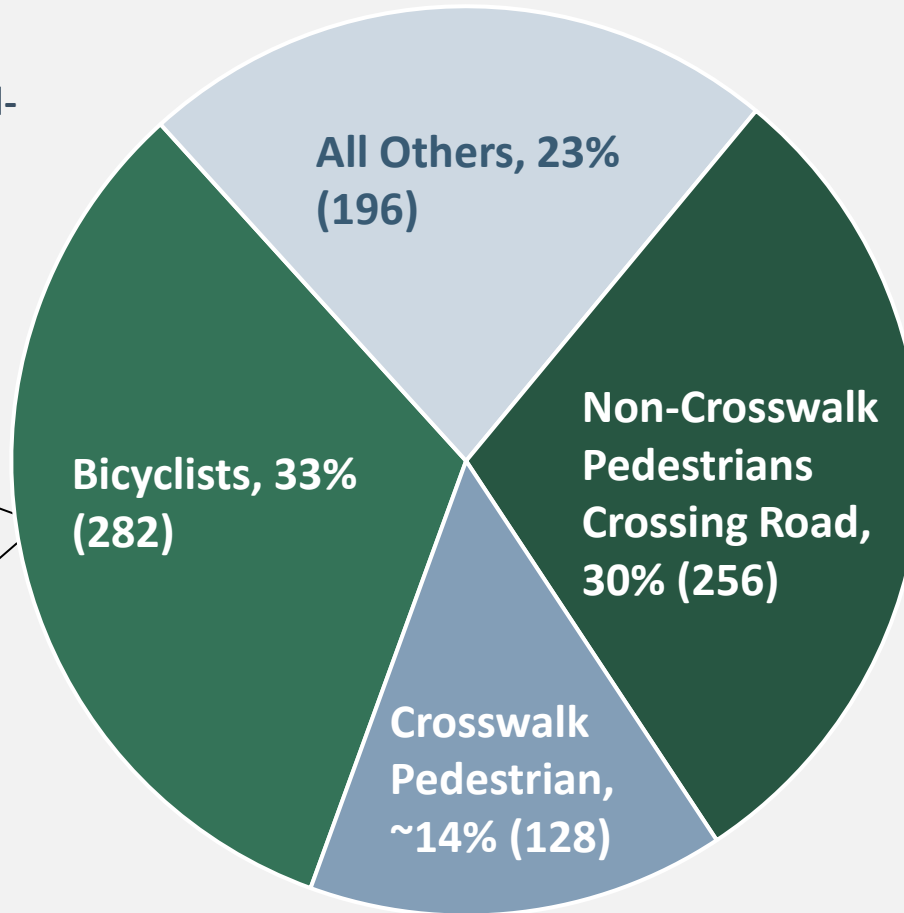
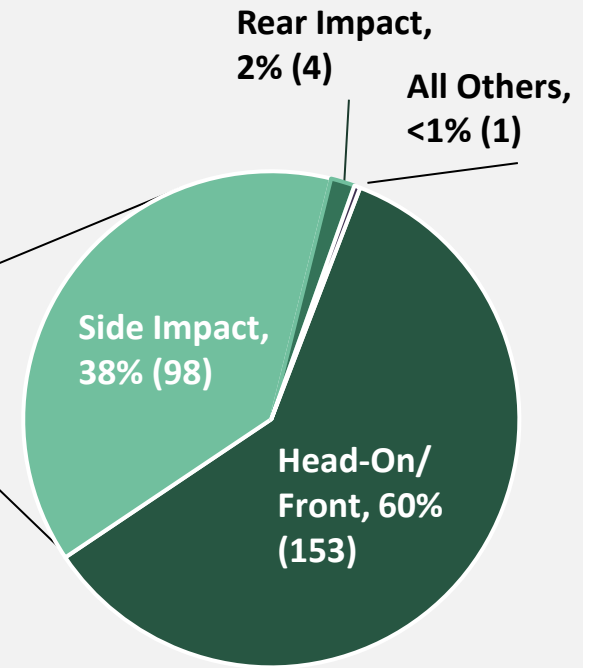
Mid-Block of Roadway Collisions

Mid-Block Bus-to-Person Collision Fatalities and Injuries (862)

Bicyclist Fatalities and Injuries from Mid-Block Collisions with Buses



Non-Crosswalk Pedestrian Fatalities and Injuries from Mid-Block Collisions



Source: NTD, 2017-2021

Risk Analysis and Mitigation Next Steps

Risk Analysis

- FTA identified the hazards and consequences associated with bus-to-person collisions
- FTA assessed the likelihood and severity of bus-to-person collisions and assigned an overall risk rating of **high likelihood** and **serious severity** to the safety topic

Mitigation Implementation Next Steps

- FTA is currently developing mitigation strategies for Bus-to-Person Collisions
- FTA will begin implementing mitigations in 2023
- FTA plans to use a variety of tools and strategies over the next several years and will monitor performance via safety data



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