

APTA Mobility Conference

Update to the Bus Safety Committee

April 23, 2023



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U.S. Department of Transportation
Federal Transit Administration

Presentation Overview

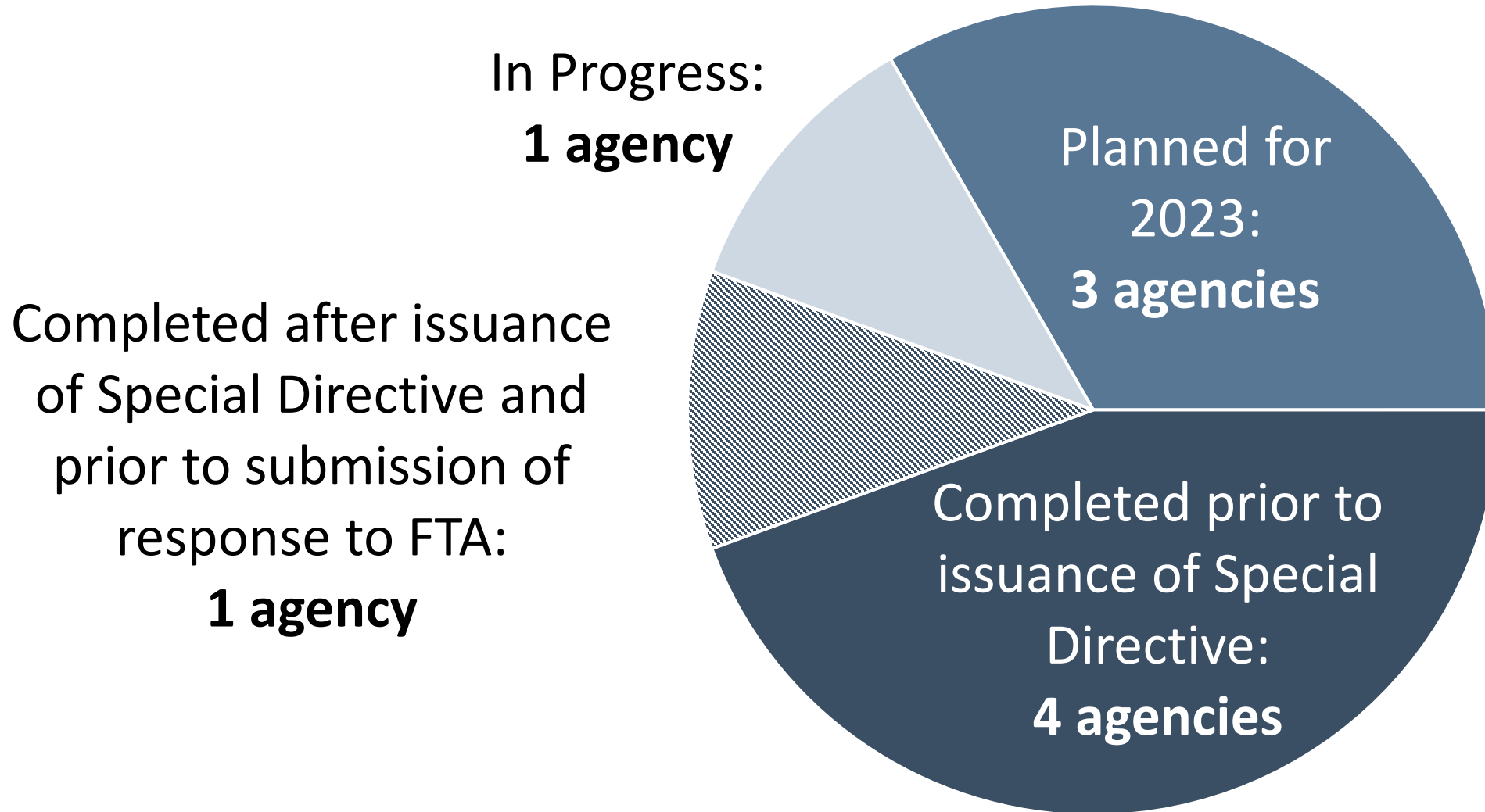
- Protecting Transit Workers from Assaults
 - Responses to FTA's Special Directive - Required Actions Regarding Transit Worker Assault
- Expanded Assault Reporting - [NTD Safety and Security Reporting Changes and Clarifications](#)
- Bus Operator Compartment Redesign
- Fall 2022 Unified Regulatory Agenda
- Safety Committees & Role in Safety Management Systems
- Bus-to-Pedestrian Collisions

Special Directives: Required Actions Regarding Transit Worker Assault

[Special Directives](#) issued on October 4, 2022 to nine transit agencies who reported 79% of assaults on transit workers to the NTD between 2016-2021.

General	Agency contact information and Agency Safety Plan (ASP)
Safety Risk Assessment	Has agency performed safety risk assessment related to transit worker assault?
Safety Risk Mitigations	Has agency implemented safety risk mitigations to address transit worker assault risk, such as operator area protective barriers? If yes, status and available data on effectiveness?

Safety Risk Assessment



Safety Risk Mitigations

Safety Risk Mitigation	# Agencies	Complete	In Progress
Operator Area Protective Barriers	9	5	4
De-Escalation Training Program	8	6	2
Video and Audio Surveillance	8	7	1
Policing Strategies	7	7	-
Operating Procedures and Training	6	6	-
Emergency/Silent Alarms	6	6	-
Automatic Vehicle Location	4	4	-
Communication Devices and Protocols	4	4	-
Public Awareness Campaigns	3	3	-
Surveillance/Penalty Signage	3	2	1

Safety Risk Mitigation Monitoring



Eight agencies provided information on monitoring mitigation effectiveness.



One agency described key performance indicators relating to transit worker assault.



Seven agencies described monitoring the effectiveness of all mitigations layered together rather than each individual mitigation.



Six agencies described using post-event analysis and reviews to monitor mitigation effectiveness.



One agency described using feedback on training as a mechanism to support mitigation effectiveness.



Expanded Assault Reporting

Federal Register Notice: [NTD Safety and Security Reporting Changes and Clarifications](#) published February 2023

Before NTD Updates	After NTD Updates
<ul style="list-style-type: none"> FTA collected only transit worker assault data that qualified as major events from full reporters to NTD Major events involve one or more fatalities or injuries requiring medical transport 	<ul style="list-style-type: none"> FTA will collect all transit worker assaults data for major and non-major events Non-major transit worker assaults will be collected in a summarized format

When do changes take effect?

Full Reporters	Small Reporters
CY 2023	NTD report year 2023

Bus Operator Compartment (BCP) Program

In October 2020, FTA awarded \$1.6M in competitive grant funds to:

- International Transportation Learning Center (ITLC) to redesign a transit bus compartment to improve safety for operators. FTA award was \$1M.
- New Orleans Regional Transit Authority (NORTA) to study the addition of shields and barriers on its bus fleet to protect bus operators. FTA award was \$.6M.
- Final report on BCP Phase 1 by ITLC is expected by June, 2023; and NORTA by August, 2023.
- FTA is exploring options for the award of BCP Phase 2 with a key focus on increasing bus operator safety from assaults.



Fall 2022 Unified Regulatory Agenda

Publication Date: January 4, 2023

Public Transportation Agency Safety Plans (PTASP)

- Incorporates new requirements established through the Bipartisan Infrastructure Law

State Safety Oversight (SSO)

- Introduces changes to clarify State Safety Oversight Agencies' (SSOA) oversight responsibilities and authority to conduct inspections

Rail Transit Roadway Worker Protection (RWP)

- Establishes minimum baseline standards and risk-based redundant protection requirements

NEW: Transit Worker Fitness for Duty

- Asks questions about establishing minimum standards related to transit worker fitness for duty

Public Transportation Safety Certification Training Program (PTSCTP)

- Amends training curriculum to reflect new requirements and training course information



Safety Committees & Role in SMS

Implement and Support an Agency's Safety Management System

Identify and recommend risk-based mitigations or strategies necessary to reduce the likelihood and severity of consequences identified through the agency's safety risk assessment

Identify mitigations or strategies that may be ineffective, inappropriate, or were not implemented as intended

Identify safety deficiencies for the purposes of continuous improvement

Establishing safety performance targets for the risk reduction program

Review and approve the Agency Safety Plan



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
- This analysis defines “person” as pedestrians, bicyclists, and people utilizing micromobility



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



Applicable Legal Framework

- The Bipartisan Infrastructure Law amended Section 5329 of title 49, United States Code by adding that public transportation agencies take into consideration “innovations in driver assistance technologies and driver protection infrastructure, where appropriate, and a reduction in visibility impairments that contribute to pedestrian fatalities”



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:

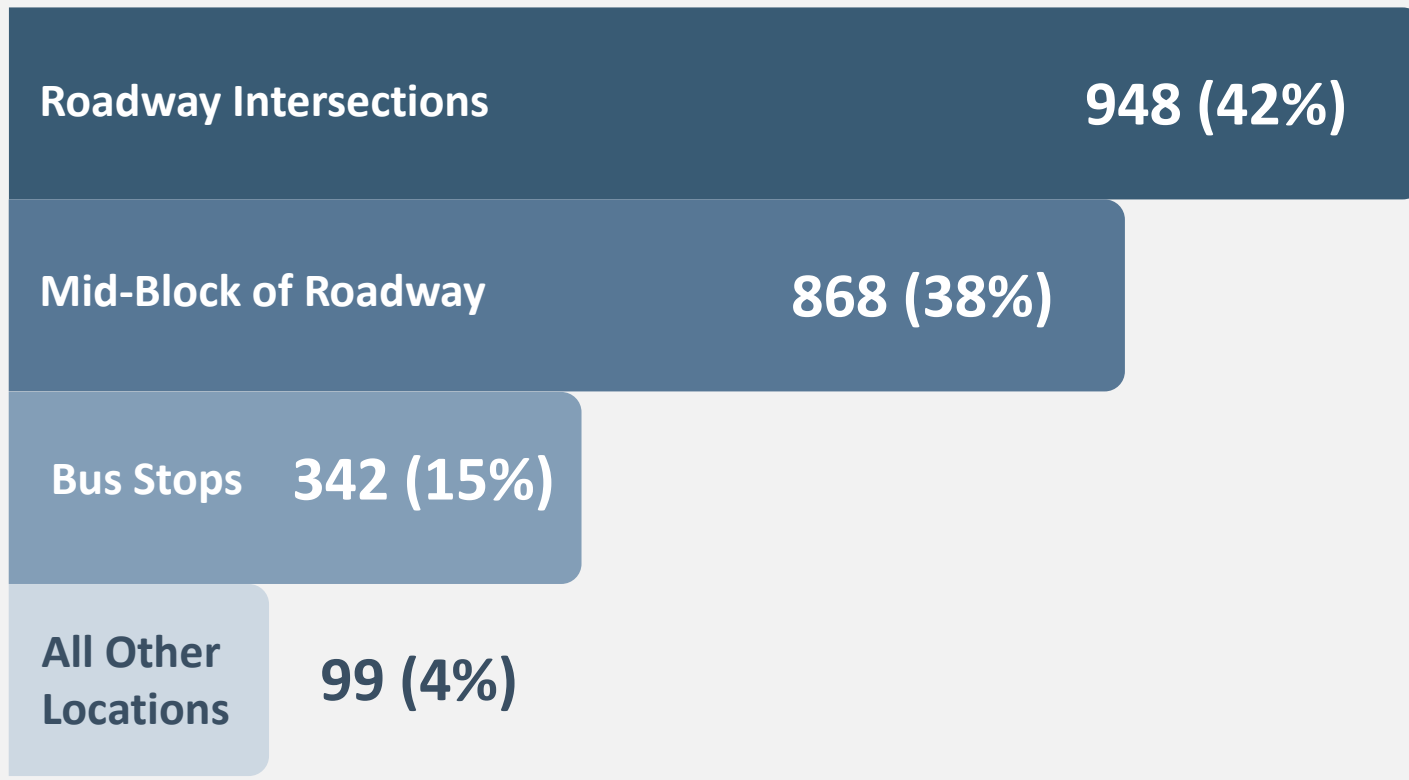
- 15% of all transit fatalities
- 37% of all bus transit fatalities

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



Bus-to-Person Collisions by Location

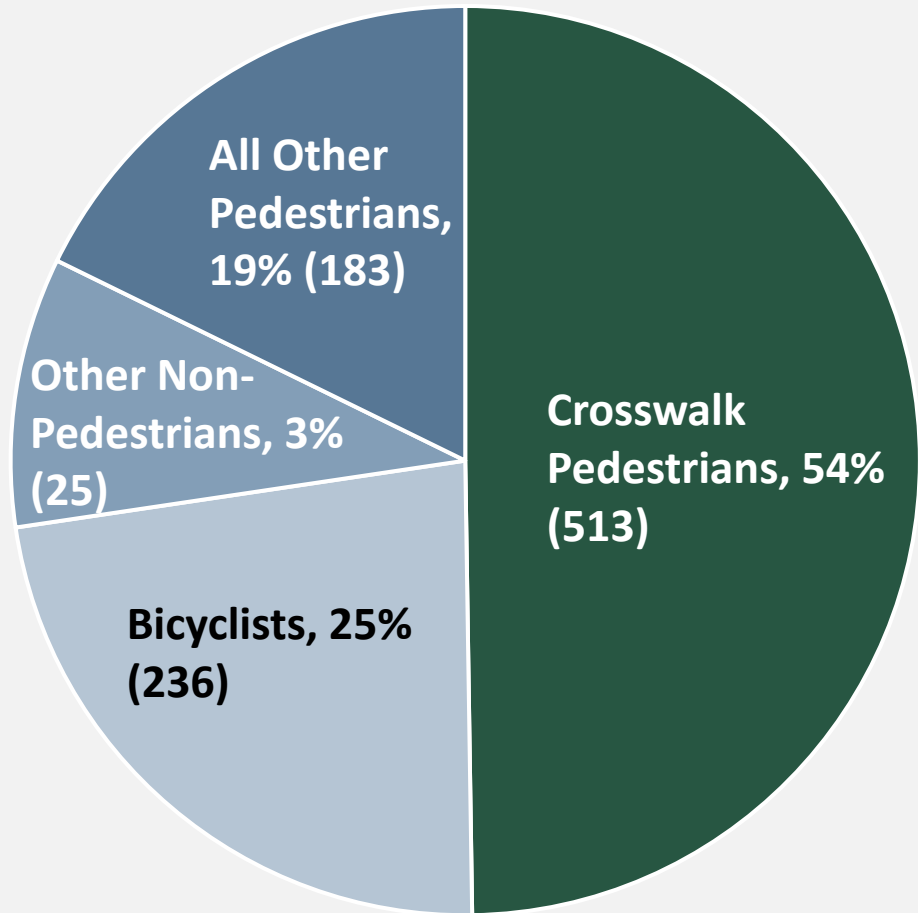
Bus-to-Person Collisions by Location 2017 – 2021



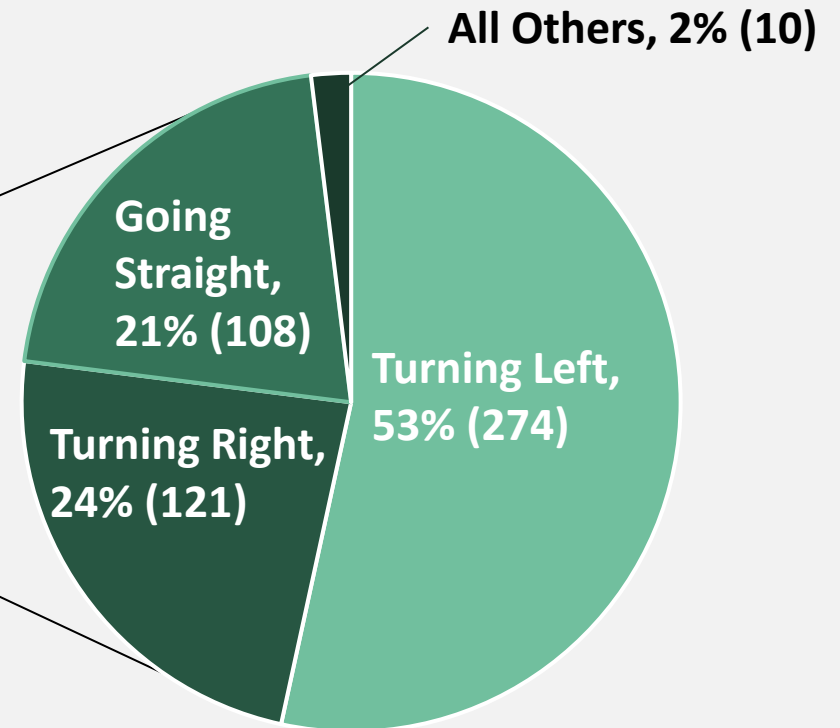
Source: NTD, 2017-2021 (new location field added in 2017)

Roadway Intersection Collisions

Intersection Bus-to-Person Collision Fatalities and Injuries (948) by Pedestrian Type



Crosswalk Pedestrian Fatalities and Injuries from Intersection Collisions

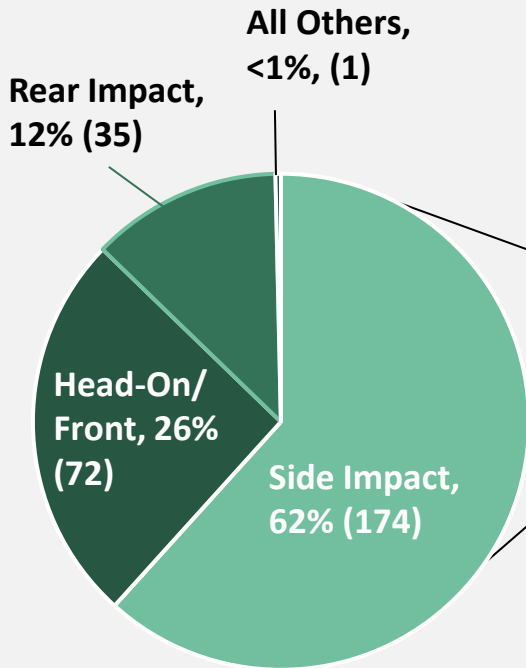


Source: NTD, 2017-2021

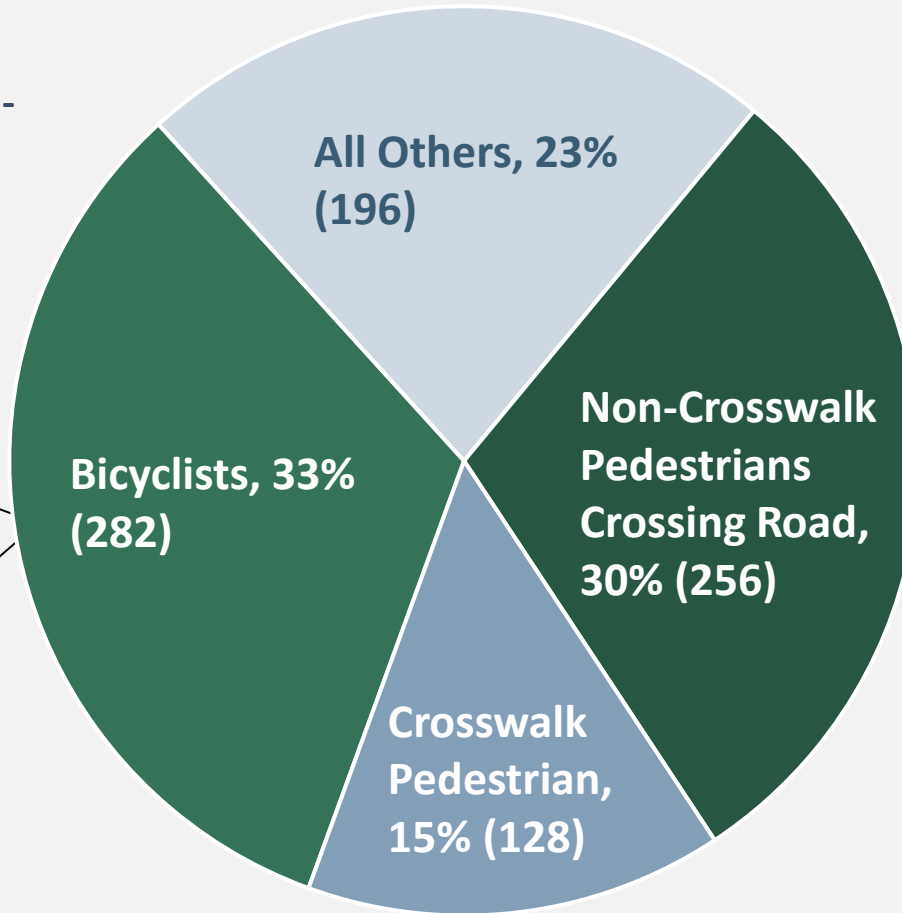
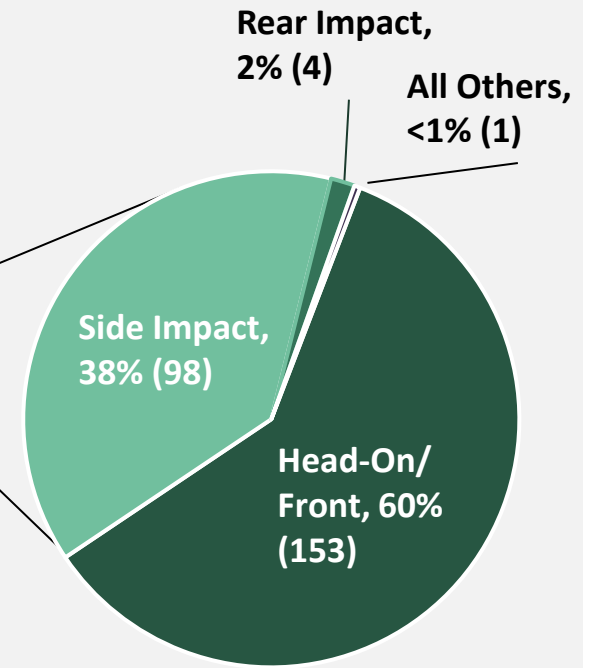
Mid-Block of Roadway Collisions

Mid-Block Bus-to-Person Collision Fatalities and Injuries (868)

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 use a variety of tools and strategies over the next several years and will monitor performance via safety data



Questions

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