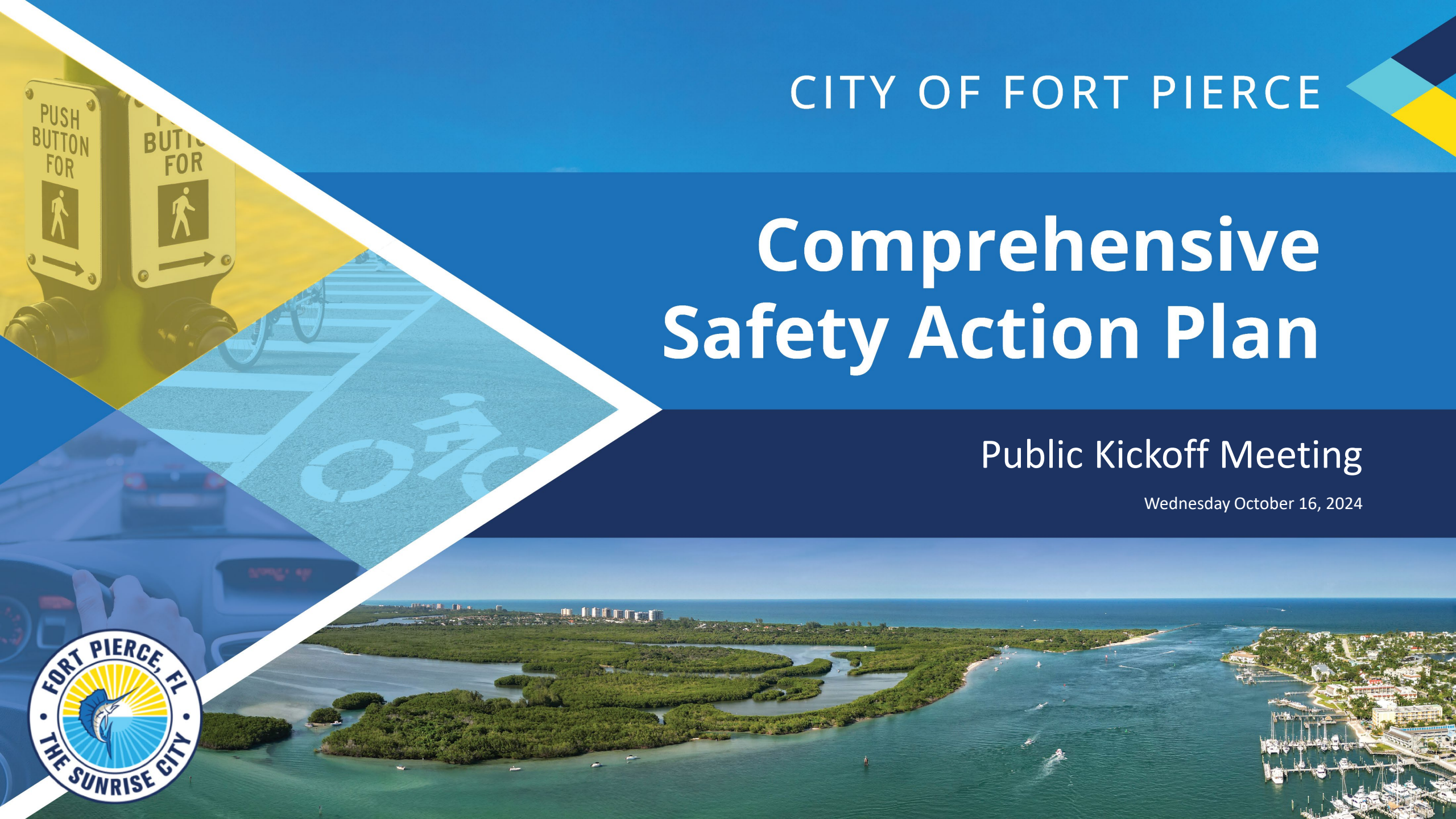


CITY OF FORT PIERCE

Comprehensive Safety Action Plan

Public Kickoff Meeting

Wednesday October 16, 2024





START CROSSING

Watch For
Vehicles



DON'T START
Finish Crossing
If Started



TIME REMAINING
To Finish Crossing



DON'T CROSS

**PUSH BUTTON
TO CROSS**

US 1



Virginia Ave

Port St. Louis
Street



Safe Streets and Roads for All (SS4A)

- Federal discretionary program with \$5 billion in appropriated funds over 5 years, 2022-2026
- Supports the U.S. Department of Transportation's National Roadway Safety Strategy and goal of zero roadway deaths using a Safe System Approach
- Special emphasis on vulnerable road users and equity



FORT PIERCE **COMPREHENSIVE SAFETY ACTION PLAN**

SS4A Funding Opportunities

Planning & Demonstration Grants

\$100,000 to \$10M

- **Comprehensive Safety Action Plan (\$240k)**
- Supplemental Planning and/or Demonstration Activities

Implementation Grant

\$2.5M to \$25M

- Safety Action Plan required to apply for project funding
- Infrastructural, behavioral, and/or operational activities
- Systemic improvements
- Design/Construction



Comprehensive Safety Action Plan Elements

- A Safety Action Plan is aimed at preventing and significantly reducing roadway fatalities and serious injuries for all users
- Includes elements such as:
 - Leadership Commitment and Goal Setting
 - Safety Analysis
 - Engagement and Collaboration
 - Equity Considerations
 - Policy and Process Changes
 - Project Identification

S | S
4 | A

Safe Streets and Roads for All Action Plan Components

This document is not meant to replace the NOFO. Applicants should follow the instructions in the NOFO to correctly apply for a grant. See the SS4A website for more information: <https://www.transportation.gov/SS4A>

Leadership Commitment and Goal Setting



An official public commitment (e.g., resolution, policy, ordinance, etc.) by a high-ranking official and/or governing body (e.g., Mayor, City Council, Tribal Council, MPO Policy Board, etc.) to an eventual goal of zero roadway fatalities and serious injuries. The commitment must include a goal and timeline for eliminating roadway fatalities and serious injuries achieved through one, or both, of the following:

- (1) the target date for achieving zero roadway fatalities and serious injuries, OR
- (2) an ambitious percentage reduction of roadway fatalities and serious injuries by a specific date with an eventual goal of eliminating roadway fatalities and serious injuries.



Planning Structure

A committee, task force, implementation group, or similar body charged with oversight of the Action Plan development, implementation, and monitoring.



Safety Analysis

Analysis of existing conditions and historical trends that provides a baseline level of crashes involving fatalities and serious injuries across a jurisdiction, locality, Tribe, or region. Includes an analysis of locations where there are crashes and the severity of the crashes, as well as contributing factors and crash types by relevant road users (motorists, people walking, transit users, etc.). Analysis of systemic and specific safety needs is also performed, as needed (e.g., high-risk road features, specific safety needs of relevant road users, public health approaches, analysis of the built environment, demographic, and structural issues, etc.). To the extent practical, the analysis should include all roadways within the jurisdiction, without regard for ownership. Based on the analysis performed, a geospatial identification of higher-risk locations is developed (a High-Injury Network or equivalent).



FORT PIERCE COMPREHENSIVE SAFETY ACTION PLAN

Improving transportation safety requires a safe systems approach.

U.S. DOT has adopted a *Safe Systems Approach* to transportation safety. It works by building and reinforcing multiple layers of protection to both prevent crashes from happening in the first place and minimize the harm caused to those involved when crashes do occur.

The **Fort Pierce Comprehensive Safety Action Plan** (CSAP) will use a *Safe Systems Approach* to identify projects, policies, and programs to improve transportation safety in the city.

The *Safe Systems Approach* principles are:

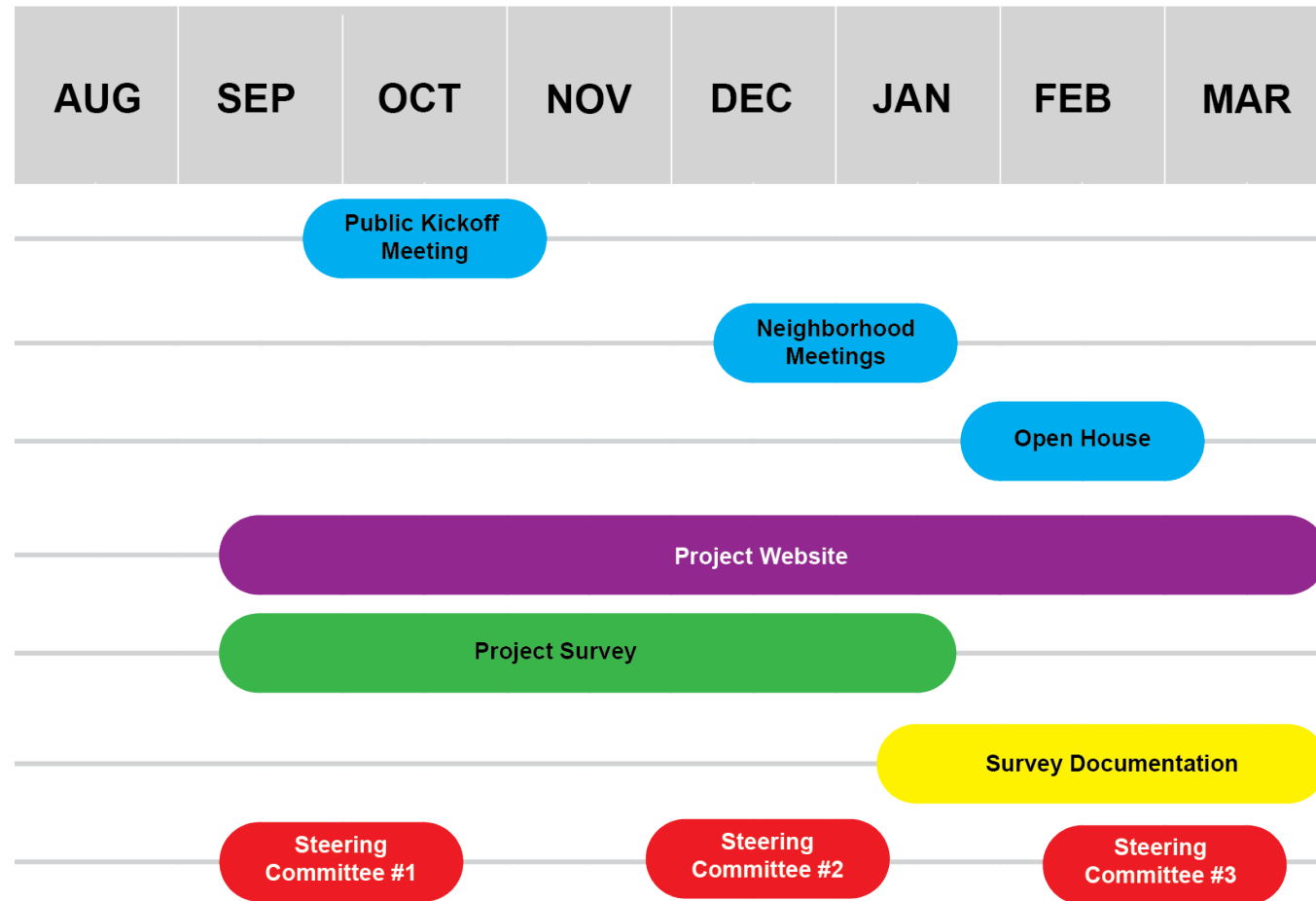
- Death and Serious Injuries are Unacceptable.
- Humans Make Mistakes.
- Humans Are Vulnerable.
- Responsibility is Shared.
- Safety is Proactive.
- Redundancy is Crucial.

This safety assessment provides the baseline measures for safety trends in Fort Pierce. The results of this assessment will be used to identify projects, policies, and programs to improve transportation safety in the city.



FORT PIERCE COMPREHENSIVE SAFETY ACTION PLAN

Engagement Schedule



FORT PIERCE COMPREHENSIVE SAFETY ACTION PLAN

Traffic crashes are a persistent trend in Fort Pierce.

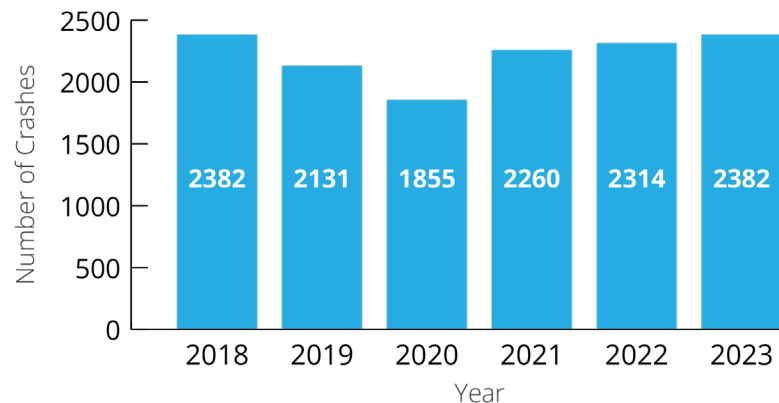
The goal of the CSAP is to reduce transportation related crashes, particularly those that result in serious injuries and death.

Over the past six years, there have been an average of six crashes per day.

Over the same time frame, there was an average of 3.6 serious injury and fatal crashes every month.

By any type of crash severity, crashes are a persistent and regular part of daily life in Fort Pierce.

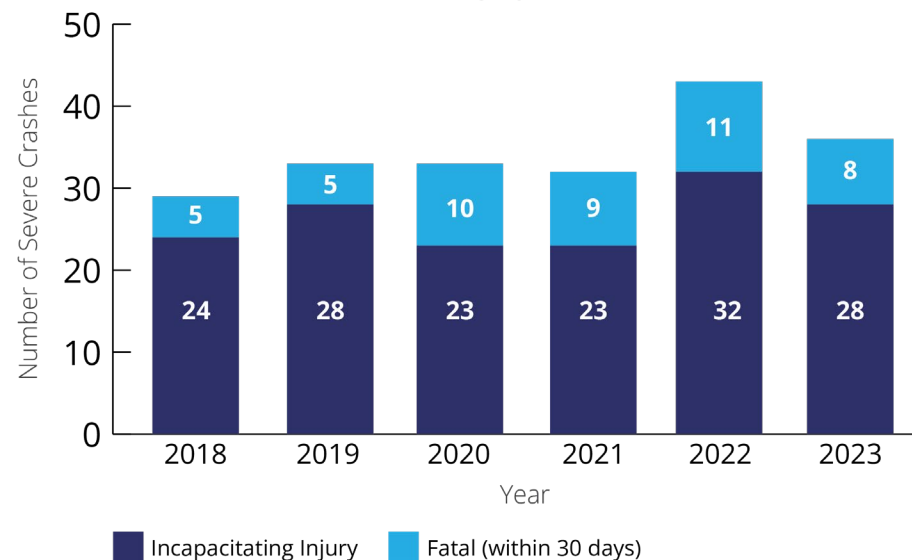
Fort Pierce Annual Crashes: 2018 to 2023



6

Average number of crashes per day over past six years.

Fort Pierce Annual Serious Injury and Fatal Crashes: 2018 to 2023



3.6

Average number of serious injury and fatal crashes every month over past six years.



FORT PIERCE COMPREHENSIVE SAFETY ACTION PLAN

Severe and fatal crashes cost lives and money.

A Safe System Approach acknowledges that people will inevitably make mistakes.

Since we cannot prevent all crashes, the greatest focus is on lessening the severity of crashes.

Vehicles can be repaired or replaced. People that lose their lives can not. Additionally, those experiencing severe injuries are not able to return to normal life, resulting in loss of ability to work and care for themselves.

These types of crashes have individual costs, as well as community costs.

In Fort Pierce, serious injury and fatal crashes account for 1.5% of all crashes and 63% of the economic cost of all crashes.

Focusing on serious injury and fatal crashes will save lives and money.

\$888 Million

Economic cost of serious injury and fatal crashes over past six years



\$148 Million

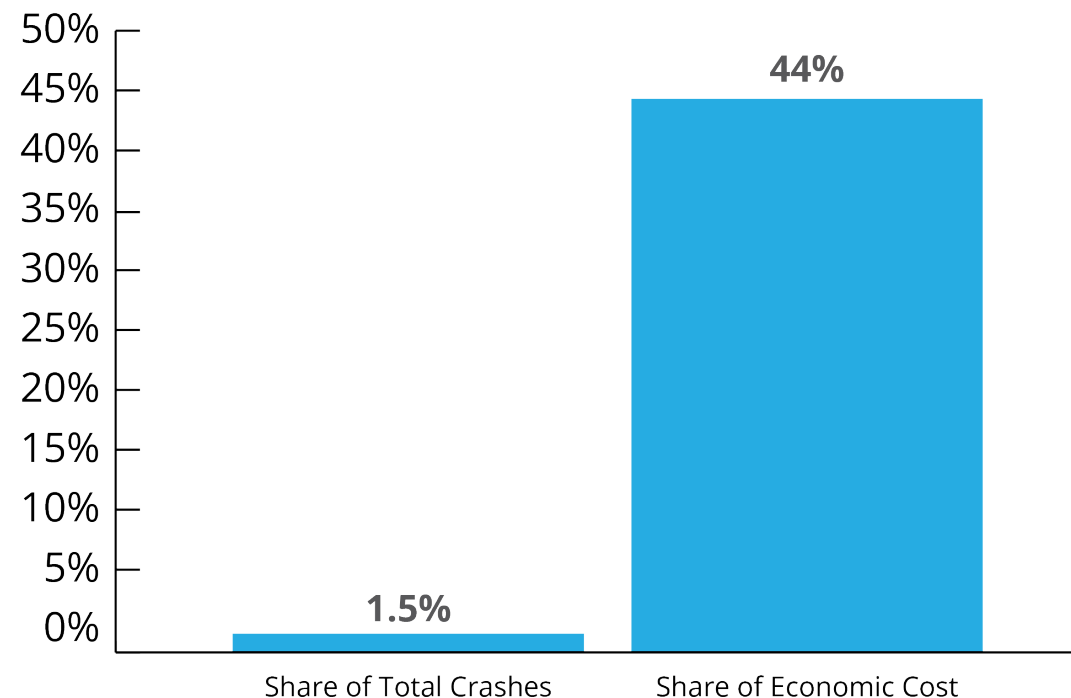
Average annual economic cost of serious injury and fatal crashes over past six years



\$405,000

Average daily economic cost of serious injury and fatal crashes over past six years

Fort Pierce Serious Injury and Fatal Crashes:
Share of Total Crashes vs. Share of Economic Cost



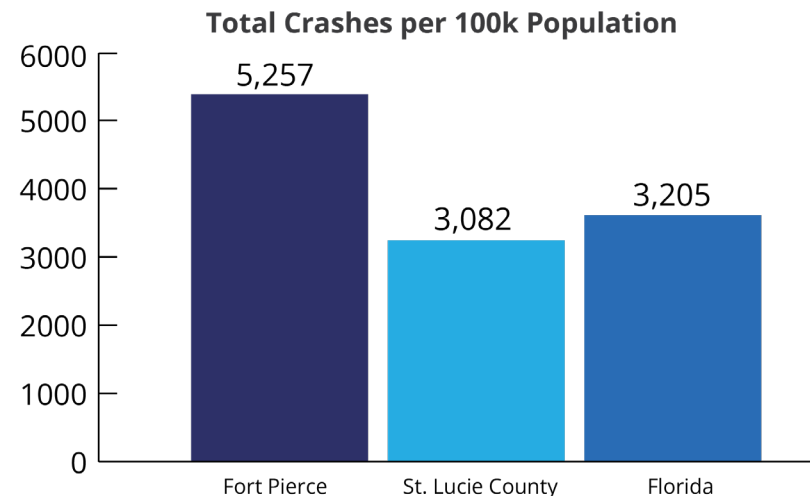
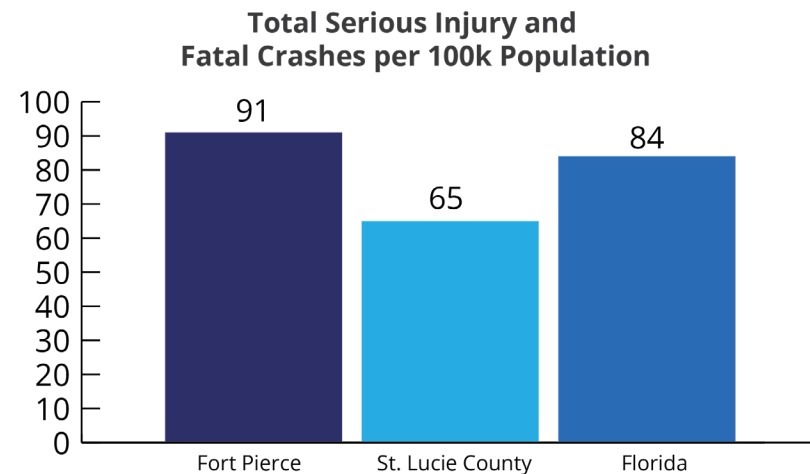
FORT PIERCE COMPREHENSIVE SAFETY ACTION PLAN

Fort Pierce has a higher rate of crashes than the county and the state.

Serious injury and fatal crashes on a population basis in Fort Pierce are 8% higher than the state and 31% higher than St. Lucie County.

For all crashes, Fort Pierce's crash rate is 64% higher than the state and 68% higher than St. Lucie County.

These rates mean that crashes are occurring more frequently in Fort Pierce. If you live, work, or visit Fort Pierce, your chance of being involved in a crash is significantly higher than the state or county.



Source: Florida Department of Transportation; US Census



FORT PIERCE COMPREHENSIVE SAFETY ACTION PLAN

The type of road significantly influences the severity of crashes.

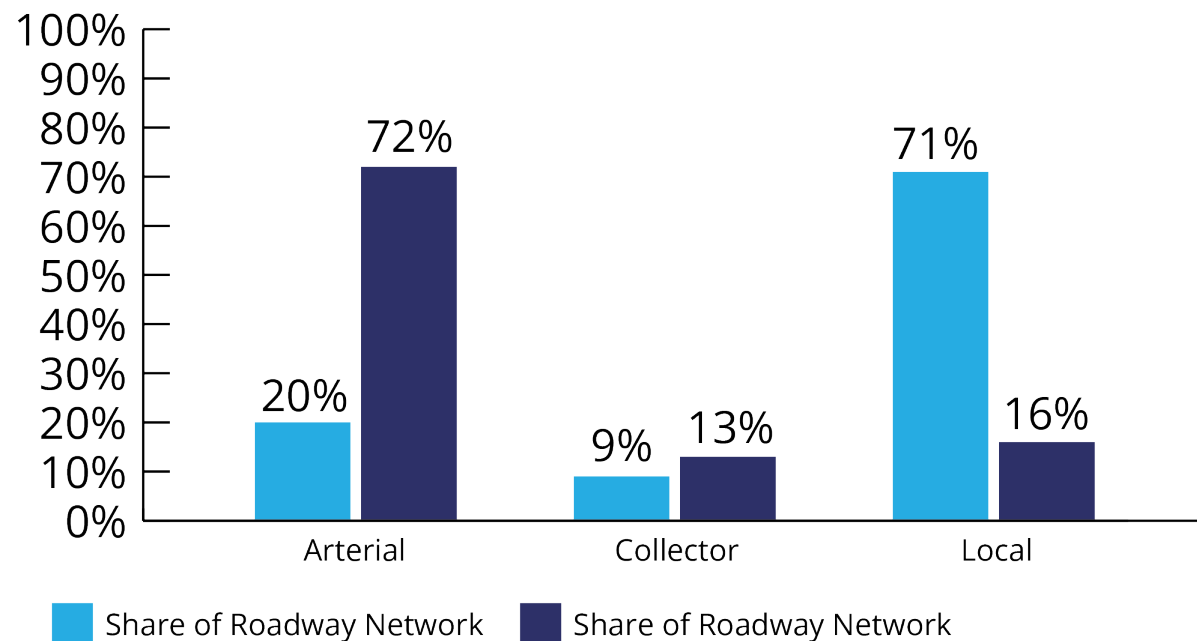
Traveling on roadways with higher vehicle speeds is more likely to result in serious injury or death. This is the result of more force from a vehicle, drivers having narrower fields of vision at higher speeds, and drivers traveling further before being able to slow or stop.

The safety data for Fort Pierce illustrates the increase in severity as vehicle speeds increase.

72% of serious injury and fatal crashes in Fort Pierce occur on arterial roads. These are major roads like US 1 and Orange Avenue. Arterial roads represent 20% of the total roadway network.

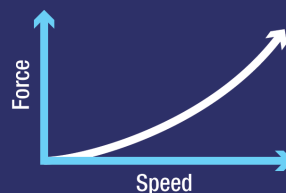
89% of serious injury and fatal crashes occur on arterial and collector roads, which represent 29% of the roadway network in Fort Pierce.

Roadway Network and Serious Injury and Fatal Crashes By Roadway Type

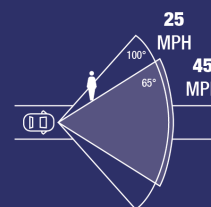


Source: Florida Department of Transportation; US Census

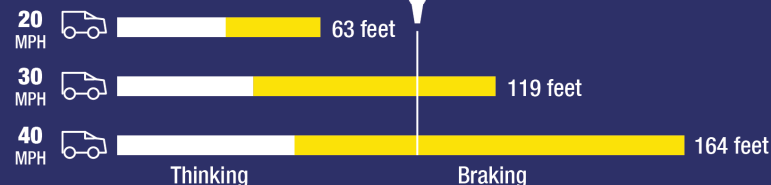
1 Crashes at higher speeds are more forceful and thus more likely to be fatal



2 Drivers traveling at higher speeds have a narrower field of vision



3 Drivers traveling at higher speeds travel further before they can react



4 Drivers traveling at higher speeds travel further before they can react

Source: NACTO City Limits: Setting Safe Speed Limits on Urban Streets, 2020

FORT PIERCE COMPREHENSIVE SAFETY ACTION PLAN

Speeding Perspective

As drivers go faster, their field of vision narrows, and they travel further before they can react.

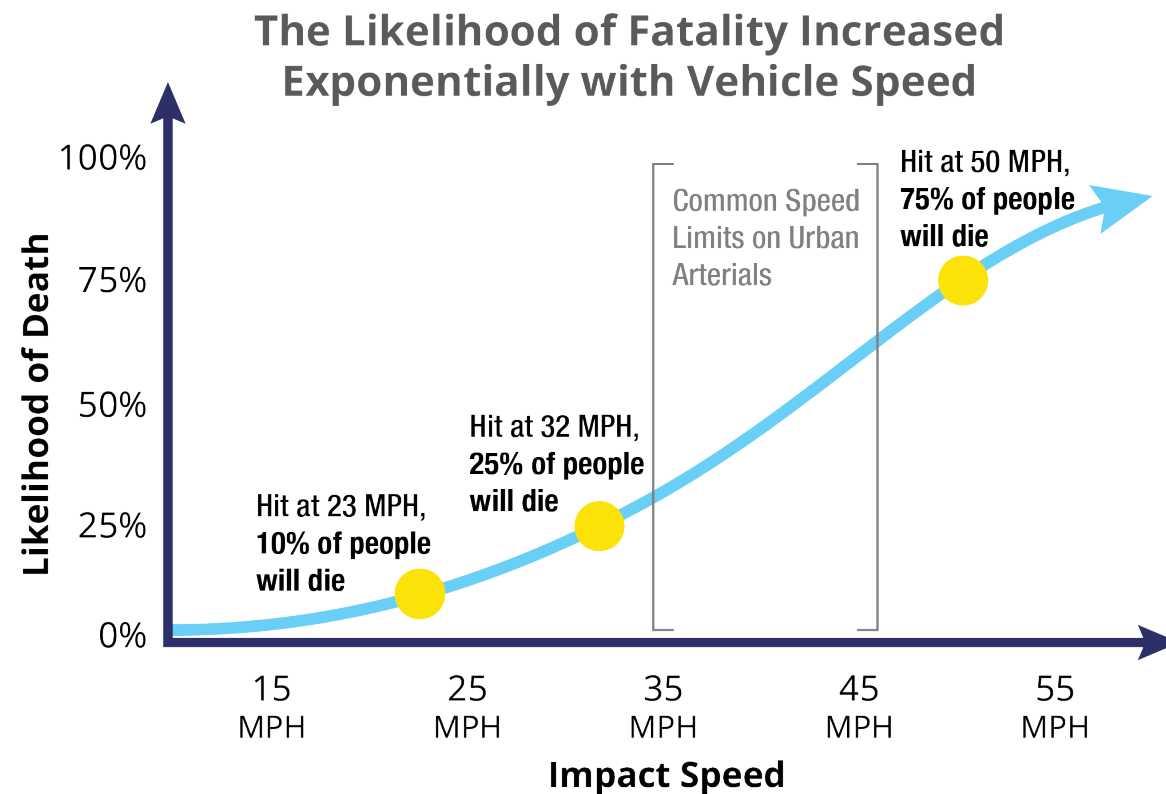
The graphic to the right illustrates how a driver's field of vision narrows as vehicle speeds increase.



Vehicle Speeds Influence Likelihood of Dying in a Crash

National research highlights the fact that as vehicle speeds increase, so does the chance of people involved dying.

- At 23 MPH, 10% of people walking and hit by a vehicle will die.
- At 32 MPH, 25% of people walking and hit by a vehicle will die.
- At 50 MPH, 75% of people walking and hit by a vehicle will die.



Source: NACTO City Limits

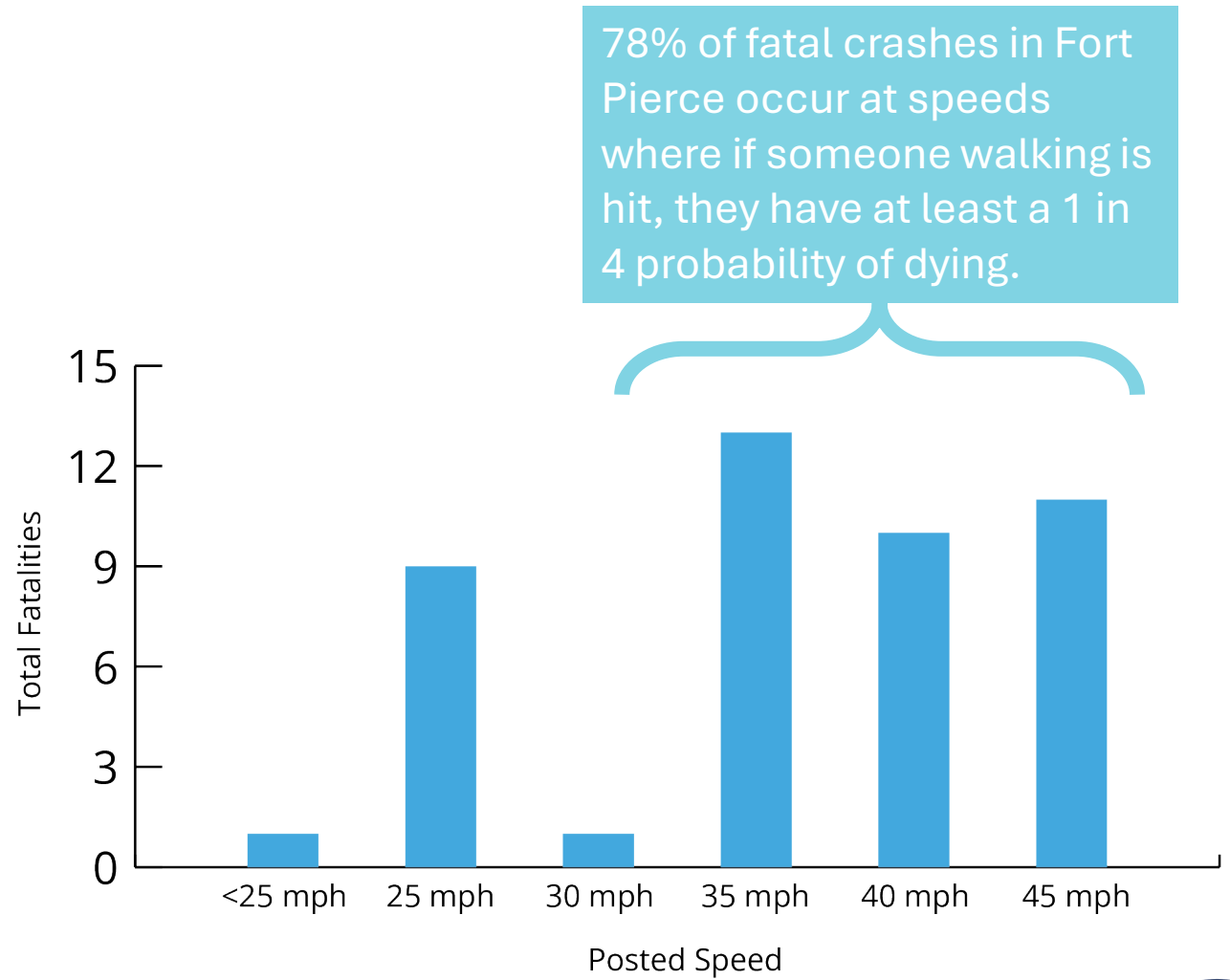
FORT PIERCE COMPREHENSIVE SAFETY ACTION PLAN

Higher posted speeds correlate with more fatalities in Fort Pierce

78% of traffic-related fatalities in Fort Pierce occur on roadways with a posted speed of 30 MPH or more.

Along roadways with higher posted speed limits, it is not the posted speed but how the roadway is designed that is contributing to the higher speeds. Major roads with higher posted speeds often have wider roadways, wider lanes, and longer distances between traffic signals. These factors give visual cues for drivers to go faster.

While changing the posted speed has shown to lower vehicle speeds, ultimately changing the design of the roadway is the primary strategy to change driver behavior and reduce the severity of crashes.



Source: Florida Department of Transportation



FORT PIERCE COMPREHENSIVE SAFETY ACTION PLAN

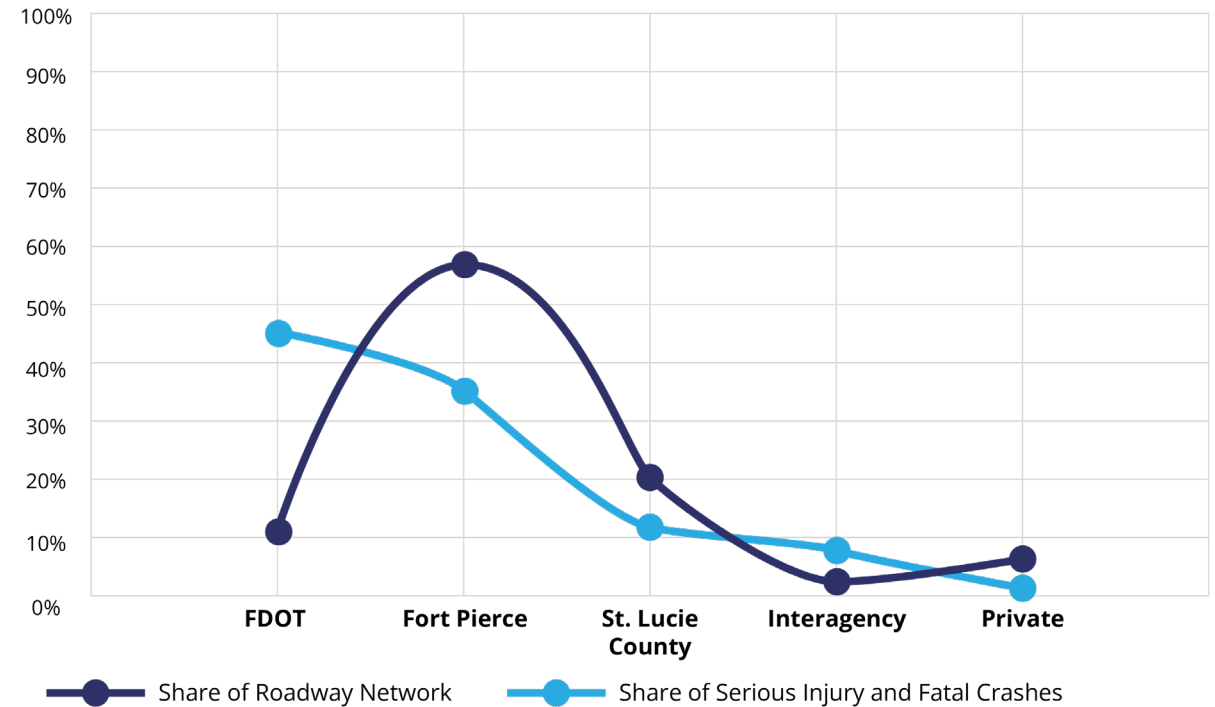
Working with regional partners is key to reducing and eliminating serious injury and fatal crashes in Fort Pierce

Only 36% of the serious injury and fatal crashes occur on roads owned by the City of Fort Pierce.

46% of the serious injury and fatal crashes occur on FDOT roadways and 12% occur on St. Lucie County roadways.

Coordination with the state and county is needed to reduce and eliminate the most severe crashes in Fort Pierce.

Fort Pierce Serious Injury and Fatal Crashes by Roadway Ownership



Source: Florida Department of Transportation



How you choose to travel impacts your safety risk.

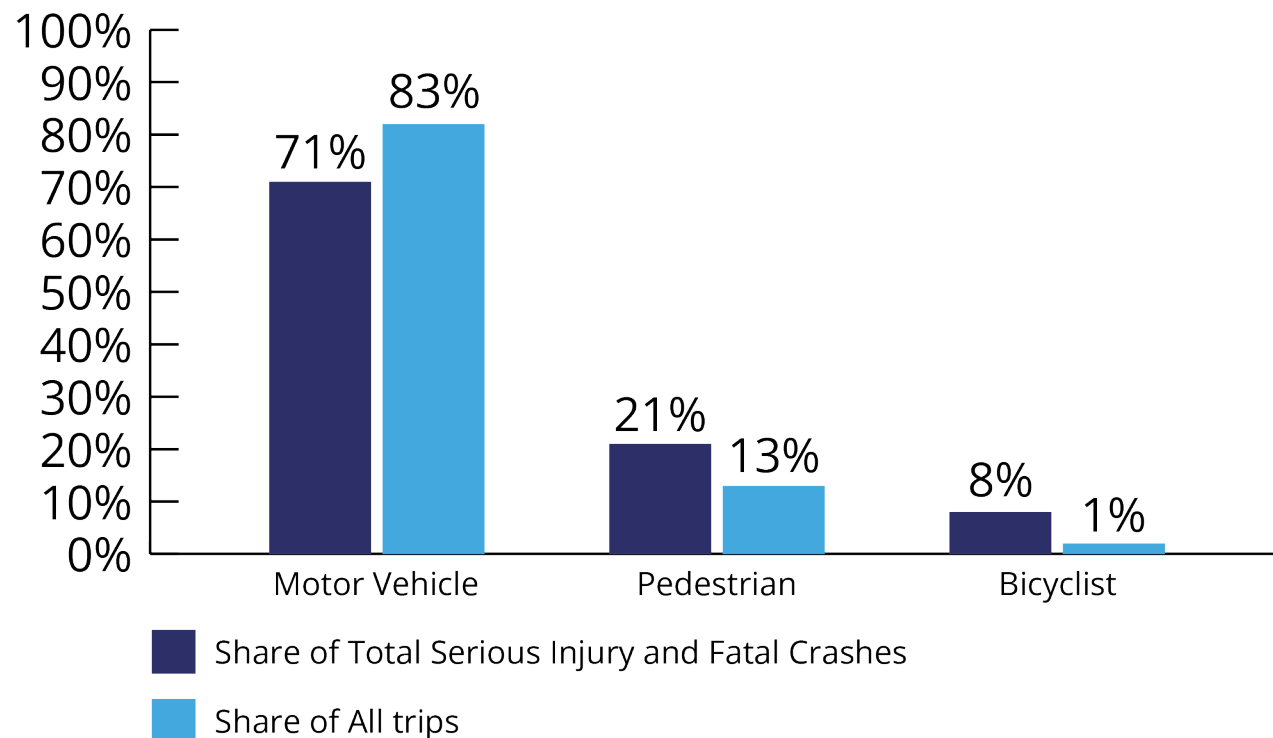
The chart highlights two facts.

Most of the serious injury and fatal crashes are the result of people driving crashing into other people driving.

Additionally, people walking and biking are disproportionately involved in serious injury and fatal crashes. The pedestrian share of all serious injury and fatal crashes is 63% higher than their share of all trips. For bicyclists, it is 666%.

These facts highlight the need to focus on slowing drivers down and protect those more vulnerable to serious injuries and fatalities.

Serious Injury and Fatal Crashes and Mode Share



FORT PIERCE COMPREHENSIVE SAFETY ACTION PLAN

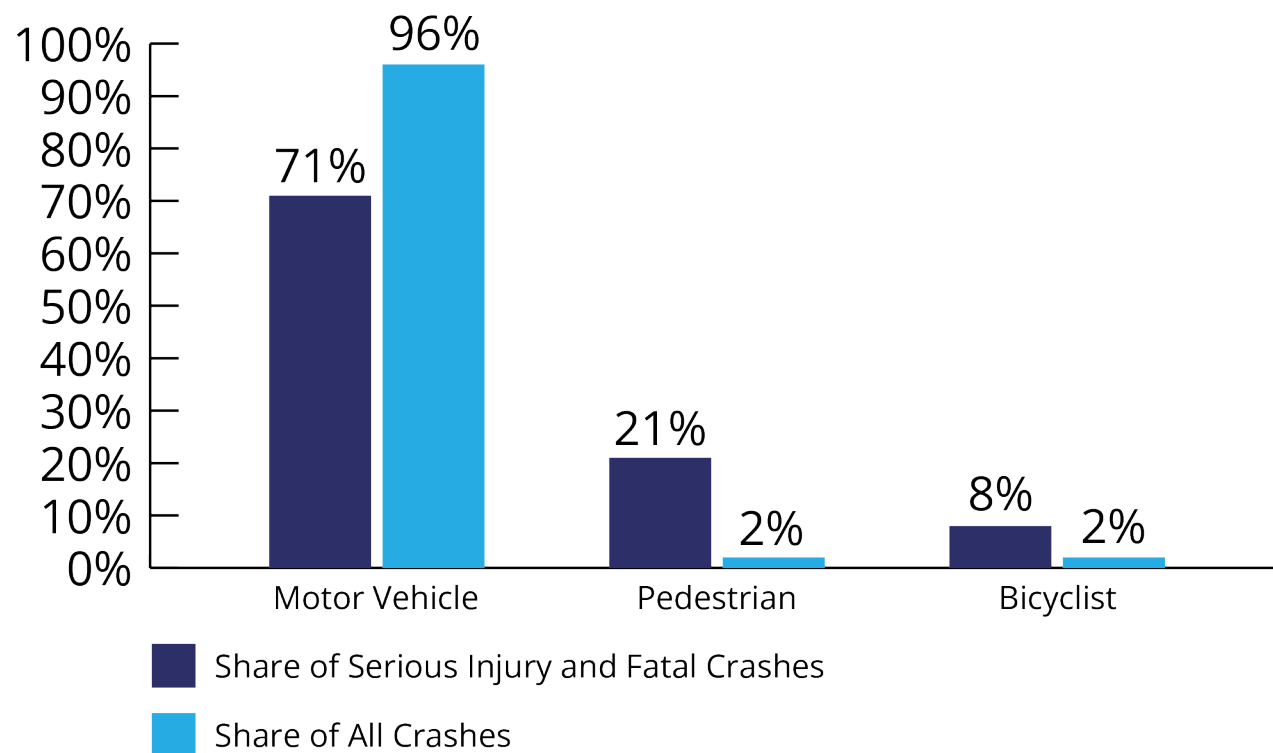
People walking and biking are involved in a disproportionate number of the most severe crashes.

The rate of pedestrian serious injury and fatal crashes is 999% higher than the rate of all crashes for pedestrians.

For the same measure for bicyclists, the difference is 375% higher.

When someone walking or biking is involved in a crash in Fort Pierce, they are far more likely to be seriously injured or killed.

Share of Serious Injury and Fatal Crashes
vs Share of All Crashes By Mode



FORT PIERCE COMPREHENSIVE SAFETY ACTION PLAN

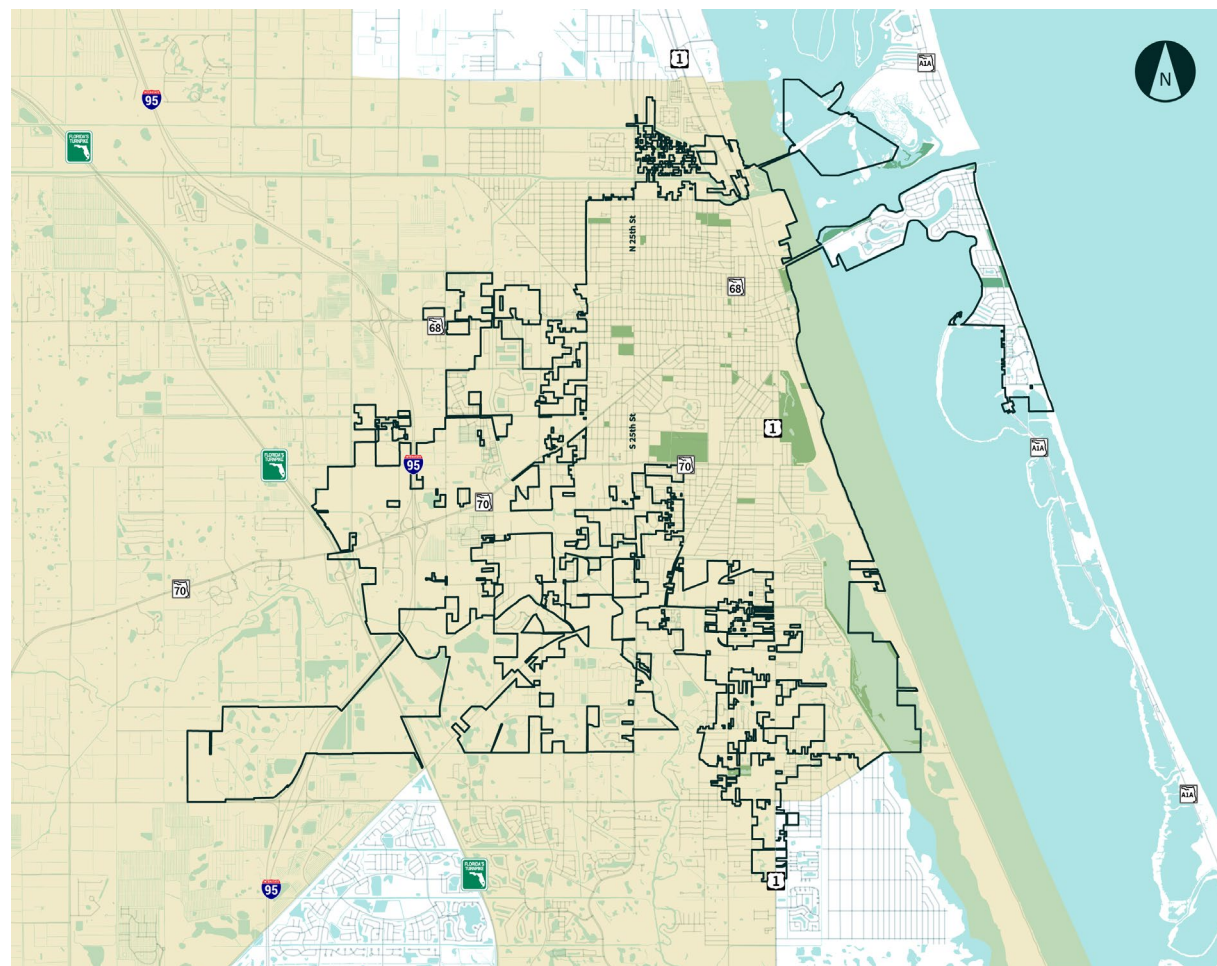
Equity and Transportation Needs

The Justice40 Initiative is a federal strategy to identify disadvantaged communities and address environmental justice issues. Census tracts are identified to give priority to communities that have been impacted by economic conditions, such as lower incomes, or exposure to higher levels of air pollution.

In Fort Pierce, the majority of the city is covered by a Justice40 designated census tract. 91% of the serious and fatal crashes in the city occur in a Justice40 census tract.

This information will be used to identify and prioritize transportation safety investments in the City of Fort Pierce.

Map of justice40 census tracts



LEGEND

 Fort Pierce City Limit	 Roads
 Parks	 Justice40 Census Tracts

Source: US Department of Transportation



FORT PIERCE COMPREHENSIVE SAFETY ACTION PLAN

Land Use Context Correlates with Safety Needs

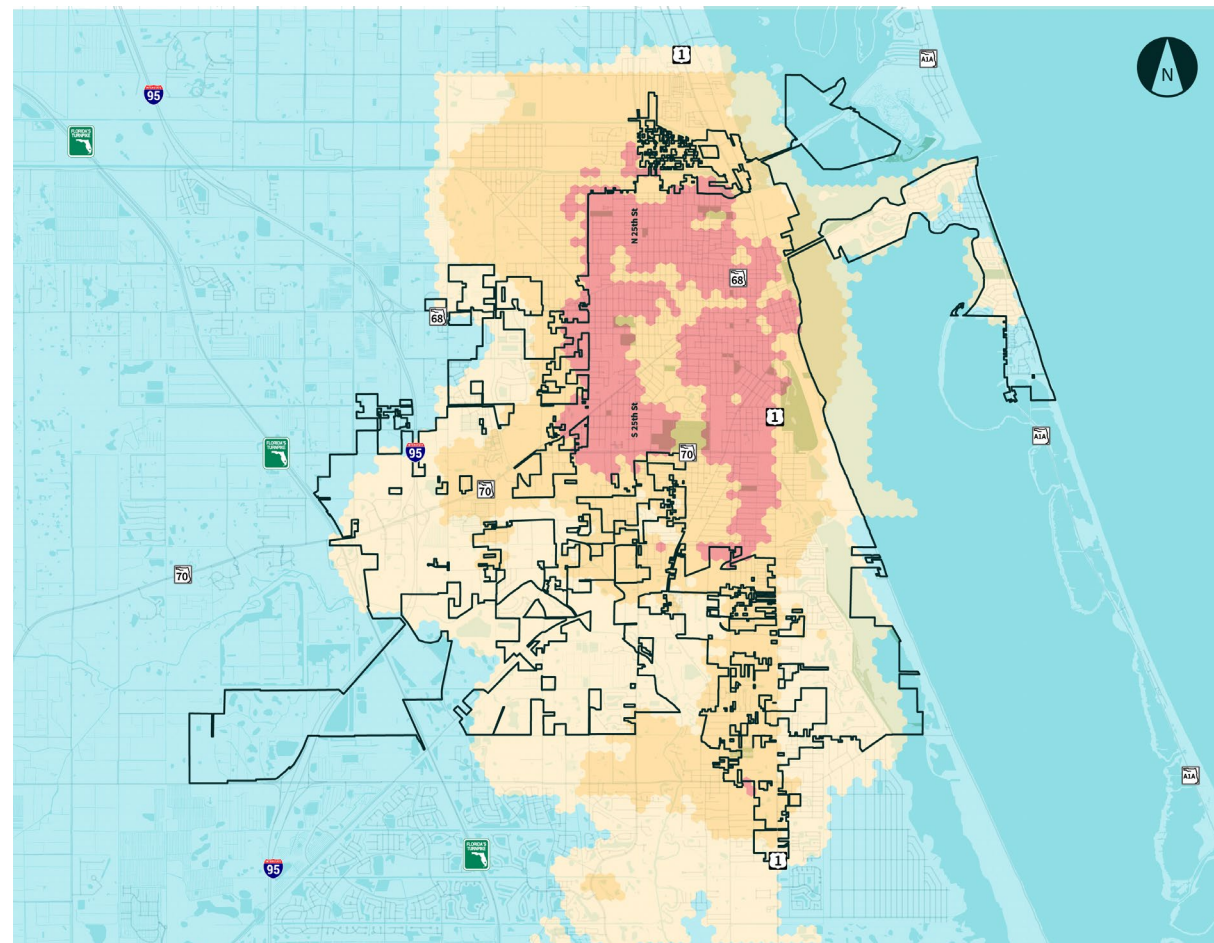
The areas with the highest trip demand and economic activity are also areas where most severe and fatal crashes occur.

The multimodal demand score is based on proximity with these activity factors:

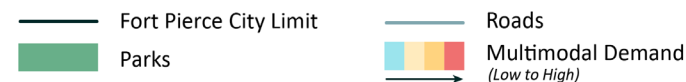
- Where people play. Proximity to parks.
- Where people learn. Proximity to schools.
- Where people live. Population density variations.
- Where people work. Employment density variations.
- Where people access transit. Proximity to bus stops.

The areas identified with the highest demand cover 21% of the land area of Fort Pierce and have 47% of the serious injury and fatal crashes in the City.

Multimodal Demand



LEGEND



Source: US Census; City of Ft. Pierce



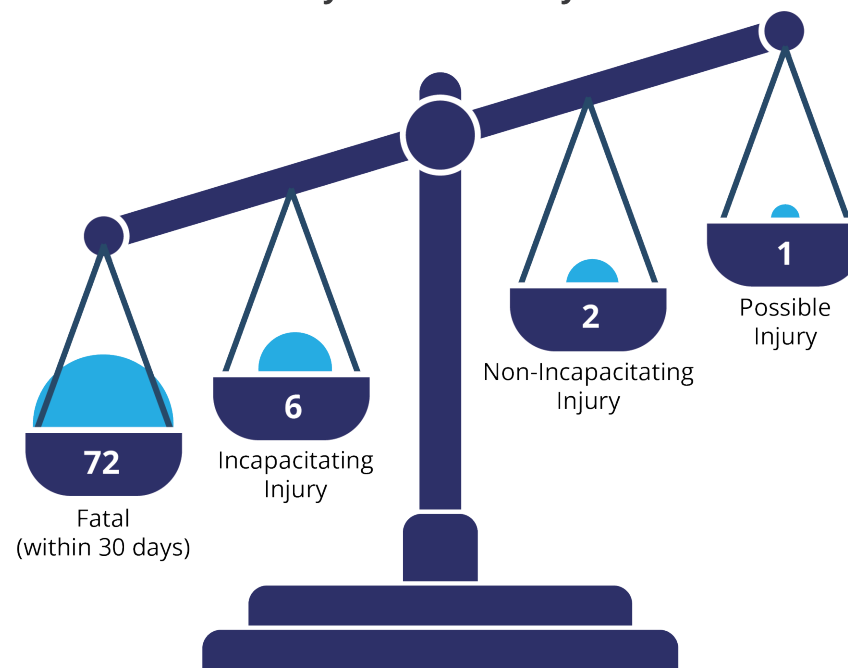
High Injury Network (HIN)

A high-injury network is a network of roads, intersections, or other transportation infrastructure (such as multiuse trails) that has a higher-than-average rate of crashes results in injury or fatality. The network is determined by traffic crash data, considering factors such as crash frequency and severity.

For Fort Pierce, a weighted score was applied to all crashes based on the economic cost associated with each type of crash. The weighted scores were then applied to the roadway segments where they occurred. Roadway segments with the highest weighted score were identified as part of the Fort Pierce HIN.

The table and chart to the right summarize the weight factor applied to each crash in Fort Pierce over the past six years.

Weighted Scoring Comparison
by Crash Severity



Crash Severity	Economic Cost	Weighted Scoring Factor
No Injury	\$ 10,000	0
Possible Injury	\$ 139,000	1
Non-Incapacitating Injury	\$ 241,000	2
Incapacitating Injury	\$ 1,189,000	9
Fatal (within 30 days)	\$ 14,585,000	105

FORT PIERCE COMPREHENSIVE SAFETY ACTION PLAN

Crashes are concentrated along a few roads.

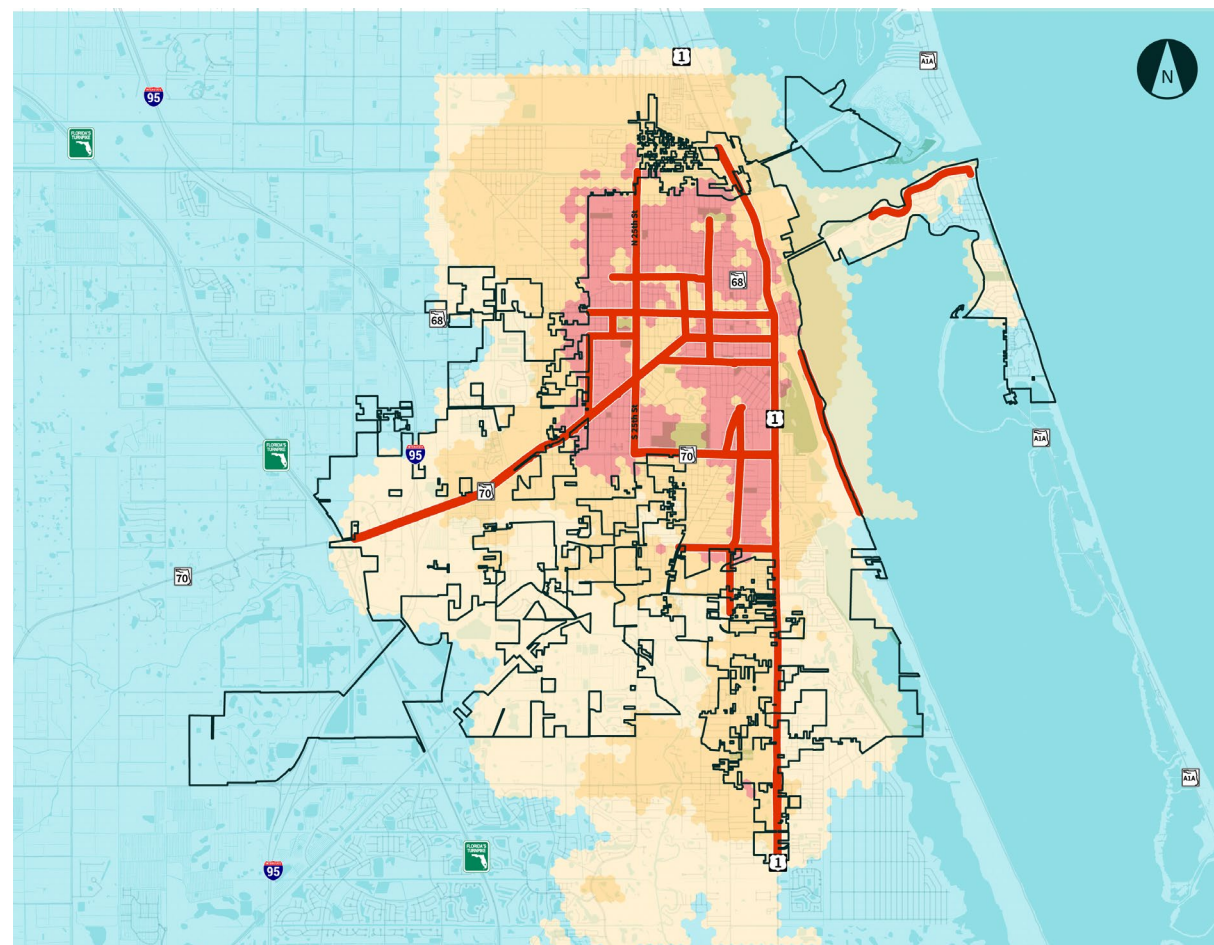
Crashes in Fort Pierce are concentrated along a few roads and at a few intersections.

Streets that are a part of the HIN (i.e. streets with higher crash rates and severity of crashes account for 71% of serious injury and fatal crashes in Fort Pierce.

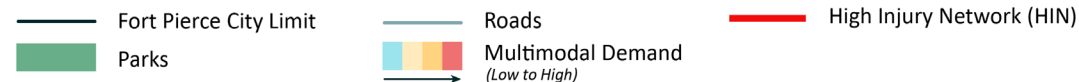
The 10 highest crash intersections in Fort Pierce account for 14% of serious injury and fatal crashes in Fort Pierce. All the highest crash intersections are on High Injury Networks. 5 of these intersections are on US 1.

The HIN will be used to prioritize and focus safety investments where they can have the greatest influence and return on investment.

Multimodal Demand and High Injury Network



LEGEND



Source: US Census; City of Ft. Pierce; Florida Department of Transportation

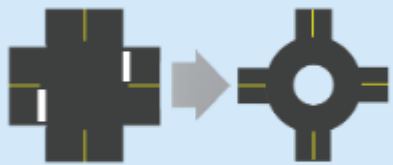


FORT PIERCE COMPREHENSIVE SAFETY ACTION PLAN

Proven Strategies to Improve Safety

Example countermeasure: **Roundabouts**

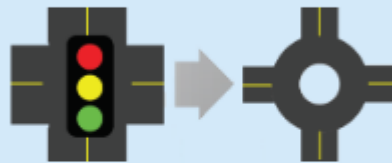
Two-Way Stop-
Controlled
Intersection to a
Roundabout



82%

Reduction in fatal and injury
crashes¹

Signalized
Intersection to a
Roundabout



78%

Reduction in fatal and injury
crashes¹

OFFICE OF SAFETY
Proven Safety Countermeasures

SPEED MANAGEMENT

- Speed Safety Cameras
- Variable Speed Limits
- Appropriate Speed Limits for All Road Users

ROADWAY DEPARTURE

- Wider Edge Lines
- Enhanced Delineation for Horizontal Curves
- Longitudinal Rumble Strips and Stripes on Two-Lane Roads
- SafetyEdge™
- Roadside Design Improvements at Curves
- Median Barriers

INTERSECTIONS

- Backplates with Retroreflective Borders
- Corridor Access Management
- Dedicated Left- and Right-Turn Lanes at Intersections
- Reduced Left-Turn Conflict Intersections
- Roundabouts
- Systemic Application of Multiple Low-Cost Countermeasures at Stop-Controlled Intersections
- Yellow Change Intervals

PEDESTRIANS/BICYCLES

- Crosswalk Visibility Enhancements
- Bicycle Lanes
- Rectangular Rapid Flashing Beacons (RRFB)
- Leading Pedestrian Interval
- Medians and Pedestrian Refuge Islands in Urban and Suburban Areas
- Pedestrian Hybrid Beacons
- Road Diets (Roadway Reconfiguration)
- Walkways

CROSSCUTTING

- Pavement Friction Management
- Lighting
- Local Road Safety Plans
- Road Safety Audit

FHWA-SA-21-082

Source: Federal Highway Administration (FHWA)



FORT PIERCE COMPREHENSIVE SAFETY ACTION PLAN

Ways to Get Involved Online

Project Website

- FtPierceSafetyPlan.com



Online Survey



- [Project Home](#)
- [Project Documents](#)
- [Survey](#)
- [Get Involved](#)

The City of Fort Pierce is developing a Comprehensive Safety Action Plan to prevent and significantly reduce roadway fatalities and serious injuries in our community.

This project site will serve as the central location for information about the plan as it is developed. Check back regularly for information about opportunities to share input and review findings and recommendations.

Why is this plan being developed?

Key Dates

 **Wednesday 16 October 2024 5:30 pm**
Public Kickoff Meeting
Where: River Walk Center
When: 5:30pm to 7:00pm
Address: 600 Indian River Dr, Fort Pierce, FL 34950

Open

Fort Pierce Comprehensive Safety Action Plan Survey

The purpose of this survey is to gain understanding about existing transportation safety perceptions, needs, and priorities. The results of the survey will be used to identify and prioritize plan recommendations.

Part 1. Question Survey

Please answer the questions provided. The goal for these questions is to identify needs and priorities. Where does the City of Fort Pierce need to focus its time and investments related to transportation safety?

What is your connection to the City of Fort Pierce?

- ☐ I live in the city.
- ☐ I work in the city.
- ☐ I live and work in the city.
- ☐ I regularly visit the city to socialize or for other daily activities.

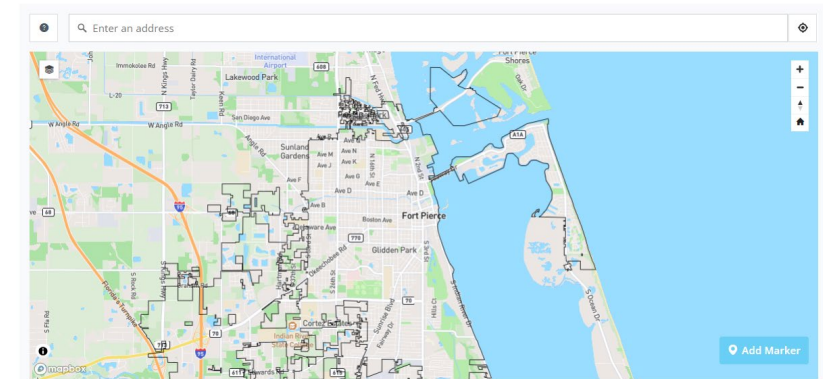
Part 2 Map Survey

Please use this map to identify and share specific notes about transportation safety in the City of Fort Pierce. You can share notes about a specific intersection you think needs to be changed or ideas for how safety can be improved along a specific road. The results will be used to develop and prioritize the recommendations for this safety plan.

Where would you like to see safety improvements made?

You can place as many markers as you would like. When done, please submit your completed survey by clicking "Submit" at the bottom of the page.

● Add as many map markers as you like



Neighborhood Meeting Schedule

- Thursday December 5th
- Tuesday December 10th
- Thursday December 12th



Disclaimer

- 23 United States Code Section 407
- Discovery and admission as evidence of certain reports and surveys.
- Notwithstanding any other provision of law, reports, surveys, schedules, lists, or data compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential accident sites, hazardous roadway conditions, or railway-highway crossings, pursuant to sections 130, 144, and 148 of this title or for the purpose of developing any highway safety construction improvement project which may be implemented utilizing Federal-aid highway funds shall not be subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data.

