Bristol Safe Streets and Roads for All (SS4A)

Overview of the Safety Action Plan

SS4A
SAFE STREETS FOR ALL

TOWN OF BRISTOL
RHODE ISLAND

RIPTA
RHODE ISLAND PUBLIC TRANSIT AUTHORITY

SS4A Program Goals

Overarching Goal

Significantly **reduce** and eventually **eliminate** fatalities and serious injuries across Rhode Island.

Specific Goals

Create an **implementable** Safety Action Plan (SAP) rooted in the Safe Systems Approach* for Bristol.

Prepare Bristol in their **ability to adapt** to known/emerging safety and mobility challenges for all modes of transportation.

Support multi-jurisdictional **collaboration** and regional **impact**.

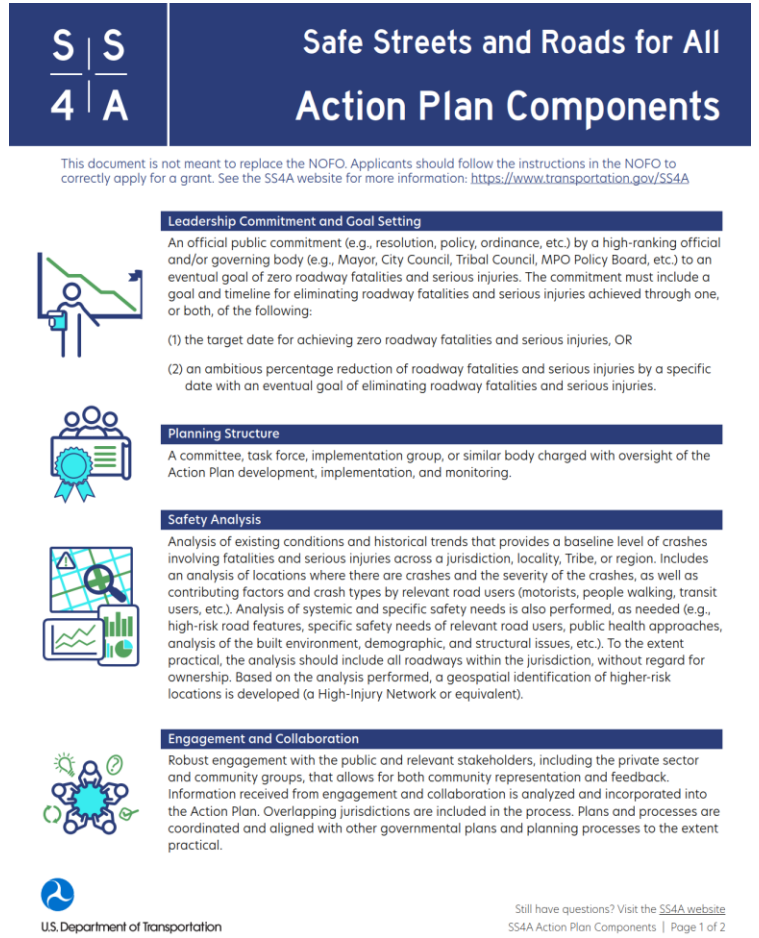
Promote broad public involvement/**engagement** and **equitable access** to information for underserved and minority communities and low-income areas.

Keep Bristol in a position for continued SS4A implementation **funding eligibility**.

Safety Action Plan Components

A Safety Action Plan should include the following components:

1. Leadership Commitment and Goal Setting
2. Planning Structure
3. Safety Analysis
4. Engagement and Collaboration
5. Equity Considerations
6. Policy & Process Changes
7. Strategy & Project Selections
8. Progress & Transparency



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).

Engagement and Collaboration

Robust engagement with the public and relevant stakeholders, including the private sector and community groups, that allows for both community representation and feedback. Information received from engagement and collaboration is analyzed and incorporated into the Action Plan. Overlapping jurisdictions are included in the process. Plans and processes are coordinated and aligned with other governmental plans and planning processes to the extent practical.

U.S. Department of Transportation

Still have questions? Visit the SS4A website

SS4A Action Plan Components | Page 1 of 2

SS4A SAFE STREETS FOR ALL

Plan Document Highlights

SS4A
SAFE STREETS FOR ALL

Chapter 1: Leadership Commitment and Goal Setting

Sets interim goal: 50% reduction in fatal and serious injuries (FSIs) by 2030 (local) and 2035 (state roads) with goals grounded in Safe System Approach, aligned with community priorities

Language:

- Achieve **zero roadway fatalities and serious injuries** on roadways under the **jurisdiction of the Town of Bristol by 2035**,
- Partner with RIDOT to achieve **zero roadway fatalities and serious injuries** on roadways in Bristol **under RIDOT jurisdiction by 2040**,
- **Reduce fatal and serious injuries** on roadways under the **Town of Bristol's jurisdiction by 50% by 2030**,
- Partner with RIDOT to **reduce fatal and serious injuries** on roadways within Bristol under **RIDOT jurisdiction by 50% by 2035**.

Chapter 2: Planning Structure

- Outlines how the plan was developed and will be implemented
- Community Development Department will lead coordination and updates
- **Name and document any roles people hold in street safety**
- Ensures plan remains adaptive with future performance evaluation

Chapter 3: Safety Analysis

- **Analyzes 2019-2023 crash data**
- **Key findings:**
  - State roads = 11% of mileage but 54% of injury crashes
  - Single-vehicle crashes = nearly 50% of FSIs
  - Young adults overrepresented in FSI crashes
  - VRU crashes more likely to result in injuries
- Introduces:
  - **Baseline Crash Analysis (BCA)** – describes recent crash trends and patterns
  - **High-Risk Network (HRN)** – identifies locations at higher risk for fatal and serious injury crashes
  - **High-Injury Network (HIN)** – identifies roads with the most FSI crashes combined with highest risk roads
- Visuals include:
  - Crash trend figures
  - Heatmaps for FI and FSI crashes by mode
  - HIN maps (All Modes, VRU, and Combined)
  - Supporting tables and charts on crash causes, road context, and risk factors

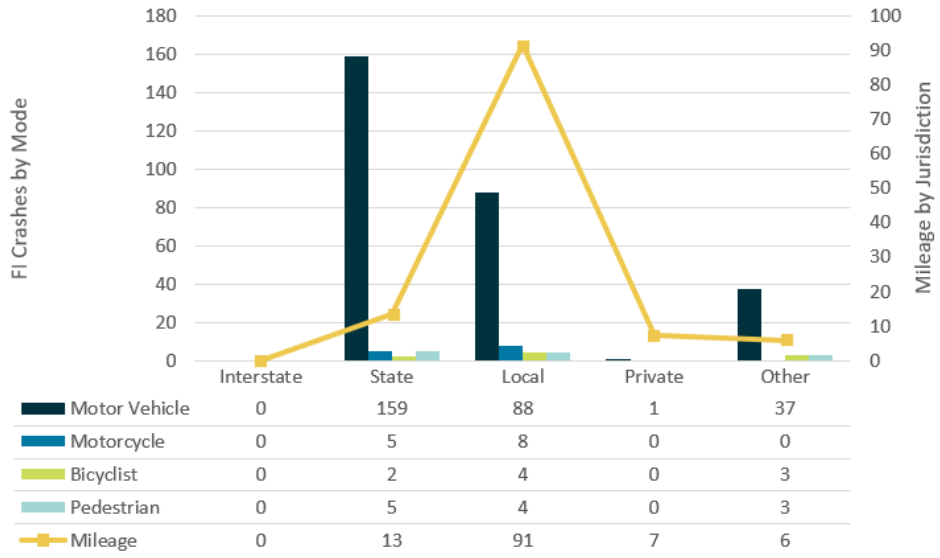
These analyses guide project prioritization and risk-based design. Codes:

- **K (Fatal Injury):** Individuals who die as a result of the crash.
- **A (Suspected Serious Injury):** Injuries that may require hospitalization or result in incapacitation, such as broken bones or amputations.
- **B (Suspected Minor Injury):** Injuries that are evident at the scene but are not incapacitating, like cuts, scrapes, or bruises.
- **C (Possible Injury):** Injuries that may not be immediately obvious or are reported by the individual but are not severe.
- **O (No Apparent Injury):** Individuals who show no signs of injury at the scene.

Table 3. Study Area Crashes by Severity and Mode (2019-2023)

Severity	Motorized				VRU			
	Motor Vehicle		*Motorcycle*		*Bicyclist*		*Pedestrian*	
	#	%	#	%	#	%	#	%
K	0	0.0%	0	0.0%	0	0.0%	0	0.0%
A	14	0.5%	2	10.0%	0	0.0%	1	6.7%
B	37	1.3%	3	15.0%	1	8.3%	4	26.7%
C	234	8.1%	8	40.0%	8	66.7%	7	46.7%
O	2,604	90.1%	7	35.0%	3	25.0%	3	20.0%
FSI Total	**14**	**0.5%**	**2**	**10.0%**	**0**	**0.0%**	**1**	**6.7%**
FI Total	**285**	**9.9%**	**13**	**65.0%**	**9**	**75.0%**	**12**	**80.0%**
Grand Total	**2,889**	**100%**	**20**	**100%**	**12**	**100%**	**15**	**100%**

Figure 2. FI Crashes by Mode by Roadway Jurisdiction (2019-2023)

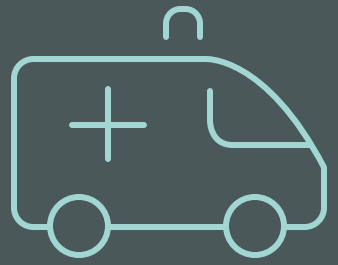


Street Safety Trends in Bristol

2019-2023

DRAFT

2,937
Total reported crashes



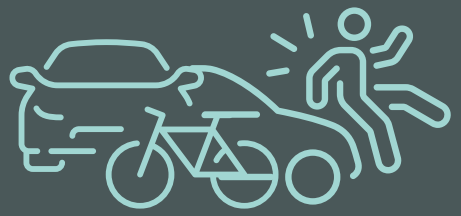
0
Fatal Crashes

17
Serious Injury Crashes

45
Minor Injury Crashes

257
Possible Injury Crashes

319
Total Injury Crashes



1%
of all crashes involve bicyclists & pedestrians YET

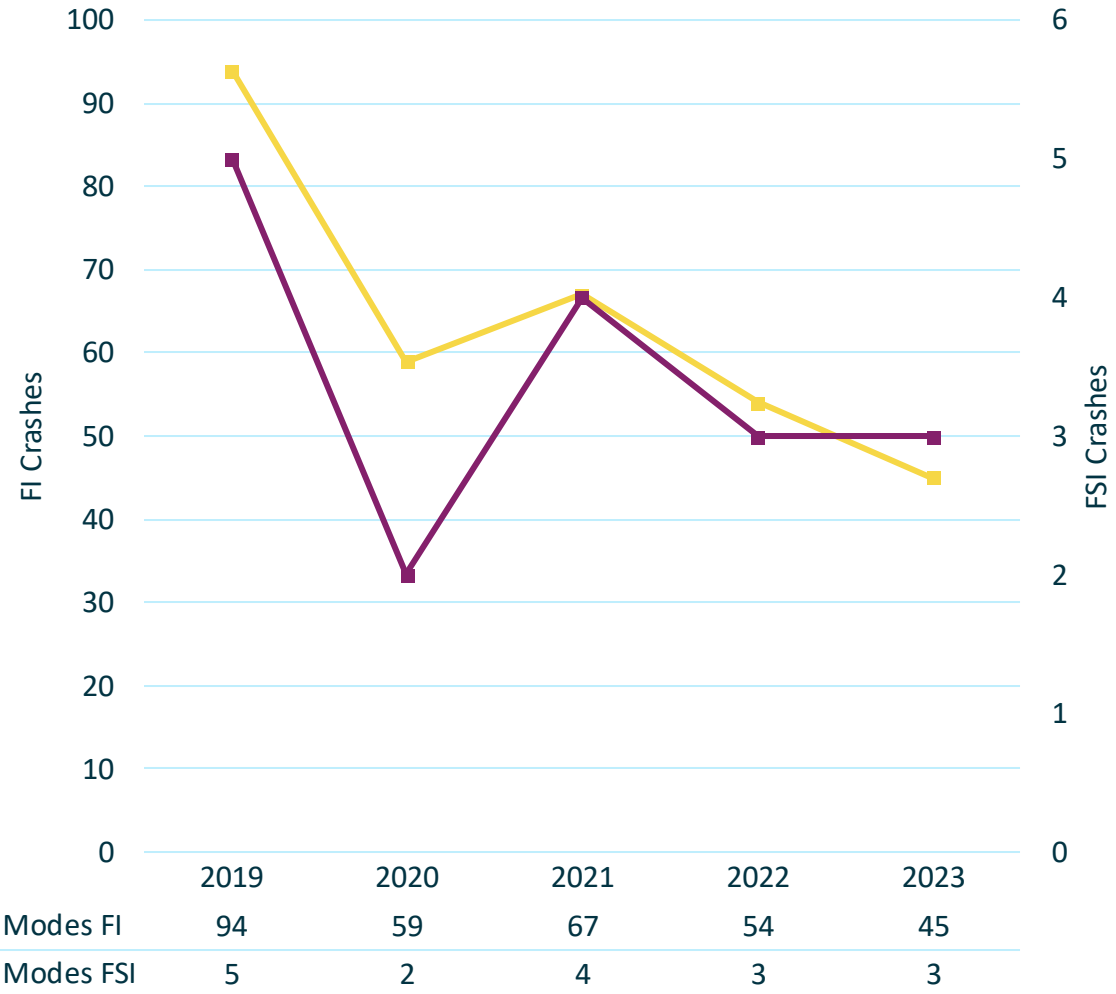
7%
of all injury crashes involve a pedestrian or cyclist

6%
of all fatal or serious injury crashes involve a pedestrian or cyclist

SS4A
SAFE STREETS FOR ALL

FSI Crashes by Year (2019-2023)

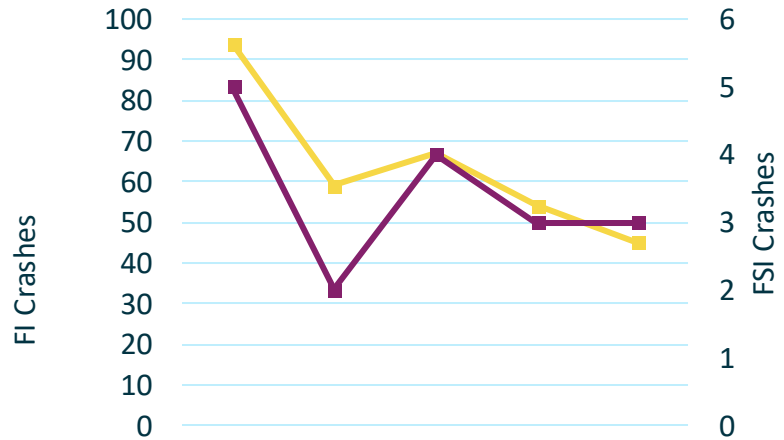
- Fatal and serious injury (FSI) crashes fluctuate between 2 and 5 per year.
- All fatal and all injury (FI) crashes decreased from 94 in 2019 to 45 in 2023.
- While 2020 saw the lowest crash numbers, 2021 had a rebound in both FI and FSI crashes.
- Consistent drop in FI crashes since 2021.



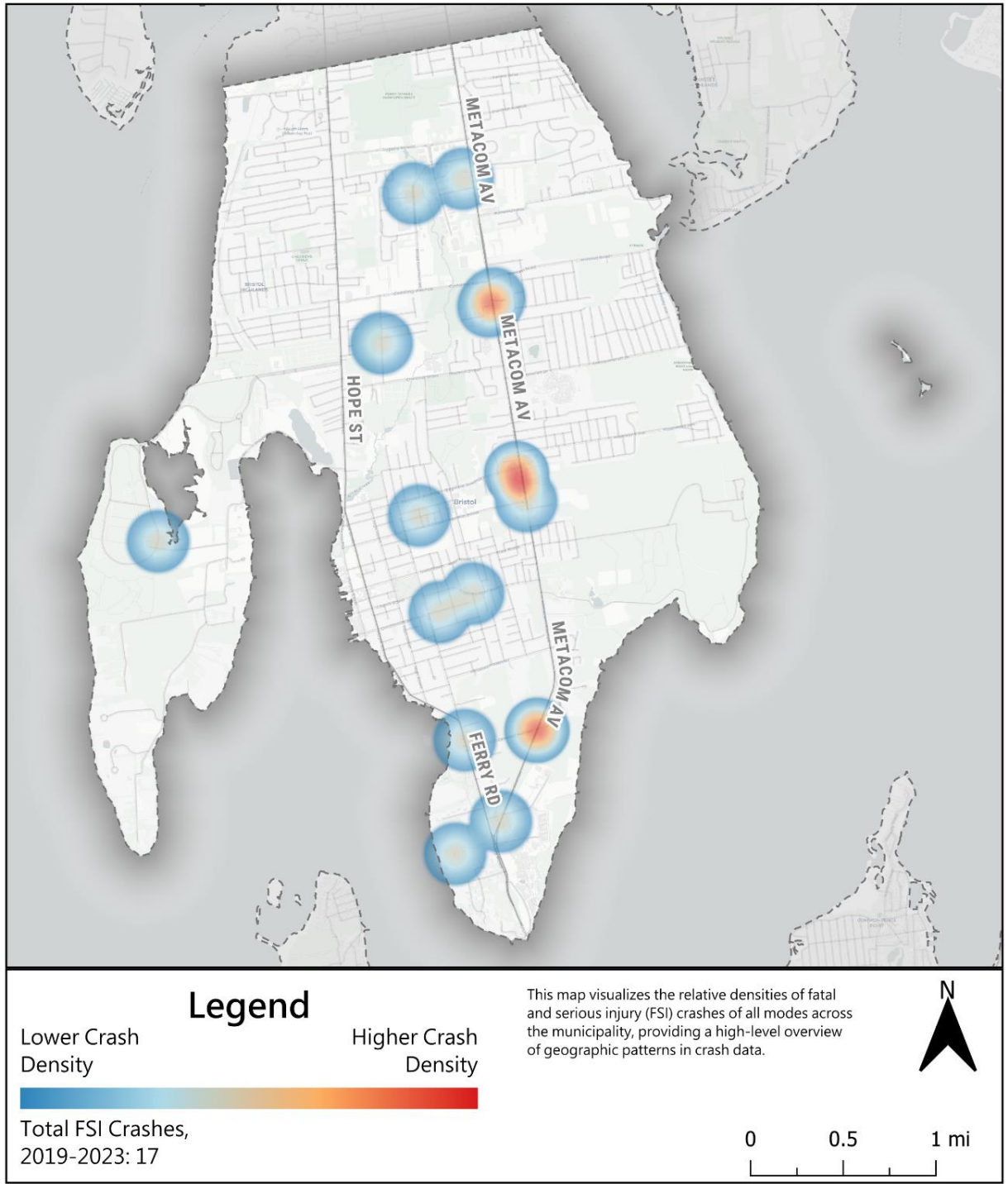
Fatal & Serious Injury Heatmap (All Modes, 2019-2023)

The locations with the highest incidence of crashes for the period of study in Bristol were identified and are shown in the heatmaps. **Key Locations:**

- Metacom Ave & Griswold Ave
- Metacom Ave & Bayview Ave
- Metacom Ave & Peter Rd (near Gooding Ave)



	2019	2020	2021	2022	2023
All Modes FI	94	59	67	54	45
All Modes FSI	5	2	4	3	3



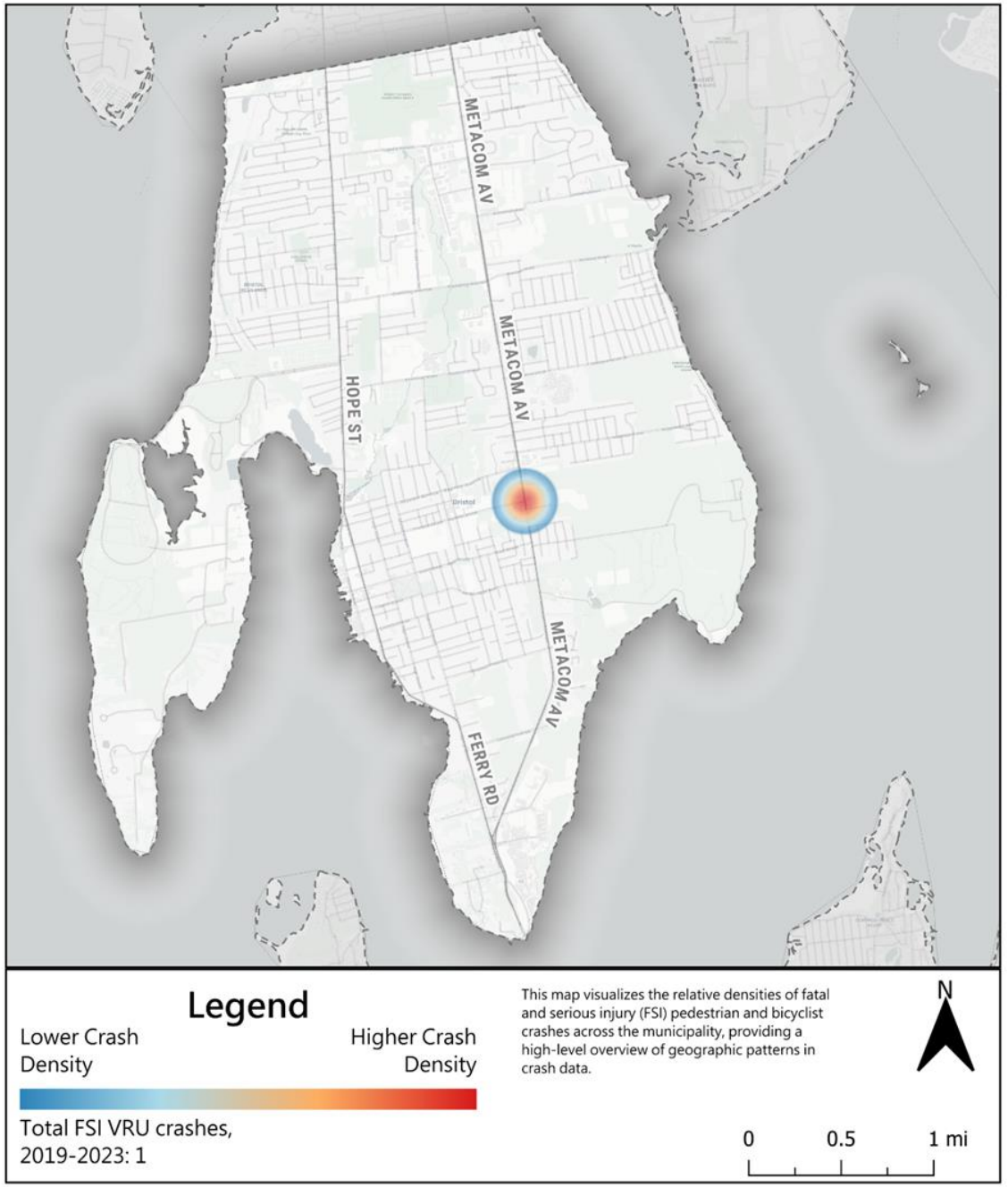
Fatal & Serious Injury Heatmap (Bikes & Pedestrians, 2019-2023)

The locations with the highest incidence of crashes in Bristol for the period of study were identified and are shown in the heatmaps. No bikeped deaths reported during this period.

- **Key Locations:**
  - Metacom Ave & Franklin Street intersection – 1 serious injury (ped)

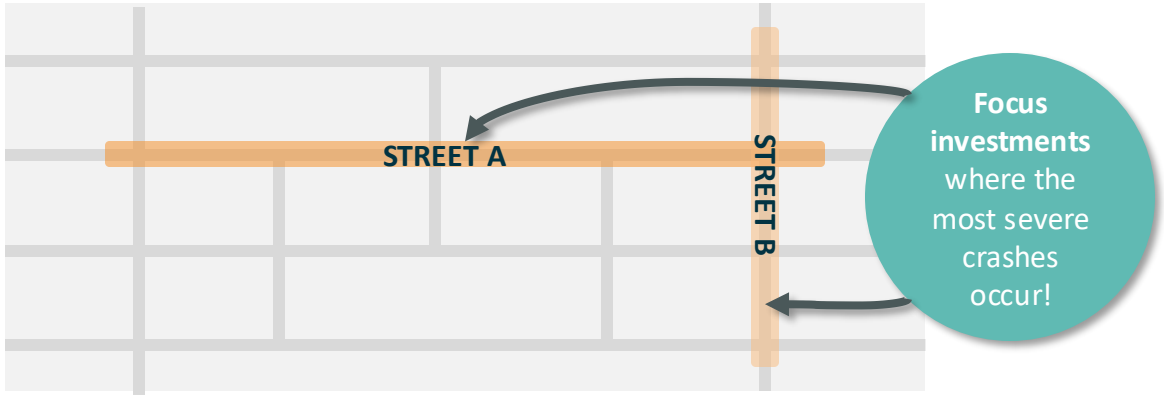
Table 3. Study Area Crashes by Severity and Mode (2019-2023)

Severity	Motorized				VRU			
	Motor Vehicle		*Motorcycle*		*Bicyclist*		*Pedestrian*	
	#	%	#	%	#	%	#	%
K	0	0.0%	0	0.0%	0	0.0%	0	0.0%
A	14	0.5%	2	10.0%	0	0.0%	1	6.7%
B	37	1.3%	3	15.0%	1	8.3%	4	26.7%
C	234	8.1%	8	40.0%	8	66.7%	7	46.7%
O	2,604	90.1%	7	35.0%	3	25.0%	3	20.0%
FSI Total	**14**	**0.5%**	**2**	**10.0%**	**0**	**0.0%**	**1**	**6.7%**
FI Total	**285**	**9.9%**	**13**	**65.0%**	**9**	**75.0%**	**12**	**80.0%**
Grand Total	**2,889**	**100%**	**20**	**100%**	**12**	**100%**	**15**	**100%**



What is a High Injury Network?

The High Injury Network (HIN) identifies stretches of roadways and intersections where the **highest concentrations of crashes resulting in fatal or serious injuries occur**.

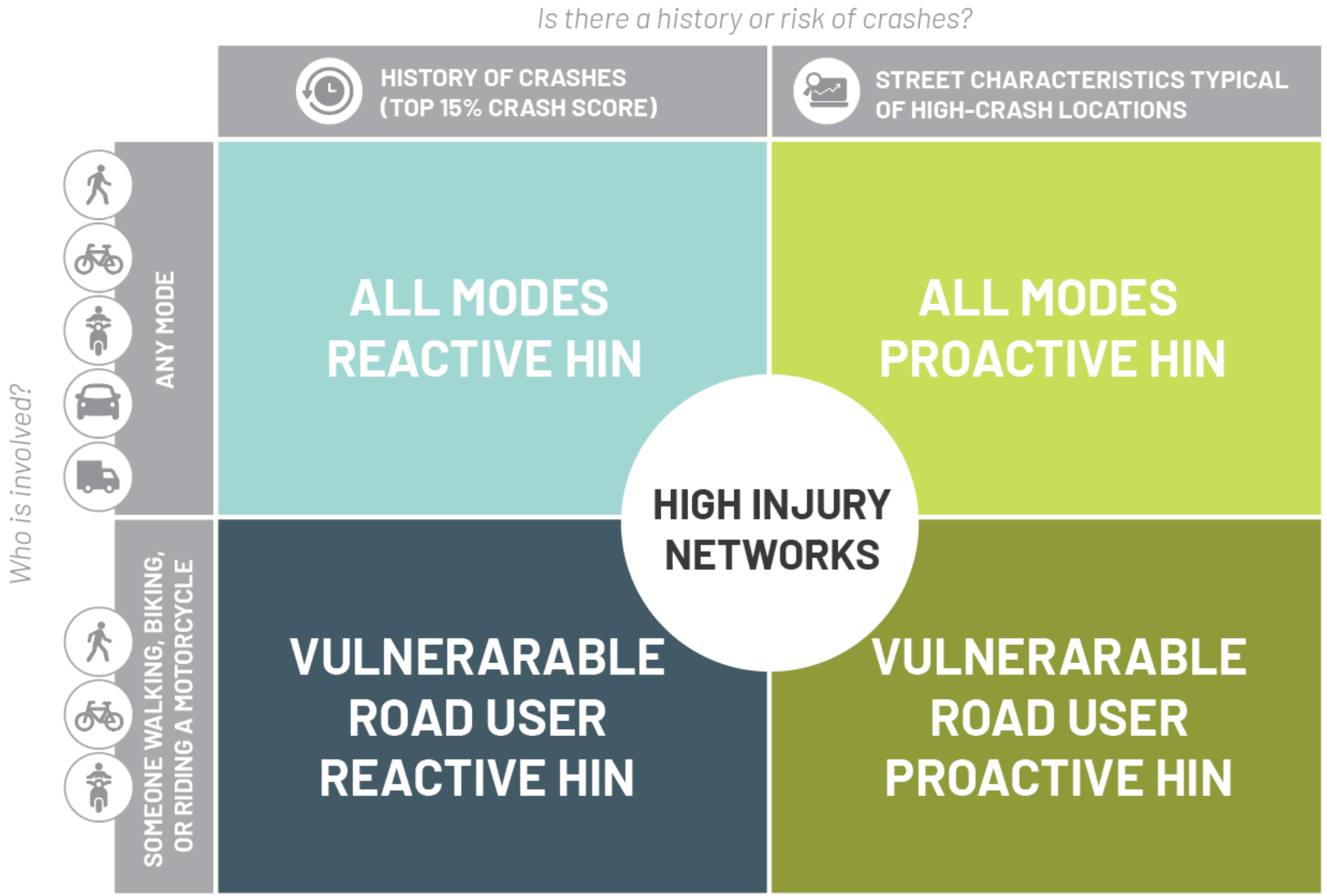


Benefits of a HIN

- ✓ Identifies areas of need
- ✓ Guides data-driven decision-making
- ✓ Help focus limited resources to prioritize potential projects with the greatest safety impacts
- ✓ Understand where communities are disproportionately impacted by higher rates of collisions

SS4A SAFE STREETS FOR ALL

High Injury Network Types



SS4A SAFE STREETS FOR ALL

High Injury Network Methodology

Process

Combines analysis results for both all modes and Vulnerable Road Users* (VRU) modes:

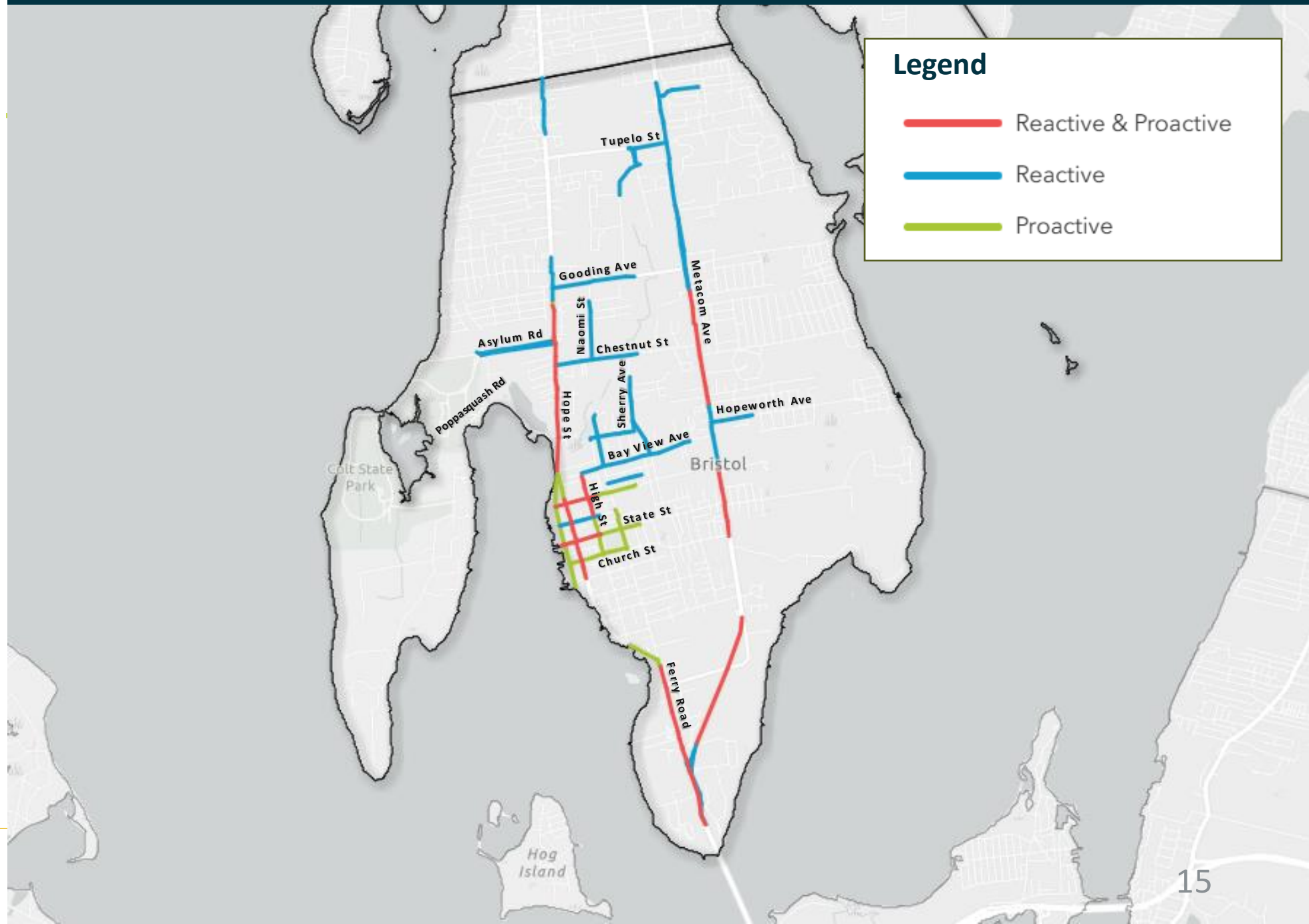
- ***Sliding window analysis*** *identifies roads with acute safety needs*
- ***Risk-based analysis*** *helps fill in gaps and identify locations with latent risks*

Results

- **Reactive** Segments which appear on the baseline crash analysis maps based on a top 15% crash score for the given mode and municipality.
- **Proactive** Segments which appear in the top risk tiers for the given mode and municipality.
- **Reactive & Proactive** Segments which satisfy both the reactive and proactive categories.
- **None** Segments which satisfy neither the reactive nor proactive categories.

*Vulnerable road users refers to bicyclists and pedestrians

Bristol's High Injury Network



SS4A SAFE STREETS FOR ALL

Chapter 4: Engagement & Collaboration

- 115 survey responses + 200+ pop-up participants
- Community priorities:
  - Safer crossings
  - More sidewalks
  - Traffic calming
  - RWU–downtown bike/ped access
- Location-based feedback directly informed project locations

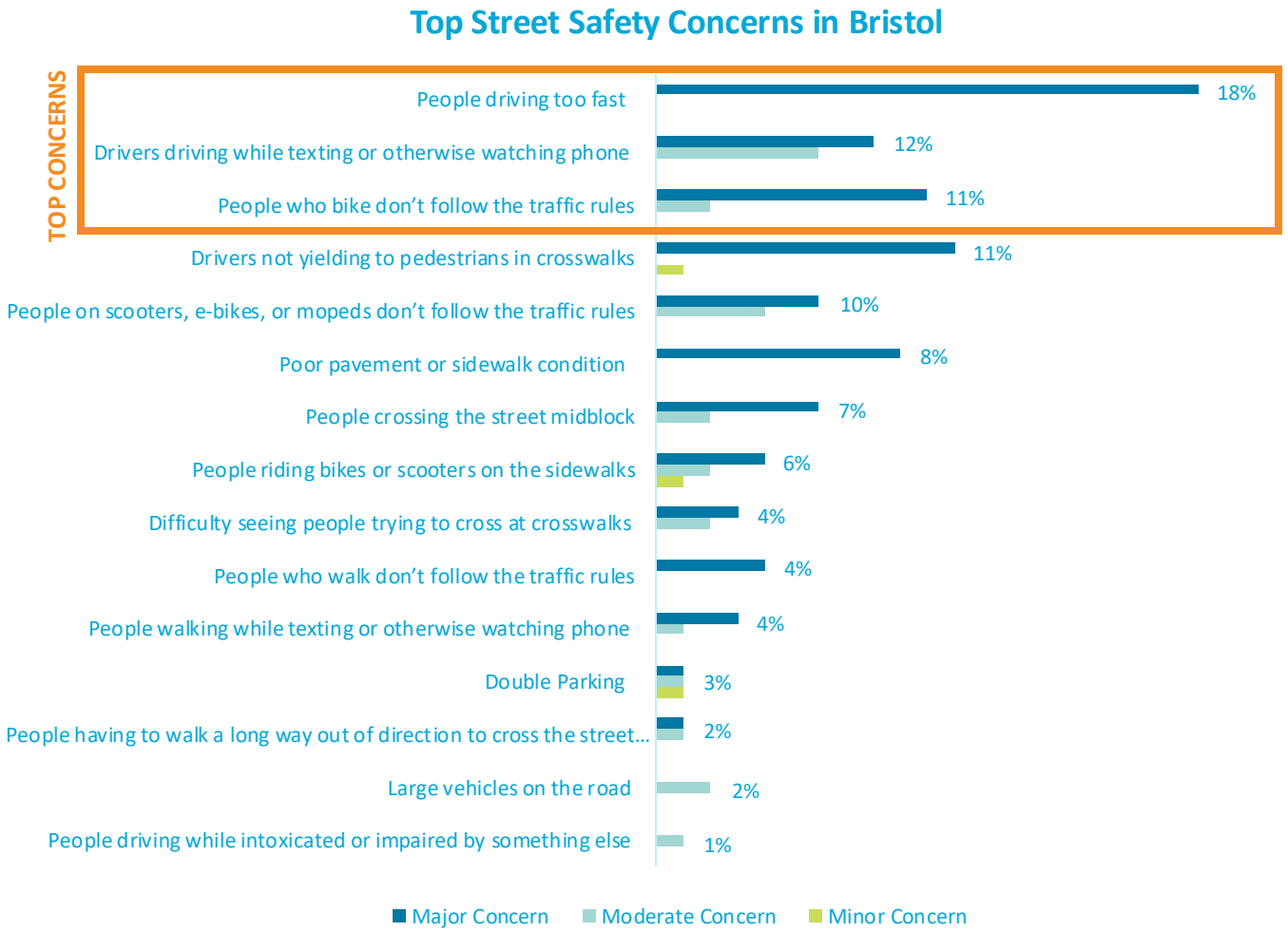
Public Engagement

~200 people engaged to-date

Engagement activities

- Five pop-up tabling events, including:
  - Thursday, 7/25:
    - Bike path, ~20 people
    - Art Night, ~30 people
  - Saturday, 9/14:
    - Mt. Hope Farmer's Market, ~20 people
    - State Street Festival, ~40 people
    - Roger Williams University, ~15 people
- Online Survey
  - 111 responses for Bristol zip code (02809), as of 10/15
- Working Group meeting 10/2

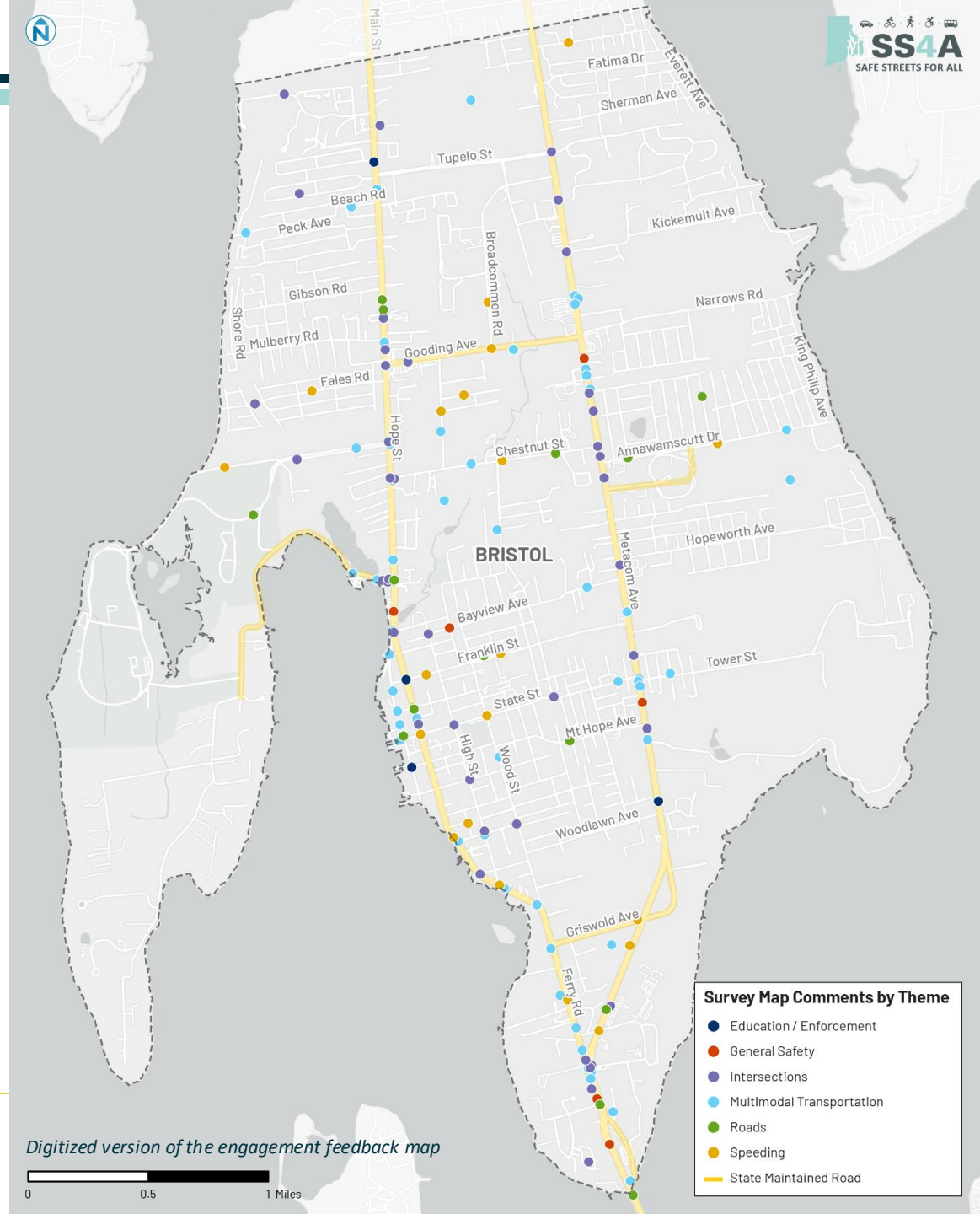
Pop-up Engagement Feedback: Top Concerns



Pop-up Engagement Feedback: Map

Key themes:

- Speeding and unsafe driving (High St, Hope St, Metacom Ave)
- Several areas lacking crosswalks and sidewalks
- Blind spot issues at intersections
- Requests for four-way stops and more stop signs
- Areas are unsafe for biking and walking (Hope St, bike path crossing)
- Issues with visibility at intersections
- Pedestrian safety issues, especially for seniors crossing the street and RWU students walking downtown
- Need for more traffic lots and stops (Thames St, Metacom Ave)
- Speeding and traffic issues (Franklin, neighborhood streets)
- Lack of crosswalks and proper sidewalks in key areas (Library, Senior Center)

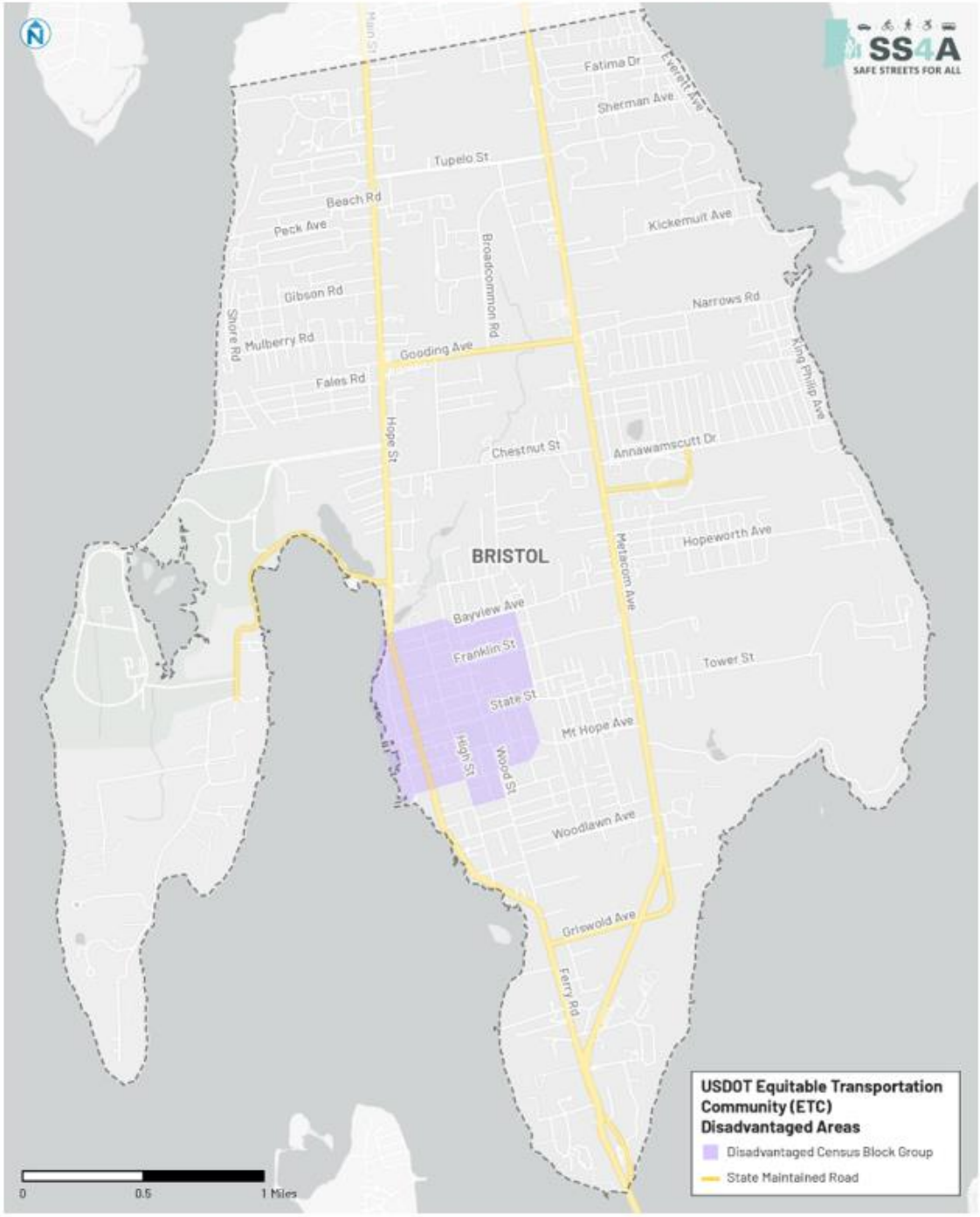


SS4A
SAFE STREETS FOR ALL

Chapter 5: Equity Considerations

- 13% of Bristol population lives in disadvantaged (ETC) block groups
- 25% of the All Modes High Injury Network and 29% of the VRU High Injury Network overlaps these areas
- Ensures safety investments support historically underserved neighborhoods

Figure 20. Block Groups within Bristol qualifying as Disadvantaged (ETC)



SS4A
SAFE STREETS FOR ALL

Chapter 6: Policy and Process Changes

- This chapter discusses the **recommended policies and practices** related to transportation planning, street design, enforcement, education, and emergency response.
- It identifies gaps and opportunities to align with the Safe System Approach, which emphasizes reducing crash severity through design, speed management, and system-level changes.
- Tables 14-18 provide detailed, tailored recommendations across five key categories, tailored to Bristol's context:
  - Safe People
  - Safe Roads
  - Safe Vehicles
  - Safe Speeds
  - Post-Crash Care
- Departments should review these tables carefully to begin identifying:
  - Where they are already aligned
  - Where changes or coordination will be needed
  - What is feasible in the short vs. long term

This chapter sets the foundation for long-term safety culture change and implementation success.

Chapter 7: Action Plan

- This chapter outlines the **13 proposed infrastructure project locations** identified through crash data, risk modeling, and community input.
- It introduces a **prioritization framework** that considers:
  - Crash history (FI and FSI)
  - High-risk network analysis
  - Equity (disadvantaged communities)
  - Proximity to schools and RIPTA transit routes
- The prioritization process uses a **scoring matrix** to rank corridors and identify near-term opportunities.
- **Key figures/tables:**
  - Figure 21: Map of recommended project locations
  - Table 21: Full prioritization matrix with scoring for each project location

SS4A
SAFE STREETS FOR ALL

Project Sheets Overview

The images at right show an example project sheet. Each project in the appendix has its own project sheet with additional context about the project area, crash history, goals for safety improvements, and potential safety countermeasures.

Many of these factors are also discussed in the larger local context in the Safety Action Plan under the safety analysis, equity, and engagement chapters.

The historic crash heat maps shown on these project sheets visualize the relative densities of fatal and injury (FI) crashes of all modes across the municipality, providing an overview of geographic patterns in crash data from 2019 to 2023. They include crashes that occurred on interstates. Crashes that did not result in a fatality or injury are not represented in the heat maps.

PAGE 1 An overview of the project location, street characteristics, and a heat map of historic crashes.

PAGE 2 Summary of historic crash statistics, corridor demographics, public input, and planned projects.

PAGE 3 Project area safety goals and a summary of recommended safety countermeasures.

PAGE 4 Project area diagram with potential locations for safety countermeasures.

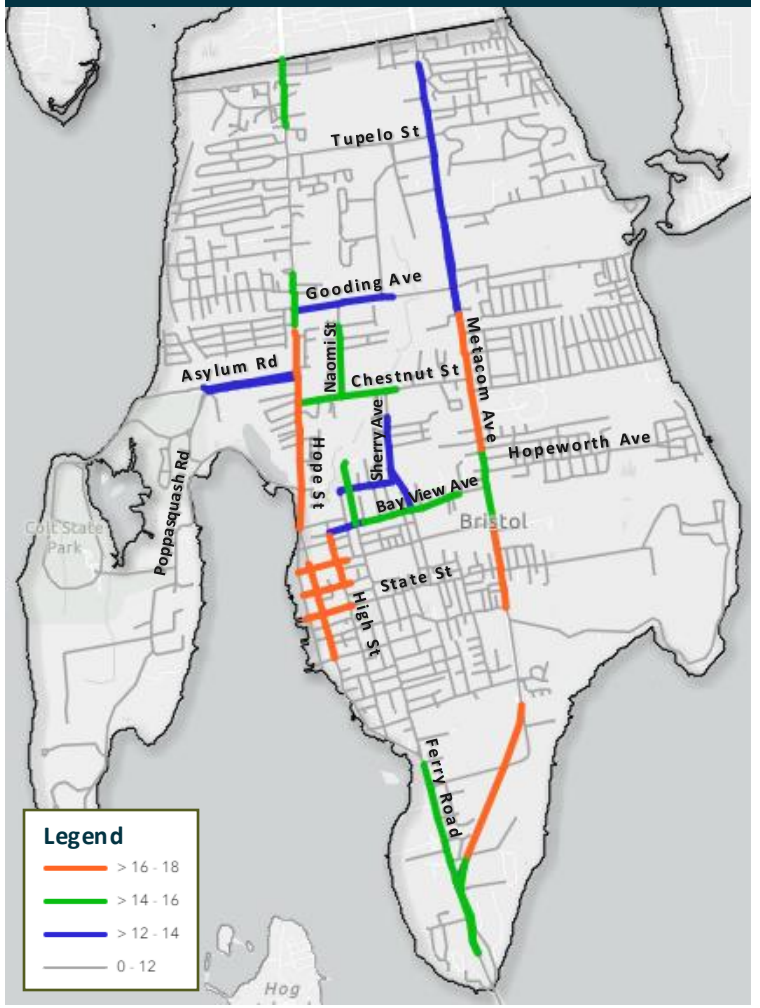
Project Screening and Scoring

- Nelson\Nygaard developed a screening approach that aimed to **rank the most important corridors and intersections** within the HIN.
- Criteria was developed in **alignment with the SS4A funding guidance** (so would provide alignment with federal project goals)
- Criteria included:
  - Proximity to school (1/4 mile)
  - Along a RIPTA bus route
  - Within the reactive crash network for 'All Modes' and Bikes/Peds ('VRU Modes')
  - Indicated as a medium, high or critical risk based on road type
  - Within a census area that is above the 65th percentile for USDOT Equitable Transportation Community indicators

Ranking Segments on the HIN

	Screening Criteria	Criteria Met	Points
BASIC CRITERIA	Proximity to public school (within 1/4 mile)	Yes	1 point
		No	0 points
	Within high-equity census block group (USDOT ETC)	Yes	1 point
		No	0 points
	Along RIPTA bus route	Yes	1 point
		No	0 points
NETWORK ANALYSIS	Part of All Modes Reactive Crash Network (top 15% weighted by land use)	Yes	10 points
		No	0 points
	Part of the pedestrian and bicyclists (VRU) reactive crash network?	Yes	1 point
		No	0 points
RISK ASSESSMENT	Risk Score level of the corridor	Critical	5 points
		High	4 points
		Medium	3 points
		Low	2 points
		Minimal	1 point
	Medium, high, or critical risk for bikes/peds (VRU)	Yes	1 point
		No	0 points

SCREENING CRITERIA PRIORITIZATION

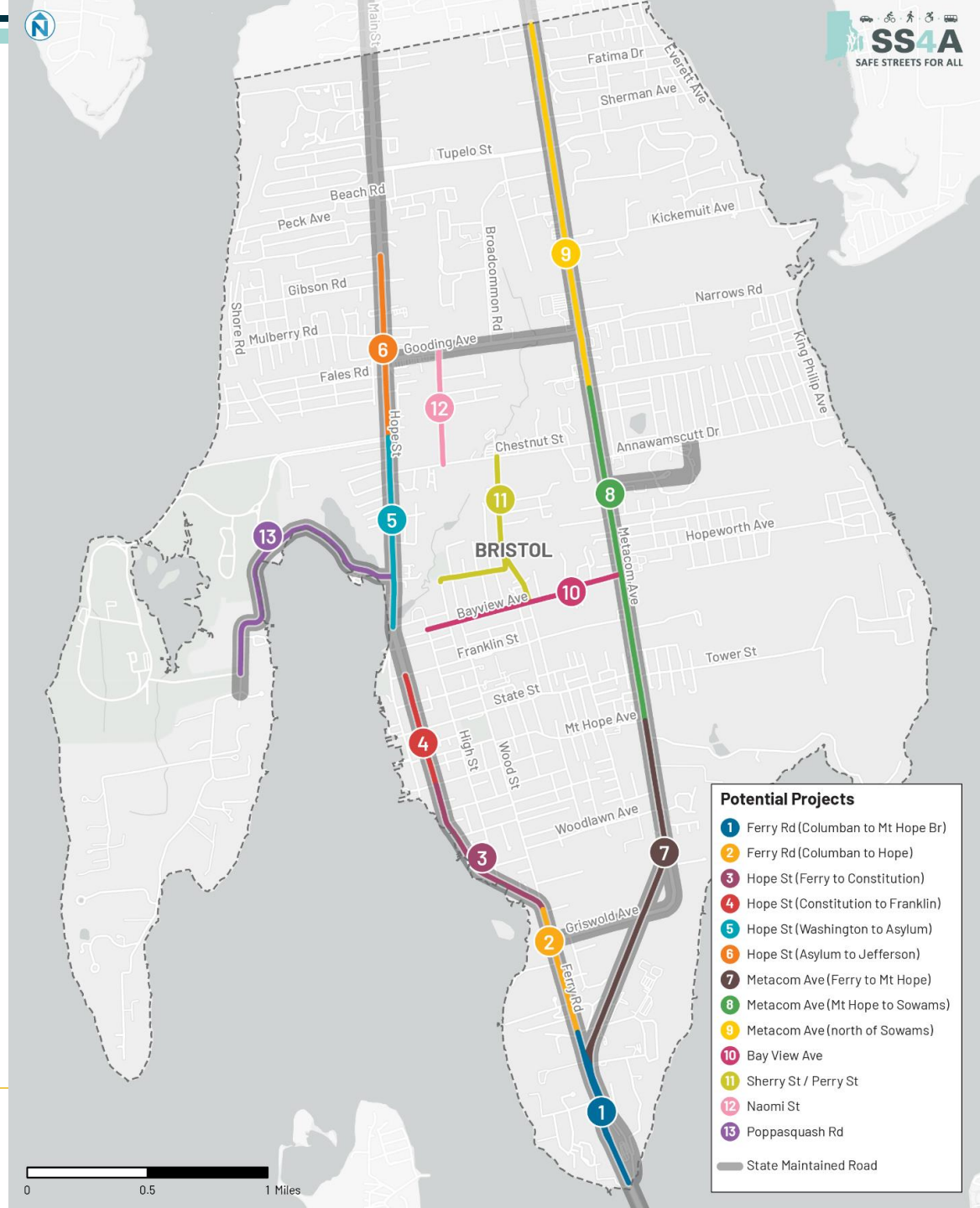


SS4A SAFE STREETS FOR ALL

Project Locations

(#s are ID Keys, Not a Numerical Priority Order)

1. Ferry Rd (Rt 114) (Columban to Mt. Hope Bridge)
2. Ferry Rd (Rt 114) (Columban to Hope)
3. Hope St (Ferry to Constitution)
4. Hope St (Constitution to Franklin)
5. Hope St (Washington to Asylum)
6. Hope St (Asylum to Jefferson)
7. Metacom (Ferry to Mount Hope)
8. Metacom Ave (Mt Hope Ave to Sowams Rd)
9. Metacom Ave (Sowams Rd to town line)
10. Bay View Ave
11. Sherry Ave and Perry St
12. Naomi St
13. Poppasquash Rd



SS4A
SAFE STREETS FOR ALL

Safety Countermeasures

- In developing recommendations, we will use FHWA guidance on tested and proven safety countermeasures that are best suited for the issues and challenges we see (and have heard about) on these roadways.

Project Location Issues & Potential Recommendations

Project #	Project Name	Key Issues	Potential Recommendations
1	**Ferry Rd/Route 114** (Columban to Mt. Hope Bridge)	Speeding, access challenges to RWU, especially for bicyclists/pedestrians	Traffic calming; pedestrian/bicyclist amenities; fill sidewalk network gap from Metacom to existing crosswalk; reconsider roundabout or alternative intersection solution
2	**Ferry Rd (Rt 114)** (Columban to Hope)	Lack of pedestrian/bicycle connectivity between RWU and downtown, unsafe intersection at Metacom Ave	Note that DOT is already planning sidewalks on the west side (Wood-Metacom); consider adding bike access, enhance crosswalks, lighting, and signage
3	**Hope St** (Ferry to Constitution)	am	
4	**Hope St** (Constitution to Franklin)	Speeding, lack of crosswalks, conflicts between drivers, and bicyclists/pedestrians	Implement raised crosswalks, curb extensions, and other traffic calming measures; improve crosswalk visibility and accessibility; enhance bicycle/pedestrian infrastructure
5	**Hope St** (Washington to Asylum)	Speeding, lack of safe bike/pedestrian connections to bike path; massive curb cuts	Install traffic calming features; add separated bike lanes or a multi-use path connecting to the East Bay Bike Path; improve crosswalk safety; emphasize preserving historical character
6	**Hope St** (Asylum to Jefferson)	Speeding around school zone, lack of sidewalks on eastern side around school	Traffic calming in school zone, speed enforcement
7	**Metacom Ave** (Ferry to Mount Hope)	Blind turns, limited pedestrian/bicycle accommodations, speeding (especially southbound drivers approaching the Ferry intersection); high crash area; feels like a highway	Improve intersection sight lines; improve and install sidewalks, bike lanes, and other pedestrian/bicycle amenities; implement speed management
8	**Metacom Ave** (Mt Hope Ave to Sowams Rd)	Unsafe intersections, lack of pedestrian crossings, speeding	Redesign intersections with curb extensions, high-visibility crosswalks, and pedestrian signals; add new crosswalks; implement speed limit reduction and enforcement
9	**Metacom Ave** (Sowams Rd to town line)	Speeding, lack of pedestrian amenities, coordination with Warren at town line	Implement traffic calming or reduction in roadway capacity; add pedestrian/bike amenities and fill gaps in the sidewalks network; connect pedestrian amenities between neighborhoods to the east and west sides of town
10	**Bay View Ave**	Wide lanes conducive to speeding, no bicycle/pedestrian facilities, common connection between Metacom and downtown	Reduction in roadway capacity and traffic calming; add designated bike facilities; add pedestrian infrastructure to upper east end; consider Complete Streets approach
11	**Sherry Ave and Perry St**	Neighborhood cut-through street, challenging turn at Chestnut, very narrow, major walking path for students to high school	Move forward Wood St Extension as alternative route for bikes/pedestrians; add signage/safety treatments at Chestnut; improve pedestrian sidewalks/crosswalks; widen street
12	**Naomi St**	Neighborhood cut-through street, challenging turn at Chestnut; gaps in sidewalk and in need of repair	Prioritize safe access to the high school for all modes; improve sidewalks; add signage/treatments at Chestnut
13	**Poppasquash Rd**	Speeding and blind curves/turns; bike path crossing, sea level rise; extremely dangerous turn for people driving/walking at Hope (big trees with low visibility)	Traffic calming measures; visibility treatments; sidewalk improvements

Chapter 8: Progress and Transparency

This chapter outlines how the Town of Bristol will sustain momentum beyond adoption of the Safety Action Plan, emphasizing the importance of transparency and accountability.

- Bristol will **monitor progress annually** using key metrics such as:
  - Number of FSI crashes
  - Miles of safe facilities implemented
  - Projects completed from the SAP list
  - Progress toward policy and program changes (from Chapter 6)
- Encourages a **phased approach** to project delivery:
  - Near-term quick builds
  - Medium-term infrastructure upgrades
  - Long-term capital improvements
- Positions Bristol to **apply for SS4A implementation grants** and other federal/state sources and identifies potential coordination with RIDOT, RIPTA, and private developments to advance project goals.
- Suggests revisiting and updating the plan every 5 years or as new data and funding opportunities emerge.

This chapter provides the roadmap for turning the plan into action, ensuring progress is measurable, inclusive, and sustained.

Resolutions and Schedule

SS4A SAFE STREETS FOR ALL

Leadership Commitment

Letters, endorsements, resolutions

<u>Highly encouraged</u> by SS4A program (and potentially required if pursuing implementation)

- Endorse the plan somehow (at a minimum, adopting a vision zero crash reduction commitment; adopting the whole plan is more beneficial)

Timing of resolutions: by the time you apply for an implementation grant (cycle likely starts March 2026)

Nice to have for SS4A certification and plan success

- Letters of support

Timing of letters: nice to have for plan, but needed before applying for SS4A implementation (If including now, speak to the merits of the plan and its usefulness; if going for implementation, speak to the benefits of the project you're seeking)

Letters are one of easiest ways to support the plan for those passionate about it

Who can write letters of support?

- From relevant municipal leaders or entities, schools, HEZ, other non-profit advocacy groups
- Politicians at local, state, or federal level

Ideal to include some letters with the plan appendix (but more could come later after adoption and before an SS4A grant application)

Leadership Commitment

Getting to a letter of support, plan adoption, or endorsements

- Potential working group/leadership presentations
- City advances leadership/endorsements/support letters
- City consider resolutions to adopt

Self Certification sheet and language on resolution adoption

- "A high-ranking official and/or governing body in the jurisdiction publicly committed to an eventual goal of zero roadway fatalities and serious injuries;

- The commitment includes either **setting a target date to reach zero** OR **setting one or more targets to achieve a reduction in roadway fatalities and serious injuries by a specific date**."

https://www.transportation.gov/sites/dot.gov/files/2025-03/SS4A_FY25-Self-Certification-Worksheet.pdf

Project Schedule

May - June

- Integrate all plan comments and edits
- Review project sheets
- Finalize appendices and supporting materials
- Advance support letters
- Submit final Safety Action Plan with all comments included to RIPTA and USDOT before end of June
- June 20th – supplemental planning grants due

July - September

- Socializing final plan with stakeholders
- Advance additional support letters and endorsements
- Town Council resolution consideration
- Project closeout and certification by September

Next grant cycle likely begins March 2026 - resolutions and letters needed by then

Project Contacts

Alyson Fletcher | afletcher@nelsonnygaard.com
Kelsey Tustin | ktustin@nelsonnygaard.com
Dru van Hengel | dvanhengel@nelsonnygaard.com

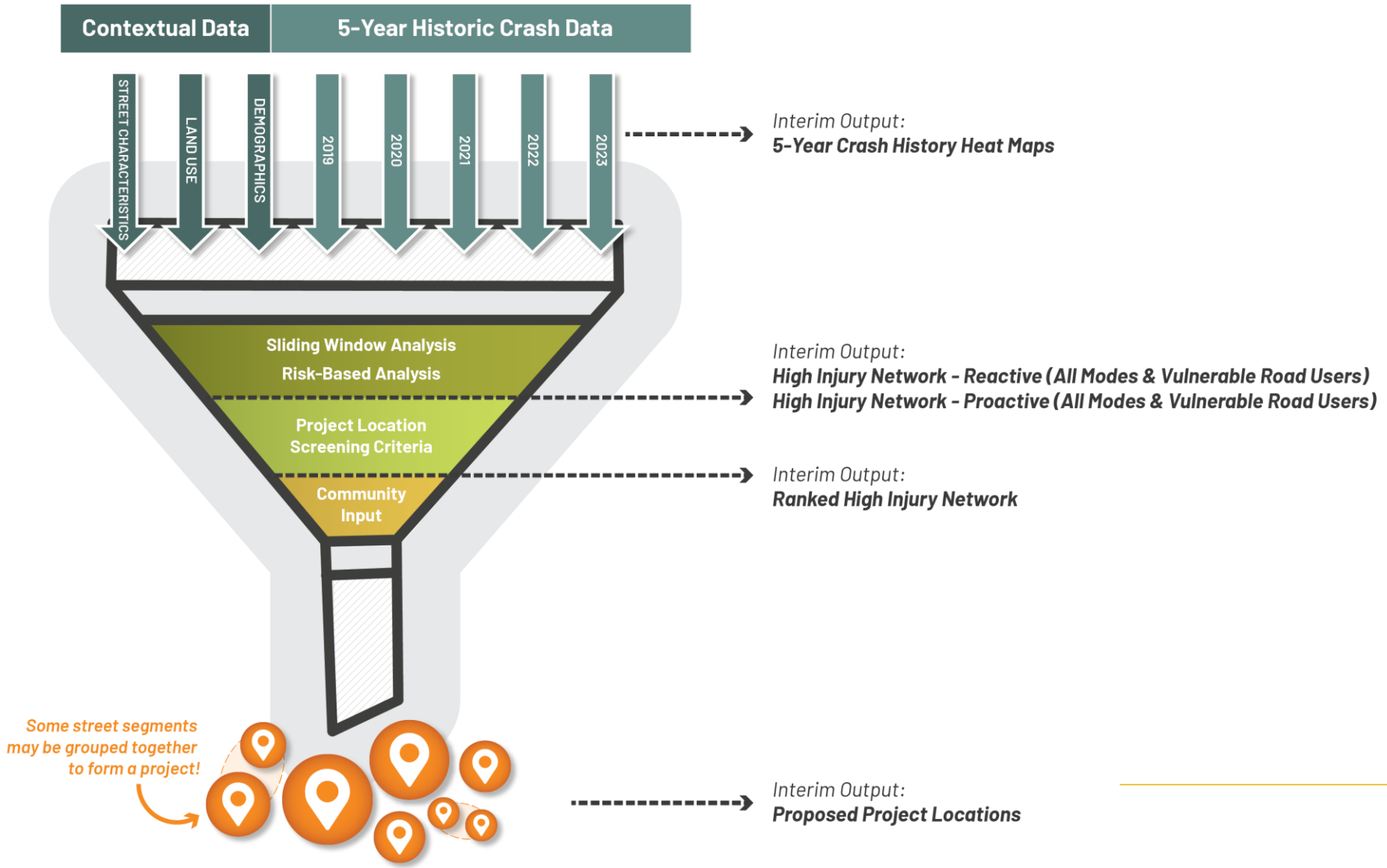
SS4A
SAFE STREETS FOR ALL

Additional Detail: Safety Project Screening Process

Overview of HIN and Screening Process

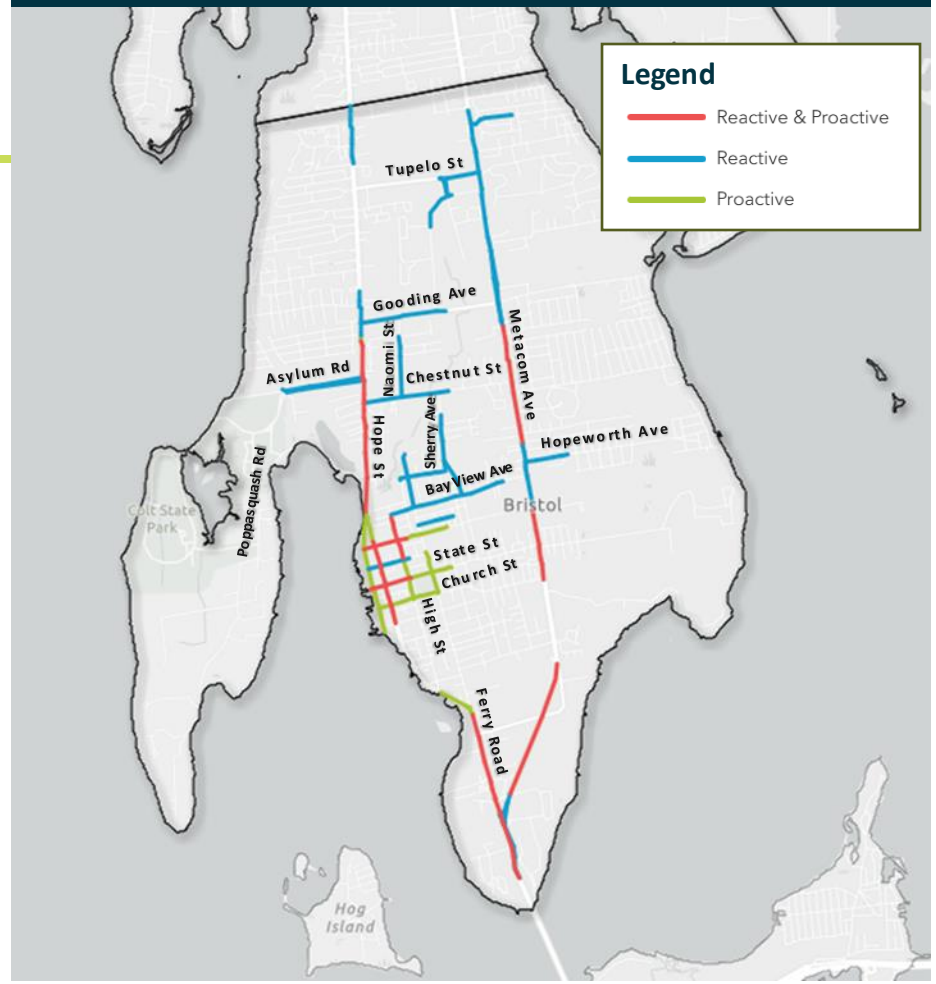
SS4A SAFE STREETS FOR ALL

Generating Potential Projects

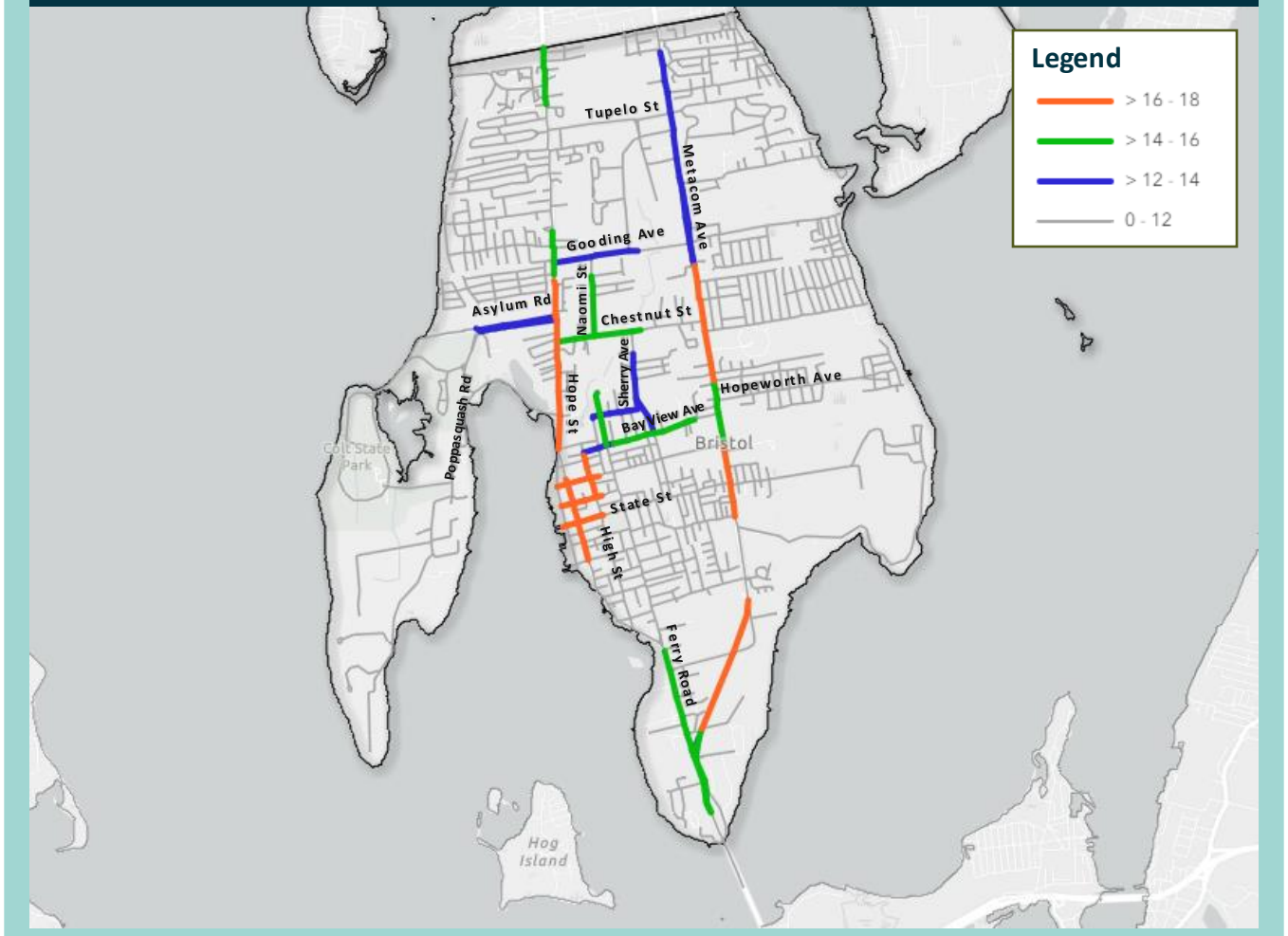


SS4A
SAFE STREETS FOR ALL

HIN - ALL MODES



Prioritized HIN



SS4A SAFE STREETS FOR ALL