



COMPREHENSIVE
**SAFETY
ACTION**
PLAN



TABLE OF CONTENTS

ROCK HILL-FORT MILL AREA TRANSPORTATION STUDY *Comprehensive Safety Action Plan*

Acknowledgements	i
Finding Your Way Through The Plan	i
Letter From The Mayor.....	ii
Executive Summary.....	iii
Defining The Vision	2
Vision Zero Overview	3
Safe Systems Approach.....	4
Vision, Goals + Outcomes	5
From Vision To Zero: A Regional Strategy For 2055	7
Designing The Process.....	10
Rock Hill-Fort Mill Area Transportation Study.....	12
SS4A Framework & Planning Approach.....	13
Planning Structure + the MPO Technical Committee	14
Diagnosing Safety Risk	16
Methodology	18
Safety Analysis	19
Vehicular Crashes.....	23
Vulnerable Road User Crashes	24
High-Injury Network	25
Vehicular HIN + HII.....	27
Vulnerable Road User HIN + HII.....	28
Systemic Analysis	29
High-Risk Network (HRN).....	31
Documenting Community Input	34
Engagement.....	35
Objectives + Goals.....	35
Community Outreach Overview	37
Key Takeaways	39
Distilling Priority Safety Needs.....	42
High Priority Network	43
Delivering Safety Actions	48
Turning Insight Into Action.....	49
Existing Plan Review	51
Safety Countermeasures Toolkit.....	55
Demonstrating Accountability	72
Implementation Framework	73
Safety Metrics	81

ACKNOWLEDGEMENTS

PROJECT LEADERSHIP ROCK HILL-FORT MILL AREA TRANSPORTATION STUDY

David Hooper

TECHNICAL COMMITTEE CATAWBA COG

Steve Allen

CITY OF ROCK HILL

Chris Herrmann

Lauren Harms

Leah Youngblood

CITY OF TEGA CAY

Nick Cauthen

FHWA

Mark Pleasant

LANCASTER COUNTY

Corey Barnes

SCDOT

Cliff Goolsby

Jim Walden

Tony Edwards

TOWN OF FORT MILL

Penelope Karagounis

YORK COUNTY

Christopher Stephens

Diane Dil

Jonathan Buono

Patrick Hamilton

CONSULTANT TEAM

WSP USA

Bolton & Menk

FINDING YOUR WAY THROUGH THE PLAN

1.0 DEFINING THE VISION



Defines the vision and gives overview of Vision Zero and the Safe Systems Approach, the goals and objectives to go from vision to zero.

2.0 DESIGNING THE PROCESS



Designs the process for the study. This lays out the planning approach, technical committee and structure, and explains the region in more detail.

3.0 DIAGNOSING SAFETY RISK



Lays out the approach, methodology, and safety analysis of the region, by breaking down the trends for fatal and serious injuries.

4.0 DOCUMENTING COMMUNITY INPUT



Explains the goals for engagement, the public engagement plan, and summarizes the input and key takeaways to date.

5.0 DISTILLING PRIORITY SAFETY NEEDS



Describes how safety projects and programs are identified, prioritized, and advanced.

6.0 DELIVERING SAFETY ACTIONS



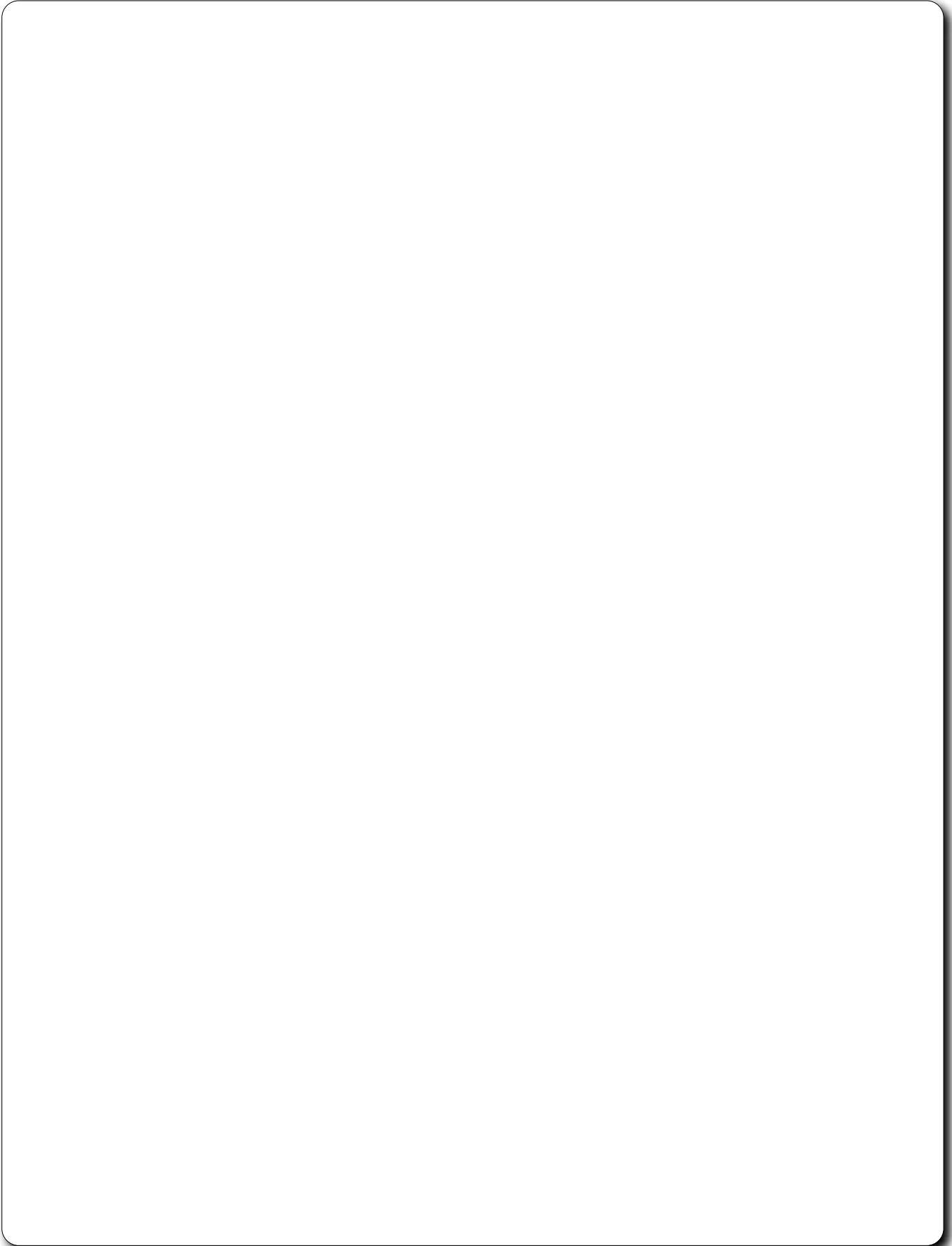
Details different safety countermeasures that will be beneficial towards advancing the region's safety goals based on the data analysis.

7.0 DEMONSTRATING ACCOUNTABILITY



Defines the actions, implementation plan, and metrics for analysis and lays out actions in alignment with the safe system approach.

LETTER FROM THE MAYOR



EXECUTIVE SUMMARY



VISION STATEMENT

“**SAFE STREETS, STRONGER COMMUNITIES: ADVANCING SAFETY, MOBILITY AND OPPORTUNITY FOR ALL.**”

A vision where every person, regardless of how they travel, can move safely and with peace of mind through a transportation system that supports economic vitality, health, and sustainability in the RFATS region.

RFATS COMPREHENSIVE SAFETY ACTION PLAN

The Comprehensive Safety Action Plan (CSAP) was developed with planning funds from the U.S. Department of Transportation’s Safe Streets and Roads for All program. The plan provides a clear, data driven, and community informed roadmap to eliminate traffic deaths and serious injuries while advancing RFATS commitment to Vision Zero.

PLAN GOALS

- » **Goal 1:** Eliminating fatal and serious injury crashes by 2055.
- » **Goal 2:** Promote safe speeds and safe roads.
- » **Goal 3:** Prioritize vulnerable road users and expand mobility choices.
- » **Goal 4:** Foster a culture of shared responsibility for safety.
- » **Goal 5:** Use data to inform decisions and transparency on safety topics.

WHAT THE PLAN DELIVERS

The CSAP integrates community priorities with region-wide safety data to guide RFATS safety investments and actions by:

- » **DEMONSTRATING** toolbox of proven safety countermeasures.
- » **DEFINING** prioritized high-injury and high-risk networks.
- » **DEVELOPING** actionable strategies and recommendations.
- » **DRIVING** implementation with transparency through performance measures.

WHY SHOULD THIS PLAN MATTER TO RFATS?

Traffic deaths and serious injuries are preventable. RFATS Vision Zero commitment reflects the belief that people will make mistakes and that streets, speeds, vehicles, and policies must be designed, so those mistakes do not result in serious harm or loss of life.

This Action Plan turns that commitment into action by prioritizing practical, visible safety improvements on streets where serious crashes are most likely to occur, with a focus on areas of greatest safety risk and community concern.

COMMUNITY SHAPED AND DATA INFORMED

Community involvement is a foundation of the CSAP. RFATS gathered input through public meetings, in person outreach, stakeholder coordination, and an online survey that had over **1,900 comments in public engagement** phase 1. to understand safety concerns, priorities, and locations in need of improvement. Residents consistently identified speeding, aggressive and distracted driving, and inadequate pedestrian and bicycle infrastructure as top concerns. Community input directly informed plan recommendations and support RFATS long-term Vision Zero goals.

The plan also includes a robust, data driven analysis to understand where and why serious crashes occur. The analysis shows that **50 percent of fatal and serious injury crashes** occur on just **11 percent of RFATS roadway network**. The most common contributing factors include lane departure, intersection related crashes, and speed related crashes, particularly on high-speed, multilane arterials and at complex intersections. Serious crashes are also overrepresented in communities with higher transportation and social vulnerability.

EIGHT KEY COMPONENTS

- Leadership Commitment and Goal Setting
2. Planning Structure
3. Safety Analysis
4. Engagement and Collaboration
5. Safety for All Road Users
6. Policy and Process Changes
7. Strategy and Project Selections
8. Progress and Transparency





The
Groves

TEGA CA

PLACE



01

DEFINING

THE VISION

VISION ZERO OVERVIEW

Overview

Vision Zero is the safety commitment that guides RFATS long-term effort to eliminate traffic-related fatalities and serious injuries while advancing safe, healthy, and equitable mobility for all roadway users. It is grounded in the understanding that traffic deaths are preventable and that safer streets require a coordinated, systems-based approach addressing roadway design, operations, behavior, and policy. In a fast-growing region with changing travel patterns and increasing multimodal needs, Vision Zero provides RFATS with a clear framework for proactively identifying safety risks and guiding future decisions.

In practice, Vision Zero is advanced through coordination among RFATS, local governments, the South Carolina Department of Transportation, the Catawba Nation, community organizations, and Community Safety Partners to align policy, data, and public input around a shared goal of safer streets.

That effort is supported by a detailed safety analysis of the RFATS transportation network, including about 1,787 centerline road miles and roughly 6,447 intersections, to better understand where serious crashes occur and where action is needed most. The analysis shows that a relatively small share of the system carries a disproportionate share of serious crashes: **just over 6 percent of road miles account for nearly 63 percent of fatal crashes and 61 percent of serious injury crashes, while only about 1.5 percent of intersections account for more than 84 percent of fatal crashes and nearly 47 percent of serious injury crashes.** These findings help RFATS focus resources where they can have the greatest safety benefit for all roadway users.

WHATS NEXT FOR RFATS PURSUIT TO VISION ZERO?

Following adoption of the CSAP, RFATS will use the plan to pursue future Safe Streets and Roads for All implementation grant opportunities, advance priority corridor and intersection improvements, transitioning from the planning stages to implementation. Together, Vision Zero and the CSAP establish a clear path for reducing serious crashes and advancing RFATS long-term goal of eliminating traffic fatalities and serious injuries.

OUT WITH THE OLD, IN WITH THE NEW!

TRADITIONAL APPROACH

Traffic deaths are **INEVITABLE**

PERFECT human behavior

Prevent **COLLISIONS**

INDIVIDUAL responsibility

Saving lives is **EXPENSIVE**

VS

SAFE SYSTEM APPROACH

Traffic deaths are **PREVENTABLE**

Integrate **HUMAN FAILING** in approach

Prevent **FATAL** and **SEVERE CRASHES**

SYSTEMS approach

Saving lives is **NOT EXPENSIVE**

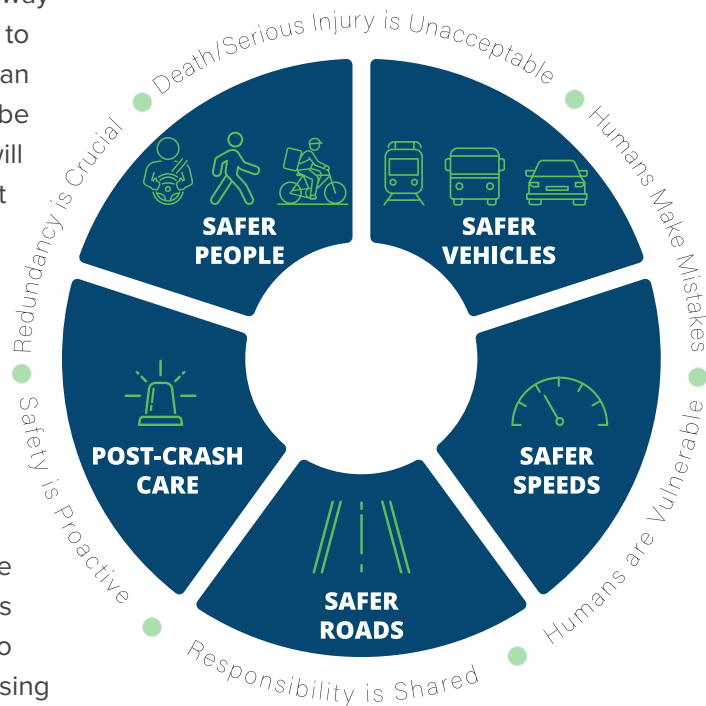
SAFE SYSTEMS APPROACH

Overview

The Safe System Approach is a comprehensive strategy for managing road safety that is closely aligned with Vision Zero principles. Developed by the Federal Highway Administration, the goal of the Safe System Approach is to create a transportation system that is forgiving of human error and does not rely on individual road users to be perfect. Instead, the approach recognizes that people will make mistakes and that the transportation system must be designed, to the extent possible, to protect people from the consequences of those mistakes.

Vision Zero is a global traffic safety initiative that originated in Sweden in the late 1990s and is now endorsed by the U.S. Department of Transportation through the Safe Streets and Roads for All program. The core principle of the Safe System Approach is the belief that all traffic fatalities and serious injuries are preventable, and that no loss of life is acceptable. The goal is to create a transportation system that prioritizes safety above all else, using data driven analyses to identify the root causes of traffic crashes and addressing them with comprehensive strategies rooted in a Safe System Approach.

ELEMENTS OF THE SAFE SYSTEM



THE SAFE SYSTEM APPROACH IS BASED ON SIX FOUNDATIONAL PRINCIPLES*:

- » **DEATHS AND SERIOUS INJURIES ARE UNACCEPTABLE:** A Safe System Approach prioritizes eliminating crashes that result in death and serious injury.
- » **HUMANS MAKE MISTAKES:** People will inevitably make mistakes and decisions that can lead to crashes, but the transportation system can be designed and operated to accommodate certain types and levels of human mistakes and avoid death and serious injuries when a crash occurs.
- » **HUMANS ARE VULNERABLE:** Human bodies have physical limits for tolerating crash forces before death or serious injury occurs; therefore, the transportation system must be designed and operated in ways that account for human vulnerability.
- » **RESPONSIBILITY IS SHARED:** All stakeholders, including government at all levels, industry, nonprofit and advocacy groups, researchers, and the public, play a vital role in preventing fatalities and serious injuries.
- » **SAFETY IS PROACTIVE:** Proactive tools should be used to identify and address safety issues in the transportation system, rather than waiting for crashes to occur and react afterward.
- » **REDUNDANCY IS CRUCIAL:** Reducing risk requires strengthening all parts of the transportation system so that if one part fails, other parts still protect people.

VISION, GOALS + OUTCOMES



This plan sets a clear set of safety goals and supporting objectives to guide near-term action and long-term progress toward eliminating fatal and serious injury crashes. Together, the goals align education, enforcement, engineering, policy and research so safety improvements are delivered consistently and where they can achieve the greatest benefit.



VISION STATEMENT

“**SAFE STREETS, STRONGER COMMUNITIES: ADVANCING SAFETY, MOBILITY AND OPPORTUNITY FOR ALL.**”

A vision where every person, regardless of how they travel, can move safely and with peace of mind through a transportation system that supports economic vitality, health, and sustainability in the RFATS region.

GOALS

- » **Goal 1:** Eliminating fatal and serious injury crashes by 2055.
- » **Goal 2:** Promote safe speeds and safe roads.
- » **Goal 3:** Prioritize vulnerable road users and expand mobility choices.
- » **Goal 4:** Foster a culture of shared responsibility for safety.
- » **Goal 5:** Use data to inform decisions and transparency on safety topics.

OBJECTIVES AT A GLANCE

Across the five goals, the plan focuses on a set of repeatable actions:

- » Identify high-risk locations
- » Select proven countermeasures
- » Institutionalize Safe System practices in standards and processes
- » Expand multimodal safety infrastructure
- » Track progress with clear performance measures.



PROJECT PRIORITIZATION BASED ON SAFETY

Project selection and sequencing are guided by safety need and potential benefit. RFATS CSAP prioritization approach combines crash history from the High Injury Network, systemic risk factors from the High Risk Network, and screening for areas of elevated need to rank priority corridors and standalone high-injury intersections.

Priority corridors are then tiered using a scoring framework that weighs serious crash rates and vulnerable road user crash rates, alongside systemic risk scores and review of high-need locations. For priority corridors and intersections, candidate countermeasures are identified and evaluated through a planning-level benefit-cost analysis using crash reduction factors, crash costs, estimated service life, and planning-level cost estimates.

LEVERAGING FUNDING TO DELIVER SAFETY OUTCOMES

The CSAP builds on the RFATS 2055 Long Range Transportation Plan's data-driven approach to transportation investment by helping translate safety priorities into implementation-ready projects and funding strategies. The 2055 Long Range Transportation Plan emphasizes prioritizing safety in transportation projects and funding decisions, addressing high-injury corridors and vulnerable road users, and integrating safety performance measures into planning.

Aligned with that framework, the CSAP helps position RFATS for future funding opportunities, including SS4A, RAISE, PROTECT, and other regional and local programs, while supporting more targeted and data-driven investment decisions across the region.

FROM VISION TO ZERO: A REGIONAL STRATEGY FOR 2055

Overview

Traffic deaths and serious injuries are increasing nationwide, and fast growth in the RFATS region can intensify safety challenges as travel patterns, traffic volumes, and the mix of transportation modes evolve. A region where there is a projected 32 percent increase in population and 44 percent increase in employment by 2055 requires a sustaining a safe transportation system requires coordinated, data driven action.

RFATS Vision Zero commitment is grounded in the understanding that traffic deaths and serious injuries are preventable and unacceptable. The CSAP uses the Safe System Approach and a data-driven prioritization process to focus resources where they can have the greatest effect, particularly on high-injury corridors and intersections.

GOAL 4: FOSTER A CULTURE OF SHARED RESPONSIBILITY FOR SAFETY

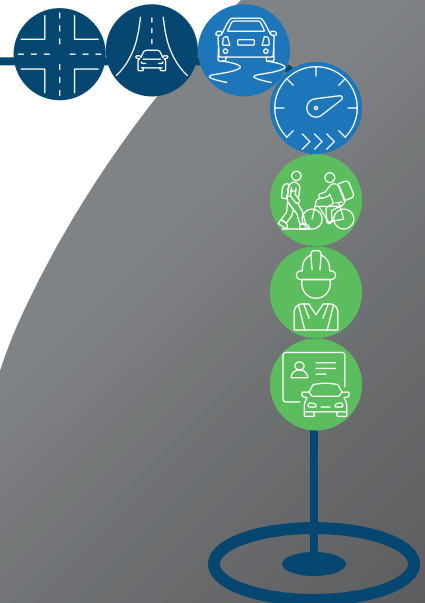
- 4.1. SUPPORT SAFE SYSTEM APPROACH PRINCIPLES IN LOCAL PLANNING AND ZONING.
- 4.2. CONTINUALLY ENGAGE THE PUBLIC THROUGH OUTREACH AND EDUCATION CAMPAIGNS.
- 4.3. COLLABORATE WITH LAW ENFORCEMENT, EMS, SCHOOLS, AND EMPLOYERS.
- 4.4. PROMOTE SAFE DRIVING THROUGH TARGETED CAMPAIGNS.

GOAL 3: PRIORITIZE VULNERABLE ROAD USERS.

- 3.1. EXPAND PEDESTRIAN AND BICYCLE INFRASTRUCTURE.
- 3.2. IMPROVE INTERSECTION AND ROADWAY CROSSINGS.
- 3.3. INVEST IN UNDERSERVED AREAS AND AGING INFRASTRUCTURE.
- 3.4. ENHANCE TRANSIT ACCESS, FIRST/ LAST MILE CONNECTIONS, AND SAFE ROUTES TO SCHOOL PROGRAMS.

GOAL 1: ELIMINATING FATAL AND SERIOUS INJURY CRASHES BY 2055

- 1.1. REDUCE FATAL AND SERIOUS INJURY CRASHES IN THE REGION BY 50% BY 2040 AND ACHIEVE ZERO DEATHS AND SERIOUS INJURIES BY 2055.
- 1.2. ADOPT A VISION ZERO POLICY WITH TARGETS AND PERFORMANCE METRICS.
- 1.3. FOCUS SAFETY INVESTMENTS ON HIGH-INJURY CORRIDORS AND INTERSECTIONS.
- 1.4. APPLY PROVEN SAFETY COUNTERMEASURES.
- 1.5. INTEGRATE SAFETY PERFORMANCE METRICS IN REGIONAL PLANNING, DESIGN, AND FUNDING DECISIONS.



WHERE HAVE WE BEEN?

TOTAL CRASHES	34,019	
FATAL CRASHES	118	
SERIOUS INJURY CRASHES	445	
NON-FATAL CRASHES	33,456	
Non-Fatal Crashes By Year	2024	6,979
	2023	6,861
	2022	6,777
	2021	7,084
	2020	5,755

GOAL 5: USE DATA TO INFORM DECISIONS AND TRANSPARENCY ON SAFETY TOPICS

5.1. MAINTAIN AND UPDATE A PLANNING AREA SAFETY REPORT.

5.2. DEVELOP A DASHBOARD TO TRACK SAFETY TRENDS AND PROGRESS.

5.3. ANALYZE CRASH DATA TO IDENTIFY RISKS AND ASSESS PROJECT IMPACT.

5.4. ALIGN SAFETY METRICS WITH REGIONAL GOALS.

GOAL 2: PROMOTE SAFE SPEEDS AND SAFE ROADS.

2.1. DESIGN ROADS TO ENCOURAGE SAFE SPEEDS THROUGH GEOMETRY AND VISIBILITY.

2.2. CONDUCT SPEED STUDIES AND APPLY CONTEXT-SENSITIVE SPEED LIMITS.

2.3. PROMOTE TRAFFIC CALMING AND ACCESS MANAGEMENT NEAR SCHOOLS.

2.4. EXPAND ADAPTIVE SIGNALS AND REAL-TIME TRAFFIC MONITORING.

ON THE ROAD TO VISION ZERO: FOCUS AREAS GUIDING THE PATH TO 2055



Intersections



Distracted +
Impaired Driving



Cycling +
Pedestrian Users



Work Zone



Lane Departure



Speeding



Mature +
Young Drivers





02

DESIGNING

THE PROCESS

WHAT IS RFATS?

The Rock Hill–Fort Mill Area Transportation Study (RFATS) is the federally designated metropolitan planning organization (MPO) for the Rock Hill–Fort Mill region. RFATS serves the cities of Rock Hill, Fort Mill, and Tega Cay, the Catawba Nation, the eastern urbanized portion of York County, and the Lancaster County panhandle. RFATS provides a forum for local governments and partners to work collaboratively on transportation planning issues that affect how people move throughout the region.

RFATS IN ACTION!

RFATS guides regional transportation decision-making by leading long-range transportation planning, coordinating transportation improvement programs, and supporting technical studies that inform investment priorities. RFATS has helped plan and program roadway, transit, bicycle, and pedestrian improvements that respond to growth, travel patterns, and regional safety needs. This work focuses on improving transportation safety and ensuring projects support the region's long-term travel demands.

ABOUT THE REGION:

The RFATS region is served by a transportation network that includes interstate 77, principal and minor arterials, such as U.S. 21, U.S. 521, SC 274, and other high-volume corridors that support regional travel, freight movement, and daily commuting between Rock Hill, Fort Mill, Tega Cay, and surrounding communities. These roadways often serve multiple purposes, providing mobility for through traffic while also accommodating local access, pedestrians, and bicyclists.

As growth continues and traffic volumes increase, these corridors face greater exposure to conflict, highlighting how roadway function, traffic volume, and land use context influence safety outcomes across the RFATS region and underscore the need for a coordinated, system-wide approach to addressing transportation safety challenges.

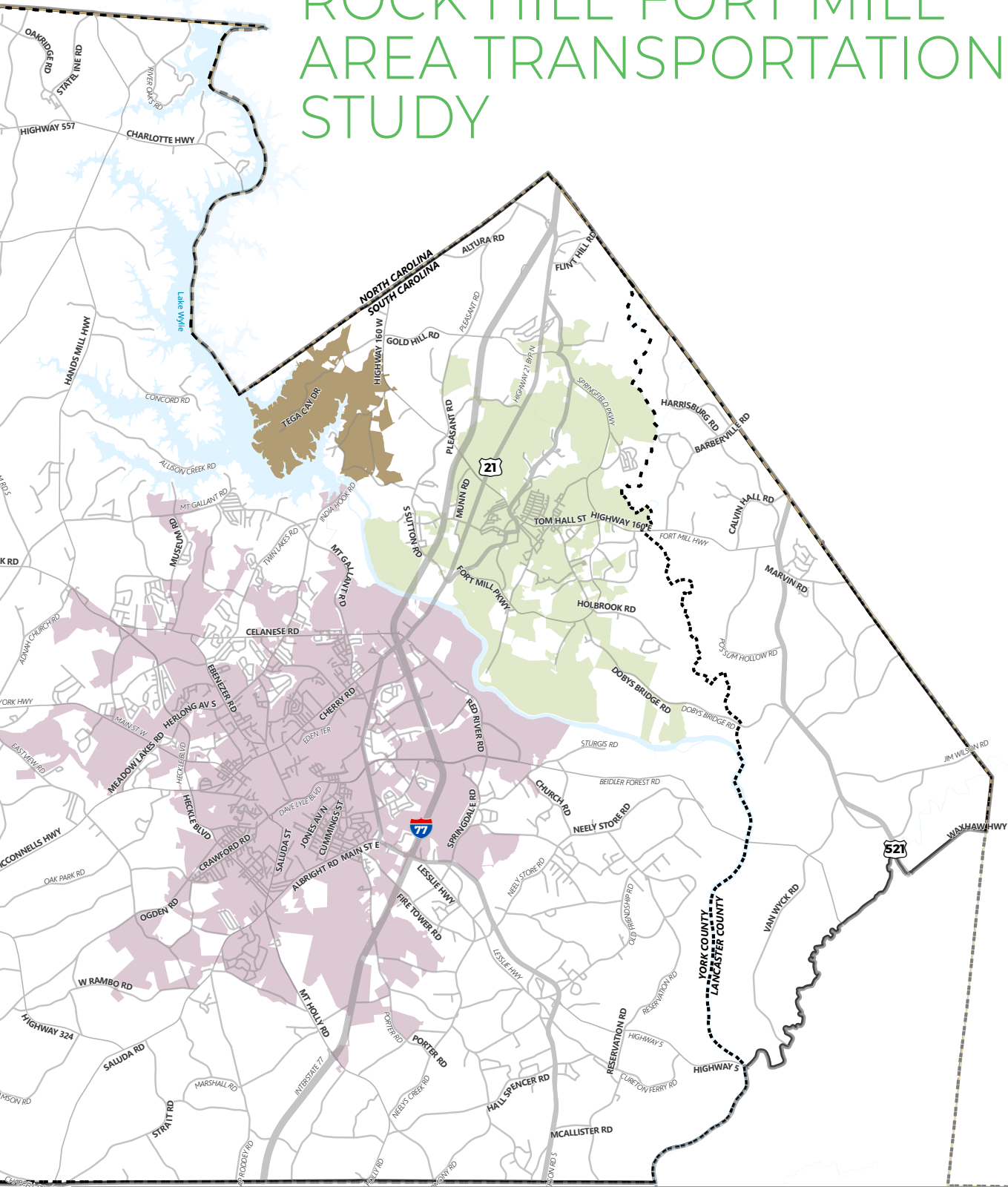
Learn more on [RFATS.org](https://www.rfats.org),
keyword: **Safe Streets and Roads for All**

CITY/TOWNS, COUNTY, AND TRIBAL JURISDICTION WITHIN RFATS:

- » Catawba Nation
- » Fort Mill
- » Lancaster County
- » Rock Hill
- » Tega Cay
- » York County



ROCK HILL-FORT MILL AREA TRANSPORTATION STUDY



RFATS STUDY AREA

RFATS Local Jurisdictions

- Rock Hill
- Fort Mill
- Tega Cay

SS4A FRAMEWORK & PLANNING APPROACH

HOW DID WE GET HERE

The RFATS CSAP was developed with planning funds from the U.S. Department of Transportation's Safe Streets and Roads for All (SS4A) program, with a framework that provides a structure for addressing roadway safety in a comprehensive and coordinated way.

Rather than focusing solely on individual crash locations or roadway segments, the SS4A framework emphasizes identifying systemic safety risks and prioritizing actions that can achieve the greatest reduction in fatal and serious injury crashes. This approach guided how RFATS structured the planning process—from establishing clear goals and a regional planning structure, to conducting safety analysis across all roadways, engaging communities throughout the study area, and identifying strategies that can be implemented consistently across cities, counties, and roadway ownerships.

USING THE SS4A FRAMEWORK

The SS4A program identifies eight key components that together form the foundation of a CSAP. In the RFATS region, these components were used collectively to shape the plan's organization and content—ensuring that safety priorities identified along high-volume arterials, at complex intersections, and in areas with pedestrian and bicyclist activity were informed by both technical analysis and community input.

Across all eight components, a Safe System approach serves as a consistent framework for the plan. The Safe System approach recognizes that people will make mistakes and that the transportation systems must be designed to reduce the likelihood that mistakes result in fatal or serious injury. This approach provides the foundation for the safety analysis and strategies presented in subsequent chapters.

SS4A EIGHT KEY COMPONENTS:



LEADERSHIP COMMITMENT

Establishes a formal commitment and clear, measurable goals to reduce and ultimately eliminate roadway fatalities and serious injuries.



PLANNING STRUCTURE

Defines leadership, roles, and coordination that guide the development, implementation, and monitoring of the safety action plan.



SAFETY ANALYSIS

Uses data and technical analysis to identify crash trends, risk factors, and locations with elevated severity across the transportation network.



PUBLIC AND STAKEHOLDER ENGAGEMENT

Incorporates input from the public and key stakeholders to ensure the plan reflects community priorities and local multidisciplinary expertise.



SAFETY FOR ALL ROAD USERS

Ensures safety planning identifies and addresses disparities in crash risk and outcomes, particularly for VRU and historically underserved communities.



POLICY AND PROCESS INTEGRATION

Identifies opportunities to update or align policies, standards, and procedures so safety is consistently integrated into transportation decisions.



STRATEGY AND PROJECT SELECTION

Develops and prioritizes actionable strategies and projects that address identified safety needs using proven, evidence-based approaches.



PERFORMANCE-BASED MONITORING

Establishes performance measures, reporting, and accountability to track implementation and communicate progress toward safety goals.

PLANNING STRUCTURE + THE MPO TECHNICAL COMMITTEE

TECHNICAL COMMITTEE FUNCTION:

The RFATS MPO Technical Committee functioned as the steering committee for the CSAP. Through a series of meetings and ongoing coordination, the Technical Committee guided key elements of the planning process, including safety analysis, public and stakeholder engagement, identification of priority safety needs, development of strategies and projects, and consideration of policy and process changes.

This multidisciplinary structure ensured that decisions were informed by a range of perspectives and that safety issues were addressed consistently at a regional scale, rather than on a jurisdiction-by-jurisdiction basis and designed to support not only development of the CSAP, but also coordination, implementation, and ongoing monitoring of safety priorities over time.

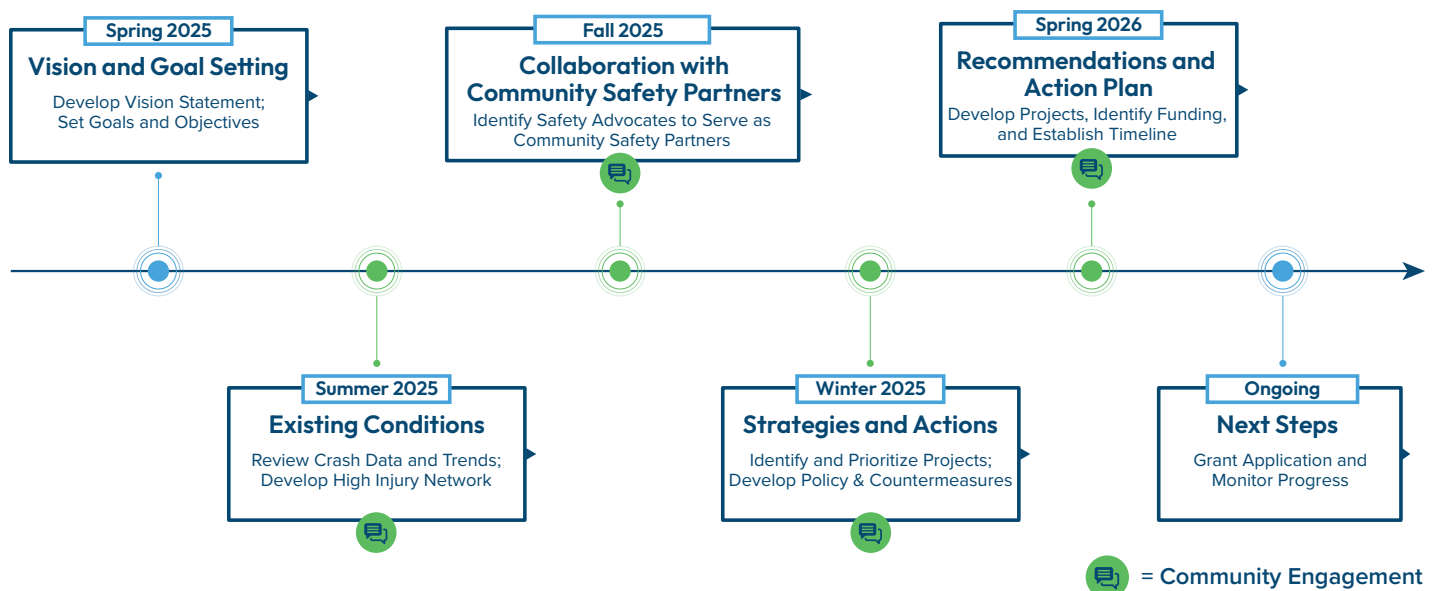
PROJECT LEADERSHIP

» David Hooper - RFATS Director

ORGANIZATIONS INCLUDED IN THE TECHNICAL COMMITTEE

- | | | | |
|---|---|---|---|
| » Catawba COG
Steve Allen | » City of Tega Cay
Nick Cauthen | » SCDOT
Cliff Goolsby
Jim Walden
Tony Edwards | » York County
Christopher Stephens
Diane Dil
Jonathan Buono
Patrick Hamilton |
| » City of Rock Hill
Chris Herrmann
Lauren Harms
Leah Youngblood | » FHWA
Mark Pleasant | » Town of Fort Mill
Penelope Karagounis | |
| | » Lancaster County
Corey Barnes | | |

PROJECT TIMELINE







03

DIAGNOSING

SAFETY RISK



The following chapter delivers a thorough evaluation of crash data to determine patterns, risk factors, and priority areas for potential intervention. The following analysis aims to adopt a data-driven approach to improve decision-making for roadway safety by systematically evaluating crash trends, contributing factors, and the spatial distribution of crashes across the RFATS planning area.

Multiple forms of analysis were performed, including a safety analysis, systemic analysis, as well as determining the High-Injury Network (HIN), High-Injury Intersection (HII), and the High-Risk Network (HRN).

DATA-DRIVEN APPROACH

- » **Safety Analysis:** Used statistical and geospatial methods to identify crash patterns, contributing factors, and the characteristics of high-risk locations across the RFATS region.
- » **Systemic Analysis:** Evaluated roadway features and conditions associated with elevated crash risk to proactively identify safety needs beyond locations with significant crash history.
- » **High-Injury Network (HIN):** Identifies where severe crashes have occurred and are concentrated on a relatively small share of roadway miles and intersections.
- » **High-Injury Intersection (HII):** Identifies specific intersections with elevated concentrations of fatal and injury crashes to focus location-specific safety improvements.
- » **High-Risk Network (HRN):** Identifies where systemic roadway characteristics and context indicate elevated risk, even in locations without a significant crash history.

METHODOLOGY

CRASH DATA SOURCE

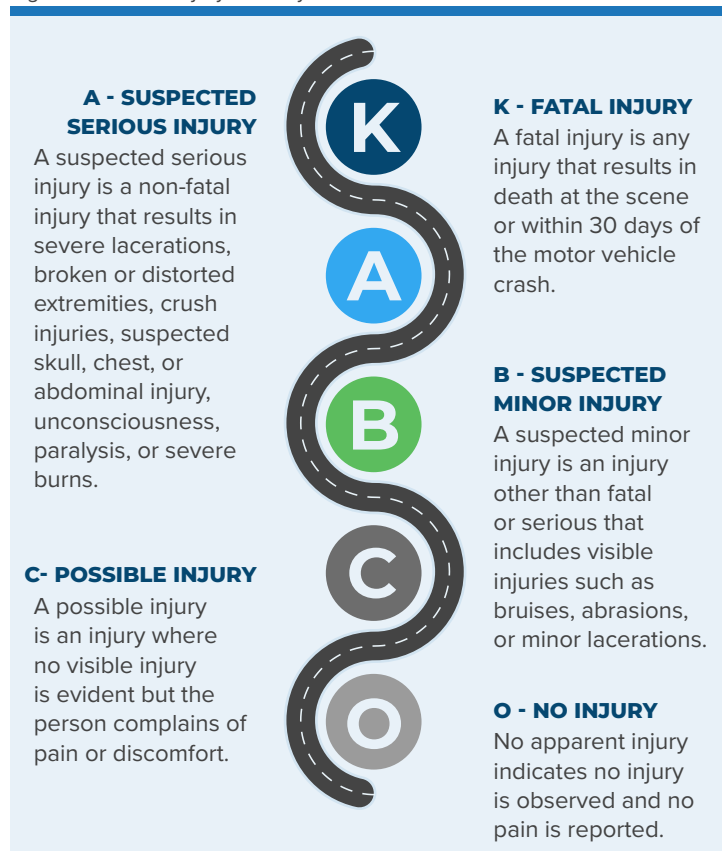
Crash data across all roadway user modes were analyzed to support a comprehensive safety analysis. Historical crash records were obtained from the South Carolina Department of Transportation (SCDOT) through AASHTOWare Safety. The dataset included detailed information for each reported crash, such as severity, location, roadway characteristics, and environmental conditions including lighting and weather.

Crash outcomes were examined using both fatal and serious injury crashes (KA) and all reported injury crashes based on the KABCO scale. Consistent with the Safe Streets and Roads for All (SS4A) program's emphasis on eliminating fatalities and serious injuries, primary analytical focus was placed on KA crashes.

ALL USERS CONSIDERATION

Safety for All Road User considerations were incorporated into the safety analysis through the inclusion of GIS data layers representing Historically Disadvantaged Communities, Areas of Persistent Poverty, and Tribal Lands. These layers were used to support interpretation of safety patterns and inform the development and prioritization of strategies and investments, consistent with the SS4A program's emphasis on safety outcomes for All Road Users.

Figure #: KABCO Injury Severity Classification Scale



CRASH ANALYSIS TIMEFRAMES

- » **Analysis Periods:** Summary-level vehicular crash trends were evaluated using five years of data (January 1, 2020, through December 31, 2024). VRU crashes involving people walking or bicycling were evaluated using a ten-year period (January 1, 2015, through December 31, 2024).
- » **Methodological Rationale:** A longer analysis period was applied to VRU crashes to account for lower crash frequencies and to support statistically stable identification of high-risk locations and corridors, consistent with SS4A best practices.

SAFETY ANALYSIS

Overview

The Safety Analysis examined observed crash history across the RFATS region to establish an objective understanding of how fatal and serious injury crashes occurred. Its purpose was not to catalog every reported crash, but to focus attention on outcomes most closely aligned with the SS4A program goal of eliminating traffic deaths and serious injuries. By prioritizing fatal and suspected serious injury crashes, the Safety Analysis established a consistent and defensible baseline for evaluating safety conditions across roadway users and contexts.

Rather than relying on anecdotal concerns or isolated locations, the Safety Analysis identified patterns in crash severity, crash types, and affected road users that recurred across the transportation network. This approach allowed the plan to distinguish between general crash frequency and crashes resulting in the most severe consequences, ensuring that subsequent recommendations were grounded in outcomes with the greatest public safety impact.

The Safety Analysis also established a clear distinction between overall crash trends and the concentration of severe outcomes. While crashes occurred throughout the transportation system, fatal and serious injury crashes were not evenly distributed. Understanding where serious crashes were concentrated, and which road users were most affected, provided critical context for prioritization and helped focus attention on locations and conditions with the greatest potential for safety improvement.

CRASHES BY THE NUMBERS

34,019
TOTAL
CRASHES

445
SERIOUS
INJURY
CRASHES

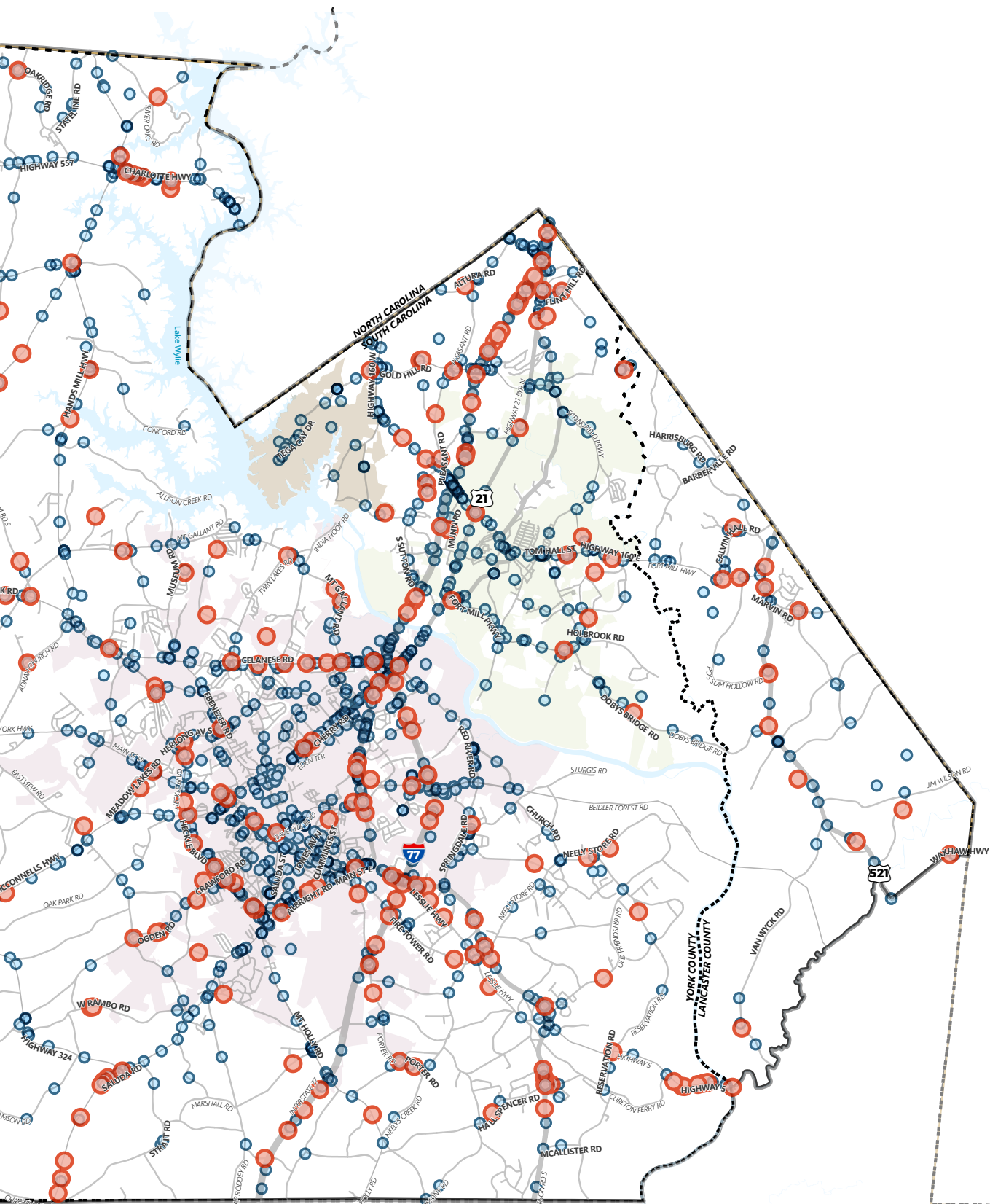
563
TOTAL KA
CRASHES

118
FATAL
CRASHES

HOW DID THE DATA SHAPE THE PLAN?

Findings from the Safety Analysis directly informed the structure and direction of the Safety Action Plan. Documented concentrations of serious crashes supported the development of location-based prioritization tools, including the High-Injury Network (HIN) and High-Injury Intersections (HII), while observed disparities in crash severity reinforced the need to prioritize vulnerable road users throughout the plan. At the same time, recurring crash patterns and contributing conditions established a clear link between documented safety challenges and the strategies and countermeasures advanced in later chapters.





ALL MODES KA CRASHES

Crash Severity

- (K) Fatal Injury
- (A) Serious Injury

RFATS Local Jurisdictions

- Rock Hill
- Fort Mill
- Tega Cay

FATAL + SERIOUS INJURY CRASH COMPARISON

Fatal and serious injury crashes occurred at relatively consistent levels across all modes. While the number of severe pedestrian and bicyclist crashes remained low in absolute terms, these crashes continued to occur year after year. Although these numbers are small, the recurring nature of severe crashes shows that serious injuries and deaths are not isolated events and require ongoing attention in system design and operation.

Crashes involving pedestrians and bicyclists were far more likely to result in serious injury or death, even though they occurred less often. This contrast highlights why protecting people outside of vehicles remains a critical focus for safety improvements.

FATAL AND SERIOUS INJURY MOTOR VEHICLE CRASHES (2020-2024)

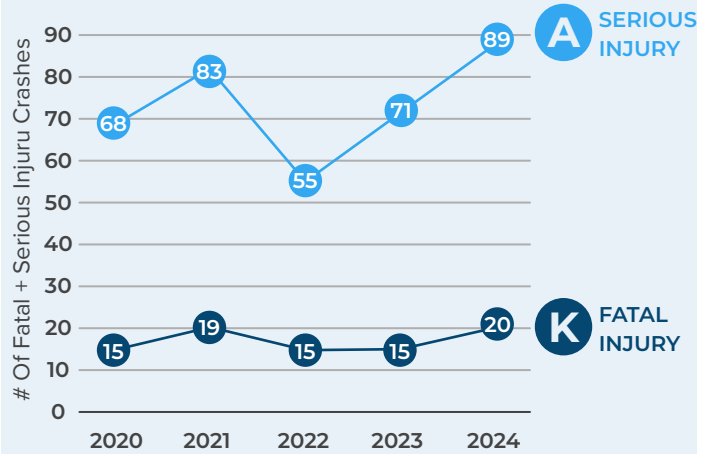


Figure #: Fatal and Serious Motor Vehicle Crashes by Year, 2020-2024

FATAL AND SERIOUS INJURY PEDESTRIAN + BICYCLIST CRASHES (2020-2024)

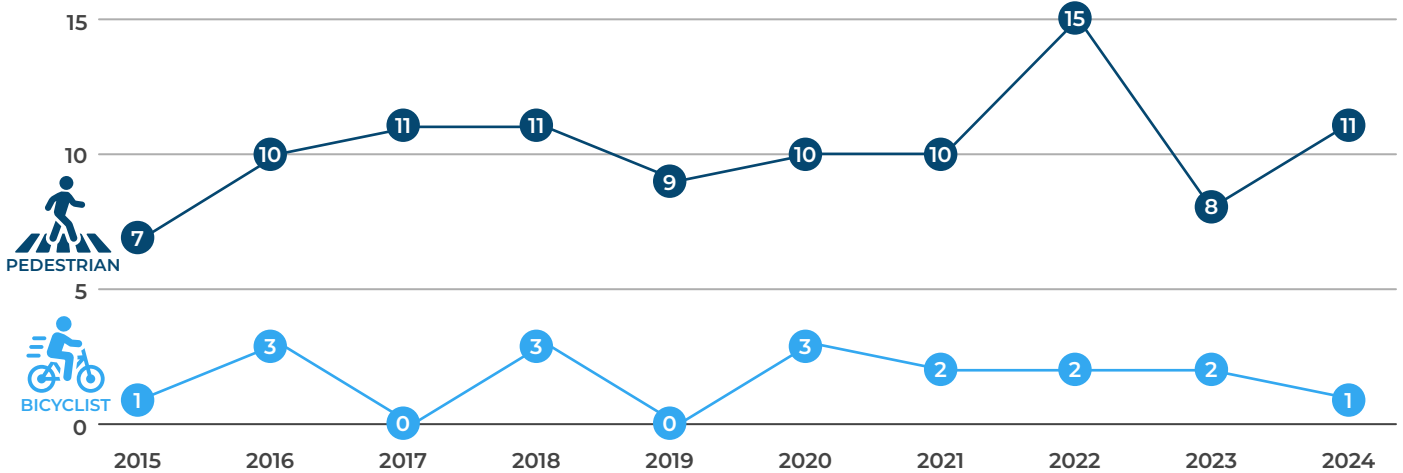


Figure #: Pedestrian & Bicyclist Fatal and Serious Injury Crashes by Year (2015 - 2024)

CRASH TYPES

Fatal and serious injury crashes were heavily concentrated in crash types associated with high-conflict movements and loss of vehicle control, with angle and non-collision crashes occurring more frequently than any other crash type. Head-on crashes represented a smaller but still meaningful share of severe outcomes.

TOP 3 VEHICULAR KA CRASH TYPES



ANGLE



NON-COLLISION



HEAD ON

Figure #: Top Three Vehicular KA Crash Types

NOT ALL CRASHES CARRY THE SAME CONSEQUENCES

TOTAL REPORTED CRASH
33,746 VS **273**
 VEHICULAR VS VRU

TOTAL FATAL (K) CRASH
94 VS **24**
 VEHICULAR VS VRU

TOTAL SERIOUS INJURY (A) CRASH
397 VS **48**
 VEHICULAR VS VRU

Figure #: Vehicular vs VRU Crashes

HOW SEVERE CRASHES ARE SHAPED BY EMPHASIS AREA

Crashes were grouped by emphasis area consistent with SCDOT's Strategic Highway Safety Plan to better understand where, how, and to whom fatal and serious injury crashes most often occurred. This approach helped identify patterns across infrastructure conditions, human factors, and high-risk roadway users. These patterns directly informed the selection and prioritization of projects and strategies included in the CSAP.

COMPARATIVE FATAL CRASH RATES

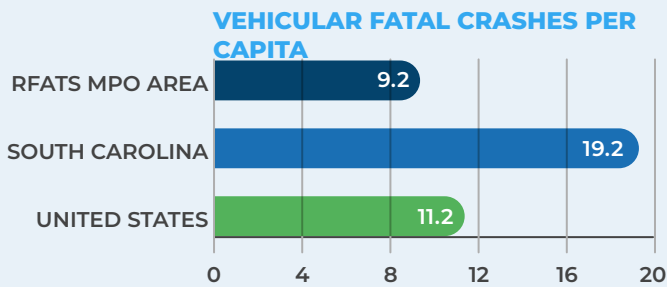


Figure #: Fatal Crashes per Capita per Year, 2019-2023

VRU FATAL CRASHES PER CAPITA

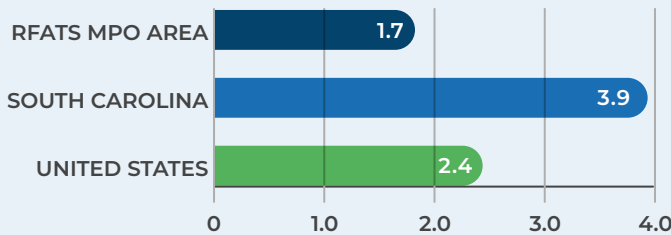


Figure #: VRU Fatal Crashes per Capita per Year, 2019-2023

FATAL CRASHES PER 100M VMT

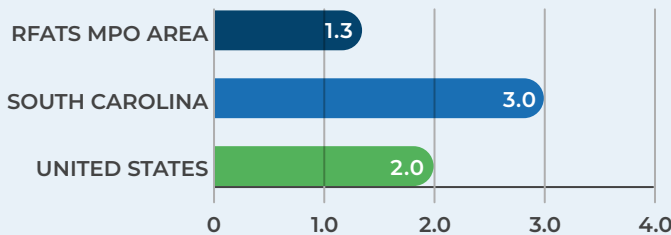


Figure #: Fatal Crashes per 100M VMT, 2019-2023

INFRASTRUCTURE WHERE CRASHES HAPPEN

LANE DEPARTURE
232*
 KA CRASHES

INTERSECTIONS
172*
 KA CRASHES

HUMAN FACTORS HOW CRASHES HAPPEN

IMPAIRED DRIVING
127*
 KA CRASHES

DISTRACTED DRIVING
18*
 KA CRASHES

SPEEDING
166*
 KA CRASHES

DISTRACTED + IMPAIRED DRIVERS
145* KA CRASHES

HIGH-RISK ROADWAY USERS WHO IS MOST AFFECTED

YOUNG DRIVERS
182*
 KA CRASHES

CYCLING
10*
 KA CRASHES

MATURE DRIVERS
108*
 KA CRASHES

PEDESTRIANS
62*
 KA CRASHES

MATURE + YOUNG DRIVERS
290* KA CRASHES

CYCLING + PEDESTRIAN USERS
72* KA CRASHES

WORK ZONES **6*** KA CRASHES

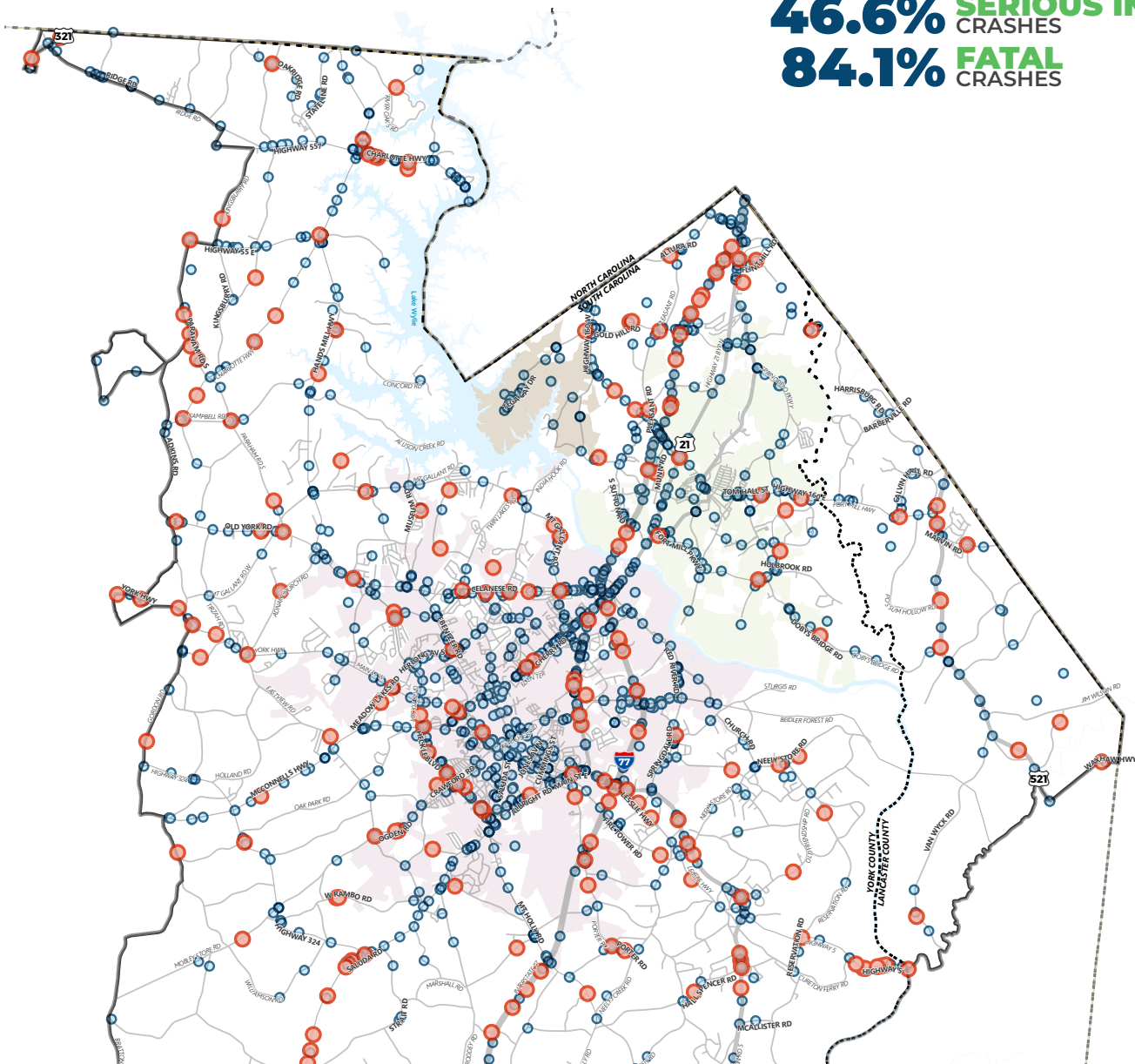
*Crashes may involve more than one contributing factor. Totals shown are not additive.

VEHICULAR CRASHES

A SMALL SHARE OF ROADS ACCOUNTS FOR MOST FATAL CRASHES!
6.1% OF ROADWAY CENTERLINE MILES ACCOUNT FOR 62.8% OF FATAL CRASHES
AND 61.2% OF SERIOUS INJURY CRASHES

ONLY 1.5% OF ALL INTERSECTIONS ACCOUNT FOR:

46.6% SERIOUS INJURY CRASHES
84.1% FATAL CRASHES



VEHICULAR KA CRASH MAP

Crash Severity

- (K) Fatal Injury
- (A) Serious Injury

RFATS Local Jurisdictions

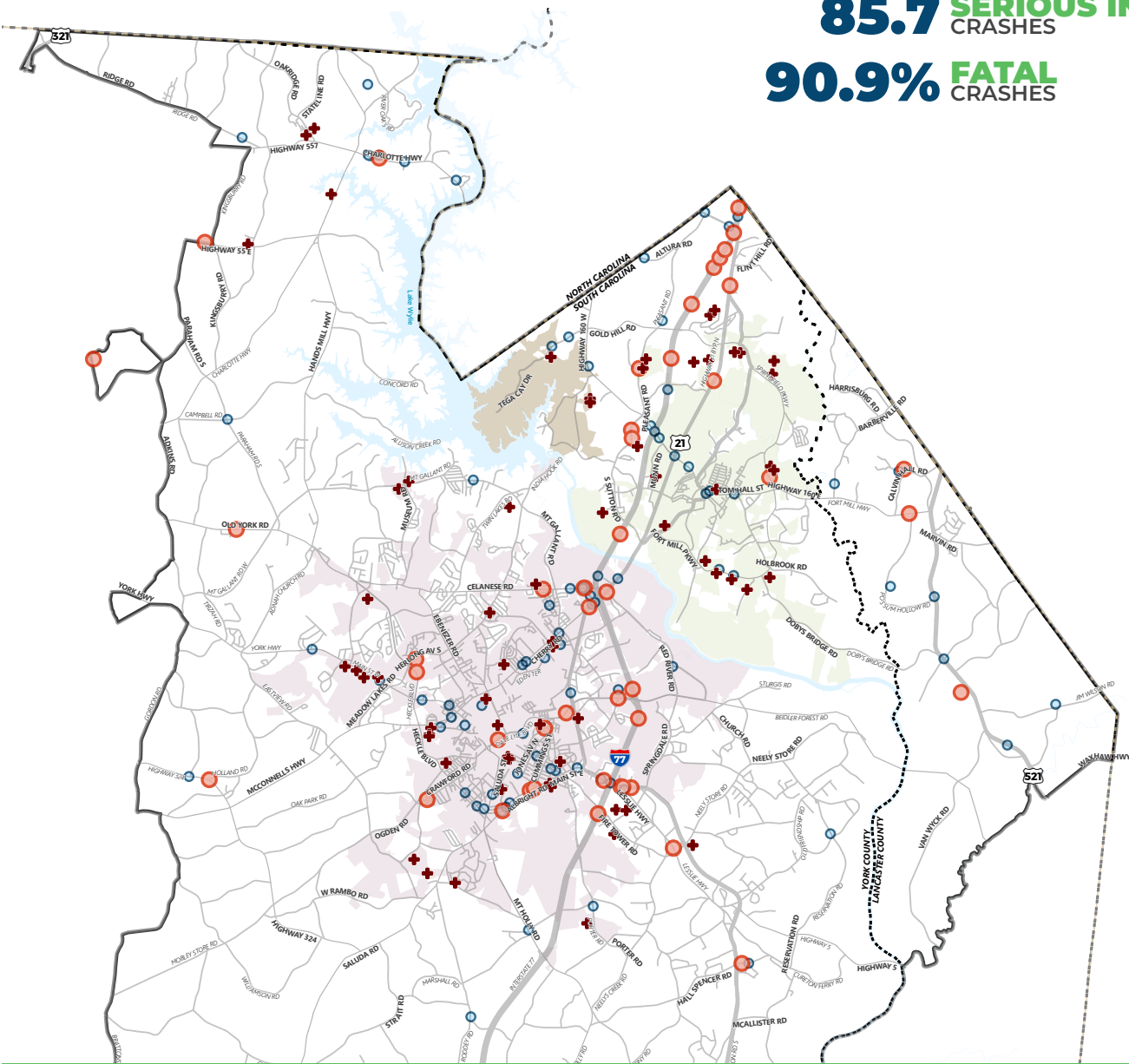
- Rock Hill
- Fort Mill
- Tega Cay

VULNERABLE ROAD USER CRASHES

VRU CRASHES MORE LIKELY TO RESULT IN KA CRASHES
26% OF VRU CRAHSES RESULTED IN **FATAL OR SERIOUS INJURY**, COMPARED TO **~1%**
OF MOTOR VEHICLE CRASHES

ONLY 0.5% OF ALL INTERSECTIONS ACCOUNT FOR:

85.7 **SERIOUS INJURY** CRASHES
90.9% **FATAL** CRASHES



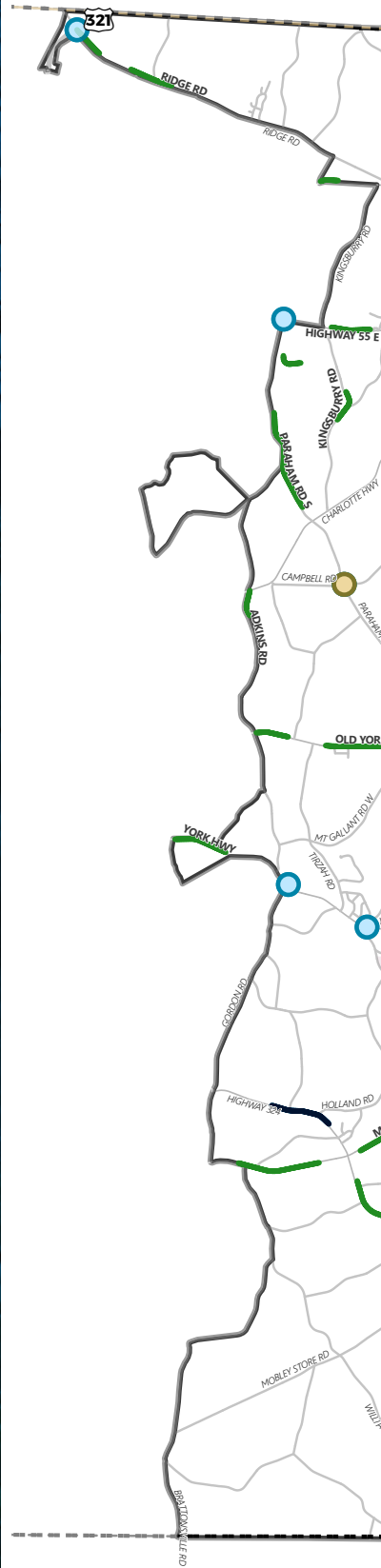
VRU KA CRASH MAP

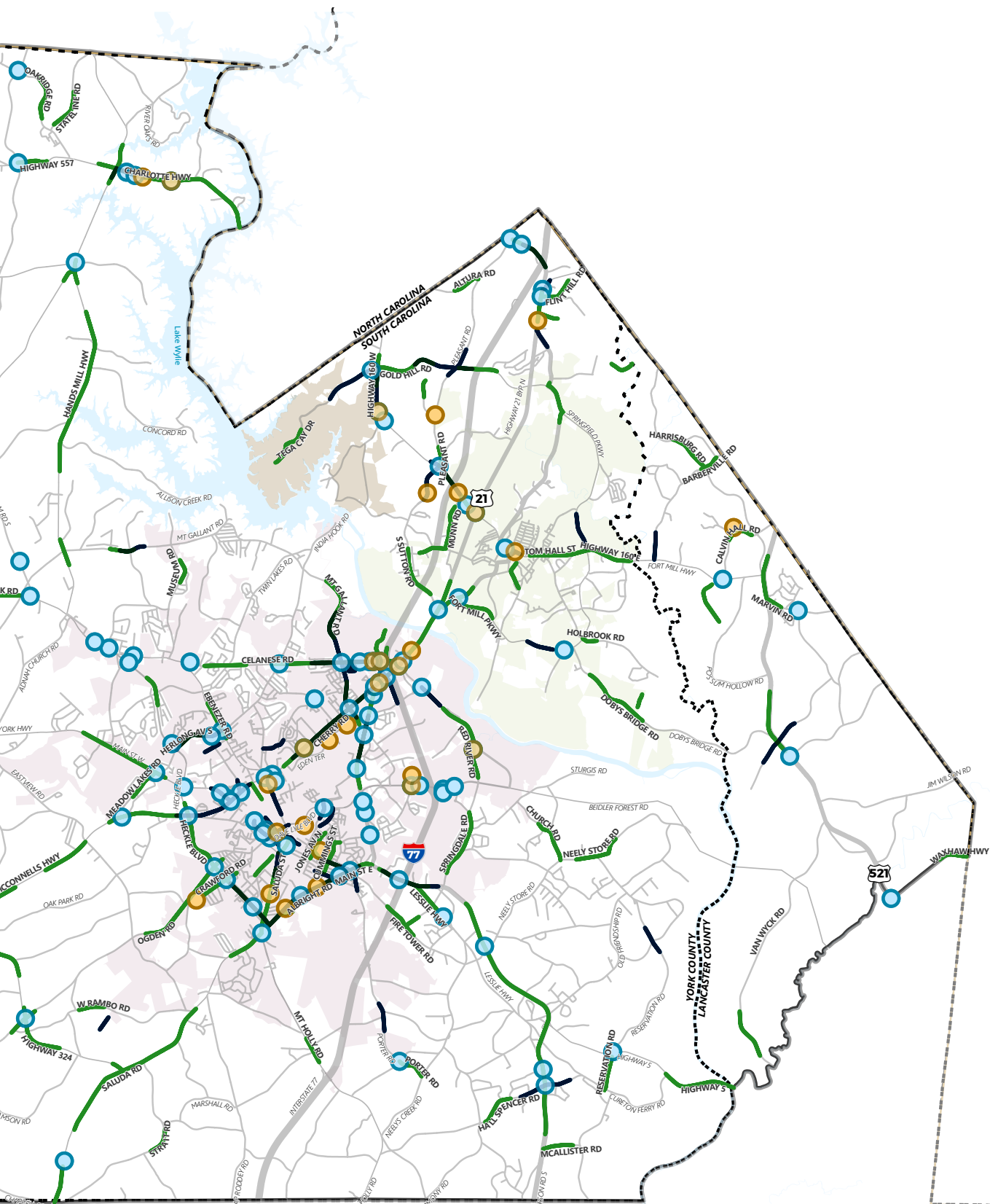
- | | |
|-----------------------|----------------------------------|
| Crash Severity | RFATS Local Jurisdictions |
| ○ (K) Fatal Injury | ■ Rock Hill |
| ○ (A) Serious Injury | ■ Fort Mill |
| ✚ Schools | ■ Tega Cay |

HIGH-INJURY NETWORK

IDENTIFYING WHERE SEVERE CRASHES ARE CONCENTRATED

The **HIGH-INJURY NETWORK (HIN)** and **HIGH-INJURY INTERSECTIONS (HII)** identify roadway segments and intersections with the **HIGHEST CONCENTRATIONS OF FATAL AND SERIOUS INJURY CRASHES** across the RFATS region, helping **PRIORITIZE LOCATIONS** where targeted safety improvements can **MOST EFFECTIVELY REDUCE SEVERE OUTCOMES**.





VRU HIN + HII MAP

High Injury Network

- Vehicular HIN
- VRU HIN

High Injury Intersections

- Vehicular HII
- VRU HII

RFATS Local Jurisdictions

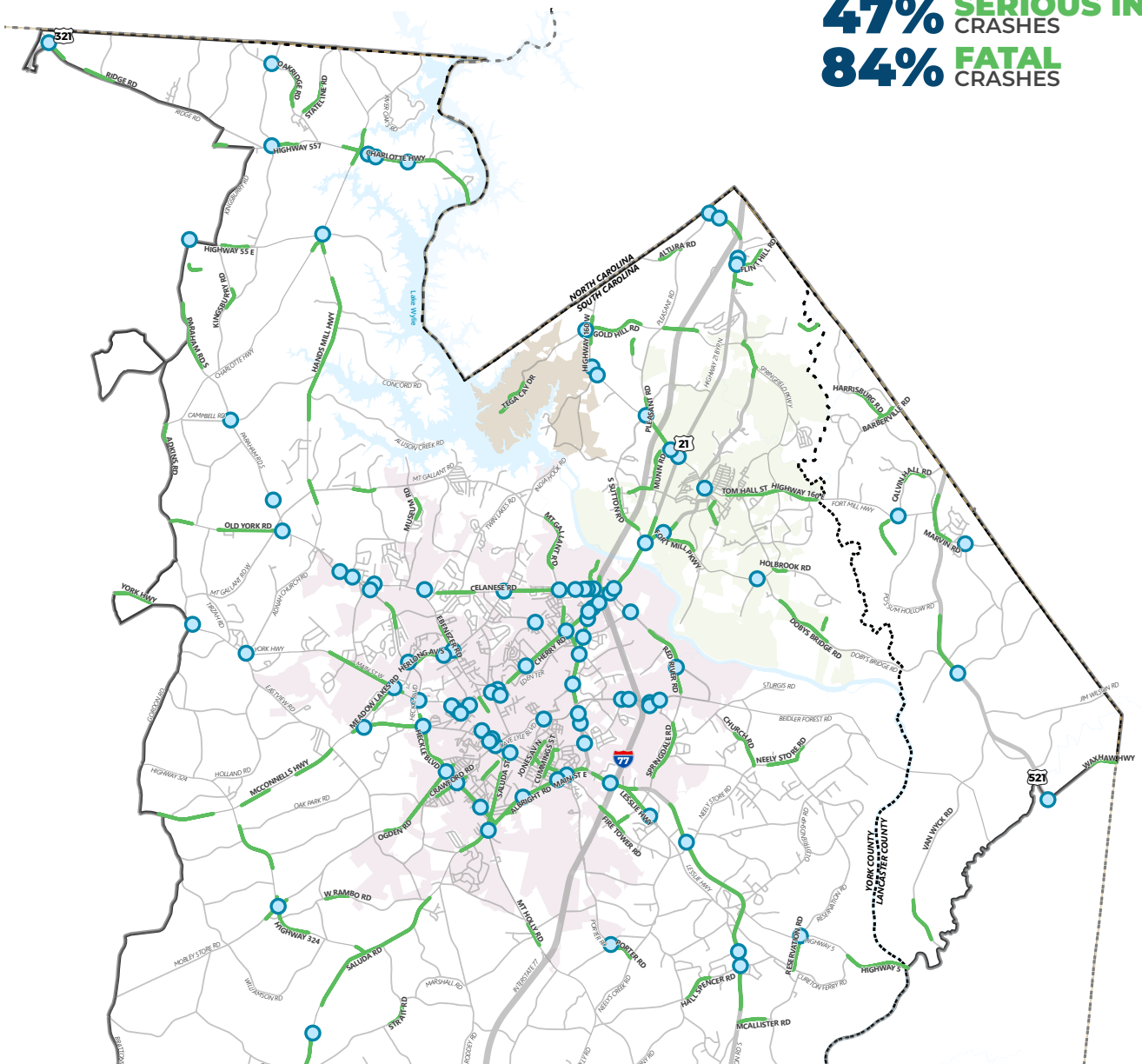
- Rock Hill
- Fort Mill
- Tega Cay

VEHICULAR HIN + HII






A SMALL SHARE OF ROADS ACCOUNTS FOR MOST FATAL CRASHES!
6% OF ROADWAY CENTERLINE MILES ACCOUNT FOR 63% OF FATAL CRASHES
AND 61% OF SERIOUS INJURY CRASHES

LESS THAN 2% OF ALL INTERSECTIONS ACCOUNT FOR:

47% SERIOUS INJURY CRASHES
84% FATAL CRASHES



VEHICULAR HIN + HII MAP

- | Vehicular HIN + HII | | RFATS Local Jurisdictions | |
|---|---------------|---|-----------|
|  | Vehicular HII |  | Rock Hill |
|  | Vehicular HIN |  | Fort Mill |
| | |  | Tega Cay |

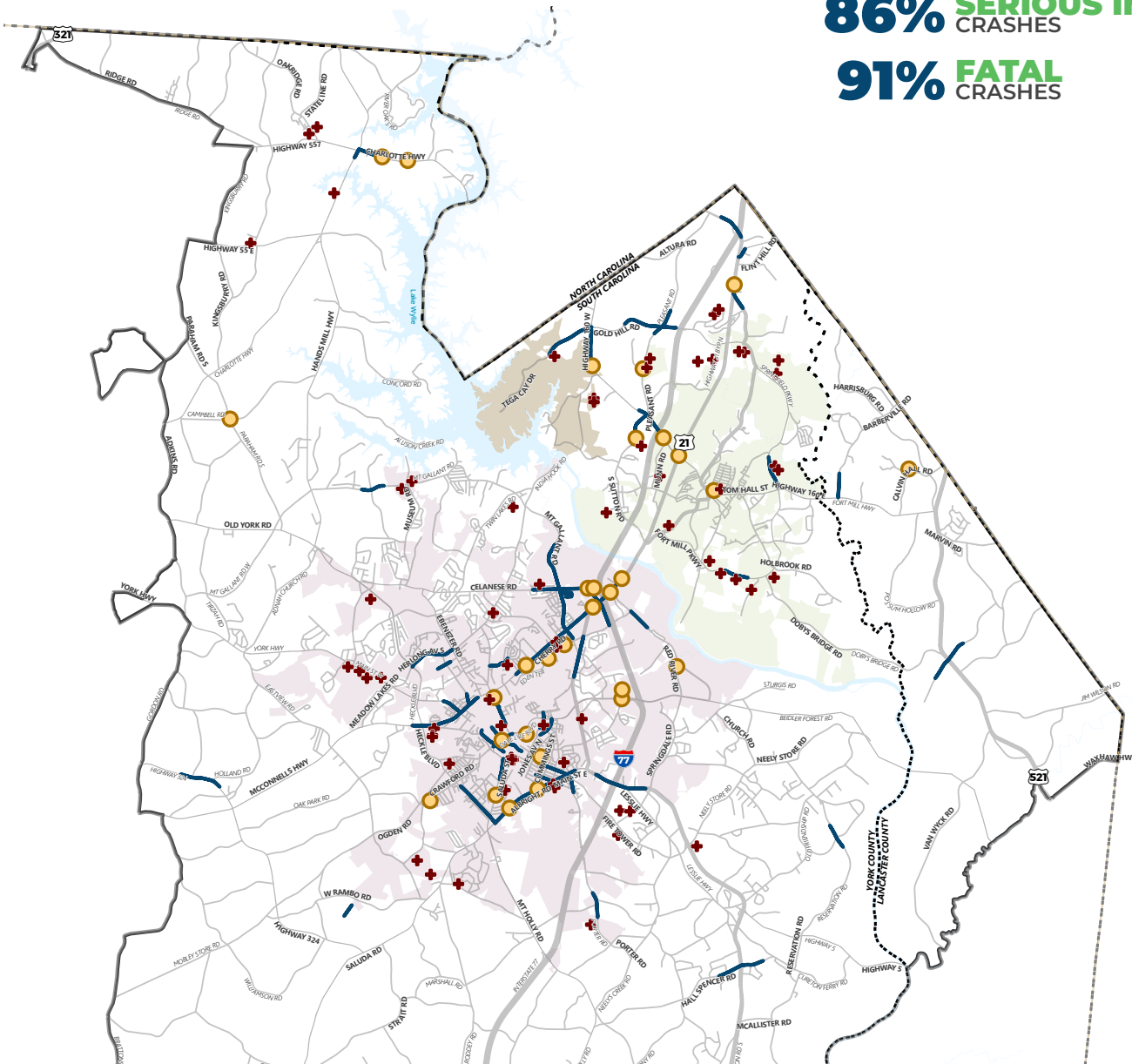
VULNERABLE ROAD USER HIN + HII

VRU CRASHES MORE LIKELY TO RESULT IN KA CRASHES
2% OF ROADWAY CENTERLINE MILES ACCOUNT FOR 73% OF FATAL CRASHES
AND 56% OF SERIOUS INJURY CRASHES

LESS THAN 1% OF ALL INTERSECTIONS ACCOUNT FOR:

86% SERIOUS INJURY
CRASHES

91% FATAL
CRASHES

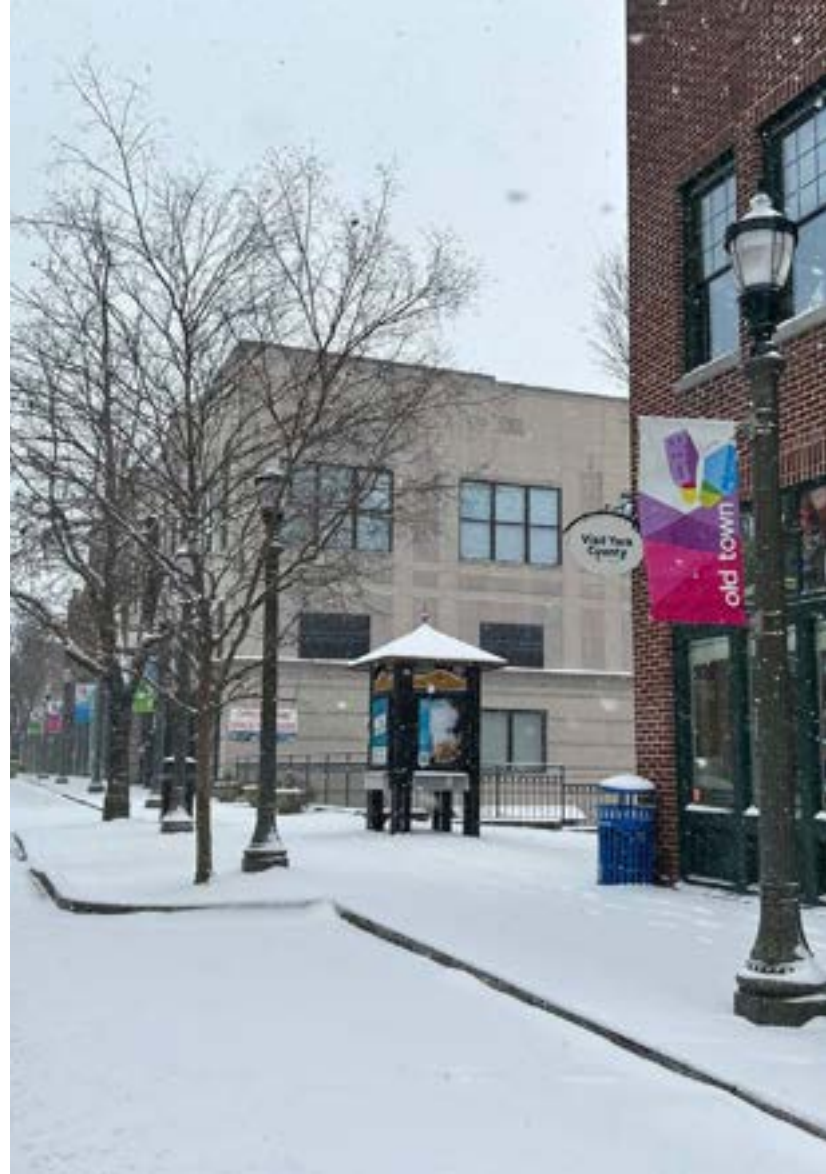


VRU HIN + HII MAP

- | VRU HIN + HII | RFATS Local Jurisdictions |
|---------------|---------------------------|
| VRU HII | Rock Hill |
| VRU HIN | Fort Mill |
| Schools | Tega Cay |

SYSTEMIC ANALYSIS

Systemic analysis looks at conditions that are linked to higher crash risk — not just where crashes have happened in the past. It helps RFATS identify roadway types and settings where severe crashes are more likely to occur, even if a location has not yet developed a long crash history. This approach supports proactive, data-driven decisions by focusing attention on the roadway characteristics and travel environments that are associated with higher risk across the region.



MOST SERIOUS CRASHES OCCUR DURING EVERYDAY DRIVING CONDITIONS, WHEN MOST TRAVEL HAPPENS.

LIGHT CONDITIONS	TOTAL
DAY TIME:	248
NIGHT TIME:	202
TOTAL:	450

In the RFATS region, fatal and serious injury crashes are most commonly observed during daytime hours, on dry road surfaces, and in clear weather conditions.

SURFACE CONDITIONS	TOTAL
DRY:	434
WET:	57
TOTAL:	491

This pattern reflects when and where most travel occurs across the region. Crashes that occur at night or during wet conditions, while less frequent, may involve additional challenges related to visibility and roadway conditions.

WEATHER CONDITIONS	TOTAL
CLEAR:	382
CLOUDY:	28
FOG/SMOKE:	2
RAIN:	38
TOTAL:	450

FINDINGS

MINOR ARTERIALS STAND OUT

Such as Charlotte Highway and Celanese Road stand out as higher-risk corridors because they mix high traffic volumes with frequent access points and turning activity.

MORE CARS, MORE INTERACTIONS

As daily traffic volumes increase, the number of interactions between road users increases, raising the likelihood of serious crashes.

SCHOOL PROXIMITY

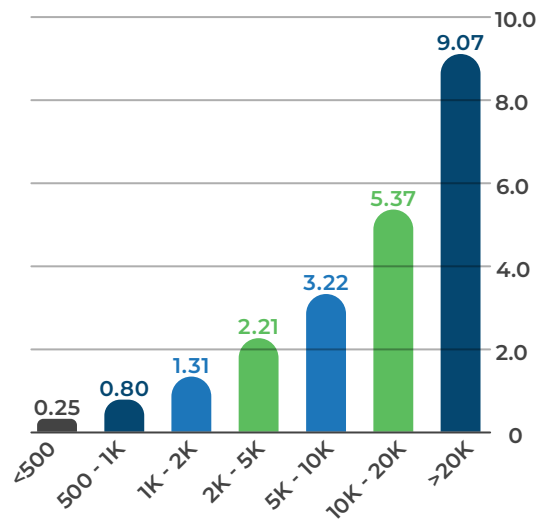
Roadways within 0.25 miles of K–12 schools show about twice the risk of serious injuries for people walking and biking compared with areas farther from schools.

GROWTH BRINGS OPPORTUNITY, BUT IT ALSO BRINGS INCREASED SAFETY CHALLENGES.

In the RFATS region, roads that carry higher daily traffic volumes are more likely to experience fatal and serious injury crashes.

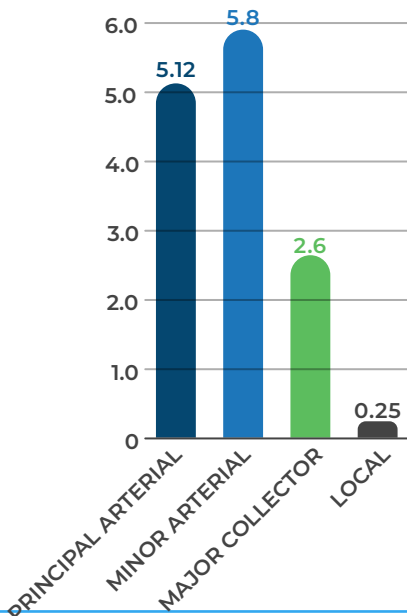
As traffic increases, the complexity of driving environments increases as well, leading to greater crash risk. Understanding this relationship is critical for a growing region like RFATS, where identifying higher-risk roadway conditions early can help prevent future crashes before they occur.

Figure #: Crash Risk Ratio By AADT



WHY EVERYDAY ROADS CARRY HIGHER CRASH RISK IN RFATS

Figure #: Crash Risk Ratio By Functional Class



Serious crashes are more likely on busy “everyday” roads than on highways. Minor arterials like Charlotte Highway and Celanese Road are seeing more traffic, development, and travel demand. That combination creates more opportunities for conflict and increases crash risk, especially as traffic volumes grow.

HIGH-RISK NETWORK (HRN)

How Systemic Risk Factors Identify the High-Risk Network:

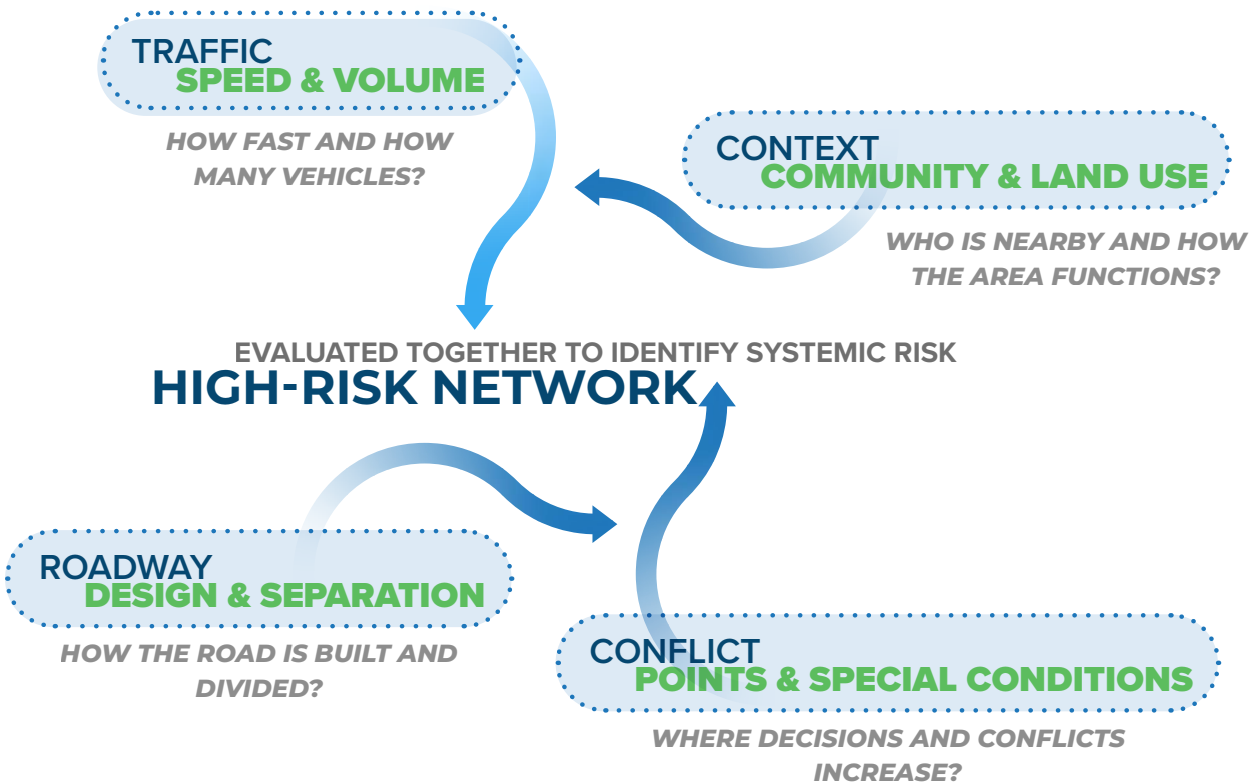
Multiple factors evaluated together to proactively prioritize safety improvements

The High-Risk Network (HRN) is created based on the determined risk factors that contribute to a heightened crash risk. The HRN uses all fatal (K) and serious injury (A) crash data from January 1, 2015, to December 31, 2024.

The individual risk factors outlined in the scoring criteria below are given a point according to the proportional risk representation ratio as shown in the systemic analysis. An example of this is the direction of travel flow, where one-way streets have the least representative ratio and therefore have the lowest risk potential. This also means that one-way streets will have the fewest risk points associated with them.

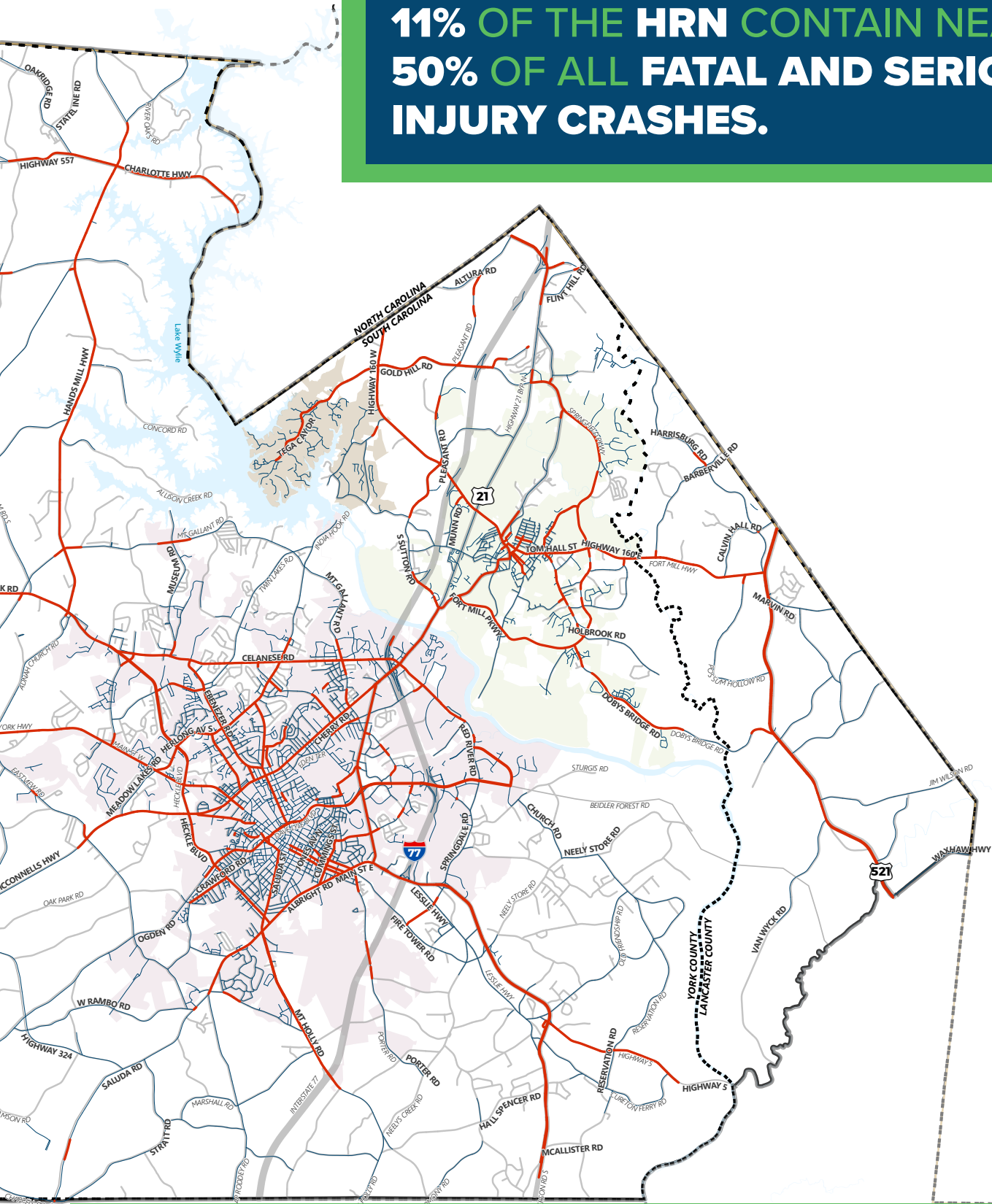
The total possible risk score is measured on a 100-point scale, with the final risk score of a roadway segment being determined by the sum of the risk points for each risk factor associated with the roadway.

After calculating the final risk scores, the roadway segments are then classified into risk levels (low, moderate, and high). The risk level is determined by the final risk scores and indicates the likelihood of a crash on those roadway segments.



Risk Class	Miles	% of Miles	KA Crashes ¹	% of KA Crashes	KA Crashes Per Mile	KA Representation Ratio
High	199.2	11%	594	46%	3.0	4.2
Moderate	592.0	33%	525	40%	0.9	1.2
Low	1026.3	56%	180	14%	0.2	0.2

11% OF THE HRN CONTAIN NEARLY 50% OF ALL FATAL AND SERIOUS INJURY CRASHES.



RFATS HIGH-RISK NETWORK MAP

Risk Severity

- High Risk
- Medium Risk
- Low Risk

RFATS Local Jurisdictions

- Rock Hill
- Fort Mill
- Tega Cay





04

DOCUMENTING COMMUNITY INPUT

ENGAGEMENT OBJECTIVES + GOALS

OBJECTIVE

“Guide a clear and inclusive public engagement process that educates, involves, and gathers input from the RFATS community to help shape a CSAP that reflects local needs and priorities.”

ENGAGEMENT GOALS

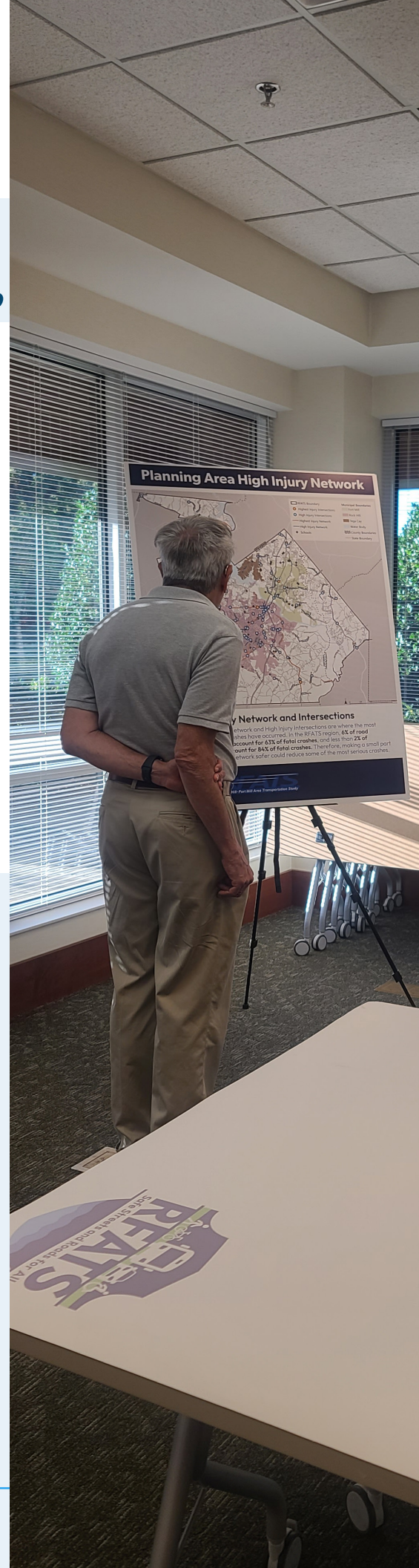


PUBLIC ENGAGEMENT PLAN

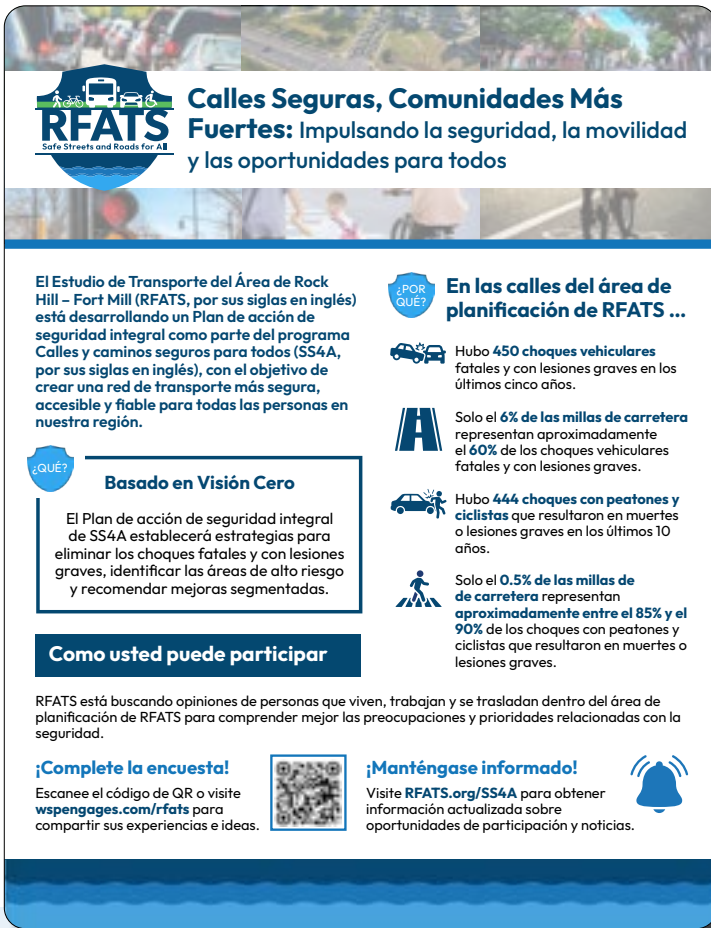
Participation by the public is vital in the development of SS4A CSAP, its implementation, and its long-term success. Community input helped shape the plan's vision, identify safety concerns, and inform data-driven and community-supported strategies.

The Public Engagement Plan (PEP) defines the goals, responsibilities, tools, and timeline for public engagement, promotional outreach, and stakeholder coordination activities supporting the RFATS SS4A CSAP. The PEP provides an overview of the project, identifies target audiences and stakeholders, and outlines the engagement tactics intended to support a two-phase public involvement process aligned with the project schedule.

The RFATS PEP emphasizes inclusive and accessible engagement across the planning area. It is designed to reach a broad range of community members and stakeholders through public meetings, surveys, social media, flyers, postcards, press releases, and other outreach activities, while also providing Spanish-language materials and other accommodations as needed. The plan identifies the RFATS MPO Technical Committee as the steering committee for the effort and outlines how outreach would be coordinated across both phases of engagement.



ENGAGEMENT FOR ALL ROADWAY USERS FRAMEWORK



Calles Seguras, Comunidades Más Fuertes: Impulsando la seguridad, la movilidad y las oportunidades para todos

¿POR QUÉ? **En las calles del área de planificación de RFATS ...**

- Hubo 450 choques vehiculares fatales y con lesiones graves en los últimos cinco años.
- Solo el 6% de las millas de carretera representan aproximadamente el 60% de los choques vehiculares fatales y con lesiones graves.
- Hubo 444 choques con peatones y ciclistas que resultaron en muertes o lesiones graves en los últimos 10 años.
- Solo el 0.5% de las millas de carretera representan aproximadamente entre el 85% y el 90% de los choques con peatones y ciclistas que resultaron en muertes o lesiones graves.

¿QUÉ? **Basado en Visión Cero**

El Plan de acción de seguridad integral de SS4A establecerá estrategias para eliminar los choques fatales y con lesiones graves, identificar las áreas de alto riesgo y recomendar mejoras segmentadas.

Como usted puede participar

RFATS está buscando opiniones de personas que viven, trabajan y se trasladan dentro del área de planificación de RFATS para comprender mejor las preocupaciones y prioridades relacionadas con la seguridad.

¡Complete la encuesta!
Escanee el código de QR o visite wspengages.com/rfats para compartir sus experiencias e ideas.

¡Manténgase informado!
Visite RFATS.org/SS4A para obtener información actualizada sobre oportunidades de participación y noticias.



Safe Streets, Stronger Communities: Advancing Safety, Mobility and Opportunity for All

WHY **On RFATS Planning Area Streets ...**

- There were 450 fatal and serious injury vehicular crashes in the last five years.
- Just 6% of road miles account for ~60% of fatal and serious injury vehicular crashes.
- There were 444 fatal and injury pedestrian and bicycle crashes in the last 10 years.
- Only 0.5% of road miles account for ~85-90% of fatal and serious injury pedestrian and bicycle crashes.

WHAT **Routed in Vision Zero**

The SS4A Comprehensive Safety Action Plan will set strategies for eliminating fatal and serious injury crashes, identifying high-risk areas and recommending targeted improvements.

How You Can Get Involved

RFATS is seeking input from people who live, work, and travel in the RFATS Planning Area to better understand safety concerns and priorities.

Take the Survey!
Scan the QR code or visit wspengages.com/rfats to share your experiences and ideas.

Stay Informed!
Visit RFATS.org/SS4A for updates on engagement opportunities and project news.

Considerations were integrated throughout the RFATS engagement process to help ensure that outreach was responsive to the needs of all roadway users, including those in harder-to-reach populations across the planning area. The RFATS PEP identifies senior adults, minority, disabled, low-income, millennial, and transportation-disadvantaged populations as groups requiring special consideration, and it outlines strategies such as meeting people where they already gather, adjusting the timing and format of outreach, and coordinating accommodations for people with visual, hearing, or physical disabilities.

In addition, multilingual materials, translation of critical notices based on Limited English Proficiency needs, and outreach through media used by target audiences in the study area. These strategies were reflected throughout the engagement process to ensure the outreach efforts broaden involvement across the planning area.

During Phase I, RFATS used a public survey and interactive map to gather input from 555 participants, generating 1,910 open comments and 1,189 map pins that helped document community experiences, location-specific concerns, and ideas for safer streets. These efforts helped build a data-driven, community-informed foundation for the RFATS CSAP, consistent with SS4A program objectives.



RFATS | **SS4A Comprehensive Safety Action Plan**
DRAFT FOR REVIEW AND COMMENT

The Rock Hill-Fort Mill Area Transportation Study is developing a Comprehensive Safety Action Plan as part of the Safe Streets and Roads for All (SS4A) initiative to support a safer, more accessible and reliable transportation network for all users in the planning area.

The draft plan will be available for public review starting **Monday, April 13**. Your feedback will help ensure the plan reflects community priorities and supports safer streets for everyone.

Review the draft plan and join the virtual public meeting on **Thursday, April 16, 2026 at 6 p.m.**
RFATS.org/SS4A

COMMUNITY OUTREACH OVERVIEW

Ultimately, this planning effort focused on implementing a comprehensive and inclusive public engagement process to support development of the RFATS SS4A CSAP. The plan was designed as a two-phase process to build awareness, gather input, and refine recommendations with community feedback. Because RFATS serves a multi-jurisdictional planning area, outreach was structured to reflect the communities and transportation needs of Fort Mill, the Catawba Nation, Tega Cay, Rock Hill, the eastern urbanized portion of York County, and the Lancaster County panhandle.

Phase 1: Focused on introducing the SS4A initiative and building a broad foundation of public awareness and community input. RFATS used a combination of branding, a project webpage, press materials, e-blasts, social media, bilingual handouts, Community Safety Partner coordination, an in-person open house, a public survey, and an interactive mapping activity to reach residents, stakeholders, and roadway users across the planning area. These efforts generated survey responses, open-ended comments, and location-specific map input that helped identify community concerns, recurring safety issues, and location-based priorities to inform the next stage of plan development.

Phase 2: Builds on that foundation by shifting toward public review of draft recommendations and confirmation of proposed safety improvements through a mix of webpage updates, outreach materials, Community Safety Partner engagement, a public meeting, pop-up events, postcard outreach, and paper and online comment opportunities to collect feedback on the draft plan. The strategy also emphasizes continued collaboration with trusted community partners, Spanish-language materials, and targeted outreach to broaden participation as the plan moves toward finalization.

ENGAGEMENT TOOLS:



COMMUNITY SAFETY PARTNERS

group was made up of **13 partners**



E-BLAST

2 e-blasts sent announce the survey, and one to promote the open house



OPEN HOUSE

1 In-person open house on October 16, 2025, at the City of Rock Hill



PRESS RELEASE

1 Press Release at program launch to help publicize the initiative



PRINTED MATERIAL

1 Informational flyer with the project overview, and link to survey and website



SOCIAL MEDIA

One Town of Fort Mill Facebook post recorded **31 shares**



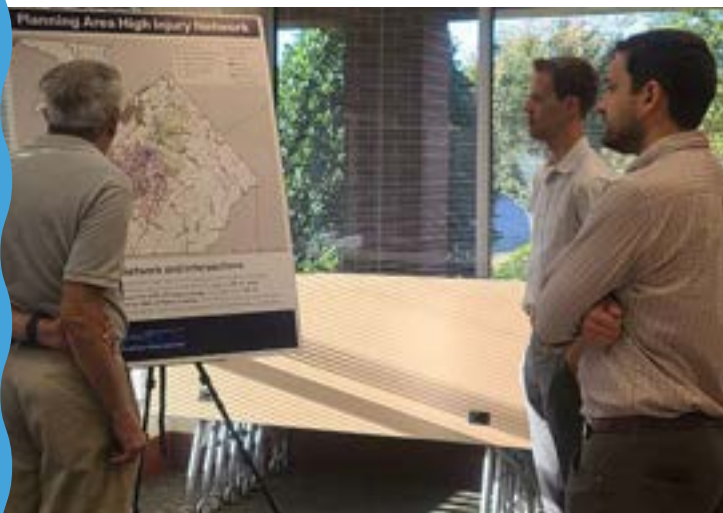
SURVEY

Survey attracted **555 participants**, generating **1,910 open comments**



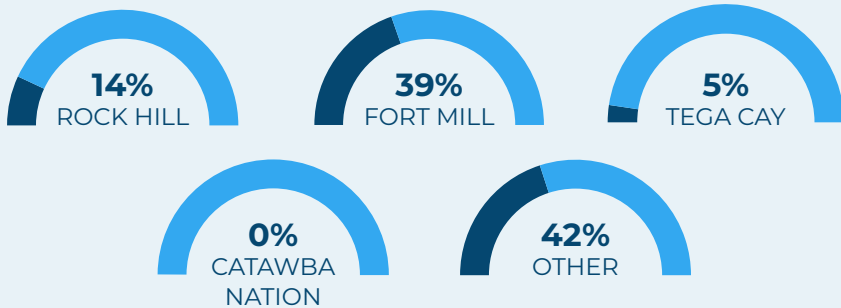
WEBSITE

Project webpage recorded **2,323 unique users** during Phase I



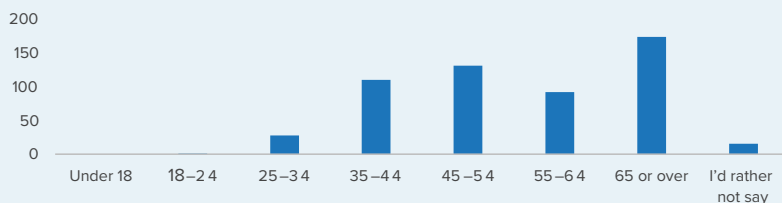
WHO WE HEARD FROM

CITY, TOWN, OR TRIBAL NATION OF RESIDENCE



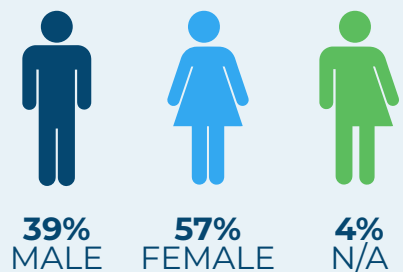
Most survey respondents (95%) reside in York County. Nearly 84% of respondents living in "Other" jurisdictions reported residing in the Lake Wylie/Clover, S.C. area of York County.

AGE GROUP



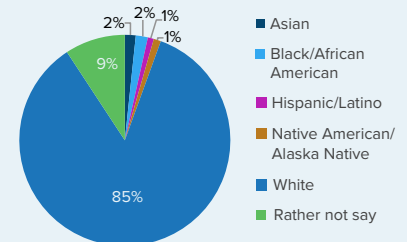
Some 72% of respondents were ages 45 or older, with no respondents under 18.

GENDER



A majority of respondents identified as female.

RACE/ETHNICITY



Respondents are predominantly White, with 9% choosing not to disclose their race or ethnicity.

GETTING SOCIAL: ENGAGEMENT POSTS SHARED

Social media supported Phase I outreach by providing a broad, accessible way to share project information and encourage participation. RFATS developed ready-to-use graphics and messaging for Facebook, X, and Instagram, which local governments and Community Safety Partners shared through their existing channels to extend reach beyond traditional audiences.

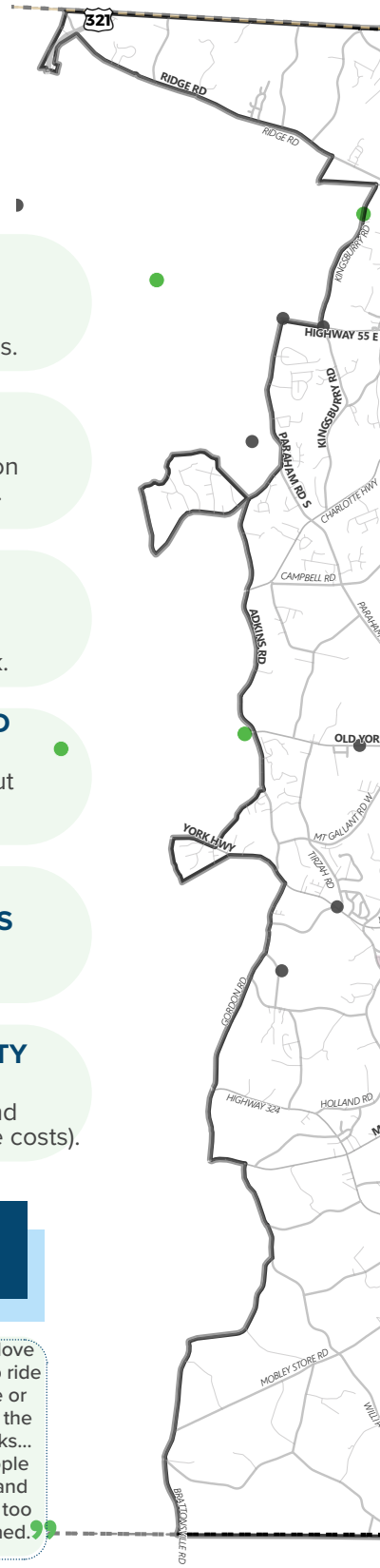
Municipal posts generated measurable engagement, including shares, comments, and reactions, while a coordinated final survey push by Community Safety Partners helped drive additional survey responses and interactive map input. Overall, social media outreach increased awareness of the CSAP initiative, directed users to project resources, and created additional opportunities for the public to provide meaningful input early in the planning process.



KEY TAKEAWAYS

COMMON THEMES!

- 1 UNSAFE DRIVING BEHAVIORS**
Speeding, red-light running, distracted and aggressive driving are widespread concerns.
- 2 LACK OF ENFORCEMENT**
Perception that traffic laws are not consistently enforced, contributing to risky behavior.
- 3 CONGESTION AND TRAFFIC GROWTH PRESSURES**
Rapid growth and increased traffic volumes are overwhelming existing infrastructure.
- 4 INADEQUATE ROADWAY DESIGN**
Poorly designed roads, intersections, and sightlines increase crash risk.
- 5 GAPS IN SIDEWALK INFRASTRUCTURE**
Missing or incomplete sidewalks create unsafe walking conditions.
- 6 LACK OF SAFE BICYCLE FACILITIES**
Minimal bike lanes and unsafe shared road conditions discourage cycling.
- 7 SAFETY RISKS FOR VULNERABLE ROAD USERS**
High concern for pedestrians, cyclists, children, and new drivers.
- 8 HIGH VEHICLE SPEEDS**
Excessive speeds reduce reaction time and increase crash severity.
- 9 UNSAFE INTERSECTIONS AND CORRIDORS**
Specific roads and intersections repeatedly identified as high-risk.
- 10 IMPACTS OF LAND USE AND DEVELOPMENT**
Development is occurring without adequate transportation safety planning.
- 11 NEED FOR MULTIMODAL TRANSPORTATION OPTIONS**
Desire for safer alternatives to driving (walking, biking).
- 12 PERSONAL AND COMMUNITY IMPACTS OF CRASHES**
Emotional stress, safety fears, and financial burdens (e.g., insurance costs).

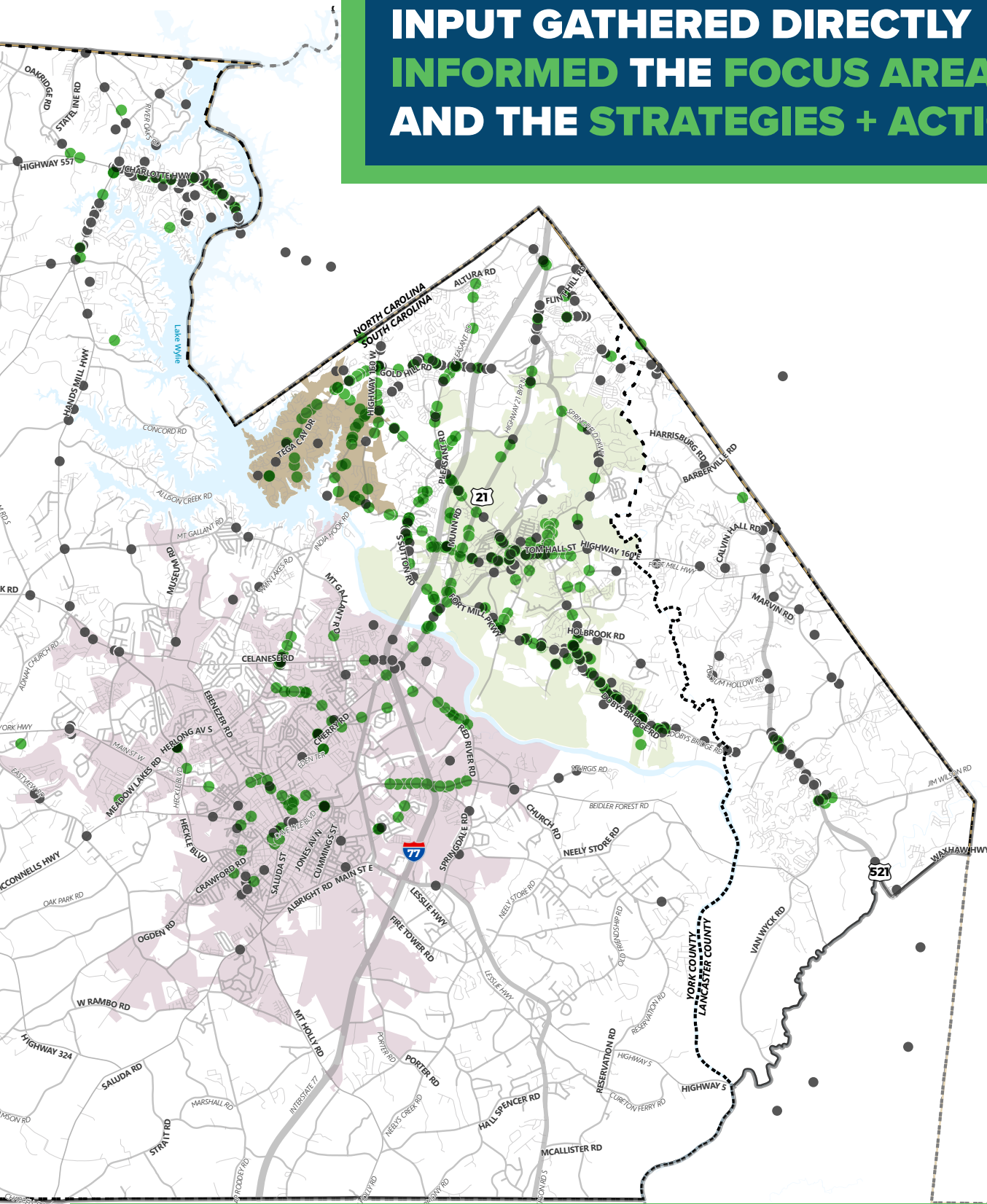


WHAT WE HEARD?

- “Walking and cycling are a method of transportation. Let’s improve those options.”
- “We have a new teenager driver... and it terrifies me... due to all the accidents and careless driving.”
- “More cellphone use enforcement.”
- “We need red light cameras on many of the major roads.”
- “Day to day life requires transportation.”
- “Amount of traffic and infrastructure is not supportive of the speed and number of cars/trucks traveling.”
- “I would love my kid to ride his bike or walk on the sidewalks... but people speed and I’m way too concerned.”



**INPUT GATHERED DIRECTLY
INFORMED THE FOCUS AREAS,
AND THE STRATEGIES + ACTIONS.**



PUBLIC ENGAGEMENT AREAS OF CONCERN

Concern By Mode

- VRU Safety
- Vehicular Safety

RFATS Local Jurisdictions

- Rock Hill
- Fort Mill
- Tega Cay





05

DISTILLING

PRIORITY SAFETY NEEDS



HIGH PRIORITY NETWORK

THE HPN IS A TOOL THAT IDENTIFIES PRIORITY ROAD SEGMENTS FOR PROJECT PRIORITIZATION THROUGH A COMBINATION OF CRASH HISTORY, POTENTIAL RISK, AND CONSIDERATION OF COMMUNITY INPUT. THE HIGH INJURY NETWORK AND THE HIGH RISK NETWORK WERE COMBINED TO CREATE THE HPN.

PROJECT LOCATION LIST:

VEHICULAR PRIORITY PROJECT LOCATIONS

TOP PRIORITY CORRIDORS

- › Anderson Rd
(US 21 / SC 5)
- › York Hwy
(SC 5 / SC 121)
- › McConnells Hwy
(SC 322) / Cherry Rd
- › Herlong Ave
- › Tega Cay Dr
- › Saluda Rd
- › McAllister Rd
- › Charlotte Hwy (SC 49)
- › Hwy 557
- › Regent Pkwy
- › Old York Rd
- › Mt Gallant Rd
- › Red River Rd

TOP PRIORITY INTERSECTIONS

- › Anderson Rd / Hall Spencer Rd (RCI)
- › SC 160 / US 21 BYP
- › Celanese Rd / Mt Gallant Rd
- › Old York Rd / Pennington Rd
- › Heckle Blvd / Crawford Rd
- › Carowinds Blvd / Pineville-Rock Hill Rd
- › Old York Rd / Paraham Rd
- › Charlotte Hwy / Robinwood Rd
- › Heckle Blvd / Ogden Rd
- › Paraham Rd / Campbell Rd (Roundabout)

VRU PRIORITY PROJECT LOCATIONS

TOP PRIORITY CORRIDORS

- › Iredell St
- › Old York Rd
- › Dave Lyle Blvd
- › Anderson Rd
- › Carowinds Blvd
- › Sutton Rd
- › Lesslie Hwy
- › White St
- › Riverview Rd
- › Hwy 324

TOP PRIORITY INTERSECTIONS

- › Cherry Rd / Patriot Pkwy
- › Dave Lyle Blvd / John Ross Pkwy
- › Sutton Rd / Market St
- › Celanese Rd / Cherry Rd
- › Pleasant Rd / Whitley Rd
- › Carowinds Blvd / Central Carolinas Pkwy
- › Glen Laurel Dr / Mercer St
- › Crawford Rd / Daisy St
- › Albright Rd / Blackmon St
- › Charlotte Hwy / Mill Pond Rd



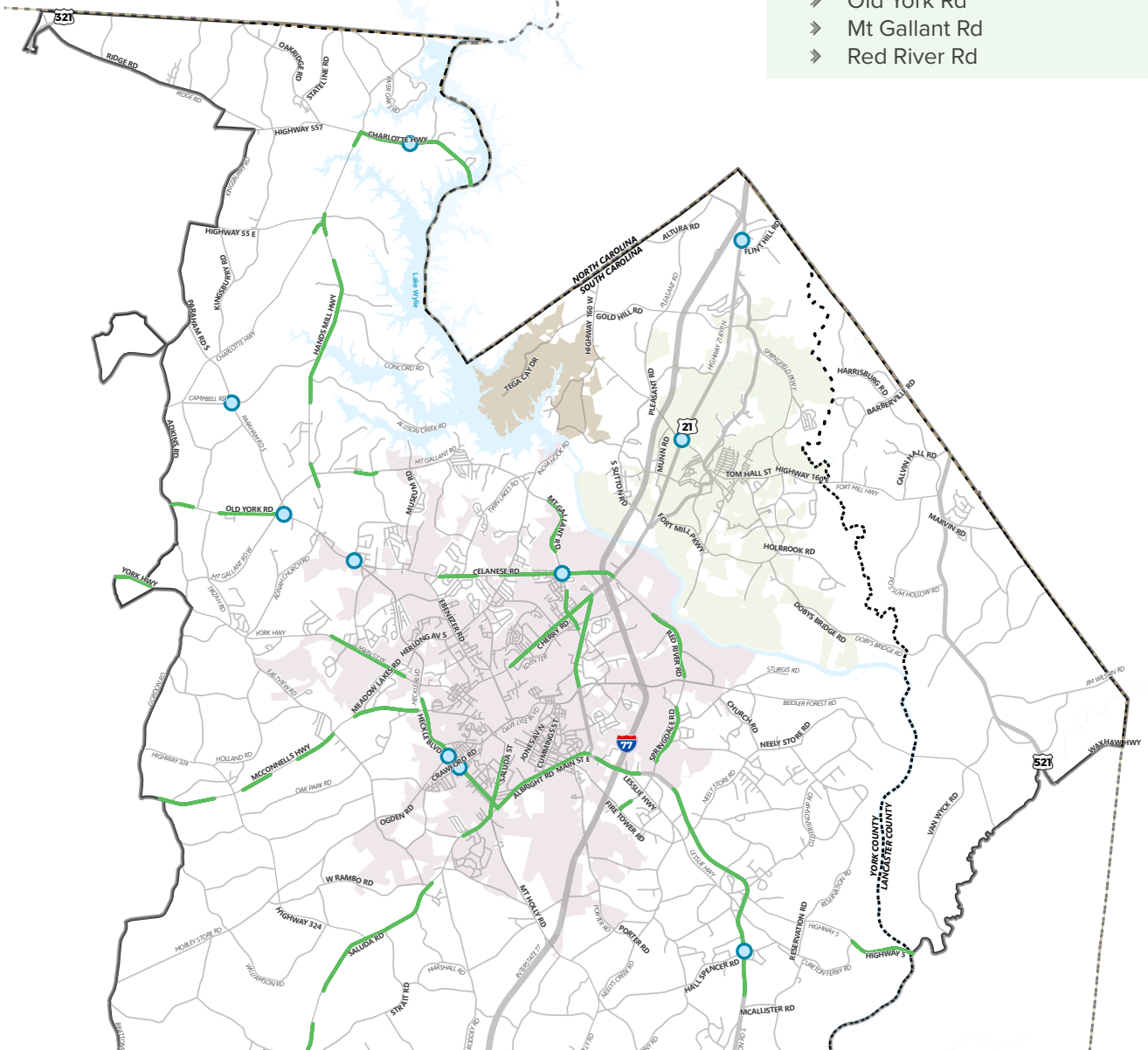
VEHICULAR PRIORITY PROJECT LOCATIONS

TOP PRIORITY INTERSECTIONS

- Anderson Rd / Hall Spencer Rd (RCI)
- SC 160 / US 21 BYP
- Celanese Rd / Mt Gallant Rd
- Old York Rd / Pennington Rd
- Heckle Blvd / Crawford Rd
- Carowinds Blvd / Pineville-Rock Hill Rd
- Old York Rd / Paraham Rd
- Charlotte Hwy / Robinwood Rd
- Heckle Blvd / Ogden Rd
- Paraham Rd / Campbell Rd (Roundabout)

TOP PRIORITY CORRIDORS

- Anderson Rd (US 21 / SC 5)
- York Hwy (SC 5 / SC 121)
- McConnells Hwy (SC 322) / Cherry Rd
- Herlong Ave
- Tega Cay Dr
- Saluda Rd
- McAllister Rd
- Charlotte Hwy (SC 49)
- Hwy 557
- Regent Pkwy
- Old York Rd
- Mt Gallant Rd
- Red River Rd



VEHICULAR PRIORITY PROJECT LOCATIONS

Vehicular Priority Locations

- Vehicular Priority Intersections
- Vehicular Priority Segments

RFATS Local Jurisdictions

- Rock Hill
- Fort Mill
- Tega Cay

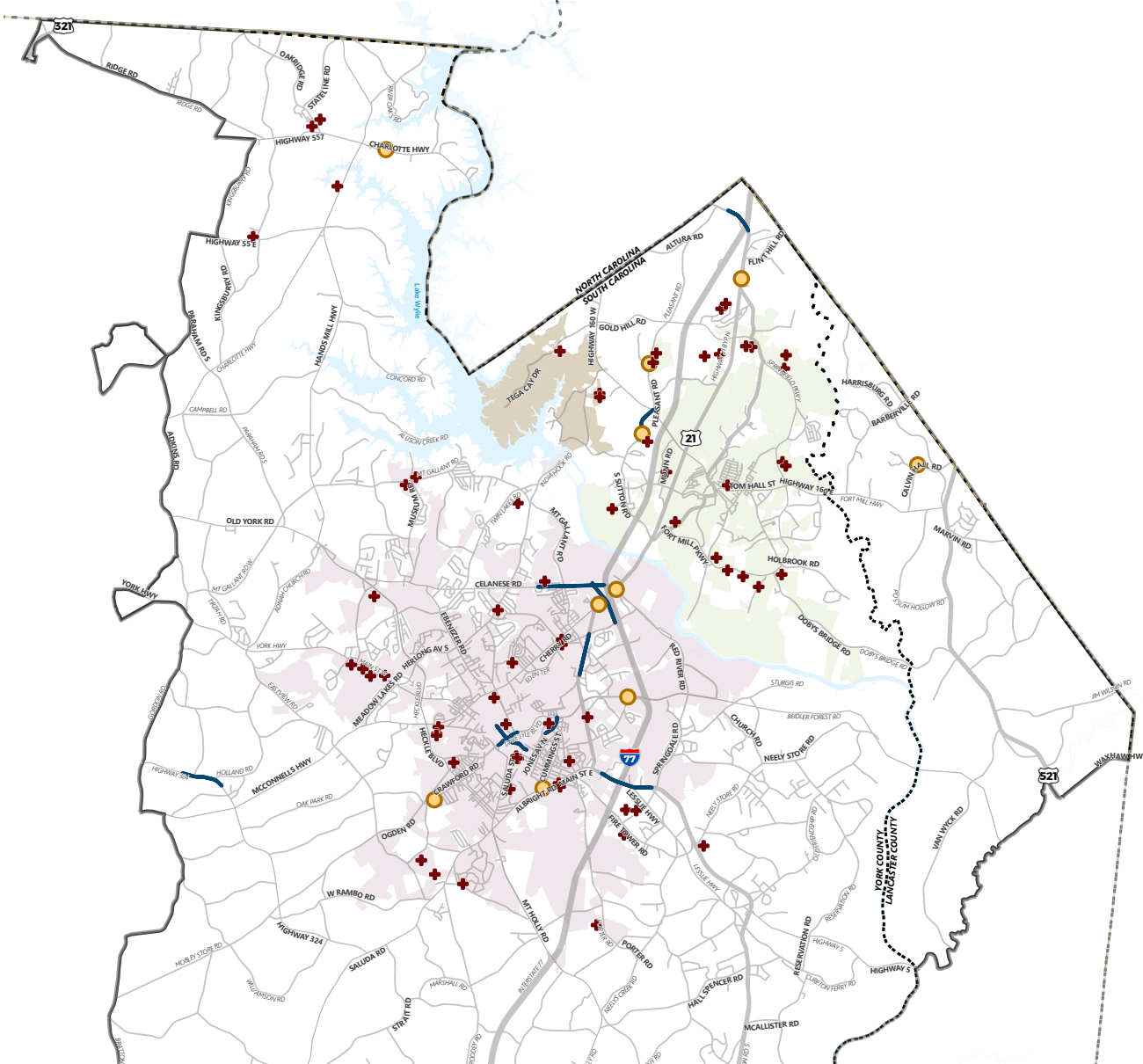
VRU PRIORITY PROJECT LOCATIONS

TOP PRIORITY CORRIDORS

- › Iredell St
- › Old York Rd
- › Dave Lyle Blvd
- › Anderson Rd
- › Carowinds Blvd
- › Sutton Rd
- › Leslie Hwy
- › White St
- › Riverview Rd
- › Hwy 324

TOP PRIORITY INTERSECTIONS

- › Cherry Rd / Patriot Pkwy
- › Dave Lyle Blvd / John Ross Pkwy
- › Sutton Rd / Market St
- › Celanese Rd / Cherry Rd
- › Pleasant Rd / Whitley Rd
- › Carowinds Blvd / Central Carolinas Pkwy
- › Glen Laurel Dr / Mercer St
- › Crawford Rd / Daisy St
- › Albright Rd / Blackmon St
- › Charlotte Hwy / Mill Pond Rd



VRU PRIORITY PROJECT LOCATIONS

VRU Priority Locations

- VRU Priority Intersections
- VRU Priority Segments
- +

RFATS Local Jurisdictions

- Rock Hill
- Fort Mill
- Tega Cay





06

**DELIVERING
SAFETY ACTIONS**



TURNING INSIGHT INTO ACTION

Reducing fatal and serious injury crashes in the RFATS region requires moving beyond understanding safety challenges to taking coordinated, data-driven action. The previous chapters established a clear foundation for this work by defining regional safety goals, analyzing where and why serious crashes occur, and incorporating community input on everyday travel experiences and concerns. Together, these elements identify the most pressing safety needs across the RFATS transportation network and highlight where targeted interventions can produce meaningful safety benefits.

This chapter translates that foundation into action. To ensure that recommended strategies are realistic, coordinated, and aligned with existing commitments, RFATS first reviewed relevant state, regional, and local plans and policies that shape transportation safety and investment decisions across the region. These plans informed the focus areas and priorities presented in this chapter and helped ensure that proposed actions build on existing frameworks, support consistent implementation across jurisdictions, and are positioned to advance regional safety goals. The sections that follow move from this alignment process to the specific strategies, countermeasures, and actions designed to reduce fatal and serious injury crashes for all roadway users.



EXISTING PLAN REVIEW

STRATEGIC SAFETY POLICIES AND PLANNING FRAMEWORKS ARE CENTRAL TO RFATS COMMITMENT TO BUILDING A SAFER, MORE ACCESSABLE TRANSPORTATION NETWORK, FOR ALL SYSTEM USERS. THE PLAN BUILDS ON A STRONG FOUNDATION OF EXISTING TRANSPORTATION PLANS AND POLICIES THAT ALREADY REFLECT THE PRINCIPLES OF THE SSA AND VISION ZERO APPROACHES. THESE LOCAL, REGIONAL, AND STATE PLANS EMPHASIZE SYSTEMIC SAFETY, MULTIMODAL ACCESS, AND DATA-DRIVEN DECISION-MAKING.

TO ENSURE ALIGNMENT AND CONTINUITY, THE PROJECT TEAM REVIEWED EACH PLAN'S SAFETY-RELATED GOALS, STRATEGIES, AND RECOMMENDED PROJECTS. THIS REVIEW IDENTIFIES HOW EXISTING INITIATIVES SUPPORT THE CSAP'S OBJECTIVES AND PROVIDES A CLEAR PATHWAY FOR IMPLEMENTATION BY CONSOLIDATING RELEVANT SAFETY PLANNING ELEMENTS INTO A UNIFIED FRAMEWORK. THE FOLLOWING SUMMARY HIGHLIGHTS HOW THESE PLANS ALIGN WITH THE CSAP.

LOCAL-LEVEL PLANS

City of Tega Cay Comprehensive Plan 2025

Tega Cay's Comprehensive Plan outlines a **community vision** that strives for a **safe, family-friendly city with strong multimodal connectivity**. The plan emphasizes Complete Streets and traffic safety as the city grows, calling for **improvements to key corridors** like SC 160 and Gold Hill Road so that these roads accommodate pedestrians and cyclists safely alongside cars.

It also focuses on expanding greenways, trails, and sidewalks, **enabling residents to walk or bike** to parks, schools, and neighborhoods safely. Maintaining Tega Cay's small-town character is important, so the plan favors **traffic calming** and **context-sensitive design** over simply widening roads.

Town of Fort Mill Trail Master Plan

Fort Mill's Trail Master Plan is a blueprint for a safer, more connected community through walking and biking. It proposes an **interconnected network** of trails, greenways, and sidewalks crisscrossing the town. The idea is that **residents should be able to walk or bike** from their neighborhood to downtown, schools, parks, or even neighboring towns without fearing for their safety.

Key initiatives include adding missing **sidewalks**, creating **safe road crossings**, and building off-street multi-use paths that keep **cyclists and pedestrians away from fast traffic**. By offering alternatives to driving, the plan not only enhances safety for those on foot or bike, but it can also ease car traffic.

York, SC 2023–2024 Annual Development Report

The City of York's Annual Development Report may not be a dedicated transportation plan, but it highlights how York is **integrating safety into its growth**. The report notes that as the city develops, it is **investing in roadway upgrades**, new **sidewalks**, and **intersection safety** enhancements.

York is making its streets more walkable and **managing increased traffic** with a **multimodal mindset** by ensuring new developments include **pedestrian infrastructure**. York's approach shows that communities can advance Vision Zero goals through steady, **incremental improvements**.

REGIONAL/MPO-LEVEL PLANS

RFATS Long Range Transportation Plan

The 2055 LRTP is updating RFATS long-term strategy with an even stronger **safety emphasis amid rapid growth**. Its core goals include providing a safe and reliable roadway system and reducing crashes across all modes of travel. The plan is **fully multimodal** and it integrates Complete Streets and transit-oriented development principles so that safety is designed into **future transportation and land use decisions**.

Residents highlighted needs for safer bike/ped connections and relief for congested corridors, and the plan responds with appropriate projects. Aligned with SS4A, the draft LRTP pairs its safety goals with **safety, climate resilience, and economic development** objectives to ensure a **holistic approach**.

RFATS Bicycle & Pedestrian Connectivity Plan (Bike Walk RFATS)

Bike Walk RFATS is the region's **active transportation master plan**, and it directly supports SS4A by aiming to make walking and biking safe and convenient for everyone. It envisions a **connected network** of sidewalks, greenways, bike lanes, and shared-use paths linking all communities in the RFATS area. The plan's goals emphasize safety for all, eliminating gaps that force pedestrians into dangerous situations.

It also includes **education and enforcement initiatives** to **encourage a culture of safety** and courtesy between road users. By getting more people walking and biking – and doing so more safely aligning perfectly with Vision Zero ideals and SS4A priorities on **vulnerable road user safety**.

RFATS Collector Street Plan (August 2026)

The Collector Street Plan aims to improve safety and traffic flow by creating a more **connected local road network**. By planning new collector roads and connections, RFATS can take pressure off major arterial highways and **spread traffic more evenly**. This reduces congestion and collision risk on the big roads. More collectors also mean more route **options for emergency responders** and safer back-road alternatives for local drivers, cyclists, and pedestrians.

The plan provides a strategy for local governments and developers to **gradually build out this network over time**, ensuring future growth contributes to better connectivity. In essence, this network level proactively reduces conditions that lead to serious crashes.

RFATS Unified Planning Work Program (UPWP, FY 2023–2025)

The UPWP is RFATS **work plan and budget** for transportation planning activities, a critical tool that ensures staff and resources are focused on the **region's top priorities**. The current UPWP explicitly supports SS4A objectives by funding the development of this CSAP.

It also covers updates to the LRTP and TIP, **congestion management**, transit planning, and **exploration of new technologies** – all done with an eye toward safety for all users, and efficiency. In short, the UPWP is how RFATS “puts its money where its mouth is” for safety, turning plans into **actionable studies and programs**.

Why include York, SC Annual Development Report?

Although York lies outside the RFATS planning area, its rapid growth is shaping regional travel patterns and may warrant future inclusion. The City's Annual Development Report highlights investments in pedestrian infrastructure, multimodal connectivity, and intersection safety that extend beyond jurisdictional boundaries.

STATE-LEVEL PLANS AND GUIDELINES

South Carolina Strategic Highway Safety Plan (SHSP) (2020–2024)

The SHSP is South Carolina’s **statewide Vision Zero plan** aimed at eliminating traffic deaths. It provides a data-driven Safe System framework covering **12 emphasis areas** (like speeding, intersections, and vulnerable road users), developed with input from MPOs such as RFATS.

The SHSP aligns with SS4A principles by **emphasizing the “4 E’s”** (Engineering, Enforcement, Education, Emergency Services) and setting ambitious targets to reduce fatalities and serious injuries on all public roads. RFATS uses the SHSP as a blueprint, tailoring its **proven strategies to local crash patterns** in pursuit of zero deaths.

South Carolina Pedestrian and Bicycle Safety Action Plan (PBSAP)

The PBSAP is a targeted safety plan for South Carolina’s most **VRU**. It responds to alarming trends by outlining systemic solutions. The PBSAP aligns with Vision Zero and SS4A by **focusing on equitable, Complete Streets policies and data-driven interventions** to protect those at highest risk.

For RFATS, the plan **identifies priority corridors** in York and Lancaster Counties and recommends specific improvements to make these areas **safer for walking and biking**. RFATS can leverage the PBSAP’s guidance to direct resources where they will save the most lives.

SCDOT Access and Roadside Management Standards (ARMS)

The ARMS are South Carolina’s statewide guidelines for access management and roadside features on highways. They support SS4A objectives by **reducing conflict points** and enforcing **safe design as roads are built** or modified. Key rules include **proper spacing** of driveways/intersections, maintaining **sight distance**, and providing **clear zones** along road shoulders.

By requiring a uniform, safety-oriented approach to road access, these standards **help prevent crashes** before they occur. In the RFATS region, ARMS ensures that rapid growth and new developments don’t create unsafe highway access.

SCDOT Work Zone Traffic Control and MUTCD Supplement

These work zone safety guidelines ensure that road **construction and maintenance areas** are set up to prevent crashes. SCDOT’s manual, in line with the federal MUTCD, standardizes how to safely manage traffic during road work, from signage and cone placement to reduced speed limits and worker training.

By requiring uniform, well-planned traffic control at every work site, the guidelines **protect both drivers and workers**, directly furthering SS4A’s goal of safe roads under all conditions. For RFATS, this means fewer crashes and injuries in work zones.

SCDOT Traffic Signal Design & District Signal Shop Guidelines

South Carolina’s traffic signal guidelines standardize the **design and timing of signals** to improve safety and efficiency at intersections. They call for performance-based signal timing and modern equipment, ensuring drivers, cyclists, and pedestrians encounter well-timed, highly visible signals statewide.

By **reducing red-light running** and **intersection confusion**, these guidelines advance SS4A’s mission to reduce serious crashes around intersections. In the RFATS area, these standards means local signals are upgraded and operated using the latest safety best practices.

SCDOT Traffic Calming Guidelines (2019)

This state program **empowers communities** to **slow down traffic on local streets** through engineered design solutions. It provides a framework for neighborhoods (in coordination with SCDOT and RFATS) to implement traffic calming measures – such as speed humps, raised crosswalks, mini-roundabouts, and road diets – to address speeding and cut-through traffic.

The process is **community-driven**: residents help identify the problem and work with officials on a solution, ensuring public buy-in. By making residential streets quieter and safer, the guidelines echo Vision Zero’s focus on speed management and SS4A’s emphasis on public engagement in safety improvements.

HOW EXISTING PLANS SUPPORT THE RFATS CSAP:

The RFATS CSAP builds on a strong foundation of state, regional, and local plans that already reflect the principles of the SS4A program. This snapshot summarizes how each policy area aligns with the CSAP's goals for systemic safety, multimodal access, and implementation readiness.

STATE-LEVEL SAFETY FRAMEWORK

South Carolina's SHSP, PBSAP, and SCDOT design standards provide a systemic, data-driven foundation that directly supports RFATS's CSAP goals to reduce fatalities and improve safety for vulnerable users.

REGIONAL POLICY & PLANNING

The RFATS 2050 and Draft 2055 LRTPs embed Vision Zero, performance-based planning, and multimodal safety priorities that align with and inform the CSAP's long-term investment strategy.

MULTIMODAL & LOCAL INTEGRATION

Plans like Bike Walk RFATS, the Collector Street Plan, and local comprehensive and trail plans advance the CSAP's goals by expanding safe, connected, and context-sensitive multimodal networks.

ENGAGEMENT FOR ALL

RFATS regional and local plans emphasize inclusive public engagement and prioritize underserved communities, reinforcing the CSAP's approach to safety planning.

DATA-DRIVEN APPROACH

The SHSP, PBSAP, LRTPs, and UPWP promote crash analysis, hotspot identification, and performance monitoring, supporting the CSAP's commitment to evidence-based safety strategies.

IMPLEMENTATION READINESS

RFATS coordinated planning framework, funding mechanisms, and interagency partnerships position the region to implement the CSAP with clear priorities, accountability, and institutional support.



**SOUTH CAROLINA
IS AMONG THE
TOP FIVE STATES
FOR PEDESTRIAN
FATALITY RATES,
WITH OVER 20%
OF ITS TRAFFIC
DEATHS INVOLVING
PEDESTRIANS OR
CYCLISTS**

SCDOT Access and Roadside Management Standards

SAFETY COUNTERMEASURES TOOLKIT

RFATS CSAP IDENTIFIED 12 ROADWAY SAFETY COUNTERMEASURE CATEGORIES DEVELOPED THROUGH A DATA-DRIVEN PROCESS GROUNDED IN SCDOT'S EMPHASIS AREAS AND REGIONAL CRASH TRENDS. RATHER THAN APPLYING A ONE-SIZE-FITS-ALL APPROACH, THE RFATS FRAMEWORK USED AVAILABLE CRASH, ROADWAY, AND SYSTEMIC RISK DATA TO REFINE STATEWIDE EMPHASIS AREAS TO THOSE MOST RELEVANT TO THE UNIQUE TRANSPORTATION AND LAND USE CONTEXT OF THE RFATS REGION.

THIS APPROACH ENSURES THAT RECOMMENDED COUNTERMEASURES DIRECTLY RESPOND TO THE REGION'S HIN, HII AND HRN, WHILE REMAINING CONSISTENT WITH VISION ZERO GOALS AND THE SAFE SYSTEM APPROACH. THE SECTIONS THAT FOLLOW INTRODUCE EACH COUNTERMEASURE CATEGORY, ALONG WITH A SAFETY JUSTIFICATION DESCRIBING HOW DATA INSIGHTS INFORMED THEIR INCLUSION AND HOW THEY ADDRESS THE SPECIFIC SAFETY CHALLENGES FACING RFATS COMMUNITIES.

From Data to Action: **Targeted Safety Countermeasures for RFATS**

The RFATS Safety Countermeasures Toolkit compiles strategies selected to directly address the primary safety emphasis areas identified through regional crash data analysis and alignment with SCDOT's emphasis area framework. Countermeasures included in the toolkit reflect documented crash reduction effectiveness and are organized to support application across the region's urban, suburban, and rural roadway contexts.

Using the RFATS data findings, emphasis areas were prioritized, allowing countermeasure selection to be narrowed to treatments most relevant to the region's crash patterns and HIN, HII, and HRN. This targeted approach enables jurisdictions to move beyond generalized safety strategies and focus on countermeasures with demonstrated safety benefits that align with local roadway characteristics, traffic volumes, and user needs.

The toolkit is intended to serve as a practical resource to support coordination among RFATS jurisdictions, SCDOT, and local agencies, providing a common reference for understanding safety benefits, application considerations, and implementation timeframes. The full RFATS Safety Countermeasures Toolkit is provided in the Appendix.

**THE FOLLOWING
PAGES PROVIDE AN
OVERVIEW OF EACH
COUNTERMEASURES
BY DATA-DRIVEN
FOCUS AREA**

TECHNICAL COMMITTEE FUNCTION:

The RFATS MPO Technical Committee functioned as the steering committee for the CSAP. Through a series of meetings and ongoing coordination, the Technical Committee guided key elements of the planning process, including safety analysis, public and stakeholder engagement, identification of priority safety needs, development of strategies and projects, and consideration of policy and process changes.

This multidisciplinary structure ensured that decisions were informed by a range of perspectives and that safety issues were addressed consistently at a regional scale, rather than on a jurisdiction-by-jurisdiction basis and designed to support not only development of the CSAP, but also coordination, implementation, and ongoing monitoring of safety priorities over time.

FOCUS AREAS:

OVERVIEW OF TOOLKIT TO ALIGN SAFETY

INFRASTRUCTURE

WHERE CRASHES HAPPEN



INTERSECTIONS

Intersections were prioritized due to their outsized share of fatal and serious injury crashes across the RFATS HIN. **Goal 2: Promote Safe Speeds and Safe Roads.**



LANE DEPARTURES

Lane departure countermeasures address one of the most common contributors to severe crashes on RFATS roadways. **Goal 2: Promote Safe Speeds and Safe Roads.**

HUMAN FACTORS

HOW CRASHES HAPPEN



DISTRACTED + IMPAIRED DRIVING

Countermeasures support safer decision-making on corridors where driver inattention contributes to high crash risk. **Goal 4: Foster a Culture of Shared Responsibility for Safety.**



SPEEDING

Speed management addresses the strong link between higher speeds and crash severity on RFATS high-risk corridors. **Goal 2: Promote Safe Speeds and Safe Roads.**

HIGH-RISK ROADWAY USERS

WHO IS MOST AFFECTED



CYCLING + PEDESTRIAN USERS

Bicycle countermeasures respond to elevated crash risk where bicyclists travel alongside higher-speed traffic. **Goal 3: Prioritize Vulnerable Road Users.**



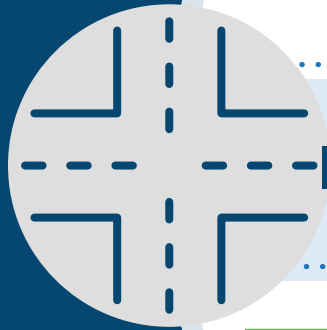
WORK ZONES

Work zone strategies address safety risks created by changing roadway conditions. **Goal 2: Promote Safe Roads.**



MATURE + YOUNG DRIVERS

Countermeasures respond to crash patterns linked to inexperience and risky driving behaviors. **Goal 4: Foster a Culture of Shared Responsibility for Safety.**



INTERSECTIONS COUNTERMEASURES






INTERSECTIONS: HOW THE DATA INFORMED THIS FOCUS AREA

Intersections are a primary contributor to **crash frequency and severity**. Over **26% of all crashes** are intersection-related, and **approximately 30% of KA crashes** are identified as intersection-related.

The HII analysis further shows that a **small number of intersections account for a disproportionate share of fatal and serious injury crashes**. Intersections concentrate conflict points, decision-making demands, and speed differentials, making them high-risk locations for systemic safety improvements.

INTERSECTIONS
172* KA CRASHES

COUNTERMEASURES

COUNTERMEASURE	DESCRIPTION
 Advance Yield/ Stop Lines with Signs	Place stop/yield lines 20–50 ft in advance of crosswalks with ‘Yield/Stop Here for Pedestrians’ signs.
 Curb Extensions (Bump Outs)	Extend curb into parking lane to shorten pedestrian crossing distance and improve sightlines.
 Raised Crosswalks	Crosswalk elevated to the sidewalk grade to calm traffic at crossings.
 Right-Turn Restrictions	Right-turn restrictions limit the ability to make right turns on certain signal phases. This helps to reduce the number of conflicts with pedestrians and bicyclists who may also be crossing during this time.
 Traffic Signal Coordination	Implement timed and coordinated traffic signals with adequate clearance intervals to improve traffic flow, reduce red-light running, and manage speeds.



TRAFFIC-CALMING
CROSSINGS THAT SLOW
VEHICLES AND PRIORITIZE
PEDESTRIANS AT
INTERSECTIONS



LANE DEPARTURES COUNTERMEASURES






LANE DEPARTURE: HOW THE DATA INFORMED THIS FOCUS AREA

Lane departure crashes account for approximately **16% of all crashes** but represent **over 40% of KA crashes**, indicating a strong relationship with crash severity. KA data show a high proportion of fatal and serious injuries associated with **run-off-road and crossover events**.






Lane departure crashes are closely tied to roadway geometry, roadside conditions, and speed. Their overrepresentation in severe outcomes makes them a core infrastructure focus area.

LANE DEPARTURE
232* KA CRASHES

COUNTERMEASURES

COUNTERMEASURE	DESCRIPTION
 Speed Humps/ Tables	Vertical deflection devices to slow vehicles on local/collector streets.
 Lane Diet (Lane Narrowing)	Narrow travel lanes to lower speeds and reallocate space to bike lanes, buffers, or wider sidewalks.
 Driveway Improvements	Tighten radii, maintain sidewalk level, continuous materials, and clear sightlines to reduce conflicts.
 Pedestrian Refuge Islands / Raised Medians	Provide a protected space in the median for two-stage crossings on multi-lane roads.
 Median Barriers	Barriers that run parallel to the roadway that separate traffic on divided highways. Barriers help to reduce cross-median crashes.

PHYSICAL SEPARATION THAT PREVENTS CROSS-MEDIAN AND HEAD-ON CRASHES

COUNTERMEASURE	DESCRIPTION
 General Lighting Improvements	Install/upgrade roadway and crosswalk lighting to improve nighttime visibility.
 Road Safety Audits (RSAs)	Safety performance examination of a roadway segment or intersection.
 Wider Shoulders	Wider shoulders give drivers room to correct after passing over the white roadway edge line. Sudden pavement edges can make the return to the roadway difficult and cause loss of vehicular control.
 Roadside Barriers	Barriers that run parallel to the roadway on the outside edge that redirect run-off vehicles away from slopes or roadside objects.
 Sight Distance Improvements	Sight distance improvements include removing obstacles from the travel area and edges to increase visibility of oncoming and turning traffic and traffic control devices.



DISTRACTED + IMPAIRED DRIVING COUNTERMEASURES

DISTRACTED + IMPAIRED DRIVING: **HOW THE DATA INFORMED THIS FOCUS AREA**




Distracted driving accounts for roughly 12% of all crashes, while impaired driving represents a smaller share of total crashes but a much higher share of fatal outcomes. In the KA dataset, **impaired driving alone** accounts for nearly **one-quarter of severe crashes**, with a notably high fatality rate.

Distraction and impairment share a common crash mechanism and together represent a significant human-factor contribution to serious and fatal crashes. Combining these emphasis areas reflects their shared behavioral root cause.

**DISTRACTED +
IMPAIRED DRIVERS**

145* KA CRASHES

COUNTERMEASURES

COUNTERMEASURE	DESCRIPTION
 Driver Training	Increase driver awareness of pedestrians and bicyclists and inform drivers of their responsibility to prevent crashes and enhance safety.
 Rumble Strips (Centerline + Shoulder)	Milled rumble strips to alert inattentive drivers and reduce roadway departures and head-on crashes.
 Social Media Campaign	Provide information via social media to increase awareness of roadway safety.



AUDIBLE AND TACTILE WARNINGS THAT HELP PREVENT LANE DEPARTURE CRASHES



SPEEDING COUNTERMEASURES






SPEEDING: HOW THE DATA INFORMED THIS FOCUS AREA

Speeding is identified in approximately **6% of all crashes**, yet it is present in nearly **30% of KA crashes**, including a substantial number of fatalities. This disparity underscores the role of speed as a **severity multiplier**, rather than merely a crash initiator.

Even when speeding is not the primary cause, it dramatically increases crash severity. The data support speed management as a core focus area influencing fatal and serious injury outcomes.

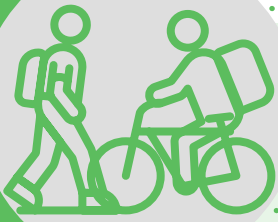
SPEEDING
166* KA CRASHES

COUNTERMEASURES

COUNTERMEASURE	DESCRIPTION
 Speed Enforcement	Increased police enforcement along target corridors.
 Corridor Access Management (Replace TWLTL with Raised Median)	Reduce conflict points by restricting midblock left turns and consolidating driveways.
 Speed Humps/Tables	Vertical deflection devices to slow vehicles on local/collector streets.
 Traffic Signal Coordination	Implement timed and coordinated traffic signals with adequate clearance intervals to improve traffic flow, reduce red-light running, and manage speeds.
 Lane Diet (Lane Narrowing)	Narrow travel lanes to lower speeds and reallocate space to bike lanes, buffers, or wider sidewalks.

A traffic signal with a green light illuminated, set against a blue background with green foliage. The signal is mounted on a pole and has three lights. The bottom light is green and is lit up. The top and middle lights are unlit. The background is a solid blue color with some green foliage visible on the left and right sides.

TRAFFIC SIGNAL
COORDINATION
REDUCES REAR-END AND
INTERSECTION CRASHES BY
IMPROVING TRAFFIC FLOW.



CYCLING + PEDESTRIAN USERS COUNTERMEASURES






CYCLING + PEDESTRIAN USERS: **HOW THE DATA INFORMED THIS FOCUS AREA**

Cyclist and pedestrian crashes make up **less than 1% of all crashes**, yet they account for a **disproportionately high share of fatalities and serious injuries**. Baseline Totals show **24 VRU fatalities** and **48 serious injuries** over the analysis period.

Cyclists and pedestrians lack physical protection, making any crash more likely to result in serious injury or death. Combining these modes reflects shared exposure and risk profiles.

CYCLING +
PEDESTRIAN USERS
72* KA CRASHES

COUNTERMEASURES

CYCLING COUNTERMEASURE	DESCRIPTION
 Separated Bikeways / Cycle Tracks	Two-way paths for bicyclists and pedestrians, separated from motor traffic.
 Bicycle Signals	Dedicated bicycle signal heads/phases to reduce conflicts and assign right-of-way for cyclists.
 Bicycle Boxes	Advance stop area for cyclists at signals to increase visibility and reduce right-turn conflicts.
 Right-Turn Restrictions	Right-turn restrictions limit the ability to make right turns on certain signal phases. This helps to reduce the number of conflicts with pedestrians and bicyclists who may also be crossing during this time.
 Pedestrian and/or Bicycle Safety Educational Classes	Provide information on traffic laws and proper bicycling behavior on roadways

CYCLING AND PEDESTRIAN IMPROVEMENTS REDUCE CRASH RISK BY INCREASING VISIBILITY, PREDICTABILITY, AND SEPARATION FROM VEHICLES

PEDESTRIAN COUNTER-MEASURE

DESCRIPTION



Sidewalks / Walkways

ADA-compliant sidewalks or walkways to separate pedestrians from motor traffic and provide connected routes.



Pedestrian Hybrid Beacon (PHB/HAWK)

Pedestrian-activated beacon with red indication sequence to assign right-of-way for safe crossing.



Rectangular Rapid Flashing Beacon (RRFB)

Pedestrian-actuated flashing yellow beacons to improve yielding at uncontrolled crossings.



Leading Pedestrian Interval (LPI)

Signal timing gives pedestrians a 3–7 second head start before parallel vehicle green.



Safe Route to School Programs

Increase safety for students and parents walking and bicycling to and from school.



MATURE + YOUNG DRIVERS COUNTERMEASURES

MATURE + YOUNG DRIVERS: HOW THE DATA INFORMED THIS FOCUS AREA

High-risk drivers at the extremes of age are overrepresented in severe crashes. KA data show that **young drivers account for over 30% of KA crashes**, while **mature drivers account for nearly 20%**, with both groups experiencing notable fatal and serious injury counts.

While the underlying reasons differ (inexperience and risk-taking versus declining perception and reaction), both groups exhibit elevated crash risk and severity, justifying a combined age-based focus area.

**MATURE + YOUNG
DRIVERS
290*** KA CRASHES

COUNTERMEASURES

COUNTERMEASURE

DESCRIPTION



Driver Training

Increase driver awareness of pedestrians and bicyclists and inform drivers of their responsibility to prevent crashes and enhance safety.



Pedestrian and/ or Bicycle Safety Educational Classes

Provide information on traffic laws and proper bicycling behavior on roadways



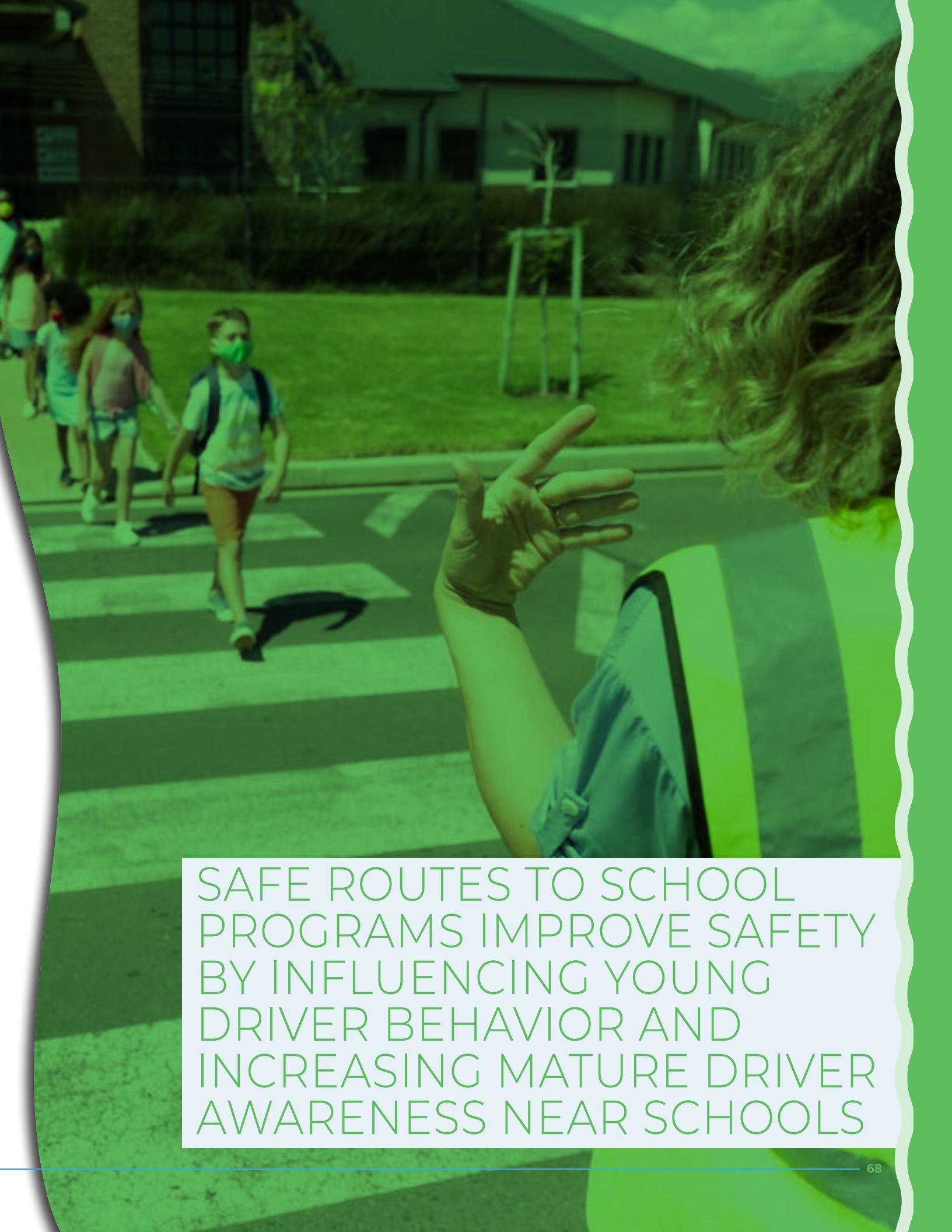
Safe Route to School Programs

Increase safety for students and parents walking and bicycling to and from school.



Social Media Campaign

Provide information via social media to increase awareness of roadway safety.



SAFE ROUTES TO SCHOOL PROGRAMS IMPROVE SAFETY BY INFLUENCING YOUNG DRIVER BEHAVIOR AND INCREASING MATURE DRIVER AWARENESS NEAR SCHOOLS



WORK ZONES COUNTERMEASURES



WORK ZONES: HOW THE DATA INFORMED THIS FOCUS AREA

Work zone crashes represent **less than 1% of total crashes**, but KA data show that **nearly all severe work zone crashes result in serious injury**. Work zones introduce temporary, unfamiliar conditions and place both road users and workers at heightened risk.

Despite their lower frequency, work zone crashes are consistently severe due to constrained space, altered traffic patterns, and close proximity to workers.

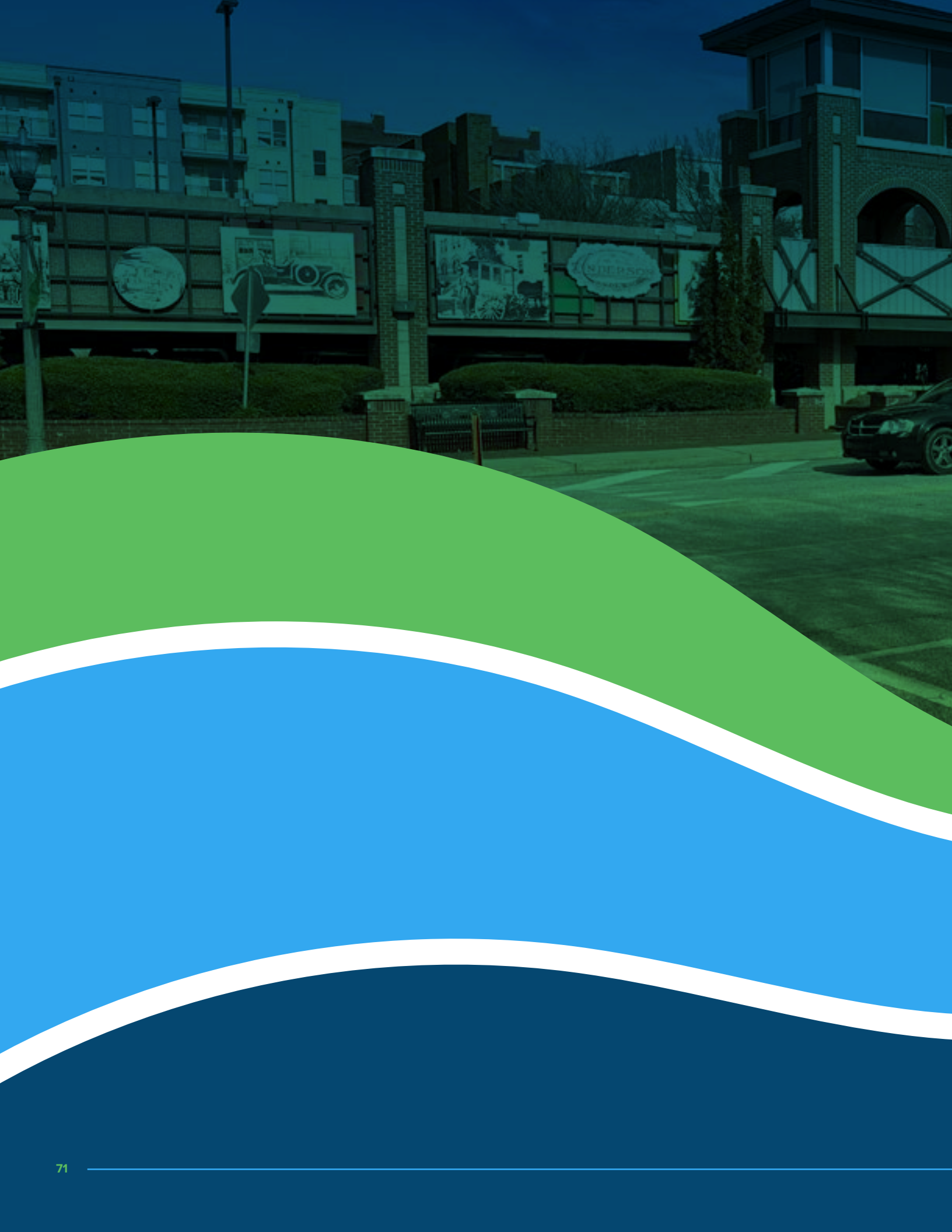
WORK ZONES
6* KA CRASHES

COUNTERMEASURES

COUNTERMEASURE	DESCRIPTION
 General Lighting Improvements	Install/upgrade roadway and crosswalk lighting to improve nighttime visibility.
 Road Safety Audits (RSAs)	Safety performance examination of a roadway segment or intersection.

GENERAL LIGHTING
IMPROVEMENTS ENHANCE
WORK ZONE SAFETY BY
INCREASING VISIBILITY FOR
DRIVERS AND WORKERS







07

**DEMONSTRATING
ACCOUNTABILITY**

IMPLEMENTATION FRAMEWORK

HOW THE RECOMMENDATIONS ARE ORGANIZED

Recommendations were developed based on the safety issues identified through crash analysis and refined through the plan's focus areas, ensuring alignment between documented risk patterns and proposed actions. Together, these recommendations reflected a comprehensive, system-wide response to roadway safety challenges across the RFATS region.

To support effective implementation, recommendations were organized in a consistent sequence. A foundational set of Leadership and Commitment actions established the policies, partnerships, and accountability needed to advance safety efforts. Subsequent sections presented three prioritized recommendations within each SSA element to address the region's most pressing safety needs.

Each recommendation included clear information on type, timeframe, cost, and applicable focus areas, providing decision-makers with the context needed to advance near-term actions while planning for long-term safety improvements. Collectively, these recommendations formed an actionable framework for implementing the RFATS CSAP and advancing the plan's safety goals.



RECOMMENDATION TYPE



Education

Builds awareness of safe travel behaviors on high-speed corridors with frequent severe crashes in the RFATS region.



Emergency Response

Improves post-crash response and access to care across growing communities and areas with longer response distances.



Enforcement

Supports targeted, data-driven traffic enforcement along RFATS priority corridors with a history of severe crashes.



Engineering

Improves safety through design and operational changes on RFATS roadways identified as having elevated crash risk.



Planning

Guides long-term, data-driven safety investments aligned with RFATS growth patterns and priority locations.

THE OUTLINE

HOW THE RECOMMENDATIONS FLOW

1. LEADERSHIP + COMMITMENT

2. SAFE SYSTEMS APPROACH ELEMENTS

- » Safer Vehicles
- » Safer Roads
- » Safer Speeds
- » Post-Crash Care
- » Safer People


3. TRANSPARENCY + ACCOUNTABILITY

ANATOMY OF A RECOMMENDATION

TIMELINE

 Immediate
Less than 1 year to implement

 Medium
1-3 years to implement

 Long
More than 3 years to implement

FOCUS AREA



Intersections



Lane Departure



Distracted + Impaired Driving



Speeding



Cycling + Pedestrian Users



Mature + Young Drivers



Work Zone

MEANING BEHIND THE COLOR



Focus Area (Color)
APPLICABLE



Focus Area (Grey)
NOT APPLICABLE

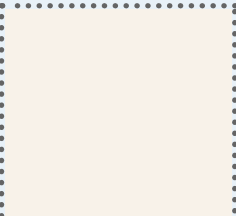
IMPLEMENTATION RECOMMENDATION

Description of the implementation recommendation will be inserted here

TYPE



TIMEFRAME



COST



FOCUS AREA



COST



Low



Low-Mid



Medium



Mid/High




THE FOLLOWING RECOMMENDATIONS ARE ORGANIZED USING THIS FRAMEWORK TO ENSURE CLARITY, CONSISTENCY, AND TRANSPARENCY IN WHAT ACTIONS ARE PROPOSED, WHEN THEY SHOULD OCCUR, THEIR RELATIVE COST, AND THE FOCUS AREAS THEY SUPPORT.

LEADERSHIP+ COMMITMENT

Effective implementation of the RFATS CSAP depends on sustained leadership, clear accountability, and coordinated decision-making across jurisdictions and partner agencies. While countermeasures are organized by specific safety focus areas, Leadership and Commitment actions establish the policy, governance, and institutional framework that enables those strategies to advance.





FORMALIZE VISION ZERO COMMITMENT

Formally adopt a regional Vision Zero policy committing RFATS jurisdictions to eliminating fatal and serious injury crashes, with interim targets aligned to the 2040 and 2055 safety goals.

TYPE	TIMEFRAME	COST	FOCUS AREA
 Planning	 Immediate	 Low	





FORMALIZE CROSS-AGENCY COORDINATION

Establish a standing coordination process among RFATS, SCDOT, local governments, law enforcement, and EMS to align safety policy, enforcement priorities, and implementation responsibilities.

TYPE	TIMEFRAME	COST	FOCUS AREA
 Planning	 Immediate	 Low	

INSTITUTIONALIZE SAFETY REPORTING

Direct regular reporting on safety trends and CSAP implementation progress to maintain transparency and reinforce leadership commitment to safety outcomes.



TYPE	TIMEFRAME	COST	FOCUS AREA
 Planning	 Immediate	 Low	

SAFER VEHICLES

Safer Vehicles play a critical role in reducing the severity of crashes by protecting occupants and vulnerable road users when mistakes occur. The following recommendations focus on practical strategies that support safer vehicle operation


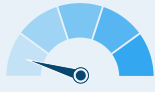








ENCOURAGE EMPLOYER FLEET SAFETY POLICIES

Support development of regional employer guidance encouraging fleet safety policies, routine vehicle maintenance, and adoption of vehicle safety technologies for employees who drive as part of their job.

TYPE	TIMEFRAME	COST	FOCUS AREA
			      
Planning	Medium	Low	


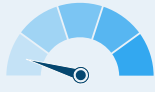








EXPAND SEATBELT & VEHICLE SAFETY MESSAGING

Coordinate with law enforcement partners to reinforce seatbelt use and occupant protection messaging as a core strategy, integrated into RFATS impaired driving, speeding, and nighttime safety campaigns.

TYPE	TIMEFRAME	COST	FOCUS AREA
			      
Education	Immediate	Low	

IMPROVE VEHICLE LIGHTING AND VISIBILITY

Promote proper vehicle lighting, headlight use, and visibility features through RFATS safety messaging, particularly along corridors with elevated nighttime roadway-departure and pedestrian fatal and serious injury crashes.

TYPE	TIMEFRAME	COST	FOCUS AREA
			      
Education	Immediate	Low	

SAFER SPEEDS

When crashes occur, the transfer of kinetic energy from one object to another can have life altering affect. The amount of kinetic energy transferred is heavily dependent on the rate of speed a vehicle is travelling. By lowering vehicular speeds we can reduce the amount of energy transferred thereby reducing the potential severity of a crash. Safe Speed Actions should be used to reduce speeds through geometric design, enforcement, and public policy,

DEVELOP A SPEED MANAGEMENT PLAN

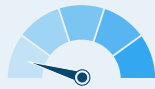
Compare posted and operating speeds, identify RFATS locations where speed contributes to severe crashes, and recommend targeted speed limit modifications.

TYPE



Planning

TIMEFRAME



Immediate

COST



Low

FOCUS AREA



DEPLOY SYSTEMIC SPEED COUNTERMEASURES

Deploy speed-related safety countermeasures at high-crash locations identified through the RFATS CSAP HIN/HII, with future refinement through a regional Speed Management Plan.

TYPE



Engineering

TIMEFRAME



Medium

COST



Mid/High

FOCUS AREA



CONDUCT HIGH-VISIBILITY SPEED ENFORCEMENT

Conduct high-visibility speed enforcement at RFATS locations where speed-related crashes are over-represented and evaluate the potential benefits and challenges of automated speed enforcement for leadership consideration.

TYPE



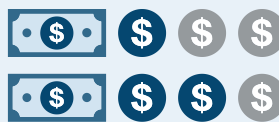
Enforcement

TIMEFRAME



Medium

COST



Low-Mid

FOCUS AREA



SAFER ROADS

Safer Roads strategies address roadway conditions and planning decisions that contribute to crash risk across the RFATS region. In response to rapid growth and increasing traffic demands, these recommendations focus on proactive assessment, access management, and staff training to improve safety





CONDUCT RSAS AT PRIORITY LOCATIONS

Conduct RSAs at the top priority locations identified in this plan in coordination with municipal partners. Use RSAs to evaluate roadway conditions, identify crash causation, and recommend context-appropriate countermeasures aligned with RFATS priorities and implementation feasibility.

TYPE	TIMEFRAME	COST	FOCUS AREA
 Planning	 Medium	 Low-Mid	


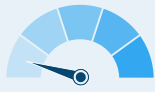
IMPLEMENT ACCESS MANAGEMENT IMPROVEMENTS

Advance access management strategies, including driveway consolidation and median control, along RFATS arterial corridors to reduce conflict points in areas experiencing rapid growth and increasing traffic volumes.

TYPE	TIMEFRAME	COST	FOCUS AREA
 Engineering	 Medium	 Medium	

TRAIN LOCAL STAFF ON SYSTEMIC SAFETY DESIGN

Offer training for municipal and county planning, engineering, and public works staff on applying systemic safety principles during roadway planning and project development.

TYPE	TIMEFRAME	COST	FOCUS AREA
 Education	 Immediate	 Low	

POST-CRASH CARE

Post-crash care challenges in the RFATS region are shaped by rapid growth, dispersed development patterns, and serious crashes concentrated along a limited number of high-risk corridors. These recommendations focus on improving coordination among responders, strengthening trauma access in fast-growing suburban and rural edge areas, and using post-crash data to identify gaps and improve response practices.

STRENGTHEN INCIDENT RESPONSE COORDINATION

Coordinate with fire, EMS, law enforcement, and incident responders to identify opportunities to reduce secondary crashes at Intersection and work-zone where these crashes tend to occur.

TYPE



Emergency Response

TIMEFRAME



Medium

COST



Low-Mid

FOCUS AREA



STRENGTHEN TRAUMA ACCESS ALONG HIGH-RISK CORRIDORS

Coordinate with regional hospitals, EMS providers, and SCDOT to evaluate trauma care coverage along HIN corridors, particularly fast-growing suburban/rural edges, to ensure crash victims are routed to facilities quickly.

TYPE



Emergency Response

TIMEFRAME



Long

COST



Mid/High

FOCUS AREA



ENHANCE POST-CRASH DATA SHARING + AFTER-ACTION REVIEW

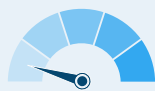
Continue supporting proven young driver safety initiatives, such as Alive @ 25 that promote safe driving behaviors among young drivers.

TYPE



Education

TIMEFRAME



Immediate

COST



Low

FOCUS AREA



SAFER PEOPLE

Addressing driver behavior is critical to reducing severe crashes in the RFATS region. These recommendations focus on impaired driving and speeding through education-led strategies reinforced by targeted enforcement, particularly along HIN corridors. Together, these actions support safer driving behaviors where crash severity and frequency are highest.

ENHANCE SFST/DRE FOR AT-RISK DRIVERS

Apply Standardized Field Sobriety Test (SFST) and Drug Recognition Expert (DRE) testing and evaluation through regular traffic enforcement and crash investigations or at public safety checkpoints, at key RFATS HIN corridors such as Anderson Rd, Cherry Rd, Tega Cay Dr, and Old York Rd, with emphasis on nighttime enforcement.

TYPE



Enforcement

TIMEFRAME



Medium

COST



Low

FOCUS AREA



PROMOTE SAFE SPEED AWARENESS

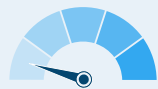
Support targeted education and enforcement campaigns focused on speeding along RFATS HIN corridors, emphasizing crash severity and stopping-distance risks on high-speed arterial roadways.

TYPE



Education

TIMEFRAME



Immediate

COST



Low

FOCUS AREA



STRENGTHEN YOUNG DRIVER SAFETY INITIATIVES

Continue supporting proven young driver safety initiatives, such as Alive @ 25 that promote safe driving behaviors among young drivers.

TYPE



Education

TIMEFRAME



Immediate

COST



Low

FOCUS AREA



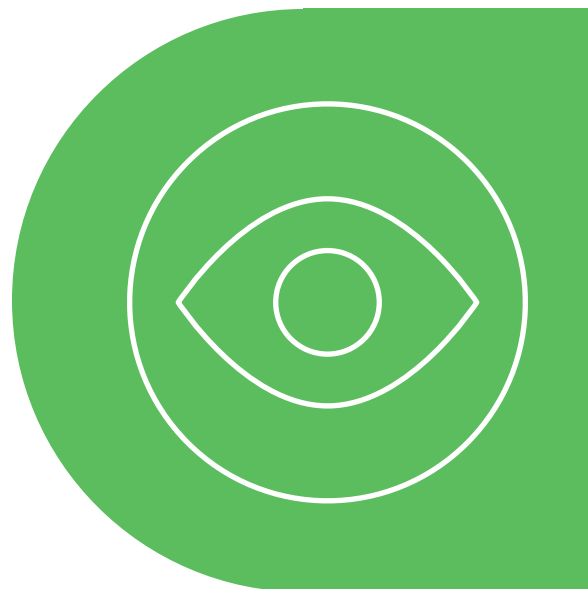
SAFETY METRICS

MEASURING PROGRESS TOWARD VISION ZERO

Safety metrics provide the foundation for moving the needle and tracking progress toward Vision Zero across the RFATS region. While the CSAP identifies priority focus areas, goals, and recommendations, safety metrics define how progress will be measured, evaluated, and communicated over time.

The metrics presented on this page emphasize data-driven decision-making, transparency, and accountability by combining outcome measures, leading indicators, and implementation tracking. Together, they support a consistent regional approach to monitoring safety trends, assessing whether planned actions are producing meaningful improvements, and informing future adjustments as the region advances toward eliminating fatal and serious injury crashes.

Achieving Vision Zero is a shared community responsibility. Data, transparency, and accountability are critical to ensuring that recommended actions are implemented effectively and that progress is clearly understood. As the RFATS region continues to experience growth at both ends of the planning area, regional mobility and coordination will become increasingly important. This safety metrics framework supports regional partnerships and provides a clear, data-informed path forward for improving safety as development and travel demands evolve.



ACCOUNTABILITY

These recommendations establish clear expectations for **monitoring** progress, **documenting** outcomes, and **assessing** whether planned actions are **producing meaningful safety improvements**. These actions emphasize follow-through, performance review, and responsibility for results as the RFATS region advances toward Vision Zero.

Track Implementation Gaps, Not Just Progress

Recommendation:

Track and **document** where CSAP strategies and priority actions have not yet been implemented, including known constraints, delays, or barriers to delivery.

Maintain a Public CSAP Implementation Status Summary

Recommendation:

Maintain a publicly accessible progress summary showing the **status** of CSAP recommendations, including general progress, time horizon, and responsible partners.

Conduct Periodic Performance Reviews of Safety Outcomes

Recommendation:

Conduct **periodic reviews** comparing expected safety outcomes to **observed trends** to assess whether implemented strategies are achieving intended results.

DATA

These recommendations strengthen how safety information is defined, measured, and interpreted across the RFATS region. These actions emphasize **consistent** metrics, **repeatable** analysis, and **clear benchmarks** to support evidence-based decision-making and long-term tracking of progress toward Vision Zero.

Formalize a Regional Definition of “Progress Toward Vision Zero”

Recommendation:

Establish a regionally **consistent** definition of “progress toward Vision Zero,” including **interim benchmarks** tied to RFATS goals, focus areas, and severity outcomes.

Publish an Annual RFATS Safety “State of the Region” Snapshot

Recommendation:

Release a concise **annual** snapshot summarizing regional safety trends, **progress toward Vision Zero benchmarks**, and emerging risk patterns.

Establish a Regional Safety Metrics Governance Framework

Recommendation:

Develop a documented framework describing **how RFATS safety metrics are selected**, updated, reviewed, and refined over time to ensure **consistency**, relevance, and data integrity.

TRANSPARENCY

These recommendations ensure that safety **information**, progress **updates**, and **decision-making processes** are clearly **communicated** and **accessible** to stakeholders and the public. These actions emphasize openness, clarity, and consistency in how safety priorities and outcomes are shared across the RFATS region.

Document How Safety Data Informed Regional Priorities

Recommendation:

Document and **communicate** how crash data, focus areas, and safety metrics are **used** to **inform regional safety priorities** and recommendations.

Use plain-Language Summaries of Safety Trends and Progress

Recommendation:

Develop **plain-language** summaries and visuals to accompany technical safety **information** so progress and trends are **understandable** to **non-technical audiences**.

Establish a Public, Online Safety Dashboard

Recommendation:

Develop and maintain a publicly accessible, **online dashboard** that presents key safety metrics, progress summaries in a clear, **user-friendly format**.