

Capital Region Vision Zero Safety Action Plan

prepared for

Capital Region Transportation Council

prepared by

Cambridge Systematics, Inc.

with

Byer Planning

Capital Streets

Highland Planning

FHI Studio

Stantec

draft

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date

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Inside Cover

Disclaimer

This document was prepared and published by the Capital Region Transportation Council (Transportation Council), the Metropolitan Planning Organization (MPO) for Albany, Rensselaer, Saratoga, and Schenectady counties. Financial assistance for the preparation of this document was provided through the Office of the Secretary of Transportation, with additional support from the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) through the New York State Department of Transportation (NYSDOT). The Transportation Council is solely responsible for its content, and the views and opinions expressed herein do not necessarily reflect the official views or policy of the United States Department of Transportation (U.S. DOT).

Title VI and Non-Discrimination Policy Statement

The Capital Region Transportation Council (Transportation Council) is committed to ensuring that no person is excluded from participation in, or denied the benefits of, its metropolitan transportation planning process on the basis of race, color, or national origin as protected by Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d). Additionally, the Transportation Council will provide meaningful access to services for persons with Limited English Proficiency (LEP) in accordance with Executive Order # 13166. The Transportation Council is also committed to ensuring that no person is excluded from participation in, or denied the benefits of, its transportation planning process on the basis of sex, age, or disability as protected by Section 162 (a) of the Federal-Aid Highway Act of 1973 (23 U.S.C. § 324), the Age Discrimination Act of 1975, Section 504 of the Rehabilitation Act of 1973, and the Americans with Disabilities Act of 1990.

It is also the policy of the Transportation Council to ensure that all programs, policies, and other activities do not have disproportionate adverse effects on minority and low-income populations in accordance with Executive Order #12898.

If information is needed in another language, please contact (518) 458-2161 or send an e-mail to info@capitalmpo.org.

Protection of Data from Discovery Admission into Evidence

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

Executive Summary

Background and Goal Setting

In 2023, the U.S. Department of Transportation (U.S. DOT) awarded the Capital Region Transportation Council (Transportation Council) a Safe Streets and Roads for All (SS4A) grant to develop a Comprehensive Roadway Safety Action Plan (CRSAP). The Transportation Council developed and adopted this CRSAP, the Capital Region Vision Zero Safety Action Plan (“VZSAP”), to guide how the region will work to reduce traffic fatalities and serious injuries on all roadways in the Capital Region for all road users including people who drive, walk, bike, or ride transit.

The VZSAP follows the Safe System Approach, a national paradigm for eliminating roadway fatalities by addressing human error and vulnerability through multiple layers of protection. It focuses on five key areas: safer people, safer roads, safer vehicles, safer speeds, and post-crash care. The approach accounts for both human mistakes and the human body’s vulnerability in collisions by both preventing crashes and reducing harm when crashes may occur.

The VZSAP sets a goal to eliminate roadway fatalities and reduce serious injuries by 50 percent by 2050. Additionally, this goal is aligned with safety goals identified in the 2023 New York State Strategic Highway Safety Plan and the Long-Range Transportation Plan for the Capital Region.

Engagement and Collaboration

To ensure a public- and stakeholder-driven VZSAP, the Transportation Council developed a robust community engagement program that encouraged and solicited public feedback throughout the region. From November 2023 to June 2025, the Transportation Council conducted in-person and online engagement activities, including Community Advisory Committee (CAC) meetings, presentations at key meetings throughout the region, public open houses, meetings, tabling at local community centers, and virtual and interactive efforts. The CAC convened regularly to engage agencies and other stakeholders at key milestones during the planning process and to invite members to provide their feedback on concerns and recommendations from their unique perspectives. Public meetings were held in the Summer of 2024, spring of 2025, and the Summer of 2025. Meetings were designed to be casual, drop-in events where members of the public could learn more about the project and provide their thoughts on any safety concerns. Exclusively virtual engagement efforts included an interactive Feedback Map for public comments regarding safety issues and concerns.

Safety Analysis

A comprehensive historical analysis of traffic safety trends for the Capital Region reveals that in the long term, since 1979, traffic crashes in the region have experienced a downward trend. Annual traffic fatalities decreased by 2 percent from 1980 to 2020. However, an analysis using traffic safety performance measures similar to those required on the state level shows a substantial, short-term uptick in various outcomes from 2021 to 2023, including the regional crash fatalities, serious injuries, nonmotorized combined fatalities and serious injuries, and serious injury and fatality rates per 100 million vehicle miles traveled (VMT). These sharp increases offset reductions observed in the years prior to the COVID-19 pandemic.

Two complementary approaches to Network Screening were used in the safety analysis to support a comprehensive approach to safety management. While a traditional Hotspot Analysis identified the segments and intersections that are over-represented in terms of their crash history from 2019 to 2023, a Systemic

Analysis focused on identifying risk factors commonly associated with severe crashes in the Capital Region and screened the network based on site-specific risk levels. The results of the Network Screening processes were overlaid with other roadway and demographic data to develop a comprehensive Priority Safety Network. The network is intended to be a synthesized set of priority corridors and intersections that will be the focus of future implementation efforts of the Safety Action Plan. These could include both near-term investigations and corridor studies or long-term capital projects.

Underserved Community Considerations

The VZSAP identifies historically underserved communities and those disproportionately impacted by crashes on our roadway through data analysis in collaboration with stakeholders and the public. The Transportation Council has developed nine demographic indicators to identify potential geographically-defined Communities of Concern for analysis of transportation-relevant burdens. The geographic areas at the census tract level with identified Communities of Concern were assessed for their relation to the impacts of crashes.

Crash data from 2019 to 2023 was spatially joined onto the census tracts to analyze the spatial distribution of crashes within the region in relation to the distribution of the Communities of Concern. For all tiers, crash counts and crash rates, both population and trip activity, were calculated to illustrate the comparisons between each other and the regional average. The rates were calculated for both all road users and for vulnerable road users (bicyclists and pedestrians).

Policy and Process Changes

The VZSAP includes safety-related policies and processes in the Capital Region encompassing the five elements of the Safe System Approach and that are rooted in best practices in both New York State and nationally. Regional and local policy recommendations that impact transportation safety in counties, cities, towns, and villages were identified through consultation with the Transportation Council, the CAC, and other stakeholders. Action items and their associated lead agencies and primary supporters were identified related to Vision Zero Policy, Roadway Safety Management, Complete Streets, Speed Management, Education, Local Codes, Post-Crash Care, and Funding. These policies prioritize the safety, comfort, and connectivity for all users – pedestrians, cyclists, motorists, mobility-impaired individuals, transit riders, and freight services, among others. They support future planning, design, and implementation of safer roads for communities of all sizes and on all transportation networks.

Safety Implementation Program

The goals of the VZSAP will be advanced through the implementation of the proposed Safety Implementation Program (SIP), a broad-based approach of capital projects and safety programs to reduce fatal and serious injury crashes across the Capital Region. The SIP guides planning and investment decisions by facility owners, program administrators, and other stakeholders. The proposed projects and programs in the SIP have anticipated implementation timeframes that range from the short-term, such as maintenance projects and annual enforcement programs, to the long-term, such as major capital projects and new educational programs. Recommendations are organized across five categories: Priority Locations, systemic treatment packages, Safe Routes to School, Safe Routes to Transit, and Governor's Traffic Safety Committee (GTSC) Enforcement and Education. Progress towards implementing the SIP will be tracked in the Implementation Program Annual Report in conjunction with an assessment of overall safety performance trends.

Progress and Next Steps

The Transportation Council has identified performance measures to be reviewed and reported through the Implementation Program Annual Report. These performance measures are consistent with NYSDOT performance measures. The performance measures are five-year rolling averages of: number of fatalities, rate of fatalities per 100 million Vehicle Miles Traveled (VMT), number of serious injuries, rate of serious injuries per 100 million VMT, and number of nonmotorized fatalities and serious injuries.

To promote transparency on the performance and implementation of this action plan, VZSAP will take several steps, including presenting the findings and results from the Annual Report, updating the public Safety Performance Dashboard periodically, posting the VZSAP on the project website to allow jurisdictions to reference the documents when implementing safety countermeasures, and continuing the CAC meetings.

The VZSAP also designates many next steps that should be taken in the next several years. These steps include designating a Vision Zero Coordinator and membership of the Safety Advisory Committee that will maintain the Safety Action Plan, reviewing and updating the public Safety Performance Dashboard based on new data and stakeholder feedback, pursuing additional funding opportunities, conducting project-level evaluations of completed SIP projects, and updating the VZSAP every five years.

Letter of Intent from the MPO

The Capital Region Transportation Council is proud to present the *Capital Region Vision Zero Safety Action Plan* (VZSAP). Every year, on average, the Capital Region experiences the loss of about 50 people on our roads due to fatal traffic crashes. This is why we are launching this strategic plan to reduce traffic fatalities and serious injuries on all roadways in the Capital Region. Achieving this goal is not only possible but imperative, as every single crash is preventable and every life lost represents a family member, friend, colleague, or neighbor in the region.

This plan is the result of active collaboration among the Transportation Council and its grant partners, the City of Albany, the City of Saratoga Springs, the City of Troy, the City of Watervliet, and the Village of Green Island. There is no single countermeasure that will eliminate all traffic deaths. Instead, we all must work together to leverage all the tools at our disposal. Under this plan, the Capital Region adopts the Safe System Approach to roadway safety. The Safe System Approach aims to eliminate fatal and serious injuries for all road users by adopting a holistic view of the transportation system.

This plan is organized under five elements of the Safe System Approach: Safe Roads, Safe Speeds, Safe Road Users, Safe Vehicles, and Post-Crash. The plan aligns with the U.S. Department of Transportation's National Roadway Safety Strategy, New York Strategic Highway Safety Plan, and the In Motion Metropolitan Transportation Plan. Within is an analysis of safety factors in the Capital Region, consideration of vulnerable road users' impacts, and discussion of other important programming areas such as organizational change, policy improvements, and better data collection. Finally, the plan lays out specific actions that the Transportation Council will take to reduce deaths and injuries in our neighborhoods.

The VZSAP provides a call to action for all residents of the Capital Region. Everyone has a role to play in keeping our streets safe, and we need your support and commitment to make the Capital Region a safe place for everyone driving, walking, cycling, scooting, and otherwise traveling on our roads, streets, and sidewalks.

Sincerely,

[Name]

[Title]

Key Terms and Acronyms

Key Definitions

Vision Zero Safety Action Plan: A comprehensive safety action plan (referred to as an Action Plan) is aimed at preventing roadway fatalities and serious injuries in a locality or region or on Tribal land. This can be either a plan developed with a Planning and Demonstration Grant, or a previously developed plan that is substantially similar and meets the eligibility requirements (e.g., a Vision Zero plan or similar plan).

Complete Streets: Standards or policies that ensure the safe and adequate accommodation of all users of the transportation system, including pedestrians, bicyclists, personal conveyance and micromobility users, public transportation users, children, older individuals, individuals with disabilities, motorists, and freight vehicles.

Underserved Communities: Census Tracts that receive a certain threshold score based on a weighted evaluation of several socioeconomic attributes. These attributes include race/ethnicity, income, English proficiency, disability prevalence, elderly population, youth population, zero-vehicle households, female single-parent households, and foreign-born population.

Fatal or Serious Injury Crash: A fatal or serious injury crash involves a motor vehicle traveling on a trafficway customarily open to the public. A fatal crash must result in the death of at least one person (occupant of a vehicle or a non-motorist) within 30 days of the crash. This definition aligns with the definition of a fatal traffic crash in the Fatality Analysis Reporting System (FARS). A serious injury crash, as defined by the Model Minimum Uniform Crash Criteria, is one in which there is “Severe laceration resulting in exposure of underlying tissues/muscle/organs or resulting in significant loss of blood; Broken or distorted extremity (arm or leg); Crush injuries; Suspected skull, chest or abdominal injury other than bruises or minor lacerations; Significant burns (second and third degree burns over 10% or more of the body); Unconsciousness when taken from the crash scene; or Paralysis.”

Level of Service of Safety (LOSS): Screening the network by means of LOSS employs a Safety Performance Function to compare either observed or expected crash frequency for a given site to the predicted crash frequency for the given traffic volume. This difference is called the Potential for Safety Improvement (PSI). The LOSS indicates where the PSI falls in the spectrum of crash frequencies statewide. LOSS stratification boundaries are defined to create four categories of sites with respect to the PSI. In the Crash Location and Engineering Analysis and Reporting (CLEAR) Safety application, the following stratification boundaries are used to define the four LOSS categories:

- Level 4: the PSI is in the highest 10%
- Level 3: the PSI is in the 50th to 90th percentile
- Level 2: the PSI is in the 10th to 50th percentile
- Level 1: the PSI is in the lowest 10%

Priority Safety Network: Specific streets or roads (or portions thereof) and/or intersections within the boundaries of the Capital Region that have a high concentration of traffic fatalities and/or severe injuries.

Road User: People who use roads in any way—driving, walking, biking, taking transit, using mobility devices like wheelchairs and canes, or getting around some other way.

Safety Performance Function: An equation used to estimate or predict the average crash frequency per year at a location as a function of traffic volume and, in some cases, roadway or intersection characteristics (e.g., number of lanes, traffic control, or type of median).

Safe System Approach: A guiding principle to address the safety of all road users. It involves a paradigm shift to improve safety culture, increase collaboration across all safety stakeholders, and refocus transportation system design and operation on anticipating human mistakes and lessening impact forces to reduce crash severity and save lives.

Vulnerable Road User: People that are unprotected when traveling and people with limited mobility are considered vulnerable road users. This includes people walking, biking, or using micromobility because they are not in a protective vehicle. It also includes people with disabilities, seniors, and children who may move slower, have difficulty navigating, or are less visible to people in cars.

Acronyms and Abbreviations

AASHTO: American Association of State Highway and Transportation Officials

CAC: Community Advisory Committee

CLEAR: Crash Location and Engineering Analysis Repository

FARS: Fatality Analysis Reporting System

FHWA: Federal Highway Administration

GTSC: Governor's Traffic Safety Committee

HSIP: Highway Safety Improvement Program

HSM: Highway Safety Manual

LOSS: Level of Service of Safety

LRTP: Long-Range Transportation Plan

MUTCD: Manual on Uniform Traffic Control Devices

NHTSA: National Highway Traffic Safety Administration

NYSDOT: New York State Department of Transportation

ROSAC: Regional Operations and Safety Advisory Committee

SHSP: Strategic Highway Safety Plan

SRTS: Safe Routes to School

SS4A: Safe Streets and Roads for All

TIP: Transportation Improvement Program

Transportation Council: Capital Region Transportation Council

TSB: Traffic Safety Board

USDOT: United States Department of Transportation

VRU: Vulnerable Road User

VZSAP: Vision Zero Safety Action Plan

1.0 Introduction

Every year, more than 40,000 people are killed on American roadways, and hundreds of thousands more are seriously injured. From 2019 through 2023, the Capital Region experienced 263 traffic fatalities and 3,203 serious injuries. In the wake of this traffic safety crisis, the Capital Region Transportation Council (Transportation Council) has adopted this **Capital Region Vision Zero Safety Action Plan (“VZSAP”)** with the goal of eliminating roadway fatalities and reducing serious injuries by 50 percent by 2050.

The Transportation Council is the Metropolitan Planning Organization (MPO) for Albany, Rensselaer, Saratoga, and Schenectady Counties (except the Town of Moreau and the Village of South Glens Falls). The Transportation Council is focused on establishing a comprehensive, cooperative, and continuing transportation planning process for the region. This planning process includes the development of a long-range transportation plan and a short-range program of projects, known as the Transportation Improvement Program (TIP). The Transportation Council also develops a Unified Planning Work Program (UPWP) biannually in cooperation with federal, state, and local agencies to provide a comprehensive list of short- and long-range transportation planning activities and technical assistance.

THE VZSAP PLAN REFLECTS THE TRANSPORTATION COUNCIL’S STRONG COMMITMENT TO MAKING ALBANY, RENSSELAER, SARATOGA, AND SCHENECTADY COUNTIES SAFER FOR ALL ROAD USERS.

1.1 What is the Vision Zero Safety Action Plan?

On February 1, 2023, the United States Department of Transportation (USDOT) awarded the Transportation Council a fiscal year 2022 Safe Streets and Roads for All (SS4A) grant to develop a Capital Region VZSAP. This publicly available document is the primary deliverable of that grant and aligns with the Federal requirements for the development of an Action Plan under that assistance, as well as eligibility for future federal Implementation Grants via SS4A.

The Transportation Council developed this Comprehensive Roadway Safety Action Plan to guide how the region will work to reduce traffic fatalities and serious injuries on all roadways in the region. The goal is to help make the region safer for all road users, including people who drive, walk, bike, or ride transit.

GRANT PARTNERS

- Capital Region Transportation Council
- City of Albany
- City of Saratoga Springs
- City of Watervliet
- City of Troy
- Village of Green Island

(NYSDOT-Region 1 is providing match support)

The VZSAP builds on transportation planning and safety initiatives already undertaken by the Transportation Council, as well as the valuable commitment of everyone driving, walking, cycling, or otherwise traveling in our community. The VZSAP is also consistent with the priorities and emphasis areas of the New York State Strategic Highway Safety Plan (SHSP). This effort will help the Transportation Council navigate the future of roadway safety and communicate clearly to residents the safety improvements.

The use of this grant funding is consistent with eligible activities under the SS4A, including developing this VZSAP, conducting planning, design, and concept development activities for projects and strategies.

This plan fully reflects the SS4A Program’s grant priorities in both the 2022 grant cycle and the most recent 2025 grant cycle:

- Promote safety to prevent death and serious injuries on public roadways;
- Employ low-cost, high-impact strategies that can improve safety over a wide geographic area;
- Ensure equitable investment in the safety needs of underserved communities, which includes both underserved urban and rural communities;
- Incorporate evidence-based projects and strategies and adopt innovative technologies and strategies;
- Demonstrate engagement with a variety of public and private stakeholders; and
- Align with the Department’s mission and Strategic Goals, such as safety, climate change and sustainability; equity and Justice40; and workforce development, job quality, and wealth creation.

Finally, this Plan was developed in accordance with SS4A Cost Sharing or Matching requirements, and all expenditures have been consistent with the cost principles in 2 CFR § 200 Subpart E.

The VZSAP supports USDOT’s National Roadway Safety Strategy (NRSS) and is organized with the aim of fully implementing the Safe System Approach in the Region. This includes the identification of projects, policies, and strategies that align with the five Safe System elements.

1.2 Safe Streets and Roads for All Grant

The SS4A program, as stated in the Federal Fiscal Year (FFY) 2022 Notice of Funding Opportunity (NOFO) under which this project was funded, requires all SS4A Safety Action Plans to have eight key components. The Capital Region VZSAP includes these required components, listed below:

Leadership Commitment and Goal Setting	The plan shall have an ambitious goal and timeline to reduce fatal and serious injury crashes, which is backed by an official public commitment. This component is discussed in more detail in Chapter 2.
Planning Structure	The plan shall have a committee, task force, implementation group, or similar body charged with oversight of the Safety Action Plan development, implementation, and monitoring. This planning structure is discussed in Chapter 3.
Engagement and Collaboration	Robust engagement with the public and relevant stakeholders, including the private sector and community groups, that allows for both community representation and feedback must be completed. This engagement process is described in Chapter 3.
Safety Analysis	The plan must conduct an analysis of existing and historical crash trends. These trends serve as a baseline level for crashes involving fatalities and serious injuries across the Capital Region. The safety analysis is detailed in Chapter 4.
Equity Considerations	Plan development must include inclusive and representative processes. Equity considerations are discussed in detail in Chapter 5.
Policy and Process Changes	The plan must assess existing policies, plans, guidelines, and standards to identify opportunities to improve how these documents improve safety. The policy and process recommendations are provided in Chapter 6.
Strategy and Project Selection	The plan must identify a comprehensive list of strategies and projects shaped by data, the best available evidence, and noteworthy practices, stakeholder input, and equity considerations. Chapter 7 provides a priority list of locations, the potential projects at representative priority locations, a toolbox of safety countermeasures to use at high-crash locations, and other safety measures.

Progress and Transparency

The Safety Action Plan must have a method to measure progress over time. It shall also include means to ensure ongoing transparency with residents and stakeholders. Chapter 8 discusses progress and transparency.

By incorporating these essential components, this VZSAP provides a comprehensive and structured approach to enhancing traffic safety in the Capital Region. It ensures that all necessary elements are in place to effectively reduce fatal and serious injury crashes, engage stakeholders, and maintain transparency and accountability throughout the process.

FFY 2025 NOFO

The FFY 2025 NOFO, issued by the Office of the Secretary of Transportation on March 28, 2025, maintained seven out of eight of the key components. Equity was discontinued as a required component for future Safety Action Plans and is no longer included on the Self-Certification Eligibility Worksheet for Implementation Projects.

1.2.1 Intended Use of the Plan

The adoption of the VZSAP is an important step in reducing fatal and serious injury crashes in the region. Through its adoption, the VZSAP:

- Affirms **commitment** to create a safer roadway system for all users in the Capital Region.
- Sets **an ambitious goal** for the Capital Region to reduce fatal and serious injury crashes by using the Safe System Approach, strategies, and actions outlined in this plan.
- Establishes **strategies and actions** that the region will employ to reduce fatal and serious injuries.
- Enables municipalities in Albany, Rensselaer, Saratoga, and Schenectady counties to apply for **safety implementation grants**.
- Identifies **priority locations** for safety improvements that the SS4A program and other funding opportunities for safety improvements could fund.
- Provides a **toolbox of countermeasures** to improve safety, as outlined in Chapter 7, that municipalities could employ to reduce crashes and serious injuries along their streets and roadways.
- Provides the **public and stakeholders** with information regarding the strategies and actions that the grant partners, as well as the Transportation Council, will undertake to reduce fatal and serious injury crashes.
- Demonstrates safety treatments** for representative locations from the priority list to demonstrate to local municipalities how countermeasures could be employed to reduce fatal and serious injury crashes in similar cases.
- Enables **continued coordination and progress tracking** through the Implementation Annual Program Report and Safety Dashboard.

1.3 Safe System Approach

The USDOT's [National Roadway Safety Strategy \(NRSS\)](#) outlines the Department's comprehensive approach to significantly reducing serious injuries and deaths on our nation's highways, roads, and streets. The NRSS adopts a long-term goal of reaching zero roadway fatalities and positions the Safe System Approach as the national organizing paradigm for achieving this goal.

The [Safe System Approach](#) aims to address and mitigate the risks inherent in the transportation system by building and reinforcing multiple layers of protection to both prevent crashes from happening in the first place and minimize the harm caused to those involved when crashes do occur. This holistic and comprehensive approach accounts for both human mistakes and the human body's vulnerability in collisions involving motor vehicles, while promoting a system designed with many redundancies in place to protect all road users.

The Safe System Approach also embraces all types of roadway safety countermeasures, beyond infrastructure countermeasures alone, and acknowledges that a multi-disciplinary approach is required to address the full range of diverse safety risks.

The Safe System Approach includes a commitment to addressing all aspects of crash risks through the five elements that constitute a Safe System:

Safer People: Encourage safe, responsible behavior by people who use our roads and create conditions that prioritize their ability to reach their destination unharmed.

Safer Roads: Design roadway environments to mitigate human mistakes and account for injury tolerances, to encourage safer behaviors, and to facilitate safe travel by the most vulnerable users.

Safer Vehicles: Expand the availability of vehicle systems and features that help to prevent crashes and minimize the impact of crashes on both occupants and non-occupants.

Safer Speeds: Promote safer speeds in all roadway environments through a combination of thoughtful, context-appropriate roadway design, targeted education and outreach campaigns, and enforcement.

Post-Crash Care: Enhance the survivability of crashes through expedient access to emergency medical care, while creating a safe working environment for vital first responders and preventing secondary crashes through robust traffic incident management practices.

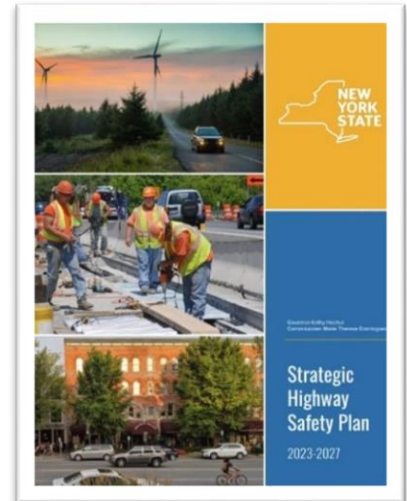


2.0 Leadership Commitment and Goal Setting

Goal setting is a critical component of a Safety Action Plan. It establishes a clear direction and measurable objectives for the region and those implementing the plan. With specific, achievable, and time-bound goals, all stakeholders are aligned and focused on the same priorities. Goal setting also allows for the tracking of progress and the identification of areas that may require additional attention or resources. Well-defined goals can be used to create a roadmap for continuous improvement in safety performance.

The VZSAP is consistent with the safety goals identified in the 2023 New York State Strategic Highway Safety Plan and the Transportation Council's Long-Range Transportation Plan.

The 2023 New York State Strategic Highway Safety Plan (SHSP) established a vision statement that “strives for an equitable transportation system that works towards zero fatalities and zero serious injuries for all roadway users”. The SHSP guides the NYSDOT, the Transportation Council, and other safety partners in addressing safety and defines a framework for implementation activities to be carried out regionally and statewide.



Placeholder for the In-Motion's Cover

The Transportation Council's Long-Range Transportation Plan (LRTP), In Motion: The Plan to 2050, identifies the region's transportation infrastructure vision, needs, and priorities for the next 25 years. In Motion provides a vision for the Capital Region, which is to “strive to maintain a clean and efficient transportation system that provides safe, resilient, and reliable options for the movement of all people and goods. The Capital Region will thrive with a seamless, multimodal network that is community-focused, connecting all people to economic opportunity while supporting sustainable growth and livable communities. Transportation investments will improve system performance, support and promote new development, adapt to technological advancements, and protect the environment for future generations.” The LRTP's 2050 goals are aligned with the National Goal for safety, per 23 USC 150, “to achieve a significant reduction in traffic fatalities and serious injuries on all public roads.”

2.1 Goal

The Transportation Council established a Vision Zero target to “**eliminate fatal crashes and reduce serious injury crashes by 50 percent (50%) in the Capital region by 2050**”.

These are ambitious targets that align the Capital region with state and national goals. However, they are heavily driven by long-term historical trends in the Capital Region (Figure 2.1), showing traffic fatalities on trend for zero before 2050. It will require a sustained five-percent reduction annually for the first ten years, which is twice the historical reduction but attainable, due to recent short-term increases.

Eliminate fatal crashes and reduce serious injury crashes by fifty percent by 2050

The reduction in serious injuries will require an approximately 2.5% reduction annually. There is less historical data for this measure, so a lower target is set at this time.

2.1.1 Key Objectives

The Capital Region’s LRTP, In-Motion: The Plan to 2050, has safety goals and objectives that support the goal of this plan. Following the adoption of the VZSAP, the Transportation Council Policy Board will incorporate VZSAP targets and recommendations into the LRTP.

The LRTP goals that relate to Vision Zero are:

Safety – Eliminate fatalities and serious injuries on Capital Region roadways and increase the security of the transportation system.

Prioritize the safety of all road users, particularly the most vulnerable.

Prioritize funding for proactive projects that lead to safe roads and reduce speeds, while designing for human mistakes.

Provide and promote education on safety, security, and cybersecurity best practices.

Support the protection of transportation customers, shipments, employees, and travelers from safety and security threats.

Mobility – Ensure the transportation system is maintained, operated, and coordinated to support reliable travel throughout the region.

- Maximize investment in the operation of the transportation system.
- Maintain surface transportation infrastructure and rebuild aging bridges and culverts to reduce future maintenance costs and enhance future mobility.
- Implement advanced technologies, real-time data gathering, and other operational tools to improve the efficiency of the transportation system.

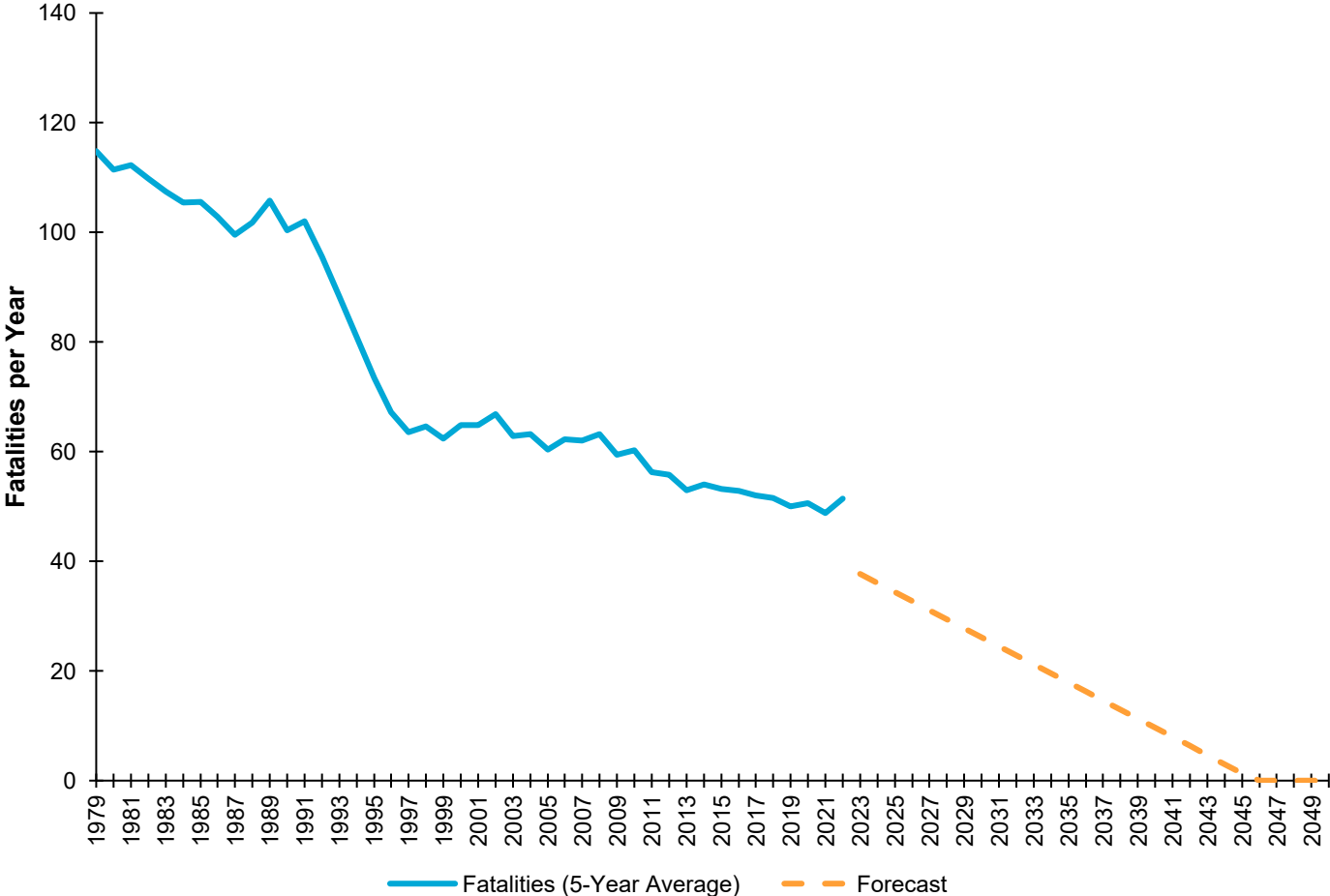
- Plan for evolving technologies for all travel options, including the potential for connected and automated vehicles.
- Prioritize strategic integration of Smart Cities technologies over increasing capacity or building new infrastructure.

2.2 The Safety Challenge

Historical data on fatal motor vehicle crashes from 1979 through 2022 were collected from the FARS for municipalities in the Capital Region to analyze long-term trends in roadway fatalities. There is an overall downward trend over nearly half a century. This history is punctuated by numerous interventions such as enhancements to vehicle technology, state laws for personal and child restraints, changes in societal attitudes towards impaired driving, and improvements to the roadway network. However, in the future, due to an increase in vehicle miles traveled, population, or technological advancements, the crash likelihood might increase if the safety strategies are not properly implemented.

There has been an **average annual decrease of two percent in fatalities** (five-year average) from 1980 to 2020. Using this historical data, a linear trendline was used to provide a simple forecast of future fatalities, a downward trend, potentially reaching zero by 2046 (Figure 2.1).

Figure 2.1 Long-Term Trend of Fatalities (1979-2049)



Source: FARS, National Highway Traffic Safety Administration

Similar historical patterns of fatal crashes can be observed in Table 2.1, which lists the five-year average crash fatalities at the beginning and end of each decade throughout the analysis period. From the 1980s to the 2020s, regional crash fatalities showed a gradual decline at an average annual rate of two percent, with the 1990s recording the highest average annual decline rate at five percent. These periods of previous performance provided a key point of reference for confirming the target for 2050.

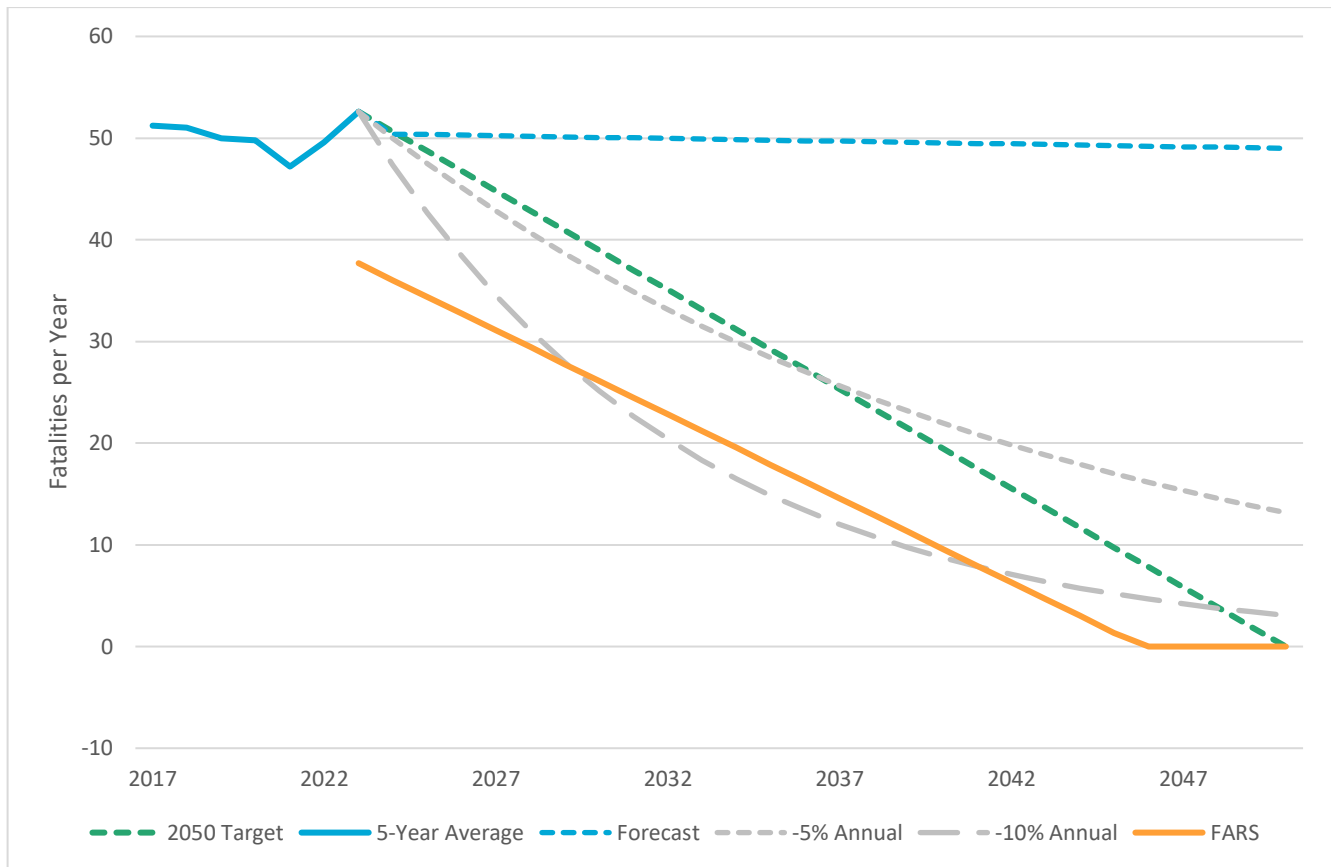
Table 2.1 Fatality Trends by Decade

Decade	Start Year	Fatalities (Five-Year Average)	End Year	Fatalities (Five-Year Average)	Average Annual Reduction
1980s	1980	111	1989	106	-1%
1990s	1990	100	1999	62	-5%
2000s	2000	65	2009	59	-1%
2010s	2010	60	2019	50	-2%
2020s	2020	51	2022	51	0%
All	1980	111	2022	51	-2%

Source: FARS.

Figure 2.2 presents the Transportation Council's targets for reductions in fatalities and serious injuries from 2017 to 2050. The following series are shown utilizing the Traffic Safety Statistical Repository (TSSR) figures, since those are the official NYS data source for serious injuries:

Figure 2.2 2050 Target for Fatalities



2.3 Overview of Existing Plans and Initiatives

The review of the state, regional, and local plans and documents provided a basis for understanding the local and regional context for transportation safety and provided background for the one-on-one meetings with the stakeholders and public outreach later in the project. Several key themes or areas related to safety stood out in the document review. These themes were important to the development of the VZSAP as they reflect priority safety topics for the Transportation Council, as well as best practices in transportation safety. The key themes include:

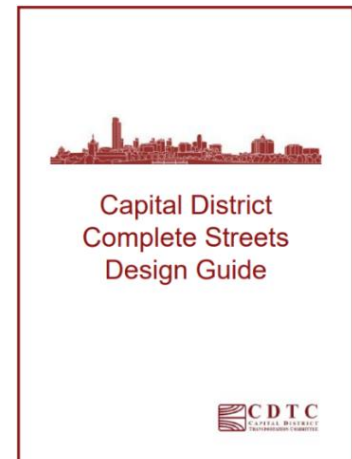
- Pedestrian and bicycle facilities, including on-road facilities as well as trail networks, are essential to the transportation system. It is important to strengthen, expand, and maintain infrastructure to safely accommodate Vulnerable Road Users (VRU), such as pedestrians, cyclists, motorized wheelchair users, and those on foot in work zones, who may face unique challenges and a greater risk of injury than other road users.
- Utilizing the Complete Streets approach to design, build, and operate streets can enable safe access and mobility for all people throughout the Capital Region.

A complete document and resource review can be found in Appendix A.3.

2.3.1 Regional Plans

Capital District Complete Streets Design Guide

The Transportation Council (formerly known as the Capital District Transportation Committee) assembled the [Capital District Complete Streets Design Guide](#) at the request of local governments and under the direction of its Complete Streets Advisory Committee. This document aims to fill in gaps where the context of local streets differs from that of state highways. The guide provides design guidance for sidewalks, roadways, intersections, and curbsides.



Capital District Trails Plan

The [Capital District Trails Plan](#) is a vision for a seamless regional transportation network that connects cities, towns, and villages throughout the Capital Region. The plan highlights two trail networks, Core Trails and Supporting Trail Networks. The Core Trail network is defined as the primary transportation highway for non-vehicle travel, linking multiple towns or population centers, and connecting outside of the Capital Region. The Supporting Trail Network provides secondary connections, which often serve lower-density population areas.



I-787/Hudson Waterfront Corridor Study

The [I-787/Hudson Waterfront Corridor Study](#) identified potential future transportation strategies for the I-787 corridor that support and balance community economic development and revitalization efforts, transportation network resilience, and improved walking, biking, transit, and visual access to the waterfront. The study area consists of I-787 Interchange 2 (Port of Albany) to I-787 Interchange 9 (NY Route 7) in Albany County, New York.



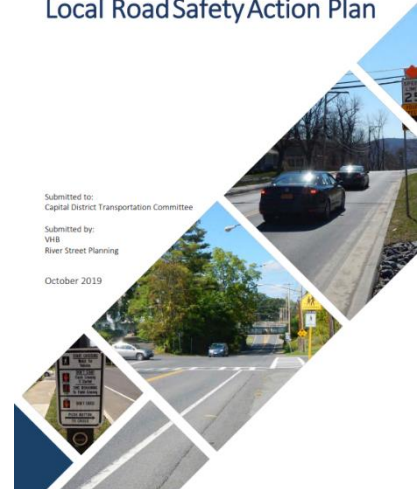
I-787/Hudson Waterfront Corridor Study
Albany County, New York
FINAL REPORT
December 2018



Local Road Safety Plan

The Transportation Council prepared this Local Road Safety Action Plan to provide local context and recommendations in support of the NY SHSP. The Local Road Safety Action Plan follows FHWA's Local Road Safety Plans (LRSP) development process to provide crash reductions through engineering, education, and enforcement strategies targeting the following six region-specific emphasis areas: intersections, lane departure, vulnerable users, age-related, road user behavior, and speed. The data analysis focuses on the city, village, town, and county-owned and maintained roadways since the NYSDOT manages the safety performance of state-owned roadways.

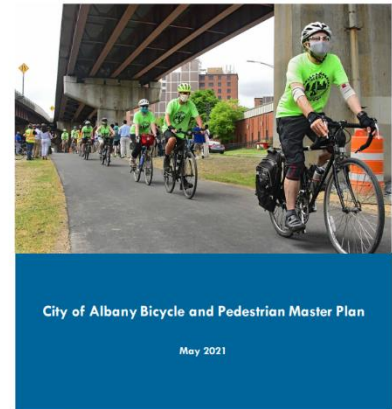
Local Road Safety Action Plan



2.3.2 Local Plans and Studies

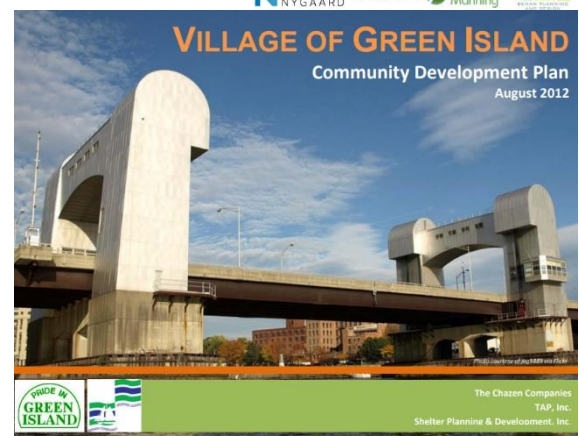
City of Albany Bicycle and Pedestrian Master Plan

The City of Albany created a in 2021, which builds upon the City's 2009 Bicycle Master Plan. This Plan reviews existing conditions (planning precedents, existing pedestrian and biking networks, equity analysis, crash analysis, demand analysis, gaps, and opportunities) and compares them to the community vision as informed by previous planning efforts as well as input collected over the course of the plan. That vision said that walking, biking, and transit are viable transportation options, Albany's streets feel safe and comfortable for all people who use them, and a culture of awareness and compassion supports everyone who uses Albany's streets.



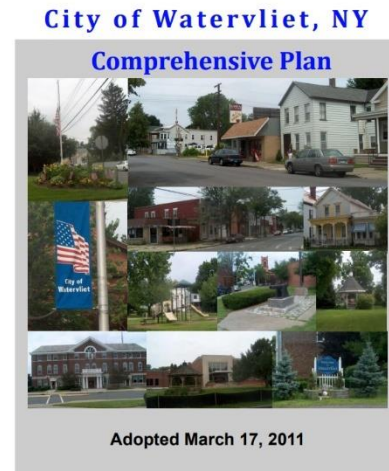
Village of Green Island Community Development Plan

The [Village of Green Island Community Development Plan](#) identifies priority initiatives and projects related to housing and infrastructural improvements. Furthermore, the plan mainly targets residential neighborhoods south of Tibbits Avenue, including key corridors like Albany Avenue, Hudson Avenue, Lower Hudson Avenue, and George Street, as well as community resources such as Paine Street Park, Veterans Memorial Stadium, River Park, and the Hudson River waterfront.



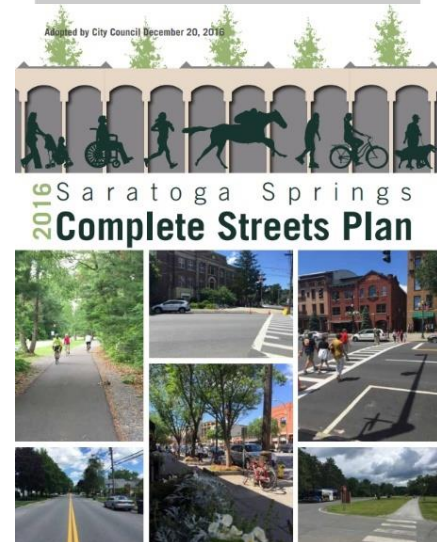
City of Watervliet Comprehensive Plan

The [City of Watervliet Comprehensive Plan](#) presents a long-term vision for development of Watervliet. The plan includes goals, objectives, guidelines, and policies for community development. Additionally, other government departments are required to adhere to the comprehensive plan elements that may affect the city.



Saratoga Springs Complete Streets Plan

The [Saratoga Springs Complete Streets Plan](#) provides a framework for including all modes of mobility on existing City streets and state and County routes. This plan provides the planning tools, design guidance, and public input to transform Complete Streets in Saratoga Springs. Additionally, the plan identifies priority routes and types of infrastructure required for various streets based on the location of significant active transportation destinations.



ADA Transition Plans

The Transportation Council provides support to develop Americans with Disabilities Act (ADA) Transition Plans for municipalities in the Capital Region. The [Department of Justice/Department of Transportation Joint Technical Assistance on the Title II of the Americans with Disabilities Act Requirements to Provide Curb Ramps when Streets, Roads, or Highways are Altered through Resurfacing](#) provides standards relating to the provision and design of curb ramps through pavement preservation and restoration projects. Safety projects may also trigger ADA requirements, but may also be an opportunity to incorporate design features, including but not limited to curb ramps, that improve accessibility for road users of all abilities.

The municipal Transition Plans highlight those areas where improvements to sidewalks and other facilities on public streets are necessary to meet accessibility standards and where they should be prioritized.

3.0 Engagement and Collaboration

3.1 Planning Structure

The Transportation Council collaborated with the Cities of Albany, Saratoga Springs, Troy, Watervliet, the Village of Green Island, and the NYSDOT to develop a robust Public Participation Plan as part of the VZSAP process. This Public Participation Plan aimed to prioritize inclusive and equitable engagement to ensure diverse community voices played a central role in identifying traffic safety issues and shaping proposed safety strategies, policies, programs, and projects.

The Public Participation Plan included in-person and virtual engagement opportunities such as community workshops, pop-up events, public surveys, interactive mapping tools, stakeholder interviews, and targeted outreach to underserved populations. These efforts worked to gather meaningful input on local traffic safety concerns, priorities, and lived experiences from people across all modes of transportation. The Public Participation Plan was designed to foster transparency, build trust, and ensure that the final VZSAP strategies reflect the needs and values of the region's diverse communities. The Public Participation Plan also had an ongoing goal of establishing continuous two-way communication with residents, governments, community leaders, and other stakeholders, which informed the development of the VZSAP.

The Public Participation Plan established several committees, including:

- The **Administrative Committee** was comprised of staff from the Transportation Council, participating municipalities, and the New York State Department of Transportation. The Administrative Committee met on a biweekly basis to coordinate activities and provide guidance and direction to the Project.
- The **Regional Operations and Safety Advisory Committee (ROSAC)** is comprised of local, regional, state, and federal organizations and agencies as well as private companies. This Committee met at major milestones in the development of the VZSAP to review and discuss project deliverables, provide guidance on public engagement and project tasks, and advise on project recommendations and implementation.
- The **Project Engagement Team** was responsible for organizing, leading, and documenting all public outreach and engagement activities associated with the project and ensuring that public input was reflected in the VZSAP's final recommendations. The team, made up of staff from the Transportation Council, Cambridge Systematics, and Highland Planning as well as the Community Ambassadors, focused on outreach and engagement, particularly with underserved communities. FHI Studio led an analysis of Communities of Concern, which helped direct engagement efforts.
- The **Community Advisory Committee (CAC)** was comprised of local community members representing the region's diverse populations. The Community Advisory Committee met at major milestones in the development of the VZSAP to provide insight and guidance to the project and play a role in decision-making processes, including project identification and prioritization.

3.2 Engagement Strategy

Engagement for the VZSAP was conducted through a multi-faceted approach designed to maximize public input and ensure broad community participation across the Capital Region. The following strategies were used to engage the public throughout the planning process:

- **Public Workshops Focused on the Development of the Plan:** Three rounds of public workshops were conducted to guide the project through key phases—initial visioning and goal setting, identification

of safety issues and opportunities, feedback on proposed strategies and projects, and review of the draft Action Plan.

- **Public Workshops Focused on the Development of Corridor Concepts:** Corridor concepts were developed for specific locations in Albany, Troy, Saratoga Springs, Green Island, Watervliet, and Schenectady. These corridor concepts focused on applying proposed regional safety countermeasures to specific locations in the Capital Region. Public outreach was a three-part process: 1) street safety audits were conducted for each location with roadway owners, municipal and Transportation Council staff, other stakeholders, and the consultant team; 2) public workshops were conducted to gather input from the community; and, 3) virtual “pin-ups” were held to describe and present the proposed safety countermeasures.
- **Participation in Community Events:** The Project Engagement Team participated in several standing community events, including the City of Albany Trunk or Treat and the World Day of Remembrance. Participating in existing community events helped reach a broader, more diverse audience, especially those who may not attend traditional public meetings. Attendance at these meetings also helped to build trust by meeting people where they are and encouraging informal, accessible conversations.
- **Focus Groups:** A total of 12 focus groups were held with residents across the region, including meetings with schools, law enforcement, traffic safety boards, highway safety committees, students, and community groups. These focus groups gathered targeted insights from those directly involved in or impacted by transportation safety. Focus group participants offered unique, on-the-ground perspectives that helped identify both systemic challenges and practical solutions.
- **Community Ambassadors:** Community Ambassadors were hired early in the project to enhance community engagement, build local relationships, and amplify the voices of residents from marginalized groups. The Ambassadors played an active role throughout the project's development and participated in all aspects of the project, from engagement to the development of recommendations. Community Ambassadors were also an extension of the Project Engagement Team and participated in all Community Advisory Committee meetings.
- **Project Website:** The project website served as a platform for sharing information, updates, and engagement opportunities with the public. It aimed to ensure transparency by making project materials, data, and timelines easily accessible. The website also provided a convenient way for community members to give feedback and stay involved throughout the planning process.

The above methods emphasized both in-person and digital engagement to reach a wide audience, including a project website that provided accessible information, updates, an interactive map for identifying safety issues, and tools for submitting comments online. Communication materials and event promotions were crafted to keep the public informed, with all events advertised at least one week in advance.

A database of project contacts was developed and maintained for the duration of the planning process and included public meeting participants, focus group participants, committee members, community ambassadors, and interested and impacted parties. This database was used to send email blasts regarding plan updates and public engagement opportunities, and helped ensure outreach was both targeted and effective in reaching a diverse cross-section of the region.

Community Advisory Committee

As an essential component of the Capital Region VZSAP development, the Transportation Council assembled a Community Advisory Committee (CAC), comprised of local community members representing populations who have been historically underserved and/or marginalized in transportation planning processes, such as youth, elderly, racial and ethnic minorities, low-income individuals, and those with disabilities.

The CAC members met approximately every other month to guide the Plan's development and played an instrumental role in shaping the Plan. Members included:

- Devendra Kanithi
- Naomi Clarke
- Trent Griffin-Braaf
- Susan Quine-Laurilliard
- Hannah Curran
- Lindley Hickox
- Mary Frances Sabo
- Juan Martinez
- Michael Meyer
- Ed Brennan

The CAC accomplished the following key outcomes across its first four meetings (July 2024 – February 2025).

1. CAC Members Elevated Community Voices in Regional Planning by:

- Sharing **localized transportation safety concerns**;
- Providing input on deliverables, project priorities, and proposed safety countermeasures; and,
- Bringing the perspectives of **youth, seniors, racial minorities, those experiencing poverty, and those with disabilities** into the planning process.

2. CAC Members Identified and Prioritized Regional Safety Issues by:

- Helping to define the region's **top transportation risks**;
- Identifying key locations for safety interventions;
- Participating in systemic risk mapping; and,
- Contributing input to corridor concept plans and treatment selection.

3. CAC Members Influenced Policy and Strategy Development by:

- Reviewing and shaping policy proposals in the areas of complete streets, speed management, automated enforcement, and community-informed funding access;
- Advocating for low-cost, interim safety treatments;
- Identifying unique issues for underserved communities **and enforcement**; and,
- Raising questions about income impact, community trust, and data transparency.

4. CAC Members Advanced Public Engagement and outreach to underserved communities by:

- Reviewing feedback from over **300 public comments** and **multiple public meetings**;
- Facilitating connections to **schools, planning boards, and civic groups** to extend outreach; and
- Proposing **planning board training** and candidate engagement to sustain Vision Zero commitment beyond the Plan.

5. CAC Members Contributed to Long-Term Capacity Building by:

- Supporting the groundwork for a **Vision Zero Task Force**;
- **Learning about and sharing the regional traffic safety dashboard**;
- Helping prioritize actions for **local governments** to apply for federal safety funding; and,
- Encouraging coordination between municipal maintenance programs and Vision Zero implementation.

Website and Online Engagement

The Capital Region Vision Zero project's website, www.capitalregionvisionzero.org, served as a central hub for community engagement and information sharing. Throughout the project, the site received over 3,200 unique visitors and generated more than 6,700 page views. The website hosted a contact form where visitors could sign up to stay informed with project updates, leave comments, or ask questions. An embedded interactive map allowed community members to provide location-based input on transportation safety concerns or suggestions, collecting over 430 unique data points throughout the project.

Public Meetings and Workshops

The Transportation Council, in partnership with local municipalities and the consultant team, led a series of public engagement and stakeholder outreach efforts throughout 2024 and the first half of 2025.

The first round of public meetings took place in August 2024 and included in-person open house meetings in Albany, Watervliet, and Saratoga Springs, as well as a virtual meeting. These events introduced the VZSAP, outlined regional crash trends, and invited the public to share concerns and ideas for improving transportation safety. Over 120 individuals participated, and input was collected through interactive displays, digital polling, and discussion.

The second round of meetings was held in March 2025 and focused on sharing proposed strategies and draft actions informed by previous outreach. Meetings were held in Albany, Troy, Saratoga Springs, and virtually, using the same open house and interactive format. Outreach at the Troy Farmers Market and a local grocery (Bargain Grocery) store helped expand engagement by engaging with community members in areas with high foot traffic. Over 75 participants contributed feedback across these events.

The third round of meetings was held in June 2025 and focused on sharing the recommendations of the Capital Region Vision Zero Safety Action Plan, which focuses on reducing fatal and serious injury crashes to an eventual goal of zero on all public roadways in the Capital Region. Meetings were held in Albany, Troy, Saratoga Springs, and virtually using the same open house and interactive format. The public meeting engaged diverse stakeholders and residents across the event locations.

To ensure accessibility and broad participation, each formal public meeting was paired with an online counterpart. These virtual sessions featured identical presentation materials, American Sign Language (ASL) interpretation, and live Q&A opportunities, enabling inclusive engagement for attendees regardless of how they joined. Additionally, the project team developed and distributed event-specific social media graphics, which were shared across partner networks to boost awareness and participation in both virtual and in-person events.

Stakeholder Groups

In mid-2024 through early 2025, a series of stakeholder engagement activities (10 total) were conducted to inform the VZSAP. These activities included virtual meetings, focus groups, pop-up events, and community meetings to collect insights from diverse stakeholders across the Capital Region. The engagement process prioritized inclusivity and sought input from residents, advocates, neighborhood leaders, and professionals involved in transportation, public health, and safety. These engagement activities are summarized at a high level below.

- A series of focus groups was held in July 2024 with representatives from law enforcement, emergency response agencies, and school systems across the Capital Region. These sessions offered targeted insight into transportation enforcement, youth mobility challenges, road safety education, driver behaviors, and public safety coordination within and between counties. An in-person focus group was held at the Washington Avenue Branch of the Albany Public Library, and two virtual focus groups were hosted via Zoom. Participants included staff from municipal police departments, county sheriff's offices, public schools, emergency management services, Cornell Cooperative Extension of Saratoga County, state traffic safety organizations, and the project consultant team.
- Meetings with traffic safety boards and highway safety committees were conducted throughout Fall and Winter 2024, including discussions with the Saratoga County Traffic Safety Board, Albany County Traffic Safety Board, Schenectady County Traffic Safety Board, Colonie Highway Safety Committee, and Clifton Park Highway Safety Committee. These conversations focused on enforcement capacity and needs, high-crash corridors, speeding and unsafe driver behaviors, the need for more protection of vulnerable roadway users, and the need for better data, funding, and regional collaboration.

- In Fall 2024, outreach efforts expanded to Saratoga Springs, where older adults were engaged through the Saratoga Senior Center. Informal and structured conversations revealed pedestrian safety issues on Van Dam Street—specifically disconnected sidewalks, heavy truck traffic, and limited crossings.

Altogether, these stakeholder engagements created a strong foundation of community input, emphasizing both site-specific challenges and broader regional safety priorities.

3.3 Public Engagement Key Takeaways

Below are the public engagement key takeaways, summarized by theme, which reflect the community's priorities, concerns, and suggestions for making the Capital Region's roadways safer and more accessible for all users.

Speed Management

Speeding emerged as a pervasive concern, with strong support for traffic calming measures aimed at reducing vehicle speeds and improving safety. Public feedback emphasized the need for:

- Narrowing travel lanes to naturally slow traffic.
- Installing raised crosswalks, curb extensions, and other physical design features to reduce speeding and improve pedestrian safety.
- Expanding use of speed enforcement tools such as cameras and feedback signage. Concerns were also raised about drivers disregarding stop signs and making high-speed right turns on red, creating dangerous conditions for all road users.

Regional Intersections

Intersections were frequently highlighted as high-risk areas due to crash history, poor visibility, and pedestrian hazards. Community recommendations included:

- Converting more intersections to all-way stops.
- Improving visibility by addressing lighting deficiencies and reducing obstructions like parked vehicles.
- Installing pedestrian refuge islands and other features to shorten crossing distances and clarify the right-of-way.
- Using traffic signal improvements to reduce wait times and encourage safe pedestrian behavior.

Roadway Departures

Comments reflected concern over conditions that contribute to vehicles veering off-course, including excessive speeds and unclear roadway design. Suggestions to address these issues included:

- Narrowing overly wide travel lanes.
- Adding physical design features like center islands and curb extensions to guide vehicle movement.
- Enhancing lighting and visibility, especially around curves and pedestrian areas.
- Limiting vehicle maneuvers like U-turns that introduce unexpected conflicts.

Safe Road Users and Post-Crash Care

Although less emphasized, community feedback pointed to the need for greater safety awareness and improved post-crash response. Priorities included:

- Stronger enforcement of traffic laws, particularly around yielding to pedestrians and speed compliance.
- Public education targeting both drivers and vulnerable road users to encourage safer behavior.
- Infrastructure changes to reduce reliance on behavioral compliance alone, thereby decreasing the severity and likelihood of crashes.

Complete Streets

There was widespread support for a more inclusive, multimodal street environment. Key needs identified by the community included:

- Dedicated bicycle infrastructure to separate cyclists from vehicle traffic.
- Wider, well-maintained sidewalks that accommodate all users, including those with mobility challenges.
- Debris/naturally occurring impediment removal to ensure year-round accessibility.
- Pedestrian-scale lighting and signage to improve safety, comfort, and wayfinding for non-drivers.
- Improved transit stop access and amenities to encourage transit use and reduce walking distance and exposure to traffic.

Underserved Communities and Local Codes

Public input underscored the importance of designing roadways that meet the needs of all users, with particular focus on historically underserved communities. Concerns included:

- Addressing disparities in sidewalk and lighting quality.
- Ensuring that transit access is safe, convenient, and inclusive.
- Prioritizing safety improvements in areas that serve vulnerable populations.
- Integrating safety goals into local planning and zoning processes to promote long-term, equitable outcomes.

Throughout all engagement efforts, participants consistently voiced a desire for actionable, place-specific solutions that reflect community input, particularly from those most at risk in the current transportation system. This feedback is shaping a VZSAP that ensures responsiveness to underserved communities, accountability, and meaningful change.

4.0 Safety Analysis

A comprehensive historical analysis of traffic safety trends was conducted for the Capital Region in order to support decision making and the development of the Capital Region VZSAP.

In the long term, since 1979, traffic crashes in the Region have experienced a downward trend. However, an analysis using traffic safety performance measures, similar to those required on the state level, shows a substantial short-term uptick in various outcomes from 2021 to 2023, including the regional crash fatalities, serious injuries, non-motorized combined fatalities and serious injuries, and serious injury and fatality rates per 100 million VMT. These sharp increases offset reductions observed in the years prior to the COVID-19 pandemic.

The Capital Region VZSAP comes at an opportune time to reverse these trends. Targeted and data-driven investments in traffic safety countermeasures can help the Capital Region get back on track and even approach zero fatalities by 2050.

By understanding these safety trends, targeted safety initiatives and investments can be directed more effectively. As part of this analysis, a Priority Safety Network has been developed to assist jurisdictions in identifying potential locations for safety projects. The hotspot network is based on a broad set of criteria, including crash severity, VRU risk, and considerations for underserved communities. Additionally, the trend

- Over the past five years, there has been an average of **at least one fatal crash every week** in the region.
- Between 2019 and 2023, there were a total of **256 fatalities** that together cost approximately **\$4.03 billion**.
- Crashes have most frequently occurred on **NYS DOT and local roads**.
- Between 1979 and 2022, traffic fatalities **decreased by 55.2 percent** from 115 fatalities in 1979 to 51 fatalities in 2022.
- On average, the rate of crash fatalities per 100,000 population decreased **by 20 percent** each decade.

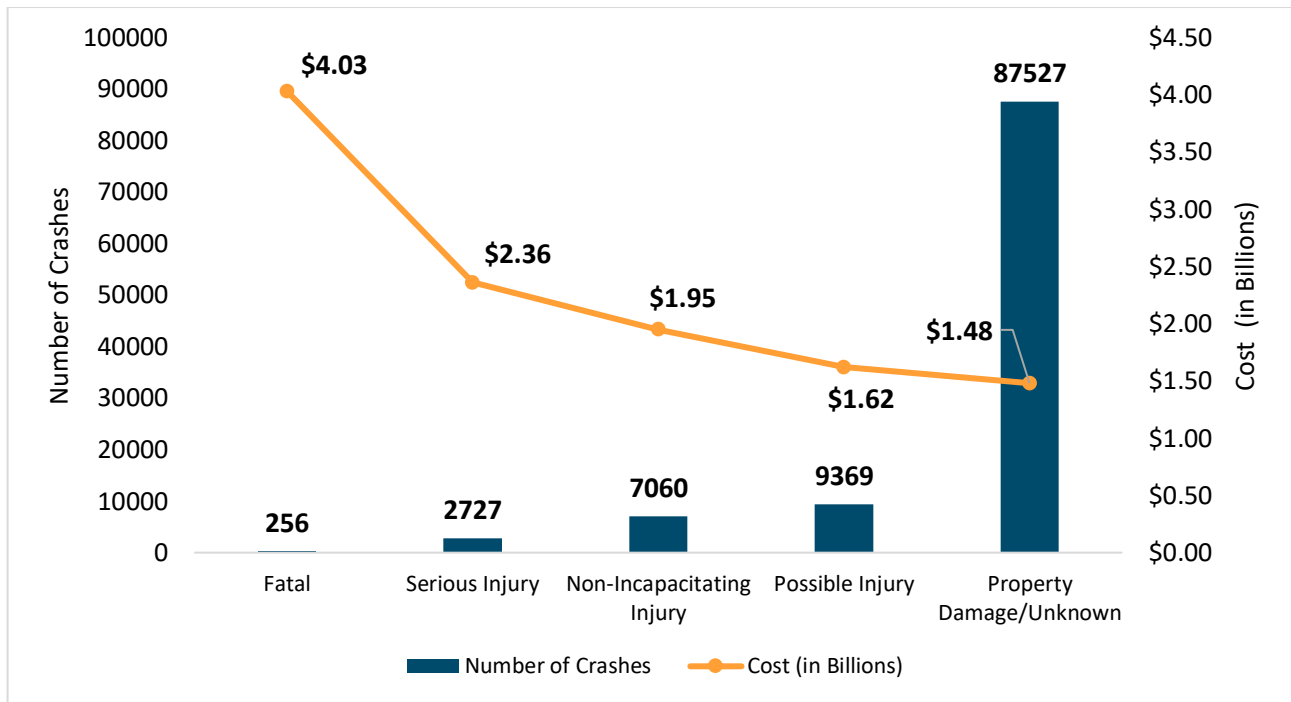
analysis discusses specific crash trends within the four counties, providing detailed insights into the types of collisions, roadway types, and users, which complement the hotspot analysis.

4.1 Historical Trends

What are the key crash trends?

Though the most severe and costly crashes make up a small share of crashes, they have significant health and financial impacts. Crashes that resulted in fatalities or serious injuries only account for about 2.8 percent of all crashes within the Capital region from 2019 to 2023 (Figure 4.1). However, fatal and serious injury crashes are the most costly despite being the least frequent. Between 2019 and 2023, there were a total of 256 fatal crashes, an average of 51 annually, that cost approximately \$4.03 billion. Similarly, there were just over 2,700 serious injury crashes, costing approximately \$2.36 billion, over that same period.

Figure 4.1 Crashes by Injury Severity and Total Crash Cost (2019-2023)



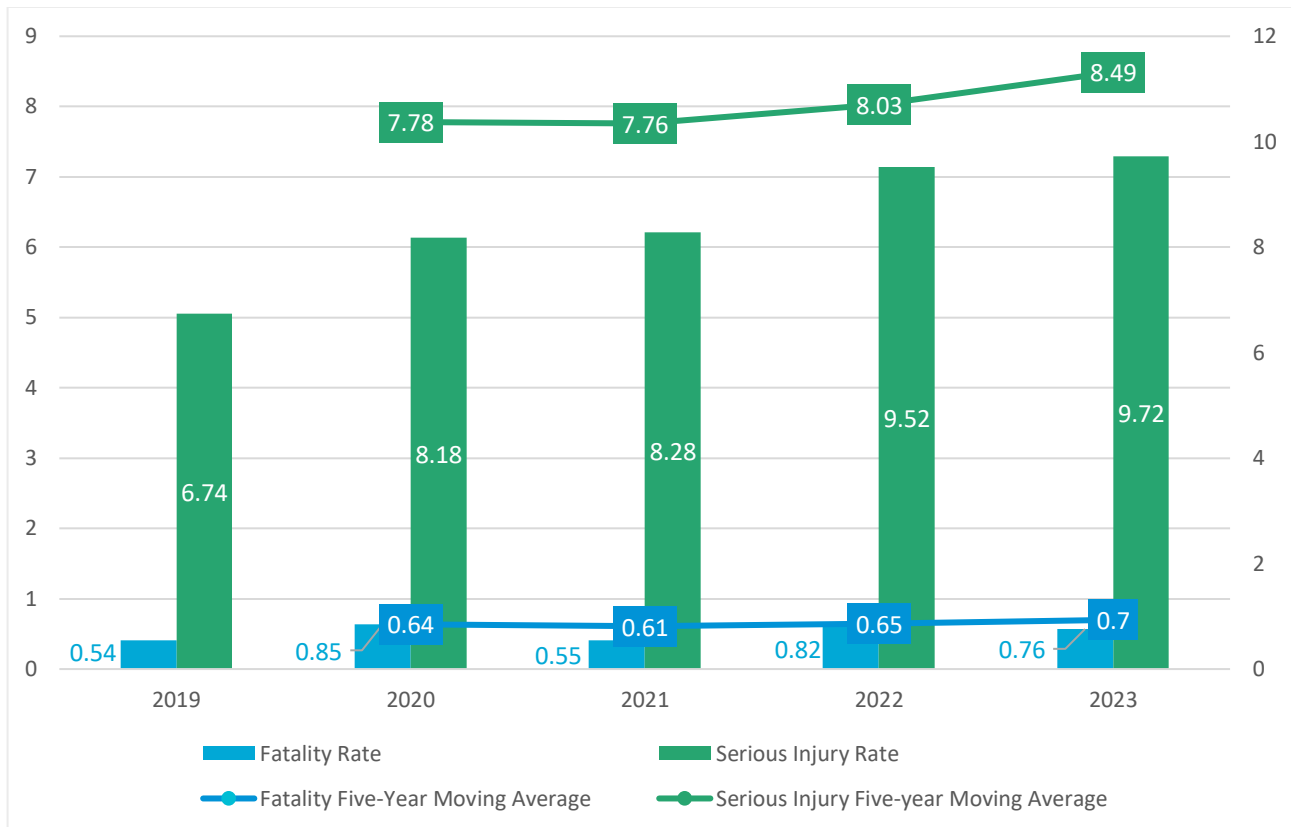
Source: TSSR; Highway Pavement Management System (HPMS).

Figure 4.2 shows fatalities and serious injuries per 100 million VMT in the Capital region from 2019 to 2023. The annual fatality rate was 0.68 in 2016 and generally decreased until 2020, when the rate increased by almost 60 percent to 0.85 fatalities per 100M VMT. Following a brief dip in 2021, the rates returned to elevated levels in 2022 and 2023. The five-year moving average increased by almost 10 percent from 2020 to 2023.

Compared to NYS, the Capital Region's fatality rate is about 30 percent lower on average. However, both the statewide and Capital Region trends show increasing five-year averages, indicating that fatalities are becoming more common despite decreasing VMT numbers.

From 2016 to 2019, serious injury rates decreased from 8.34 serious injuries per 100 million VMT to 6.74, a decrease of 19 percent. From 2019 to 2023, there was an increase from 6.74 to 9.72, an increase of 44 percent. Serious injury rates are 20 percent lower in the Capital Region compared to New York State. However, the Capital Region and NYS show a trend of serious injury rate increasing, which indicates that serious injuries are becoming more common even after normalizing for changing VMT numbers.

Figure 4.2 Regional Fatality and Serious Injury Rate Trend (2019-2023)



Source: TSSR; Highway Pavement Management System (HPMS).

What type of crashes are occurring?

The Capital Region's serious injury and fatality trends are driven by diverse factors. Table 4.1 organizes the Capital Region fatalities and serious injuries from 2019 to 2023 into 21 crash categories across seven emphasis areas identified in the New York State SHSP. Furthermore, each crash category is tagged with a red upward arrow or a blue downward arrow if that crash category experiences an increasing trend or decreasing trend, respectively.

The crash categories that contributed the most to fatalities and serious injuries in 2023 include intersections, roadway departures, unsafe speed, age-related (65+ and <21), pedestrian, and motorcycle. Fatalities and serious injuries involving pedestrians or drivers under the age of 21 increased the most from 2019 to 2023. More detailed information for each emphasis area can be found in the Appendix **Error! Reference source not found.**

Table 4.1 Fatalities and Serious Injuries by Emphasis Area (2019-2023)

NY SHSP Emphasis Area	Crash Category	2019	2020	2021	2022	2023	Capital Region Trend	NYS Trend
Intersections	(All)	103	100	140	215	235	▲	▲
Vulnerable Road Users	Bicyclists	18	18	21	33	28	▲	▲
	Pedestrian	66	54	66	80	77	▲	▼
	Road Workers	0	0	1	0	0	-	▼
Road User Behavior	Alcohol	44	47	53	52	54	▲	▲
	Drugs	9	18	15	13	12	▲	▼
	Cell Phones	1	4	5	4	4	▲	▲
	Distracted	83	75	95	82	86	▲	▼
	Asleep	15	8	24	25	11	▲	▼
Roadway Departures	Roadway Departures	110	112	112	104	111	▼	▲
	Head-On	41	28	39	48	40	▲	▲
	Sideswipe	8	6	9	9	11	▲	▲
Alternate Road Vehicles	Buses	8	1	0	4	7	▲	▼
	Motorcycles	78	99	92	103	77	▲	▲
	Trucks	31	31	29	34	33	▲	▼
Age Related	65+	125	98	136	132	153	▲	▲
	< 21	76	69	88	89	79	▲	▲
Aggressive Driving	Aggressive Driving	8	11	10	11	9	▲	▲
	Following Closely	77	50	56	79	68	▲	▼
	Traffic Control	25	36	42	46	54	▲	▼
	Unsafe Speed	121	117	132	132	113	▼	▲

Source: CLEAR, extracted June 2024.

Where are fatal and serious injury crashes occurring?

An analysis was conducted to determine the classification of roadways that have a high occurrence of severe crashes. 87 percent of crashes occurred on urban roads (Table 4.2). Of urban roads, the majority of crashes occur on arterial roads, with a minority of crashes occurring in collector and local roads. Fatalities and serious injuries follow a similar distribution: 80 percent of fatalities and serious injuries occur on urban roadways, with a majority occurring on urban arterials specifically.

Table 4.2 Crashes and Fatalities/ Serious Injuries by Functional Classification (2019-2023)

Functional Class		Total Crashes	% of Total Crashes	Total Fatalities & Serious Injuries	% of Total Fatalities & Serious Injuries
Urban	Principal Arterial – Interstate	10,327	11.6%	327	11.1%
	Principal Arterial – Other Freeway / Expressway	1,197	1.3%	29	1.0%
	Principal Arterial – Other	26,071	29.3%	870	29.5%
	Minor Arterial	16,344	18.4%	540	18.3%
	Major Collector	9,533	10.7%	273	9.2%
	Minor Collector	426	0.5%	13	0.4%
	Local	13,643	15.4%	313	10.6%
	Urban Total	77,541	87.3%	2,365	80.1%
Rural	Principal Arterial – Interstate	598	0.7%	16	0.5%
	Principal Arterial – Other Freeway / Expressway	49	0.1%	0	0.0%
	Principal Arterial – Other	1,683	1.9%	96	3.2%
	Minor Arterial	2,407	2.7%	108	3.7%
	Major Collector	2,286	2.6%	142	4.8%
	Minor Collector	2,560	2.9%	136	4.6%
	Local	1,720	1.9%	91	3.1%
	Rural Total	11,303	12.7%	589	19.9%
Sub-Total (excluding 'Unknown')		88,844	100%	2,954	100%
Unknown		18,095	16.9%	437	12.9%
Total		106,939	100.0%	3,391	100.0%

Source: CLEAR, extracted June 2024.

Crashes, fatalities, and serious injuries occur on various types of roadway ownership. Local roads¹ and state roads account for the majority of crashes, while county roads and other² Forms of road ownership make up a minority of crashes, shown in Table 4.4.

Table 4.2 Crashes and Fatalities/Serious Injuries by Road Ownership (2019-2023)

	% of Total Crashes	% of Fatalities and Serious Injuries

¹ Local includes City, Village, or Town jurisdiction

² Other jurisdictions include Army, Local Parks, Local Service, Navy/Marines, Other local agencies, Other Public Instrumentality, Other State agencies, Private or Restricted Access, Public Unclaimed, Railroad, and State Parks.

NYS DOT	45.7%	51.7%
County	43.4%	34.8%
Local	43.4%	34.8%

Source: CLEAR, extracted June 2024

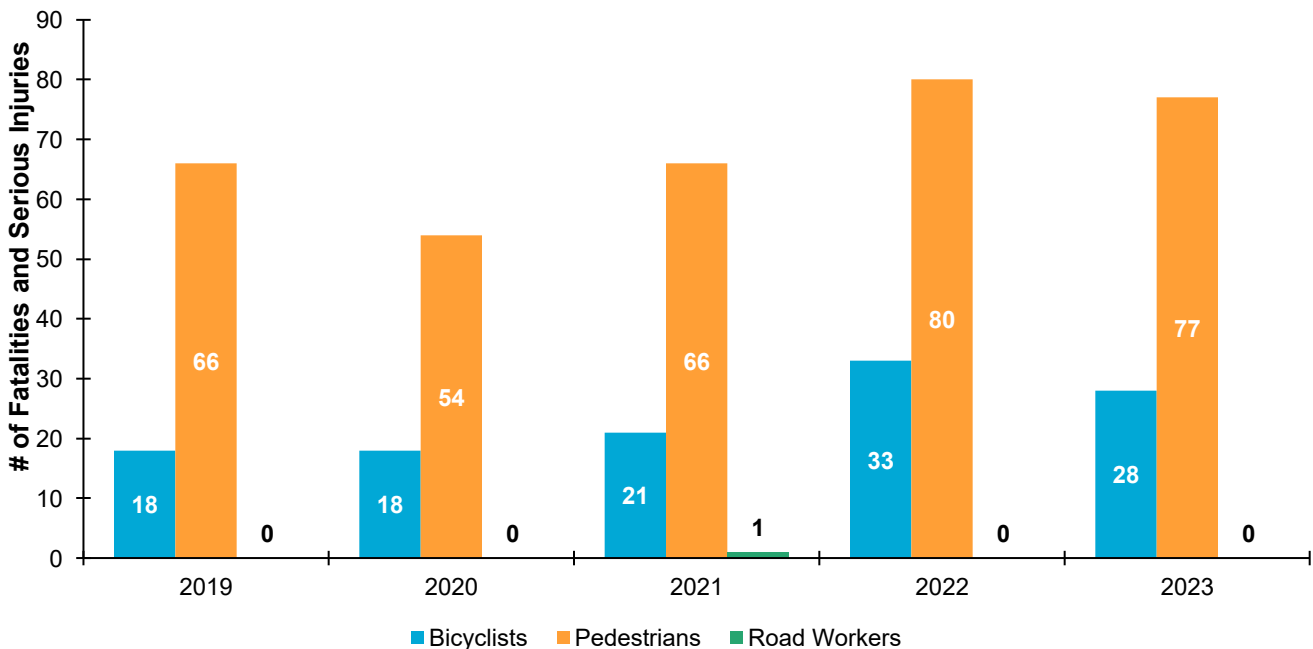
Who is most affected by crashes?

The majority of fatal and serious injury crashes (79 percent) involve a car, van, or pickup truck. Motorcycles are involved in 12 percent of fatal and serious injury crashes, and trucks make up 5 percent of fatal and serious injury crashes.

VRU crashes, including those involving pedestrians, cyclists, motorized wheelchair users, and people on foot within work zones, face unique challenges and a higher risk of injury compared to other road users. During these five years, there was also one fatality or serious injury involving road workers. The limited number of such incidents provides insufficient data to establish a historical trend for these crash types.

While walking and bicycling offer significant health and environmental benefits, these users are more prone to severe injuries and fatalities when involved in collisions with motor vehicles. In the Capital Region from 2019 to 2023, bicyclist fatalities and serious injuries account for 3.5 percent of all fatalities and serious injuries, while pedestrian fatalities and serious injuries make up 10.1 percent (Figure 4.3). Both pedestrian and bicycle fatalities and serious injuries generally increased over this five-year period.

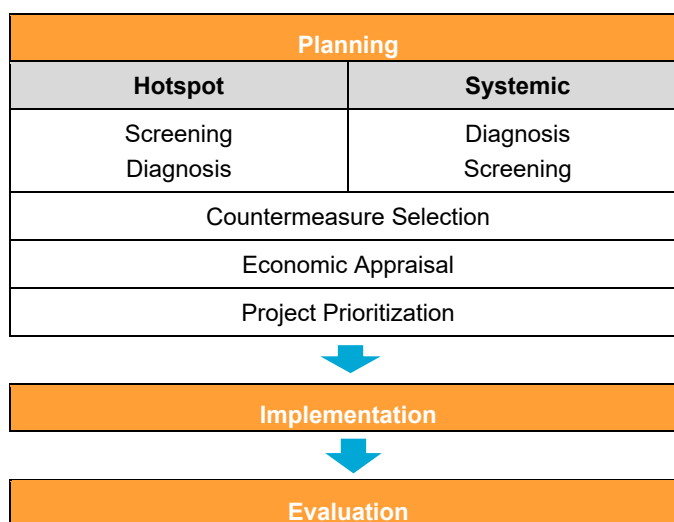
Figure 4.3 Vulnerable Road User Fatalities and Serious Injuries (2019-2023)



4.2 Network Screening

The NYSDOT *Highway Safety Improvement Program Procedures and Techniques* (“Red Book”) has divided the **roadway safety management process** into three broad components (Figure 4.4) with respective approaches for Hotspot and Systemic network screening. While Hotspot Analysis identifies the segments and intersections that are over-represented in terms of their crash history from 2019 to 2023, Systemic Analysis focuses on identifying risk factors commonly associated with severe crashes and screens the network based on site-specific risk levels. These two approaches are complementary and should each be conducted to support a comprehensive approach to safety management.

Figure 4.4 NYSDOT Highway Safety Improvement Program Process



Hotspot Analysis

The Hotspot approach selects and treats sites based on historic site-specific crashes. The screening for the Capital Region was conducted using the NYSDOT Crash Location and Engineering Analysis Repository (CLEAR) Safety application, a geographic information system (GIS) tool. Roadway locations that are over-represented in terms of their crash history are defined by their Potential for Safety Improvement (PSI), which is

based on a comparison of the location’s safety performance relative to the statewide Predicted Crash Frequency of similar peer facilities.

Each intersection and segment location has an associated PSI, which is then used to break the locations into four categories called a Level of Service of Safety (LOSS). LOSS stratification boundaries are defined to create four categories of sites. Locations with positive PSI values fall into LOSS 3 and LOSS 4 categories, with LOSS 4 representing those in the top 10th percentile.

This screening was conducted to identify intersections and segments that are over-represented in terms of their fatal and serious injury crash history for all crash types, as well as pedestrian and bicycle crashes, specifically from 2019 to 2023.

After running the CLEAR Safety tool screening, manually adjusting the inputs to account for missing annual average daily traffic (AADT) and Facility Type attribute data, and reviewing the results with the Regional Operations and Safety Advisory Committee, the final hotspot screening results were completed. **All ‘LOSS = 4’ segments and intersections had a minimum of two fatal and/or severe injury crashes over the five-year analysis period (2019-2023), and all ‘LOSS = 3’ locations had a positive PSI.**

The facility owners with the greatest number of fatal and serious injury hot spots are the City of Albany and NYSDOT (Table 4.3). For VRU, the City of Schenectady and NYSDOT have the greatest number of hot spots (Table 4.4). Maps of the results for both screens are presented in Figure 4.5 and Figure 4.6.

Table 4.3 Fatal and Serious Injury Hotspots (LOSS=4)

<i>Facility Owners</i>	<i>Segments</i>	<i>Intersections</i>
NYSDOT	6	34
City of Albany	13	15
City of Schenectady	8	8
City of Troy	3	7
Saratoga County		6
Albany County		3
Rensselaer County		2
City of Watervliet		2
Town of Colonie	1	
Town of East Greenbush		1
Town of Halfmoon	1	
Town of Malta	1	
City of Mechanicville	1	
City of Saratoga Springs (Inner District)	1	
Schenectady County	1	
Total	36	78

Source: CLEAR Safety, analysis conducted by Cambridge Systematics.

Table 4.4 Vulnerable Road User Hotspots (LOSS = 4)

Facility Owners	Segments	Intersections
NYS DOT	2	3
City of Schenectady	2	3
City of Albany	1	2
City of Troy		2
	4	10

Source: CLEAR Safety, analysis conducted by Cambridge Systematics.

Figure 4.5 Fatality and Serious Injury Hotspot Screening Results

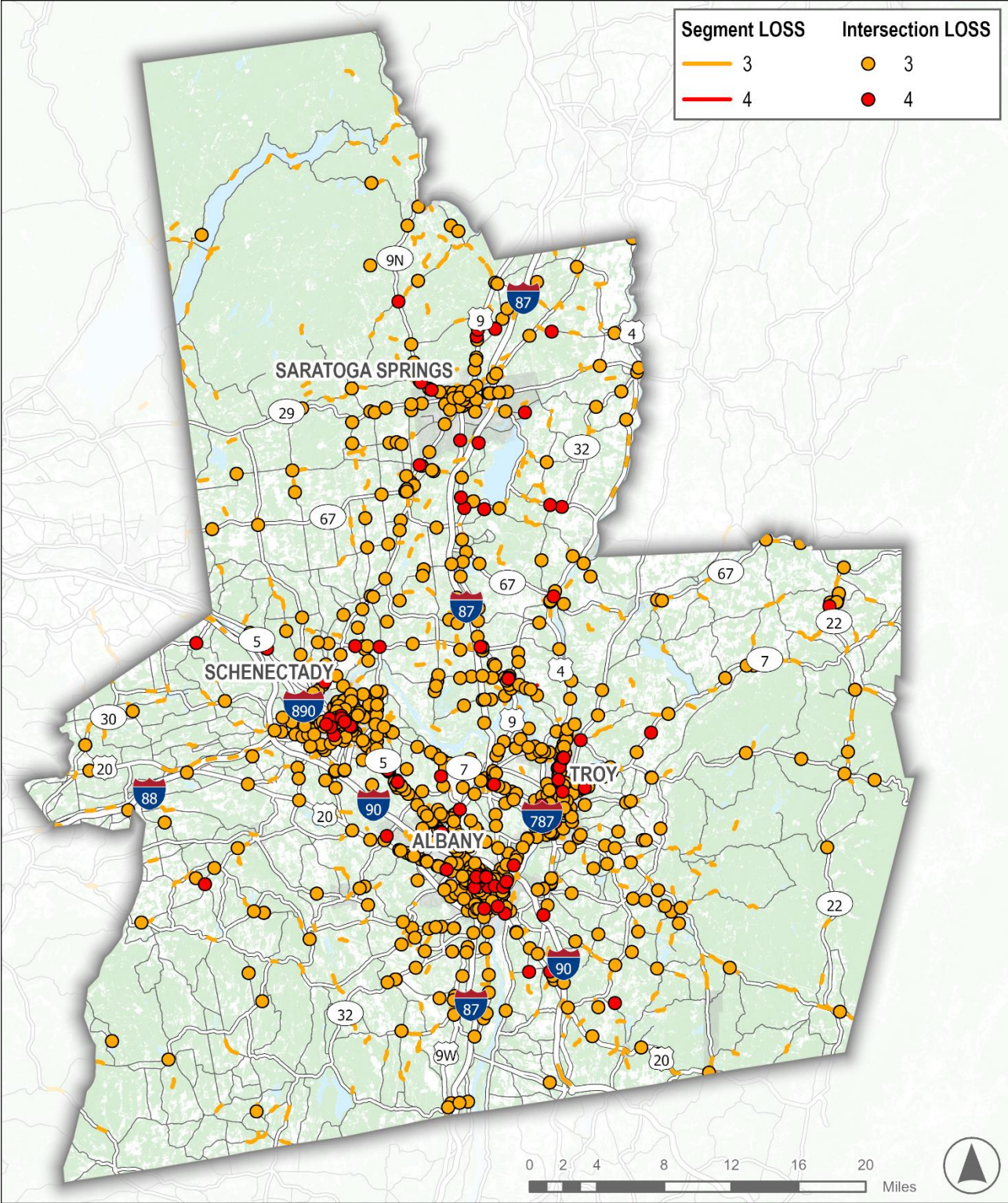
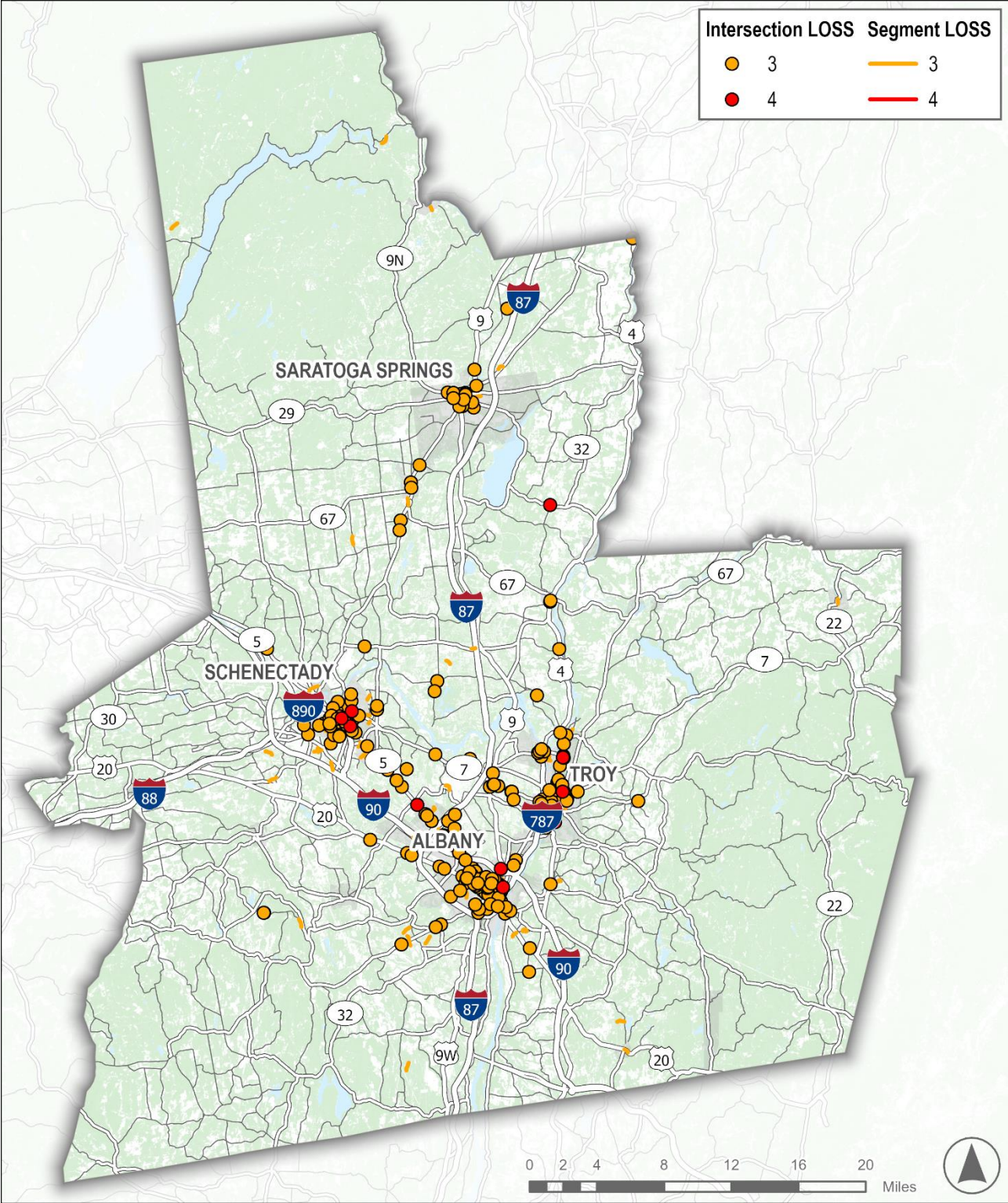


Figure 4.6 Vulnerable Road User Hotspot Screening Results

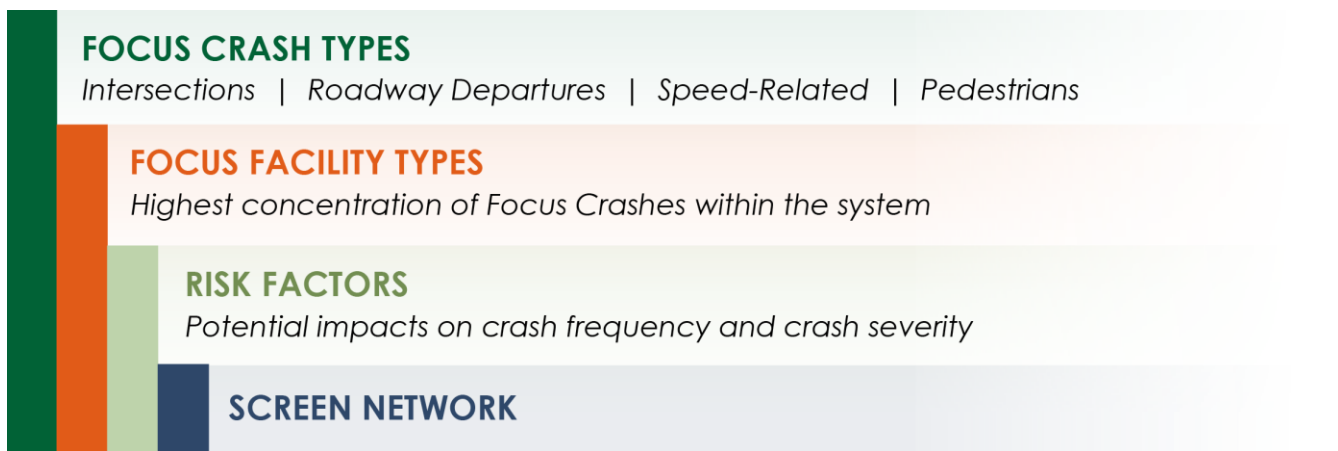


Systemic Analysis

Given the relatively rare and dispersed occurrence of severe crashes in the Capital Region, a systemic analysis was performed as a complementary analysis to the hotspot analysis. Unlike the hotspot analysis, which screens the system based on site-specific historical crash data, the systemic analysis focuses on identifying risk factors commonly associated with severe crashes and screens the network based on roadway risk characteristics. Therefore, this systemic approach can proactively prioritize locations with high crash risks for potential safety improvements, even in areas that may lack significant crash history.

The methodology for systemic analysis is shown in Figure 4.7. Considering the emphasis areas identified in New York's SHSP and the Transportation Council's recent five-year crash trends from 2019 to 2023, the focus crash types selected for this systemic analysis include roadway departure crashes, intersection-related crashes, pedestrian-related crashes, and speed-related crashes. To address those four focus crash types, the subsequent analysis, which includes the identification of the most prevalent crash locations and contributing factors, was conducted separately for each group.

Figure 4.7 Systemic Analysis Methodology



Focus facility types are generally identified as those with the highest concentration of focus crashes within the system. Due to the inherent differences in roadway design standards and operational characteristics across facility types, risk factors are often highly correlated with specific facility types. Thus, for a more streamlined selection of risk factors, facility types were grouped into broader categories to allow the subsequent analysis to focus on identifying the specific risk factors associated with each category. The risk factors for each of these four focus crash types (intersection-related, roadway departure, pedestrian-related, and speed-related) are shown in Figure 4.8.

Figure 4.8 Risk Factors by Crash Type

Intersection-Related	Roadway Departure	Pedestrian-Related	Speed-Related
<ul style="list-style-type: none"> • Presence of lighting • Traffic control types • Left-turn lane types • Right-turn channelization types • Crosswalk types • Traffic control type • Intersection skew angles (degree) • Pedestrian signal types • Total entering vehicles (TEV) 	<ul style="list-style-type: none"> • Number of through lanes • Annual average daily traffic (AADT) • Shoulder width (feet) • Posted speed limit (MPH) • Divided • Median width (feet) • Median types • Access control types • Truck route types 	<ul style="list-style-type: none"> • Pedestrian Daily Trip Count • VRU High-risk area 	<ul style="list-style-type: none"> • Number of Through Lanes • AADT • Shoulder Width (ft) • Posted Speed Limit (MPH) • Divided • Median Type • Truck Route

Source: NYSDOT, and NYSDOT CLEAR, 2019-2023

An interactive online map, accessible through this [link](#), was created that visualizes the locations of all segments or intersections within each Focus Crash and Focus Facility type, along with the count of identified Risk Factors present. Each Risk Factor was weighted equally, and a Risk Score was calculated for each location based on the total number of factors present. Facility owners can use this online map to visualize sites that are candidates for systemic countermeasures to address the identified risks.

Table 4.7 shows the number of focus facilities with above-average risk scores across the four focus crash types. For example, 325 out of 685 urban signalized intersections with 4 or more legs have an above-average number of risk factors, making them priority candidates for systemic countermeasures. Each risk factor for the focus facilities was given equal weight

Table 4.7 Risk Score of Focus Facilities

Focus Crash Type	Focus Facilities	# miles / intersections	Above Average Risk Scores
Intersections	Urban Signalized Intersections with 4 or more Legs	685	325
	Rural Stop-Controlled Cross-Intersections	364	262
Pedestrians	Urban Signalized Intersections with 4 or more Legs	685	297
	Urban Signalized Y-Intersections and T-intersections	412	213
	Urban Stop-Controlled Cross-Intersections and T-Intersections	10,358	4,725
Roadway Departure	Rural Arterials (Excluding Freeways)	212.2	52.6
	Urban Arterials (Excluding Freeways)	573.6	354.6
	Rural Major Collectors	242.6	145.3
	Rural Minor Collectors	495.5	91.8
Speed-Related	Rural Arterials (Excluding Freeways)	212.2	146.9
	Urban Arterials (Excluding Freeways)	573.6	214.9

Focus Crash Type	Focus Facilities	# miles / intersections	Above Average Risk Scores
	Urban Major Collectors	468.3	184.6
	Rural Major Collectors	242.6	125.3
	Rural Minor Collectors	495.5	105.8

Source: NYSDOT CLEAR, 2019-2023.

4.3 Speed Limit Investigations

The VZSAP seeks to provide the required traffic engineering studies to support the decision of municipalities to further reduce speed limitations within the Capital Region from 30 mph to 25 mph, as permitted by NYS Assembly Bill A1007A.

The project team conducted Speed Limit Assessment Studies on Group 1 and 2 roadways (Table 4.8). The distinctions in roadway types, including volume, setting, and connectivity, will be considered in this study. The assessment includes a summary of the data collected for low-volume residential neighborhood streets, as well as roadways classified as collectors and arterials that see heavier traffic and speeds. These are included in Appendix A6.

Table 4.8 Group 1 and 2 Roadways

	Group 1 Roadways	Group 2 Roadways
Description	Low-volume residential neighborhood streets. Residential-only streets located within a neighborhood and with expected low vehicle volumes.	Roadways are classified as collectors and arterials that see heavier traffic and higher speeds.
Considerations	<ul style="list-style-type: none"> Residential setting and part of a neighborhood street grid Roadway characteristics Parking Potential for ped-bike activity 	<ul style="list-style-type: none"> Operating speed (50th and 85th percentile) Annual average daily traffic Roadway characteristics and geometric conditions Level of development in the area around the road Crash and injury rates Presence of on-street parking Extent of ped/bike activity
Data Collection	Desktop survey of aerial imagery to verify roadway characteristic and residential/neighborhood locations	24 hours of data collection at one mid-block location to determine volume (vehicle and bike-ped) and vehicle speeds

5.0 Underserved Communities Analysis and Plan

The VZSAP seeks to identify communities disproportionately impacted by roadway crashes through data analysis in collaboration with stakeholders and the public. The analysis includes both geographic-specific population characteristics and crash history to inform the proposed projects and strategies.

Incorporating considerations for underserved communities at the core of the VZSAP’s data analysis will ensure this plan more accurately represents existing challenges affecting these areas and opportunities to provide targeted countermeasures.

5.1 Identification and Analysis of Underserved Communities

The Transportation Council has identified nine demographic indicators to identify potential geographically-defined Communities of Concern for analysis of transportation-relevant burdens, as listed below:

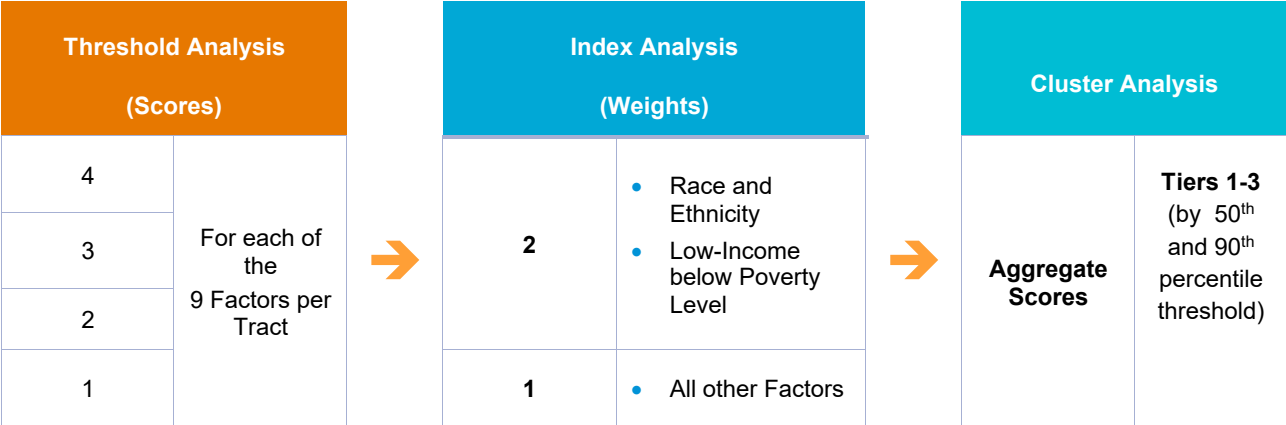
- Race and Ethnicity
- Low-Income below Poverty Level
- Youth population (under 18 years of age)
- Elderly population (75 years of age or older)
- Limited English Proficiency
- Individuals with Disability
- Foreign-born
- Zero-Car households
- Female single-parent household

Indicator	Regional Average
Race and Ethnicity	23%
Low-Income below Poverty Level	10%
Youth population (under 18 years of age)	19%
Elderly population (75 years of age or older)	18%
Limited English Proficiency	3%
Individuals with Disability	12%
Foreign-born	9%
Zero-Car households	4%
Female single-parent household	2%

Source: 2018-2022 ACS

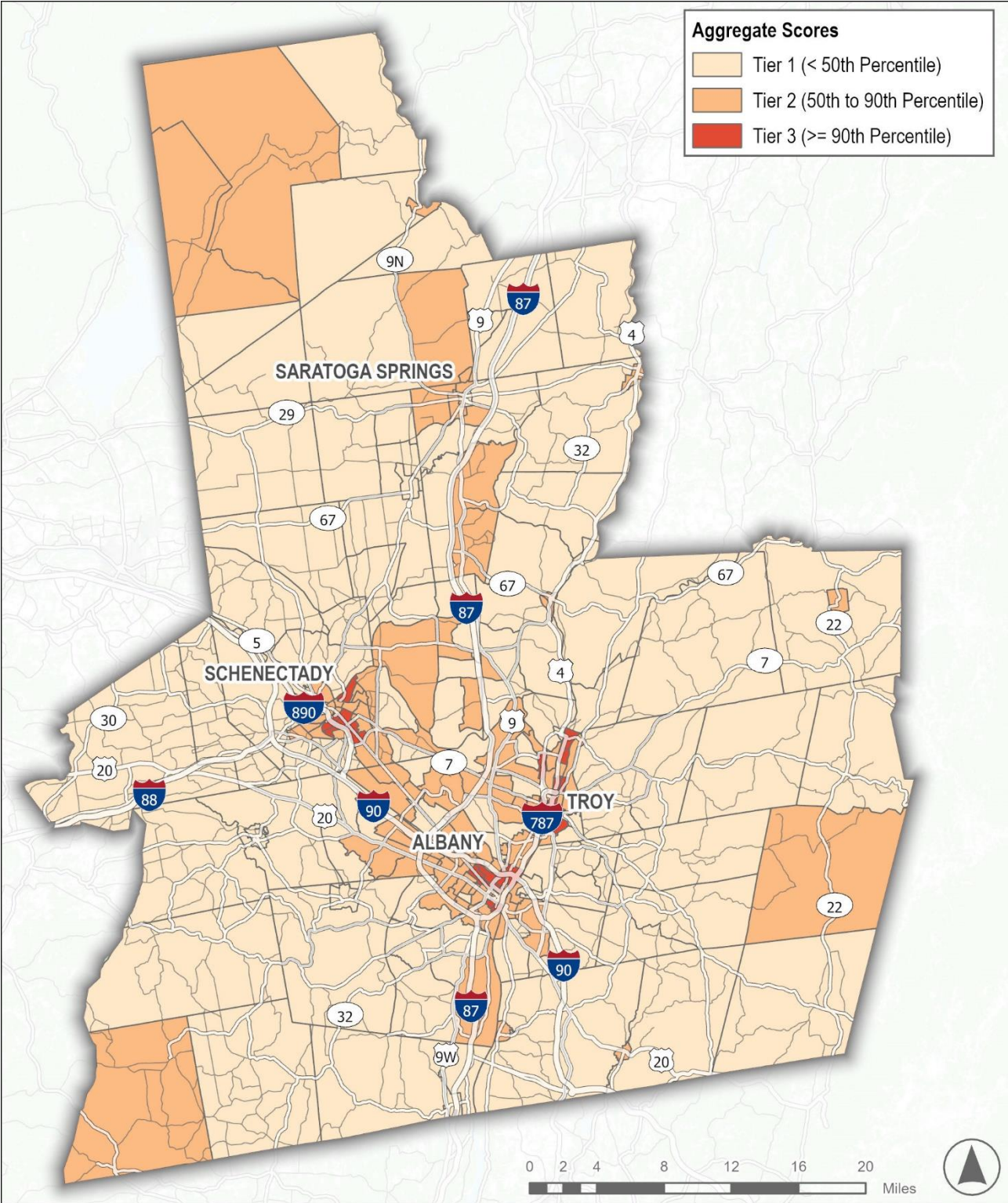
The geographic areas at the Census Tract-level with identified Communities of Concern have been assessed for their relation to the impacts of crashes. Three ‘Tiers’ of Communities of Concerns have been developed, based upon calculated Aggregate Scores for the nine demographic factors combined using 2018-2022 American Community Survey (ACS) data. The Tiers were produced using a three-step process, as shown in Figure 5.1. Threshold Score was assigned to the census tracts where the concentration of individuals exceeds one or more of the regional averages for the respective demographic indicators. For each demographic indicator, the 50th, 70th, 80th, and 90th percentile values for the entire region of Erie and Niagara Counties were chosen as thresholds to assigned score 1, 2, 3, or 4 respectively. The threshold scores for Race and Ethnicity and Poverty Level were assigned a weight of 2, while the remaining indicator scores were given an equal weight of 1.

Table 5.1 Communities of Concern – Tiers Process



The majority of areas identified as Tiers 2 or 3 are located in the urban areas of Albany, Troy, Schenectady, and Saratoga Springs.

Figure 5.1 Communities of Concern in the Capital Region

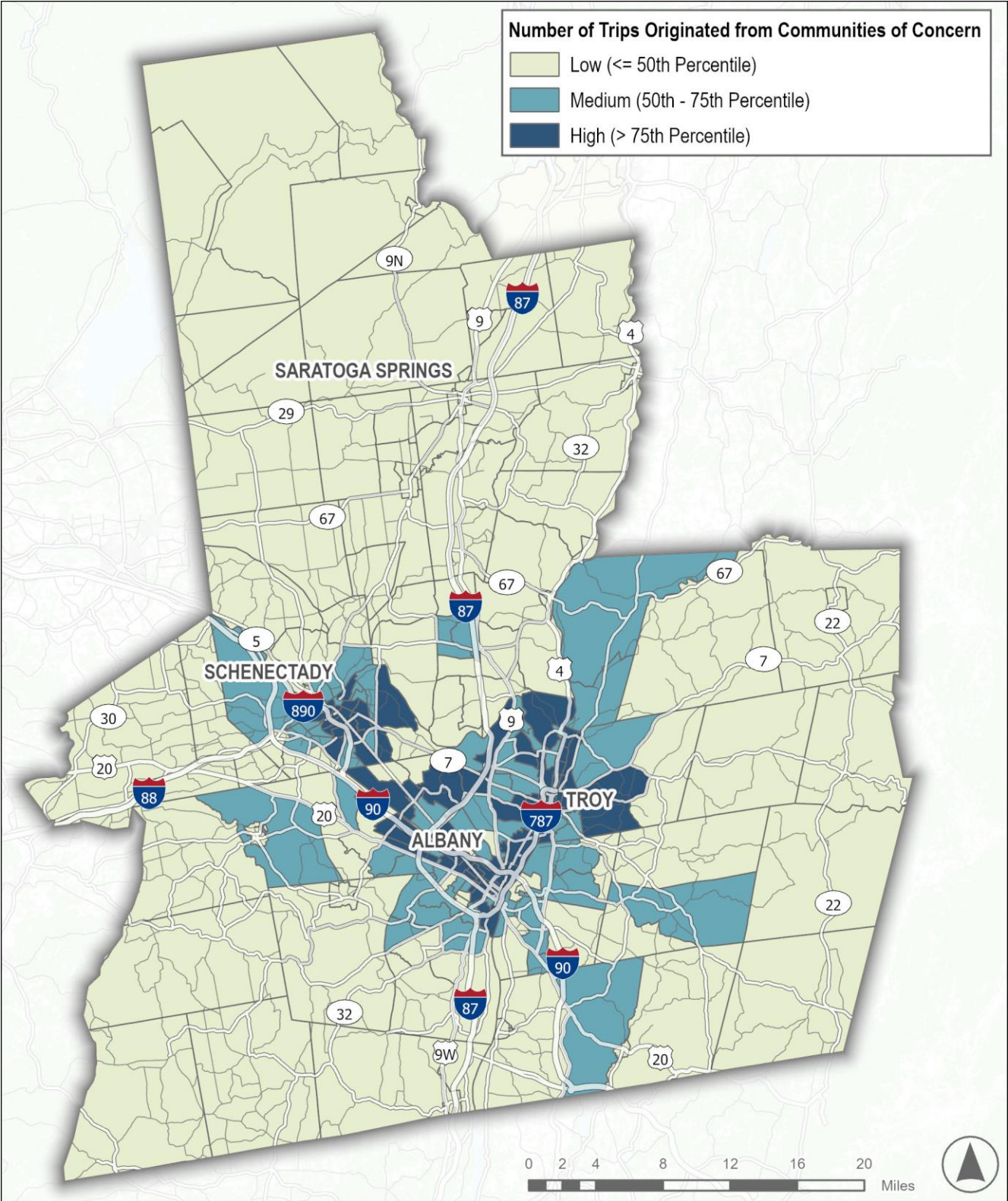


5.2 Key Destinations

To effectively identify crash risks associated with the daily travel of individuals residing in Census Tracts identified as Communities of Concern, it is important to target safety improvements not only within those areas where trips originate, but also at the most frequently visited destinations of these trips.

To identify the top destinations for residents of Census Tracts identified as Communities of Concern (those in the 90th percentile or above of Aggregate Scores), trip activity data from a typical Thursday in Fall 2023 were collected from the Replica platform. For each Tract within the region, the number of trip pairs originating from the Communities of Concern and ending in that particular Tract was summed. Tracts where the number of trip destinations was greater than the region's 75th percentile value were considered as key Communities of Concern destinations. Most of these top destinations are located around the Cities of Albany, Troy, and Schenectady. These specific locations within the region are highlighted in Figure 5.2.

Figure 5.2 Key Destinations in the Capital Region



6.0 Policy and Process Changes

The Capital Region VZSAP identifies safety-related policies and processes for municipalities in the region, encompassing the five elements of the Safe System Approach and rooted in best practices in both New York State and nationally. The regional and local policy recommendations that impact transportation safety in the counties, cities, towns, and villages were identified in consultation with the Transportation Council, the ROSAC, the Community Advisory Committee, and other stakeholders. The policies and process recommendations will help Albany, Rensselaer, Saratoga, and Schenectady Counties to:

- Foster a commitment to achieve goals and objectives through recognition of key principles;
- Establish and sustain leadership, collaboration, and accountability;
- Clarify the relationship to other policies, plans, and programs; and
- Assist transportation agencies and all levels of government in improving and maintaining the transportation system in Albany, Rensselaer, Saratoga, and Schenectady Counties.

New York State followed the lead of the USDOT and has embraced the Safe System Approach in pursuit of eliminating roadway-related fatalities and serious injuries. The New York State SHSP has incorporated the Safe System Approach to assess current Strategies and Actions and to identify new directions for partners statewide to employ. This represents a transition from being focused on individual behavior to a more shared responsibility among facility owners, law enforcement, education, and the broader community.

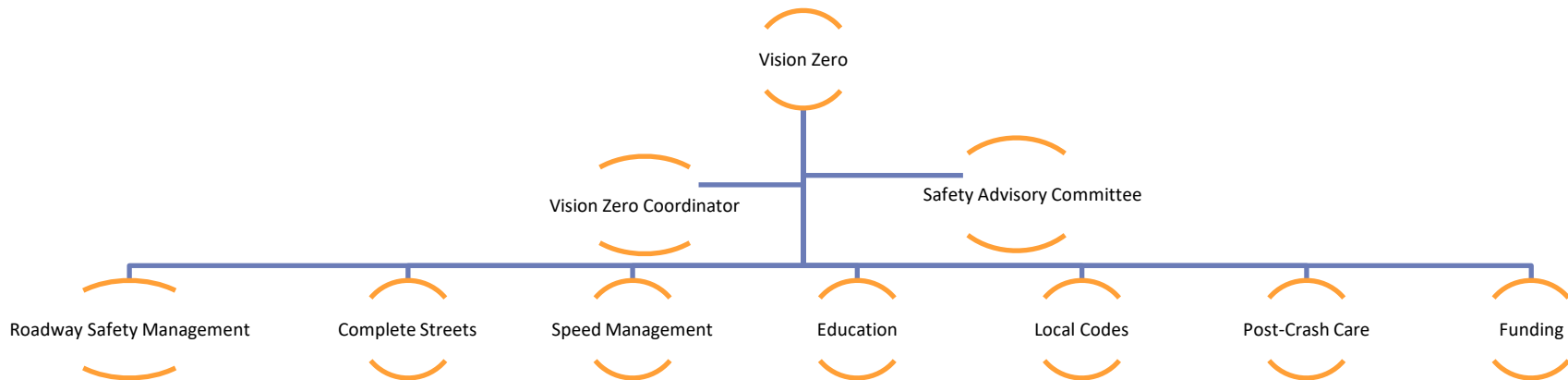
6.1 Policy and Process Recommendations

The Vision Zero Policy and Process Framework (Figure 6.1) organizes the actions that can be taken to pursue the Vision Zero goal. The Transportation Council and Vision Zero Coordinator are envisioned as the key staff and coordinating body to oversee the implementation of the VZSAP. There are seven Process “areas” that each have multiple recommendations toward building capacity for a roadway safety management process, refining Complete Streets project development processes, utilizing speed management, promoting education about transportation safety, utilizing local codes to incentivize safety improvements, enhancing post-crash care, and pursuing funding for improvements, which together contribute towards the Vision Zero goal.

This chapter provides a variety of policy and process recommendations that build a broad framework for supporting traffic safety in the Capital Region. The recommended actions implemented by the Transportation Council, its member agencies, municipalities, or other entities will support the projects and programs identified in the Safety Implementation Program (Chapter 7) and prioritize future activities to address severe crashes. The recommendations span across each of the emphasis areas in the NY SHSP and are consistent with all five Safe System Approach elements. Numerous recommendations highlight ongoing activities, and most others are intended to commence in the next one to three years, though that may change depending on agency prioritization and capacity. Where possible, the funding source for the planning, coordination, and other staff-level activities for the recommendations has been provided.

The Implementation Program Annual Report will track action items that agencies, municipalities, and other partners will undertake to improve safety in the region as identified in the VZSAP. A prioritized list of actions will likely be more manageable for implementation and progress tracking.

Figure 6.1 Vision Zero Policy and Process Framework



Recommendations in each process area that have been identified as ‘priorities’ will be highlighted and italicized.

6.1.1 Vision Zero Policy

New York State's SHSP aims to eliminate fatalities and serious injuries statewide. In conjunction with consideration of adoption of the VZSAP, the Transportation Council will also consider a regional Vision Zero Policy that will confirm their commitment to that goal with a planning horizon that aligns with *In Motion*, the long-range transportation plan. The proposed Policy will be supported by the appointment of a Vision Zero Coordinator at the Transportation Council and potentially more formal designations for the ROSAC for monitoring the implementation of the VZSAP. Together, they will build a shared safety culture and strategy that will work with the community to achieve Vision Zero. Additionally, the local counties and municipalities, and other public/private entities, will be encouraged to adopt their own supporting Vision Zero resolutions.

Table 6.1 Recommendations related to the Vision Zero Policy

Key Action Items	Category	Lead Agency	Supporting Partners	SHSP Emphasis Area	Safe System Approach Element	Timeline	Funding
<i>Adopt a Vision Zero Policy for the Capital Region</i>	<i>Leadership</i>	<i>Transportation Council</i>	<i>Counties and Municipalities</i>	<i>All</i>	<i>All</i>	<i>1 year</i>	<i>N/A</i>
<i>Encourage counties, municipalities, and other public/private entities to adopt their own supporting Vision Zero resolutions</i>	<i>Leadership</i>	<i>Transportation Council</i>	<i>Counties and Municipalities</i>	<i>All</i>	<i>All</i>	<i>1-3 years</i>	<i>N/A</i>
<i>Provide an annual VZSAP Annual Report with updates on key safety performance metrics, tracking progress on the implementation of priority initiatives, and highlighting accomplishments made by partners</i>	<i>Transparency</i>	<i>Transportation Council</i>	<i>NYSDOT</i>	<i>All</i>	<i>All</i>	<i>1 year</i>	<i>N/A</i>
Designate a Vision Zero Coordinator	Leadership	Transportation Council	Counties and Municipalities	All	All	1 year	N/A
Continue to support the ROSAC for coordination across agencies and to help guide the implementation of the VZSAP. Continue to seek to broaden membership	Partnerships	Transportation Council	Counties and Municipalities	All	All	Ongoing	N/A

Key Action Items	Category	Lead Agency	Supporting Partners	SHSP Emphasis Area	Safe System Approach Element	Timeline	Funding
for law enforcement, emergency response, public health, and other potential partners.							
Continue to convene the Community Advisory Committee to support and monitor implementation of the VZSAP	Partnerships	Transportation Council	Counties and Municipalities	All	All	Ongoing	N/A

6.1.2 Roadway Safety Management

The Roadway Safety Management Process (Figure 6.2) is a data-driven approach to applying proven analysis tools for identifying, implementing, and evaluating potential safety improvements at a network scale. The recommendations aim to improve each of the six steps in the process to promote greater data integrity, collaboration amongst partners, and transparency to broader stakeholders. These will build upon the existing tools, such as the CLEAR application from NYSDOT, to inform the planning and programming process supported by the Transportation Council and its member agencies. Other action items involve collaborations with other facility owners and law enforcement agencies to help inform their respective investments in safety projects and enforcement activities.

Figure 6.2 Roadway Safety Management Process

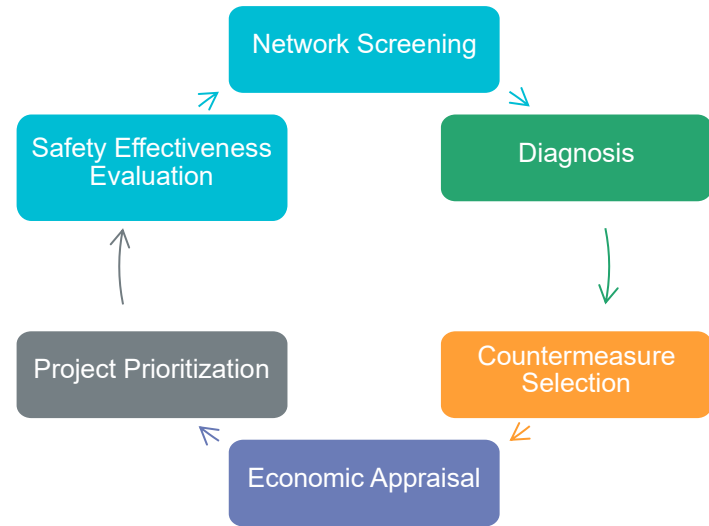


Table 6.2 Recommendations related to Roadway Safety Management

Key Action Items	Category	Lead Agency	Supporting Partners	SHSP Emphasis Area	Safe System Approach Element	Timeline	Funding
Provide network screening results, including vulnerable road users, to facility owners on an annual basis	Network Screening	Transportation Council	NYSDOT	Data	Safe Roads	Ongoing	N/A
Develop and support an Annual Work Program of Highway Safety Investigations for county- and municipal-owned roads	Public Awareness	Transportation Council	Counties, Municipalities	(All)	Safe Roads	1 year	Unified Planning Work Program (UPWP)
Provide “seed funding” to conduct preliminary engineering for safety projects where Highway Safety Investigations recommend capital improvements	Project Prioritization	Transportation Council	NYSDOT	(All)	Safe Roads	1-3 years	Highway Safety Improvement Program (HSIP)

Key Action Items	Category	Lead Agency	Supporting Partners	SHSP Emphasis Area	Safe System Approach Element	Timeline	Funding
<i>Develop an inventory and data management system of horizontal curves on county- and municipal-owned roads for risk assessment of roadway departure crashes</i>	Counter-measure Selection	Transportation Council	Counties, Municipalities	Roadway Departure	Safe Roads	3-5 years	UPWP
Establish a Community Traffic Safety Team of local officials, law enforcement, and community stakeholders to promote engagement through the Road Safety Audits process	Counter-measure Selection	Transportation Council	Counties, Municipalities	Vulnerable Road Users	Safe Roads, Safe Road Users	1 year	UPWP
Conduct project-level evaluations of crashes in proximity to completed safety projects and improvements	Leadership	Transportation Council	NYSDOT, Counties, Municipalities	(All)	Safe Roads	3-5 years	UPWP
Identify systemic safety signage, striping, and other treatments that can be delivered through coordination with maintenance projects	Counter-measure Selection	Transportation Council	Counties, Municipalities	Roadway Departures, Intersections	Safe Roads	1-3 years	UPWP
Encourage all local law enforcement agencies to adopt the Traffic and Criminal Software (TraCS) crash reporting system	Evaluation	Transportation Council	Traffic Safety Boards (TSBs)	Data	Safe Road Users	1-3 years	N/A
Host training for law enforcement on reporting crashes involving vulnerable road users and micromobility users on the updated NYSDMV MV-104P report	Data Development	ROSAC	TSBs	Vulnerable Road Users	Safe Road Users	1-3 years	UPWP
Develop an inventory and data management system of signage and pavement marking data on county- and municipal-owned roads	Counter-measure Selection	Transportation Council	Counties, Municipalities	Roadway Departures, Intersections	Safe Roads, Safe Speeds	3-5 years	UPWP
Coordinate with NYS Association of MPOs to develop local guidance for designating truck routes and provide resources to municipalities	Partnerships	Transportation Council	Counties, Municipalities	Roadway Departures	Safe Roads	3-5 years	UPWP

6.1.3 Complete Streets

Complete Streets policies support proactive planning, design, and maintenance of streets for the safety of users of all ages and abilities. The policies and associated practices guide the inclusion of VRU-oriented design elements into all projects and phases, mandate coordination between departments and jurisdictions, and specify methods for measuring progress. Communities that adopt Complete Streets policies are more likely to implement Complete Streets and safety improvements as a part of regular maintenance and capital projects. To date, eight municipalities in the Capital Region have adopted local Complete Streets policies. Additional jurisdictions will be encouraged to adopt their respective policies. The Transportation Council, in conjunction with NYSDOT and member agencies, can continue to review updates to guidance and develop resources tailored to meet regional planning and project development needs.

The [State of New York Complete Streets Act](#) was signed into law in 2011. It requires agencies that receive federal funding to consider the mobility and convenience of all users when developing transportation projects, including bicyclists, pedestrians, public transportation riders, and motorists of all ages.

Eight municipalities in the Capital Region have adopted Complete Street policies:

- Town of Bethlehem (2009)
- Saratoga Springs (2012)
- City of Albany (2013)
- City of Troy (2014)
- Village of Scotia (2014)
- City of Cohoes (2017)
- City of Watervliet (2017)
- Town of Niskayuna (2017)

Figure 6.3 Complete Streets Related Policies

Key Action Items	Category	Lead Agency	Supporting Partners	SHSP Emphasis Area	Safe System Approach Element	Timeline	Funding
<i>Continue to collect and analyze active transportation counts, sidewalk inventory, and bicycle facilities data to support corridor-level analysis and project planning</i>	<i>Data Development</i>	<i>Transportation Council</i>	<i>NYSDOT, Counties, Municipalities</i>	<i>Vulnerable Road Users</i>	<i>Safe Roads</i>	<i>Ongoing</i>	<i>UPWP</i>

Key Action Items	Category	Lead Agency	Supporting Partners	SHSP Emphasis Area	Safe System Approach Element	Timeline	Funding
Encourage municipalities to update their existing Complete Streets policy as best practices change, or adopt a new one	Planning and Policy	Transportation Council	Counties, Municipalities	Vulnerable Road Users	Safe Roads, Safe Road Users	1-3 years	N/A
Develop a model Local Complete Streets Policy for the Capital Region that incorporates the <i>Capital Region Complete Streets Design Guide</i>	Planning and Policy	Transportation Council	NYSDOT, Counties, Municipalities	Vulnerable Road Users	Safe Roads, Safe Road Users	1-3 years	UPWP
Conduct an update to the <i>Capital Region Complete Streets Design Guide</i> with revised national facility guidance, the latest NYSDOT Complete Streets Checklist, and current regional best practices	Guidance	Transportation Council	Active Transportation Advisory Committee (ATAC)	Vulnerable Road Users	Safe Roads, Safe Road Users	3-5years	UPWP
Develop a Pedestrian and Bicycle Safety Review Checklist that includes the application of potential countermeasures through the Safe Streets Design Hierarchy (FHWA)	Guidance	Transportation Council	ROSAC, ATAC	Vulnerable Road Users	Safe Roads, Safe Road Users	1-3 years	UPWP
Develop a regional Context-based Functional Classification System based upon the AASHTO Green Book, NCHRP 1022, and best practices nationally, and apply to <i>Capital Region Complete Streets Design Guide</i>	Guidance	Transportation Council	NYSDOT, ATAC	Vulnerable Road Users	Safe Roads, Safe Road Users	3-5 years	UPWP
Provide Complete Streets training to staff, stakeholders, and the public on applying	Partnerships	Transportation Council	Municipalities	Road User Behavior	Safe Roads	1-3 years	UPWP

Key Action Items	Category	Lead Agency	Supporting Partners	SHSP Emphasis Area	Safe System Approach Element	Timeline	Funding
<p>the <i>Capital Region Complete Streets Design Guide</i> to local projects</p>							
<p>Conduct project-level evaluations of completed safety projects and complete streets projects</p>	<p>Project Prioritization</p>	<p>Transportation Council</p>	<p>NYSDOT</p>	<p>(All)</p>	<p>Safe Roads</p>	<p>3-5 years</p>	<p>UPWP</p>

6.1.4 Speed Management

Speed management recommendations aim at slowing vehicular traffic, providing additional reaction time to prevent crashes, and reducing the severity of those that do occur. These action items can have a combined effect by using available statutory, enforcement, and engineering solutions that can change driver behavior across the network from Local roads to Principal Arterials.

Municipalities, both large and small, can develop speed management programs that are based on a data-driven approach to traffic calming by applying a combination of physical and behavioral countermeasures. The Transportation Council, the ROSAC, and various Traffic Safety Boards can support each other by collaborating on regional guidance and technical exchange.

The potential for automated enforcement in new locations should be studied by monitoring the deployment of similar speed enforcement programs in School Zones in the City of Albany, as well as the City of Syracuse. Data should be collected to assess where such enforcement would most likely have a positive effect on systemic speed risk.

Municipal Speed Limits

Under changes made in 2022 to the NYS Vehicle and Traffic Law (Section 1643), cities, villages, and suburban towns have the authority to set areawide speed limits as low as 25 mph, rather than the previous minimum areawide speed limit of 30 mph.

As of March 2025, four municipalities have already adopted the new speed limits:

- Town of East Greenbush (adopted 4/19/2023)
- City of Albany (adopted 7/1/2024)
- City of Cohoes (adopted 11/26/24)
- City of Schenectady (adopted 1/27/2025)

Figure 6.4 Recommendations related to Speed Management

Key Action Items	Category	Lead Agency	Supporting Partners	SHSP Emphasis Area	Safe System Approach Element	Timeline	Funding
Collect vehicle operating speed data through traffic counts and other methods, per the FHWA Speed Limit Setting Handbook, to analyze the impacts of implemented municipal speed limit changes	Evaluation	Municipalities	TSBs, ROSAC, Transportation Council,	Aggressive Driving	Safe Speeds	3-5 years	UPWP
Develop a regional template for required engineering studies to enable municipalities to lower statutory speed limits to 25 miles per hour, per Section	Guidance	ROSAC	Transportation Council, TSBs	Aggressive Driving	Safe Speeds	1-3 years	UPWP

Key Action Items	Category	Lead Agency	Supporting Partners	SHSP Emphasis Area	Safe System Approach Element	Timeline	Funding
1643 of the NYS Vehicle and Traffic Law							
Develop and distribute shared communications resources for municipalities that establish new speed limits	Outreach	Municipalities	TSBs, ROSAC	Aggressive Driving	Safe Speeds	3-5 years	GTSC
Monitor best practices in NYS on automated enforcement at red lights and school zones	Coordination	ROSAC	Counties, Municipalities	Aggressive Driving	Safe Speeds	1-3 years	UPWP
Collect and analyze data from traffic cameras or field observations on red light running to support current high-visibility enforcement and assess the potential for future automated enforcement.	Analysis	ROSAC	Transportation Council	Aggressive Driving	Safe Speeds	1-3 years	UPWP
Collect and analyze speed data in School Zones to support current high-visibility enforcement and assess the potential for future automated enforcement	Analysis	ROSAC	Counties, Municipalities	Vulnerable Road Users	Safer Roads, Safer Speeds	1-3 years	UPWP
Promote the crash dashboard to law enforcement agencies to support targeted locations for high-visibility enforcement activities	Coordination	Transportation Council	Counties, Municipalities	Road User Behavior	Safe Roads, Safe Speeds	Ongoing	N/A

6.1.5 Local Codes

Land use decisions made by local municipalities are a significant driver of vehicle volumes, traffic patterns, and active transportation access, impacting the number and severity of crashes in their communities. The effects of these designs on safety for all road users should be considered by local Planning and Zoning Boards or City/Village councils and Town boards. In recent years, Complete Streets and context-sensitive design factors have been incorporated into the site plan and development review processes. Transportation safety countermeasures, particularly for vulnerable road users, such as traffic signals, enhanced pedestrian crossings, and lighting, can be added to development codes or considered in the review process.

46 independent towns and villages in the Capital Region each have the authority to develop their own land use ordinances and zoning codes.

Figure 6.5 Recommendations related to Local Codes

Key Action Items	Category	Lead Agency	Supporting Partners	Safe System Approach Element	SHSP Emphasis Area	Timeline	Funding
Provide training to local Planning and Zoning boards on systemic safety treatments, particularly in regard to pedestrian facilities, that may be implemented through the land use review process	Guidance	Transportation Council	Counties, Municipalities	Intersections, Vulnerable Road Users	Safe Roads, Safe Road Users	1-3 years	N/A
Incorporate systemic safety treatments and Complete Streets improvements into Site Plan Review checklists and/or through Section 239-M by County Planning Boards	Planning and Policy	Counties, Municipalities	Transportation Council	Intersections, Vulnerable Road Users	Safe Roads, Safe Road Users	3-5 years	N/A
Provide updates on the Annual Work Program of Highway Safety Investigations to local Planning and Zoning boards to receive input on future land use along selected corridors and to consider the future	Analysis	Transportation Council	Counties, Municipalities	Data	Safe Roads	1-3 years	UPWP

Key Action Items	Category	Lead Agency	Supporting Partners	Safe System Approach Element	SHSP Emphasis Area	Timeline	Funding
impacts of development on multi-modal access needs							
Ensure that access to sidewalks, bicycle facilities, and bus stops is maintained or detours are provided in new site plans and during roadway or site construction detours	Operations	Counties, Municipalities	NYSDOT, Capital District Transit Authority (CDTA)	Vulnerable Road Users	Safe Roads, Safe Road Users	Ongoing	N/A

6.1.6 Education

Education recommendations aim to support statewide education campaigns addressing individual road user behavior while also helping to build a shared safety culture across the

Capital Region. Existing education resources from the Governor’s Traffic Safety Committee (GTSC) should be leveraged to the extent possible. New organizations should be guided to take advantage of these opportunities to extend vital messages to their communities. New versions of safety campaigns, including targeted messaging by topic, can be utilized to ensure that a greater share of the public is aware of available safety resources.

The ROSAC and local Traffic Safety Boards can help identify where there are gaps in needed educational programming and can collaborate on how to best fill them. Potential options include training for local municipalities, law enforcement, and specific road users, such as older drivers, parents, and teens.

Partnerships with civic organizations, educational institutions, and the private sector should be facilitated to help build a greater understanding of regional safety issues and to encourage action from their members.

Automated Enforcement in School Zones

NYS Legislation (VAT Article 29, Section 1174-A) authorizes municipalities to install speed cameras, red light cameras in school zones, and bus arm cameras on school buses.

- The City of Albany is the only municipality that has approval for red light and speed enforcement in School Zones. There are twenty locations authorized for each type.
- The City of Schenectady has also requested approval for red light cameras and school zone speed cameras.
- School Districts in Albany County can choose to install bus arm cameras on their school buses.

Figure 6.6 Recommendations related to Education

Key Action Items	Category	Lead Agency	Supporting Partners	SHSP Emphasis Area	Safe System Approach Element	Timeline	Funding
<i>Convene an annual meeting of GTSC grantees to promote coordination and knowledge sharing, pursue a common curriculum and materials, and identify regional gaps in program coverage in advance of the GTSC call for projects</i>	Coordination	ROSAC	TSBs, Counties, Law Enforcement	Age-Related, Aggressive Driving, Road-User Behavior	Safe Road Users	1-3 years	UPWP

Key Action Items	Category	Lead Agency	Supporting Partners	SHSP Emphasis Area	Safe System Approach Element	Timeline	Funding
Leverage public communications and events to publicize GTSC's safety campaigns to increase public awareness of traffic safety issues. Target safety campaign materials to suit the needs of lower-income and non-English speaking communities	Outreach	ROSAC	TSBs, Counties, Municipalities	(All)	Safe Road Users	Ongoing	N/A
Utilize the Community Traffic Safety Team and the Community Advisory Committee to promote the VZSAP and build a safety culture in the region	Partnerships	ROSAC	TSBs	(All)	(All)	1-3 years	UPWP
Promote partnerships and educate safety professionals at regional and local governments on addressing the special transportation needs of the aging population	Partnerships	ROSAC	Counties, Local Agencies	Age-Related	Safe Road Users	Ongoing	UPWP, NYS Department of Health (DOH)
Identify opportunities to expand the number of events for the installation and proper use of child restraints	Coordination	TSBs	Counties ROSAC	Age-Related	Safe Road Users	Ongoing	GTSC Child Passenger Safety Grant
Continue to support and expand coalitions for peer-led and teen/parent education activities for safer teen driving	Coordination	School Districts	ROSAC, TSBs	Age-Related	Safe Road Users	Ongoing	GTSC
Develop partnerships with local motorcycle retailers and insurance companies to incentivize motorcyclists to take training and wear safety equipment	Partnerships	Counties, Municipalities	-	Alternate Road and Commercial Vehicles	Safe Roads	1-3 years	GTSC

Key Action Items	Category	Lead Agency	Supporting Partners	SHSP Emphasis Area	Safe System Approach Element	Timeline	Funding
Provide coordination to support Safe Routes to School (SRTS) programs through curriculum development, train-the-trainer support, and technical support for local SRTS committees	Partnerships	Counties	School Districts, Transportation Council, ATAC	Safe Road Users	Safer People	Ongoing	UPWP, Transportation Alternatives Program (TAP)

6.1.7 Post-Crash Care

Post-crash recommendations aim to support emergency medical services that increase the survivability of crashes through access to on-site and hospital care. Efficient processes for 9-1-1 dispatch, timely responses for emergency medical services, and access to necessary trauma care are all essential steps to follow in the event of crashes to prevent them from having fatal outcomes. Albany Medical Center is the only Tier 1 Trauma Center in the Region; therefore, improving access to that location is critical.

It is also a priority to create a safe working environment for first responders. NYSDOT, the NYS Thruway Authority, police, fire, and towing companies can all play a collaborative role

*Nationally, **40 percent** of individuals who suffered fatal injuries from crashes were alive when first responders arrived on the scene.¹*

FARS 2021 Annual Report File, Version 5.5 (National Highway Traffic Safety Administration).

to make response times faster and clear incidents to improve safety for both drivers and responders. Programs and practices for traffic incident management should continue to be supported, and opportunities for expansion explored.

Figure 6.7 Recommendations related to Post-Crash Care

Key Action Items	Category	Lead Agency	Supporting Partners	SHSP Emphasis Area	Safe System Approach Element	Timeline	Funding
Pursue funding opportunities to support prehospital blood transfusion to decrease prehospital and early-hospital mortality	Innovation	ROSAC, EMS	NYSDOT, Transportation Council, Counties, Municipalities	Post-Crash Care	Post-Crash Care	1-3 years	DOH
Review the existing HELP Program and evaluate additional corridors for roadside assistance	Coordination	ROSAC	Transportation Council, NYSDOT	Post-Crash Care	Post-Crash Care	3-5 years	N/A
Identify and evaluate technology opportunities and best practices to accelerate incident detection time	Innovation	Transportation Council	ROSAC, NYSDOT, NYS Thruway	Post-Crash Care	Post-Crash Care	1-3 years	UPWP

6.1.8 Funding

Maximizing the use of existing funding sources and identifying new ones will be vital to achieving the varied projects and programs included in the Safety Implementation Program. In particular, innovative funding opportunities will enable the implementation of those initiatives that are not eligible or otherwise readily funded by the Highway Safety Improvement Program or through the GTSC. The Transportation Council, the Regional Operations and Safety Advisory Committee, and other partners will need to coordinate to identify and pursue those opportunities outside of traditional channels for capital and programmatic investments.

Figure 6.8 Recommendations related to Funding

Key Action Items	Category	Lead Agency	Supporting Partners	Safe System Approach Element	SHSP Emphasis Area	Timeline	Funding
<i>Guide local jurisdictions through TIP applications and promote available systemic treatments to access the Highway Safety Improvement Program funding</i>	Guidance	Transportation Council	Counties, Municipalities	(All)	Safe Roads	3-5 years	N/A
Promote and assist in collaborative funding applications through GTSC for regional program implementation	Coordination	ROSAC	TSBs, Transportation Council, Counties	Road User Behavior	Safe Road Users	1-3 years	GTSC
Pursue new funding and innovative funding opportunities	Innovation	Transportation Council	Counties, Municipalities	Vulnerable Road Users	Safe Roads, Safe Road Users	Ongoing	Transportation Alternatives Program, Office of the Secretary of Transportation
Coordinate with community partners to review programmed capital investments and safety programs for vulnerable road users in identified Title VI areas	Outreach	Transportation Council	ROSAC, Municipalities	Vulnerable Road Users	Safe Roads, Safe Road Users	Ongoing	N/A

7.0 Safety Implementation Program

The goals of the VZSAP will be advanced through the implementation of the proposed Safety Implementation Program (SIP), a broad-based approach of capital projects and safety programs to reduce fatal and severe injury crashes across the Capital Region.

The SIP is intended to guide planning and investment decisions by facility owners, program administrators, and other stakeholders. The proposed projects and programs in the SIP have anticipated implementation timeframes that range from the short-term, such as maintenance projects and annual enforcement programs, to the long-term, such as major capital projects and new educational programs. Progress towards implementing the SIP will be tracked in the Implementation Program Annual Report in conjunction with an assessment of overall safety performance trends.

The Safety Improvement Program provides several recommendations organized across five categories:

Hot Spot Projects

Systemic Treatment packages

Safe Routes to School

Safe Routes to Transit

GTSC's Enforcement and Education

The categories were shaped by stakeholder input, national best practices, and applicable New York State program eligibilities. They seek to promote the involvement of all levels of government and a wide array of other partners in implementation.

Balanced Program

Developing comprehensive programs of safety projects in the Capital Region Transportation Improvement Program (TIP) or other agency capital improvement programs requires agencies to manage the selection of projects across the region and by safety need. A combination of site-specific, Hot Spot, and systemic treatment approaches must be tailored to fit agency needs. These two approaches are complementary and can help create a balance between multiple priorities in program development:

Hot Spots vs. Systemic Treatments

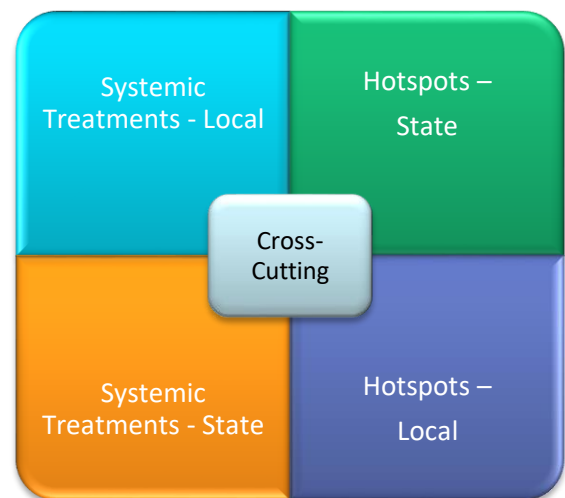
State vs. Local System

Rural vs. Urban

Key Emphasis Areas

Cross-Cutting Strategies

Figure 7.1 Balanced Safety Program



A potential balanced capital program would include the following categories, as shown in Figure 7. Organizing projects in these categories can help ensure that a wide number of potential projects are identified and ranked in comparison to one another. An overall program can be shaped by conducting trade-offs of funding for each category until a more optimal balance is achieved.

The FFYs 2026-2030 TIP includes the SS4A Implementation Set-Aside with \$2.0 million in HSIP funding. That funding can be used to advance the project development of multiple projects identified in the Safety Implementation Program.

7.1 Hot Spot Projects

There are approximately 230 estimated excess fatal and severe injury crashes per year that occur on segments and intersections with a Potential for Safety Improvement. These locations represent key “Hot Spot” locations where capital projects may have the greatest impact on crash reduction. Locations are to be assessed for more detailed over-representation of crash types through Highway Safety Investigations before specific countermeasures are recommended, and they progress through further project development.

The Priority Safety Network is intended to be a tiered set of priority corridors and intersections that will be the focus of future implementation efforts of the SIP. These efforts can include both Highway Safety Investigations and corridor studies in the near term that can lead to capital projects in the mid- to long-term. These facilities have been prioritized based on:

1. Potential for Safety Improvement³ - estimated difference in fatal and severe injury crashes compared to similar roadway segments and intersections; Potential for Safety Improvement;
2. Area-wide crash exposure – measure how frequently a Census Tract experiences all crashes normalized by the number of trips that occur in that Census Tract⁴;
3. Communities of Concern – Census Tracts that receive a certain threshold score based on a weighted evaluation of several socioeconomic attributes;
4. Vulnerable Road User “High-Risk” areas – Census Tracts identified in the *Vulnerable Road User Safety Assessment*⁵ (VRUSA) as part of the *NYSDOT Strategic Highway Safety Plan*; and
5. Isolated Transit Stops (Section 7.3).

Following the development of these five factors, the Priority Safety Network was established by weighing each factor for all roadway segments and intersections to create an overall index score (Figure 7.2). A cluster analysis was then conducted to produce overall classes based upon the index scores for both urban and rural locations, respectively. These distinct Tiers, 1 through 5, result in a diversity of locations throughout the region, providing a wide number of facilities for investigation, diagnosis, and consideration of potential

³ Estimates are from the NYSDOT Crash Location and Engineering Analysis Repository (CLEAR) Network Screening Tool. The Regional Safety Analysis Report describes the methodology.

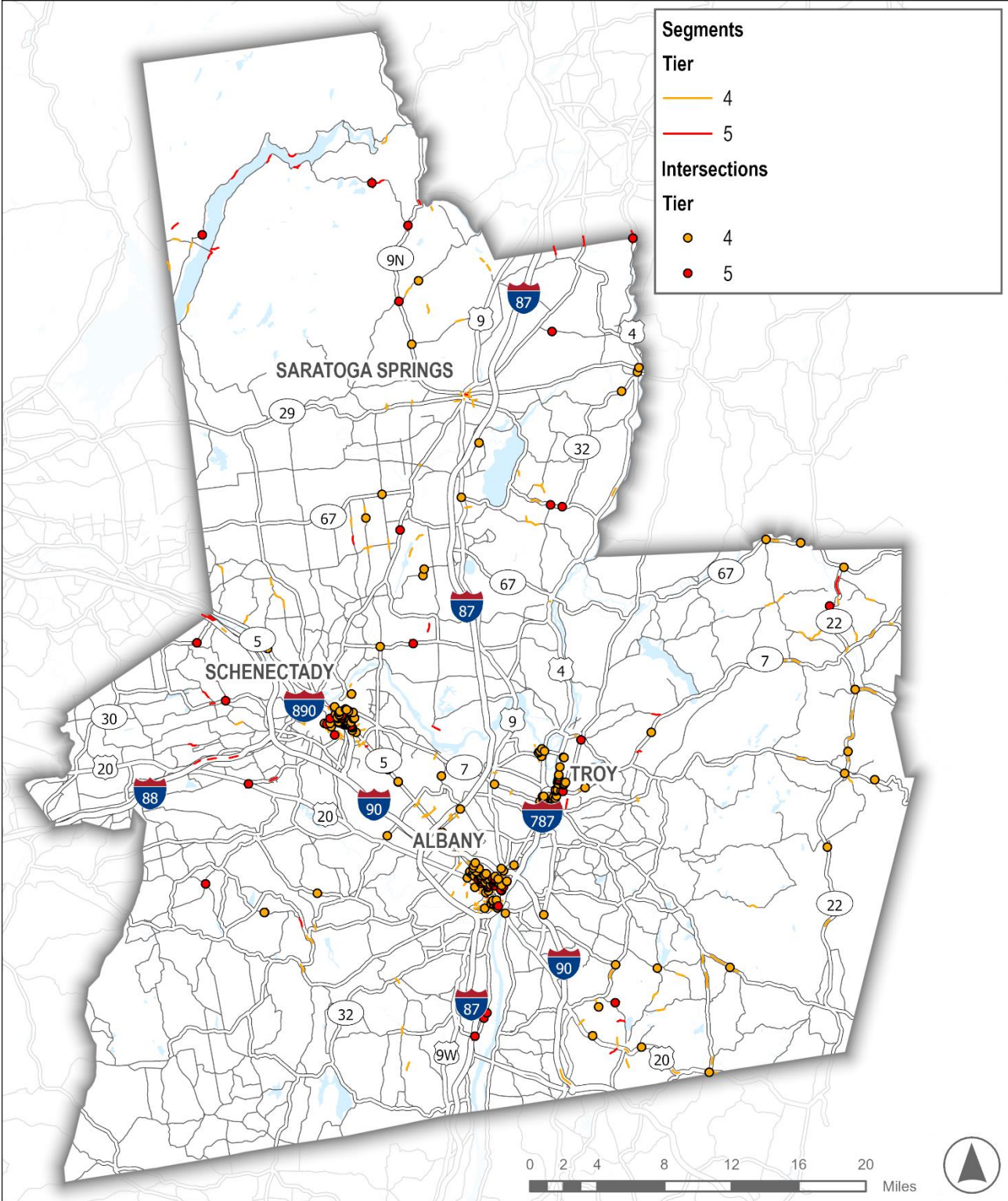
⁴ Trip estimates were provided by Replica

⁵ https://www.dot.ny.gov/divisions/operating/osss/highway-repository/SHSP2023_Appendix_2_VRUSA.pdf

countermeasures. Tiers 4 and 5 represent the prioritized locations for further safety analysis and consideration.

As part of the VZSAP, through coordination with local facility owners and other stakeholder feedback, multiple locations were the subjects of Street Safety Investigations, and others further advanced through the development of Corridor Concepts. The efforts are intended to identify targeted countermeasures while also exploring the potential for creating broader Complete Streets projects that improve accessibility, operations, and asset conditions.

Figure 7.2 Priority Safety Network



Sources: CLEAR, American Community Survey, National Transit Map, Replica

7.1.1 Corridor Concepts

The six planning-level Corridor Concepts (Table 7.1) are intended to identify key countermeasures and other improvements that can be further developed through scoping and preliminary engineering. The design process was aimed at facilitating community conversations to create streets that are safe, comfortable, and convenient for all people, regardless of age, ability, or mode. The Corridor Concepts are holistic Complete Streets that may be delivered through one or more capital projects.

The Corridor Concept Reports are included in the Appendix **Error! Reference source not found..**

Table 7.1 Corridor Concept Locations

Municipality	Location	Key Recommendations
Albany	N Main Ave, Western Ave, Ontario St, Washington Ave (Block)	<ul style="list-style-type: none"> • Road Diet • Enhanced pedestrian crossings • Protected bicycle facilities • Lighting
Schenectady	Eastern Avenue	<ul style="list-style-type: none"> • Traffic calming • Enhanced pedestrian crossings
Troy	4th Street	<ul style="list-style-type: none"> • Intersection improvements • Protected bicycle facilities • Leading pedestrian intervals
Saratoga Springs	Broadway, Lake Ave, Henry St, Caroline St (Block)	<ul style="list-style-type: none"> • Traffic calming • Protected bicycle facilities • Sidewalk improvements
Watervliet	2nd Ave, 15th St, Broadway, 16th St (Block)	<ul style="list-style-type: none"> • Traffic calming • Protected bicycle facilities • Empire State Trail connection
Green Island	Lower Hudson Ave	<ul style="list-style-type: none"> • Traffic calming

7.1.2 Street Safety Investigations

Forty-one (41) Street Safety Investigations were conducted to diagnose crash contributing factors and apply potential targeted countermeasures where a Potential for Safety Improvement was calculated through the network screening process. These investigations included a review of crash data, an assessment of supporting documentation, and site visits to evaluate field conditions.

Four potential Hot Spot capital projects have been recommended (Table 7.2). Though stand-alone capital projects were not recommended for the other locations, a number of potential systemic safety improvements are recommended, including:

Pedestrian crosswalks, signals, signage

Lighting

ADA facilities

Table 7.2 Street Safety Investigation – Hot Spot Projects

County	Project Sponsor	Municipality	Project Description
Albany	Town of Colonie	Town of Colonie	Construction of a shared use path on Sand Creek Rd from Wolf Rd to Sand Creek Middle School
Albany	City of Albany	City of Albany	Intersection improvements at Broadway at Thatcher St/Pleasant St
Albany	City of Albany	City of Albany	Corridor improvements on Livingston Ave from N Lake St to Broadway
Albany	Albany County	Town of Guilderland	Intersection improvements at Fuller Rd at Railroad Ave

NYS DOT – Region 1 Annual Work Program

NYS DOT will conduct their own series of investigations on their facilities through their Annual Work Program of Highway Safety Investigations. Recommended projects that have been evaluated through this process may be also considered for HSIP funding and amended into the TIP.

7.1.3 TIP Projects

The *Federal Fiscal Years 2026-2030 Transportation Improvement Program* (TIP) includes **12 projects** (Table 7.3) that have both:

- Significant geographic overlap with the Priority Safety Network (Tiers 4 through 5);
- Project scope that is focused on safety, intersection improvements, or Complete Streets enhancements through pavement rehabilitation/reconstruction.

Table 7.3 TIP Projects on Priority Safety Network

County	Sponsor	Project	Municipality
Albany	CDTA	BusPlus Red Line Upgrades and Safety Improvements	City of Albany
Albany	City of Albany	Central Avenue Reconstruction Project	City of Albany
Albany	City of Cohoes	City of Cohoes Columbia Street Pedestrian Accessibility	City of Cohoes
Albany	City of Watervliet	25th Street Corridor Rehabilitation	City of Watervliet
Albany	NYS DOT	Pavement Resurfacing, Lane Width Reduction and Drainage Repairs on NY 5 Central Ave	Town and Village of Colonie
Rensselaer	City of Troy	NY 2 Corridor Project & River/Ferry St Intersection Improvements	City of Troy

County	Sponsor	Project	Municipality
Rensselaer	Village of Nassau	Village of Nassau Intersection and Pedestrian Upgrades	Village of Nassau
Saratoga	Saratoga County	RT 50 (Doubleday Ave) at Northline Rd Intersection Improvements	Town of Milton
Saratoga	Town of Clifton Park	NY 146/Miller Rd & Tanner Rd & NY 146/Waite Rd Intersections	Town of Clifton Park
Saratoga	Town of Wilton	Town of Wilton Traffic Safety & Pedestrian Connectivity	Town of Wilton
Schenectady	CDTA	BusPlus Red Line Upgrades and Safety Improvements	City of Schenectady
Schenectady	City of Schenectady	Craig St Corridor Rehabilitation	City of Schenectady

Source: Capital Region Transportation Council

There is also one project included in the Illustrative Projects list that is located on the Priority Safety Network and is programmed for design only:

Federal Street Corridor Improvements (City of Troy)

7.2 Systemic Treatment Packages

The strategies and actions in the VZSAP include a comprehensive set of systemic countermeasures. NYSDOT has approved an increasing number of systemic treatments that are adopted in the NYS *Strategic Highway Safety Plan* through the further adoption of specific Emphasis Area plans. These include:

Pedestrian Safety Action Plan (PSAP, 2018)

Vulnerable Road User Safety Assessment (VRUSA, 2023)

Roadway Departure Safety Action Plan (RwDSAP, 2024)

These plans have each included both individual countermeasures and packages that are tailored to specific Focus Facilities and other locations demonstrating identified Risk Factors. The Systemic Treatment Packages for Intersections, Pedestrians, Roadway Departures, and Speed Management bring together the approved countermeasures included in each NYSDOT Emphasis Area plan, Engineering Instruction bulletins, or other national guidance.

The Packages are grouped with the intent of providing facility owners with broad guidance to identify priority locations for multiple, layered countermeasures that together will have a cumulative reduction in the risk of fatal or severe injury crashes. They are arranged by Focus Facility, eligibility, countermeasure type, and compatibility. Those indicated as ‘HSIP-eligible’ will be eligible for the Highway Safety Improvement Program (HSIP), though additional warrants may be required. Individual countermeasures may be required to have a field evaluation and “Enhanced” packages may require further study.

The countermeasures are intended to be implemented through a number of means:

- “Bundling” in a single contract across multiple focus facilities across one or more jurisdictions;
- Added as accomplishments in capital projects; or
- Incorporated into routine pavement, signage, and signal maintenance programs.

7.2.1 Intersections and Pedestrians

Intersections are one of the main points of conflict between various system users, including motorized vehicles, pedestrians, cyclists, and trains at on-street railroad crossings. Proven counter measures seek to reduce severe conflict, and increase visibility of pedestrians while slowing down vehicles. In the Capital Region, 67 percent of bicyclist and pedestrian fatal and severe injury crashes happened at intersections, so countermeasures are focused at those locations.

Based upon the systemic crash analysis, the following Focus Facility types for Intersection and Pedestrian crashes (Table 7.44) have been identified for the Capital Region. The number of intersections is narrowed down by those locations that have a greater than average number of geometric or operational risk factors, specific to each Focus Facility. There are 263 urban signalized intersections with four or more legs that meet that threshold for both Intersections and Pedestrians.

Those Pedestrian Focus Facilities that are located within Vulnerable Road User “High Risk Areas” in the VRUSA are highlighted. These intersections are located within the Cities of Albany, Saratoga Springs, Schenectady and Troy. These facility owners may consider bundling projects at these specific locations due to HSIP funding eligibility.

Table 7.4 Intersection and Pedestrian Focus Facilities by Owner Type

Owner Type	Focus Facility Type	Total	> Avg. # of Intersection Crash Risk Factors	Total	> Avg. # of Pedestrian-Related Crash Risk Factors	VRU “High Risk” Areas	> Avg. # of Risk Factors
NYSDOT	Urban Signalized with 4 or more Legs	248	158	248	141	8	138
	Rural Stop-Controlled Cross-Intersections	106	97	-	-	-	-
	Urban Signalized Y- and T-Intersections	-	-	154	92	-	-
	Urban Stop-Controlled Cross- and T-Intersections	-	-	1,359	905	2	-
Cities and Villages	Urban Signalized with 4 or more Legs	377	141	377	136	72	125
	Rural Stop-Controlled Cross-Intersections	58	9	-	-	-	-
	Urban Signalized Y- and T-Intersections	-	-	221	103	30	-

	Urban Stop-Controlled Cross-and T-Intersections	-	-	3,835	2,472	342	-
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Source: CLEAR, Cambridge Systematics analysis.

Systemic Treatment Toolbox

Table 7.5 Systemic Intersection Treatment Packages

Package	Project Delivery	Countermeasure(s)	Applicable Locations	Focus Facility(-ies)	Planning Consideration	NYSDOT Reference	HSIP Eligible
Signalized	Signals, Beacons, Illumination	<ul style="list-style-type: none"> • Backplates with retroreflective borders • Retime signals for Yellow and Red clearance intervals and improved coordination • Signal Ahead sign • Turning vehicle yield to Pedestrian Sign • Advance cross street sign names 	Signalized Intersections	Urban 3-leg (T,Y) and Cross Intersections		PSAP (Appendix B)	✓
Signalized <i>Enhanced</i>	(Various)	<p>“Signalized” in addition to:</p> <ul style="list-style-type: none"> • Raised Crosswalks • No Turn on Red sign (Overhead Blank-Out) • Restrict parking • Lighting • Dedicated left- and right-turn lanes 	Signalized Intersections	Urban 3-leg (T,Y) and Cross Intersections		PSAP (Appendix B)	✓
Stop-Controlled	Maintenance; Signs, Markings, and Delineators	<ul style="list-style-type: none"> • Double oversized advance intersection warning signs (on through approach) • Double oversized advance “Stop Ahead” warning signs (on the stop approach). • Doubled (left and right), oversized Stop signs. • Retroreflective sheeting on sign posts. • Enhanced pavement markings • Painted stop bar • Removal of sight distance obstructions 	Stop-Controlled Intersections	Rural Stop-Controlled Intersections	FHWA <i>Proven Safety Counter Measures</i> : Systemic Application of Multiple Low-Cost Countermeasures at Stop-Controlled Intersections		
Stop-Controlled <i>Enhanced</i>	Signals, Beacons, Illumination	<p>“Stop Controlled” in addition to:</p> <ul style="list-style-type: none"> • Flashing beacons • Lighting 	Stop-Controlled Intersections	Rural Stop-Controlled Intersections	FHWA <i>Proven Safety County Measures</i> : (Above); Lighting		

Package	Project Delivery	Countermeasure(s)	Applicable Locations	Focus Facility(-ies)	Planning Consideration	NYS DOT Reference	HSIP Eligible
Roundabouts	Construction (2R/3R)	<ul style="list-style-type: none"> Mini-Roundabouts Single-Lane Roundabouts Mixed Lanes Roundabouts 	All Intersections	(All)	NCHRP Guide for Roundabouts; MassDOT Guidelines for the Planning and Design of Roundabouts		✓

(Compiled by Cambridge Systematics)

Table 7.6 Systemic Pedestrian Treatment Packages

Package	Project Delivery	Countermeasure(s)	Applicable Locations	Focus Facility(-ies)	Planning Consideration	NYS DOT Reference	HSIP Eligible
Pedestrian Crossings	Maintenance; Signs, Markings, and Delineators	<ul style="list-style-type: none"> High-Visibility crosswalks Restrict parking at intersections (“Daylighting”) Signal Ahead signs No Turn on Red Signs Stop Here for Pedestrians Signs (Section 2B.19, MUTCD, 2024) 	Signalized Intersections	Urban 3-leg (T,Y) and Cross Intersections	No Turn on Red signs should be prioritized near schools and other pedestrian generators	PSAP – Signalized Intersection Improvements (Appendix B)	✓
Pedestrian Crossings <i>Enhanced</i>	Signals, Beacons, Illumination	<ul style="list-style-type: none"> Leading Pedestrian Interval Pedestrian countdown times Evaluate left-turn phasing for pedestrian crossings Accessible Pedestrian Signals No Turn on Red sign (Overhead Blank-Out) 	Signalized Intersections	Urban 3-leg (T,Y) and Cross Intersections		PSAP – Signalized Intersection Improvements (Appendix B)	✓
Crosswalks	Maintenance; Signs, Markings, and Delineators	<ul style="list-style-type: none"> High-visibility crosswalks Pedestrian warning signs Retroreflective sign posts 	Uncontrolled marked crosswalks	Urban Stop-Controlled Intersections	Two-Way Stops and Mid-Block Crossings	PSAP – Crosswalks at Uncontrolled Locations (Appendix A)	✓

Package	Project Delivery	Countermeasure(s)	Applicable Locations	Focus Facility(-ies)	Planning Consideration	NYSDOT Reference	HSIP Eligible
Crosswalks <i>Enhanced</i>	Signals, Beacons, Illumination	<ul style="list-style-type: none"> Rectangular Rapid Flashing Beacons (RRFB) Raised pedestrian median refuge and/or corner island and/or curb extension Pedestrian Hybrid Beacons 	Uncontrolled marked crosswalks	Urban Stop-Controlled Intersections	Two-Way Stops and Mid-Block Crossings	PSAP – Crosswalks at Uncontrolled Locations (Appendix A)	✓
VRU Countermeasures	(Multiple)	<ul style="list-style-type: none"> Construction of new countermeasures at Signalized Intersections or Uncontrolled marked crosswalks 	All Functional Class		VRU “High-Risk” Areas <u>only</u>	VRUSA (Strategy 1)	✓
Transit Stop Crossings	Signs, Markings, and Delineators	<ul style="list-style-type: none"> High-visibility crosswalks Enhanced signing and pavement markings 	All Functional Classifications		Near public transit stops	VRUSA (Strategy 1)	✓
Transit Stop Lighting	Signals, Beacons, Illumination	<ul style="list-style-type: none"> Lighting 	All Functional Classifications		Near public transit stops	VRUSA (Strategy 1)	✓
Sidewalk Gap Completion	Minor Construction (1R); Construction (2R/3R)	<ul style="list-style-type: none"> Construct new pedestrian facilities 	All Functional Classifications		VRU “High-Risk” Areas <u>only</u>	VRUSA (Strategy 1)	✓

7.2.2 Roadway Departures and Speed Management

Roadway departures continue to be among the deadliest crash types in New York State. NYSDOT’s efforts to reduce roadway departure crashes are guided by a strategic approach that involves countermeasures that: 1) keep vehicles on the roadway, 2) provide for safe recovery, and 3) reduce crash severity once vehicles do leave the roadway. Countermeasures that fulfill any of these strategies should be considered for implementation.

Reducing speeds is the most efficient way to improve safety. Slower speeds reduce both the number and the severity of crashes. Unsafe Speed has also been a contributing factor in 18% of fatal and severe injury crashes involving roadway departures in the Capital Region so there is considerable opportunity for promoting redundancy of systemic countermeasures.

Based upon the systemic crash analysis conducted, the following Focus Facility types for Roadway Departure and Speed-Related segments (Table 7.7) have been identified for the region. The number of centerline miles is narrowed down by those locations that have a greater than average number of geometric or operational risk factors, specific to each Focus Facility.

Table 7.7 Roadway Departure and Speed-Related Focus Facilities by Owner Type

Owner Type	Focus Facility Type	Total	> Avg. # of Roadway Departure Crash Risk Factors	Total	> Avg. # of Speed-Related Crash Risk Factors	> Avg. # of Both Risk Factors
NYSDOT	Urban Arterials (Free Access)	336	255	336	162	146
	Rural Arterials (Free Access)	212	53	212	147	29
	Urban Major Collectors	-	-	83	64	-
	Rural Major Collectors	172	87	172	101	16
	Rural Minor Collectors	70	18	70	14	12
Counties	Urban Arterials (Free Access)	72	53	72	23	19
	Urban Major Collectors	-	-	178	81	-
	Rural Major Collectors	73	59	73	25	12
	Rural Minor Collectors	407	68	407	85	39
Cities and Villages	Urban Arterials (Free Access)	149	29	149	29	14
	Urban Major Collectors	-	-	91	7	-
	Rural Minor Collectors	4	0	4	0	0

Towns	Urban Arterials (Free Access)	26	19	26	1	1
	Urban Major Collectors	-	-	103	34	-
	Rural Minor Collectors	18	6	18	7	4

Source: CLEAR, Cambridge Systematics analysis.

Table 7.8 Systemic Roadway Departure Treatment Packages

Package	Project Delivery	Countermeasure(s)	Applicable Locations	Focus Facility(-ies)	Planning Consideration	NYS DOT Reference	HSIP Eligible
Curve Signage	Maintenance; Signs, Markings, and Delineators	<ul style="list-style-type: none"> Horizontal alignment signs Advisory speed plaque Chevrons and/or One Direction Large Arrow 	Horizontal curves on Expressways, Arterials, and Collectors	Rural Principal and Minor Arterials, Major Collectors, Local	Where "Required" per Table 2C-5 of Section 2C-07 (MUTCD, 2009); AADT > 1,000;	RwDSAP – Level 1 Countermeasures (Table 19)	✓
Curve Signage <i>Enhanced</i>	Maintenance; Signs, Markings, and Delineators	<p>"Curve Signage" in addition to:</p> <ul style="list-style-type: none"> Oversized horizontal alignments signs "Recommended" and/or "Optional" horizontal alignment signs (Table 2C-5 of Section 2C-07 (MUTCD, 2009)) Reflectorized sleeves on signposts Post-mounted or barrier mounted delineators Breakaway sign supports 	Horizontal curves on Expressways, Arterials, and Collectors	Rural Principal and Minor Arterials, Major Collectors	AADT > 1,000; KA Roadway departure crash history, At least 1 Risk Factors (Tables 5-6, RwDSAP)	RwDSAP – Level 1 Countermeasures (Table 19)	✓
Curve Corridors	(Various)	<ul style="list-style-type: none"> Wider edge lines Curve warning pavement markings Flashing beacons/driver feedback signs Shoulder widening (including SafetyEdge) Clear zone improvements Fill slopes Roadside barriers 	Horizontal curves	Rural Principal and Minor Arterials, Major Collectors, Local	At least 2 Risk Factors (Tables 5-6, RwDSAP)	RwDSAP – Corridor Projects (Table 20); NYSDOT EI 10-012	✓
Friction Treatments	Construction (1R)	<ul style="list-style-type: none"> High Friction Surface Treatments 	Horizontal curves		Must include a Benefit-Cost Analysis > 1	RwDSAP – Corridor Projects (Table 20)	✓
Lighting	Signals, Beacons, Illumination	<ul style="list-style-type: none"> Lighting 	Curves	Rural Principal Arterials	NYSDOT	<i>Policy on Highway Lighting, Warrant WAC-1</i>	✓

Package	Project Delivery	Countermeasure(s)	Applicable Locations	Focus Facility(-ies)	Planning Consideration	NYSDOT Reference	HSIP Eligible
CARDS	Minor Construction; Construction (1R)	<ul style="list-style-type: none"> Centerline audible roadway delineators (CARDS) 	All Functional Classifications	Rural Principal and Minor Arterials	Posted speed > = 45 mph; AADT >= 2,000; No Median or Two-Way Left Turn Lane	NYSDOT Engineering Instruction 13-021	✓
SHARDS	Maintenance; Signs, Markings, and Delineators	<ul style="list-style-type: none"> Secondary Highway Audible Roadway Delineators (SHARDS) 	All Functional Classifications	Rural Principal and Minor Arterials	Posted speed > = 50 mph; AADT >= 2,000; Lane and Shoulder width must be >= 17'	NYSDOT Engineering Instruction 16-014	✓

Table 7.9 Systemic Speed-Related Treatment Packages

Package	Project Delivery	Countermeasure(s)	Applicable Locations	Focus Facility(-ies)	Planning Consideration	NYSDOT Reference	HSIP Eligible
Speed Feedback Signs	Maintenance; Signs, Markings, and Delineators	<ul style="list-style-type: none"> Speed Feedback Signs 	Advisory Speed Zones (School, Curve); Transition Zones	Urban and Rural Arterials, Urban Major Collectors	Highway Work Permit (PERM 33) is required for signs in NYSDOT right-of-way		
Lane Space Allocation	Signs, Markings, and Delineators; Construction (1R)	<ul style="list-style-type: none"> Reallocation of lane space 		Urban Arterials and Major Collectors	AADT < 15,000; Considered during Initial Project Proposal	Complete Streets Checklist	
Street Width Reduction	Minor Construction; Construction (1R)	<ul style="list-style-type: none"> Corner Extension Choker Median Island On-Street Parking 	Principal/ Minor Arterials, Major/Minor Collectors and Local segments	Urban Arterials and Major Collectors	FHWA Traffic Calming ePrimer (Table 3.1)		
Vertical Deflection	Minor Construction; Construction (1R)	<ul style="list-style-type: none"> Speed Hump Speed Cushion Speed Table Offset Speed Table 	Major/Minor Collectors and Local segments.	Urban Arterials and Major Collectors	FHWA Traffic Calming ePrimer (Table 3.1). The "Applicable		

Package	Project Delivery	Countermeasure(s)	Applicable Locations	Focus Facility(-ies)	Planning Consideration	NYSDOT Reference	HSIP Eligible
		<ul style="list-style-type: none"> • Raised Crosswalk • Raised Intersection 			Application” for Speed Tables and Raised Crosswalks (Module 3) should be reviewed for Arterials		

7.3 Safe Routes to School

Ensuring safe access for students and all walkers and cyclists near schools is a key objective for the VZSAP. Two key categories of streets were identified using this analysis: streets directly adjacent to schools and collectors/arterial roads within a quarter-mile of schools intersecting those primary streets. These corridors were prioritized due to their significant roles in providing both primary and secondary access for students traveling to and from school. Limited access facilities where pedestrian access is restricted were excluded.

Table 7.10 Primary and Secondary SRTS Segments

Facility Owner Type	Miles by Functional Classification			Total
	Local	Federal Aid (Non-NHS)	National Highway System	
NYSDOT	0.0	17.8	14.8	32.6
County	2.8	14.0	1.0	17.7
City/Town/Village	52.9	50.0	11.8	114.7
Total	55.7	81.7	27.6	165.0

Source: NYSDOT Roadway Inventory System, NYS Education Department (via NYS GIS Clearinghouse)

These routes were then overlaid with areas identified as “High Risk” for vulnerable road users. These locations have additional eligibility for implementation funding. The “VRU Countermeasures” and “Sidewalk Gap Completion” treatment packages are described in Table 7.6.

Potential treatments to enhance these corridors and create a safer and more accessible environment for students commuting by foot or bike are discussed below.

Capital Recommendations: Adding additional sidewalks, bicycle infrastructure and shared-use paths, and high-visibility crosswalks with pedestrian signals as needed will lead to additional walking and bicycling to schools. It is also important that segments are added to connect existing pedestrian and bicycle infrastructure to create a larger continuous connected network.

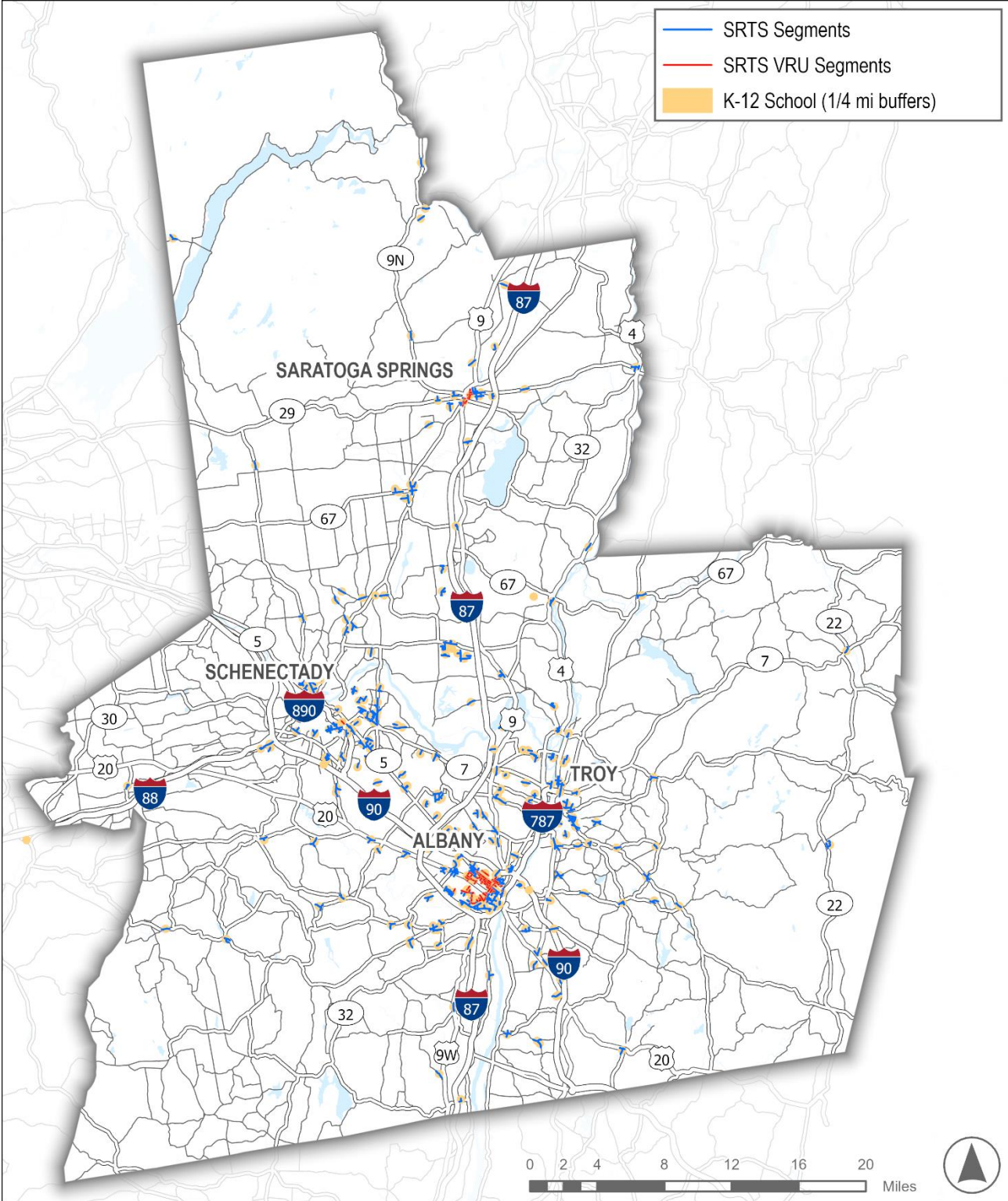
Pedestrian infrastructure capital improvements include sidewalks, pedestrian-scaled lighting, shared use paths, high visibility crosswalks, ADA curb ramps, Leading pedestrian intervals (LPIs), Rectangular Rapid Flashing Beacons (RRFBs), and High intensity Activated crossWalk (HAWKs)

School Zone signage and speed management installation bring awareness of slower speed locations adjacent to schools to encourage drivers to slow down in those locations.

Crossing Guards Program lead to more children walking and biking to school. Crossing guards can be hired through local government police departments.

Safe Routes to School Education assists in encouraging walking and biking to school safely. Recommendations include creating a SRTS Coordinator and providing educational materials on walking and bicycling safety for children and information on driving safely through School Zones.

Figure 7.3 SRTS Segments



Source: NYSDOT Roadway Inventory System, NYS Education Department (via NYS GIS Clearinghouse)

7.4 Safe Routes to Transit

Every transit rider is also a pedestrian at some point during their journey. In many cases across the Capital Region, transit riders face significant challenges accessing transit as pedestrians. The SIP includes the Safe Routes to Transit category to directly address this problem. The goal of the category is to make access to transit safer and easier by making targeted improvements at transit stops while also helping the region reduce fatalities and serious injuries for vulnerable road users.

Isolated transit stops are identified as a focus for pedestrian safety improvements. These stops are locations where mid-block crossings are likely to occur and controlled crosswalks are not present. They are likely pedestrian generators that are not currently provided with crossing accommodations that would reduce the risk of fatal and severe injury crashes for all vulnerable road users.

Transit stops were compiled from a combination of the National Transit Database (NTD) and data published by the Capital District Transportation Authority (CDTA). These stops were then joined with NYSDOT Roadway Inventory System data and assigned a score based on the AADT, posted speed limit, and number of lanes of the roadway segment where the stop is located, using the FHWA Safe System Project-Based Alignment Framework as shown in Table 7.11.

Table 7.11 Transit Stop Scoring Criteria

Scoring Factor	Scoring Criteria	Score
AADT	0	0
	0 – 1,000	1
	1,000 – 5,000	4
	5,000 – 10,000	6
	10,000 – 15,000	8
	> 15,000	10
Crossing Distance (Number of Lanes)	0	0
	1	1
	2	4
	3	6
	4	8
	> 4	10
Posted Speed Limit (MPH)	0	0
	25	1
	30	3
	35	6
	40	9
	45	12
	50	15
	55	18
> 55	20	

Based on the assigned scores, transit stops were categorized into 5 tiers using the Jenks Natural Breaks method. A total of 197 transit stops in the Capital Region were identified as isolated transit stops based on the following criteria:

- The transit stop is located at least 500 ft away from the nearest signalized or all-way stop-controlled intersection, and

- The transit stop has an assigned score above 24 (Tier 5)

The identified isolated transit stops are shown in Figure 4.3.

The *Safe Transportation for Every Pedestrian (STEP) Guide* promotes the following effective and lower-cost countermeasures that communities can deploy for isolated transit stops based on their specific needs⁶: Of these countermeasures, the *Guide for Improving Pedestrian Safety at Uncontrolled Crossing Locations*⁷, provides context-specific guidance. The Guide notes that the following primary countermeasures should be installed:

- High-visibility crosswalk markings
- Parking restriction on the crosswalk approach
- Improved lighting
- Crosswalk warning signs

In addition, the following secondary countermeasures should be considered:

- Advance Yield Here To Pedestrians signs
- Pedestrian refuge islands
- Pedestrian Hybrid Beacon (PHB), where the posted speed is less than or equal to 45 mph

NYS DOT Traffic Safety & Mobility Instruction [18-02](#) provides guidance for State facilities, but local jurisdictions may consider other sources.

Road Diet

The need for pedestrians to access transit stops was recognized as a priority in the NYS DOT VRUSA. The installation of new crosswalks, lighting, and other countermeasures serving Isolated Transit Stops may be candidates for HSIP funding through the VRU set-aside. Engineering studies will be required for each new crossing at these stops to assess pedestrian volumes, vehicle speeds and classifications, and sight distances. The NYS DOT Highway Design Manual⁸ notes that, for roadways with four lanes and posted speed limits greater than 40 mph, marked crosswalks alone should not be used at unsignalized locations.

In addition to pedestrian crossings, pedestrians accessing transit stops must have a network of safe, accessible pathways and clear wayfinding signage. The complexities of route planning and transit connectivity require interagency coordination among relevant stakeholders to ensure a consistent approach. Agreements between parties should be simple to facilitate the streamlined implementation of joint projects. This includes clear scopes of work and funding commitments. CDTA and municipal partners would benefit from a cooperation agreement which states a general intent to work together. Shorter, project-specific

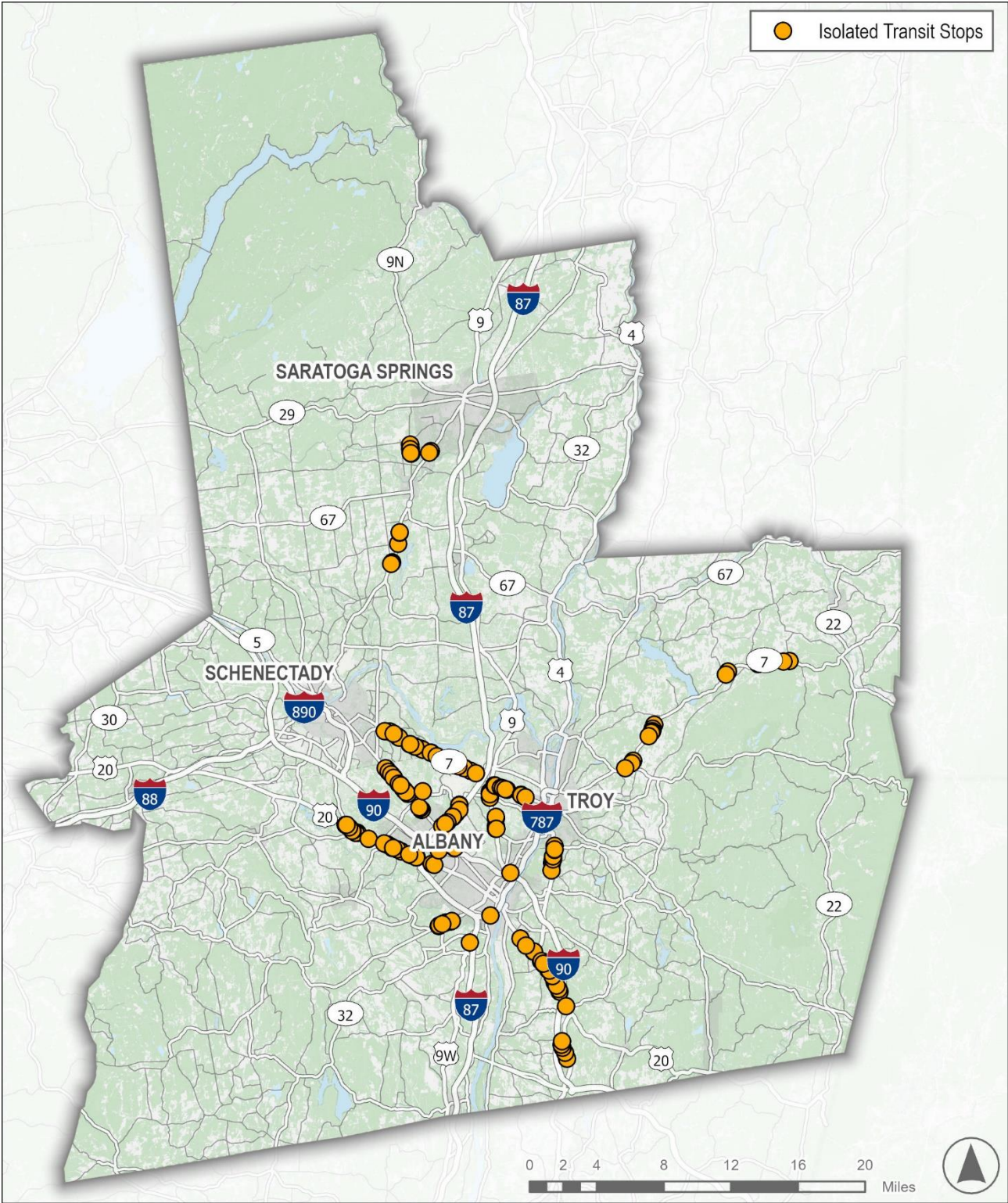
⁶ https://www.fhwa.dot.gov/innovation/everydaycounts/edc_5/docs/STEP-guide-improving-ped-safety.pdf

⁷ [Guide for Improving Pedestrian Safety at Uncontrolled Crossing Locations](#)

⁸ Exhibit 18-20

agreements can be issued on a case-by-case basis. CDTA has been successful in receiving SS4A Implementation funding for improvements along the Red Line which can be a model for future projects as well.

Figure 7.4 “Isolated” Transit Stops



Source: National Transit Database; analysis by Cambridge Systematics.

7.5 GTSC Enforcement and Education Grants

Law enforcement, public health, and other community partners should leverage funding through the New York Governor's Traffic Safety Committee (GTSC) to implement education and enforcement activities in the Capital Region. The GTSC is increasing investment in many program areas due to roadway safety trends.

With an increasing number of drug-impaired driving fatalities, the GTSC plans to increase law enforcement drug recognition training and encourage more impaired driving checkpoints and high-visibility enforcement.

Speed-related crashes have also increased in New York, and GTSC plans to encourage communities to invest in "hot spot" speed-related crash locations and conduct two statewide "Speed Awareness Week" enforcement and engagement mobilizations.

To address a rise in motorcyclist fatalities, GTSC will improve and expand motorcycle safety training and geographically deploy motorcycle safety messaging based on crash data.

To reduce the number of bicyclists killed and injured, GTSC is delivering a new training course for law enforcement developed with the New York Bicycling Coalition, and is expanding in-school, e-bike education, and other public awareness efforts.

To better promote occupant protection, GTSC will increase training on non-certified CPS law enforcement officers.

GTSC funds the programs at the state-wide level and through their annual grant application to address these identified safety issues as outlined in their Highway Safety Strategic Plan. Opportunities for local law enforcement and other partners are made available through their two Structured Programs, **Police Traffic Services** and **Child Passenger Safety**, as well as through locally driven **General Highway Safety Grants**.

Police Traffic Services

The Police Traffic Services grant program funds County Sheriffs' Departments and municipal police departments to conduct traffic law enforcement for motorist violations based on each jurisdiction's traffic and crash data. Each agency is required to participate in the annual statewide Click It or Ticket mobilization.

Child Passenger Safety

The Child Passenger Safety grant program supports four different initiatives or schedules: fitting stations, awareness trainings, car seat check events, and car seat education & distribution programs for low-income families.

Highway Safety Grants

The Highway Safety Grant program provides funding for local, state, and not-for-profit agencies to address data-driven safety issues in their respective jurisdictions. GTSC accepts proposals for unique activities that address one or more of the program areas included in the Highway Safety Strategic Plan.

7.5.1 Current Programs in the Capital Region

Table 7.12 provides a summary of County- and municipal-led programs in the Capital Region that have received GTSC funding for implementing police traffic services, child passenger safety, and other public education programs.

Table 7.12 FFY 2024 Grants in the Capital Region

	# of Grants	Agencies	Total
Police Traffic Services			\$369,990
<i>Albany County</i>	9	Albany County Sheriff's Office, Green Island Village PD, Guilderland Town PD, Menands Village PD, Watervliet City PD, Albany City Police, Cohoes City PD, Bethlehem Town PD, Colonie Town PD	\$199,722
<i>Saratoga County</i>	3	Saratoga County Sheriff's Office, Waterford Town & Village PD, Ballston Spa Village PD	\$36,104
<i>Rensselaer County</i>	5	Rensselaer City PD, Rensselaer County Sheriff's Office, Schodack Town PD, Troy City PD, East Greenbush Town PD	\$17,093
<i>Schenectady County</i>	5	Glenville Town PD, Niskayuna Town PD, Rotterdam Town PD, Schenectady City PD, Scotia Village PD	\$79,952
Child Passenger Safety			\$176,593
<i>Albany County</i>	2	Albany County Sheriff's Office, Albany County Traffic Safety Board,	\$129,100
<i>Saratoga County</i>	1	Cornell Cooperative Extension of Saratoga County	\$24,000
<i>Rensselaer County</i>	6	Rensselaer City PD, Troy City PD, Commission on Economic Opportunity, Samaritan Hospital, The Eddy Foundation, East Greenbush Town PD, Hoosick Falls Village PD	\$54,212
<i>Schenectady County</i>	4	Glenville Town PD, Niskayuna Town PD, Rotterdam Town PD, Scotia Village PD	\$6,400
Community Traffic Safety			\$185,099
<i>Albany County</i>	3	Albany County Department of Health, Cohoes City PD, Colonie Town PD	\$104,260
<i>Schenectady County</i>	1	Glenville Town PD	\$3,150
<i>Saratoga County</i>	1	Cornell Cooperative Extension of Saratoga County	\$77,698

Source: NY 2024 Annual Grant Application (GTSC).

The Transportation Council should consider the extent to which Albany, Rensselaer, Saratoga, and Schenectady Counties, local municipalities, and other potential safety partners, are hosting the following safety initiatives and whether they might want to apply for additional state funding. For the Structured Programs:

Non-participating law enforcement agencies should be encouraged to apply for Police Traffic Services grants

Non-profit agencies that can target low-income communities should partner with law enforcement or public health agencies for Child Passenger Safety

In addition to the Structured Programs, there is a wide variety of potential programs that would be candidates for Community Traffic Safety grants, target Emphasis Areas, and build a broader network of public and private partners:

Leveraging motorcycle safety education from NYS Department of Health and targeting it to local audiences;

Providing school-based programming through Physical Education and/or Health classes to educate K-12 students about bicycling laws and safe cycling; and

New organizations with existing ties to local communities and certified instructors should be provided mentorship to become new GTSC grantees to implement these programs.

Support community organizations to host local programs to improve traffic safety, with a particular focus on novice drivers or underserved communities.

7.6 Implementation Plan

This section lists the implementation strategies to reduce fatalities and serious injuries in the Capital Region, with their timeline, lead agency, supporting partners, and the type of strategy. The timeline is largely organized into three categories:

Short-term: Strategies targeted for implementation within 1 year

Medium-term: Strategies targeted for implementation within 5 years

Long-term: Strategies targeted for implementation beyond 5 years

CRTC, Counties, municipalities, and other stakeholders can use this list of strategies as an implementation tool to determine next action steps to improve safety in the Capital Region. The agencies can refer to the list of comprehensive countermeasures provided in Section 7.2 as the Systemic Treatment Packages for intersections, pedestrians, roadway departures, and speed management. Additionally, Sections 7.3 and 7.4 provide the recommended solutions for Safe Routes to School and Safe Routes to Transit respectively. The strategies also include several policy and process initiatives which are listed in detail in Chapter 6.

Table 7.13 List of Implementation Strategies

Strategies	Lead Agency	Supporting Partners	Type
Short-term: Strategies targeted for implementation within 1 year			
Implement low-cost and quick-build solutions to reduce intersections, roadway departure, pedestrian, and bike crashes based on crash data on priority segments	Municipalities	ROSAC, counties	Infrastructure
Support policy initiatives and work with vulnerable road user advocates and working groups to increase vulnerable road user safety (See Chapter 6 for more details)	Transportation Council	ROSAC, Counties, Municipalities	Policy
Promote and assist in collaborative funding applications through GTSC for regional program implementation	Transportation Council	Counties, Municipalities	Policy
Continue to collect and analyze active transportation counts, sidewalk inventory, and bicycle facilities data to support corridor-level analysis and project planning	Transportation Council	NYSDOT, Counties, Municipalities	Data
Medium-term: Strategies targeted for implementation within 5 years			
Develop and implement a systemic intersection program that applies the Safe System Approach and low-cost proven safety countermeasures at intersections with characteristics most likely to lead to fatal and serious injury crashes	Municipalities	ROSAC, counties	Infrastructure

Implement systemic safety improvements to decrease the severity of roadway departure crashes	Municipalities	ROSAC, counties	Infrastructure
Implement countermeasures to the Safe Routes to School corridors (See Section 7.3 for the list of recommendations)	Municipalities	ROSAC, counties	Infrastructure
Continue implementing infrastructure programs to enhance vulnerable road user safety on priority segments, at priority intersections, and in high-risk areas	Municipalities	ROSAC, counties	Infrastructure
Support policy initiatives and work with counties and municipalities to eliminate fatalities and reduce serious injuries (See Chapter 6 for more details)	Transportation Council	ROSAC, Counties, Municipalities	Policy
Long-term: Strategies targeted for implementation beyond 5 years			
Review and implement recommended countermeasures at the six Corridor Concept locations (Table 7.1) (Refer to Appendix A.7 for Corridor Concept Reports)	Facility Owners	NYSDOT, Counties	Infrastructure
Implement potential systemic safety improvements at the identified four potential Hot Spot capital projects (Table 7.2)	Facility Owners	NYSDOT, Counties	Infrastructure
Implement applicable countermeasures from the Systemic Treatment Package for Intersections, speeding, pedestrians, and roadway departures	Municipalities	Transportation Council	Infrastructure
Utilize FHWA Safe Transportation for Every Pedestrian (STEP), Proven Safety countermeasures, and the Systemic Treatment Package for Pedestrians to systemically implement countermeasures with known safety benefits at both uncontrolled and signalized crossing locations	Municipalities	ROSAC, counties	Infrastructure
Using the FHWA STEP program, implement lower-cost countermeasures that communities can deploy for isolated transit stops based on their specific needs (See Section 7.4 for more info on isolated transit stops)	Municipalities, CDTA	ROSAC, counties	Infrastructure

Note: The timeline provided for the strategies is tentative and is subject to the availability of funding and necessary resources.

8.0 Progress, Transparency, and Next Steps

Ensuring progress and transparency is a critical component of the Capital Region VZSAP. This chapter outlines the methods to measure progress over time, including the collection and analysis of outcome data, and potential ways to maintain continual transparency with residents and other stakeholders.

8.1 Performance Measurement

To track and ensure the progress towards the goal of zero fatalities and a reduction in serious injuries by 50 percent by 2050, the Transportation Council has identified performance measures to be reviewed and reported through the Implementation Program Annual Report. These performance measures are consistent with NYSDOT performance measures.

NYSDOT PERFORMANCE MEASURES

Based on FHWA performance measures, NYSDOT has established five performance measures for safety on all public roads. The performance measures are five-year rolling averages of:

- Number of Fatalities
- Rate of Fatalities per 100M Vehicle Miles Traveled (VMT)
- Number of Serious Injuries
- Rate of Serious Injuries per 100M VMT
- Number of Nonmotorized Fatalities and Serious Injuries

In addition to NYSDOT performance measures, the VZSAP Plan recommends two additional performance measures:

Fatalities/Serious Injuries per 100M VMT by Functional Classification

Ratio of Fatalities and Serious Injuries per 100,000 residents in Communities of Concern Areas compared to the Region-wide Average

Table lists the performance measures recommended for the VZSAP Plan.

Table 8.1 Recommended Performance Measures for the Safety Action Plan

Performance Measure	Performance Measure Subset	Baseline	Target by 2050	Source	Period
Fatalities	Total	53		TSSR	
	Fatalities per 100M VMT	0.70		TSSR, Highway Pavement Management System (HPMS)	Five-Year Rolling Average
	National Highway System	0.48	Zero	CLEAR, HPMS	
	Federal Aid (Non-NHS)	1.02			
	Non-Federal Aid	0.31			
Serious Injuries	Total	641		TSSR	
	Serious Injuries per 100M VMT	8.49	50% reduction	TSSR, HPMS	Five-Year Rolling Average
	National Highway System	4.91		CLEAR, HPMS	

	Federal Aid (Non-NHS)	10.59			
	Non-Federal Aid	4.71			
Non-Motorized Fatalities and Serious Injuries		103	-	TSSR	Five-Year Rolling Average
Ratio of Fatalities & Serious Injuries per 100,000 residents in Communities of Concern to Regional Average	All Crashes	1.33	1	TSSR, ACS 5-year Estimates	Five-Year Rolling Total
	Vulnerable Road Users	3.26	1		

Note: All the above-listed performance measures are reportable Regionwide but can be broken down by County or Municipality, except for Communities of Concern, which will require spatial joining in GIS. These performance measures will be tracked by the Transportation Council through the Implementation Program Annual Report, after the adoption of the VZSAP.

8.2 Transparency

The Transportation Council is committed to promoting transparency on the performance and implementation of this action plan and, as such, intends to take the following steps:

- Report and track the performance measures annually through the Implementation Program Annual Report. This Annual Report will be made publicly accessible on the project website.

- Hold public meetings annually to present the findings and results from the Annual Report.

- Update the Public Safety Performance Dashboard periodically to monitor trends in traffic fatalities and serious injuries.

- Post the Safety Action Plan on the project website to allow jurisdictions to download and reference the document when implementing safety countermeasures and preparing their grant applications.

- Continue the Regional Operations and Safety Advisory Committee meetings to ensure a collaborative approach to roadway safety and engage stakeholders to track progress.

8.3 Future Planning and Next Steps

In the coming years, the following steps will be taken:

- Designate a Vision Zero Coordinator and membership for the Safety Advisory Group to prepare the Annual Report and update the project website.

- Maintain strong relationships with stakeholders through regular engagement and communication.

- Promote and educate the stakeholders about the VZSAP Plan, its goals, and progress.

- Review and update the Public Safety Performance Dashboard based on new data and stakeholder feedback.

- Pursue additional funding opportunities, including the SS4A Implementation Grant.

- Conduct project-level evaluations of completed Safety Implementation Program projects.

To follow trends in the region, it is recommended that the VZSAP be updated every five years. The VZSAP is designed to complement the New York State SHSP and the VRUSA (last updated in 2023). Given the timing of this plan and the SHSP update schedule, it is recommended that updates to this VZSAP follow those of the SHSP to bring about coordinated updates of both Plans. Therefore, this plan is scheduled to be updated in 2028. Plans could also include safety site investigations.

9.0 Conclusion

The adoption and implementation of this VZSAP is a significant step towards eliminating fatalities and serious injuries in the Capital Region. The Safe System Approach is the new paradigm to achieve zero roadway fatalities. Each crash on our roadways is a tragic event leading to life-changing deaths and injuries. However, at the same time, every crash is 100 percent preventable. The Safe System Approach incorporated in the VZSAP aims to create a multi-layered safety net that can avert or significantly mitigate the impact or potential for injury of any possible crash for all roadway users.

A key component of the Safe System Approach is its inclusive, multi-disciplinary nature. We must leverage all tools at our disposal, and we must involve everyone in the process. The responsibility for roadway safety is shared by everyone involved in our transportation system, and all residents of the Capital Region have a role to play. The Transportation Council is encouraged by the engaging and rewarding process of developing this plan in conjunction with the communities and stakeholders impacted most by changes to the local transportation network, and we look forward to your partnership to ensure everyone in the Capital Region can get home safely.

