Pioneer Valley
SAFE STREETS





DRAFT JUNE 2026

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Acronyms and Abbreviations

AARP – American Association of Retired Persons

AASHTO – American Association of State and Highway Transportation Officials

ACS – American Community Survey

ADA – American with Disabilities Act of 1990, 42 USC § 12101 et seq.

ADT – Average Daily Traffic

APP – Areas of Persistent Poverty

ATSSA – American Traffic Safety Services Association

ATTAIN – Advanced Transportation Technologies and Innovative Mobility Deployment

BUILD – Better Utilizing Investments to Leverage Development

CFWM – Community Foundation of Western Massachusetts

CHNA – Community Health Needs Assessment

CIP – Capital Improvement Plan

CMF – Crash Modification Factor

DPW – Department of Public Works

EJ – Environmental Justice

EMS – Emergency Medical Services

EOED – Executive Office of Economic Development

EOHLC – Executive Office of Housing and Livable Communities

EPDO – Equivalent Property Damage Only

FHWA – Federal Highway Administration

FTA – Federal Transit Administration

HAWK – High-Intensity Activated Crosswalk Beacon

HFST – High Friction Surface Treatment

HIN – High Injury Network

HRN – High Risk Network

HSIP – Highway Safety Improvement Program

IIJA – Infrastructure Investment and Jobs Act

ITS – Intelligent Transportation Systems

JTC – Joint Transportation Committee

LEAP – Local Early-stage and Actionable Planning

LEP – Limited English Proficiency

LRTP – Long Range Transportation Plan

MassDOT – Massachusetts Department of Transportation

MBTA – Massachusetts Bay Transportation Authority

MET – Massachusetts Environmental Trust

MPO – Metropolitan Planning Organization

MUTCD – Manual for Uniform Traffic Control Devices

NCREP – National Cooperative Research and Evaluation Program

NEPA – National Environmental Policy Act

NHTSA – National Highway Traffic Safety Administration

OSFG – One Step for Growth

OTP – Office of Transportation Planning

P3 – Public-private Partnership

PHB – Pedestrian Hybrid Beacon

PVMPO – Pioneer Valley Metropolitan Planning Organization

PVPC – Pioneer Valley Planning Commission

PVTA – Pioneer Valley Transportation Authority

REJ – Regional Environmental Justice

REJ+ -- Regional Environmental Justice Plus

RFP – Request for Proposals

RRFB – Rapid Rectangular Flashing Beacon

RTA – Regional Transportation Authority

RTOR – Right Turn on Red

RTP – Regional Transportation Plan

SHSP – Strategic Highway Safety Plan

SRTS – Safe Routes to School

SS4A – Safe Streets and Roads for All

TIP – Transportation Improvement Plan

USDOT – U.S. Department of Transportation

VMT – Vehicle Miles Traveled

VRU – Vulnerable Road User

VRM – Value-for-money

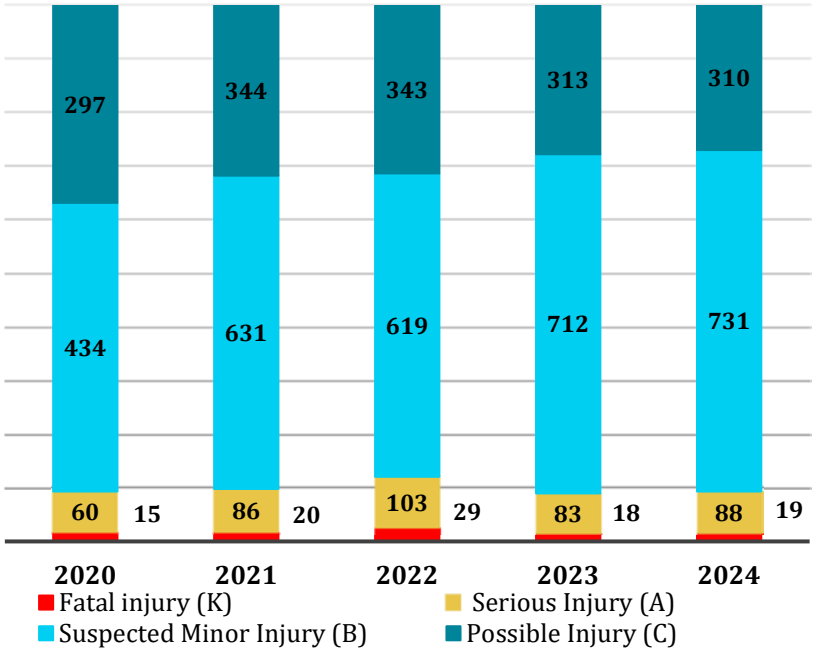
Executive Summary

The Massachusetts Pioneer Valley is a dynamic region of 43 cities and towns across Hampden, Hampshire, and Franklin counties. It ranges from the urban centers of Springfield, Holyoke, and Chicopee to small rural villages and college communities such as Amherst and Northampton. Home to roughly half a million residents, these communities encompass diverse neighborhoods, economic conditions, and transportation needs. They are united by a shared reliance on a multimodal roadway network that connects people to jobs, schools, health care, and essential services.

Regional Crash Trends

From 2020 through 2024, Pioneer Valley communities have experienced an increase in overall crashes along its roadway networks. During this five-year period, a total of 25,107 1crashes occurred, with 521 fatal and serious injury crashes resulting in XX fatalities and XXX serious injuries. While fatal and serious injury (FSI) crashes peaked in 2022 before declining in 2023, in 2024, the region saw an increase in both fatalities and serious injuries.

Figure 1: Injury Crashes by year



The Pioneer Valley region experiences a significant burden from fatal and serious injury crashes, with the highest number of fatalities occurring in West Springfield and Agawam. These severe crashes are estimated to cost the region approximately $0.86 billion each year in economic and societal impacts. Temporal patterns show that weekday afternoons and weekend late night periods see the greatest concentration of these serious incidents. Spatially, severe crashes are heavily concentrated on higher-order roadways: in urban communities, principal and minor arterials together account for about three-quarters of all fatal and serious injury (KA) crashes, while in rural areas, major collectors alone represent nearly 40 percent of rural KA crashes.

Certain behaviors, modes, and crash types are overrepresented in the region's most severe outcomes. Motorcycles make up only a small share of overall crashes but nearly one-fifth of all fatal and serious injury crashes, and speeding is a factor in roughly 17 percent of K/A crashes. Single-vehicle crashes represent the highest share of KA crashes, underscoring the importance of addressing roadway departure risk. Vulnerable road user (VRU) crashes—those involving people walking, bicycling, or using other mobility devices—constitute only a small share of total crashes but 17 percent of KA

[1] This total number of crashes excludes crashes in Chicopee, Holyoke, Springfield, Ware and Westfield.

crashes, and a higher proportion of these VRU KA crashes occur in dark conditions, with or without street lighting. Erratic driving contributes to an additional 13 percent of KA crashes. Notably, most crashes overall occur in daylight and on dry roads, indicating that driver behavior, speed, and roadway design play a larger role in severe crash outcomes than adverse weather alone.

To address these significant safety challenges, the Pioneer Valley Regional Planning Commission, acting as staff to the Pioneer Valley Metropolitan Planning Organization (PVMPO), together with local communities, residents, state and federal partners, and the Pioneer Valley Joint transportation Committee (JTC), developed a data-driven Regional Safety Action Plan under the United States Department of Transportation (USDOT) a Safe Streets and Roads for All (SS4A) initiative. The plan provides a coordinated, data-driven framework for reducing fatalities and serious injuries, advancing equity, and supporting safe, reliable travel for all roadway users—whether they walk, bike, take transit, use mobility devices, or drive. It serves as both a strategic guide and an implementation roadmap that aligns local, regional, and state partners around common goals, priority corridors, and evidence-based safety countermeasures.

What is a Safety Action Plan?

The Pioneer Valley Safe Streets Plan solidifies the region's commitment to implementing a Vision Zero and Safe System Approach to safety for all road users in the region. The Plan sets a goal to reduce traffic-related fatalities and serious injuries to zero by 2050. The region's strategy aligns with the Safe System Approach, which recognizes that people will sometimes make mistakes and seeks to design and manage the transportation system—through safer roads, speeds, vehicles, and behaviors—in a way that prevents those mistakes from resulting in fatal or serious injuries.



Plan Components

Public Engagement

A broad range of engagement strategies including digital mapping tool, project website, public meetings, pop-up events, and stakeholder coordination sessions to engage more than 1,200 community members across the PVPC region was central to the planning process. Outreach efforts were focused on reaching community members where they live, work, play, and study in the 38 communities included in the Pioner Valley Safe Streets Plan . In June 2026, the draft RSAP was released to a 21-day public comment period to gather direct feedback and ensure alignment with community needs.

Key Themes from Public Engagement

- Infrastructure gaps and condition create safety concerns
- Dangerous driver behaviors present a significant safety threat
- Road conditions create additional safety hazards

- Rural and Hilltown communities face unique safety challenges
- Transit access and connectivity do not meet community needs
- Schools and children are recurring safety concern

Crash Data Analysis

To develop the Pioneer Valley Safe Streets Plan, crash data from 2020-2024 was reviewed and analyzed to identify trends, common crash factors such as speeding and distracted driving, and common crash locations. Data analysis identified several key trends, including the high proportion of fatalities and serious injuries among vulnerable road users compared to a relatively low number of total crashes when compared to motor vehicles.

Safety Analysis

As part of the planning process, a regional high-injury network (HIN) and high-risk network (HRN) were identified using crash data from 2020-2024 along with existing roadway network. The HIN identifies roadway corridors and intersections with the highest safety concern based on crash frequency and severity.

Table 1: HIN Coverage - Segments

HIN Coverage Percentage	Total Length (Miles)	Percentage by Length	Percentage Coverage of KAB Crashes
5%	218	5.5%	46.3%
10%	424	10.7%	64.3%
Total Length of Roadways Analyzed	3965	100%	100%

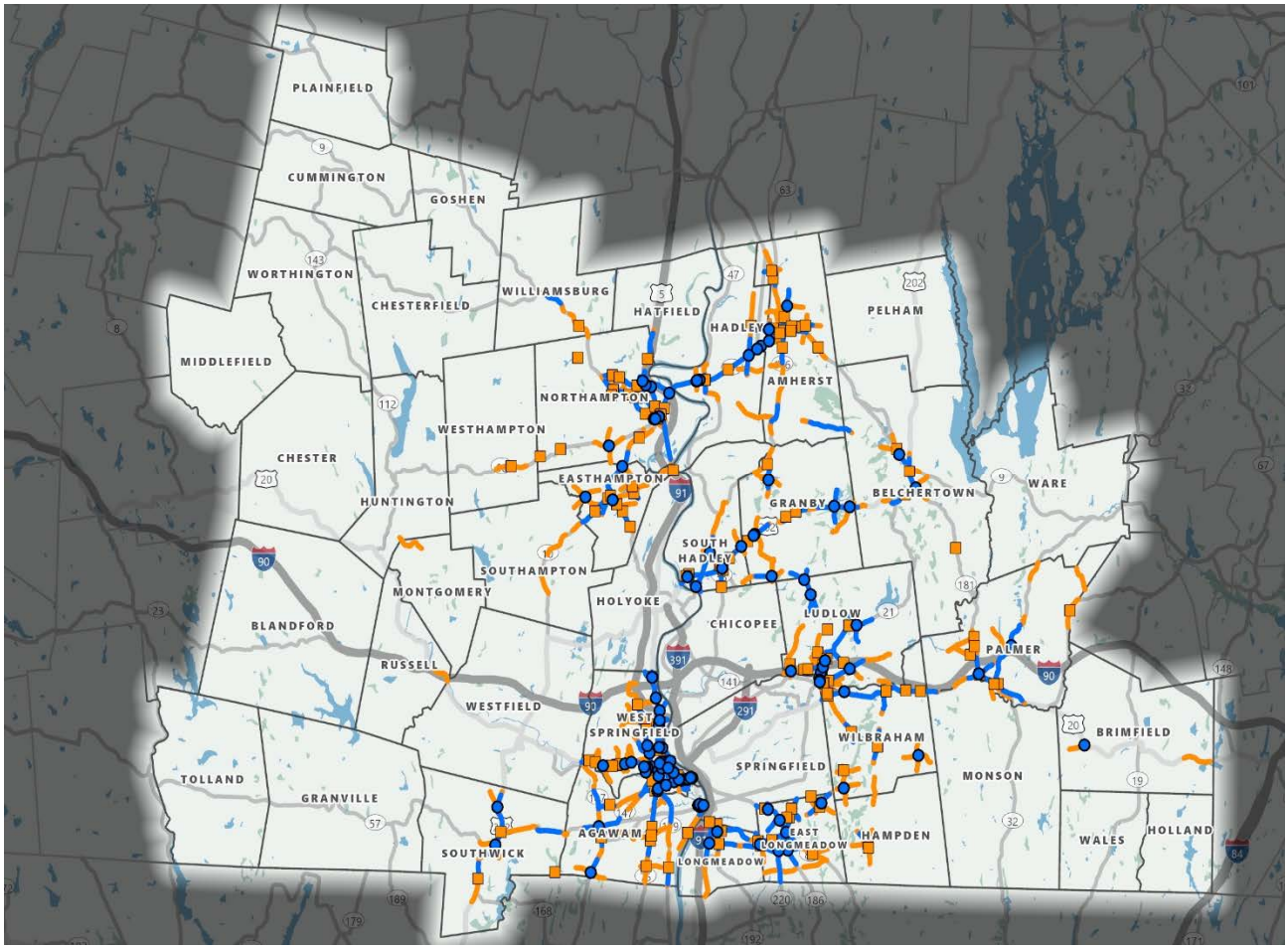
Table 2: HIN Coverage-Intersections

HIN Coverage Percentage	Total Number	Percentage Coverage of KAB Crashes
5%	110	33.7%
10%	249	53.7%
Total Number of Intersections Analyzed	2440	100%

The HRN represents a proactive method to identify roadway risk factors linked to fatal and serious injury crashes utilizing a systemic analysis of roadway network and crash data. This allows agencies to assess roadway networks based on site-specific risk levels to help identify, prioritize, and implement countermeasures at locations where fatal and severe crashes are most likely to occur. For this analysis, the following 6 crash types were selected to identify their HRNS:

- Lane departure crashes
- Intersection crashes
- Motorcycle crashes
- Speeding and aggressive driving crashes
- Bicycle crashes

Figure 2: Pioneer Valley High Injury Network



Countermeasures and Projects

The Pioneer Valley Safe Streets Plan presents a comprehensive toolkit that includes engineering countermeasures ranging from low-cost, high-impact improvements that can be implemented in the near-term to higher cost options that may be addressed as long-term solutions or larger projects. Strategies are generally divided into three categories:

- **Policy and Process Changes** focused on revising existing regional and local plans, policies, and guidelines, or to adopt new policies to prioritize safety
- **Engineering Countermeasures** such as high-visibility crosswalks, pedestrian lighting, curb extensions, signal head visibility, curb modifications, and geometry modifications
- **Non-Engineering Countermeasures** such as policies and programs to provide education, reduced vehicle trips, improve interactions between travel modes through direct and indirect vision enhancements, improve post-crash care response times, or enhance enforcement to increase driver awareness

These strategies were used to identify a list of regional projects for corridors and intersections, as well as a set of priority intersection and segments within each municipality.





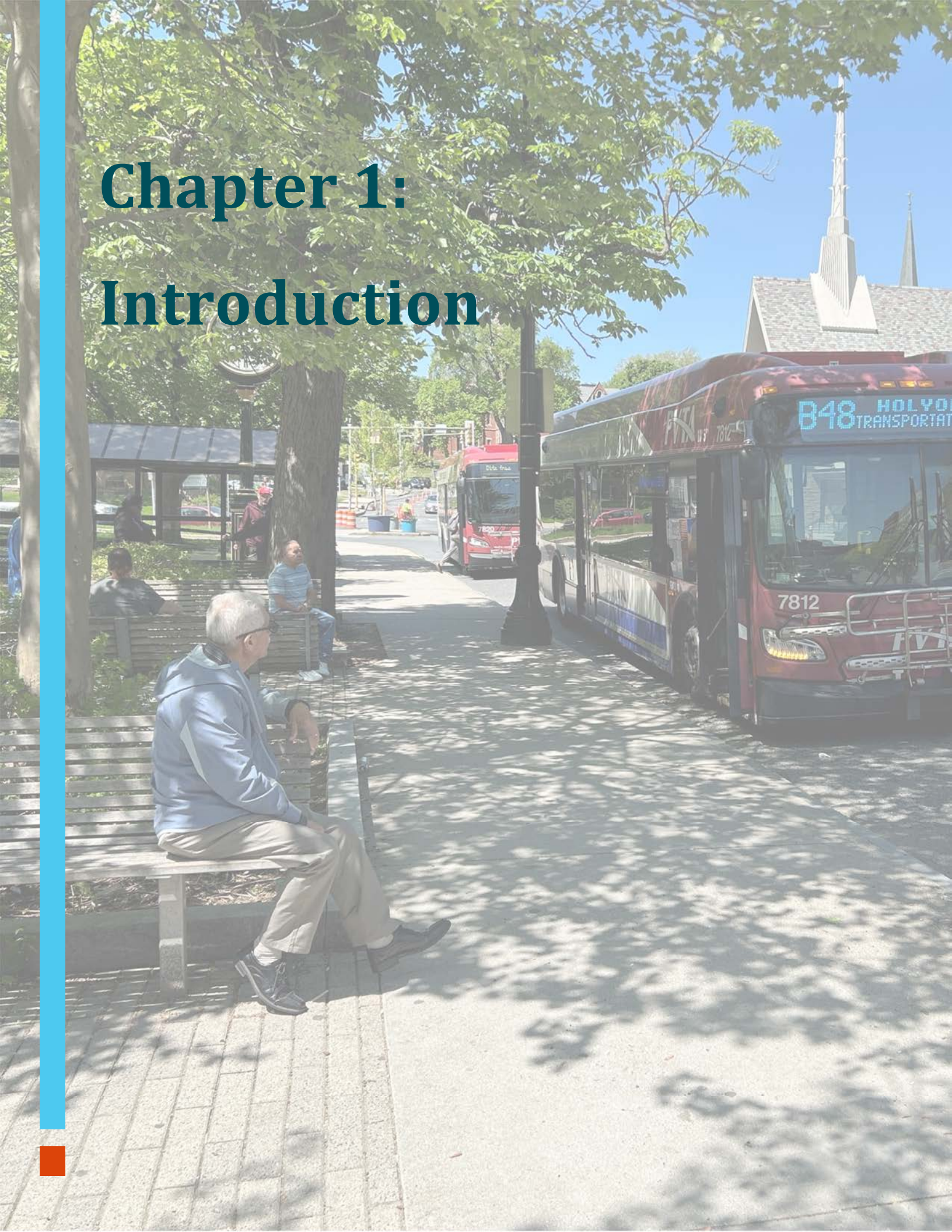
Implementation and Next Steps

PVPC, with direction from PVMPO, will work closely with the 38 communities who participated in development of this Plan to identify opportunities to advance planning, design, and implementation of proposed projects through state and federal funding and technical assistance programs. This Plan enables these communities to pursue federal grant funding through the SS4A program to design and construct recommended solutions identified for regional and municipal corridors and intersections, positioning the region to pursue targeted, collaborative investments to advance projects that will have region-wide impact and advance Pioneer Valley's goal to reduce fatalities and serious injuries along the region's roadways.

This Plan represents a collaborative effort between the Pioneer Valley Planning Commission, municipal leaders, stakeholders, community members, and the Pioneer Valley JTC. Their role continues as the Pioneer Valley Safe Streets Plan moves into the implementation phase, as all regional safety stakeholders must take meaningful action together to achieve the Vision Zero goal.

Chapter 1:

Introduction



Purpose

The Pioneer Valley Region experienced 1,427 fatal and serious injury crashes from 2020-2024, resulting in 262 fatalities and 1,165 serious injuries. These events have consequences that reach far past the moment itself, impacting not only families and friends but also businesses, communities, first responders, witnesses, and the overall transportation system.

The Pioneer Valley Metropolitan Planning Organization (PVMPO) is dedicated to reducing, and ultimately eliminating, traffic-related fatalities and serious injuries through the adoption of Vision Zero principles and implementation of the Safe System Approach outlined in the National Roadway Safety Strategy.

Acting as staff to the PVMPO and representing 43 Central Massachusetts communities, the Pioneer Valley Planning Commission (PVPC) secured a Safe Streets for All (SS4A) planning grant from the United States Department of Transportation (USDOT) to develop this Regional Safety Action Plan, known as the ***Pioneer Valley Safe Streets Plan***. Five municipalities within the region obtained independent funding to establish separate safety action plans; consequently, these communities are excluded from this report, although coordination efforts were made to ensure alignment across all plans. The five municipalities include: Springfield, Holyoke, Chicopee, Ware, and Westfield.

This plan presents a data-driven framework identifying high crash locations and sites with elevated risk due to roadway characteristics or land use. It outlines both site-specific, systemic, and non-engineering safety enhancements designed to improve roadway safety and reduce the incidence of fatal or serious injuries among all road users, including pedestrians, bicyclists, motorcyclists, public transportation riders, and motorists.

The development of this plan was accomplished in collaboration with local communities, residents, state and federal partners, as well as the Pioneer Valley Joint Transportation Committee (JTC).

About the Region



43 Cities & Towns



625,000 Population



Undeveloped and Residential, >1.0M Acres



20,835 Zero Vehicle Households



26.6% of Households with Income below $35,000/year

35.5%

Of Population Age 65+ in the Pioneer Valley Region

What is Vision Zero?

Vision Zero represents a comprehensive, data-informed strategy aimed at eliminating all traffic-related fatalities and serious injuries within the roadway network. Founded on the principles that prioritize human life and health, acknowledge the inevitability of human error, and require a transportation system engineered to anticipate and accommodate such errors, Vision Zero underscores the collective responsibility of planners, engineers, policymakers, enforcement agencies, and community stakeholders.

The core Vision Zero principles as used in transportation safety and planning:

- Traffic-related deaths and injuries are **preventable**
- Integrate **human** error in approach as it **is unavoidable**
- **Human life and health** are the number one priority across **all modes of transportation**
- Safety work should **focus on system-level changes** above influencing individual behavior
- **Speed Reduction** is the **fundamental** factor in reducing crash severity
- **Data-driven** allows for transparent **decision-making**

Vision Zero in the Pioneer Valley Region

Vision Zero is a collaborative and ongoing effort, communities often share resources and insights from their own implementation. The most prominent resource for Vision Zero adoption in the United States is the Vision Zero Network, which provides case studies, webinars, and other tools to improve Vision Zero initiatives. In Massachusetts, communities such as Boston, Cambridge, Somerville, Worcester, Lynn and Lexington have proven that the Vision Zero approach can adapt to communities of varying sizes, respond to local needs, and improve transportation safety for residents across the state.

The Pioneer Valley Metropolitan Planning Organization (PVMPO) adopted their first Vision Zero Statement in 2023. With the development of this plan the PVMPO adopted an updated Vision Zero Statement on February 24, 2026, solidifying the region's commitment to implementing a Vision Zero and Safe System Approach to safety in the region. As part of the newly adopted statement, PVMPO has set a goal for fatal and serious injury reduction within the region.

Safe System Approach

The Safe System Approach serves as a comprehensive framework, prioritizing human vulnerability and the potential for error within decision-making processes. Consequently, this approach is integral to the implementation of Vision Zero and is broadly adopted in transportation safety planning and design.

Death and Serious Injuries are Unacceptable:

- Transportation systems must be designed to eliminate all fatal and severe outcomes.

Design for Human Error:

- Mistakes are inevitable, but transportation systems can reduce harm through forgiving, human-centric design.

Consider Human Vulnerability:

- Transportation infrastructure should be human-centric and designed to minimize the risk of harm to vulnerable users .

Shared Responsibility:

- Transportation safety requires collaboration between all stakeholders to effectively reduce harm.

Plan Proactively:

- Systemic and localized safety issues must be identified and addressed before harm is caused, not after.

Build Redundancy:

- A transportation system must be strengthened at all levels, ensuring that if one mechanism fails, others may stand in place to reduce or prevent harm.



Implementation of the Safe Systems Approach is arranged around five complementary objectives as shown in Table 1.

The Safe System Approach forms the basis of Vision Zero by offering practical strategies aimed at eradicating traffic-related injuries and fatalities. By prioritizing systemic change over individual responsibility, this approach integrates human safety into all facets of transportation planning, policy development, and design, thereby advancing the objectives of Vision Zero.

Table 3: Safe System Approach

Safe System Approach	
Safer People	Promotes safe and responsible driving practices among road users while establishing conditions that prioritize their safety and ensure they reach their destination without harm.
Safer Roads	Design Roadway environments should be designed to reduce the impact of human error, accommodate injury tolerances, promote safe behaviors, and enable secure travel for the most vulnerable users.
Safer Vehicles	Increase the availability of vehicle systems and features designed to prevent accidents and reduce their impact on both occupants and non-occupants.
Safer Speeds	Encourage safer speeds on every type of road by combining careful, fair, and context-sensitive roadway designs, setting proper speed limits, conducting focused education and outreach efforts, and enforcing regulations.
Post-Crash Care	Improve crash survivability by ensuring prompt access to emergency medical services, while establishing a secure environment for essential first responders and mitigating secondary collisions through comprehensive traffic incident management strategies.

Current Vision Zero & Safe System Statement

Vision Zero is a strategy to eliminate all traffic fatalities and severe injuries, while improving safety, increasing healthy, equitable mobility, and providing resilient infrastructure for all. **In 2024, 48 people died and 245 people were seriously injured** due to roadway crashes in the Pioneer Valley region. We acknowledge that deaths and severe injuries on our roadways are preventable and the Pioneer Valley Metropolitan Planning Organization's top priority is **ensuring the safety of all roadway users**: whether they are taking transit, walking, bicycling, or using any other mobility device; driving a vehicle, truck, or motorcycle; or riding as a passenger. One life lost or seriously altered is one too many.

The Pioneer Valley MPO is committed to the goal **to achieve zero roadway fatalities and serious injuries by 2050**. Pioneer Valley will work towards this goal by applying the Safe System Approach into daily practice.

Consistent with the Safe System Approach and Safe Streets for All (SS4A) principles, the Pioneer Valley MPO embraces **shared responsibility** among transportation agencies, policymakers, planners, emergency responders, community groups, and all roadway users. **Safety is embedded as a foundational consideration** in all transportation planning, project development, operations, and funding decisions.

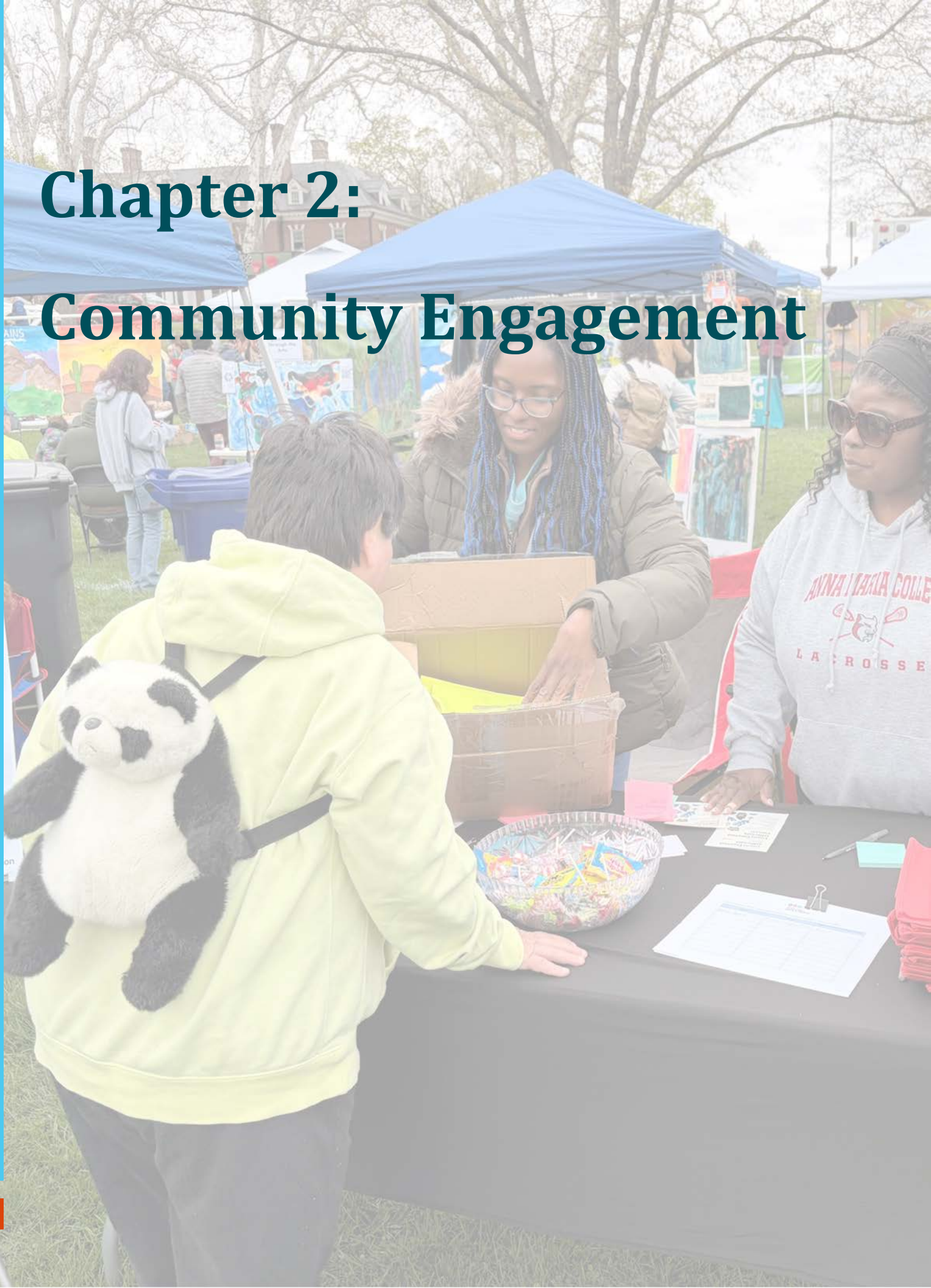
The MPO has incorporated elements from the Massachusetts 2023 Strategic Highway Safety Plan (SHSP) into its 2024 Update to the Regional Transportation Plan for the Pioneer Valley MPO (RTP). This provides a framework for how the MPO will work to make regional roadways safer for all road users. The RTP includes specific **safety strategies that can aid in achieving a Vision Zero regional transportation network in the Pioneer Valley**.

The Pioneer Valley Region will use **data-driven, equity-centered decision-making to prioritize investments in communities and corridors with the highest concentrations of fatal and serious injury crashes**, particularly where historically underserved populations are disproportionately impacted.

Through ongoing collaboration with federal, state, local, and community partners, we will implement policies, programs, and projects that advance SS4A goals and move our region toward a transportation system where no loss of life is acceptable and everyone can travel safely, regardless of age, ability, or mode of travel.

Chapter 2:

Community Engagement



Role of Community Engagement

The Pioneer Valley Safe Streets project team collected input from the public and key regional stakeholders throughout the planning process. Community engagement served as foundational input for the technical safety analysis, helping to shape the locations studied, the risk factors prioritized, and the countermeasures ultimately recommended.

Outreach was designed to reach those who live, work, play, and study in the 38 participating municipalities, including residents of rural Hilltown communities, bicyclists, students, older adults, commuters, transit users, and underserved populations who may experience transportation safety challenges differently than the broader public.

To ensure that outreach efforts engaged a wide variety of community members, the project team deployed several strategies through the community engagement process. Figure 3, below identifies these efforts. Over the course of 6 months, these efforts engaged more than 1,200 community members from across the PVPC region

Figure 3. Project Engagement at a Glance



781 visits to Project Website



27 participants across 3 Public Meetings



43 communities and 50+ stakeholder organizations engaged through 4 meetings of existing regional committees



584 pins from 269 contributors in 30 communities



Over 155 Community Interactions across 6 Pop-up Events



20 participants representing 15 organizations across 9 Stakeholder Coordination Sessions

Key Themes from Community Input

Feedback collected through all engagement activities revealed recurring transportation safety concerns across the region. The themes presented in this section reflect issues that were consistently raised by community members, stakeholders, and regional partners through public meetings, pop-up events, regional committee discussions, stakeholder coordination sessions, and the digital mapping tool. There were no significant differences in the issues raised by participants based on engagement method or audience.

Infrastructure gaps and condition are top concerns.

Participants consistently identified missing, discontinuous, or poorly maintained sidewalks across the region. Dedicated bicycle infrastructure is limited on most roads, and existing bike lanes are often unprotected or poorly designed. Crosswalks were also frequently described as faded, unsignalized, or routinely ignored by drivers.

> *"One of the best things about the conservation area is that it's close to town, but it still feels like you're out in nature. I'd like to see safer walking and biking connections so more people can reach the trails without having to drive."*

Dangerous driver behaviors are perceived as a significant safety threat.

Speeding emerged as one of the most consistent concerns across urban corridors, rural roadways, and areas near schools. Participants also reported that drivers frequently fail to yield at crosswalks, run stop signs and red lights, and use mobile devices while driving. Many respondents also expressed concern about limited or inconsistent enforcement.

> *"There is zero enforcement of traffic laws. Drivers are constantly running red lights and ignoring crosswalks."*

Road conditions create hazards for all users.

Poor pavement conditions, particularly potholes, were frequently cited throughout the region and across all travel modes. In some locations, roadway conditions were described as severe enough to force cyclists to dismount or avoid certain routes altogether.

> *"Cracks, holes, unevenness, and sometimes the lack of sidewalks are a big safety hazard that forces pedestrians into the road."*

Rural and Hilltown communities face compounding safety challenges.

Participants from rural and Hilltown areas described layered transportation concerns that differ from those in more urbanized communities. Common issues included the absence of sidewalks, longer distances to essential services, limited transit access, and the needs of older adults and individuals with mobility limitations.

> *"Because there are no sidewalks, older adults need help getting around safely."*

> *"This is a fast, narrow rural road with many walkers and bikers. No white fog lines. People are at risk from wandering drivers."*

Transit access and connectivity are inadequate.

Bus stops are often difficult to reach safely on foot, service can be infrequent, and routes do not always connect effectively between communities. Shelters and benches are missing. Several respondents noted the region feels designed to require car ownership.

> *"Getting to the airport should be simple and reliable. Stronger transit connections between our cities and the airport would make life easier for residents, workers, and visitors."*
>
> *"As I get older, I need more bus connections to essential services like doctors' offices, grocery stores, and community centers."*

Schools and children are a recurring safety concern.

Unsafe walking and biking routes to school were identified throughout the region. Participants frequently cited challenges accessing schools safely, particularly in areas where sidewalk and crosswalk deficiencies coincide with speeding and other unsafe driver behaviors near school zones.

> *"My kids were using the crosswalk and nearly hit by a car. They would like to walk or bike to school. This intersection makes it hard for them to safely do so."*
>
> *"Sidewalks are crumbling and there is no bike infrastructure or shoulder width. This is an important connection to the new elementary school!"*

Public Engagement Activities

Public engagement activities provided opportunities for those who live, work, study, and play in the region to learn about the project, share local safety concerns, and help shape transportation safety priorities across the region.

The project website served as the central hub for project information, updates, and engagement opportunities throughout the planning process. Figure X shows the project website, which provided access to meeting materials, announcements, the mapping tool, and project findings as they became available. The website was offered in multiple languages to support broader accessibility across the region. As summarized in Table 4, the website received 781 visits from 579 unique visitors and generated 862 pageviews as of June 1, 2026. Table X presents the primary sources of website traffic, with direct visits accounting for the majority of website activity.

Figure 4. Pioneer Valley Safe Streets Website

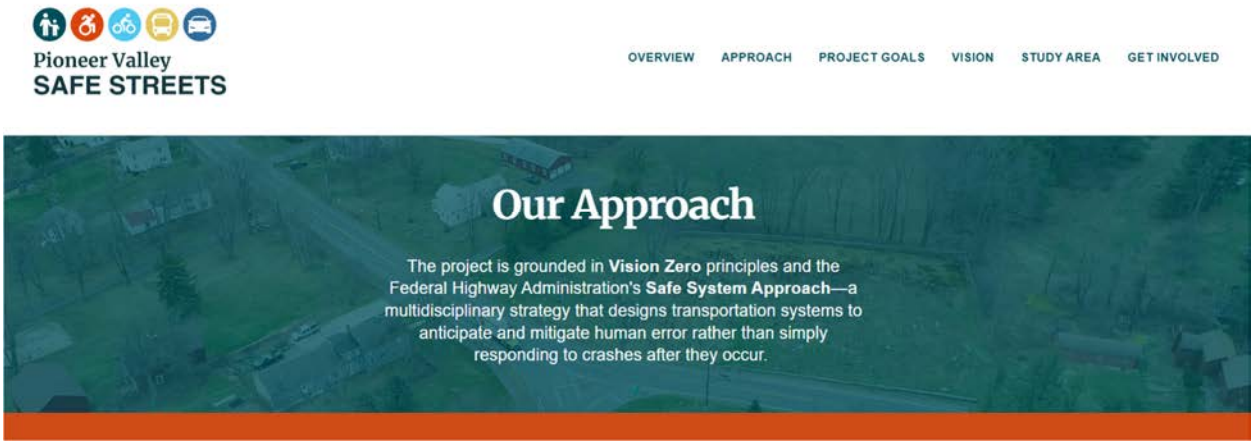


Table 4. Summary of Website Engagement (As of June 1, 2026)

Type	Visits
Website Visits	781
Unique Visitors	579
Pageviews	862
Mailing List Subscribers	9

Table 5. Primary Sources of Website Activity (As of June 1, 2026)

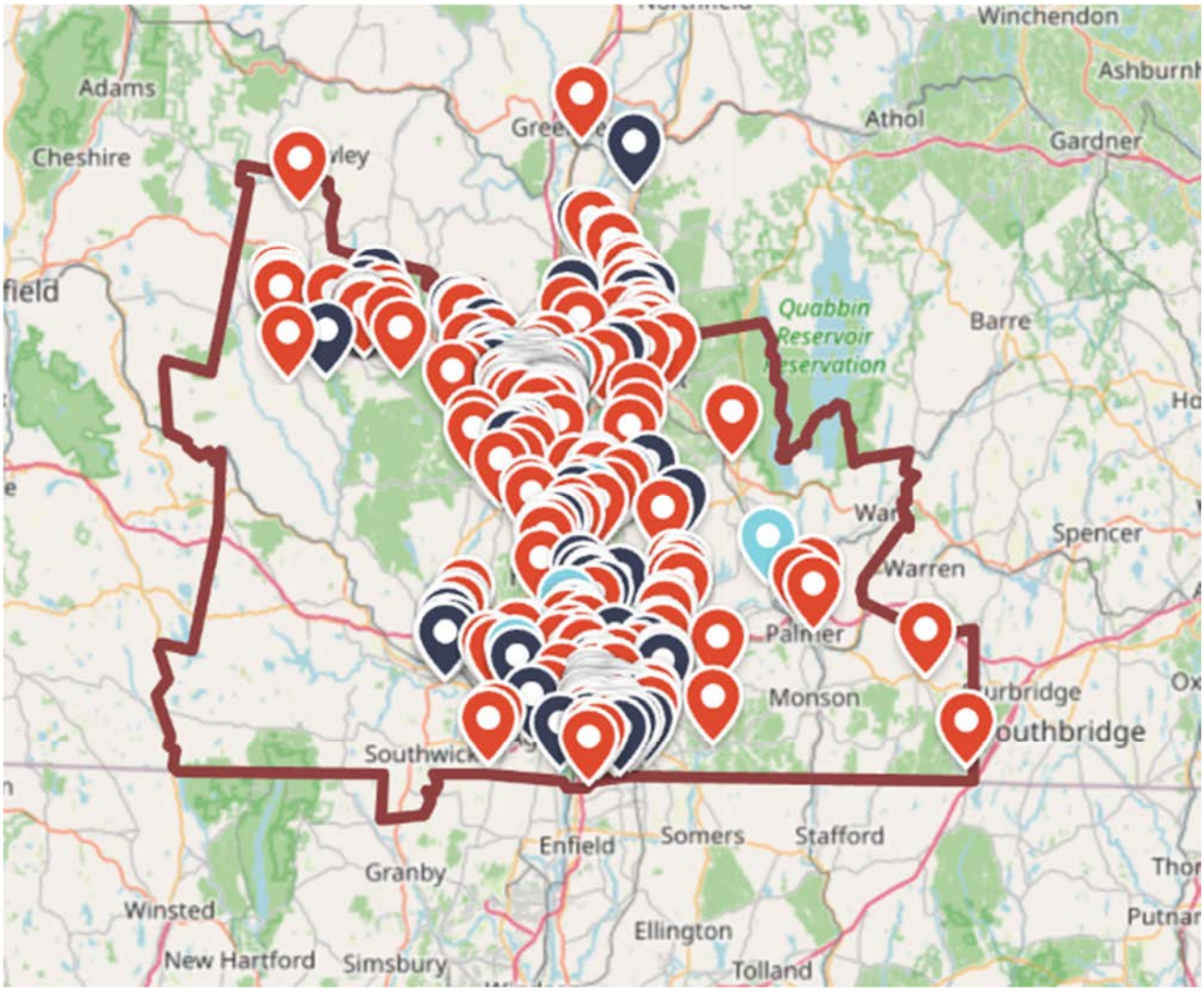
Source	% of Activity
Direct	67%
Referral	20%
Search	7%
Social	6%
Email	<1%

From January 20 to May 26, 2026, the public used an interactive digital mapping tool to identify transportation safety concerns and opportunities across the region. Participants could drop pins on a map to highlight unsafe conditions, examples of effective design, and ideas for improvement tied to specific locations. More than 260 pins in 30 communities were submitted during the engagement period. Figure 5 illustrates the geographic distribution of comments submitted through the mapping tool, while

The mapping tool was open across the full road network, including Chicopee, Holyoke, Springfield, Ware, and Westfield, which are developing their own SS4A plans. This approach recognized that people routinely travel across municipal boundaries and that transportation safety issues are regional in nature. Comment data from those communities was shared with their respective planning teams to support a coordinated, region-wide approach to safety planning.

To expand awareness of the project, mapping tool, and upcoming engagement opportunities, the project team promoted the Pioneer Valley Safe Streets effort on Facebook, Instagram, and Nextdoor. Appendix X includes Mapping Tool Summary in further detail.

Figure 5. Mapping Tool Comment Heatmap



Pop-Up Events

Pop-up events allowed the project team to engage community members while they were out in the community, at festivals, markets, and other events throughout the region. These informal outreach activities helped raise awareness of the project, promote the digital mapping tool, and collect location-specific transportation safety concerns and experiences from people who may not typically attend traditional public meetings. Figure 6 shows examples of project outreach conducted at these events.

At each pop-up event, participants could add sticky notes directly to an engagement board to share location-specific feedback, which was subsequently entered into the digital mapping tool to ensure all input was captured in a consistent format. Participants were also invited to identify the

transportation modes they use most frequently through a brief interactive exercise, providing additional context for understanding local travel patterns and transportation safety needs.

Table 6. Pop-up Event Summary

Meeting	Date
Amherst Sustainability Festival	**April 25, 2026**
Hilltown CDC Resource Fair	**April 25, 2026**
Northampton Bike Week Breakfast	**May 13, 2026**
Grow Food Northampton Tuesday Farmers' Market	**May 19, 2026**
Sweet Alice Conservation Area Trail Head	**May 29, 2026**
Western Massachusetts Transportation Advocacy Network 4th Annual Transportation Forum	**June 12, 2026**

Figure 6. Community Members Participating in Pioneer Valley Safe Streets Pop-Up Engagement Activities





Public Meetings

Public meetings helped the team gather location-specific feedback, reach a broad cross-section of community members, and better understand how transportation safety challenges vary across different municipalities and user groups. They also served as an opportunity for the public to interact with, and ask questions of, the project team.

The project team organized three unique public meetings in both virtual and in-person formats. Collectively, these events engaged more than 27 people from across the region. Table 7 summarizes the format, purpose, and key takeaways from each meeting.

Table 7. Summary of Public Meetings

Meeting	*Date*	Location/ Platform	Overview	Key Takeaways
Virtual Listening Session	**February 24, 2026**	Microsoft Teams	Introduced the project and Vision Zero framework and invited participants to share safety concerns.	• Speeding and aggressive driving are major concerns • Vulnerable road user safety should remain a priority • Communities face challenges balancing safety improvements and limited funding • Police, fire, and emergency responders should be engaged early
Open House	**May 13, 2026**	Microsoft Teams & Pioneer Valley Planning Commission Office in Springfield	Presented interim safety analysis findings, including the High Injury Network (HIN) and High Risk Network (HRN), and gathered corridor-specific feedback.	• Infrastructure gaps remain a top concern • Dangerous driver behaviors continue to impact safety • Vulnerable road user safety should remain a priority • Local knowledge and stakeholder input are critical to identifying safety needs
Public Presentation	**June 16, 2026**	Microsoft Teams	Presented the study's findings, recommendations, and next steps.	

Figure 7. Community members reviewing HIN and providing input at public open house



Figure 8. Community members reviewing findings from needs and access analysis



Stakeholder Engagement Activities

Community engagement activities prioritized making connections with PVPC residents through a variety of interactive formats designed to meet community members where they live, work, and play across the region. The project team also organized a series of stakeholder engagement efforts, focused more on targeted outreach to organizations with a direct stake in transportation safety. Engagement included committee meetings, stakeholder coordination sessions, and participation at the Regional Transportation Forum.

Regional Committee Coordination Meetings

The Pioneer Valley Joint Transportation Committee (JTC) serves as the transportation advisory group to the PVMPO, helping incorporate federal, state, local, and public input into regional transportation planning and programming. Comprised of representatives from member communities and transportation organizations, the JTC coordinates transportation plans and review planning initiatives before formal PVMPO action.

The PVPC serves as the region's planning and policy-making body, bringing together representatives from member municipalities, county representatives, and other appointed stakeholders to guide regional planning efforts, establish priorities, and provide oversight of the Commission's programs and initiatives.

The project team met with these committees at key milestones throughout the planning process to review technical findings, discuss emerging safety priorities, provide regional and municipal perspectives, and guide development of the study's recommendations.

Table 8. Summary of Committee Meetings

Meeting	Date	Overview
Joint Transportation Committee / Metropolitan Planning Organization	January 14, 2026 / January 27, 2026	Introduced the PVPC Safety Action Plan, including the project scope, consultant team, regional safety data, and the Vision Zero and Safe System approaches guiding the study.
Joint Transportation Committee	April 8, 2026	Provided an update on the Vision Zero statement and Regional Safety Compass, including progress identifying High Injury and High Risk Networks and summarizing completed and upcoming engagement activities.
PVPC Commission Meeting	April 9, 2026	Presented the Regional Safety Action Plan, including project scope, safety analysis findings, engagement activities, and the public comment mapping tool, and discussed anticipated outcomes of the plan.
Joint Transportation Committee	June 10, 2026	Provided an update on the Regional Safety Action Plan including engagement, safety analysis, priority project locations, and example countermeasures.

Stakeholder Coordination Sessions

Stakeholder coordination sessions were conducted throughout the planning process to gather input from regional agencies, municipal representatives, transportation partners, and other key organizations. These meetings helped guide the technical analysis, identify regional transportation safety priorities, and ensure coordination across jurisdictions and planning efforts.

Meeting invitations were distributed to organizations and agencies across the Pioneer Valley region. Representatives from the following communities and organizations participated:

- Town of Amherst - Department of Public Works
- City of Holyoke
- City of West Springfield
- Town of Chester
- Town of Southampton
- University of Massachusetts Amherst
- Mount Holyoke College
- Pioneer Valley Transportation Authority (PVTA)
- MassBike
- Trains in the Valley
- Educare Springfield
- Hilltown CDC
- Massachusetts Healthy Aging Collaborative

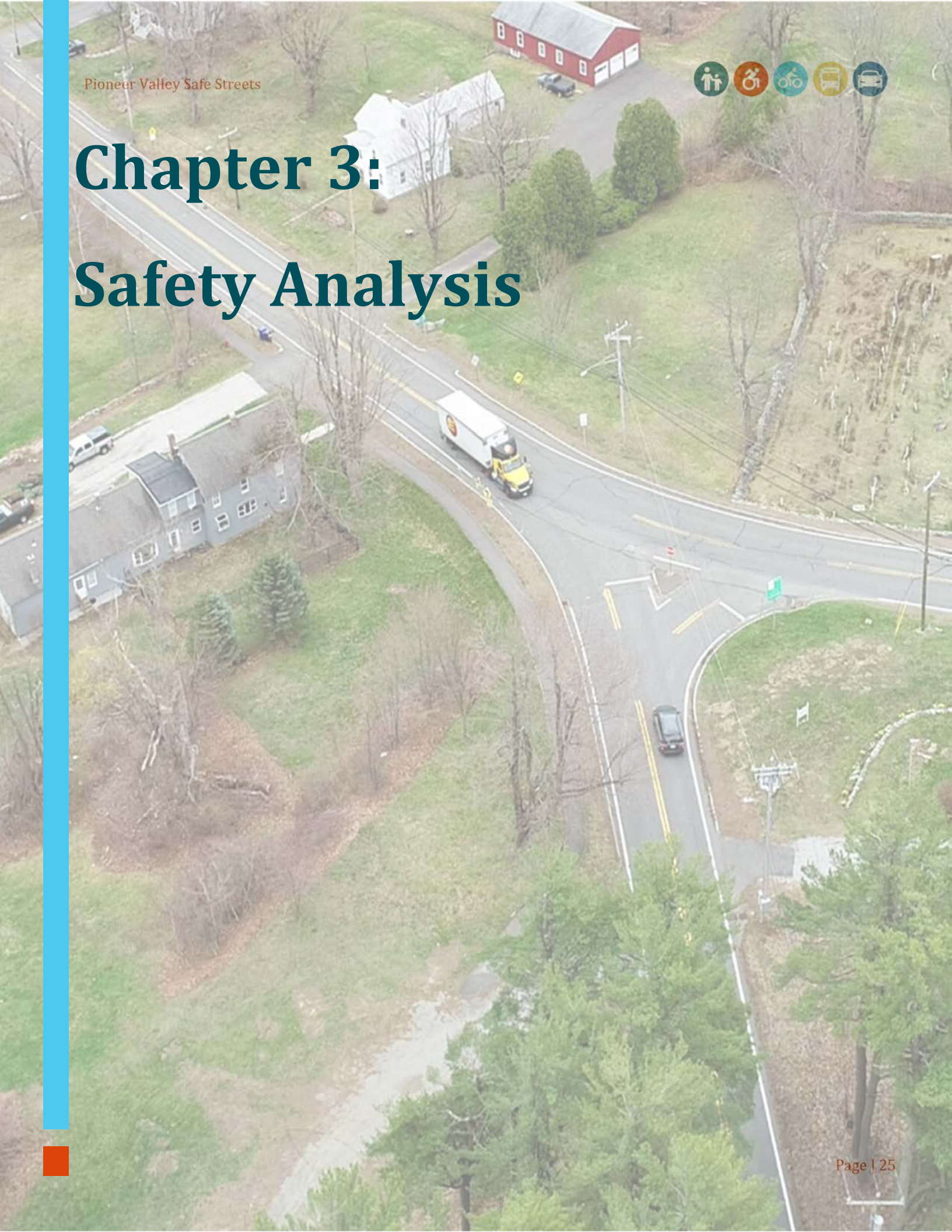
- Project Team supporting Complete Streets planning efforts in 14 rural communities in the region
- Project Team supporting SS4A planning efforts in Chicopee, Holyoke, and Westfield

Key themes from the stakeholder coordination sessions included:

- **Infrastructure improvements were consistently identified as the highest priority**, particularly sidewalks, crosswalks, bicycle facilities, traffic calming measures, and safer access to schools, transit, and community destinations.
- **Speeding is a widespread concern across both urban and rural communities**, especially in town centers, near schools, and along high-speed state highways that pass through pedestrian-oriented areas.
- **Pedestrian and bicycle safety remain significant challenges**, particularly where sidewalks, crossings, and dedicated bicycle facilities are missing or incomplete.
- **Rural communities face unique transportation safety challenges**, including limited resources, aging infrastructure, high-speed roadways through town centers, and a lack of safe pedestrian accommodations despite demand for walkability.
- **Crash data alone may not fully capture transportation safety concerns**, particularly in rural communities where near misses, perceived risk, and barriers to walking and biking are often more prevalent than documented crash histories.
- **Transit access and transit stop safety require improvement**, including safer access to bus stops, better pedestrian connections, and improved accommodations for transit users.
- **Regional coordination, local knowledge, and continued engagement are essential to implementation**, particularly in ensuring that smaller communities are represented and that safety improvements reflect local needs and conditions.

Regional Transportation Forum

The Pioneer Valley Safe Streets project team participated in the "Bridging Transit Gaps in the 413" transportation forum hosted by the Western Massachusetts Transportation Advocacy Network at Mount Holyoke College on Friday, June 12, 2026. Attendees were able to learn about and provide feedback on the project findings and recommendations by visiting the project information table and attending a presentation delivered by the Pioneer Valley Planning Commission.



Chapter 3:

Safety Analysis

Overview

This chapter documents the findings of a comprehensive safety analysis undertaken to identify trends and risk factors associated with crashes in the Pioneer Valley region. The analysis evaluates key behavioral, environmental, infrastructural, and contextual variables that are prevalent in local crashes. The detailed technical work, included in Appendix A and Appendix B, constitutes a core analytical foundation for this Action Plan. The results of these analyses have informed the recommendations, linking data to actionable policy and infrastructure improvements that will improve safety on roadways throughout the region. The analysis in this chapter is based on crash data from the MassDOT IMPACT tool[1], between 2020 and 2024 that list the Pioneer Valley Planning Commission "PVPC" as the regional planning agency. The crash data for the calendar year of 2021 or later are not yet finalized and can vary or change.

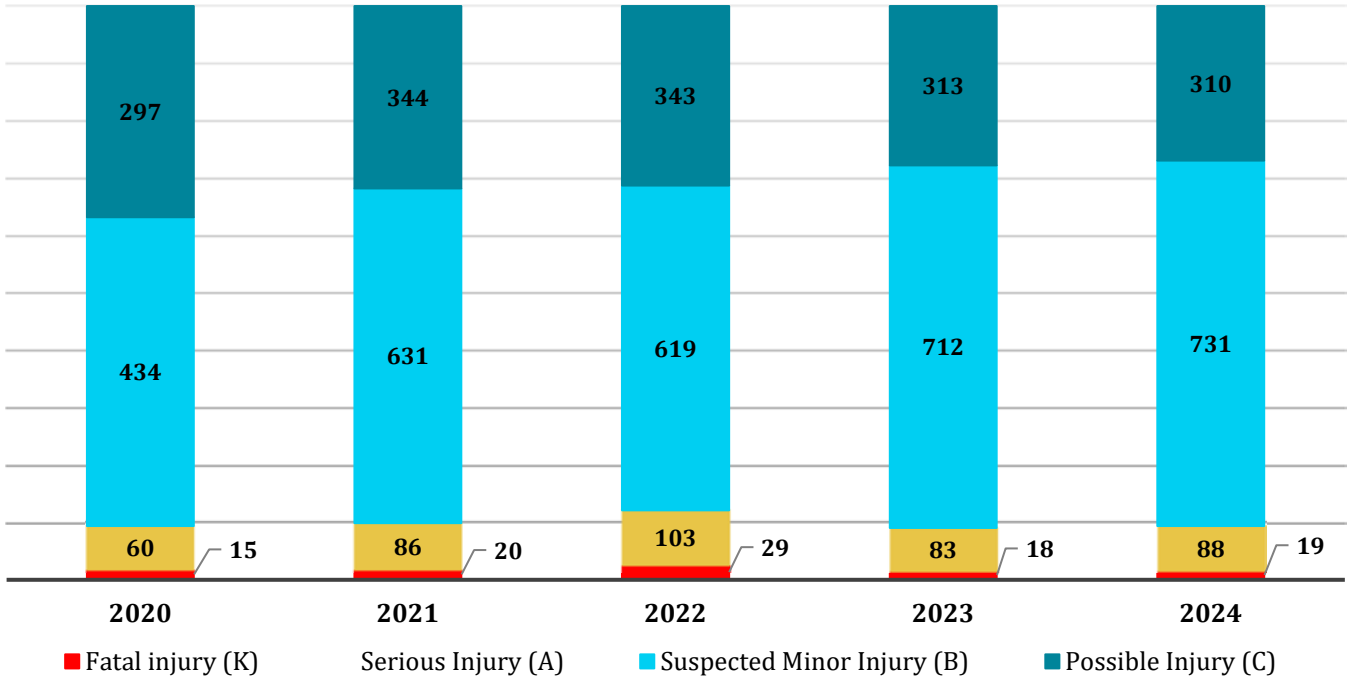
Key Crash Trends

Between the years 2020 and 2024, Pioneer Valley communities have seen consistent increase in the total number of crashes. Out of the 25,107 crashes that happened within the study period, about 25 percent resulted in injury. Both fatal and serious injury (KA) crashes peaked in 2022 before showing a decline in 2023. However, 2024 again showed an increasing trend for these crashes. **Figure 9** shows the year-by-year breakdown of all injury crashes.

Unless otherwise mentioned, this chapter excludes

- ***Fully Access-Controlled Facilities***
- ***Crashes within Chicopee, Holyoke, Springfield, Ware and Westfield***

Figure 9. Injury Crashes 2020-2024



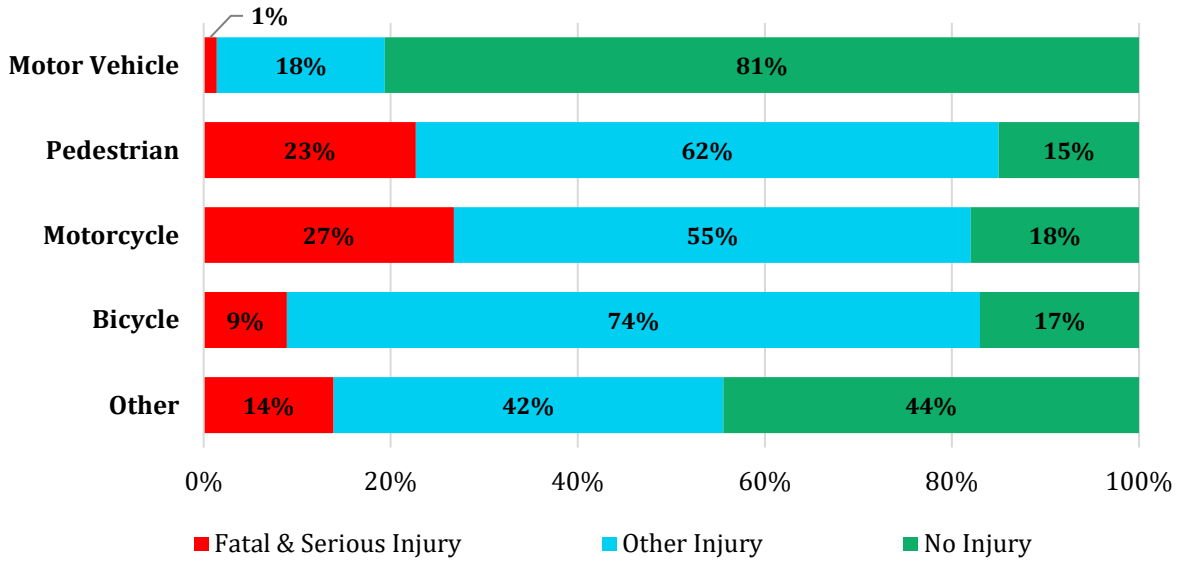
[1] MassDOT Impact Data Portal

Crashes impose financial, social, and emotional costs not only on victims and survivors but on the entire community. Between 2020 and 2024, crashes in the region generated an estimated $4.3 billion in total costs—about $860 million per year. KA crashes accounted for $2.4 billion, or 56 percent, of that amount. By identifying where and how these severe crashes occur, we can better understand their underlying causes and more effectively target safety improvements.

Who is at-risk?

Figure 10 shows the breakdown of crashes by mode. Motor vehicles have the lowest share of severe outcomes, with only 1% resulting in fatal or serious injury. In contrast, pedestrians and motorcyclists face much higher risks: pedestrians experience 23% fatal or serious injuries and 62% other injuries, leaving only 15% with no injury, while motorcyclists see 27% fatal or serious injuries, 55% other injuries, and 18% no injury. Bicyclists experience 9% fatal or serious injuries and 74% other injuries, with just 17% resulting in no injury. This statistic further highlights the heightened vulnerability of non-motor-vehicle users, who lack the structural restraints, and safety systems available to car occupants.

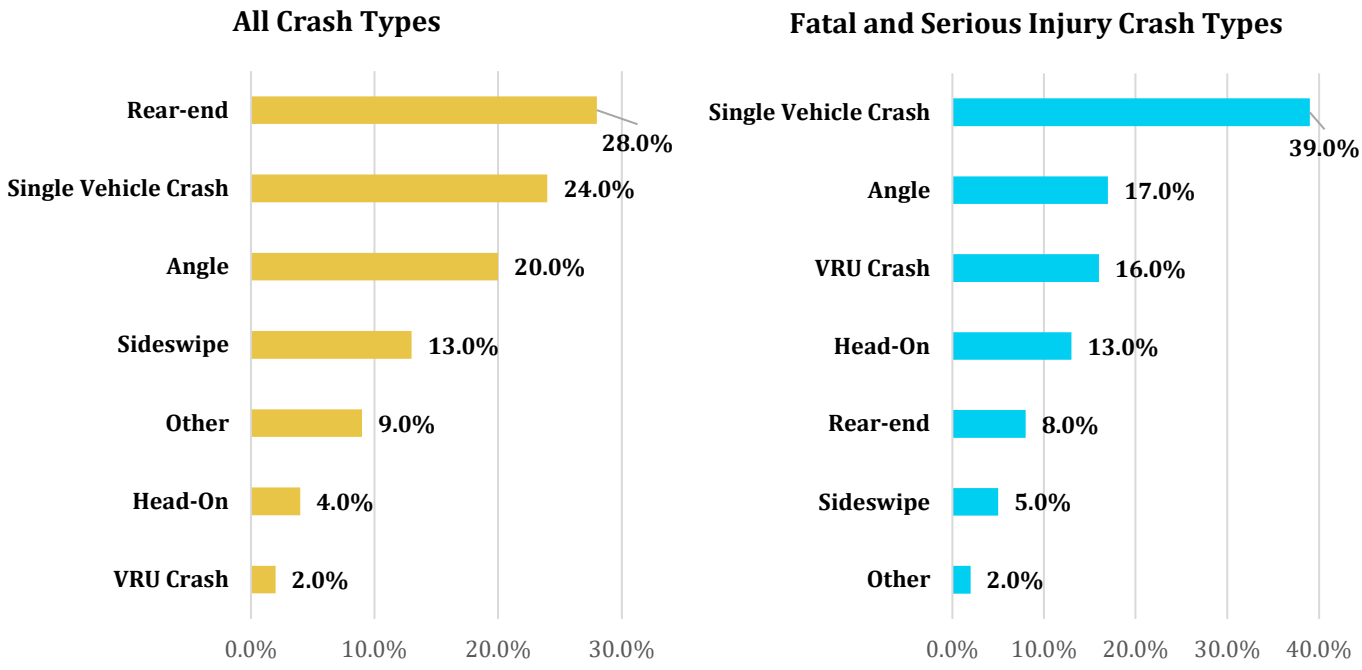
Figure 10. Crashes by Mode



How are the crashes happening?

Crash types can help reveal patterns that lead to the most severe outcomes and allow safety countermeasures to be focused on where they will have the greatest effect. As shown in 11, in Pioneer Valley region, rear-end crashes make up 28% of all crashes—the highest share of any type—yet only about 8% of rear-end crashes results in a fatal or serious injury. By comparison, single vehicle crashes account for 28% of crashes but they are the most dominant crash type for fatal and serious injury crashes. Most prominent pattern is observed for VRU crashes since they account for only 2% of all crashes but if we just consider fatal ad serious injury crashes, VRU crashes make up for 16% of those. Angle crashes were identified as the second highest crash types for fatal and serious injury and third highest crash type for all crashes.

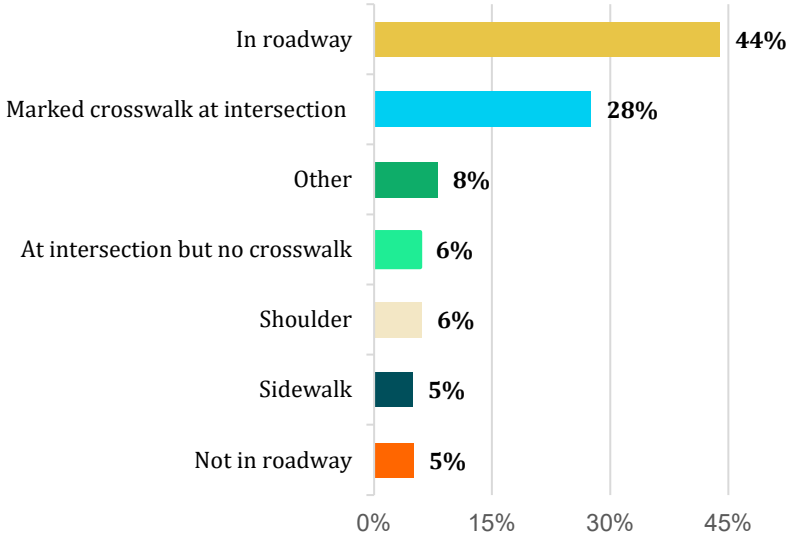
Figure 11. Crash Type Comparison



Where are the crashes happening?

Within the region, crash patterns by location type indicate that approximately two-thirds of all crashes and well over half of fatal and serious-injury (KA) crashes are segment-related, while intersections account for a little over one-third of all crashes and roughly one-third of KA crashes. Since vulnerable road users are at higher risk, their location during crash was analyzed separately. As seen in Figure 12, nearly 44% of these crashes occur on the roadway, meaning outside of any intersection influence area. Another large share, 28 percent, happens in marked crosswalks at intersections, indicating that even designated crossing areas are not entirely safe. Smaller but still notable proportions arise at intersections without crosswalks and on road shoulders, each representing 6 percent, suggesting that crossing or walking near traffic remains risky even outside formal lanes.

Figure 12. VRU Crash Location



Why are the crashes happening?

Crashes are a result of a combination of road, environmental, vehicle, and human factors. Road-related factors include poor design and geometry, unsafe roadside environments, and deficient traffic control features. Environmental factors cover adverse weather, as well as low visibility conditions Vehicle factors relate to mechanical condition, design and safety features, and vehicle type and use. Within Pioneer Valley, most crashes happened in daylight and dry weather conditions.

Human factors are often dominant and include unsafe driver behavior such as speeding, distraction, impairment by alcohol or drugs, aggressive driving, violating traffic rules etc. Figure 13 shows the driver contributing factors for crashes in the region. It shows that while "no improper driving" is reported in a notable share of both crash types, certain risky behaviors are clearly over-represented in the more severe collisions. Speeding, operating a vehicle in an erratic manner, and failure to keep in the proper lane or running off the road each account for a relatively small proportion of all crashes but a much larger share of fatal and serious injury crashes, highlighting how dangerous these actions are. Distracted or inattentive driving also appears frequently, though its share is somewhat higher among all crashes than among the most severe ones, suggesting that distraction often leads to minor incidents but can still have serious consequences.

Figure 13. Driver Contributing Factors

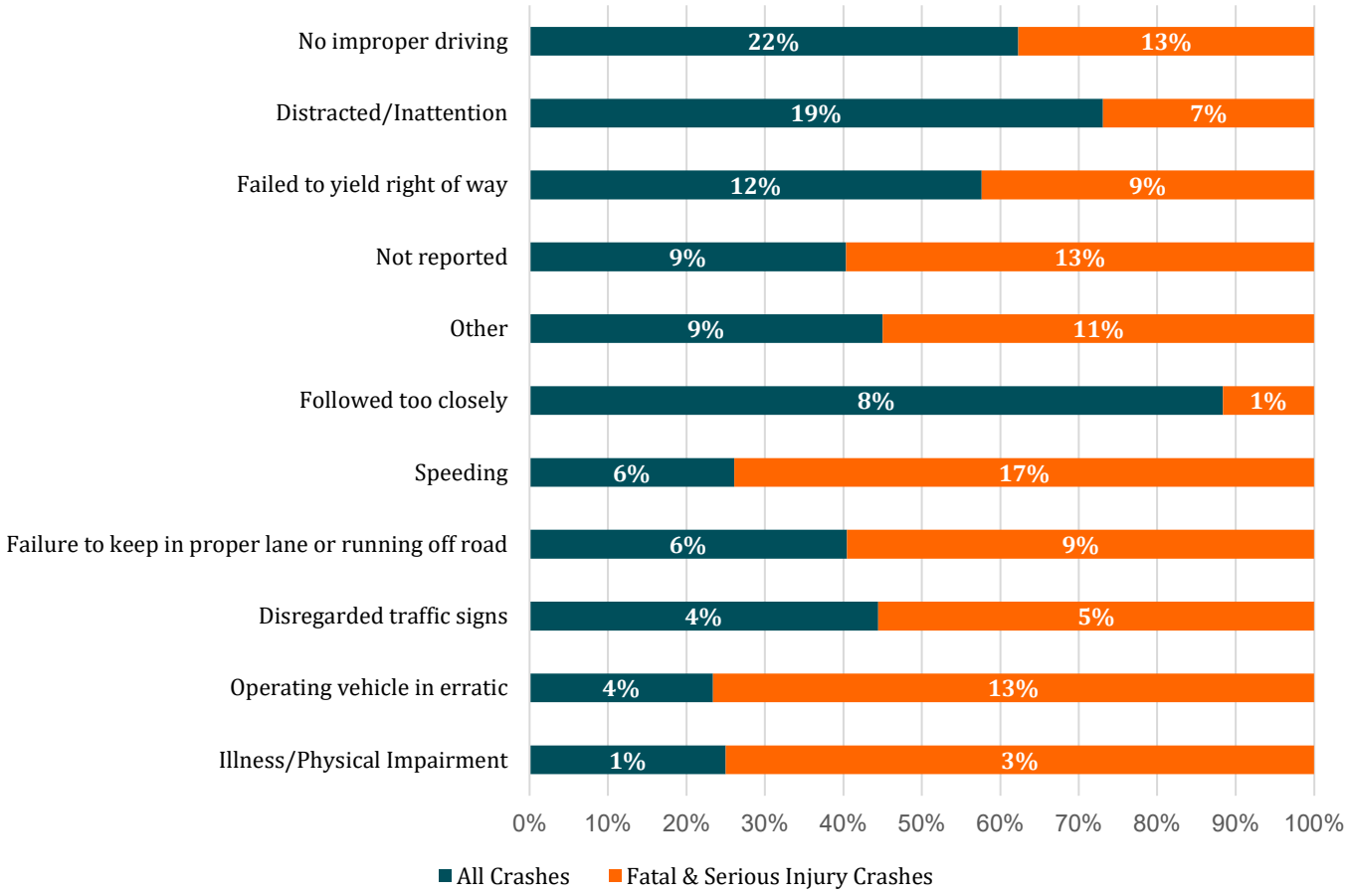


Figure 14 shows all fatal crashes within the region and Figure 15 shows the locations of VRU crashes.

Figure 14. Fatal Crashes within PVPC Region

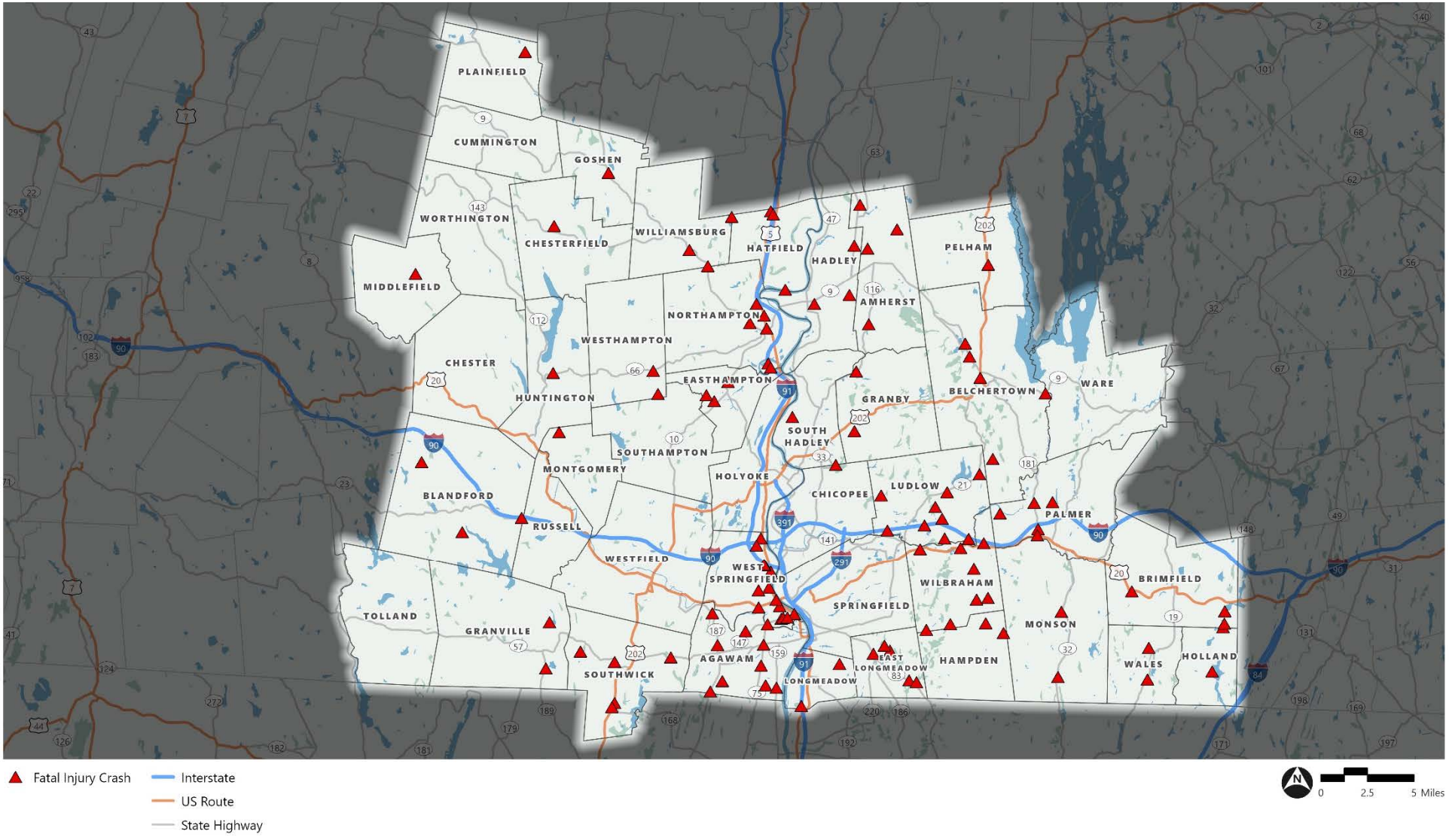
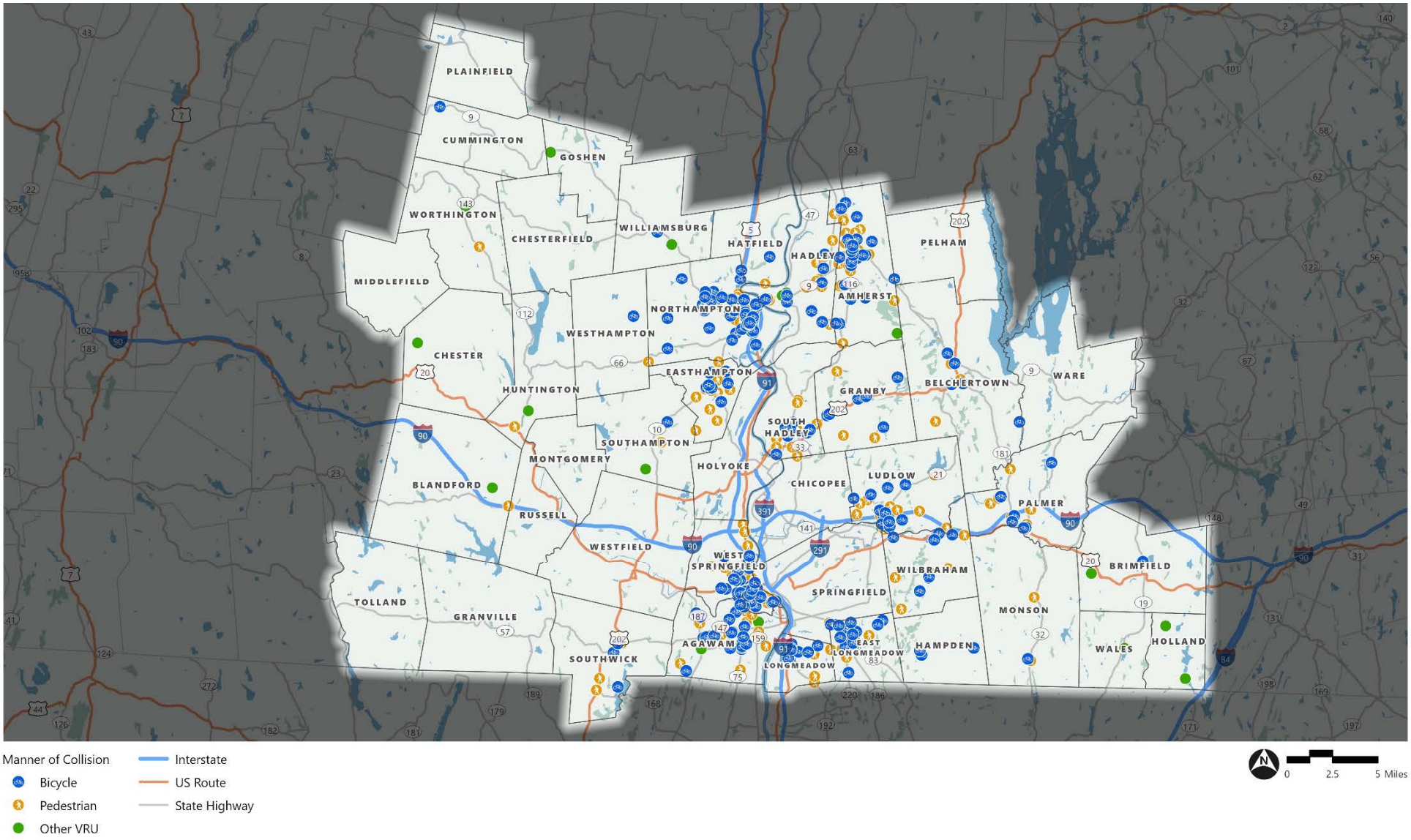


Figure 15. VRU Crashes within PVPC Region



Emphasis Areas

To further determine the major crash types this Action Plan should focus on, Pioneer Valley examined emphasis areas identified by the Massachusetts Highway Safety Improvement Program (HSIP)[2], which offers a helpful framework for identifying common crash issues, analyzing contributing factors, and linking them with a set of targeted countermeasures and strategies. In Table 9, emphasis areas that are more prevalent in the region compared to the Commonwealth are highlighted in bold.

Table 9. Emphasis Area Summary

Emphasis Area	Pioneer Valley Region		Massachusetts	
	Number of Fatal and Serious Injury Crashes	Percent of Total Fatal and Serious Injury Crashes	Number of Fatal and Serious Injury Crashes	Percent of Total Fatal and Serious Injury Crashes
Lane Departure	194	**32%**	2855	28%
Impaired Driving	41	7%	675	7%
Occupant Protection	161	**27%**	2129	21%
Speeding	90	**15%**	1097	11%
Intersections	182	**30%**	3043	29%
Pedestrians	62	10%	1644	16%
Older Drivers	75	12%	1370	13%
Motorcycle	113	**19%**	1650	16%
Younger Drivers	63	10%	1009	10%
Large Vehicles	4	1%	150	1%
Distracted Driving	33	5%	590	6%
Bicyclists	22	4%	601	6%

Note: Red text denotes Pioneer Valley Region higher than Massachusetts Statewide.

The Lane Departure, Speeding, Intersections, Occupant Protection and Motorcycle emphasis areas were overrepresented when compared to the rest of the Commonwealth. These areas are also consistently highlighted by regional stakeholders as key areas of concern. Even though the pedestrian and bicyclist emphasis areas did not show higher percentage of fatal and serious injury crashes compared to the state, VRU safety is a major focus area for the region. Given their importance, pedestrian and bicyclist emphasis areas were also considered as key areas for further analysis.

[2] MassDOT Highway Safety Improvement Program

Appendix A further describes the emphasis areas along with more detailed crash analysis.

Key Takeaways

- West Springfield experienced highest number of fatalities (10), closely followed by Agawam (9).
- Fatal and serious injury crashes cost the Pioneer Valley region approximately $0.86 billion each year.
- Weekday afternoons and weekend late night periods experience highest number of fatal and serious injury crashes.
- In urban communities, principal arterials and minor arterials together account for about three-quarters of all KA crashes. In rural parts of the region, Major collectors alone represent d nearly 40 percent of rural KA crashes.
- Motorcycles accounted for only 11% of total crashes but 19% of fatal and serious injury crashes.
- Speeding accounts for 17% of KA crashes.
- single-vehicle crashes had the highest share of fatal and serious injury crashes (39 percent).
- VRU crashes comprise only 2% of total crashes but 17% of KA crashes.
- Erratic driving accounts for 13% of KA crashes.
- Most crashes take place in daylight conditions and when the road is dry.
- A higher proportion of VRU KA crashes take place in dark conditions with or without street lighting.

High-Injury and High-Risk Networks

PVPC carried out a network screening to identify and classify sites with road safety risks using a two-part approach. By addressing both specific and systemic safety needs, we build a Safe System through identification of a High Injury Network (HIN) and High-Risk Network (HRN).

High-Injury Network (HIN)

A crash data-based approach that identifies locations with the highest concentrations of past fatal and serious injury crashes based on historical crash data. This method targets locations with the greatest potential for safety improvement and supports site-specific safety issue diagnosis and countermeasure development.

High-Risk Network (HRN)

A proactive approach that focuses on sites with the highest risk of future fatal and serious injury crashes based on the presence of contributing risk factors from a systemwide perspective. This method enables the implementation of low-cost proven countermeasures across the network to prevent future severe crashes

High-Injury Network

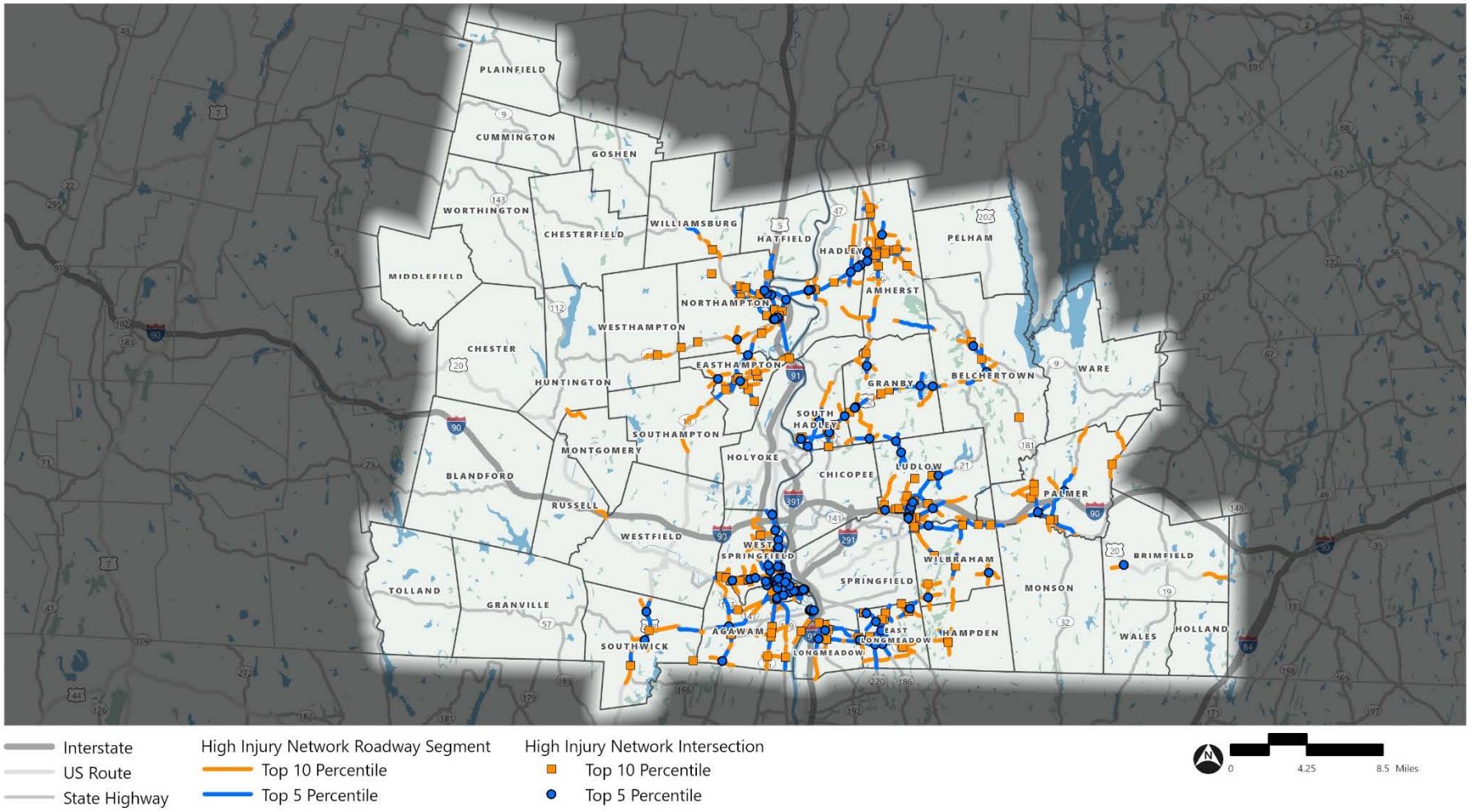
A central component of a safety action plan is the development of a High-Injury Network (HIN), a relatively small share of roadways and intersections in the region where a disproportionately high number of fatal and injury crashes occur. PVPC developed HIN for both roadway segments and intersections. This HIN uses data for 2020-2024 from the MassDOT IMPACT Crash Data Portal.

The high injury networks provide a powerful visual tool for highlighting segments and intersections which can be considered as crash hotspots. This can help guide and prioritize safety investments from a crash history perspective. **Figure16** shows the HIN within Pioneer Valley. For this action plan, PVPC decided to set the threshold at the top ten percent of the roads to constitute the HIN. The top 10% HIN segments constitute the top 10.7% of the length of the roadways in the region and cover a total of 64.3% of the KAB Crashes. Similarly, the top 10% of intersections include 249 sites throughout the region which account for 53.7 % of all KAB Crashes in the region.

From the map, it is evident that the HIN is more concentrated in and around the region's largest population and employment centers, where local streets intersect with high-speed regional corridors, reflecting the combined effects of heavy traffic volumes, frequent intersections, and multimodal activity. Together, these clusters reveal not just isolated problem spots but continuous corridors of elevated risk, underscoring the need for corridor-wide safety strategies, context-sensitive speed management, and coordinated investments across municipal boundaries.

Appendix B provides detailed methodology for the HIN.

Figure 16. PVPC High Injury Network (HIN)



High-Risk Network

While the HIN identifies locations with a high concentration of crashes, the high-risk network (HRN) focuses on locations with a high risk of severe crashes, regardless of crash history. The HRN uses roadway features tied to the region's most severe crash types to identify corridors and intersections that share these features. Corridors and intersections that have many features in common with areas where severe crashes have already occurred are deemed to have the highest risk for future severe crashes. This proactive approach enables road owners to prioritize higher-risk locations for preventative safety improvements before a significant number of severe crashes take place.

The process to develop a HRN follows the process recommended by the Federal Highway Administration (FHWA) in its Systemic Safety User Guide. The process identifies facility types where the crashes are most likely to occur, then calculates a risk score where locations with higher risk scores are more likely to have crashes of a specific type. The risk score is then used to categorize either intersections, segments, or municipalities into the following types:

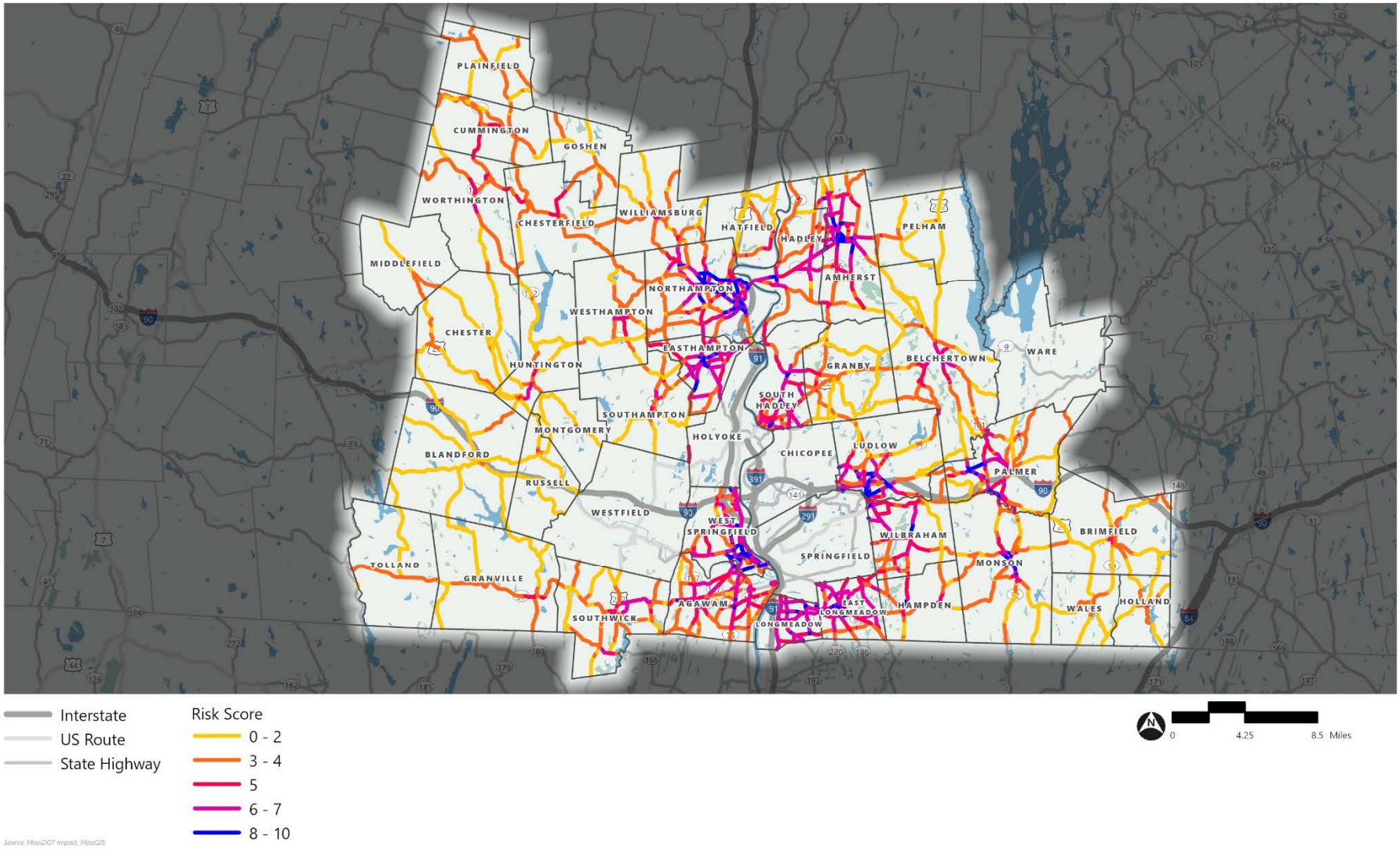
PVPC analyzed crash statistics for several crash types using IMPACT dashboard[3]. Based on that, following crash types were selected to identify their HRNs:

- Lane departure crashes.
- Intersection crashes.
- Motorcycle crashes.
- Speeding and aggressive driving crashes.
- Pedestrian crashes.
- Bicycle crashes.

Figure17 shows an example of the HRN for speeding crashes. The full list of focus facility types and risk factors identified for each emphasis area is provided in **Appendix B**, along with a summary of risk category, a detailed methodology, and all underlying data. The focus crash types considered in the HRN are consistent with the Massachusetts SHSP Emphasis Areas and the supporting countermeasures are in alignment with MassDOT and FHWA guidance.

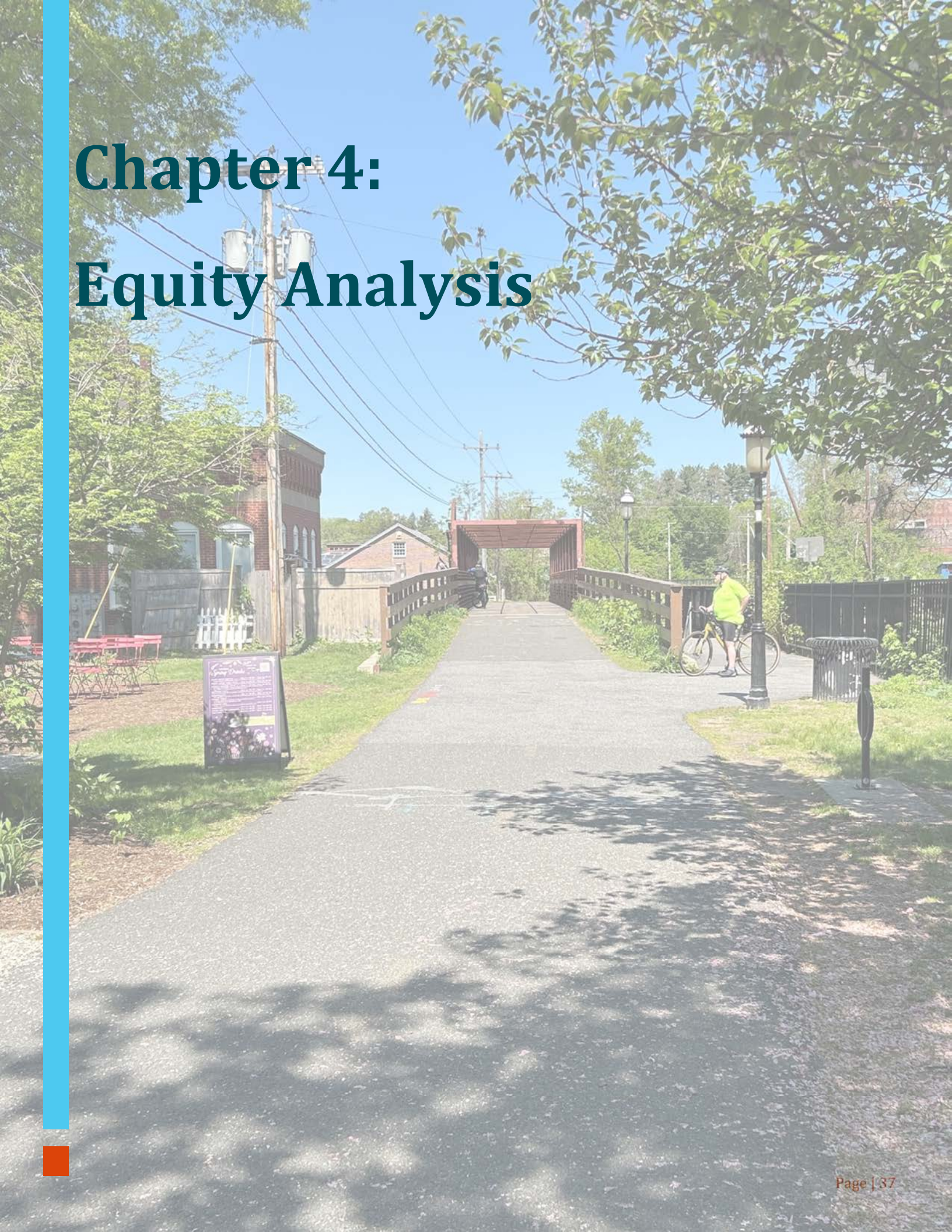
[3] IMPACT Operations Dashboard-SHSP Emphasis Areas

Figure 17. HRN for Speeding Related Crashes within PVPC



Chapter 4:

Equity Analysis



Overview

The Pioneer Valley region is diverse in its communities, transportation networks, and population characteristics. The Pioneer Valley Safe Streets Plan recognizes that underserved and environmental justice communities may experience unique transportation challenges and safety needs. As a result, the planning process considered the needs of these communities to help ensure that the benefits of safety improvements are broadly shared across the region.

This chapter presents the federal and state methodologies used to identify underserved and environmental justice communities within the project study area. Specifically, the U.S. Department of Transportation's (USDOT) Underserved Communities and the Massachusetts Department of Transportation (MassDOT) Regional Environmental Justice Plus (REJ+) tools were used to identify populations that may be disproportionately affected by transportation system changes.

Within the study area, underserved and environmental justice communities are concentrated in central and eastern portions of the Pioneer Valley region. Both federal and state screening tools identified underserved and environmental justice communities in Amherst, Hadley, Northampton, South Hadley, West Springfield, Agawam, Palmer, and Monson. Underserved and environmental justice communities were identified in Springfield, Holyoke, Chicopee, Westfield, and Ware using either tool were excluded from the analysis. These towns are conducting separate studies and are part of the Pioneer Valley region, but do not contribute any data to this analysis.

This chapter summarizes the distribution of underserved and environmental justice communities across the Pioneer Valley region and examines how transportation safety conditions and analysis results compare within these communities relative to the broader study area. **Appendix C** further elaborates the process of identifying areas with the highest relative transportation need.

USDOT Underserved Communities

USDOT identifies underserved communities using the Infrastructure Investment and Jobs Act (IIJA) Areas of Persistent Poverty (APP) criteria. Under this methodology, an area is considered underserved if it meets one of two criteria:

- It is located within a county (or equivalent jurisdiction) in which 20 percent or more of the population has continually lived in poverty, as measured by the 1990 Decennial Census, 2000 Decennial Census, and the most recent annual small area income and poverty estimate of the Census Bureau.
- It is located within a census tract with a poverty rate of 20 percent or greater, based on the U.S. Census Bureau's American Community Survey (ACS) 2014-2018 five-year estimates.

Within the study area, a total of 20 census tracts were identified as USDOT Underserved Communities. These tracts are located in Amherst, Hadley, southern Northampton, southwestern South Hadley, southeastern West Springfield, northern Agawam, western Monson, and southern and eastern Palmer. Because the USDOT Underserved Communities designation is based on persistent poverty criteria, poverty is the primary factor driving designation within the study area. Collectively, these tracts contain approximately 102,234 residents, representing 30.6% of the study area population.

REJ+

As part of the Massachusetts long-range transportation plan, *Beyond Mobility*, the MassDOT Office of Transportation Planning (OTP) developed the Regional Environmental Justice Plus (REJ+) metric to identify environmental and other equity priority populations at the regional level. REJ+ builds upon traditional environmental justice indicators by incorporating additional socioeconomic characteristics, including race, income, limited English proficiency, zero-vehicle households, disability status, and age. The dataset is based on the U.S. Census Bureau's American Community Survey (ACS) 5-Year Estimates (2023) and 2022 Census tract boundaries.

REJ+ communities are identified based on one or more demographic and socioeconomic indicators. Within the study area (excluding Chicopee, Holyoke, Springfield, Ware, and Westfield), 34 census tracts of the 69 census tracts qualify as REJ+ communities. Of the 34 REJ+ census tracts identified in the study area, 33 meet one or two REJ+ indicators and one meets three or four indicators. These communities are located in Plainfield, Cummington, Goshen, Worthington, Chesterfield, Williamsburg, Middlefield, Westhampton, Northampton, Hadley, northern Amherst, western Easthampton, northern South Hadley, southeastern Belchertown, eastern West Springfield, southern Ludlow, northern Wilbraham, southern and eastern Palmer, western Monson, Hampden, southern East Longmeadow, eastern Longmeadow, and southern Agawam. Collectively, these Census Tracts contain approximately 161,400 residents, representing 49.5% of the study area population.

Federal and State Equity Screening Results

To better understand the distribution of transportation needs and access challenges within the study area, federal and state equity screening datasets were reviewed. Figure 18 illustrates the geographic distribution of USDOT Underserved Communities and Massachusetts Roadway Environmental Justice Plus (REJ+) communities, while Table 10 summarizes the number of census tracts and residents meeting federal and state screening criteria. Table 11 provides a breakdown of the individual REJ+ indicators present within the study area.

Figure 18. Federal and State Equity Screening Results for the Study Area (Excluding Chicopee, Holyoke, Springfield, Ware, and Westfield)

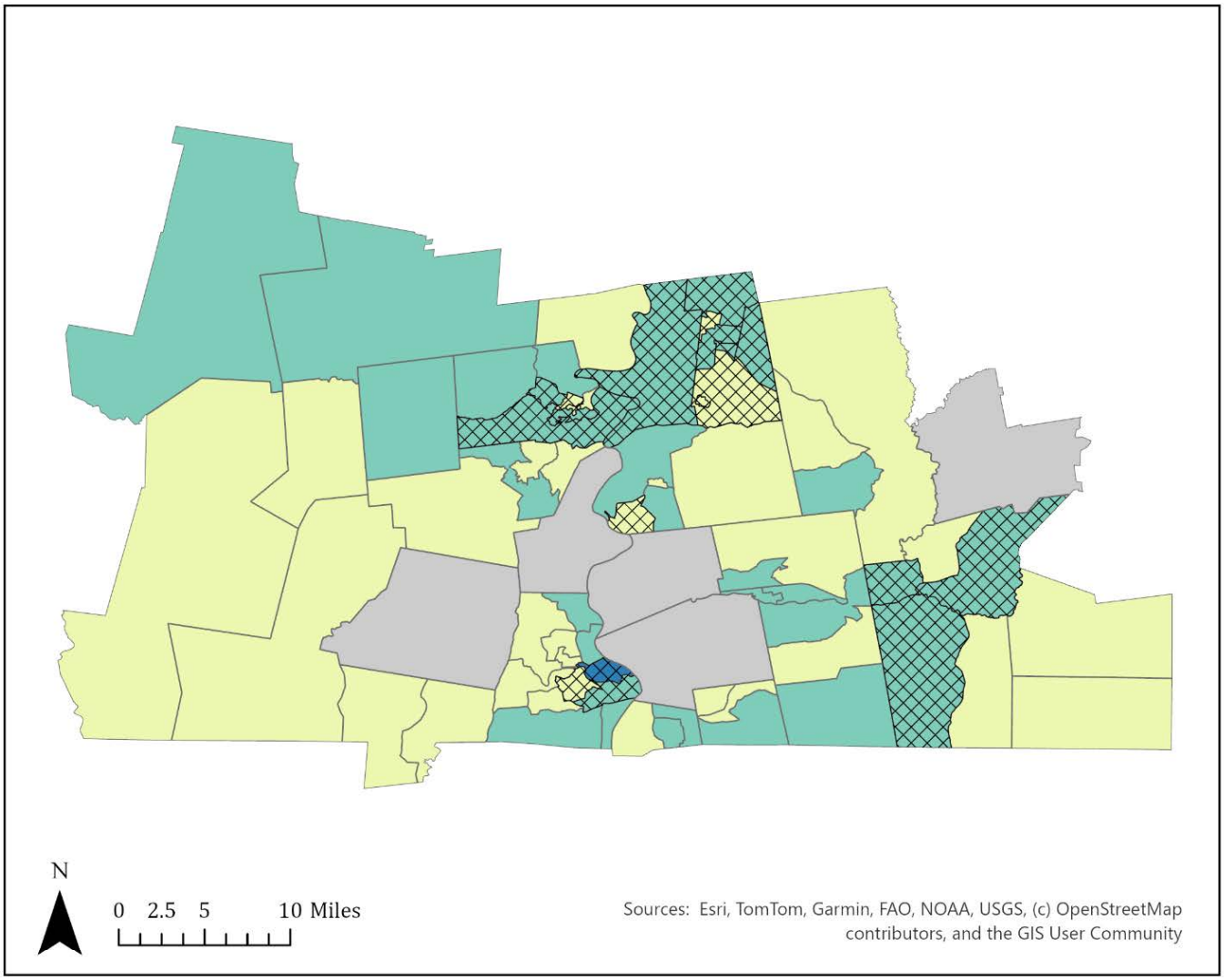


Table 10. Summary of Federal and State Needs and Access Screening Results

Needs and Access Screening Category	Census Tracts Meeting Criterion	Population	Percent of Study Area Population
REJ+ (1-2 Indicators)	34	155,254	47.6%
REJ+ (3-4 Indicators)	1	6,146	1.9%
REJ+ (5-6 Indicators)	None	None	None
USDOT Underserved Communities	20	102,234	30.6%

Table 11. REJ+ Indicator Screening Results

REJ+ Indicator	Census Tracts Meeting Criterion	Population	Percent of Study Area Population
Zero Vehicle Households	5	20,835	6.4%
Limited English Proficiency (LEP)	5	26,876	8.2%
Non-White	2	12,002	3.7%
Income	3	16,591	5.1%
Senior	24	115,597	35.5%
Disability	4	19,414	6.0%

Disparities In Severe Crashes

Regardless of what criteria are used to designate communities of concern, serious and fatal crashes are disproportionately concentrated in disadvantaged census tracts, where people are more likely to walk, bike, or rely on transit and often have fewer safe infrastructure options. As a result, inequitable crash patterns not only undermine transportation safety, but also limit access and opportunity for communities that already experience structural disadvantages.

As observed in Figure 19, half of the region's fatal crashes and more than half of the non-fatal injury crashes happen within the underserved census tracts. The disparities are more acute for vulnerable road users as seen in Figure 20. 65% of all bicycle crashes, 73% of all pedestrian crashes and 85% of other VRU crashes happen within the underserved tracts. These areas represent 31% of the study area population based on USDOT Criteria or 49.5% of population based on MassREJ+ criteria. All of this highlights the regional disparity concentration of severe injury and crash risk in these communities. This also indicates the need to prioritize safety investments—such as sidewalks, crosswalks, traffic calming, and protected bike facilities—in places where people are most exposed and least protected. Figure 21 shows the fatal and injury crashes within these census tracts.

Figure 19. Injury Crashes within Underserved Communities

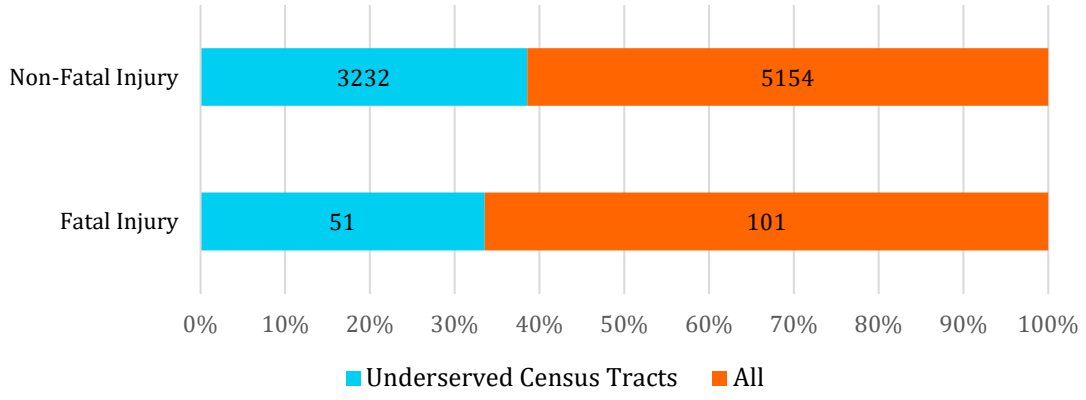


Figure 20. Vulnerable Road User Crashes within Underserved Communities

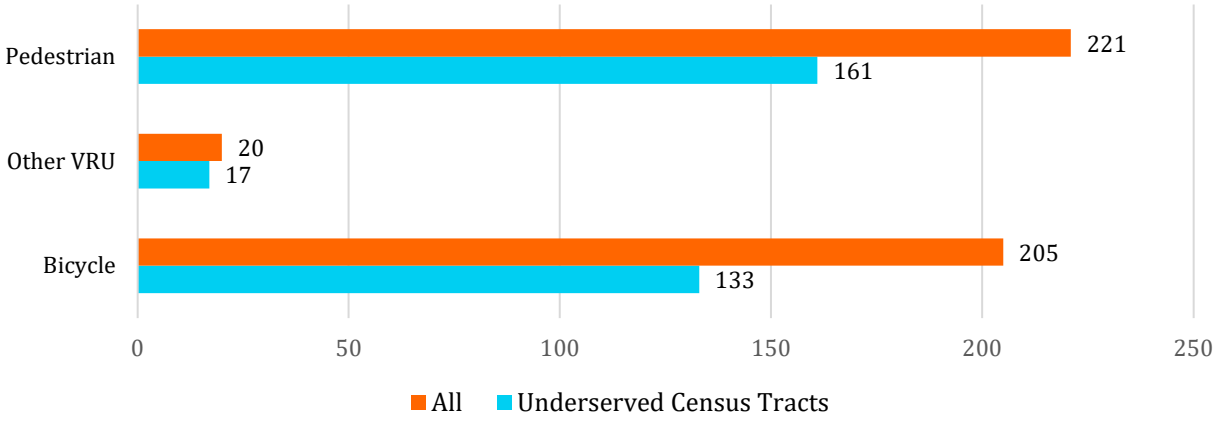
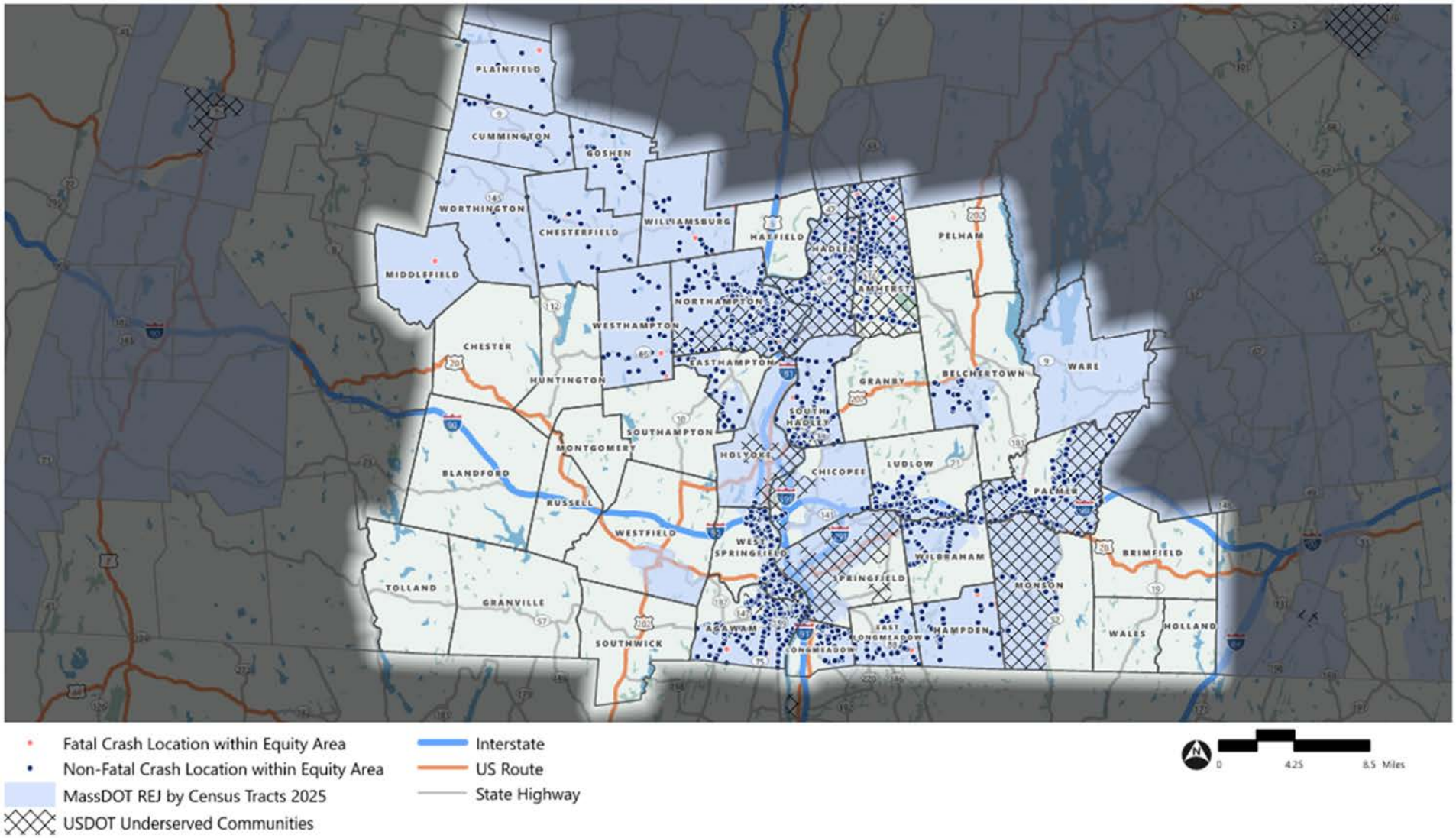
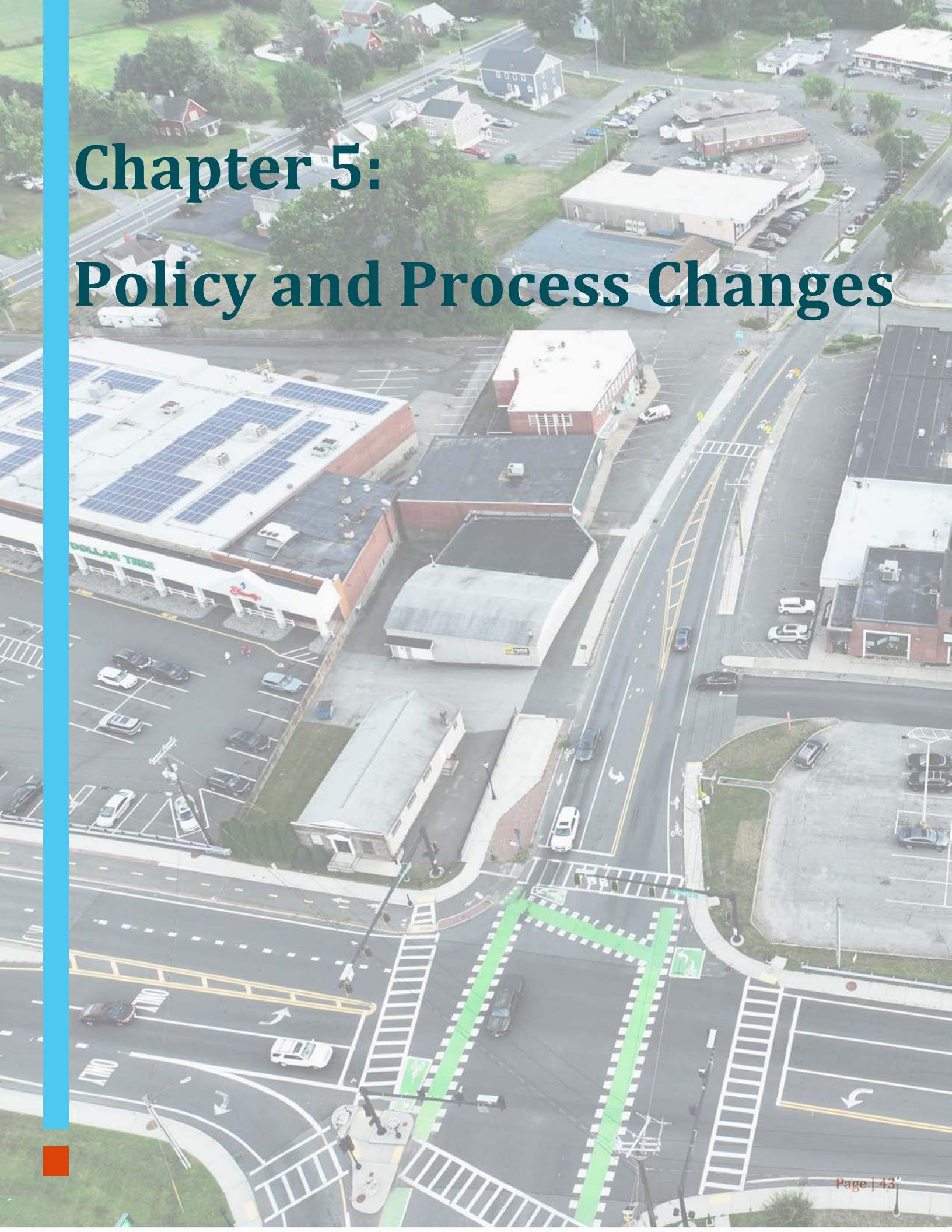


Figure 21. Fatal and Serious Injury Crashes in Census Tract



Chapter 5:

Policy and Process Changes



Overview

This chapter situates the Regional Safety Action Plan for the Pioneer Valley within the context of other plans, policies, and studies completed or ongoing at the state, regional, and local levels. The review focuses on transportation studies, comprehensive and master plans, and other plans to identify opportunities where a Regional Safety Action Plan can complement, support, or advance, or should incorporate, goals and initiatives identified in these plans.

Consistent with other parts of this report, this chapter also excludes local plans and policies for Chicopee, Holyoke, Springfield, Ware and Westfield as these towns are developing or have already developed their own safety action plan.

Key Themes

PVPC's transportation policies consistently emphasize safety, efficiency, and multimodal access. Regional priorities include reducing crashes and serious injuries for all users, promoting walking, biking, and transit by filling network gaps, improving ADA accessibility, and coordinating closely with PVTA. Climate resilience, system preservation, and data-driven, performance-based project selection further guide investments, ensuring limited resources are directed toward strategies that improve safety, support vulnerable road users, and maintain critical infrastructure in a state of good repair. This review of state, regional, and local plans revealed several common themes for safety improvements in the Pioneer Valley such as:

- Safety as a Core Priority
- Complete Streets & Multimodal Transportation
- System Preservation & State of Good Repair
- Accessibility and ADA Compliance
- Data-Driven, Performance-Based Planning
- Regional Collaboration & Local Capacity-Building

Existing Programs

Vision Zero

MassDOT, PVPC, and local communities share a Vision Zero–aligned commitment to eliminating fatal and serious injury crashes. Regionally, PVPC supports "Vision Zero" and related "Toward Zero Deaths" efforts by helping communities systematically work toward eliminating traffic fatalities and serious injuries on the region's roadways. PVPC also integrates Vision Zero principles into initiatives like Safe Routes to School, Complete Streets planning, and regional transportation safety plans, aligning local projects with state and federal safety goals. Building on this foundation, municipalities within the PVPC region can adopt local Vision Zero policies and Safety Action Plans that identify their own high-injury networks and implement design-focused, data-driven strategies to achieve zero deaths and serious injuries on their streets.

The Pioneer Valley MPO formally adopted a Vision Zero policy in 2023. **In 2026, PVPC updated their vision zero goal to achieve zero roadway fatalities and serious injuries by 2050.** Pioneer Valley's MPO will work towards this goal by applying the Safe System Approach into daily practice.

Complete Streets

MassDOT Complete Streets Policy provides a statewide framework to ensure transportation facilities are planned, designed, and operated to safely accommodate all users. PVPC assists communities in developing and adopting MassDOT-compliant local Complete Streets policies, preparing project-based Complete Streets Prioritization Plans grounded in safety, equity, and connectivity data, and applying for state construction funds under the Complete Streets Funding Program. For PVPC's member municipalities, this coordinated approach not only improves roadway safety conditions and supports implementation of small- and medium-scale safety projects but also ensures consistency with state design standards and maximizes opportunities to bundle safety projects with other federal and state funding sources.

PVPC Communities with Adopted Complete Streets Policies

Agawam	Northampton
Amherst	Palmer
Chester	South Hadley
Easthampton	Springfield
East Longmeadow	Wales
Goshen	Ware
Granville	Westfield
Holyoke	West Springfield
Longmeadow	Williamsburg

Safe Routes to School (SRTS)

The SRTS Program is a statewide initiative that promotes safe, convenient, and equitable walking and bicycling to and from schools for students of all ages and abilities through a combination of education, encouragement, engineering, and enforcement strategies. PVPC works with communities and schools to identify high-priority school zones and corridors with documented safety concerns or gaps in pedestrian and bicycle infrastructure; assists in developing school travel plans and coordinates with MassDOT and municipal staff on planning and design of SRTS-eligible projects.

A total of 152 schools in the Pioneer Valley region actively participate in the program. Local examples include infrastructure improvements at Roberta G. Doering Middle School and Robinson Park Elementary School in Agawam, participation by Rebecca M. Johnson Visual and Performing Arts Elementary School in Springfield, and the installation of bike racks in Springfield funded by a Live Well Springfield Community Transformation Grant.

Existing Planning Efforts

This Plan builds on prior planning and policy development efforts in the Pioneer Valley region focused on improving roadway safety. To identify recommendations for strengthening regional policies and processes, several relevant statewide, regional, and local planning initiatives were reviewed. Tables 12-14 list the summarize the reviewed plans and relevance.

Table 12. Review of Existing Statewide Plans

Plan Name	Plan Description	Relevance to Pioneer Valley Safe Streets
Beyond Mobility: Massachusetts 2050 Transportation Plan	Beyond Mobility serves as a long-range transportation plan for the state of Massachusetts, assessing the state's needs through the next few years. The plan focuses on how to best accommodate mobility needs as climate change develops, population density changes, and commuting habits adjust. The plan specifically focuses on developing a safe, cohesive, reliable transportation system statewide.	This plan focuses on using crash data to find where safety problems and inequities are greatest; identifying practical, systemic safety improvements; and coordinating with municipalities to build and advance a strong pipeline of projects that protect vulnerable road users. The PVPC Safety Action Plan applies these same ideas at the regional level by using data to identify high-injury locations, helping communities prioritize and program safety projects in local and regional plans, and providing technical assistance to speed up local safety planning and project implementation in line with MassDOT's statewide goals.
Massachusetts Freight Plan (2023)	The Freight Plan is a planning document that defines short and long-term vision for the freight system in the Commonwealth. The Plan includes multimodal elements such as air, rail, truck and maritime transport.	The freight plan identifies several education and policy changes such as education to raise awareness about safety for truck drivers and other drivers as well as strategies to harmonize oversize/overweight movements, permitting, and large truck restrictions across New England. The Plan also highlights the need to collaborate with MPOs and local governments to integrate freight planning into larger land-use planning decision-making to adequately address truck safety, particularly at grade crossings and along rail and highway corridors.
Massachusetts Strategic Highway Safety Plan (2023)	The SHSP emphasizes the state's priority for safer streets and provides a framework for achieving Vision Zero by adopting a Safe System Approach. Key policy and process recommendations in this plan focus on improving driver education, increasing enforcement to mitigate dangerous driver behaviors, implementing speed management strategies, and raising public awareness about roadway safety.	The SHSP establishes the overarching safety vision, emphasis areas, and performance targets that PVPC's regional work is expected to support. Aligning the PVPC Safety Action Plan with these priorities ensures consistency with statewide goals and helps the region to contribute measurably to reductions in serious crashes. The SHSP's detailed crash analysis, systemic risk factors, proven and promising countermeasures, multidisciplinary strategies, and emphasis-area action items can be a reference point for PVPC to adapt and implement at the regional and local level.
Massachusetts Vulnerable Road User Safety Assessment (2023)	The VRU Safety Assessment outlines a set of goals and strategies for reducing the risks posed to VRUs on the road and promotes walking and biking. This document serves to outline recent safety performance and provide recommendations to municipalities which can be implemented to improve safety.	This plan provides a statewide, data-driven picture of where people walking, biking, and using micromobility are at highest risk, and why. PVPC uses these statewide findings and methods to refine its own regional crash analysis, confirm and highlight high-injury corridors for vulnerable road users in the Pioneer Valley, and prioritize systemic safety countermeasures such as traffic calming, safer crossings, and low-stress bicycle facilities.

Plan Name	Plan Description	Relevance to Pioneer Valley Safe Streets
MassDOT 2026-2030 Capital Improvement Plan	This plan describes planned capital spending for Massachusetts' transportation network over a five-year horizon. The document outlines funding sources and strategies to improve safety and reduce roadway fatalities.	The CIP emphasizes programs and projects such as intersection upgrades, roadway reconstruction with Complete Streets elements, bridge and corridor projects that address high-crash locations, and targeted improvements for vulnerable road users in underserved communities. By aligning PVPC's Safety Action Plan recommendations and project lists with MassDOT's CIP investment categories and timelines, PVPC can help member municipalities position their priority safety projects for inclusion in the Transportation Improvement Program (TIP) and other CIP-funded programs.
Massachusetts Pedestrian Transportation Plan (2019) **and** Massachusetts Bicycle Transportation Plan (2019)	The Bicycle Transportation Plan and Pedestrian Transportation Plan explain how Massachusetts will work to increase the percentage of everyday trips made by biking and walking, while working to eliminate fatalities and serious injuries at the same time.	Both plans include initiatives that focus on providing local, regional, and state partners with tools necessary to integrate safety, comfort, and convenience of people biking and walking into transportation and development projects. The Plan identifies providing technical assistance and funding to local, regional, and state partners to implement high-comfort bikeway and pedestrian projects as a critical action. The plans also identify policy changes such as speed enforcement, design guidance and standards, and education as strategies to improve bicycle and pedestrian safety.
MassDOT Transition Plan for the Public Rights of Way (2017)	The Transition Plan for the Public Rights of Way serves as MassDOT's re-evaluation of all policies, programs, services, and facilities to determine their respective accessibility to those with disabilities. A focus of this plan is ensuring mobility for those with disabilities through curb ramps and accessible crossings	The Transition Plan identifies common accessibility barriers, sets design and maintenance expectations for accessible routes along state and local roadways, and emphasizes systematic inventory, prioritization, and programming of ADA improvements. PVPC's Safety Action Plan builds on this framework by using crash data, equity indicators, and local knowledge to highlight where ADA and accessibility gaps overlap with high-injury locations and vulnerable road user needs, and by recommending projects such as compliant curb ramps, accessible pedestrian signals, continuous sidewalks, and safer, shorter crossings.

Table 13. Review of Existing Regional Plans

Plan Name	Plan Description	Relevance to Pioneer Valley Safe Streets
Pioneer Valley Regional Bicycle and Pedestrian Plan (2025)	This plan establishes a collaborative framework through which government officials and community members can improve conditions for pedestrians, bicyclists, and other micromobility users. It serves as a practical resource for local staff and elected officials, and informs decisions related to walking and bicycling, supports the advancement of local projects toward implementation, and helps prioritize regional needs.	The PVPC Bicycle & Pedestrian Plan identifies where people walking and bicycling are most at risk through crash analysis, network gaps, and public input on unsafe locations, and it establishes regional goals, design guidance, and Complete Streets principles focused on protecting vulnerable road users. Aligning the safety action plan with these goals and principles will ensure that this action plan reflects a Safe System approach that systematically improves safety and comfort for all users of the transportation network.
PVPC Regional Transportation Plan (2024)	The RTP updates the region's vision, goals, and performance measures; inventories existing conditions across all modes, and identifies key issues such as safety, system preservation, congestion, transit access, and gaps in active transportation networks. It presents a fiscally constrained list of priority projects and strategies, coordinated with local and regional plans, which will guide Transportation Improvement Program (TIP) programming and other funding decisions over the next two decades.	The RTP sets the long-range, multimodal vision and goals for the transportation system, with safety as a key priority alongside mobility, equity, climate, and economic development. The Safety Action Plan works within this framework to focus specifically on reducing fatal and serious injury crashes in the near- to mid-term. It takes the RTP's broad safety goals and turns them into targeted strategies, priority locations, and fundable projects that can be advanced through the TIP and other programs.
Pioneer Valley Safety Compass (2021)	The Pioneer Valley Safety Compass overviews crash data trends to find top crash locations in the Pioneer Valley. The document focuses on reducing fatalities and serious injuries through identifying locations for each community which have high crash rates.	The PVPC Safety Compass sets the region's safety vision, identifies high crash locations, and sets performance measures for the region. The Safety Action Plan can function as a tool to achieve those safety performance measures and regional goals. The high-crash intersections identified in the safety compass also help in identifying priority locations for the safety action plan.

Plan Name	Plan Description	Relevance to Pioneer Valley Safe Streets
PVTA Comprehensive Regional Transit Plan Update 2020	This plan serves to outline PVTA's role in the region and highlight the needs and goals for the future. It assesses current ridership and service performance, identifies gaps in access to jobs, schools, healthcare, and key destinations, and recommends improvements such as more frequent service on key corridors, better evening, and weekend coverage, stronger first/last-mile connections, and enhanced amenities at stops and hubs.	The Regional Transit Plan is a key supporting document for this Safety Action Plan. Coordinated implementation of transit and safety projects will improve safe access to transit stops and stations, support mode shift away from single-occupancy vehicle travel, and advance regional goals for safety, equity, mobility, and sustainability.
Coordinated Public Transit-Human Services Transportation Plan 2025	This plan is designed to improve transportation services for people with disabilities, older adults, and people with low incomes in the Pioneer Valley Region by creating a more coordinated transportation system. It outlines a framework to help municipalities, towns, counties, tribal governments, regional transit authorities (RTAs), and private taxi operators develop projects that better meet the transportation needs of these groups. By encouraging public transportation providers and human service agencies to coordinate the transportation resources available through multiple FTA programs, the update aims to make services more effective and efficient.	A coordinated public transit–human services transportation plan identifies the mobility needs, travel patterns, and access barriers of older adults, people with disabilities, and individuals with low incomes—groups that often face higher risk of serious injury in traffic. By mapping key destinations, common routes to transit, and existing service gaps, the coordinated plan provides critical information for pinpointing high-risk locations and prioritizing safety improvements such as safer crossings, sidewalks, and accessible transit stops.

Table 14. Review of Existing Local Plans

Plan Type	Plan Description	Reviewed Plans	Relevance to Pioneer Valley Safe Streets
Community Master Plan	A community master plan is a long-range policy document, which sets a community's vision for land use, housing, economic development, transportation, and related topics, and guides major public and private investment decisions. The transportation or "circulation" element of the master plan typically describes existing mobility conditions and safety problems, identifies goals for safer, more accessible multimodal travel, and recommends policies and projects such as intersection upgrades, sidewalk and bikeway networks, traffic calming, and transit access improvements.	Community Development Plan (Agawam) Amherst Master Plan Belchertown Community Plan Blandford Resilient Master Plan East Longmeadow Resilient Master Plan City of Easthampton Master Plan Hadley Master Plan Hampden Master Plan Hatfield 2040 Action Plan Holland Community Development Plan Longmeadow Climate Resilient Long-Range Plan Monson Master Plan Palmer Master Plan Pelham Village Center Community Plan South Hadley Master Plan Southampton Master Plan Update Southwick 2040 Master Plan Wales Master Plan Resilient Westhampton Master Plan	The PVPC Safety Action Plan builds on and supports these locally defined priorities by providing a regional, data-driven safety analysis and project pipeline that communities can use to update their master plans, shape capital improvement programs, strengthen grant applications, and ensure that local transportation and land use decisions consistently advance long-term safety outcomes for all road users.
Complete Streets Plan	A Complete Streets Plan is a policy and design framework that guides the community in planning, designing, and operating streets to be safe, comfortable, and accessible for all users, including people walking, biking, using transit, driving, and with mobility limitations.	Complete Streets Prioritization Plan (Agawam) z Complete Streets Master Plan (Goshen)	The community's Complete Streets Plan directly supports this Safety Action Plan by providing the multimodal policy and design framework used to implement safety priorities. Together, they ensure that safety, accessibility, and equity are embedded in all transportation investments.
Pedestrian & Bicycle Plan	This plan defines recommended pedestrian and bicycle networks, outlines design guidance and support programs, and provides a prioritized project list and implementation approach, helping the town systematically invest in infrastructure and policies that improve safety, equity, and access for people walking and biking.	Northampton Comprehensive Pedestrian & Bicycle Plan	A community's pedestrian and bicycle plan is a core supporting document for the Safety Action Plan because it translates the community's safety vision for people walking and biking into specific networks, designs, and projects.

Recommended Policy and Process Changes

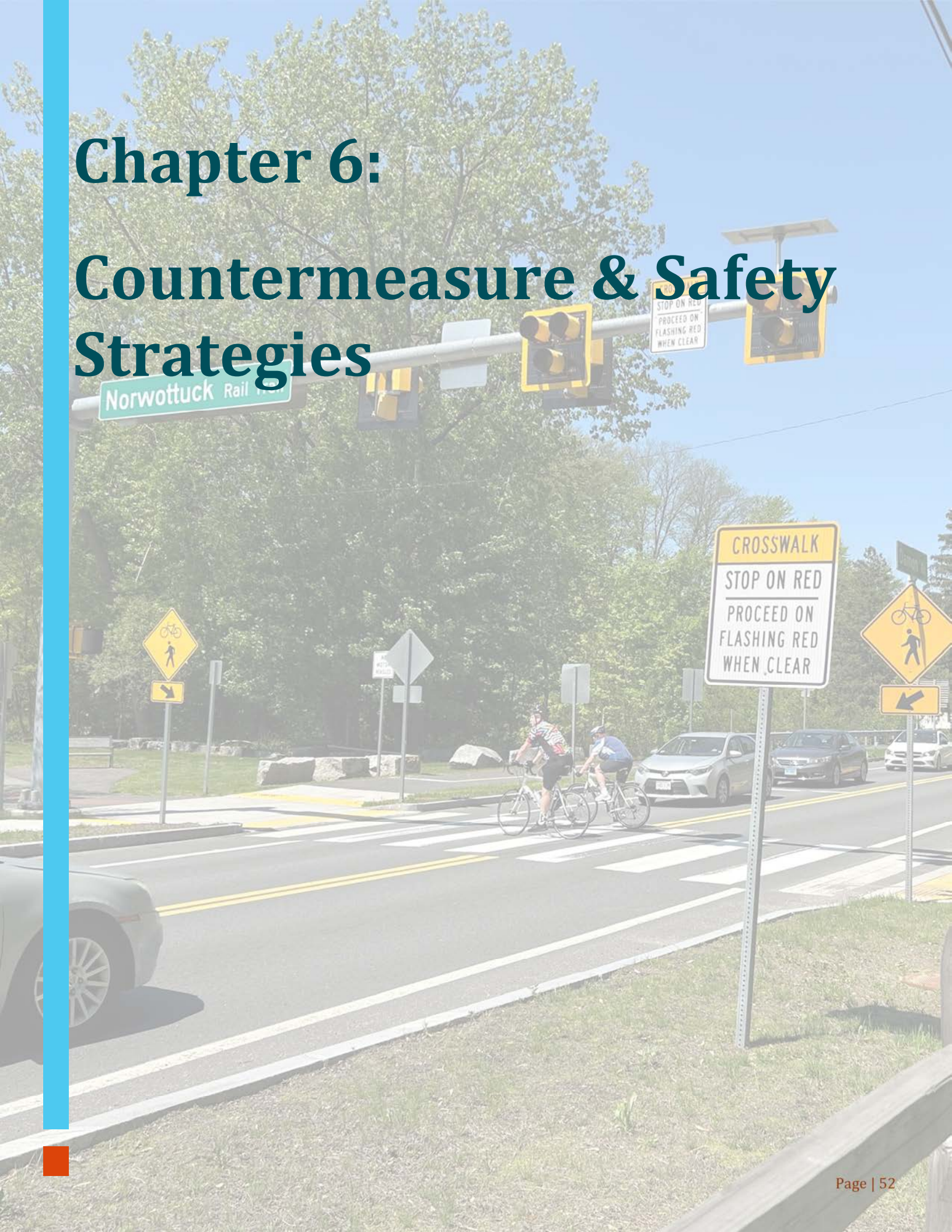
Pioneer Valley communities can consider revising existing plans, policies, and guidelines or adopt new policies in order to prioritize safety. The Table below identifies recommended plans, policies, and technical assistance that will advance the goals of this action plan.

Table 15. Policy Recommendations

Policy Recommendation	Lead Organization	Supporting Organizations	Timeline	Cost
Adopt or revise complete streets plans for all PVPC communities to align with action plan goals.	Municipal Planning Departments, Municipal Select Committees/City Councils	PVPC, MassDOT	Short	Low
Commit to adoption of local vision zero policies, establishing a clear goal to eliminate traffic fatalities and serious injuries in each community.	Municipal Planning Departments, Municipal Select Committees/City Councils	PVPC	Short	Low
Support municipalities in creating bicycle and pedestrian safety committees.	Municipal Planning Departments	PVPC	Short	Low
Support municipalities in participating in MassDOT's safe routes to school (SRTS) program.	Municipal Planning Departments, Municipal Departments of Public Works (DPW)	PVPC, MassDOT	Medium	Low
Support the pursuit of automated enforcement camera legislation in Massachusetts to capture and penalize drivers who run red lights and speed.	Massachusetts General Assembly	PVPC, MassDOT, Municipalities	Medium	Medium-High
Evaluate and update curb management policies and plans to reflect the needs and safety for all types of road users.	Municipal Zoning Departments	PVPC, MassDOT	Short	Medium
Implement the MassDOT guidance on speed management and speed limit setting.	Municipal Police Departments	PVPC, MassDOT	Medium	Low
Change seat belt usage enforcement to a primary offense for all front and rear passengers.	Massachusetts General Court	MassDOT	Medium	High
Adopt a municipal safe vehicle fleets policy.	Municipalities	PVPC, MassDOT	Short	Low

Chapter 6:

Countermeasure & Safety Strategies



Improving roadway safety in the Pioneer Valley region and its communities will require commitment and coordination from various partners. This section presents the Countermeasure Toolbox and Safety Strategies to make advancements in improving roadway safety across the region.

Countermeasure Toolbox

Improving roadway safety in the region and its communities will take a coordinated effort from various partners and viewpoints. This section presents the Engineering Countermeasure Toolbox to make advancements in improving roadway safety across the region. The recommendations are based on the crash and crash risk patterns and the following considerations discussed in previous sections. Each community may select countermeasures that meet their names or resonate with the communities' goals.

Countermeasure Selection

Crash Reduction Potential

Countermeasures that address the High Injury Network and the potential to reduce risk of fatal and serious injury crashes by removing severe conflicts, reducing vehicle speeds, managing conflicts in time, and increasing attentiveness and awareness.

Potential for systemic application

Countermeasures that can be applied systemically throughout the PVPC's Region and communities. The project team focused on systemic countermeasures that can address pedestrians, bicyclists, and speeding.

Community input

The countermeasures included in this chapter align with FHWA's Proven Safety Countermeasures or NHTSA's Countermeasures that Work. FHWA's Countermeasures are a collection of 28 countermeasures and strategies that have been proven effective in reducing roadway fatalities and serious injuries. NHTSA's Countermeasures the Work is a reference guide to help select effective, science-based traffic safety countermeasures. The countermeasures are organized by Safe System Approach Category:

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

Education and Enforcement based measures address more than one category and are therefore organized together for ease of reference.

Comprehensive information is provided for each countermeasure, including general advantages, common uses, and key design factors. It is advisable to implement multiple countermeasures where

appropriate, as this can result in greater overall safety benefits than applying individual solutions separately. All engineering-based countermeasures must comply with FHWA's Manual on Uniform Traffic Control Devices (MUTCD). Additionally, ongoing maintenance should be addressed during the selection process to ensure sustained effectiveness.

Crash Modification Factors (CMF)

In order to quantify the effectiveness and aid in the selection of a countermeasure, the Crash Modification Factor (CMF) can be reviewed.

Highway safety experts have studied how different improvements can reduce crashes. They compare crash data from before and after implementing a safety measure to create a "crash modification factor" (CMF). A CMF predicts the expected number of crashes or projected reduction in crashes after applying a specific countermeasure at a location.

The Highway Safety Manual documents several CMFs. In addition, the CMF Clearinghouse is the central repository for all countermeasure CMFs, with over 3000 currently included, and it is maintained and reviewed by AASHTO for quality assurance.

Engineering Countermeasures

Engineering Countermeasure Safer People	Timeline
Pedestrian Crosswalks	Short

All crosswalks should be highly visible for all roadway users and placed strategically in order to best service pedestrians. All crosswalks should be reviewed to ensure proper placement. Crosswalks should be relocated and installed to accommodate pedestrians and provide ample sight visibility to and from the crosswalk.



Source: FHWA

Benefits

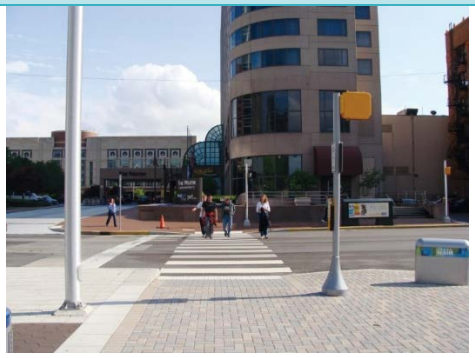
- Improves the visibility of people walking and biking in crosswalks
- Enhances drivers' sight distance
- Encourages foot traffic and can make local establishments inviting

Typical Applications

- Areas of high traffic for people biking and walking, such as bus stations, shopping centers, schools, and shared use paths
- Corridors with commercial activity

High Visibility Crosswalk Markings	Short

High visibility crosswalk markings indicate parts of the road for pedestrian or bicycle crossing. Continental crosswalk striping, used at intersections and midblock crossings, should be installed at all marked and future warranted crossings. It should replace stamped concrete, brick, diagonal, and transverse lines unless local ordinances require otherwise.



Source: NACTO

Benefits

- Provides awareness to drivers that people may be crossing
- Requires motorists to stop for people walking in crosswalk
- Relatively low cost

Typical Applications

- Intersections of vehicle facilities with moderate to high vehicle volumes and speeds
- Mid-block locations, particularly when implemented with other treatments

Design Considerations

- Minimum width is 6 feet, but wider crossings may be preferred in areas with a high number of people walking

Pedestrian Lighting — Medium

Lighting directed to illuminate the roadway, specifically in the vicinity of intersections and marked pedestrian crossings. Consider this countermeasure on sections of roadway with high volumes of nighttime non-motorized activity

Benefits

- Improves the visibility of people walking and biking in crosswalks
- Enhances drivers' sight distance
- Encourages foot traffic and can make local establishments inviting

Typical Applications

- Areas of high traffic for people biking and walking, such as bus stations, shopping centers, schools, and shared use paths
- Corridors with commercial activity

Design Considerations

- Lighting should not be placed to block entrances or inhibit pedestrian flow
- Size and type of light fixture may vary depending on the surrounding context and available space



Source: FHWA

Sidewalk & Wheelchair Ramp Repairs — Medium to Long

Sidewalks are usually paved and separated from the street by curbing and should be of appropriate width and slope for all vulnerable road users. Areas where there are tripping hazards, deteriorated conditions, or discontinuous sidewalks should be repaired or replaced. Sidewalks and Wheelchair Ramps should meet the latest ADA requirements.

Benefits

- Provides adequate space for pedestrians to walk
- Eliminates tripping hazards and discontinuous sidewalks

Typical Applications

- Areas with no existing sidewalk or gaps between sidewalks
- Ramps that do not meet current ADA requirements

Design Considerations

- Right-of-way
- Drainage



Source: ITE

Rectangular Rapid Flashing Beacon — Short

A flashing beacon provides a warning to motorists about the presence of a crosswalk. A Rapid Rectangular Flashing Beacon (RRFB) is yellow, rectangular, and has a rapid "wig-wag" flash similar to police lights. This countermeasure is for use at midblock crossings and intersections that do not warrant a signal.



Source: City of Boston

Benefits

- Provides a visible warning to drivers at eye level
- Increases driver yielding behavior at crossings
- Allows drivers to proceed after yielding

Typical Applications

- Mid-block crossings with high pedestrian or bicycle demand and high traffic volumes
- Crossing treatment for shared use paths

Design Considerations

- Push button placement should be easily accessible to people walking, in wheelchairs, and bicycling
- Can be added in median island for multi-lane crossings

Pedestrian Hybrid Beacon (PHB) — Long

The Pedestrian Hybrid Beacon (also known as a HAWK) is one of the FHWA Proven Safety Countermeasures and is used to warn and control traffic at an unsignalized location to assist pedestrians in crossing a street at a marked crosswalk; a warrant analysis and study must be performed prior installation (refer to MUTCD Chapter 4F). The device consists of three signal sections with a yellow signal head centered below two horizontally aligned red signal heads. This countermeasure is for use at midblock crossings and intersections that do not warrant a signal.



Source: FHWA

Benefits

- High rate of driver yielding behavior
- Improves safety for people walking and reduces pedestrian crashes

Typical Applications

- Mid-block crossings with high pedestrian or bicycle demand and high traffic volumes
- Crossing treatment for shared use paths

Design Considerations

- Push button placement should be easily accessible to people walking, in wheelchairs, and bicycling

Curb Extensions — Long

Curb extensions (also known as bulb-outs, neckdowns, and chokers) are portions of the roadway where the curb extends into the parking lane or shoulder. This both visually and physically narrows the roadway to reduce vehicle speeds, improves visibility between pedestrians and motorists, and provides a shorter distance for pedestrian crossings. This countermeasure should be considered on sections of roadway where on-street parking is provided, there are high vehicle speeds, and pedestrian crossings are common.



Source: City of Boston

Benefits

- Shortens crossing distances
- Reduces vehicular turning speeds
- Increases visibility between people driving and walking
- Physically restrict parking

Typical Applications

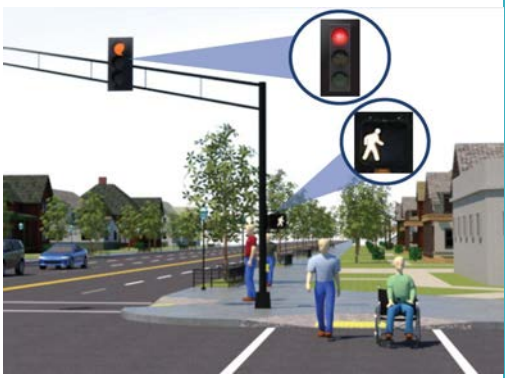
- Mid-block or intersection pedestrian crossings or transit stops
- Streets where on-street parking is provided

Design Considerations

- Design vehicle for determining radius
- Provide accessible curb ramps and detectable warnings

Leading Pedestrian Interval — Short

This signal phasing modification allows pedestrians a "head start" to begin crossing during concurrent green phases with same-direction vehicular traffic. It is intended to reduce potential conflicts between vehicles and pedestrians at the end of the signal cycle, in addition to increasing the visibility of pedestrians in the intersection.


Source: North Carolina DOT

Benefits

- Reduces pedestrian crossing time
- Increases pedestrian visibility
- Reduces pedestrian vehicle conflicts

Typical Applications

- Intersections where right-turning vehicles do not yield to pedestrians
- Intersections with a crash history of vehicle-pedestrian crashes

Design Considerations

- Pedestrian signal faces must be provided
- Interval should be 3-7 seconds

Pedestrian Signal Equipment	Medium

Upgrading pedestrian signal equipment ensures all equipment is functioning properly and meets the latest ADA standards. Pedestrian signal equipment upgrades include countdown timer signal heads and push buttons.

Benefits

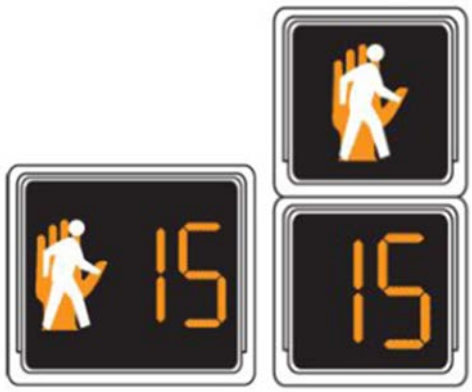
- Instructs pedestrians when to cross
- Encourages more pedestrians to use push buttons
- Improves functionality of an intersection for users

Typical Applications

- Intersections with pedestrian activity or adjacent land uses
- Intersections where no pedestrian facilities are provided

Design Considerations

- Calculations for walk and flash don't walk intervals will be displayed
- May require retiming if existing signal phasing does not provide adequate time for crossing



Source: MUTCD

Engineering Countermeasure Safer Roads – Intersection Focus	**Timeline**
Intersection Lighting	Medium

Lighting directed to illuminate the roadway, specifically in the vicinity of intersections and marked pedestrian crossings. Consider this countermeasure on sections of roadway with high volumes of nighttime non-motorized activity.

Benefits

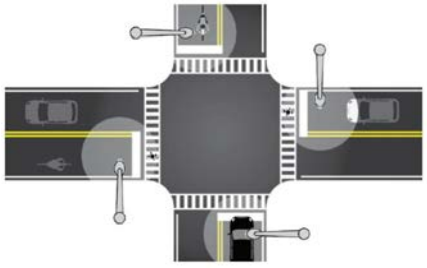
- Improves the visibility of vehicles at intersections
- Enhances drivers' sight distance

Typical Applications

- Rural areas with challenging geometry

Design Considerations

- Lighting should not be placed to block entrances or inhibit pedestrian flow
- Size and type of light fixture may vary depending on the surrounding context and available space


Source: FHWA

Signal Head Visibility — Short

The replacement of signal heads to increase lens size and/or installing new signal heads to increase signal visibility. With new signal heads, the installation of retro-reflective backplates provides added visibility for motorists when approaching a signalized intersection. The backplates encase the traffic signal head and have a retro-reflective border. The use of retro-reflective backplates should be considered at locations with a history of red light running, crashes related to red light running, or where there are unexpected, signalized intersections.

Benefits

- Increases signal visibility
- Reduces driver confusion or noncompliance

Typical Applications

- Intersections that have not been maintained or were not installed recently
- Intersections on corridors where there are high vehicular travel volumes

Design Considerations

- Consistency in types of improvement and look should be considered for long corridors
- Intersection skews may require additional improvements to ensure visibility for drivers



Signal backplate framed with a retroreflective border.

Source: FHWA

Signal Equipment and Timing Upgrades — Short

Upgrading signal equipment can improve intersection visibility by adding retroreflective backplates, larger signal lenses, new signal heads, or yellow retroreflective sheeting to backplates. Signal timing upgrades to meet current standards for vehicular clearance times. Upgrade left-turn signal phasing, consider flashing yellow arrow signal phasing and signal head indication.

Benefits

- Increases signal visibility
- Reduces driver confusion or noncompliance

Typical Applications

- Intersections that have not been maintained or were not installed recently
- Intersections on corridors where there are high vehicular travel volumes

Design Considerations

- Consistency in types of improvement and look should be considered for long corridors
- Intersection skews may require additional improvements to ensure visibility for drivers



Source: City of Boston

Curb Modifications — Long

At intersections, large curb radii typically result in high-speed turning movements by motorists. This countermeasure includes reducing curb radii or modifying channelized right turn lanes.

Benefits

- Shorter pedestrian crossings
- Reduced vehicle speeds
- Improves sight lines
- Improves wheelchair ramp positioning



Typical Applications

- Intersections with large curb radii
- Intersections with long pedestrian crossings
- Intersections with channelized right turn lanes

Design Considerations

- Truck turning envelopes
- Drainage
- Right-of-way

No Turn on Red Restriction — Short

Restricts motorists from turning right during the red light. Implementing RTOR restrictions reduces conflicts between motorists and pedestrians

Benefits

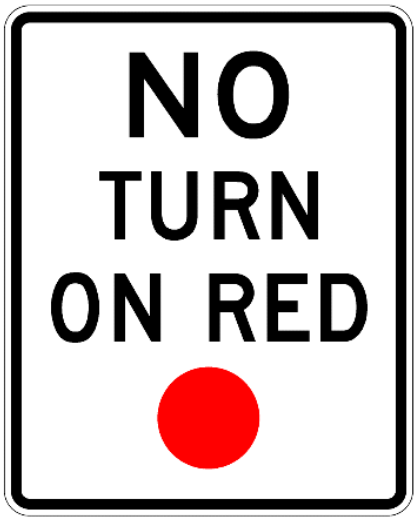
- Reduces conflicts between drivers and pedestrians

Typical Applications

- Signalized intersections with people walking
- Signalized intersections near pedestrian or bike-trip generating uses

Design Considerations

- Location of signage should be placed so it is easily visible to drivers



Source: MUTCD

All-way Stop Control — Short

All-way stop control can be implemented if warranted for intersections that are signalized or only have two-way stop control existing. This type of conversion can be effective for managing traffic.

Benefits

- Facilitates frequent pedestrian crossings

Typical Applications

- Signalized intersections where traffic volumes have decreased notably
- Unsignalized intersections where there is a demonstrated angle crash history that can be mitigated with an all-way stop

Design Considerations

- Pedestrian volumes should be evaluated with vehicular volumes to determine if all-way stop control is warranted



Source: VHB

Traffic Signal Control — Medium to Long

Evaluate conversion from stop control to signalized traffic control intersection to effectively managing traffic

Benefits

- Potential to correct intersection with angle crash history

Typical Applications

- Unsignalized intersections where there is a demonstrated angle crash history that can be mitigated
- Unsignalized intersection where there has been an increase in volume

Design Considerations

- Signal warrants per the MUTCD must be met


Source: NACTO

Convert Signal Equipment to Mast Arms — Medium to Long

When signals are mounted on pedestals or span wires, converting these intersections to mast arms can improve visibility and aid drivers' advance perception of the upcoming intersection.

Benefits

- Improve visibility of traffic signs and signals


Source: VHB

Typical Applications

- Signalized intersections in need of upgrades

Design Considerations

- New signals may also be required to place on the mast arms

Convert to Roundabout — Long

This treatment consists of installing a roundabout as intersection traffic control. A roundabout is a circular intersection without traffic signals or stop signs, where drivers travel counterclockwise around a center island. When entering the roundabout, drivers yield to existing traffic, then enter the circulatory roadway and exit in their desired direction. Roundabouts are designed to eliminate left turns conflicts by requiring traffic to traverse to the right around a central island.



Source: Mass.gov

Benefits

- Manages vehicular speeds, reduce turning conflicts, and help traffic flow efficiently
- Higher cost, long-term countermeasure

Typical Applications

- Signalized or unsignalized intersections that are operationally feasible based on traffic analysis

Design Considerations

- Right-of-way and utility impacts
- Traffic operations

General Intersection Maintenance Improvements — Short

A general intersection improvement includes a number of measures such as repaving, new pavement markings to clarify travel through the intersection, signal retiming, equipment, implementing automatic pedestrian recall, and enforce parking restrictions.

Benefits

- Clarify the preferred path of travel through the intersection to help avoid potential conflicts
- Provides appropriate pedestrian signal timing

Typical Applications

- Highway Safety Improvement Program (HSIP) cluster intersections
- Roadways with high traffic volumes and/or pedestrian activity

Design Considerations

- Signal retiming should account for appropriate pedestrian crossing times
- Thermoplastic pavement markings are more durable

Access Management — Medium to Long

Access management refers to the design, application, and control of entry and exit points along a roadway. This includes intersections with other roads and driveways that serve adjacent properties. Thoughtful access management along a corridor can simultaneously enhance safety for all modes, facilitate walking and biking, and reduce trip delay and congestion.

Benefits

- Enhance safety for all modes of travel
- Facilitate walking and biking with fewer driveway conflicts
- Reduce trip delay and congestion with fewer driveway turning movements

Typical Applications

- Corridors with a high density of driveways and uses
- Intersections with driveways located within close proximity

Design Considerations

- Internal site design providing connections via one access point should be considered
- Vehicle turn restrictions may be appropriate



Source: FHWA

Engineering Countermeasure Safer Speeds	Timeline
Speed Feedback Sign	Short

A speed feedback sign is changeable message sign that displays the speed of approaching vehicles. A radar speed display signal should be considered where motorized vehicle speed is a concern.

Benefits

- Makes drivers aware of their traveling speed versus the posted speed limit
- Permanent and temporary applications

Typical Applications

- High speed zones
- Areas with high pedestrian-related crash history

Design Considerations

- Generally considered when the 85th percentile speeds exceed the posted speed limit by 5 mph or more
- A speed study should first be conducted to determine if a change in speed limit is appropriate



Source: RoadSafe Traffic Systems

Set Appropriate Speed Limits	Short to Medium

Set speeds based on conflict density and activity level. Review and adopt MassDOT's setting target speed guidance.

Median Islands/Vertical Deflection	Short to Medium

Vertical deflection includes both speed bumps/humps, raised pedestrian crossings, bollards, and flexible delineators. By deflecting both the wheels and frame of a traveling vehicle.

Benefits

- Encourage drivers to travel at a slow speed in both directions
- Allows pedestrians to cross roadways where the pedestrian walking surface is raised to the same level

Typical Applications

- Corridors with pedestrians to use
- Relatively flat, straight, and low volume roads
- Roads one or two lanes wide

Design Considerations

- Roadways with adequate space
- A series of speed humps are installed 150 to 250 feet apart to prevent speeding between them.
- Coordinate proposed installations with emergency services


Source: City of Boston

Road Reconfiguration (Road Diet)

Short to Medium

A road diet is a redistribution of space in the roadway leading to a repurposing of the existing roadway cross section width. The road diet is one of the FHWA Proven Safety Countermeasures and may provide space for sidewalks, transit lanes, micromobility, or medians, and can help reduce motor vehicle speed. A traffic analysis is required to determine the feasibility of a road diet. Consider a road diet on segments with pedestrian crossings, multiple lanes of traffic, and high vehicle speeds.

Benefits

- Calms vehicle speeds
- Reallocates space for transit or non-motorized road users.
- Provides vehicular access to commercial and business driveways

Typical Applications

- Four-lane undivided roadways, which are converted to roadways with one lane in each direction and a two-way center left turn lane

Design Considerations

- Can be implemented with resurfacing projects to incorporate a road diet at minimal additional cost
- Roadway ADT less than 10,000 will typically perform with similar capacity
- Follow FHWA design volume thresholds
- If multimodal feature is being consider, follow the specific design considerations from AASHTO and FHWA.



Source: FHWA

Engineering Countermeasure Safer Roads – Roadway Departure Focus	Timeline
Enhance Signage	Short

Install signage to communicate roadway conditions (i.e. grooved pavement, edge drop offs, construction zones).

Benefits

- Low cost installation and maintenance
- Effective use of warning and delineation

Typical Application

- Horizontal Curves
- Rural Intersections

Design Considerations

- Proximity to driveways or side streets to avoid reducing to sight lines



Source: FHWA

Roadway Conspicuity	Short

A roadway conspicuity treatment is aimed at making pavement markings and signage clearer for drivers to see. This can include installing wider pavement markings, upgrading signs with fluorescent sheeting, adding reflective sign posts, improving edgelines/centerlines, and adding roadside delineation system.

Benefits

- Creates continuous delineation of travel lanes
- Increase visibility of regulatory and warning signs
- Clarify the edge of the roadway and lane boundaries

Typical Applications

- Signalized or unsignalized intersections
- Locations that require maintenance

Design Considerations

- Use of thermoplastic pavement markings will improve conspicuity
- Edge lines should not be considered on roadways that do not have centerlines



Source: VHB

Improve Sight Lines — Short

Remove trees within the clear zone to reduce the opportunity for crashes. Clear brush that blocks sight lines. Ensure sight lines are clear within the right-of-way to ensure stopping and intersection sight distances are met.

Benefits

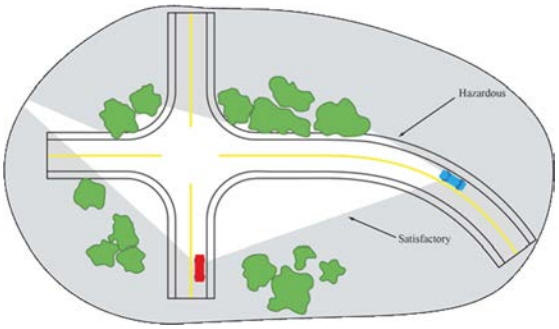
- Improve sight lines
- Clear trees to reduce severity of crash if vehicle left the roadway

Typical Application

- Within intersections
- Along corridors
- Near crosswalks (pedestrian, bike paths, trails, etc)

Design Considerations

- Right-of-way
- Roadway Context and Land Use
- Environmental impacts (historic properties, NEPA, etc)



Source: FHWA

Install Guardrail — Medium

Implement guardrail improvements for areas with roadside obstacles including bridges, slopes, poles that cannot be removed or relocated outside the clear zone.

Benefits

- Reduces the severity of crashes
- Redirects vehicles back into the traveled way

Typical Applications

- Where roadside conditions and features warrant guardrail protection per AASHTO

Design Considerations

- Pedestrian accessibility
- Context of roadway (scenic, etc)


Source: VHB

Install Rumble Strips — Long

Install centerline and/or edgeline rumble strips on two-lane rural roads with high risk of crossover and/or roadway departure crashes.

Benefits

- Provides awareness for drowsy drivers
- Reduces opportunity of roadway departure and crossover crashes

Typical Applications

- Rural corridors with minimal residential properties
- Low driveway density

Design Considerations

- Distance from rumble strip to residential properties and other sensitive receptors.
- Driveway and side street density
- Passing zones



Source: FHWA, Michigan DOT

SafetyEdge and Paved Shoulders — Long

The SafetyEdge technology shapes the edge of the pavement at approximately 30 degrees from the pavement cross slope during the paving process. If SafetyEdge isn't feasible then consider installing paved shoulders to remove gravel shoulders to avoid broken edges and debris.

Benefits

- Reduces the potential for vertical drop-off at the pavement edge
- Minimal effect on project cost
- Can improve pavement durability by reducing edge raveling of asphalt.

Typical Applications

- Rural roadways with no curb or berm

Design Considerations

- Consider roadway drainage
- Pedestrian accessibility



Source: FHWA

High Friction Surface Treatment	Medium to Long

Install High Friction Surface Treatment (HFST) at horizontal curves and intersections that have high risk of wet weather or motorcycle crashes.

Benefits

- Improves friction of roadway without paving
- Easy retrofit to reduce wet weather crashes
- Notable benefits with motorcycles maintaining control

Typical Applications

- Horizontal curves
- Approaches to intersections

Design Considerations

- Pavement condition including longitudinal or transverse cracking
- Consideration to existing pavement type and condition



Source: FHWA,

Non-Engineering Countermeasures

Safer Vehicles

The following strategies and actions were selected to align with the Safe Vehicles element of the Safe Systems Approach.

Support policy and programs that reduce vehicle trips

Actions:

- Promote the reduction of overall vehicle trips by advocating for safer transportation options through bike-sharing, e-scooter programs, and encouraging walking, biking, and transit.
- Advocate for state and federal policies that support safer, smaller, and lighter vehicles with speed control features.

Improve interactions between modes through direct and indirect vision enhancements.

Actions:

- Promote Direct Vision principles and encourage installation of countermeasures on low vision vehicles through education and distribution of funding information.
- Support local distribution events for bicycle mirrors, bells, and other devices that can improve user safety.

Post Crash Care

Post Crash Care Strategies are designed to enhance the survivability of crashes through access to emergency medical care while creating a safe working environment for vital first responders.



Emergency Medical Services

As countermeasures are identified and implemented, municipalities should coordinate closely with local Emergency Medical Services (EMS) to ensure that improvements will not negatively impact response times and compromise the effectiveness of post-crash care. Municipalities should consider developing Rapid Response Plans to formalize roles during incidents and outline the following details:

- Associated staffing commitments
- A notification system for activating response team
- A data collection protocol for immediate deployment to evaluate pre- and post-improvement conditions

- A data sharing procedure. This program should be a direct conduit with local police who may shift, and advance recommendations based on incident data

Transportation to Trauma Center

- Improve responder and motorist safety through Traffic Incident Management Training and Technology Deployment
- Improve travel conditions on vital corridors for trauma center access.
- Promote the implementation and use of red light preemption for emergency vehicles.

Education

Education strategies are designed to impart road safety principles to users, addressing key components of the Safe System Approach such as Safe Road Users, Safe Vehicles, and Safe Speeds. These strategies may incorporate interactive activities, demonstration projects, comprehensive instructional materials, and guidance on delivering road safety messages both within schools and through external programs. Additionally, media campaigns, specialized training courses, and printed educational materials can be leveraged to address targeted aspects and enhance public awareness. The following education-related strategies have been identified for implementation within the PVPC region.

- Road Safety Education for Children and vulnerable road users
- Develop printed resources for user protection (seatbelts, child restraints, helmets)
- Develop resources for vulnerable road users
- Develop and implement media campaigns
- Use everyday touchpoints with drivers and travelers to provide re-education messages
- Speed Monitoring Awareness Radar Trailer

Road Safety Education for Children and Vulnerable Road Users



Road safety education programs contribute to improved driver conduct by highlighting the importance of protecting vulnerable road users, including school children, cyclists, and pedestrians. Community and school-based events, along with demonstration projects, serve as platforms for distributing information and resources that foster greater awareness of safety practices.

Utilize printed resources for occupant protection

The National Highway Traffic Safety Administration (NHTSA) provides educational materials on seat belts, child car seats, automatic occupant protection systems, and bicycle helmets at https://www.trafficsafetymarketing.gov/. These resources, including graphics and flyers, are suitable

for distribution at community events or placement in public spaces like libraries, community centers, and schools.

Utilize resources specific to vulnerable road users

NHTSA offers a variety of safety resources, including curriculum for child pedestrian safety, materials for older adult pedestrians, bicycle and motorcycle safety guides, law enforcement safety training, neighborhood wayfinding pocket guides, and resources tailored for preteens and teens. The American Traffic Safety Services Association (ATSSA) also provides tools for creating effective programs and educational materials about vulnerable road users' rights and responsibilities.

Pioneer Valley has the opportunity to evaluate these resources and develop a local curriculum or programs that address these topics.

Utilize and implement media campaigns

Explore and/or develop social media campaigns as a method for raising and spreading awareness for educational resources available to communities and community members. These campaigns could be shared across several platforms including Facebook, Instagram, TikTok, X (formerly Twitter), and Bluesky can leverage national social media campaigns already developed by NHTSA. NHTSA's Communication Calendar provides information and resources for national campaigns such as Child Passenger Safety Week that can be utilized in campaigns. In 2019, the National Cooperative Research and Evaluation Program (NCREP) completed a study entitled Social Media Practices in Traffic Safety, which identified the following successful social media practices:

- Use pictures, videos, and links strategically to maximize impact
- Time posts to meet stakeholder needs
- Collaborate with other local and state accounts to expand reach for messaging
- Reuse messaging across multiple platforms

Enforcement

Even when engineering countermeasures are deployed, failing to adhere to state traffic laws and local ordinances can result in crashes. Police enforcement can increase driver awareness and consequently reduce crashes or severity of crashes. Potential enforcement strategies to address crash trends within the region are presented below. However, enforcement strategies should be taken with caution to avoid inequitable enforcement activities and evaluated to determine the strategy's impact. The following considerations can help lead to more successful outcomes for roadway safety enforcement strategies:

Distracted Driving

Provide training and resources for law enforcement on High Visibility Cell Phone Enforcement, in which law enforcement officers actively seek out cell phone users through a variety of enforcement techniques and then radio ahead to another officer when a driver using a cell phone is detected. This technique relies on media outreach to ensure the general public is aware of the activity and to increase the perception that being caught is likely.

Improve Reporting

Provide training and resources for law enforcement to improve crash reporting with the aim to better identify crash trends over time, understanding factors that contribute to accidents, and documenting findings comprehensively.

Conduct Increased Enforcement for Pedestrian Safety

Increased enforcement campaigns for pedestrian safety are strategic initiatives designed to raise awareness and improve compliance with traffic laws to protect pedestrians. These campaigns often involve a multi-faceted approach combining enhanced law enforcement presence, public education, and collaboration with community stakeholders. Targeted enforcement operations, such as focusing on high-risk areas like busy intersections and locations with a history of pedestrian crashes, can be effective in raising awareness for motorists. Officers may issue warnings or citations to drivers who fail to yield to pedestrians or violate crosswalk laws as part of targeted enforcement activities.

Automated Enforcement



Automated red light running enforcement is a traffic management solution designed to monitor and penalize drivers who fail to comply with red signal indications. This system generally consists of cameras installed at intersections, which are activated when a vehicle enters the intersection during a red phase. The cameras record images or video sequences of the violation, typically including the vehicle's license plate. The primary objective of automated red-light enforcement is to enhance intersection safety by discouraging red light infractions, thereby reducing the risk of serious collisions. Research indicates that these systems effectively decrease the frequency of red light violations and contribute to improved overall road safety.

Speed safety cameras, much like red-light running cameras, are used to monitor and penalize drivers who go over the speed limit. These cameras, equipped with speed detection technology, are placed in locations such as high-risk areas, school zones, and highways to record instances of speeding. Their main goal is to improve road safety by deterring speeding, which is a leading cause of traffic accidents and deaths. Research indicates that speed safety cameras can effectively decrease average vehicle speeds and lower crash rates. Nevertheless, similar to red-light cameras, they often spark discussions about privacy concerns, accuracy, and fairness in enforcement. In Massachusetts, automated

enforcement is currently not permitted by law. The PVPC plans to assess the possibility of collaborating with state legislators to establish statewide laws for both red-light running and speed safety cameras.

Enforcement Campaigns Adapted for Each Community

Enforcement campaigns represent structured initiatives led by law enforcement agencies, often in collaboration with various stakeholders, to promote adherence to safety-related laws and regulations. These campaigns are strategically developed to address identified safety issues and enhance public awareness, with the ultimate goals of reducing incidents and improving community safety. Community-specific campaigns should incorporate several of the activities previously mentioned, such as targeted enforcement, public education and awareness initiatives, as well as robust partnerships and collaborative efforts. Furthermore, to optimize outcomes:

- Campaigns should be tailored to suit the needs of different neighborhoods and demographics and should be designed and carried out to avoid targeting disadvantaged communities.
- Enforcement should be conducted with the help of staff support and awareness of the courts.
- Enforcement operations should begin with warnings and fliers before moving on to issuing citations.

Maintenance Considerations

Maintenance and preservation are essential for the longevity and safety of transportation infrastructure. When the system falls into disrepair, unsafe behaviors can occur—drivers may swerve into bike lanes to avoid potholes, or pedestrians might walk in the street due to uneven sidewalks, increasing accident risks. Maintenance covers tasks like repaving, updating pavement markings, signal retiming, equipment upgrades, automatic pedestrian recall, vegetation management, and parking enforcement. Simply providing transportation facilities does not ensure safety; maintenance should be a priority when selecting and implementing countermeasures and best practices.

- Outlining the party responsible for maintenance at the beginning of the process
- Establish practices for assessing the condition of the infrastructure and identification of maintenance needs.
- Vegetation assessment and routine trimming should be incorporated where needed.
- Consider upgrading materials or infrastructure during assessment of maintenance needs



Source: Pope Striping



Source: American Sign Products



Source: Colvoy Equipment



Source: Asphalt Pothole Repair

Pop-up Traffic Calming Demonstrations

Pop-up demonstration projects, also referred to as "better blocks," are temporary installations implemented to evaluate and illustrate strategies for enhancing road safety. These initiatives incorporate a range of traffic calming measures, such as:

- Speed Bumps or Humps: Temporary structures that encourage drivers to slow down.
- Chicanes: Features that create a winding path for vehicles, thereby reducing speed.
- Curb Extensions: Extensions or bulb-outs at intersections to narrow the roadway and reduce pedestrian crossing distances.
- Roundabouts or Traffic Circles: Temporary circular intersections that slow down traffic and improve flow.
- Road Reconfiguration: Lane reductions or reconfigurations to decrease vehicle speeds and improve pedestrian safety.
- Signage and Pavement Markings: Additional signs and painted graphics to alert drivers to slow down or pay attention to pedestrian areas.

Pop-up demonstrations typically engage community members and gather their feedback to evaluate the effectiveness and public acceptance of proposed measures prior to implementing permanent changes. These initiatives offer local governments and transportation authorities cost-effective and adaptable approaches to pilot solutions for traffic-related challenges.



Source: TrafficGardens.com



Source: Wellston, MO

Table 16. Engineering Countermeasure Summary

Engineering Countermeasure	Lead	Timeline	Cost
Pedestrian Crosswalks	Municipal, MassDOT	Short	Low
High Visibility Crosswalk Markings	Municipal, MassDOT	Short	Low
Pedestrian Lighting	Municipal, MassDOT	Medium	Medium to High
Sidewalk & Wheelchair Ramp Repairs	Municipal, MassDOT	Medium to Long	Medium to High
Rectangular Rapid Flashing Beacon	Municipal, MassDOT	Short	Low
Pedestrian Hybrid Beacon (PHB)	Municipal, MassDOT	Long	Medium
Curb Extensions	Municipal, MassDOT	Long	Medium to High
Leading Pedestrian Interval	Municipal, MassDOT	Short	Medium
Pedestrian Signal Equipment	Municipal, MassDOT	Medium	Medium to High
Intersection Lighting	Municipal, MassDOT	Medium	Medium to High
Signal Head Visibility	Municipal, MassDOT	Short	Medium
Signal Equipment and Timing Upgrades	Municipal, MassDOT	Short	Medium
Curb Modifications	Municipal, MassDOT	Long	High
No Turn on Red Restriction	Municipal, MassDOT	Short	Low
All-way Stop Control	Municipal, MassDOT	Short	Low
Traffic Signal Control	Municipal, MassDOT	Medium to Long	High

Engineering Countermeasure	Lead	Timeline	Cost
Convert Signal Equipment to Mast Arms	Municipal, MassDOT	Medium to Long	Medium
Convert to Roundabout	Municipal, MassDOT	Long	High
General Intersection Maintenance Improvements	Municipal, MassDOT	Short	Low
Access Management	Municipal, MassDOT	Medium to Long	High
Speed Feedback Sign	Municipal, MassDOT	Short	Low
Set Appropriate Speed Limits	Municipal, MassDOT	Short to Medium	Medium
Median Islands/Vertical Deflection	Municipal, MassDOT	Short to Medium	Low to Medium
Road Reconfiguration (Road Diet)	Municipal, MassDOT	Short to Medium	High
Enhance Signage	Municipal, MassDOT	Short	Low
Roadway Conspicuity	Municipal, MassDOT	Short	Low
Improve Sight Lines	Municipal, MassDOT	Short	Low to Medium
Install Guardrail	Municipal, MassDOT	Medium	Medium
Install Rumble Strips	Municipal, MassDOT	Long	Low
SafetyEdge and Paved Shoulders	Municipal, MassDOT	Long	Medium
High Friction Surface Treatment	Municipal, MassDOT	Medium to Long	Low

Table 17. Non-Engineering Safety Strategies Summary

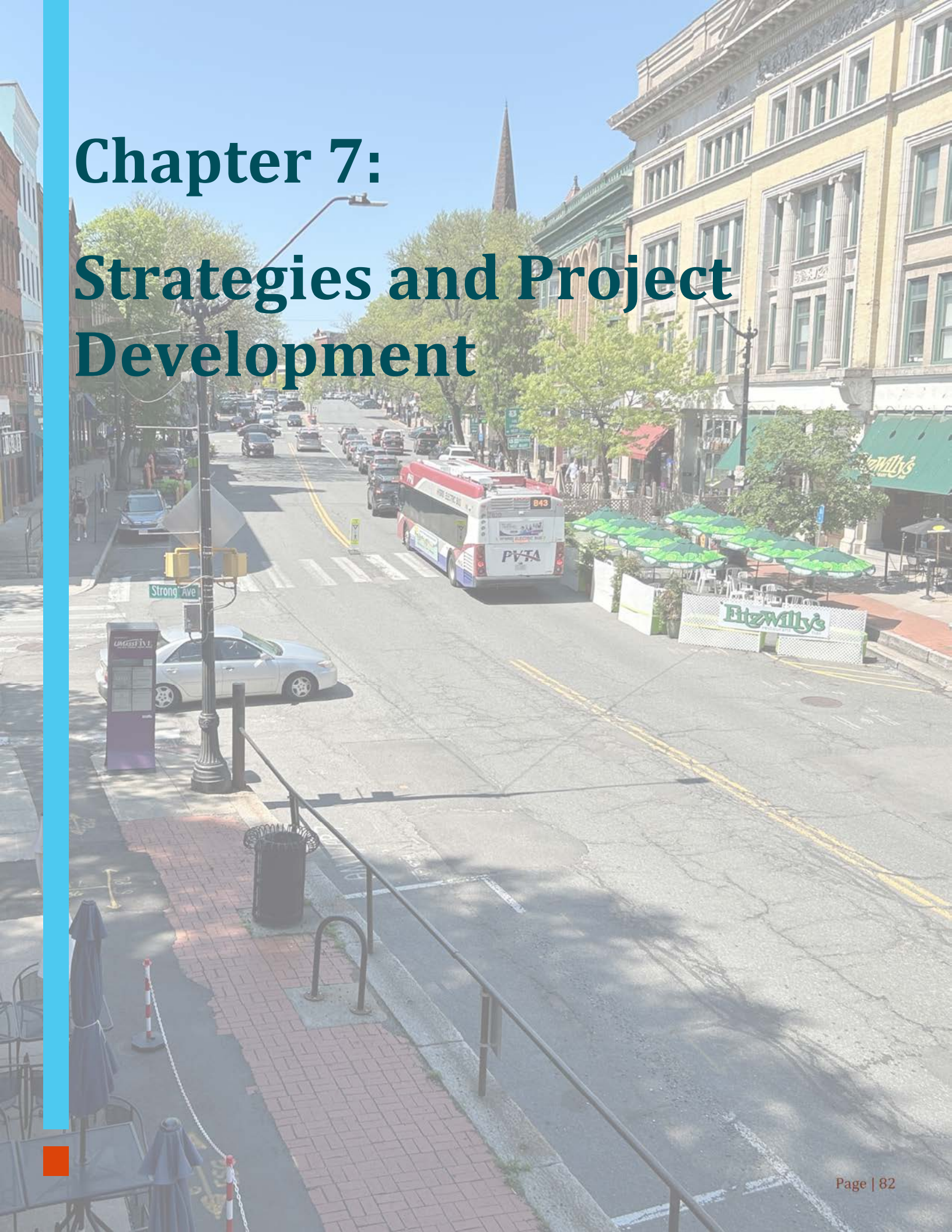
Non-Engineering Safety Strategies	Lead	Timeline
Promote reduction of overall vehicle trips through bike-sharing, e-scooter programs, walking, biking, and transit advocacy	PVPC, Municipal	1–3 years
Advocate for state and federal policies supporting safer, smaller, and lighter vehicles with speed control features	PVPC, MassDOT	3–5+ years
Promote Direct Vision principles and encourage installation of countermeasures on low-vision vehicles	PVPC, Municipal	0–1 year
Support local distribution events for bicycle mirrors, bells, and other safety devices	PVPC, Municipal	0–1 year
Coordinate with EMS to ensure safety improvements do not negatively impact emergency response times	PVPC, Municipal	Ongoing
Develop Rapid Response Plans outlining staffing commitments, notification systems, data collection protocols, and data sharing procedures	PVPC, MassDOT	0–1 year
Improve responder and motorist safety through Traffic Incident Management Training and Technology Deployment	PVPC, MassDOT	0–3 years
Improve travel conditions on vital corridors for trauma center access	PVPC, MassDOT	2–5 years
Promote implementation and use of red-light preemption for emergency vehicles	PVPC, MassDOT	1–3 years
Conduct road safety education programs for children and vulnerable road users	PVPC, Municipal, MassDOT	0–1 year
Develop and distribute printed resources for occupant protection including seatbelts, child restraints, and helmets	PVPC, Municipal	0–1 year
Develop resources tailored to vulnerable road users	PVPC, Municipal	0–1 year
Develop and implement media campaigns promoting roadway safety awareness	PVPC, Municipal, MassDOT	0–1 year
Provide re-education safety messaging through everyday driver and traveler touchpoints	MassDOT	Ongoing

Non-Engineering Safety Strategies	Lead	Timeline
Deploy Speed Monitoring Awareness Radar Trailers	PVPC, MassDOT	0–1 year
Utilize community and school-based events to distribute roadway safety information and resources	PVPC, Municipal	Ongoing
Utilize NHTSA educational materials related to occupant protection and bicycle safety	PVPC, Municipal	0–1 year
Evaluate and develop local curriculum or programs addressing vulnerable road user safety	Municipal	1–2 years
Implement social media campaigns leveraging existing national safety campaigns and communication calendars	PVPC, Municipal	0–1 year
Provide training and resources for High Visibility Cell Phone Enforcement initiatives	Municipal	0–1 year
Improve crash reporting through law enforcement training and resources	MassDOT	0–1 year
Conduct increased enforcement campaigns focused on pedestrian safety in high-risk areas	PVPC, Municipal	Ongoing
Evaluate and advocate for automated red-light running enforcement legislation	PVPC, Municipal	3–5+ years
Evaluate and advocate for speed safety camera enforcement legislation	PVPC, Municipal	3–5+ years
Develop community-specific enforcement campaigns with targeted outreach, education, and partnerships	Municipal	0–1 year
Begin enforcement campaigns with warnings and informational flyers prior to issuing citations	Municipal	Ongoing
Establish maintenance responsibility early in project development	PVPC, MassDOT	Ongoing
Establish practices for assessing infrastructure condition and identifying maintenance needs	PVPC, MassDOT	1–2 years
Conduct vegetation assessment and routine trimming where needed	Municipal	Ongoing

Non-Engineering Safety Strategies	Lead	Timeline
Consider upgrades of materials or infrastructure during maintenance assessments	MassDOT	2–5 years
Implement repaving, pavement markings, signal retiming, and automatic pedestrian recall maintenance activities	PVPC, MassDOT	Ongoing
Conduct pop-up traffic calming demonstration projects ("better blocks")	PVPC, Municipal	0–1 year
Install temporary speed bumps or humps as demonstration traffic calming measures	PVPC, Municipal	0–1 year
Install temporary chicanes to reduce vehicle speeds	PVPC, Municipal	0–1 year
Implement temporary curb extensions/bulb-outs at intersections	PVPC, Municipal	0–1 year
Install temporary roundabouts or traffic circles	PVPC, Municipal	0–2 years
Conduct temporary road reconfigurations and lane reductions	PVPC, Municipal	0–1 year
Install temporary signage and pavement markings to improve driver awareness	PVPC, Municipal	0–1 year
Incorporate community participation and feedback into demonstration project evaluation	PVPC, Municipal	Ongoing

Chapter 7:

Strategies and Project Development



Overview

This chapter documents the process of priority location identification and project development process. During the development of this safety action plan, the high-injury network, high-risk network, and public feedback were used to identify candidate projects to ensure an effective and transparent approach to improve safety within the transportation system. It is necessary to have a clear project prioritization process because safety needs and funding are both limited, so PVPC must make deliberate, defensible choices about where to invest. A structured, data-driven approach helps ensure that decisions are based on crash risk, equity, and measurable safety benefits. It also increases transparency and public trust, since residents and stakeholders can see how and why certain locations or strategies were selected.

Priority Location Methodology

Intersections and segments that were identified in the high-injury network, high-risk network, or both were prioritized to form a list of priority locations for project development consideration. For each high-risk network, thresholds were set based on the highest risk score available for that category. For the high-injury network, scoring was based on whether the location was part of the HIN or not. Additional criteria such as equity and population were also considered to ensure that disadvantaged communities and rural municipalities with less population get a fair representation.

The locations were prioritized and scored from 0 to 100 using the screening elements and weights shown in **Table 18** and **Table 19**. By assigning scores or weights to various criteria, the matrix helps identify high-priority locations that balance reactive and proactive safety issues. The score or weight for each criterion is determined by needs and priorities. Incorporating these elements in the safety action plan's priorities allows projects to address significant safety challenges while meeting the priorities of the SS4A Program.

Table 18. PVPC Priority Location Scoring Matrix - Intersections

Criteria		Maximum Score
High Injury Network		**40**
	Yes	40
	No	0
Intersection High Risk Network		**35**
	Risk Score 5-8	35
	Risk Score 3-4	30
	Risk Score 1-2	1
	Risk Score 0	0
Disadvantaged Community		**5**
	Yes	5
	No	0
Population		**20**
	<1000	20
	1000-5000	15
	5000-10000	10
	>10000	0

Table 19. PVPC Priority Location Scoring Matrix - Segments

Criteria		Maximum Score
High Injury Network	**20**	
	Yes	20
	No	0
Lane Departure High Risk Network	**10**	
	Risk Score 4-5	10
	Risk Score 3	5
	Risk Score 1-2	1
	Risk Score 0	0
Speeding High Risk Network	**20**	
	Risk Score 6-10	20
	Risk Score 4-5	15
	Risk Score 3	10
	Risk Score 1-2	1
	Risk Score 0	0
Pedestrian High Risk Network	**10**	
	Risk Score 6-9	10
	Risk Score 4-5	8
	Risk Score 3	5
	Risk Score 1-2	1
	Risk Score 0	0
Bicycle High Risk Network	**10**	
	Risk Score 5-7	10
	Risk Score 3-4	5
	Risk Score 1-2	1
	Risk Score 0	0
Motorcycle High Risk Network	**10**	
	Risk Score 4-5	10
	Risk Score 3	5
	Risk Score 1-2	1
	Risk Score 0	0
Disadvantaged Community	**5**	
	Yes	5
	No	0
Population	**15**	
	<1000	15
	1000-5000	10
	5000-10000	8
	>10000	0

Project Development Process

Once the priority locations were identified, total scores were checked and a score of 40 was identified as a threshold for any location to get considered for inclusion in a project. All segments with a priority score of 40 or above were checked for continuity and length. Segments between major intersections were combined and a revised average score was calculated. This step ensured that each segment has an appropriate length to be considered for a project.

In coordination with PVPC, a revised priority score of 75 was selected as a threshold for regional project consideration. Any segments or intersections meeting this criterion were considered for regional priority project. While developing the projects, practical implementation was taken into consideration in addition to the scoring. For example, if there is a small length of segment scoring below 75 that is between two segments with scores above 75, then the segment with below 75 scoring was also included in the project for continuity purposes.

During the regional level review, many municipalities did not have many or any intersections or segments that fell within the criteria above. Therefore, as part of this plan, locations were identified on both a regional level and a municipal level to compare the locations on a regional level and on a municipal basis. For each municipality, top ten segments and intersections based on priority scores were selected for potential projects. For some towns, there were less than 10 locations that made it to the priority location list.

List of Selected Projects and Strategies

Regional Level

Table 20 and Table 21 identify the highest-scoring corridors and intersections selected for regional projects and associated strategies, respectively. This list helps illustrate how PVPC can use the prioritized projects to start on locations with the highest potential for safety benefit.

Mapping tool of ranked projects at regional level with scoring can be found on the project website: www.pioneervalleysafestreets.com

Table 20. Potential Regional Projects (Corridors)

Town	Roadway	Street Name	From	To	Lighting	High Visibility Crosswalks	Pedestrian Facilities	Roadside Delineation	Speed Management	Roadway Reconfiguration	Roadway Departure Mitigation	Access Management	General Maintenance Improvements
Agawam	MA-187	S Westfield St	Henry E Bodurtha Hwy	Shoemaker Ln	No	No	Yes	Yes	Yes	Yes	Yes	No	Yes
Agawam	MA-187	S Westfield St	Shoemaker Ln	Springfield St	No	No	No	No	Yes	No	Yes	No	No
Agawam	Ma-147	Springfield St	North St	Columbus St	No	No	Yes	No	Yes	Yes	No	No	Yes
Agawam	MA-147	Springfield St	Suffield St	Walnut St	No	No	Yes	No	Yes	Yes	No	No	Yes
Agawam	MA-147	Suffield St	Springfield St	Town Line	No	No	No	No	Yes	No	No	No	Yes
Amherst	-	Meadow St	N Pleasant St	MA-116	No	Yes	Yes	No	Yes	Yes	Yes	No	No
Amherst	-	Massachusetts Ave	Butterfield Terrace	Town Line	No	Yes	Yes	No	Yes	Yes	No	No	Yes
Amherst	MA-9	College St	S Pleasant St	East Dr	No	No	Yes	No	Yes	Yes	No	No	Yes
Amherst	MA-116	Northampton Rd	University Dr	Town Line	No	No	Yes	No	Yes	Yes	No	Yes	Yes
Amherst	-	University Dr	Northampton Rd	USPS Entrance	No	No	Yes	No	Yes	Yes	No	No	Yes
Amherst	MA-116	S Pleasant St	E Hadley Rd	Amherst Public Works	No	Yes	Yes	No	Yes	No	Yes	No	No
Amherst	MA-116	S Pleasant St	Walnut St	Sellen St	No	No	Yes	No	Yes	Yes	Yes	No	Yes
Amherst	-	N Pleasant St	Butterfield Terrace	Fearing St	No	Yes	Yes	No	Yes	Yes	No	No	Yes
Belchertown	US-202	Main St	Maple St	Jackson St	No	Yes	No	No	Yes	Yes	No	No	No
Belchertown	MA-181	S Main St	N Washington St	Maple St	No	Yes	No	No	Yes	Yes	No	No	No
Easthampton	MA-10	Main Street	Union St	MA-10	No	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
Easthampton	MA-141	Union St	Cottage St	Main St	No	No	No	No	Yes	No	Yes	No	No
Easthampton	MA-141	Cottage St	Clark St	Union St	No	No	No	No	Yes	Yes	Yes	No	No
Easthampton	MA-10	-	Pleasant St	West St	No	No	No	No	Yes	Yes	Yes	No	Yes
Hadley	MA-47	Middle St	Bay Rd	Russell St	No	Yes	Yes	No	Yes	Yes	No	No	Yes
Hadley	MA-9	Russell St	Middle St	East St	No	No	Yes	No	Yes	No	No	No	Yes
Hadley	MA-9	Russell St	West Rd	Middle St	No	Yes	Yes	Yes	Yes	Yes	No	No	Yes
Hadley	MA-9	Russell St	Bay Rd	West Rd	No	Yes	Yes	No	Yes	Yes	No	No	Yes
Hadley	MA-116	Northampton Rd	S Maple St	Amherst Town Line	No	No	Yes	No	Yes	Yes	No	Yes	Yes
Hampden	-	Wilbraham Rd	Somers Rd	Raymond Dr	No	Yes	Yes	No	Yes	Yes	No	No	No
Ludlow	-	East St	Park Place	Sewall St	No	No	No	No	Yes	Yes	No	No	Yes
Ludlow	-	Center St	Ludlow Ave	Harding Ave	No	Yes	No	No	Yes	Yes	Yes	No	Yes
Northampton	MA-9	Main St	State St	Pleasant St	No	Yes	Yes	No	Yes	Yes	No	No	Yes
Northampton	-	Pleasant St	Main St	Randolph Pl	No	Yes	Yes	No	Yes	Yes	No	No	Yes
Northampton	-	Pleasant St	Randolph Pl	Hockanum Rd	No	Yes	Yes	No	Yes	Yes	No	No	Yes
Northampton	-	Pleasant St	Hockanum Rd	Pleasant St Roundabout	No	Yes	Yes	No	Yes	Yes	No	No	Yes
Northampton	-	Pleasant St	Pleasant St Roundabout	Pleasant St Roundabout	No	Yes	Yes	No	Yes	Yes	No	No	Yes
Northampton	-	Mt Tom Rd	Pleasant St Roundabout	I-91 Ramp	No	Yes	Yes	No	Yes	Yes	No	No	Yes
Northampton	MA-9	Main St	Pleasant St	Hawley St	No	Yes	Yes	No	Yes	Yes	No	No	Yes
Northampton	MA-9	Elm St	Franklin St	College Lane	No	Yes	Yes	No	Yes	Yes	No	No	Yes
Northampton	MA-9	Elm St	College Lane	Seeley Dr	No	Yes	Yes	No	Yes	Yes	No	No	Yes
Northampton	MA-9	Bridge St	Coolidge Ave	Bridge St Roundabout	No	No	No	No	Yes	No	No	No	Yes
Northampton	MA-9	Locust St	Hatfield St	N Elm St	No	Yes	Yes	No	Yes	Yes	Yes	No	No
Northampton	MA-9	Main St	Maple St	S Main St	No	No	Yes	No	Yes	Yes	Yes	No	No
Northampton	MA-9	N Main St	Hayward Rd	Maple St	No	Yes	Yes	No	Yes	Yes	Yes	No	Yes
Palmer	MA-181	Sykes St	Main St	183 Sykes St	No	Yes	Yes	No	Yes	Yes	No	No	No

Town	Roadway	Street Name	From	To	Lighting	High Visibility Crosswalks	Pedestrian Facilities	Roadside Delineation	Speed Management	Roadway Reconfiguration	Roadway Departure Mitigation	Access Management	General Maintenance Improvements
Palmer	MA-181	Sykes St	183 Sykes St	Wright Street	No	Yes	Yes	Yes	Yes	Yes	No	No	Yes
Palmer	MA-32	Thorndike Street	N Main Street	Pleasant Street	No	Yes	Yes	No	Yes	Yes	Yes	No	Yes
Palmer	MA-32	Thorndike Street	St. Thomas Parish Center	Lawrence St	No	Yes	Yes	Yes	Yes	Yes	No	No	Yes
Palmer	MA-32	Thorndike Street	Park Street	St. Thomas Parish Center	No	Yes	Yes	No	Yes	Yes	Yes	No	Yes
Palmer	MA-181	N Main Street	Wilbraham Street	Wright Street	No	Yes	Yes	No	Yes	Yes	No	No	No
South Hadley	MA-116	Woodbridge St	Hadley St	Silver St	No	Yes	Yes	No	Yes	Yes	No	No	No
South Hadley	MA-33	Lyman St	Granby Rd	Newton St	No	Yes	Yes	No	Yes	No	Yes	No	No
South Hadley	-	Newton St	Camden St	Lyman St	No	No	No	No	Yes	No	No	No	No
South Hadley	MA-116	Bridge St	Main St	Lamb St	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes
South Hadley	-	Lamb St	Bridge St	Gaylord St	No	No	Yes	No	Yes	Yes	No	Yes	Yes
South Hadley	-	Lamb St	Gaylord St	Ramps to US-202	No	No	Yes	No	Yes	Yes	No	Yes	Yes
Southwick	MA-57	Granville Rd	Bugbee Rd	US-202	No	No	No	No	Yes	Yes	Yes	No	No
Southwick	US202	-	Town Hall	Bonnieview Rd	No	No	No	No	Yes	No	Yes	No	No
Southwick	US202	College Highway	Bonnieview Rd	Feeding Hills Rd	No	Yes	Yes	Yes	Yes	Yes	No	No	Yes
Southwick	-	Feeding Hills Rd	Shirley Terrace	Great Brook Lane	No	No	No	No	Yes	Yes	Yes	No	No
West Springfield	-	Park St	Kelso St	River St	Yes	No	No	No	Yes	Yes	No	No	Yes
West Springfield	-	Elm St	Park St	Park Ave	No	Yes	Yes	No	Yes	Yes	No	No	Yes
West Springfield	US-20	Westfield St	Cedar Ave	South Blvd	No	Yes	Yes	No	Yes	Yes	No	No	Yes
West Springfield	US-20	Westfield St	South Blvd	Elm St Roundabout	No	Yes	Yes	No	Yes	Yes	No	No	Yes
West Springfield	US-20	Westfield St	Nelson St	Cedar Ave	Yes	No	No	No	Yes	Yes	No	No	Yes
West Springfield	MA-147	Memorial Ave	Roundabout	Town Line	No	Yes	Yes	No	Yes	Yes	No	No	Yes
West Springfield	-	Park St	Western Ave	Kelso St	Yes	No	No	No	Yes	Yes	No	No	Yes
West Springfield	US-20	Elm St	Westfield St	Park St	No	Yes	No	No	No	No	No	No	No
West Springfield	US-20	Park Ave	Union St	Town Line	No	Yes	Yes	No	Yes	Yes	No	No	Yes
Williamsburg	MA-9	Main St/Williams St	Buttonshop Rd	River Rd	No	No	No	No	Yes	Yes	No	No	Yes

Table 21. Potential Regional Projects (Intersections)

Town	Name	Type	Intersection Lighting	High Visibility Crosswalks	General Maintenance Improvements	Median Island	Vehicle Signal Timing Mods	Signal Head Visibility	Pedestrian Signal Timing Mods	Pedestrian Signal Equipment	Curb Mods	No Turn on Red	Convert Signal to Mast Arm	Convert to Roundabout	Pedestrian Crossing	All Way Stop Control
Agawam	Suffield St & Shoemaker Ln	Signalized	No	No	No	No	Yes	No	No	Yes	No	No	Yes	No	No	No
Agawam	Suffield St & Silver St	Signalized	No	No	No	No	Yes	No	Yes	No	No	Yes	No	No	No	No
Agawam	Springfield St & Walnut St	Signalized	No	No	Yes	No	Yes	No	No	No	No	No	No	No	No	No
Agawam	Suffield St & Mill St	Signalized	No	No	Yes	No	Yes	No	No	Yes	No	No	Yes	No	No	No
Agawam	Suffield St, Springfield St & Main St	Signalized	No	No	Yes	Yes	Yes	No	Yes	No	No	No	No	No	No	No
Agawam	S Westfield St & Shoemaker Ln	Signalized	No	No	Yes	No	Yes	No	No	Yes	No	No	Yes	No	No	No
Amherst	E Pleasant St & Strong St	Unsignalized	No	No	Yes	No	No	No	No	No	No	No	No	No	No	Yes
Amherst	Main St & Triangle St	Signalized	No	No	Yes	No	Yes	No	Yes	No	No	No	No	No	No	No
Amherst	Amity St & University Dr	Signalized	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Amherst	Main St & S East St/N East St	Signalized	No	No	No	No	Yes	No	Yes	No	No	No	No	Yes	No	No
Amherst	Main St & S Whitney St/N Whitney St	Unsignalized	No	No	Yes	No	No	No	No	No	No	No	No	No	No	Yes
Amherst	E Pleasant St & Triangle St	Roundabout	No	No	Yes	No	No	No	No	No	No	No	No	No	No	No
Amherst	N Pleasant St & Meadow St	Signalized	No	No	No	No	Yes	No	Yes	No	No	No	Yes	No	No	No
Amherst	S Pleasant St & Memorial Dr	Uncontrolled	No	No	Yes	No	No	No	No	No	No	No	No	No	No	Yes
Amherst	College St, East Dr, & Dickinson St	Unsignalized	No	No	Yes	No	No	No	No	No	No	No	No	No	No	Yes
Amherst	Northampton Rd & University Dr	Signalized	No	No	Yes	No	Yes	No	Yes	No	No	No	No	Yes	No	No
Amherst	Belchertown Rd & Gatehouse Rd	Signalized	No	No	No	No	Yes	No	Yes	No	No	Yes	Yes	No	No	No
Amherst	S Pleasant St & College St	Signalized	No	No	No	No	Yes	No	Yes	No	No	Yes	No	Yes	No	No
Belchertown	State St & Front St	Signalized	No	No	No	No	Yes	No	Yes	No	No	Yes	No	No	No	No
Granby	Pleasant St & W State St	Signalized	No	No	No	No	Yes	No	Yes	No	No	Yes	No	No	No	No
Hadley	S Maple Street, N Maple Street & Russell Street	Signalized	No	No	No	No	Yes	No	Yes	No	Yes	Yes	No	Yes	No	No
Hadley	Route 116, Westgate Center Drive & Russell Street	Signalized	No	No	Yes	No	Yes	No	No	No	No	Yes	Yes	No	No	No
Hadley	West Street & Russell Street	Unsignalized	No	Yes	Yes	No	No	No	No	No	No	No	No	No	No	No
Hadley	West Street & Russell Street	Unsignalized	No	Yes	Yes	No	No	No	No	No	No	No	No	No	No	No
Hadley	Campus Plaza Road, Greenleaves Drive & Russell Street	Signalized	No	No	Yes	No	Yes	No	Yes	No	No	Yes	Yes	No	No	No

Town	Name	Type	Intersection Lighting	High Visibility Crosswalks	General Maintenance Improvements	Median Island	Vehicle Signal Timing Mods	Signal Head Visibility	Pedestrian Signal Timing Mods	Pedestrian Signal Equipment	Curb Mods	No Turn on Red	Convert Signal to Mast Arm	Convert to Roundabout	Pedestrian Crossing	All Way Stop Control
Hadley	Russell Street & Middle Street	Signalized	Yes	No	Yes	No	Yes	No	Yes	No	No	No	No	No	No	No
Hadley	Russell Street & Whalley Street	Unsignalized	No	Yes	Yes	No	No	No	No	No	Yes	No	No	No	No	No
Hadley	Russell Street & Goffe Street	Unsignalized	No	Yes	Yes	No	No	No	No	No	Yes	No	No	No	No	No
Hadley	Russell Street & East Street	Signalized	No	Yes	No	No	Yes	No	Yes	No	No	Yes	No	No	No	No
Ludlow	Russell Street, West Avenue & West Street	Signalized	No	No	No	No	Yes	No	Yes	Yes	No	No	Yes	No	No	No
Ludlow	East St & Chapin St	Signalized	No	No	No	No	Yes	No	Yes	Yes	No	No	No	No	Yes	No
Ludlow	East St & State St	Signalized	No	Yes	No	No	Yes	Yes	No	No	No	No	Yes	No	No	No
Ludlow	Center St, Ludlow Ave & East St	Signalized	No	No	Yes	No	Yes	No	No	Yes	Yes	No	No	No	Yes	No
Ludlow	Chapin St & Fuller St	Unsignalized	No	Yes	Yes	No	No	No	No	No	No	No	No	No	Yes	No
Ludlow	West St & Cady St	Unsignalized	No	No	Yes	No	No	No	No	No	No	No	No	No	Yes	No
Ludlow	Center St & West Ave	Unsignalized	No	Yes	Yes	No	No	No	No	No	No	No	No	No	No	Yes
Ludlow	East St & Sewall St	Signalized	No	No	No	No	Yes	No	Yes	No	No	Yes	No	No	No	No
Ludlow	Center St & Sewall St	Unsignalized	No	Yes	No	No	No	No	No	No	No	No	No	No	No	Yes
Ludlow	Center St & Windsor St	Unsignalized	No	Yes	No	No	No	No	No	No	No	No	No	No	Yes	Yes
Ludlow	Center St & Cherry St	Signalized	No	No	No	No	Yes	No	Yes	No	No	Yes	No	No	No	No
Ludlow	Center St & Arch St	Unsignalized	No	Yes	Yes	No	No	No	No	No	No	No	No	No	No	Yes
Ludlow	Center St & Silver Terrace	Unsignalized	No	No	No	No	No	No	No	No	No	No	No	No	Yes	Yes
Ludlow	Center St & Park Terrace	Unsignalized	No	Yes	Yes	No	No	No	No	No	No	No	No	No	No	No
Ludlow	East St, Winsor St & Hampden St	Unsignalized	No	Yes	Yes	No	No	No	No	No	No	No	No	No	No	Yes
Ludlow	Center St & Harding Ave	Signalized	No	No	No	No	Yes	No	Yes	No	No	Yes	Yes	No	No	No
Northampton	Reservoir Rd, Mulberry St & River Rd	Unsignalized	No	No	Yes	No	No	No	No	No	No	No	No	No	Yes	Yes
Northampton	Bridge Rd & N Maple St	Signalized	No	No	No	No	Yes	No	Yes	No	No	Yes	No	No	No	No
Northampton	Prospect St & Prospect Ave	Unsignalized	No	Yes	Yes	No	No	No	No	No	No	No	No	No	No	No
Northampton	Hatfield St & Cooke Ave	Unsignalized	No	Yes	Yes	No	No	No	No	No	No	No	No	No	Yes	No
Northampton	Florence Road, Rocky Hill Road, & Westhampton Road	Signalized	No	No	No	No	Yes	No	Yes	No	No	Yes	No	No	No	No
Northampton	Cooke Avenue, Jackson Street & Bridge Road	Signalized	No	No	Yes	No	Yes	No	Yes	No	No	No	No	No	Yes	No
Northampton	Bridge Road, Damon Rd & Us -5	Signalized	No	No	No	No	Yes	No	Yes	No	No	Yes	No	No	No	No
Northampton	State St & Trumbull Rd	Unsignalized	No	No	Yes	No	No	No	No	No	No	No	No	No	No	Yes

Town	Name	Type	Intersection Lighting	High Visibility Crosswalks	General Maintenance Improvements	Median Island	Vehicle Signal Timing Mods	Signal Head Visibility	Pedestrian Signal Timing Mods	Pedestrian Signal Equipment	Curb Mods	No Turn on Red	Convert Signal to Mast Arm	Convert to Roundabout	Pedestrian Crossing	All Way Stop Control
Northampton	Bridge St & Damon Road	Roundabout	No	Yes	Yes	No	No	No	No	No	No	No	No	No	No	No
Northampton	Mian St, Elm St & State St	Signalized	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No
Northampton	Us-5 & Finn St	Signalized	No	Yes	Yes	No	Yes	No	Yes	No	No	No	No	No	No	No
Northampton	Main St & Old S St	Unsignalized	No	Yes	Yes	Yes	No	No	No	No	No	No	No	No	No	No
Northampton	Main St & Pleasant St	Signalized	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No
Northampton	Us-5 & North St	Signalized	No	Yes	Yes	Yes	Yes	No	Yes	Yes	No	No	Yes	No	No	No
Palmer	Park Street & Central Street	Signalized	No	No	Yes	No	Yes	No	No	No	No	No	No	No	No	No
Palmer	Shearer Street & North Main Street	Unsignalized	No	Yes	Yes	Yes	No	No	No	Yes	Yes	No	No	Yes	No	Yes
Palmer	Main Street, North Main Street & Thorndike Street	Signalized	No	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No
South Hadley	Main St & Bridge St	Signalized	No	No	No	No	Yes	No	Yes	No	Yes	Yes	No	No	No	No
South Hadley	Abbey St & Memorial Drive	Signalized	No	No	No	No	Yes	No	Yes	No	No	Yes	No	No	No	No
South Hadley	Granby Rd & Old Lyman Rd	Signalized	No	Yes	No	No	Yes	No	Yes	No	Yes	No	No	Yes	No	No
South Hadley	Lyman St & Newton St	Signalized	No	No	No	No	Yes	No	Yes	No	No	No	No	No	No	No
Southwick	Feeding Hills Road & College Highway	Signalized	No	No	No	No	Yes	No	Yes	No	No	No	No	No	No	No
Southwick	Depot Street, Granville Road & College Highway	Signalized	No	No	No	No	Yes	No	No	Yes	No	Yes	No	No	No	No
West Springfield	Union St & Bliss St	Unsignalized	No	No	Yes	No	No	No	No	No	No	No	No	No	Yes	Yes
West Springfield	Union St & Sprague St	Unsignalized	No	No	Yes	No	No	No	No	No	No	No	No	No	No	Yes
West Springfield	River St, Sears Way & Baldwin St	Unsignalized	No	Yes	Yes	No	No	No	No	No	No	No	No	Yes	No	No
West Springfield	Main St & Century Way	Unsignalized	Yes	Yes	Yes	Yes	No	No	No	No	No	No	No	No	No	No
West Springfield	Memorial Ave & US-5	Roundabout	No	Yes	Yes	No	No	No	No	No	No	No	No	Yes	No	No
West Springfield	Memorial Ave & Bridge St	Unsignalized	Yes	No	Yes	Yes	No	No	No	No	No	No	No	No	No	No
West Springfield	Riverdale St & Highland Ave	Signalized	No	No	Yes	No	Yes	No	Yes	No	No	Yes	No	No	No	No
West Springfield	Elm St & Park Ave	Signalized	Yes	Yes	Yes	No	No	No	Yes	Yes	Yes	Yes	No	Yes	No	No
West Springfield	River St, South Blvd & Park St	Signalized	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
West Springfield	Park Ave & Park St	Signalized	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No
West Springfield	Elm St & Park St	Signalized	No	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	No	Yes	No	No

Town	Name	Type	Intersection Lighting	High Visibility Crosswalks	General Maintenance Improvements	Median Island	Vehicle Signal Timing Mods	Signal Head Visibility	Pedestrian Signal Timing Mods	Pedestrian Signal Equipment	Curb Mods	No Turn on Red	Convert Signal to Mast Arm	Convert to Roundabout	Pedestrian Crossing	All Way Stop Control
West Springfield	Elm St & Kings Hwy	Signalized	No	No	Yes	No	Yes	No	No	No	No	No	Yes	No	No	No
West Springfield	Morgan Rd & Craig Dr	Signalized	No	No	No	No	Yes	No	No	Yes	No	No	No	No	Yes	No
West Springfield	Westfield St & Van Deene Ave	Signalized	No	No	Yes	No	Yes	Yes	Yes	Yes	No	Yes	No	No	No	No
West Springfield	US-5 & N End Bridge	Roundabout	Yes	Yes	Yes	No	No	No	No	No	No	No	No	Yes	No	No
West Springfield	Memorial Ave & Heywood Ave	Unsignalized	Yes	Yes	Yes	No	No	No	No	No	No	No	No	No	No	No
West Springfield	Memorial Ave & Exposition Terrace	Unsignalized	No	Yes	Yes	No	No	No	No	No	No	No	No	No	No	No
West Springfield	Memorial Ave & Circuit Ave	Unsignalized	No	Yes	Yes	No	No	No	No	No	No	No	No	No	No	No
West Springfield	Riverdale St & Morgan Rd	Signalized	No	No	No	No	Yes	No	Yes	No	Yes	No	No	No	No	No
West Springfield	Memorial Ave & Memorial Bridge	Roundabout	No	Yes	Yes	No	No	No	No	No	No	No	No	Yes	No	No
West Springfield	Union St & Day St	Unsignalized	No	No	Yes	No	No	No	No	No	No	No	No	No	Yes	Yes
West Springfield	Memorial Ave & River St	Signalized	No	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No	No
West Springfield	Westfield St & North Blvd	Signalized	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No

Municipal Level

MassDOT Complete Streets Policy provides a statewide framework to ensure transportation facilities are planned, designed, and operated to safely accommodate all users. PVPC assists communities in developing and adopting MassDOT-compliant local Complete Streets policies, preparing project-based Complete Streets Prioritization Plans grounded in safety, equity, and connectivity data, and applying for state construction funds under the Complete Streets Funding Program. For PVPC's member municipalities, this coordinated approach not only improves roadway safety conditions and supports implementation of small- and medium-scale safety projects but also ensures consistency with state design standards and maximizes opportunities to bundle safety projects with other federal and state funding sources.

Table22 shows a summary of segments and intersections that were selected for potential projects for each municipality.

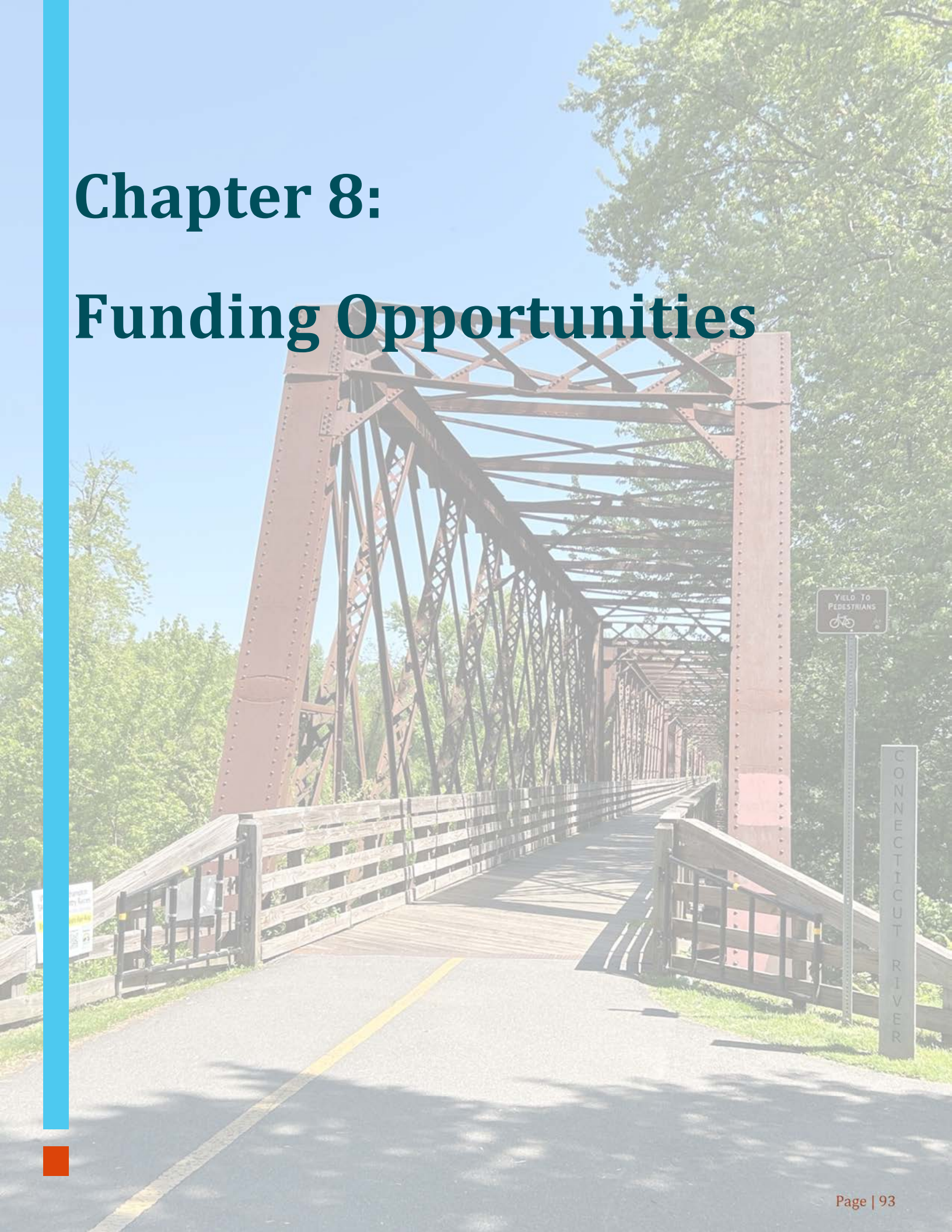
Table 22. Number of Prioritized Locations for Each Town

Town	Intersections	Segments	Town	Intersections	Segments
Agawam	10	11	**Ludlow**	9	10
Amherst	4	10	**Middlefield**	2	2
Belchertown	9	10	**Monson**	12	9
Blandford	12	9	**Montgomery**	11	4
Brimfield	18	9	**Northampton**	15	12
Chester	9	8	**Palmer**	10	7
Chesterfield	6	10	**Pelham**	8	5
Cummington	9	10	**Plainfield**	5	6
East Longmeadow	9	7	**Russell**	12	7
Easthampton	9	10	**South Hadley**	7	7
Goshen	9	8	**Southampton**	2	6
Granby	9	9	**Southwick**	3	9
Granville	7	10	**Tolland**	0	4
Hadley	21	9	**Wales**	8	5
Hampden	11	9	**West Springfield**	6	10
Hatfield	8	7	**Westhampton**	7	8
Holland	8	4	**Wilbraham**	9	10
Huntington	10	8	**Williamsburg**	10	9
Longmeadow	15	9	**Worthington**	8	7

Appendix D summarizes the details of priority locations for each municipality.

Chapter 8:

Funding Opportunities



This chapter identifies potential funding opportunities to advance projects and strategies identified in Chapter 8: Strategies and Project Development. This chapter explores federal, state, and private funding sources. Federal funding opportunities are based on the current Infrastructure Investment and Jobs Act (IIJA).

Identifying potential funding opportunities is a critical component of successful project development. PVPC's regional priorities focus on reducing fatalities and serious injuries for all users, advancing complete streets design to promote walking, biking, and transit, improving ADA accessibility, promoting resilience, and preserving the existing transportation system. These priorities align closely with several federal, state, and private funding programs, identified in the following sections.

Federal Funding Programs

In November 2021, Congress passed the IIJA, authorizing more than $551 billion to United States Department of Transportation (USDOT) for approximately 100 discretionary grant programs available to states, local governments, metropolitan planning organizations (MPOs), and other organizations. As of February 28, 2026, approximately 67 percent of IIJA funds had been obligated. The Regional Transportation Improvement Program is one of the primary avenues to fund a roadway improvement project. The current version of the program can be found here: PVPC FFY 2027-2031 TIP Document

Discretionary Grant Programs

Better Utilizing Infrastructure to Leverage Development (BUILD)

The U.S. Department of Transportation's (USDOT) Better Utilizing Investments to Leverage Development (BUILD) grant program funds multi-modal, multi-jurisdictional surface transportation projects that deliver significant local or regional benefits but are often difficult to advance through traditional funding sources. By allowing a broad range of sponsors—including state and local governments, counties, Tribal governments, transit agencies, and port authorities—to apply, BUILD aims to support transformative infrastructure investments that improve connectivity, safety, and economic vitality across communities.

BUILD funds may be used for both planning and capital projects involving eligible surface transportation infrastructure. Award amounts range from $1 million for rural capital projects and $5 million for urban capital projects to a maximum of $25 million. Planning grants have no award minimum and a maximum of $ 25 million.



Safe Streets and Roads for All (SS4A)

USDOT's SS4A Program funds local, regional, and tribal initiatives to prevent roadway deaths and serious injuries. Its purpose is to support the development and implementation of comprehensive safety action plans and projects that move communities toward zero traffic fatalities and serious injuries (often called "Vision Zero" or "Toward Zero Deaths"). SS4A is aimed primarily at local-level safety leadership, encouraging data-driven, community-informed strategies that address high-risk corridors, multiple road users (such as pedestrians and motorists), and disadvantaged communities.

Eligible applicants generally include cities, towns, counties, transit agencies, metropolitan planning organizations (MPOs), and federally recognized Tribal governments, as well as multijurisdictional groups formed through partnerships among these entities. Award amounts vary by grant type and funding round.

SS4A funds two main types of awards: (1) **Action Plan Grants** to help communities develop or complete a comprehensive safety action plan, and (2) **Implementation Grants** to carry out projects and strategies identified in an existing eligible safety plan.



Advanced Transportation Technologies and Innovative Mobility Deployment (ATTAIN)

The U.S. Department of Transportation's ATTAIN program supports the large-scale deployment of advanced transportation technologies that improve safety, reduce congestion, enhance system performance, and expand access to mobility. Its purpose is to help state and local agencies integrate cutting-edge intelligent transportation systems (ITS) and smart infrastructure—such as connected vehicle technologies, real-time traffic management, transit priority systems, and integrated data platforms—into everyday operations. By funding real-world deployments rather than small pilots, ATTAIN aims to demonstrate replicable models that other regions can adopt to improve travel reliability, safety outcomes, and multimodal accessibility.



Eligible applicants generally include state departments of transportation, local governments, transit agencies, metropolitan planning organizations (MPOs), and other public agencies responsible for transportation management or operations; applicants often apply individually or as part of a consortium. Award amounts are substantial and intended for full deployment rather than small trials; while exact ranges vary by funding round, individual awards commonly reach into the multi-million-dollar range to support multi-year implementation, system integration, and performance evaluation.

Rural Communities

Rural and Tribal Assistance Pilot Program

The Rural and Tribal Assistance Pilot Program provides grant support for legal, technical, and financial advisors to help move infrastructures project in rural and tribal communities forward. This program, created by the IIJA, is administered by the Build America Bureau, an agency within USDOT that supports transportation projects through innovative financing methods, including credit opportunities, grants, and technical assistance.

Eligible projects include pre-development phase activities such as:

- Project Planning & Feasibility Studies
- Preliminary engineering and design services
- Environmental reviews
- Financial analyses to assess benefit-cost ratios, public benefit studies, value-for-money (VRM studies, financing opportunities, and revenue forecasting

To be eligible for Rural and Tribal Assistance Pilot Program funds, communities must be located outside a United States Census Bureau designated Urban Area according to the 2020 census or located within an Urban Area with a population of less than 150,000. Federally recognized tribes are also eligible to apply for funds through this program.

PVPC is home to three 2020 Census Urban Areas, Amherst Town-Northampton-Easthampton, and Springfield, MA-CT. The Springfield, MA-CT Urban Area has a total population of 442,145, making any communities located within this area ineligible for funds through this Program.

Rural Surface Transportation Grant

The Rural Surface Transportation Grant program provides funding for transportation infrastructure projects in rural communities, defined as communities located outside of urban areas with populations over 200,000. As with the Rural and Tribal Assistance Pilot Program, all PVPC communities except those located within the Springfield, MA-CT Urban Area are eligible to apply for funds through this program.

For most projects, the minimum award is $25 million, though smaller awards are available for selecting projects as part of the small projects set-aside. For this program, eligible project costs include:

- Planning and project development phase activities
- Construction phase activities

Massachusetts State Grant Programs

Safe Routes to School (SRTS)

The SRTS Program is a nationwide movement designed to make walking and biking to school safer and more appealing for students of all ages and abilities. The national SRTS program was established in 2005, and all fifty states and the District of Colombia have active SRTS programs.

In Massachusetts, the SRTS program is administered by MassDOT and provides federal funding for programs and infrastructure projects through a suite of programs, including:

Eligible SRTS Improvements

- Sidewalk Improvements
- Traffic Calming and speed reduction improvements
- Pedestrian & Bicycle Cross Improvements
- On- and Off-Street-Street Bicycle Facilities
- Secure Bicycle Parking Facilities
- Traffic Diversion Improvements

- **Signs and Lines Program.** This program provides design services and up to $100,000 in construction funding to support low-cost infrastructure projects around a public school in a community. Only SRTS Program schools who have been SRTS partners for at least six months, and that receive public funding, can receive Signs and Lines program funds.
- **SRTS Infrastructure Program**: This program supports design and construction for infrastructure projects between $300,000 and $2 million that improve safety and encourage walking, biking, or rolling to school. Only SRTS Program schools in communities who have reached at least Tier II of MassDOT's Complete Streets Program and compliant with the MBTA Communities Act are eligible to apply for SRTS Infrastructure Program Funds.
- **Bike Rack Grants.** This Program provides new bike racks for schools that lack them, replaces old, worn, or damaged bike racks, or adds more bike parking spaces for schools with overflowing bike racks. Only SRTS Program schools who have been SRTS partners for at least six months

Currently, there are 152 schools in the Pioneer Valley region actively participating in the program, as discussed in **Chapter 6: Policy and Process Changes**.

MassDOT Complete Streets Program

MassDOT's Complete Street Program provides municipalities with tools and financial support to ensure transportation facilities are planned, designed, and operated to safely accommodate all users. MassDOT provides two types of financial assistance for Complete Streets projects:

- **Technical Assistance** for developing a Complete Streets Prioritization Plan. Up to $38,000 per community with a Complete Streets policy is available.
- **Construction Grants** support up to $1 million in funding to implement projects to redesign intersections and roadways, implement traffic calming measures, modify pedestrian crossings, improve pedestrian and bike networks, make transit improvements, and invest in environmental and streetscape improvements. Municipalities are only eligible to receive one grant per grant round.

Eligible Complete Street Improvements

- Geometry modifications at intersections and along roadways
- Traffic calming measures
- Pedestrian crossing improvements
- Bike improvements
- Streetscape improvements
- Transit connectivity and accessibility improvements

MassDOT Shared Streets and Spaces Program

MassDOT's Shared Streets and Spaces Program provides funding to municipalities and public transit authorities to implement quick-build improvements to public spaces. Applicants are eligible to request up to $150,000 in design funding and up to $1 million in construction funding. Grant requests for equipment and materials can be up to $250,000.

Primary program goals include supporting public health, safe mobility, and strengthened commerce in communities through projects that can be implemented quickly, flexibly, and at relatively low-cost.

Eligible Shared Streets and Spaces Program Activities

- Purchasing bikeshare equipment
- Bicycle & pedestrian infrastructure improvements
- Transit supportive infrastructure
- Public space redesign

MassDOT Local Early-stage and Actionable Planning (LEAP) Program

MassDOT's LEAP Program, launched in 2025, provides support for project planning and early-stage design for priority projects within municipalities across the Commonwealth. All communities are eligible to apply for LEAP funding, but the program prioritizes rural communities and gateway cities.

MassDOT provides $25,000 to $100,000 in support through MassDOT staff and on-call consultants to complete a wide range of activities, including:

- Concept development
- Design and engineering for Complete Streets Projects
- Safe Streets Network Strategy Development
- Grant Application Development
- Safety Analysis
- Traffic Analysis
- Design Documentation Support
- Cost Estimation Visual and Mapping Support
- Technical Analysis
- Site Investigation and Data Collection

Pioneer Valley Gateway & Rural Communities

Gateway Cities

Chicopee	Springfield
Holyoke	Westfield

Rural Communities

Belchertown	Hadley	Pelham
Blandford	Hampden	Plainfield
Brimfield	Hatfield	Russell
Chester	Holland	Tolland
Chesterfield	Huntington	Wales
Cummington	Middlefield	Ware
Goshen	Monson	Westhampton
Granby	Montgomery	Williamsburg

MassDOT Local Bottleneck Reduction Program

MassDOT's Local Bottleneck Reduction Program funds innovative solutions to modernize traffic signals and address congestion bottlenecks on local roadways. Applications may include single municipalities or a group of municipalities for improvements on municipally owned and operated roadways. Municipalities may also partner with Regional Transit Agencies (RTAs). The maximum funding for a project is $1 million in a single year.



Local Bottleneck Reduction

MassDOT Chapter 90 Program

The Chapter 90 program provides funding for improvements along local transportation networks. Chapter 90 funding is disbursed to communities annually based on a funding formula. Chapter 90 projects typically fall within one of four categories:

- Construction
- Equipment
- Consultant Services
- Other (software, salt storage sheds, garages, or mass transit parking facilities

Most communities rely on Chapter 90 funding to make state of good repair improvements such as paving, sidewalk repair, and minor structural improvements along municipally owned and operated roadways.

Massachusetts Community One Stop for Growth (OSFG)

The OSFG program is a single application portal and collaborative review process for 12 housing and community development grant programs offered through the Executive Office of Economic Development (EOED), the Executive Office of Housing and Livable Communities (EOHLC), and MassDevelopment Finance Agency (MassDevelopment). Programs such as the MassWorks and HousingWorks Infrastructure Programs, the Rural Development Fund, the downtown Initiative Capital Program, and the Housing Choice Grant program support both planning and construction grants for infrastructure improvements that support housing and mixed-use development in communities or transform town/village centers.

Program eligibility criteria and activities vary, and awards range from $100,000 for planning activities to as much as $5 million for infrastructure construction projects. OSFG provides communities with an opportunity to partner with private sector developers to support application development and in some case, preliminary engineering for infrastructure improvements that may be required for proposed developments. Through collaboration and partnership, projects can often be expanded in scope to include beneficial improvements for municipalities.

Private Funding Sources

In addition to federal and state funding opportunities, safety improvement projects can also advance by utilizing private funds. Traditional sources of private grant funding typically include family and independent foundations, corporate foundations and giving programs, and philanthropic organizations such as charitable trusts and donor-advised funds. While private grant funding has been an effective tool for many communities, in recent years, public-private partnerships (P3) have become increasingly effective for communities as a strategy for implementing transportation improvements. This section identifies provides a high-level summary of several private grant opportunities as well as a discussion of P3s.

Private Grant Opportunities

Table 23. Selected List of Private Grant & funding Opportunities for Safety Improvements

Organization Name	Grant Program(s)	Eligible Applicants	Eligible Safety Improvements	Typical Award Range
Community Foundation of Western Massachusetts (CFWM)	Competitive Grants / Donor-Advised Funds	Municipalities and nonprofits may both be eligible in some cycles (confirm each RFP)	Walkability and bike ability projects tied to health or equity; safe routes to parks and schools; crosswalks and lighting near community facilities; public realm improvements that enhance safety	$5,000–$50,000+ (donor-advised funds can be higher; varies widely)
Massachusetts Environmental Trust (MET)	General Grants / Partnership Grants	Municipalities, regional planning agencies, and nonprofits	Green streets and stormwater-management street retrofits that also improve pedestrian and bike safety	$10,000–$50,000; some larger multi-year awards
Eversource Foundation	Eversource Community Impact Grants	Municipalities, public agencies, and nonprofits in the Eversource service area	Public safety and community improvement projects, including lighting upgrades, safe routes to community facilities, and resilience projects that include safe evacuation and transport	Often $2,500–$25,000; sometimes higher for strategic projects
AARP	AARP Community Challenge	Municipalities, tribal governments, and nonprofits	Quick-build infrastructure such as crosswalks, curb extensions, traffic calming, parklets, benches, lighting, wayfinding, and safe crossings near senior housing or senior centers	Roughly $10,000–$50,000 (depending on small vs. large grant tier and year)
PeopleForBikes	Industry Community Grant Program	Municipalities and other public agencies, plus nonprofits	Bike lanes and paths, protected intersections, bike parking, trail connections, and other bike infrastructure where safety is a core benefit	Usually up to about $10,000 (often 10–50% of total project cost)
Baystate Health Foundation / Baystate Community Benefits (Baystate Medical Center, Noble, Wing, Franklin)	Community Benefits Grants / Community Health Initiatives (varies by hospital and Determination of Need process)	Nonprofits, health, and community coalitions, sometimes municipalities as partners or sub-recipients; PVPC and local health departments often good leads or collaborators	Sidewalk and crosswalk improvements near hospitals, clinics, and schools; traffic calming in high-injury neighborhoods; safe routes to health services and healthy food; injury-prevention projects combining infrastructure (e.g., lighting, crossings) and education; active transportation projects that address CHNA-identified priorities (e.g., chronic disease, equity, injury)	$10,000–$100,000 per project cycle; Some funds can be larger for multi-year or capital projects depending on the hospital and project scope

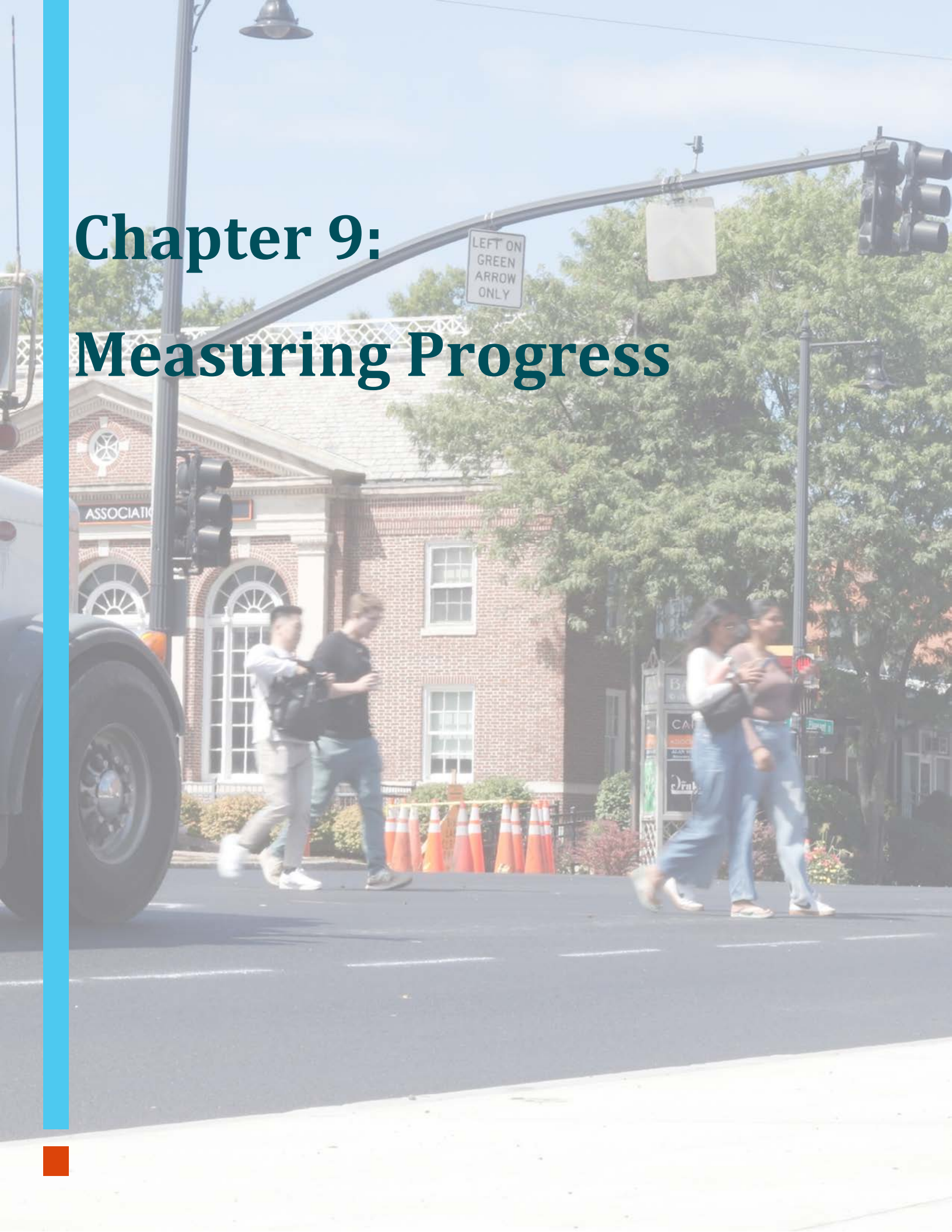
Note: Award ranges are indicative and may change; always confirm current program guidelines on the funder's website or by contacting program staff.

Public-Private Partnerships

P3s present communities with unique opportunities to secure financial support for infrastructure improvements from private partners. This has become increasingly important as communities work to construct more housing and mixed-use development. These developments often require significant off-site transportation improvements, which can be paid for by private developers as a condition of a zoning or building permit. Municipalities throughout Massachusetts have also been successful in partnering with private developers to apply for grants such as Community One Stop for Growth's MassWorks or HousingWorks Infrastructure Program, to secure funds to make more comprehensive and expansive infrastructure improvements associated with development. In most cases, the private developer provides financial support for grant application development, preliminary design and engineering, and often contributes to local match. As communities throughout the Pioneer Valley region continue to address the demand for housing and new development, strategic P3s can be leveraged to accomplish safety goals while supporting overall economic growth.

Chapter 9:

Measuring Progress

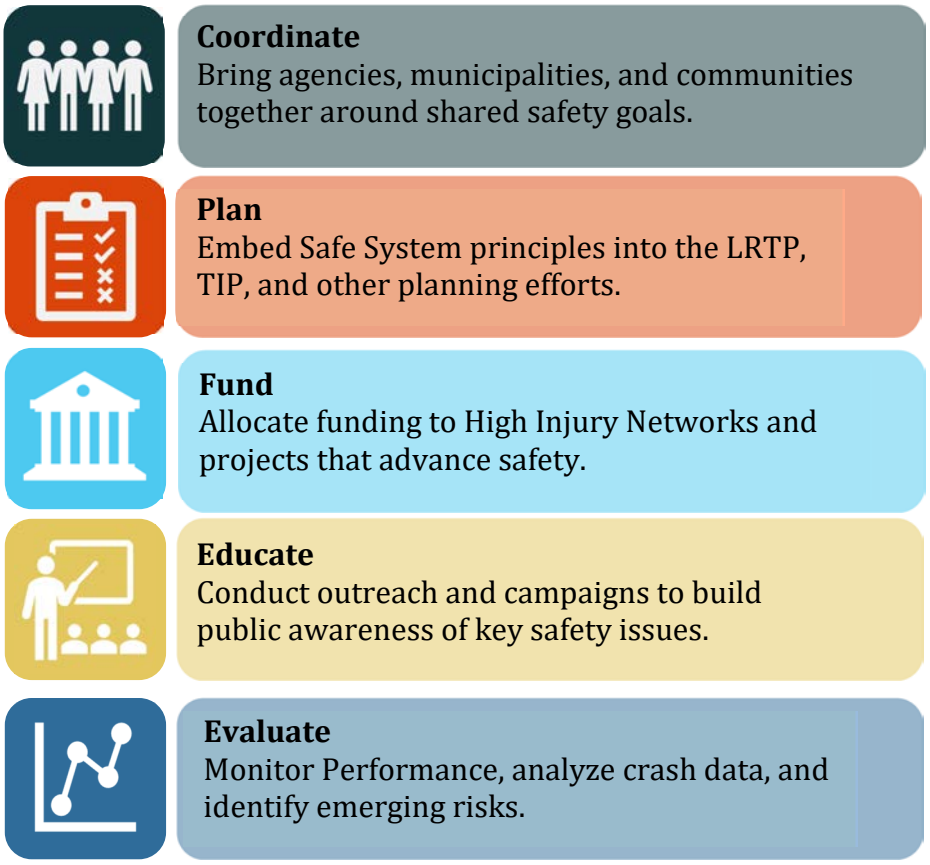


The Pioneer Valley Safe Streets Plan demonstrates an important advancement in the region's dedication to eliminating traffic fatalities and serious injuries by 2050. Its success will depend on ongoing collaboration and deliberate, proactive implementation. Although the plan establishes a regional framework, its true impact will be determined by the collective efforts of all stakeholders—from state agencies and municipalities to community organizations and individual road users.

This section reviews current safety performance measures and introduces new measures that will be reported annually, in alignment with PVPC's Vision Zero Resolution. Pioneer Valley will continue to monitor safety trends across the region by routinely analyzing crash data, identifying emerging safety concerns and community needs, and staying current with best practices and proven safety countermeasures.

PVPC's Role

PVPC will continue to play a central role in measuring progress for the Pioneer Valley Safe Streets Plan by establishing clear regional safety performance measures, tracking data over time, and reporting results back to partners and the public. They will link these metrics to funding and planning decisions—evaluating whether investments, policies, and programs are reducing severe crashes and advancing equity—and use annual or periodic reporting to document progress toward Vision Zero or other safety goals. Through this continuous evaluate-and-adjust cycle, Pioneer Valley can ensure that the Pioneer Valley Safe Streets Plan remains accountable, data-driven, and responsive to changing conditions in the region.



Performance Measures

Establishing a formal method to evaluate and monitor safety performance will strengthen accountability and build on the PVMPO's existing performance-monitoring practices, and the measures established by FHWA and MassDOT. Using this Plan, the region will track and report regional safety progress each year against the plan's goals, drawing on both outputs and outcomes. Outputs will document the PVMPO's efforts to support, promote, and lead safety initiatives, programs, policies, plans, and projects. Outcomes will assess how effectively these activities and investments reduce the frequency and severity of crashes, and the resulting evaluation findings will be used to reinforce successful strategies and refine or discontinue those that are not producing the desired safety benefits.

In terms of specific regional output measures, the following will tracked annually for the Region:

- Number of Fatal and Serious Injury Crashes
- Number of Fatalities and Serious Injuries (1-year and 5-year rolling averages)
- Fatal and serious injury rates per 100 million VMT
- Fatal and serious injury rates per 100 million population
- Total pedestrian serious injuries and fatalities per calendar year
- Total bicyclist serious injuries and fatalities per calendar year
- Number of safety projects/strategies in the Plan completed regionally and by community
- Number of projects implemented in EJ communities year by year

Annual Reporting

To continuously improve and better align strategies with regional transportation safety needs and goals, Pioneer Valley will implement a transparent, data-driven system for monitoring and reporting progress. Each year, it will prepare and distribute a Vision Zero progress report or report card that highlights key safety trends, accomplishments, and ongoing challenges. In line with SS4A requirements, the PVMPO will also publish an annual, publicly accessible report documenting progress toward reducing roadway fatalities and serious injuries, including both outcome and implementation performance measures over time. This report will be posted on the MPO's website, presented at an MPO meeting, and shared with USDOT, to keep stakeholders and community members informed and actively engaged in the region's safety efforts.

Updating the Plan

After five years, the safety trends and prioritized projects within the Pioneer Valley Region may have changed. At this point, PVMPO will evaluate whether an update to the plan is needed to update the project lists, strategies and safety analysis using new crash data and any new understanding of safety countermeasures that may have evolved. This effort may be added to the regular updates to the Regional Transportation Plan.