Safe Streets for Southeastern CT

SECOG SAFETY ACTION PLAN

FOR SOUTHEASTERN CONNECTICUT

2026

SECOG

Adopted April 15, 2026

BETA

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SECOG's Member Municipalities & Tribal Nations

- Bozrah
- Colchester
- East Lyme
- Franklin
- Griswold
- City of Groton
- Town of Groton
- Borough of Jewett City
- Lebanon
- Ledyard
- Lisbon
- Montville
- New London
- North Stonington
- Norwich
- Preston
- Salem
- Sprague
- Stonington
- Borough of Stonington
- Waterford
- Windham
- Mashantucket Pequot Tribal Nation
- The Mohegan Tribe

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EXECUTIVE SUMMARY

What is a Safety Action Plan?

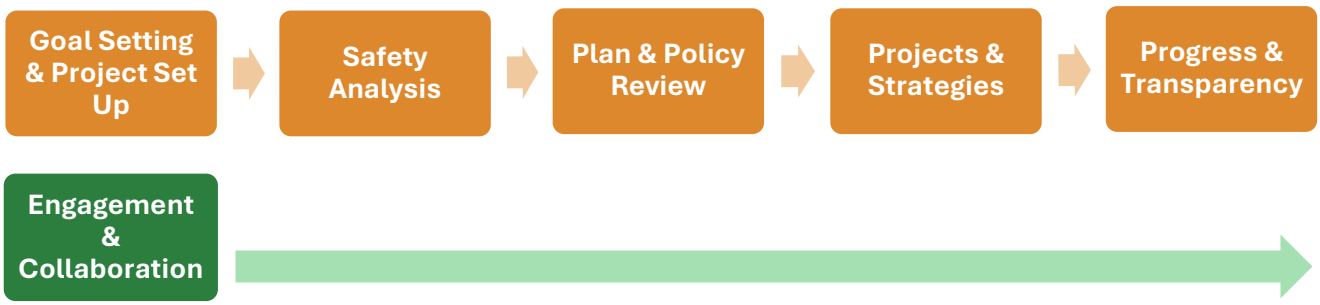
The Southeastern Connecticut Council of Governments (SECOG), Southeastern Connecticut's regional planning agency, received a federal Safe Streets for All (SS4A) planning grant in 2024 to develop an SS4A Safety Action Plan. The Safety Action Plan serves as an update to the SECOG 2022 Regional Safety Plan. The plan is a roadmap of specific actions and policies for the region to implement to reduce roadway deaths and serious injuries. The plan enables the 22 cities, towns and boroughs in the SECOG region to apply for implementation funding provided through the SS4A program to design, construct, or implement policy recommendations outlined in the plan.

Key Plan Goals

- Achieve **a goal of zero** roadway deaths and serious injuries
- Identify a **high injury network** of intersections and roadway segments
- Collect **feedback from the public and local stakeholders** on unsafe roadways and intersections
- **Develop recommendations** for site specific safety projects and regional safety policies and strategies
- Determine **key performance measures** to track progress towards Vision Zero
- Ensure SECOG and its member municipalities are eligible for **implementation funds** through the federal SS4A funding program.

Planning Process

As part of the planning process, SECOG convened the planning team, formed a Vision Zero Task Force, developed a Vision Zero goal, conducted a safety analysis identifying key crash trends and high crash clusters, reviewed past traffic safety plans and existing transportation safety policies, created recommendations, and identified performance measures for ongoing plan evaluation. Throughout the process, SECOG engaged the public and key stakeholders.



A Vision Zero Goal for the SECOG Region

Federally funded Safety Action Plans follow a process which includes establishing a target date to eliminate deaths and serious injuries. The SECOG vision zero task force reviewed best practices and set a meaningful target which may be attainable if projects identified in the plan are programmed.

SECOG has set a goal to achieve zero roadway deaths and serious injuries by

2047

Public Engagement

SECOG gathered input from the public and stakeholders to enhance understanding of safety issues and inform potential recommendations. The public engagement process involved meetings with the Vision Zero Task Force, individual stakeholder meetings with leaders in each of SECOG's cities, towns and boroughs, three public meetings, an online interactive map with over 200 responses, three walk audits at high injury locations, and an online survey with over 600 responses.

Key Issues We Heard

- Speeding
- Distracted driving
- Drunk or impaired driving
- Unsafe pedestrian crossings
- Managing conflicts between vehicles, pedestrians, bicyclists, and other road users (e.g. dirt bikes, ATVs, etc.)
- Motorcyclist safety
- Stop sign compliance
- Insufficient bicycle and pedestrian connectivity
- Insufficient enforcement
- Conflicting turning movements at intersections
- Commercial driveway turning conflicts
- Misaligned intersection geometry
- Road departure crashes
- Nighttime visibility on winding roads
- Red light running
- Poor sightlines, especially due to vegetation overgrowth

Safety Analysis

The plan includes an analysis of crash trends and documents the region's high injury network (map of historic high crash and high crash risk locations). The safety analysis informed the plan's recommended safety policies and traffic safety countermeasure toolboxes, as well as helped to identify site-specific projects at high injury intersections and roadway segments.

Between 2020-2024, 135 crashes resulted in fatal injury and 423 crashes resulted in serious injury.

Crashes most likely to result in serious or fatal injury include crashes involving a pedestrian, crashes on dark-unlighted roadways, crashes involving a driver under the influence, crashes on state roads, crashes on curved roadways, and head-on crashes.

Projects and Strategies

The updated Safety Action Plan combines the results of the safety analysis and community input to identify projects across the region at high injury locations. For each of the top projects, the plan provides preliminary countermeasures to address key safety concerns. The top 40 project locations are listed below. The projects listed are split into two categories: projects identified due to a high frequency and severity of motorist crashes and projects identified due to a high frequency of non-motorist crashes and/or noted location of high pedestrian activity by stakeholders. Although projects are separated into motorist and non-motorist specific projects, many project locations experience multi-modal safety issues**.** To see the full list of projects with countermeasure recommendations and selection criteria, go to page 71. For a full list of municipal projects, use the municipal project guide in Appendix A.

In addition to site-specific safety recommendations, regionwide policies and strategies were identified to address key aspects of the Safe Systems Approach – Safer People, Safer Vehicles, Safer Speeds, Safer Roads, and Post-Crash Care. Recommended policies and strategies start on page 86.

Implementation Responsibility – State, Regional, State and Local

As a regional planning agency, SECOG's implementation role is to provide technical assistance to municipalities, advocate for policies on a statewide level, provide training, and develop programming of projects. Implementation of site-specific projects and strategies, submitting implementation funding applications, and funding of enforcement is the responsibility of municipalities and the state.

List of Top Regional Projects

Motorist

Rank	City / Town	Project Description
1	Franklin	Franklin Turnpike (CT-32) from Franklin Town Hall to Tyler Road
2	Lisbon	River Road (CT-12) from Lee Road to I-395 Interchange
3	Groton	Fort Hill Road (US-1) from South Road (CT-649) to Vergennes Court
4	Colchester	Middletown Road (CT-16) corridor improvements from Westchester Road (CT-149) to Standish Rd
5	Preston	Poquetanuck Road (CT-2A) from Laurel Hill Road (CT-12) to Middle Road
6	Groton	Long Hill Road (US-1) from Wayne Road to Poquonnock Rd
7	Franklin	Franklin Turnpike (CT-32) from Norwich-Lebanon Road (CT-87) to Murphy Road
8	Norwich	W Main Street (CT-82) from N High Street to Washington St (CT-2)
9	Windham	Boston Post Road (US-6) from Airport Road to Walmart Driveway (Northridge Drive)
10	New London	Bank Street (US-1) from Colman Street (CT-639 / US-1) to Howard Street
11	Waterford	Hartford Turnpike (CT-85), from I-95 WB Off Ramps to Cross Road
12	Norwich	N Main Street (CT-12) from north of 14th Street to north of Edgewood Road
13	New London	Colman Street (US-1) from Waldo Street to Cedar Grove Avenue
14	East Lyme	Boston Post Road (US-1) from Church Lane to Flanders Road (CT-161)
15	Groton	CT-12 corridor, from Charter Oak Drive to Gold Star Highway (CT-184) WB Off-Ramps Interchange
16	North Stonington	Norwich-Westerly Road (CT-2) from Mains Crossing Road (CT-201) to Swantown Hill Road
17	Norwich	Stonington Road / E Main Street (CT-2) at Palmer Street / Palmer Street Ext
18	Preston	Norwich-Westerly Road (CT-2) at Ross Road and Mathewson Mill Road
19	Windham	Boston Post Road (US-6) at North Windham Road (CT-203)
20	Colchester	Parum Road (CT-354) at Lake Hayward Road
21	Montville	Norwich Salem Turnpike (CT-82) south of Green Valley Drive
22	Salem	New London Road (CT-85) from Horse Pond Road to Emerald Glen Lane
23	Lisbon	N Burnham Highway (CT-169) at Kimbal Road and Meadow Brook Circle
24	Montville	Norwich New London Turnpike (CT-32) from Fort Shantok Road to Golden Road

Rank	City / Town	Project Description
25	Norwich	Salem Turnpike (CT-82) from I-395 NB Off Ramp to Orchard Lane
26	Windham	South Street over Frog Bridge, including intersections of Pleasant Street (CT-32) and Main Street (CT-66)
27	Waterford	Boston Post Road (US-1) from Rope Ferry Road (CT-156) to Miner Lane
28	Norwich	Veterans of Foreign Wars Highway (CT-2 / CT-32) at Washington Street (CT-2)
29	Stonington	Liberty Street (CT-2) from Voluntown Road (CT-49) to I-95 NB Off-Ramp
30	Groton	North Road (CT-117) from Gold Star Highway (CT-184) to Alpha Ave

Non-Motorist

Rank	City / Town	Project Description
1	Salem	Old Colchester Road (CT-354) from Gardner Lake Volunteer Fire Company to Norwich Road (CT-82)
2	Norwich	Salem Turnpike / W Main Street (CT-82) from west of Surrey Lane to east of Dunham Street
3	Windham	Main Street (CT-66) from Bridge Street (CT-32) to Arnolds Lane
4	New London	Broad Street from Ledyard Street to Cleveland Street
5	Stonington	Coogan Boulevard from Greenmanville Avenue (CT-27) to Jerry Brown Road
6	Norwich	Washington Street (CT-2), Chelsea Parade St, Crescent Street, and Broadway near Norwich Free Academy and Chelsea Parade.
7	Griswold	Main Street (CT-12 / CT-138) from S Main Street to Ashland Street – Jewett City
8	Griswold	N Main Street (CT-12) from north of E Main Street (CT-201) to south of Lenox Avenue
9	Stonington	W Broad Street (US-1) from Pequot Trail (CT-234) east to the RI border
10	Windham	Valley Street from Mansfield Avenue to High Street

Measuring Progress

As communities in the SECOG region implement recommended projects and strategies, SECOG will evaluate if implemented improvements are moving the region closer to the goal of Vision Zero. The plan identifies measures of outcome, measures of implementation, and strategies to track key targets of achieving zero fatal and serious injuries by 2047. Recommended performance measures to track progress include the number of safety projects/strategies implemented by community each year, the total number of fatal and serious crashes over the past five years and the number of non-motorist fatal and serious injury crashes over the past five years.

INTRODUCTION

What is a Safety Action Plan?

In 2021, the Bipartisan Infrastructure Bill established the Safe Streets and Roads for All (SS4A) program, which funds regional planning initiatives intended to reduce serious and fatal injuries on roadways within the United States.

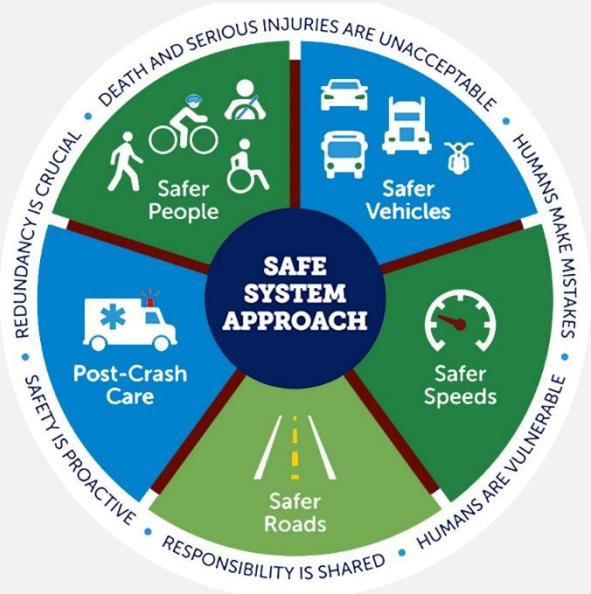
The SS4A grant program centers on a Safe System Approach that recognizes:

- Death and serious injuries on our roads are unacceptable
- People make mistakes
- Responsibility is shared
- Safety is proactive
- Redundancy is crucial.

The Southeastern Connecticut Council of Governments (SECOG) received an SS4A planning grant in 2024 to develop a Safety Action Plan, which is a roadmap for specific actions and policies the region can implement to reduce roadway deaths and serious injuries. The Safety Action Plan functions as an update to SECOG's Regional Transportation Safety Plan, published in 2022, building on work the region has already completed to improve roadway safety. The plan enables communities across the SECOG region in Southeastern Connecticut to apply for implementation funding provided through the SS4A program to design and construct recommendations outlined in the Safety Action Plan. Every Safety Action Plan through the SS4A grant program must include the seven key components outlined below. SECOG's Safety Action Plan includes all required components, with some modifications to the chapter order.

Components of a Safety Action Plan

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



The Planning Process

SECOG began the planning process by convening the planning team and forming an advisory committee comprised of regional stakeholders to guide the planning process through key decision points. SECOG also developed a Vision Zero goal – the date by which the region plans to reduce fatal and serious crashes to zero. The planning team conducted a safety analysis identifying key crash characteristics and high crash clusters, conducted a review of relevant past plans and policies, existing Connecticut statewide, regional and local programs, and created recommendations for policies, projects, and strategies to be implemented towards achieving the Vision Zero goal. Throughout the process, SECOG focused on engaging with members of the public, stakeholders from the region's 22 cities, towns, and boroughs, and public agencies. The elements of the planning process are described in more detail below.

Engagement & Collaboration

- Advisory Committee Meetings
- Interviews with Municipalities
- Meetings with State Agencies
- Website and Public Facing Project Dashboard
- Public On-Line Survey and Interactive Map
- Walk Audits in Select Locations
- Virtual & In-Person Public Meetings

Goal Setting & Project Set Up

- Develop and Publicly Commit to Vision Zero Goal
- Formation of Planning Team and Advisory Committee

Safety Analysis

- Data Collection
  - Roadway Crashes
  - Roadway Characteristics
- Safety Trends and Characteristics in Region
- High Injury Network Identification
  - Historic Crashes
  - Risk Factors

Plan & Policy Review

- Relevant Past Planning Efforts
- Review of Existing Policies and Programs
- Desired Policy Changes

Projects & Strategies

- Proven Safety Countermeasures
- High Injury Network Prioritization and Projects
- Regionwide Roadway Safety Strategies

Progress & Transparency

- Ongoing Monitoring
- Publicly Available Plan and Progress

The SECOG Planning Context: 22 Towns, Cities, and Boroughs

The SECOG Region is comprised of 22 towns, cities, and boroughs in Southeastern Connecticut. The region has several larger cities and towns including New London, Groton, Stonington, and Norwich with more urbanized street networks. Several communities are rural characterized by lower volume roadways and less dense land uses. Others are characterized by more suburban development.

Many of the major roadways travelling through SECOG communities are under State jurisdiction and maintained by Connecticut Department of Transportation (CTDOT), while others are maintained by municipalities. The region shares borders with two federally recognized tribal nations – the Mashantucket Pequot Tribal Nation and the Mohegan Tribal Nation. The tribal nations and SECOG work closely together where roadway safety issues cross borders. The region has several large traffic generators and employment and tourist centers, including two casinos, Electric Boat in New London, and Olde Mistick Village in Stonington.

The Southeast Area Transit District (SEAT) is the main transit provider in the area, offering fixed route bus service between the region's larger communities. Amtrak Northeast Regional train service also serves New London and the Mystic station in Stonington. Interstates 395 and 95 are the major interstates serving the region.

Quick Facts about the SECOG Region

Total Population: 279,025

Population Density (Densest Community): 1,624 people/square mile (Groton)

Population Density (Least Dense Community): 215 people/square mile (Sprague)

Percent of Roads that are State-Owned: 25%

Percent of People Over 65: 19%

Percent of People Under 18: 20%

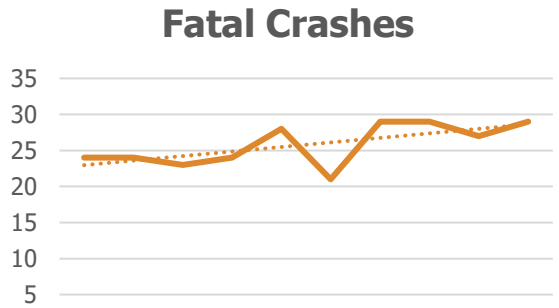
Percent People of Color (including Hispanic/Latino of any race): 31%

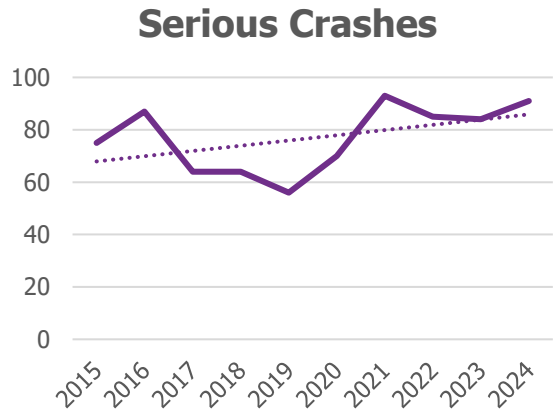
Source: U.S. Census American Community Survey 5-year estimate 2023, U. S. Census 2020, CTDOT Roads (excluding interstates)

SECOG's Roadway Safety Problem

When a community member is seriously injured or killed while traveling, this unpredictable event causes grief to families and loved ones. These tragedies also affect all of us - they create the perception that roadways are unsafe. The perception of unsafe roadways is exacerbated when it comes to walking, biking or rolling - when there is often less physical protection in the event of a crash.

In the SECOG region, fatal and serious crashes have been trending upwards since 2015, though serious crashes saw a downward trend between 2016 and 2019. In 2020, serious injury crashes began to increase during COVID-19. Fatal crashes have been generally increasing as well, though on average, the region has seen around 25-30 fatal crashes every year between 2015-2024. Remembering that even one life lost is too many, SECOG has developed a plan to eliminate fatalities and severe injuries on the region's roadways.





Source: CT Crash Data Repository

A VISION ZERO GOAL FOR THE SECOG REGION

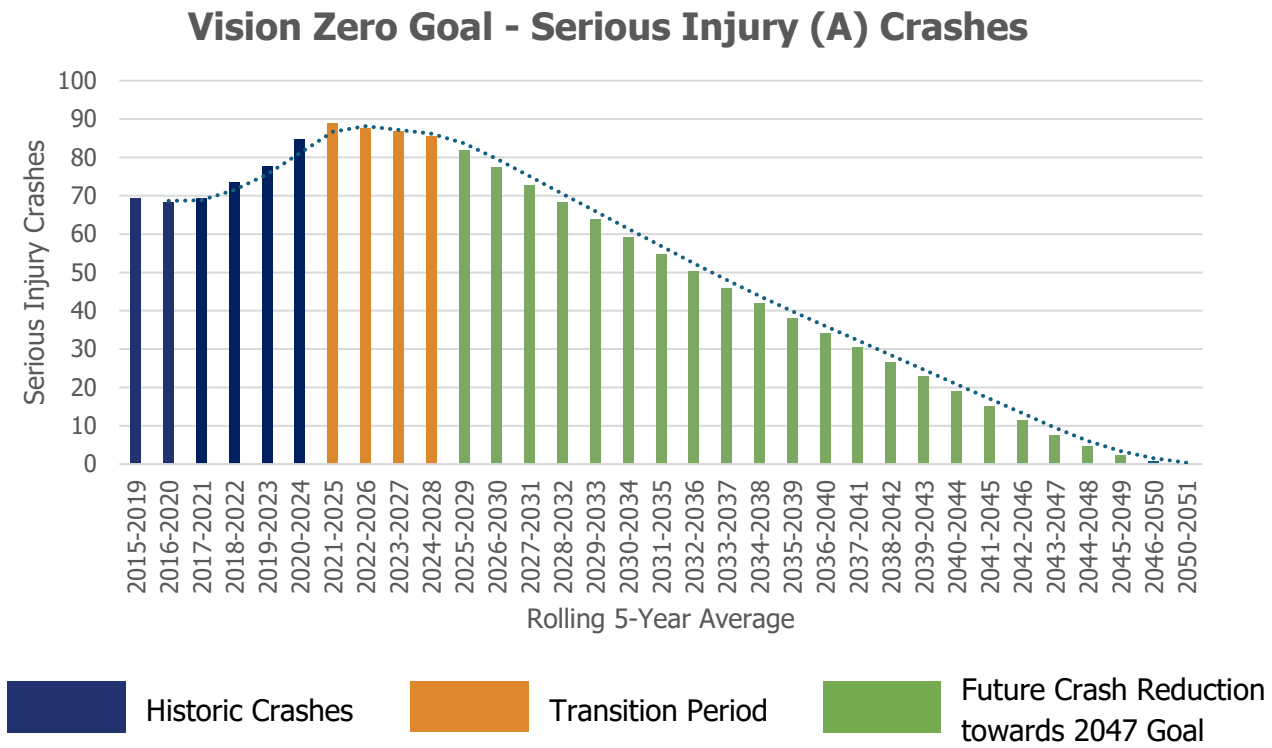
As part of the Safety Action Plan, SECOG has developed a goal for achieving Vision Zero. Vision Zero is a strategy to eliminate all traffic fatalities and severe injuries. This goal recognizes that just one traffic death is unacceptable, and the pain and suffering associated with just one roadway death is preventable.

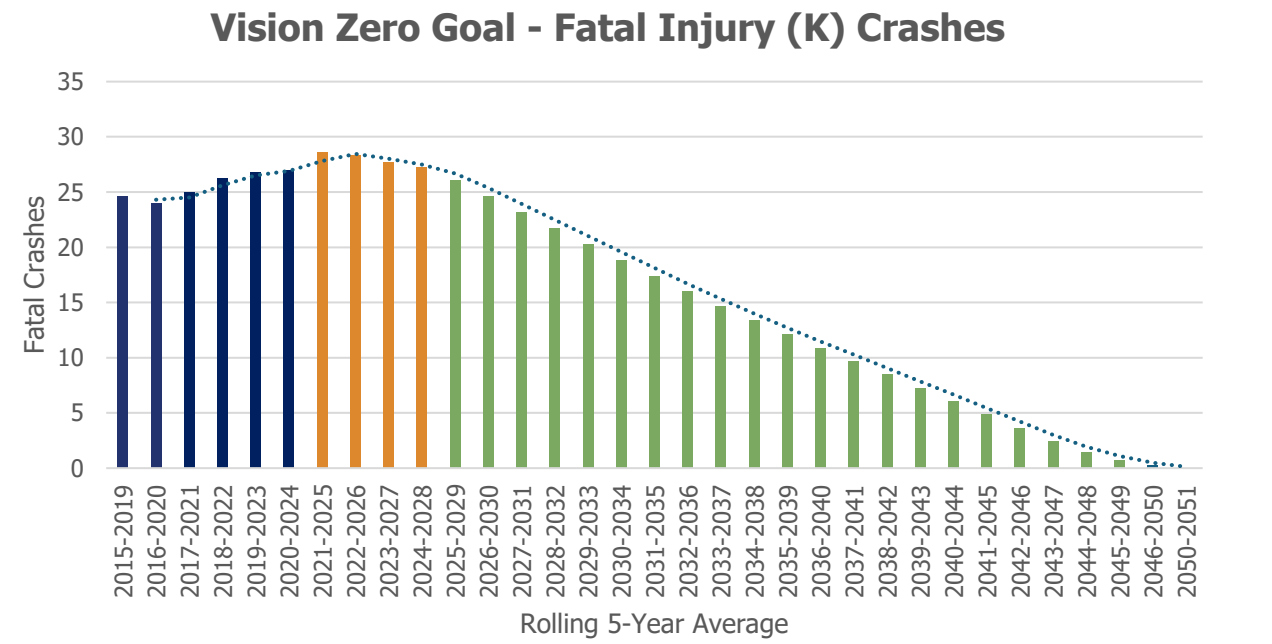
SECOG has committed to a goal to achieve zero roadway deaths in 20 years, by 2047. The charts on the following page outline the necessary crash decreases to reach this goal.

SECOG has set a goal to achieve zero roadway deaths and serious injuries by

2047

The SECOG Vizion Zero Goal was developed by mapping past trends and analyzing necessary crash reduction to achieve zero serious and fatal injuries. The following charts outline the schedule for achieving Vision Zero.





Source: Historic Crash Information from Connecticut Crash Data Repository

PUBLIC ENGAGEMENT

Engagement Goal

The goal of public engagement for the Safety Action Plan was to communicate with and inform members of the public and project stakeholders throughout the planning process. The project team engaged a geographically representative group of people who use, maintain, and enforce safety on SECOG's roads through a variety of methods. These conversations and interactions enhanced the project team's understanding of safety issues as identified through the crash analysis.

Engagement Methods

Vision Zero Task Force

The Vision Zero Task Force was composed of representatives from seven municipalities (Norwich, Town of Groton, New London, Stonington, Colchester, Griswold, and North Stonington), two advocacy organizations, the Mashantucket Pequot Tribal Nation, and the Connecticut Department of Transportation. The project team met with the Task Force three times during the development of the plan to discuss preliminary crash analysis findings, share the draft high injury network, and present the final plan. The Vision Zero Task Force additionally provided early input on the high injury network, suggested policies and strategies to address roadway safety, and offered additional local context for the recommendations and countermeasures that are included in the plan. Notes from the Vision Zero Task Force Meetings are in Appendix B.

Stakeholder Meetings

The project team conducted interviews with 16 of the 22 SECOG communities, as well as with the Mashantucket Pequot Tribal Nation. These interviews took place between the summer and fall of 2025. The meetings were generally attended by municipal staff – emergency services, public works, mayors, town managers, administrators, and planners. These meetings offered extensive insight into areas of concern in each community in addition to those highlighted by the high injury network, including commonly observed safety issues such as speeding or distracted driving, and interventions being considered to address ongoing safety concerns.

The project team additionally met with four external stakeholders working on traffic safety concerns across the state – Watch for Me CT, Safe Routes to School, the Connecticut Department of Public Health (DPH) and Department of Emergency Management and Homeland Security's Regional Emergency Planning Team-Public Health. DPH shared opportunities for enhanced access to data to improve safety evaluation, especially of emerging transportation modes such as e-bikes. Watch for Me CT is a valuable partner for towns, providing curated messages around Connecticut-specific safety needs. The Safe Routes to School program offers technical assistance to municipalities and private schools to enhance walking and biking to schools. These meetings focused on strategies for addressing safety concerns, the abundant

resources already offered to municipalities and COGs, and potential safety countermeasures. Notes from meetings with each community are located in the municipal guide in Appendix A. A summary of meetings with the other regional safety stakeholders is in Appendix C.

Public Meetings

The project team held three public meetings over the course of the planning process: two in June 2025 (one in person at the SECOG offices, one virtual) and one in January 2026. The first public meetings provided an introduction to the Safe Streets and Roads for All (SS4A) grant program and shared initial top locations and key crash trends identified through the development of the high injury network. The project team solicited feedback from participants on top crash locations, additional locations where improvements could be made, general safety concerns, and types of countermeasures they would like to see. The virtual meeting used digital whiteboards to enable participants to answer questions and share ideas, while the in-person meeting provided the same exercise using poster boards and sticky notes.

The second public meeting was held on January 22, 2026, and focused on soliciting feedback on the draft plan, including top priority locations and countermeasures. Notes from the public meetings are in Appendix D.

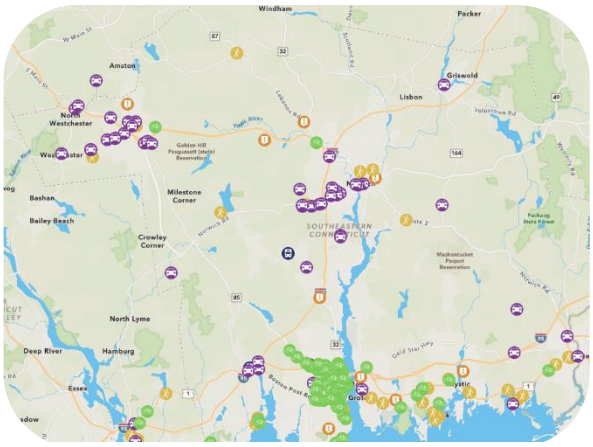
Public Survey

A survey was published online as part of the engagement process and was distributed to municipalities and advocacy organizations around the region to ensure that responses represented the geographic diversity of the region, as well as the different ways people travel. The survey was available online from June to November 2025 and received 568 total responses. The survey asked respondents to identify which modes they used most frequently (driving, walking, etc.), to share their general safety concerns, and to highlight specific locations within their communities where they have observed safety issues. A summary of the survey results can be found in Appendix E.

Flyer advertising the public survey.

Interactive Map and Dashboard

The project team additionally developed an interactive map which allowed visitors to place points and comments at specific locations of concern around the region. An interactive map was also used during the public comment period to collect comments on draft projects, and received 250 responses. A summary of responses can be found in Appendix F.



The public input map was posted on the SECOG website.

Walk Audits

The project team conducted walk audits at three of the top locations for crashes in the region. These locations were determined through the development of the high injury network and supplemented with input from the public survey, interactive map, and stakeholder interviews. The three locations chosen were: Willetts Avenue in New London, Old Colchester Road in Salem, and Norwichtown Green in Norwich. The project team scheduled walk audits with staff from each municipality, often including the Departments of Public Works and Planning, town administrators, and emergency services providers. Walk audits took place between September and December 2025. Common issues discussed included speeding, poor sightlines, red light running, and inadequate pedestrian infrastructure. Recommendations were tailored to each of the three walk audit locations, the summaries of which can be found in Appendix G.

The project team conducting a walk audit on Old Colchester Road in Salem.

What We Heard: Safety Concerns

The Safety Action Plan seeks to identify and address pressing safety issues within SECOG communities. Through the public engagement process, the planning team heard a great deal of safety issues raised by people who live, work, and recreate in the region. Notable themes that arose from all aspects of public engagement were speeding, distracted or impaired driving, poor sightlines, and insufficient pedestrian and bicycle accommodation.

COMMON CONCERNS HEARD FROM MUNICIPAL OFFICIALSAND THE PUBLIC	
Speeding	Insufficient enforcement
Distracted driving	Conflicting turning movements at intersections
Drunk or impaired driving	Commercial driveway turning conflicts
Unsafe pedestrian crossings	Misaligned intersection geometry
Managing conflicts between vehicles, pedestrians, bicyclists, and other road users (e.g. dirt bikes, ATVs, etc.)	Road departure crashes
Motorcyclist safety	Nighttime visibility on winding roads
Stop sign compliance	Red light running
Insufficient bicycle and pedestrian connectivity	Poor sightlines, especially due to vegetation overgrowth

What We Heard: Preferred Safety Improvements

Below is a selection of the types of safety improvements heard throughout the public engagement process as interventions communities would like to see. Certain communities may prefer some treatments to others; for example, some communities may be more hesitant to install speed humps due to maintenance concerns, while others may be more comfortable with testing different treatments.

Speed management

- Speed tables or humps
- Lowering speed limit
- Speed feedback radar signs
- Narrowing travel lanes
- Increased enforcement
- Improved school zone signage

Intersection safety

- Improving intersection geometry and tightening turning radii
- Roundabouts
- All-way stop
- Vegetation management to improve sightlines
- No turn on ted

Pedestrian and bicycle safety

- Rectangular rapid flashing beacons (RRFBs) at crosswalks
- Curb extensions at crosswalks
- Raised crosswalks or intersections
- Leading Pedestrian Intervals (LPI)
- Sidewalks
- Bike lanes
- Shared use paths

Other

- Center or edge line rumble strips
- High friction surface treatments
- Striped shoulders and wider lines
- Access management

What We Heard: Specific Locations of Concern

The project team conducted a thorough crash analysis as part of the development of the high injury network. Additionally, community feedback was incorporated into the plan to better understand the user experience on roadways in the region and ensure that all key locations were assessed. Some examples of feedback are provided below.

"Stricter **enforcement of speeding.** We need a better light at the intersection of 354 and Lake Hayward. Too many accidents."
- Public Survey Respondent

"Install rotary or a bend in road to **force people to slow down**" – Public Survey Respondent

SAFETY ANALYSIS

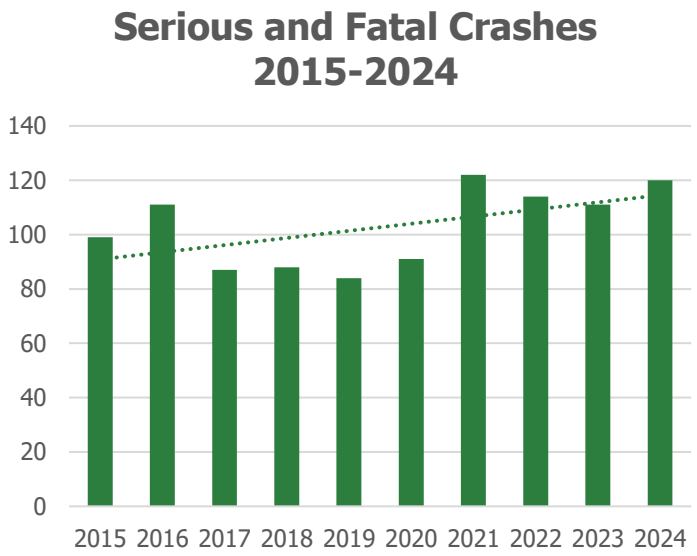
Overview of Recent Regionwide Crashes

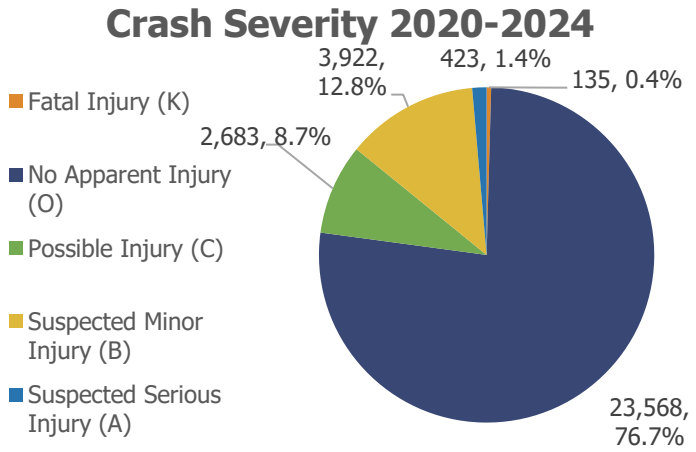
The project team examined crashes from 2015 to 2024 to understand the general trends in crashes over the years, but the plan's detailed safety analysis focuses on the most recent available five years of crash data between 2020-2024. All crash information was collected from the University of Connecticut Crash Data Repository (CTCDR), the roadway crash database for the State of Connecticut. The analysis of safety trends includes all roads in the SECOG region, including interstates, but high crash clusters are not identified for interstates. This is because interstates tend to have lower crash rates than other road types, and most safety countermeasures are not applicable to interstates or highways.

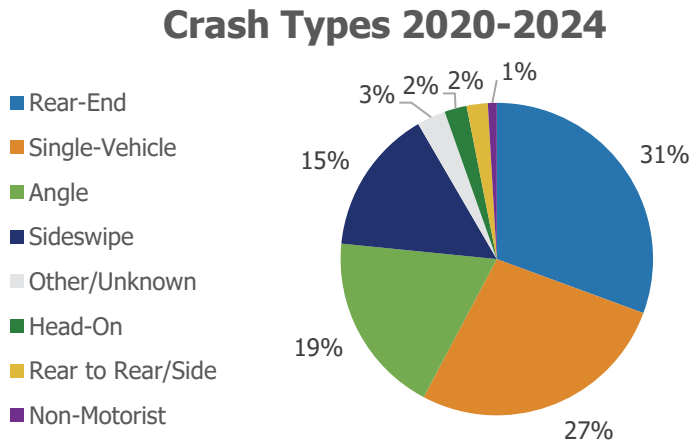
Between the years 2015 and 2024, SECOG communities have seen an overall increase in the number of crashes resulting in serious or fatal injury, despite modest declines in the total between 2017 and 2019. This reflects the need for a strategic plan to reduce transportation-related injury and fatality.

Between 2020-2024, around 23% of crashes resulted in an injury. Of the injury crashes during this time, 135 crashes resulted in fatal injury and 423 resulted in serious injury. Serious and fatal injury crashes accounted for around 1.5% of all crashes.

The most common types of crashes in the region are rear-end crashes, single-vehicle crashes, and angle crashes (see pie chart below). The variety of crash types reflects the diversity of roadway types in the region, from the more urban roadways with multiple vehicle crashes and non-motorist crashes, to more rural areas with more single vehicle crashes. Looking specifically at fatal crashes, most are single vehicle crashes, followed by non-motorist crashes, head-on crashes and angle crashes.

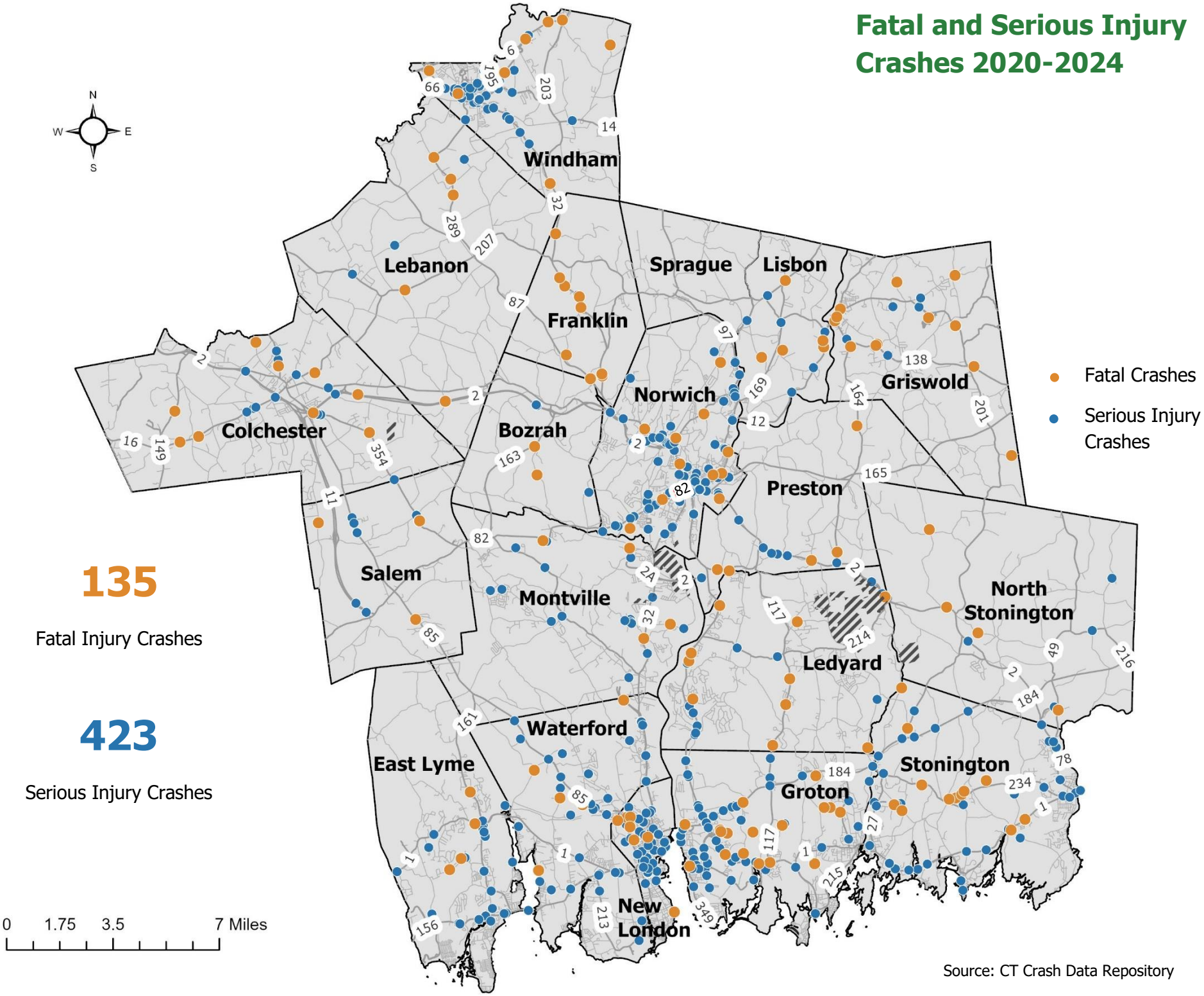






Source: CT Crash Data Repository

Fatal and Serious Injury Crashes 2020-2024



135

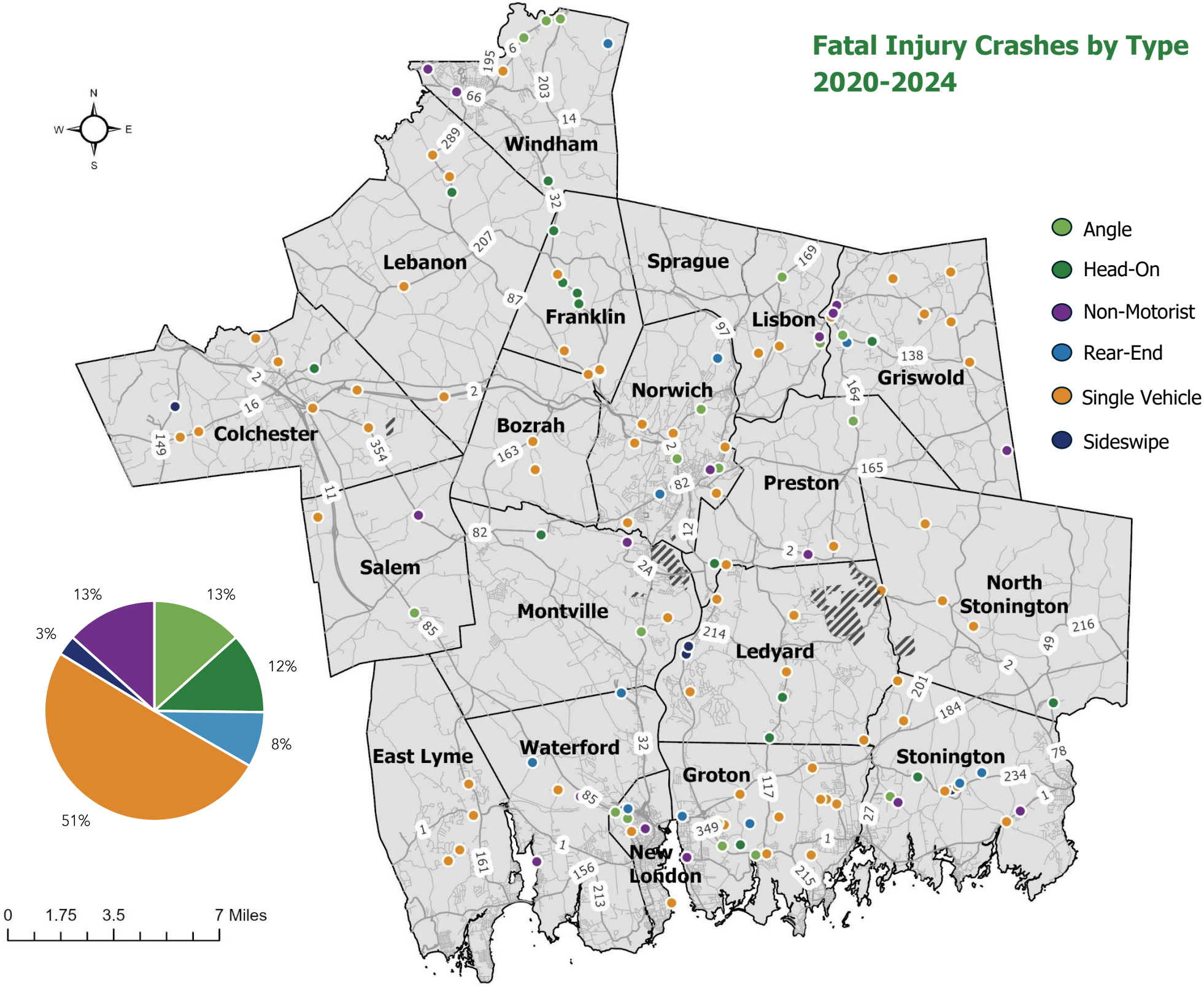
Fatal Injury Crashes

423

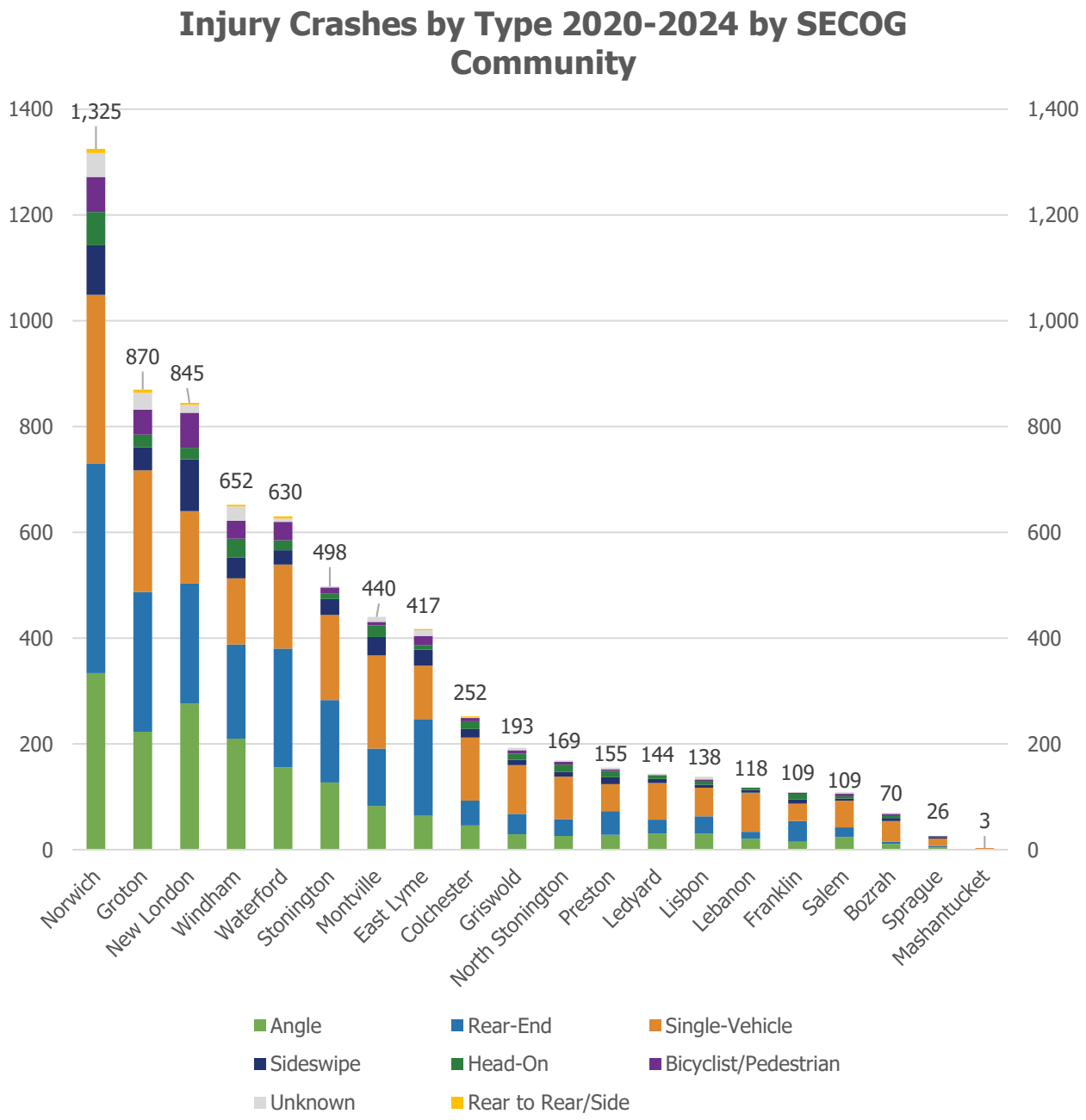
Serious Injury Crashes

Source: CT Crash Data Repository

Fatal Injury Crashes by Type 2020-2024

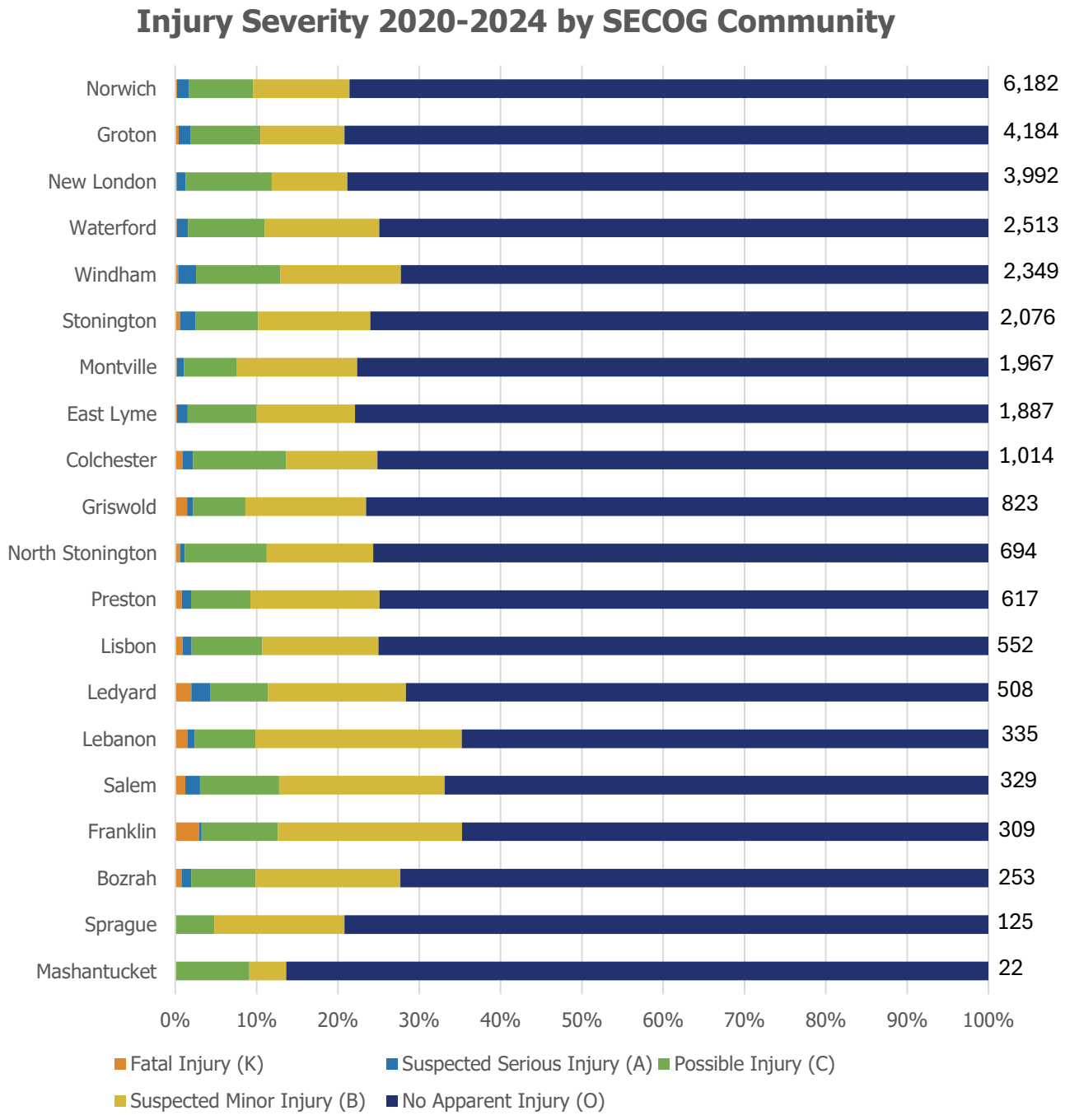


Norwich experienced the most crashes resulting in injury in the region between 2020 and 2024, with over 1,300 crashes. Crash types in the region varied by community. For example, angle crashes are most highly represented in New London (33% of city injury crashes) and Windham (32% of town injury crashes). Single vehicle crashes are most highly represented in Lebanon (63% of town injury crashes) and Bozrah (56% of town injury crashes). Pedestrian crashes are most highly represented in New London (6% of city injury crashes) and Waterford (5% of town injury crashes).



Source: CT Crash Data Repository

Of the SECOG communities with over 2,000 total crashes, Windham had the largest percentage of crashes resulting in injury (over 28% of Windham crashes); however, Franklin and Lebanon had the highest percentage of crashes resulting in injury of all towns (over 35% of town crashes). Ledyard had the highest percentage of crashes resulting in serious or fatal injury (4.3% of town crashes).



Source: CT Crash Data Repository

Fatal and Serious Injury Crash Characteristics: Summary of Over-represented crash types

The safety analysis recognized that some crash types are more likely to result in a serious or fatal injury. The analysis included a test of proportions, or over-representation analysis, that compared all roadway crashes to fatal and serious injury crashes during the study period. This analysis examined a variety of factors including roadway conditions (e.g. speed limit and roadway alignment), environmental factors (e.g. road surface and lighting conditions), crash types (e.g. vehicle-pedestrian crashes and single-vehicle crashes), and driver contributing circumstances (e.g. impaired driving and speeding).

Below is a summary of the key findings from the over-representation analysis, which examines crashes between 2020 and 2024. This is based on the widely used KABCO scale where "K" is a fatal crash, "A" is a suspected serious injury crash, "B" is a suspected minor injury crash, "C" is a possible injury crash and "O" is a crash with just property damage. The most over-represented crash type was single-vehicle crashes, comprising 27% of all crashes and 39% of fatal and serious injury crashes.

The abbreviation KA is used to describe crashes where someone was killed or seriously injured.

Crashes where a vehicle struck a non-motorist (a person walking, biking, rolling, etc.) are also over-represented, with these crashes comprising just under 2% of all crashes, but about 15% of fatal and serious injury crashes. Crashes involving pedestrians were more likely to result in a fatality or serious injury, comprising less than 1% of all crashes, but 12% of fatal or serious injury crashes. Motorcycle crashes were also over-represented, totaling about 2% of all crashes, but 16% of fatal and serious injury crashes.

Other over-represented crash types include single vehicle crashes into trees (9% of KA single vehicle crashes versus 2% of all single vehicle crashes), crashes where vehicle occupants were not wearing a seatbelt (12% of KA crashes vs. 2.5% of all crashes*), crashes on unlit dark roadways (17% of KA crashes vs. 9% of total crashes), DUI crashes (9% of KA crashes vs. 2.5% of all crashes*), crashes on curved roadways (26% of KA crashes vs. 14% of all crashes) and crashes on State-owned roadways (53% of KA crashes vs 44% of total crashes).

*Incomplete dataset – analysis only evaluates crashes with data available (~50-60% of total crashes)

Crash Types More Likely to Result in Fatal or Serious Injury (KA)

Involve a Pedestrian

12% of KA Crashes vs. 0.5% of Total Crashes

Single Vehicle Crash

39% of KA Crashes vs. 27% of Total Crashes

Dark – Unlighted Roadways

17% of KA Crashes vs. 9% of Total Crashes

Not Wearing Seatbelt

12% of KA Crashes vs. 2.5% of Total Crashes

Under the Influence

9% of KA Crashes vs. 2.5% of Total Crashes

State Road

53% of KA Crashes vs. 44% of Total Crashes

Minor Arterials & Major Collectors

51% of KA Crashes vs. 42% of Total Crashes

Involve a Motorcycle

16% of KA Crashes vs. 1.5% of Total Crashes

Head-On Collision

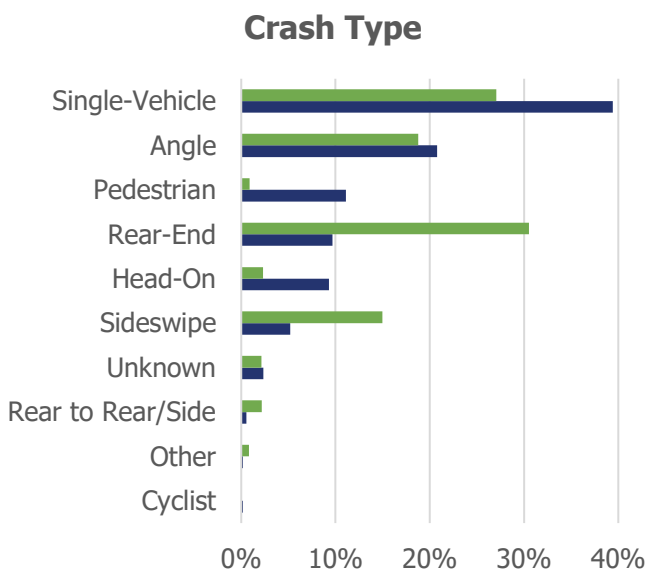
9% of KA Crashes vs. 2% of Total Crashes

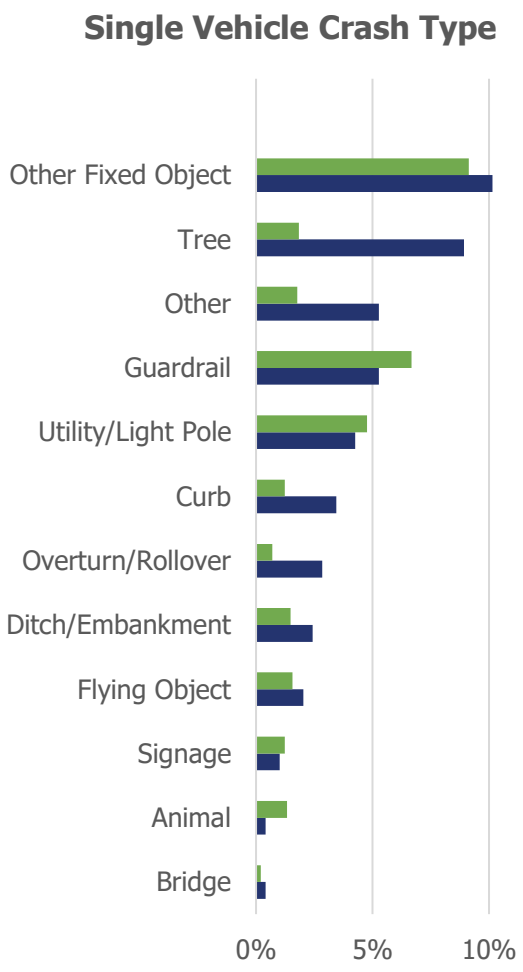
Curved Roadway

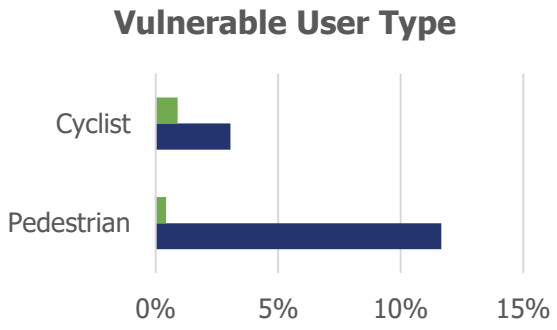
26% of KA Crashes vs. 14% of Total Crashes

The following charts offer greater detail on the over-representation analysis and methods for identifying over- and under-represented crash types and contributing factors. The tables include crash type, single vehicle crash type, bicycle and pedestrian crashes, lighting conditions, weather conditions, road surface conditions, driver contributing circumstances, vehicle type, and roadway alignment.

In the charts, a **blue bar** longer than the **green bar** indicates that the percentage of crashes resulting in a fatality or serious injury is greater than the percentage of all crashes. The analysis also showed some notable under-represented crash types, including crashes with an animal, rear-end and sideswipe crashes, and crashes in the rain or snow.

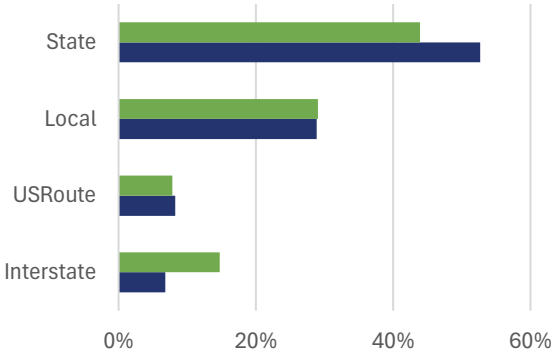




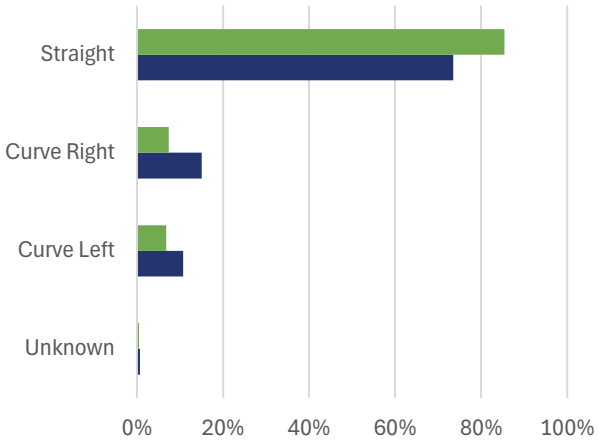


All Crashes Fatality/Serious Injury

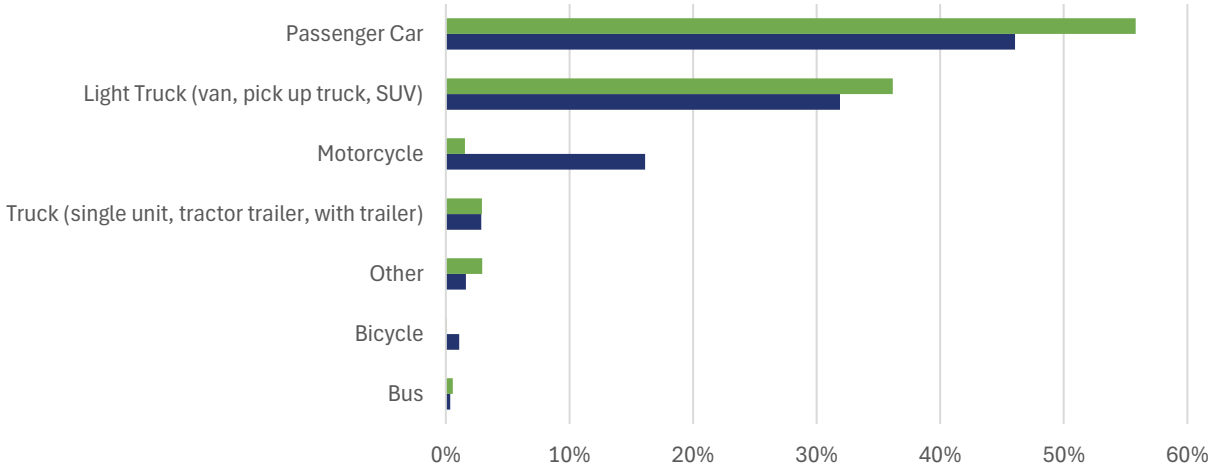
Road Class



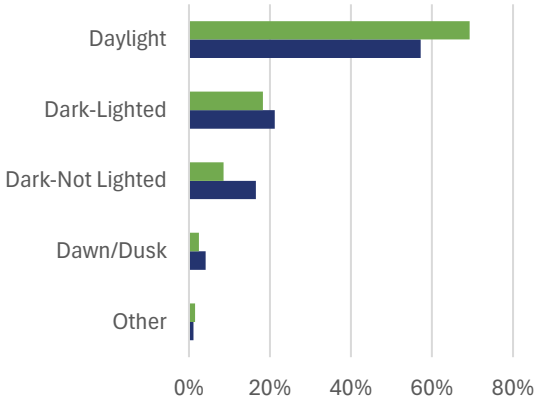
Roadway Alignment



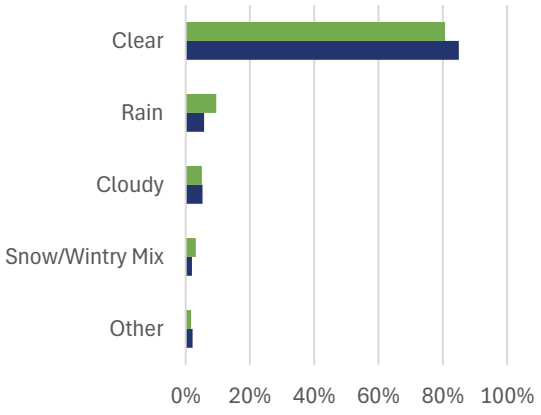
Vehicle Type



Lighting Condition

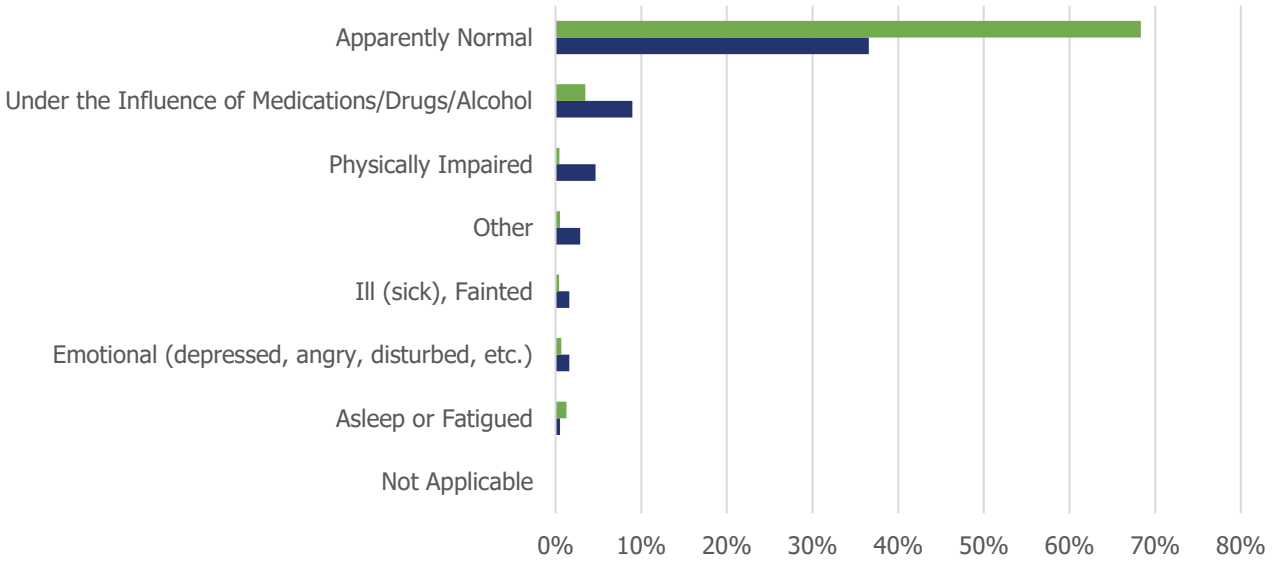


Weather Condition

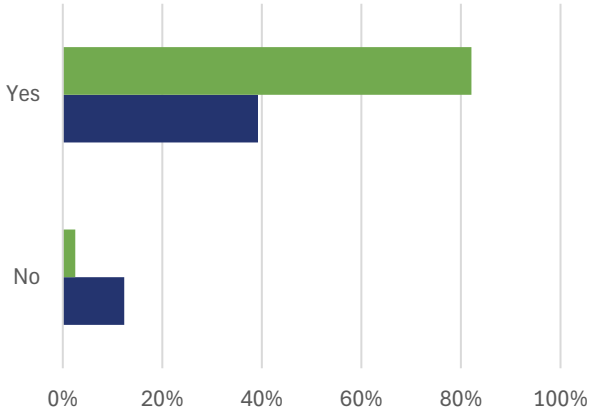


All Crashes Fatality/Serious Injury

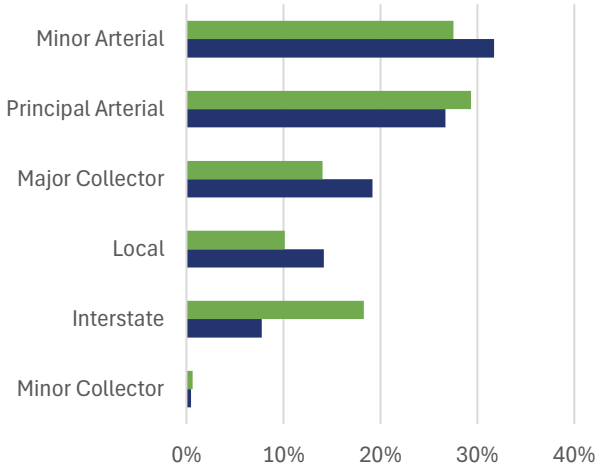
Driver Condition*



Seatbelt Used*



Functional Class*



All Crashes Fatality/Serious Injury

*Incomplete dataset – analysis only evaluates crashes with data available (~50-60% of total crashes)

High Injury Network Development

The development of the high injury network is a critical part of the Safety Action Plan. The high injury network is a selection of intersections and roadway corridors with either:

a) a **history of past crashes** resulting in injury or,
b) **high risk roadway characteristics** likely to result in future crashes. The incorporation of information regarding past crashes AND high-risk features is both reactive and proactive towards improving roadway safety.

High Injury Network (HIN) based on Recent Roadway Crashes

The first high injury network component was developed using an ArcGIS tool that linked crash point locations to roadways and intersections. The crashes were linked to roadways and intersections by mapping a 150-foot buffer around intersections and a 50-foot buffer around roadway segments. The roadways and intersections were then given a score based on the severity of injuries associated with linked crashes. As part of the process, two networks were created – one based on recent vehicular crashes and one based on recent non-motorist (people outside vehicles walking, biking, scooting etc.) crashes.

SEVERITY SCORE

Non-Serious Injury Crash: 1 pt each

Serious Injury Crash: 5 pts each

Fatal Injury Crash: 10 pts each

HIN Inputs

- Roadway Segments (CTDOT)
- Roadway Crashes (CT Crash Data Repository 2020-2024)
- Intersections (Derived from CTDOT Roadway Segments)

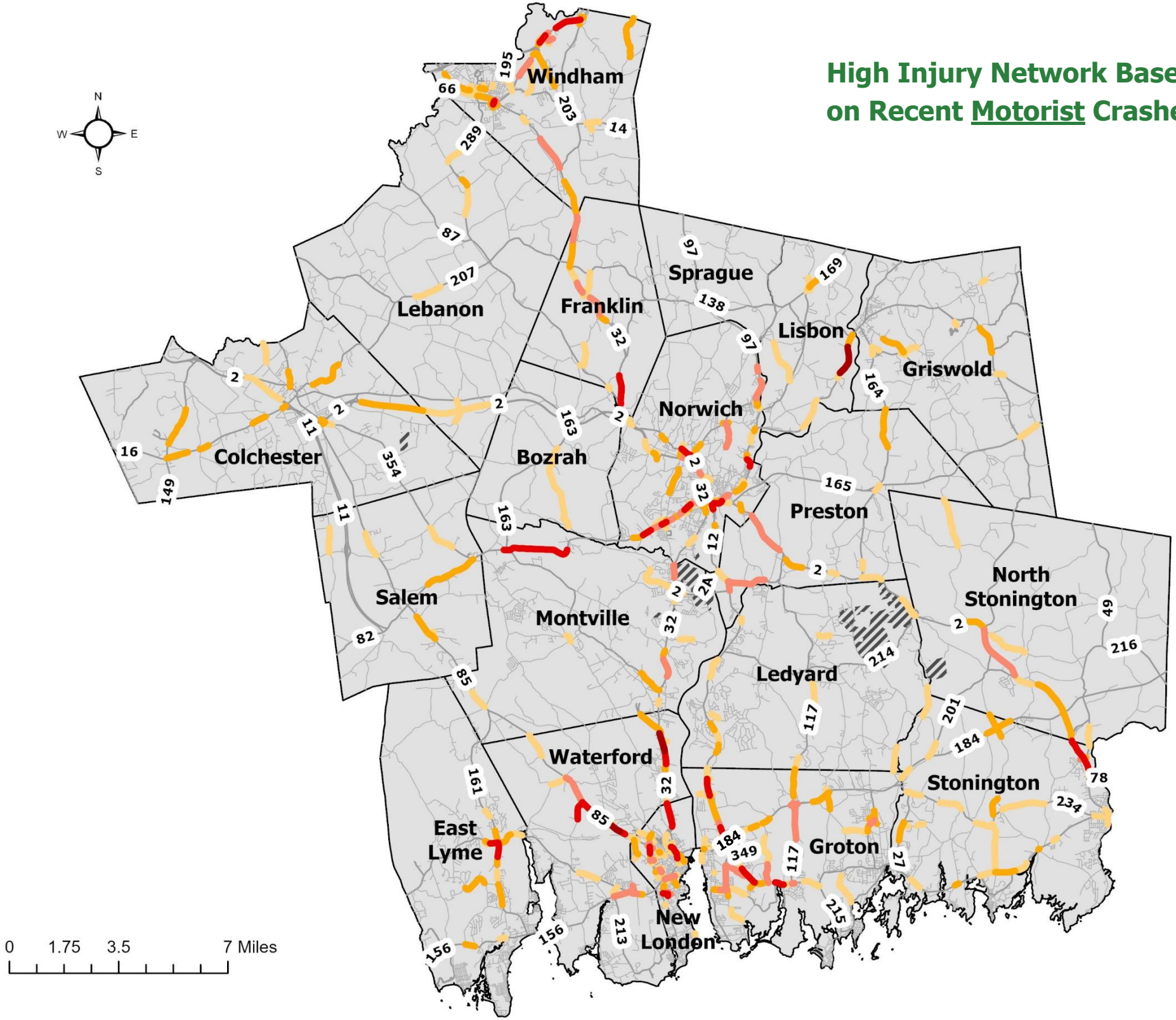
HIN Process

- Identify the crashes at each segment and intersection
- Create a severity score for each segment and intersection based on crashes

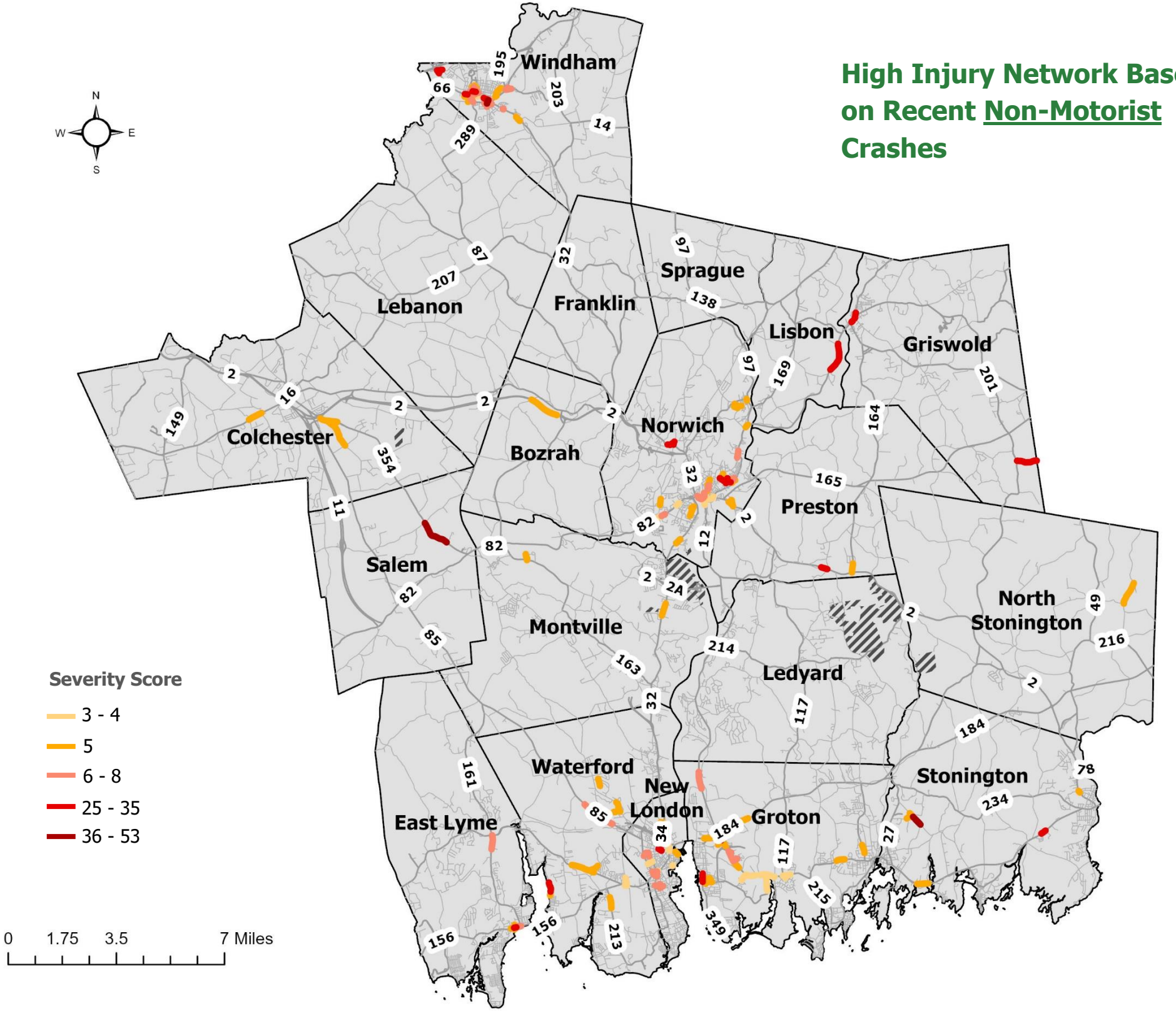
HIN Outputs

- High Injury Network – Segments
  - Vehicular
  - Non-Motorist
- High Injury Network – Intersections
  - Vehicular
  - Non-Motorist

High Injury Network Based on Recent Motorist Crashes



High Injury Network Based on Recent Non-Motorist Crashes



Network based on Risk Factors

In addition to the traditional trends-based crash analysis approach, which focuses on identifying locations with historical trends of serious or fatal crashes, the Safe Streets for All program recommends that communities also develop risk-based analyses that take a proactive approach on identifying potential future locations. Risk-based analyses identify future locations of risk by reviewing roadway and contextual attributes that are correlated with a higher frequency and severity of crashes.

The SECOG risk-based high injury network takes a proactive approach in identifying high-risk locations for vulnerable road users (people walking, biking, etc.) by identifying intersections and corridors in proximity to public assets such as public transit stops, schools, and bike facilities (trails and on-road bike lanes). The risk-based high injury network also identifies communities that are more likely to have higher walking or biking trips versus driving. This includes communities with high percentages of zero vehicle households, communities below the federal poverty line, and communities within dense mixed-use or commercial zoning. Lastly, the risk-based high injury network identifies locations that may be at a lower risk following the completion of CTDOT traffic safety projects in the future. For example, if an intersection is planned to be converted to a roundabout in the future, it is highly likely that the implementation of the traffic safety countermeasure will reduce the number of serious and fatal crashes.

The methodology for scoring of the SECOG risk-based high injury network is also shown in the graphic below.

1 – Proximity to Public Assets (Total +12 points)

- Public transit stop within 0.25 miles – 3 points
- School within 0.5 miles – 3 points
- Bike Facility (trail or on-road bike facility) within 0.25 miles – 3 points
- Other public asset within ~0.25 miles (grocery store, museum, etc. as identified from the SECOG regional assets layer) – 1 point each, up to 3 points

2 – Demographics and Zoning (Total +5 points)

- No Vehicle Household Population greater than 7.4% - 3 points*
- No Vehicle Household Population between 4% - 7.4% - 2 points*
- No Vehicle Household Population between 0.6% - 4% - 1 point*
- Greater than 24% of block group population below 200% federal poverty line (FPL) – 1 point**
- Block group within mixed use or commercial zoning – 1 point

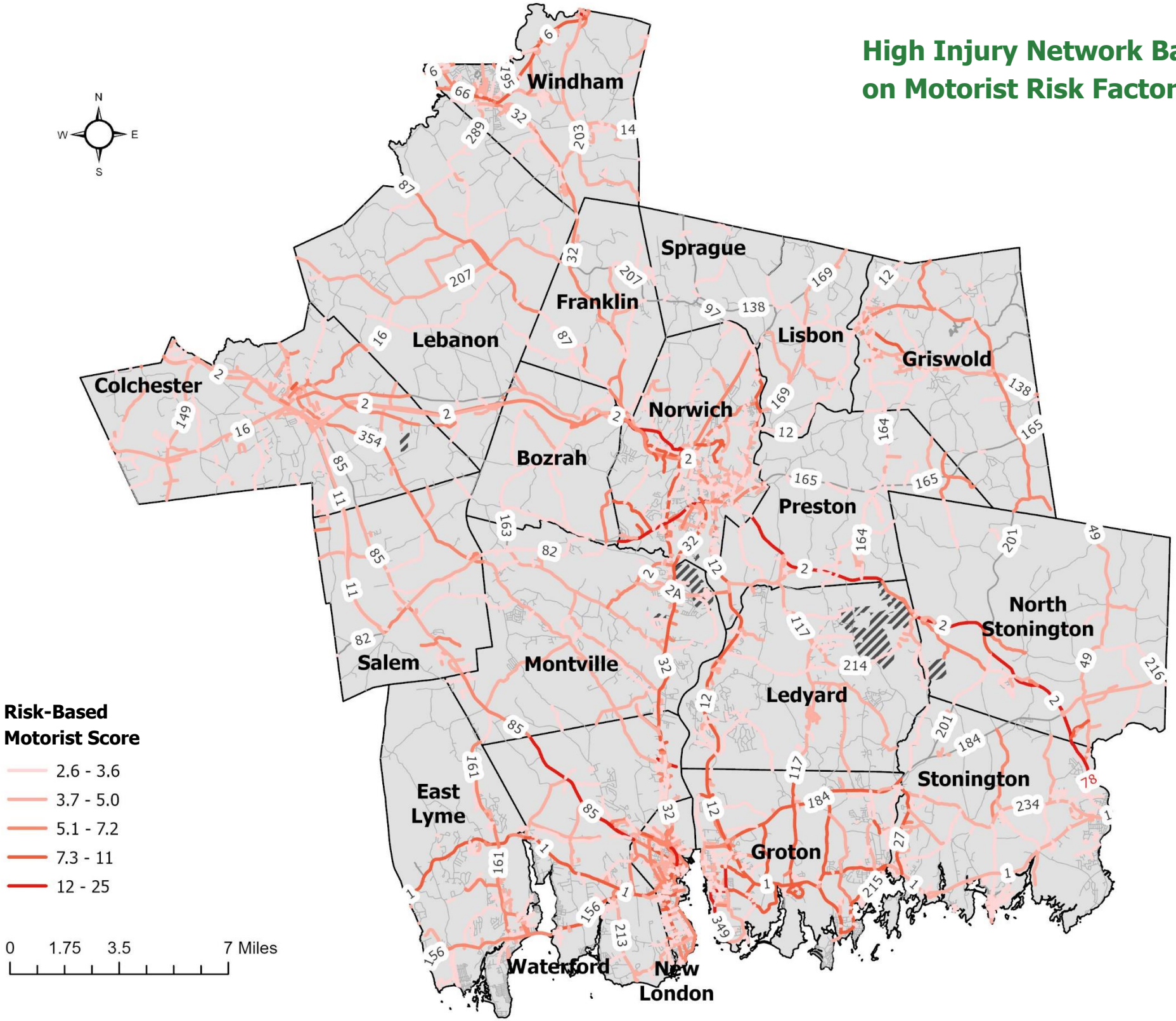
3 – Lesser Risk from Traffic Safety Projects (Total -3 points)

- Within 0.25 miles of a funded project that improves traffic safety (SECOG or CTDOT project) – Subtract 3 points

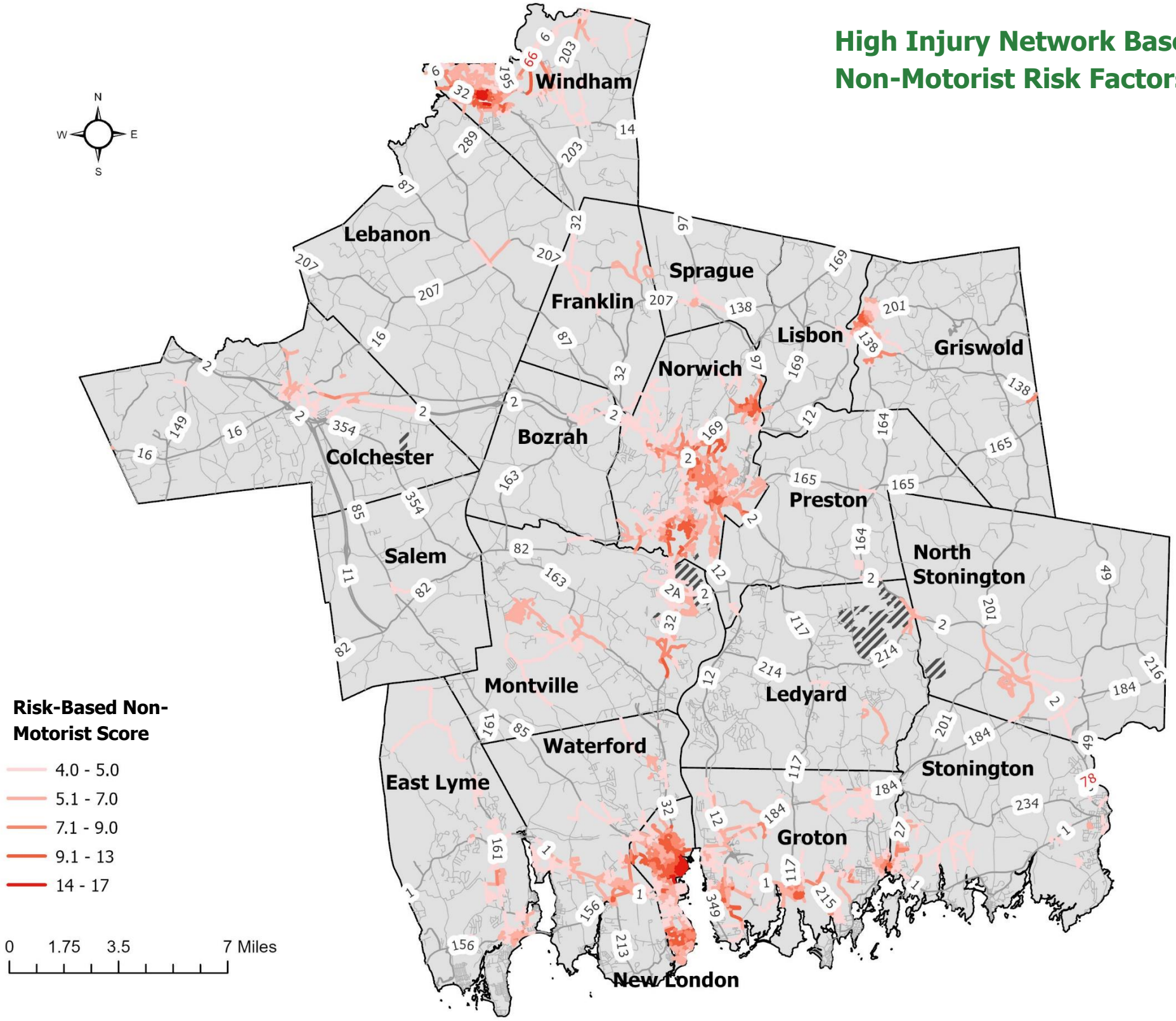
*The regional average no vehicle population based on American Community Survey (2024) is 0.6% with a standard deviation of 3.4%. Points allocated based on greater than average, average + 1 standard deviation, and average + 2 standard deviations.

**The regional average percent of population below the 200% federal poverty line is 24% based on the American Community Survey (2019-2023).

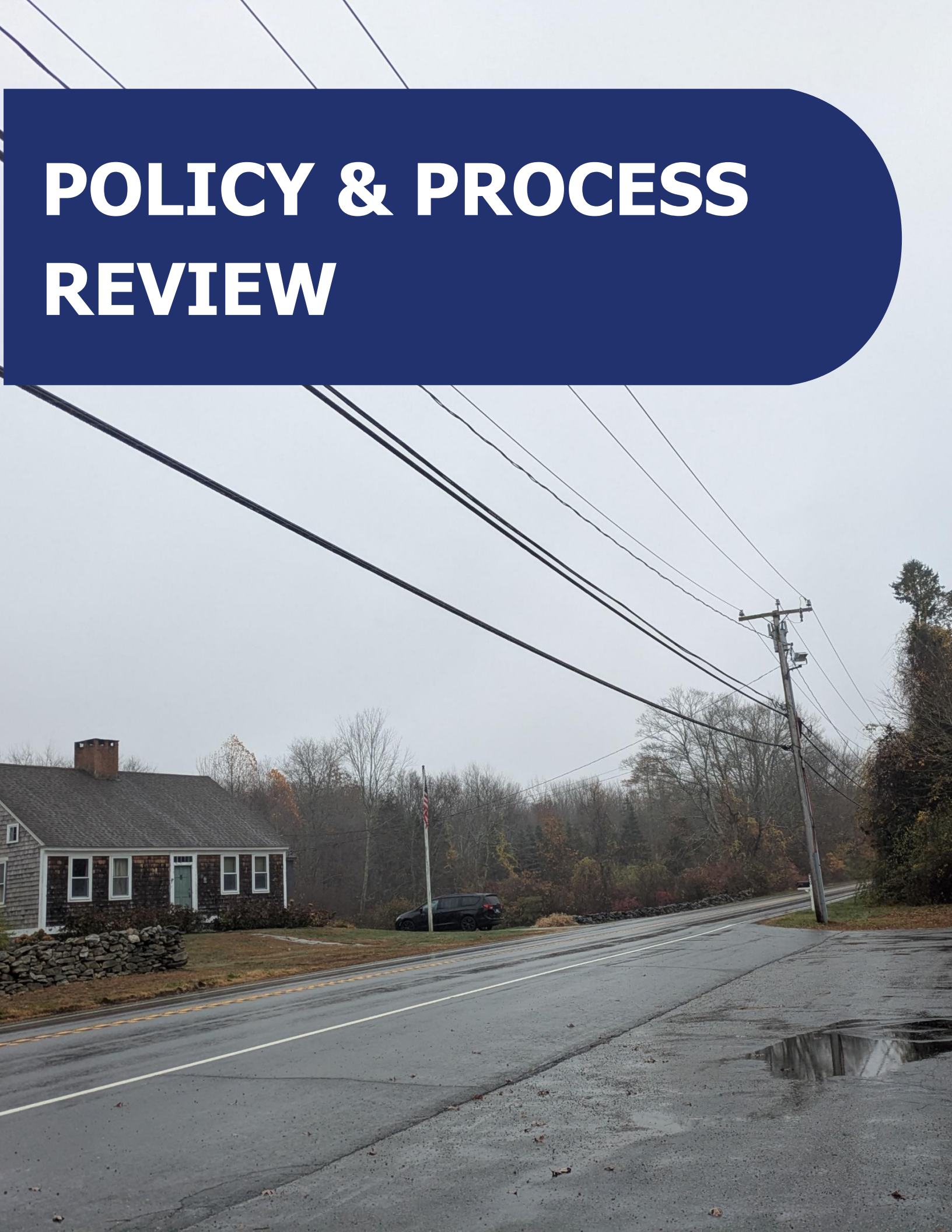
High Injury Network Based on Motorist Risk Factors



High Injury Network Based on Non-Motorist Risk Factors



POLICY & PROCESS REVIEW



This Safety Action Plan builds upon past planning efforts and policy development aimed at improving roadway safety across the region. To best offer recommendations for improvements to existing policies and programs in the region, this chapter focuses on understanding past recommendations that have been developed through previous planning efforts at the state, regional, and local levels, and any relevant policies. The review of existing plans and policies informs the strategies outlined in the Strategies and Projects section of the Safety Action Plan.

Relevant Planning Efforts

Plan	Goal	Relevant Recommendations
2022 SECOG Regional Transportation Safety Action Plan	Develop strategies and actions to reduce deaths and serious injuries in the SECOG region.	Educational campaigns for motorcyclist, pedestrian, and bicycle safety, continued updates to reporting using the MMUCC form, roadway improvements such as striping and pavement management, and continued monitoring of progress.
SECOG Metropolitan Transportation Plan, 2023-2050	Provide effective public transit, incorporate Complete Streets policies, encourage coordinated transportation with emerging technologies, and ensure a safe and reliable transportation system.	Identify or develop programming to address congestion mitigation and prioritized safety projects, continue municipal technical assistance work, expand bicycle and pedestrian network, support sustainable growth practices such as complete streets and transit-oriented development.
2019 SECOG Bicycle and Pedestrian Plan	Develop regional recommendations for bicycle and pedestrian programs and infrastructure in the SECOG Region.	Provide bicycle infrastructure, sidewalks, and intersection enhancements at specific locations across the SECOG region. Many of these locations are also identified as part of SECOG's high injury network.
2022-2026 Strategic Highway Safety Plan	Achieve a 15% reduction in deaths and serious injuries by 2026.	Incorporate emphasis areas in crash reduction strategies, such as bicycle and pedestrian crashes, motorcycle crashes, and distracted driving.

Plan	Goal	Relevant Recommendations
2025 Highway Safety Implementation Plan	Allocate funding to targeted safety programs and crash types to reduce fatal and serious crashes, especially within the rural roads and vulnerable road users emphasis areas.	Upgraded signage and lighting, RRFB retrofitting, speed limit study.
Regional Plan of Conservation and Development, 2017	Develop strategies for future development in the SECOG region that are coordinated across all communities and reflective of the needs of SECOG municipalities.	Incorporate complete streets improvements.
Colchester Plan of Conservation and Development, 2015	Develop a shared vision and strategies for future conservation and development in Colchester.	Consider transit-oriented development patterns to support the viability of a range of transportation options.
East Lyme Plan of Conservation and Development, 2020	Develop a shared vision and guidance for future conservation and development in East Lyme.	Promote multimodal transportation options, expand sidewalk and bicycle networks, and encourage traffic access management along Route 161.
Franklin Plan of Conservation and Development, 2023	Develop a shared vision and strategies for future conservation and development in Franklin.	Coordinate with CTDOT to improve overall traffic safety in town, especially with respect to sightlines, shoulder, pedestrian accommodations, and pavement condition.
City of Groton Plan of Conservation and Development, 2019	Develop a shared vision and strategies for future conservation and development in the City of Groton.	Simplify traffic circulation on Thames Street, encouraging mixed-use development in the Five Corners area to create a transit accessible, pedestrian friendly "village" feel.
Town of Groton Plan of Conservation and Development, 2016	Develop a shared vision and strategies for future conservation and development in the Town of Groton.	Expand trail network, encourage multimodal transportation, continue to invest in streetscape and pedestrian improvements.

Plan	Goal	Relevant Recommendations
Griswold Plan of Conservation and Development, 2017	Develop shared goals and strategies for future conservation and development in Griswold.	Improve roadway systems through access management techniques and parking management. Expand existing sidewalk infrastructure, especially in Jewett City and Pachaug Center commercial areas.
Lebanon Plan of Conservation and Development, 2016	Develop a shared vision and strategies for future conservation and development in Lebanon.	Work with CTDOT to designate Route 207 as a state scenic road. Install bike lanes on Route 87, Route 207, and Route 289.
Ledyard Plan of Conservation and Development, 2020	Develop a shared vision and strategies for future conservation and development in Ledyard.	Explore access management strategies on Route 12. Improve pavement condition and road repairs.
Lisbon Plan of Conservation and Development, 2016	Establish policies and priorities for future conservation and development in Lisbon.	Install pedestrian crosswalks in Newent and near Lisbon Meadows Park.
Montville Plan of Conservation and Development, 2022	Develop a shared vision and strategies for future conservation and development in Montville.	Expand pedestrian accommodations with new developments along Route 32.
New London Plan of Conservation and Development, 2017	Develop a shared vision and strategies for future conservation and development in New London.	Increase opportunities for walking and biking, expand sidewalk and bike lane networks, increase number of safe crossings.
North Stonington Plan of Conservation and Development, 2023	Develop a shared vision and strategies for future conservation and development in North Stonington.	Promote transit-oriented development and generally encourage use of multimodal transportation.
Preston Plan of Conservation and Development, 2024	Develop a shared vision and strategies for future conservation and development in Preston.	Offer public transportation options near Poquetanuck Village. Study traffic calming measures for Routes 2, 165, and 164.
Salem Plan of Conservation and Development, 2022	Develop a shared vision and strategies for future conservation and development in Salem.	Improve pedestrian and vehicular circulation, especially around commercial areas. Improve safety on Route 85.

Plan	Goal	Relevant Recommendations
Sprague Plan of Conservation and Development, 2018	Develop a shared vision and strategies for future conservation and development in Sprague.	Improve sightlines, take steps to reduce speeds, and reduce objects in roadway that can cause crashes.
Stonington Plan of Conservation and Development, 2015	Develop a shared vision and strategies for future conservation and development in Stonington.	Promote multimodal transportation options, encourage use of public transit (including water taxis), maintain roadways, and expand pedestrian and bicycle facilities.
Waterford Plan of Conservation and Development, 2012	Develop a shared vision and strategies for future conservation and development in Waterford.	Maintain roadway systems and understand potential impacts of natural hazards such as flooding.
Windham Plan of Conservation and Development, 2017	Develop a shared vision and strategies for future conservation and development in Windham.	Encourage multimodal transportation use, improve lighting for vehicles and pedestrian.

Existing Policies and Programs

Program Name	Jurisdiction	Program Focus
Safe Routes to School	State and local	Encouraging students to walk, bike, or roll to school safely through education and safety assessments.
Automated Traffic Enforcement Safety Devices	State and local	Speed and red-light running violation enforcement.
Connecticut Rider Education Program	State and local	Education program for motorcycle operators.
CTDOT Maintenance Resurfacing Program	State	Repaving and maintenance on state-owned roads.
Bus Stop Enhancement	State and local	Upgrading bus stop infrastructure.

Program Name	Jurisdiction	Program Focus
Town Aid Road Program	State and local	Maintenance, reconstruction, safety planning, traffic signs and signal improvements.
Quick Build Complete Streets Demonstration Projects on State Roads	State	Temporary demonstration projects to test efficacy of Complete Streets-aligned interventions, such as protected bike lanes, curb extensions, and traffic calming measures.
Connecticut Safety Circuit Rider Program (through T2 Center)	State	Information, training, and technical assistance to local agencies responsible for road safety. Includes RSAs and provision of safety infrastructure such as speed feedback radar signage.
Community Connectivity Grant Program	State and regional	Funding to improve bicycle and pedestrian accommodations.
Transportation Rural Improvement Program	State	Provides funding to municipal governments for infrastructure improvements in rural communities.
Active Transportation Microgrants	State	Provides microgrants to municipalities, schools, and community organizations to fund projects that encourage walking and biking. Can include bike racks, safety education, and community events.
Local Transportation Capital Improvement Program (LOTCIP)	State	Provides state funding for capital improvements to municipalities and COGs.

Guidelines

This section includes a list of relevant conceptual and design guidelines at both the state and national levels. These publications were consulted as part of the plan review and strategy development process.

Connecticut DOT Highway Design Manuals

CTDOT provides uniform design guidance for construction specifications and details, as well as other design guides and manuals, to help project engineers, contractors, and others as they work on roadway projects. These manuals provide guidance for the design, building, and maintenance of roads and bridges in Connecticut.

Connecticut DOT Bicycle Facility Selection Guide – CTDOT, 2024

The CTDOT Bicycle Facility Separation Guide provides guidance on choosing the appropriate bicycle facility type based on the roadway characteristics of a project's extent. It provides recommended facility types based on the ADT of a given roadway and on the surrounding land uses.

Manual on Uniform Traffic Control Devices (MUTCD) for Streets and Highways 11th Edition – USDOT Federal Highway Administration, 2023

The newest update to the MUTCD provides standards for traffic signals, pavement markings, traffic signage, and many other roadway features to ensure that states have consistent, safe, and modern infrastructure for public roadway users. The recent updates to the MUTCD have incorporated many changes to the way roads are designed to accommodate all users, with an exclusive section dedicated to the design and implementation of bike traffic signals.

National Association of City Transportation Officials (NACTO) Urban Street Design Guide – NACTO, 2013

NACTO's Urban Street Design Guide provides guidance for the design of roadways that emphasize the importance of providing space for all road users, including pedestrians, bicyclists, public transit users, and drivers. The guide serves as a toolbox of roadway and intersection design elements for making streets safer, more livable, and more vibrant.

Guide for Roundabouts (NCHRP Research Report 1043)

This report provides relevant roundabout planning, design, and performance information for a wide audience, including the public, elected officials, agency staff of all levels, consultants, and educators.

NACTO Urban Bikeway Design Guide – NACTO, 2025

The Urban Bikeway Design Guide provides guidance for the design of context-appropriate bikeways, with a particular focus on conflict reduction at intersections. It additionally addresses planning and project development questions that may arise when designing and implementing bike infrastructure.

Public Right-of-Way Accessibility Guidelines (PROWAG)

The PROWAG provides standards to make streets, sidewalks, and transit stops accessible for all users. This guide includes standards for accessible roadway design elements such as sidewalk ramps, sidewalks, pedestrian signals, transit stop infrastructure, and more.

Project Development Guide – CTDOT, 2012

The Project Development Guide is to guide the preparation, review, and delivery of capital project documents across a project's timeline, from initiation to completion.

Small Town and Rural Multimodal Networks – FHWA, 2016

The Small Town and Rural Multimodal Networks guidebook provides resources and ideas to help small towns and rural communities support the development of safe and accessible facilities for users of all modes. It blends existing accepted best practices in bicycle and pedestrian planning with common considerations in planning for rural and small towns.

COUNTERMEASURE TOOLBOX

Developing Safety Countermeasures

Safety countermeasures are actions or infrastructure upgrades that can be completed to enhance the safety on a roadway and reduce crash severity and frequency. In recent years, the emphasis on roadway safety has resulted in an abundance of research and guidance on safety countermeasure effectiveness. Countermeasure effectiveness can be reported using crash modification factors (CMFs). CMFs provide an estimated reduction in crashes with the implementation of a countermeasure, based on the results of past studies. **A CMF is the percentage of crashes that are expected to still occur after implementation of a countermeasure**, so for example, a CMF of .15 would mean just 15% of crashes are expected to occur after implementation, or an 85% reduction in crashes.

This plan identifies proven safety countermeasures that address common high injury crash types – single vehicle crashes, angle crashes, head-on crashes, motorcycle crashes, pedestrian crashes and bicycle crashes.

This chapter provides a toolbox of safety countermeasures with an estimated order of magnitude cost and the associated crash modification factor. Several guidebooks and reference resources were used to develop the toolbox including:

- FHWA Proven Safety Countermeasures
- NACTO Urban Street Design Guide
- NACTO Urban Bikeway Design Guide
- CMF Clearinghouse
- Small Town and Rural Design Guide
- MUTCD

The order of magnitude cost within the charts on the following pages were developed using the cost table below. The sources for the CMFs used for this project are listed in Appendix H.

Order of Magnitude Cost	
$	<$10,000
$$	$10,001 - $100,000
$$$	$100,001 – $500,000
$$$$	>$500,000

These costs are shown on the following pages to assist with ease of reference.

Single Vehicle Countermeasures

Speeding

Countermeasure	Description	Estimated Cost	Time Frame	Crash Modification Factor
Narrow Travel Lanes	Reduce travel lane width to 11 ft.	$$ per mile	Short	0.76
Road Diet	Reducing the number of travel lanes by creating a center left turn lane or providing additional space for bike lanes, center medians, and sidewalks.	$$- $$$$ (less if a quick build)	Short – Long (less if a quick build)	0.53 – 0.71
Speed Feedback Radar Signs	Speed limit sign that displays the speed of approaching vehicles. Best if used for short periods coupled with enforcement.	$-$$ per pair	Short	0.95 (Rural)
Speed Enforcement Cameras	Automated enforcement system to penalize speeding vehicles with the goal of deterring future violations and reducing crashes.	Contractor typically installs free for a portion of revenue	Short	0.76 – 0.88

Edge of Road and Curve Visibility

Countermeasure	Description	Estimated Cost	Time Frame	Crash Modification Factor
Reflective Edge Lines	Painted lines with retroreflective materials to improve edge of lane visibility.	$ per mile	Short	0.67 – 0.85
Shoulder Rumble Strips	Grooved patterns on the road shoulder to alert distracted drivers with noise and vibration.	$$ per mile	Short	0.67 – 0.84 (run-off road, fatal and injury crashes)

COST	**$:** <10,000	**$$:** $10,001 - $100,000	**$$$:** $100,001 - $500,000	**$$$$:** >$500,000
TIME	**Short:** 0-5 years	**Mid-Term** (6-10 years)	**Long-Term** (11-20 years)	

Countermeasure	Description	Estimated Cost	Time Frame	Crash Modification Factor
Horizontal Alignment Warning	Warning signs to guide drivers at curves. Table 2c.4 of MUTCD helps determine which sign should be used.	$ per sign	Short	0.59 – 0.84
Level Vertical or Horizontal Curves	Change road elevation and alignment to improve sight distances.	$$$	Long	0.315 – Varies (Based on % of grade)
Wider Edge Lines	Increase width of striped lines on the edge of the roadway to at least 6" width.	$	Short	0.78 (injuries on rural roads)

Wet or Dark Conditions

Countermeasure	Description	Estimated Cost	Time Frame	Crash Modification Factor
High Friction Surface Treatment (HFST)	Specialized pavement coating to improve tire grip on curves and during wet conditions.	$$$ per mile per lane	Short	0.26 (Wet Conditions) – 0.53
Wet Reflective Pavement Markings	Thermoplastic lane markings designed to remain visible during wet conditions.	$ per mile per lane	Short	0.47 (Wet Conditions) – 0.86
Install Lighting	Install lighting to improve corridor or intersection illumination.	$$ each	Mid	0.63 (injury crashes) – 0.79
LED Stop Signs	Flashing LED stop signs (during nighttime) to improve driver attention and compliance.	$ per sign	Short	0.59
Flood Management	Improve drainage for reduction of hydroplane caused crashes during wet conditions. Includes road crowing, catch basins and evaluation of roadway stormwater systems.	$$-$$$$ depending on extent of existing drainage	Mid	CMF not available

COST	**$:** <10,000	**$$:** $10,001 - $100,000	**$$$:** $100,001 - $500,000	**$$$$:** >$500,000
TIME	**Short:** 0-5 years	**Mid-Term** (6-10 years)	**Long-Term** (11-20 years)	

Countermeasure	Description	Estimated Cost	Time Frame	Crash Modification Factor
Retro-Reflective Signs	Install signs that remain visible during nighttime conditions	$	Short	CMF not available

Obstructions on Side of Road

Countermeasure	Description	Estimated Cost	Time Frame	Crash Modification Factor
Reflective object markers on Obstructions	Reflective markers to enhance awareness of roadside obstructions such as trees, utility poles, roadside posts, and guardrails.	$ per marker	Short	CMF not available
Relocate Utility Poles	Relocate utility poles with the goal to reduce the severity of single vehicle run off the road crashes.	$$ per pole	Mid - Long	0.66 (injury crashes) - 0.86
Guiderail	Physical barrier on side of road protecting vehicles from steep embankments or slopes in the event of a crash.	$$	Mid	0.85

COST	**$:** <10,000	**$$:** $10,001 - $100,000	**$$$:** $100,001 - $500,000	**$$$$:** >$500,000
TIME	**Short:** 0-5 years	**Mid-Term** (6-10 years)	**Long-Term** (11-20 years)	

Angle Countermeasures

Conflicting Turning Movements and Speeding

Countermeasure	Description	Estimated Cost	Time Frame	Crash Modification Factor
Roundabout	Slows traffic, reduces conflict points, and reduces severity of crashes.	$$$$	Long	0.18 (injury crashes) – 0.52
Traffic Signal	Manages vehicle and pedestrian conflicts to reduce collisions and improve efficiency.	$$$$	Long	0.56
No Turn on Red	Reduces conflicts between turning right through crossing traffic.	$	Short	CMF of 1.60 (increase in crashes) when RTOR is permitted.
2-Way to All-Way Stop	Reduces conflicts and speeds at intersections.	$	Short	0.3 (injury crashes) – 0.4
Protected Left Turn Phasing	Reduces intersection conflict points.	$$	Short	0.84 – 0.94
Road Diet	Reduces the number of travel lanes and allocates space to bike lanes, sidewalks, or center turn lanes. Road diets help calm traffic and improve safety, sometimes with limited to no effect on traffic congestion.	$$ - $$$$ (less if a quick build)	Short – Long (less if a quick build)	0.53 – 0.71
Access Management	Includes driveway closures, restricting movements at driveways, and thinning driveway entrances for turning speed reduction.	Small project: $$ Medium: $$$	Mid	0.8
Advanced Stop Signs / Double Stop Signs	Increases driver awareness and compliance at stop-controlled intersections.	$	Short	0.89 – 0.92
Intersection Realignment	Improves sight lines and reduces angle crashes.	$$ - $$$	Long	Varies based on angle
Stripe "No Parking" Near Intersection Corners	Preventing parking near corners improves visibility of turning vehicles.	$	Short	0.7

COST	**$:** <10,000	**$$:** $10,001 - $100,000	**$$$:** $100,001 - $500,000	**$$$$:** >$500,000
TIME	**Short:** 0-5 years	**Mid-Term** (6-10 years)	**Long-Term** (11-20 years)	

Countermeasure	Description	Estimated Cost	Time Frame	Crash Modification Factor
Signal Coordination	Reduces stops, improves traffic flow, and reduces rear-end collisions.	$$	Mid	CMF not available
Evaluate and Modify Clearance Intervals	Update yellow and red clearance interval times to reduce red light running and rear-end crashes.	$	Short	0.88
Raised Intersection	Slows speeds at intersections.	$$$	Long	CMF not available

Red Light Running

Countermeasure	Description	Estimated Cost	Time Frame	Crash Modification Factor
Yellow Change Interval Modification	Increases yellow time at signals to reduce conflicts due to traffic signal dilemma zones (rear-end collisions).	$	Short	0.88
Backplates with retroreflective borders	Improves visibility of traffic signals during both day and night conditions.	$	Short	0.85
Red Light Running Camera*	Automated enforcement system to detect vehicles running red lights with the goal of deterring future violations and reducing crashes.	Contractor typically installs free for a portion of citation revenue	Short	Varies
Intersection Ahead Signage	Warning sign increases driver awareness and encourages speed reduction and caution.	$	Short	CMF not available
Wider Stop Bar	Increasing the width of the stop bar enhances visibility.	$	Short	0.85
Flashing Yellow Arrow	Improves clarity related to when drivers are allowed to make left turn maneuvers.	$$	Short	0.39 – 0.50

COST	**$:** <10,000	**$$:** $10,001 - $100,000	**$$$:** $100,001 - $500,000	**$$$$:** >$500,000
TIME	**Short:** 0-5 years	**Mid-Term** (6-10 years)	**Long-Term** (11-20 years)	

Vehicle and Pedestrian Conflict Countermeasures

Visibility

Countermeasure	Description	Estimated Cost	Time Frame	Crash Modification Factor
Crosswalk	Provides marked opportunity for people to walk across the street	$$	Short	0.81
Rapid Rectangular Flashing Beacon (RRFB)	Flashing yellow LED beacons for use at midblock crossings. Enhances pedestrian visibility to drivers and prompts drivers to yield.	$$	Short	0.31 (pedestrian crashes)
Curb Extension at Crosswalk	Shortens crossing distance and improves pedestrian visibility at crossings.	$$	Mid	CMF not available
Ladder and Aesthetic Crosswalk Treatment	High-visibility crosswalk markings enhance pedestrian visibility. Aesthetic treatments may be effective in low-speed downtown areas to further enhance pedestrian visibility and slow speeds.	$	Short	0.6 (vehicle pedestrian crashes)
School Zone enhancements	Adding school zone signage and pavement markings alerts drivers to reduce speeds.	$	Short	0.63 – 0.87
No Turn on Red Blank Out Sign	No Turn on Red sign that turns on during a pedestrian phase.	$$	Short	CMF not available
Advanced Pedestrian Warning Signs	Installing pedestrian signage in advance of crosswalk alerts drivers to upcoming pedestrians	$	Short	CMF not available

COST	**$:** <10,000	**$$:** $10,001 - $100,000	**$$$:** $100,001 - $500,000	**$$$$:** >$500,000
TIME	**Short:** 0-5 years	**Mid-Term** (6-10 years)	**Long-Term** (11-20 years)	

Speeding

Countermeasure	Description	Estimated Cost	Time Frame	Crash Modification Factor
Raised Crosswalks	Elevated pedestrian crossings slow vehicles and increase visibility and safety, forexample, at trail crossings.	$$	Mid	0.55 (vehicle pedestrian crashes)
Raised Intersection	Slow speeds and enhance pedestrian visibility at intersections, especially at intersections with pedestrian scrambles.	$$$	Long	CMF not available
Speed Humps / Bumps / Tables	Sloped mounds reduce speeds on residential or low-speed streets.	$$	Short	0.6
Speed Reduction Pavement Markings	Painted roadside markings such as converging lines or closer spaces boxes create the illusion that drivers are speeding up, which prompts drivers to slow down.	$	Short	CMF not available
Curb Extension at Crosswalk	Shortens crossing distance and improves pedestrian visibility at crossings.	$$	Mid	CMF not available
Chicanes	Placement of curb extensions requires drivers to weave.	$$	Mid	CMF not available.

Separation in Space and Time

Countermeasure	Description	Estimated Cost	Time Frame	Crash Modification Factor
Leading Pedestrian Intervals (LPIs)	Provides pedestrians with a head start at signalized crossings, enhancing visibility and reducing turning conflicts.	$	Short	0.83 (injury crashes)
Pedestrian Crossing Islands	Raised or protected area in the center of the road for pedestrian crossing refuge.	$$	Mid	0.69 (pedestrian crashes)-0.86
Sidewalks	Separates non-motorist traffic from vehicles.	$$$ - $$$$ per mile	Mid	0.60
Pedestrian Exclusive Phasing	Separates pedestrian and vehicle movements at signalized intersections.	$ - $$ (depends on functionality	Short	0.65 (pedestrian crashes)

COST	**$:** <10,000	**$$:** $10,001 - $100,000	**$$$:** $100,001 - $500,000	**$$$$:** >$500,000
TIME	**Short:** 0-5 years	**Mid-Term** (6-10 years)	**Long-Term** (11-20 years)	

Countermeasure	Description	Estimated Cost	Time Frame	Crash Modification Factor
		of existing signal)		
Upgrade from side street green to pedestrian signals	Replaces a passive pedestrian crossing with an active crossing at signalized intersections.	$$	Mid	Varies based on traffic volumes
Multi-Use Paths	Separates non-motorist and vehicle travel.	$$$$ per mile	Long	0.75 (bicyclist crashes)
Increase pedestrian time	Allows for safer crossings for pedestrians, especially at wide or busy intersections with high pedestrian activity.	$	Short	0.5 (pedestrian crashes)
Raised pedestrian bridge or pedestrian tunnel	Separated pedestrian crossing from vehicular traffic.	$$$$	Long	CMF not available
ADA Compliance	Includes updating to ADA ramps (perpendicular with one ramp for one crosswalk preferred) and providing ADA accessible push buttons at signals.	$$$	Short - Mid	CMF not available
Wayfinding signage / walk your bike signage	Helps with the navigation of pedestrians and bicyclists to the safest available crossings at trails or fully pedestrian signalized intersections.	$	Short	CMF not available

COST	**$:** <10,000	**$$:** $10,001 - $100,000	**$$$:** $100,001 - $500,000	**$$$$:** >$500,000
TIME	**Short:** 0-5 years	**Mid-Term** (6-10 years)	**Long-Term** (11-20 years)	

Vehicle and Bicycle Conflict Countermeasures

Speeding

Countermeasure	Description	Estimated Cost	Time Frame	Crash Modification Factor
Bicycle Boulevard	Low speed streets optimized for bicycle travel with traffic calming (such as chicanes, raised intersections or speed humps) and priority for cyclists. May include vehicle traffic diversion.	Varies depending on devices	Mid	0.37 (vehicle-bicycle crashes)
Raised bicycle crossing	Raised crossing improves visibility of bicyclists and reduces speeds of drivers.		Mid	0.49 (vehicle-bicycle crashes)

Separation

Countermeasure	Description	Estimated Cost	Time Frame	Crash Modification Factor
Bike Lanes	Provides a dedicated space between vehicle and bicycle travel.	$$	Short	0.27 – 0.44 (vehicle—bicycle crashes)
Buffered Bike Lanes	Provides a painted buffer, or horizontal separation, between vehicle and bicycle travel.	$$	Short	0.55
Add Vertical Bike Lane separation	Barriers added between bike lanes and travel lanes to enhance cyclists' protection.	$$	Mid	0.50 (vehicle-bicycle crashes)
Bike Boxes	Marked areas at intersections that allow cyclists to position ahead of vehicles at red lights for improved visibility and safer turns.	$	Short	CMF not available
Cycle Track	Bidirectional bike facility with physical separation from vehicle traffic.	$$$	Mid	0.55

Countermeasure	Description	Estimated Cost	Time Frame	Crash Modification Factor
Shared Use Path	Bidirectional separated pathway used by all non-motorist, including pedestrians and cyclists usually separated from vehicles by landscaping.	$$$$	Long	CMF not available.
Raised Driveway or Side Street Crossing Enhancement	Provides raised bicycle crossing across commercial driveways or side streets.	$$$	Mid	0.49

Head-On Countermeasures

Countermeasure	Description	Estimated Cost	Time Frame	Crash Modification Factor
Centerline Rumble strips	Grooved strips along the centerline alert distracted drivers with noise and vibration	$$ per mile	Short	0.33 – 0.73
Median Barrier	Physical barrier separating opposing traffic lanesprevent head-on collisions and restrict dangerous turning maneuvers (typically across 2 or more lanes of traffic).	$$	Mid	0.56
Removing passing zones	Reduce risky overtaking maneuvers where unnecessary in low-speed zones.	$	Short	CMF not available

COST	**$:** <10,000	**$$:** $10,001 - $100,000	**$$$:** $100,001 - $500,000	**$$$$:** >$500,000
TIME	**Short:** 0-5 years	**Mid-Term** (6-10 years)	**Long-Term** (11-20 years)	

Statewide Safety Countermeasure Programs

The State of Connecticut has been working in recent years to implement safety countermeasures systemwide, with priority given to State roads. The safety countermeasure programs the State has implemented include:

- Road iets
- Centerline Rumble Strips
- Roundabouts
- Clearance Intervals
- Signal Improvements
- On-ramp Wrong Way Driving Detection System
- Statewide ADA compliance and transition planning
- Rapid Rectangular Flashing Beacons (RRFBs)
- Speed Feedback Radar Signs
- Automated Speeding Enforcement Program
- Horizontal Curve Signage
- High Friction Surface Treatment
- Leading Pedestrian Interval
- Crosswalk Visibility Enhancements
- Systemic Application of Multiple Low-Cost Countermeasures at Stop-Controlled Intersections
- Wider Edge Lines
- Road Safety Audits

Many of these countermeasures have also been deployed on local roadways, using State guidance.

STRATEGIES & PROJECTS

Introduction

The strategies and projects section considers crash analysis, proven safety countermeasures, and community input to identify actionable steps and key project focus areas to improve safety and reach Vision Zero in the SECOG region by 2047.

Project Development

Developing the high injury network serves as a great first step in identifying locations within the SECOG region that are in the most need of traffic safety improvements. The next step of the process involves combining key high injury intersections and segments together to create actionable project areas, which allows for the tailored identification of traffic safety countermeasures. Identifying key high injury project areas also provides municipalities with a prioritized list of locations with the highest need for traffic safety improvements.

The process of project development also included:

1. **Identify traffic safety projects for each municipality within the SECOG region**
    a. With the understanding that rural and underserved communities are often excluded from statewide or federal planning efforts, the Safety Action Plan is a way to acknowledge and identify traffic safety concerns of all communities.
    b. Safe Streets for All demonstration and implementation grant funding can be applied for on a municipal level, so by identifying locations within each community the Safety Action Plan provides opportunity for every community to be included in federally funded traffic safety projects.
    c. Traditional traffic safety plans tend to focus on areas with the highest number of crashes. In contrast, the Safety Action Plan prioritizes locations where serious or fatal crashes have – or could – occur, even if the locations do not have high traffic volumes, like in many rural communities in the SECOG region.
2. **Listen to key municipal stakeholders during the project identification process**
    a. Municipal stakeholders play a key role in helping to identify additional locations where near misses are a top concern (locations that may be missed by traditional crash data analysis).
    b. Stakeholders also help note top crash locations that are not a concern for the town, such as where traffic safety countermeasures haverecently been implemented through local or CTDOT funding sources.

Project Development Methodology Notes

The following list provides an overview of the key themes and processes in developing top high injury project locations in the SECOG region:

- Review (at minimum) top 50 trends-based high injury network intersections.
- Review (at minimum) top 50 trends-based high injury network segments.

- Review high injury locations for overlaps with current CTDOT projects.
    - Top high injury locations were noted where there is an active CTDOT project that addresses traffic safety concerns.
- High injury locations were cross-checked with municipal stakeholder and public survey input.
- In municipalities where there were few high injury locations, municipal and public stakeholder input was used to identify top municipal projects.
- High injury network locations were cross-checked with previous projects noted in the 2022 SECOG Safety Action Plan to identify locations of continuing traffic safety concern.
- Projects were split into Motorist and Non-Motorist specific projects.
- Motorist projects were developed based on top locations from the motorist high injury network.
- Non-Motorist (pedestrian and bicyclist focused) projects were developed based on top locations from the non-motorist high injury network. Additionally, input from municipal stakeholders and from public survey responses on where bike and pedestrian infrastructure was needed most was a key input in identifying non-motorist projects.
- The risk-based high injury network was used to supplement project geometry creation by identifying additional intersections and segments to include within project boundaries. For example, in some corridor projects with 2+ intersections, additional corridor intersections were reviewed to see if they were identified and scored highly in the risk-based analysis and if so, the corridor project was extended to include the additional intersections.

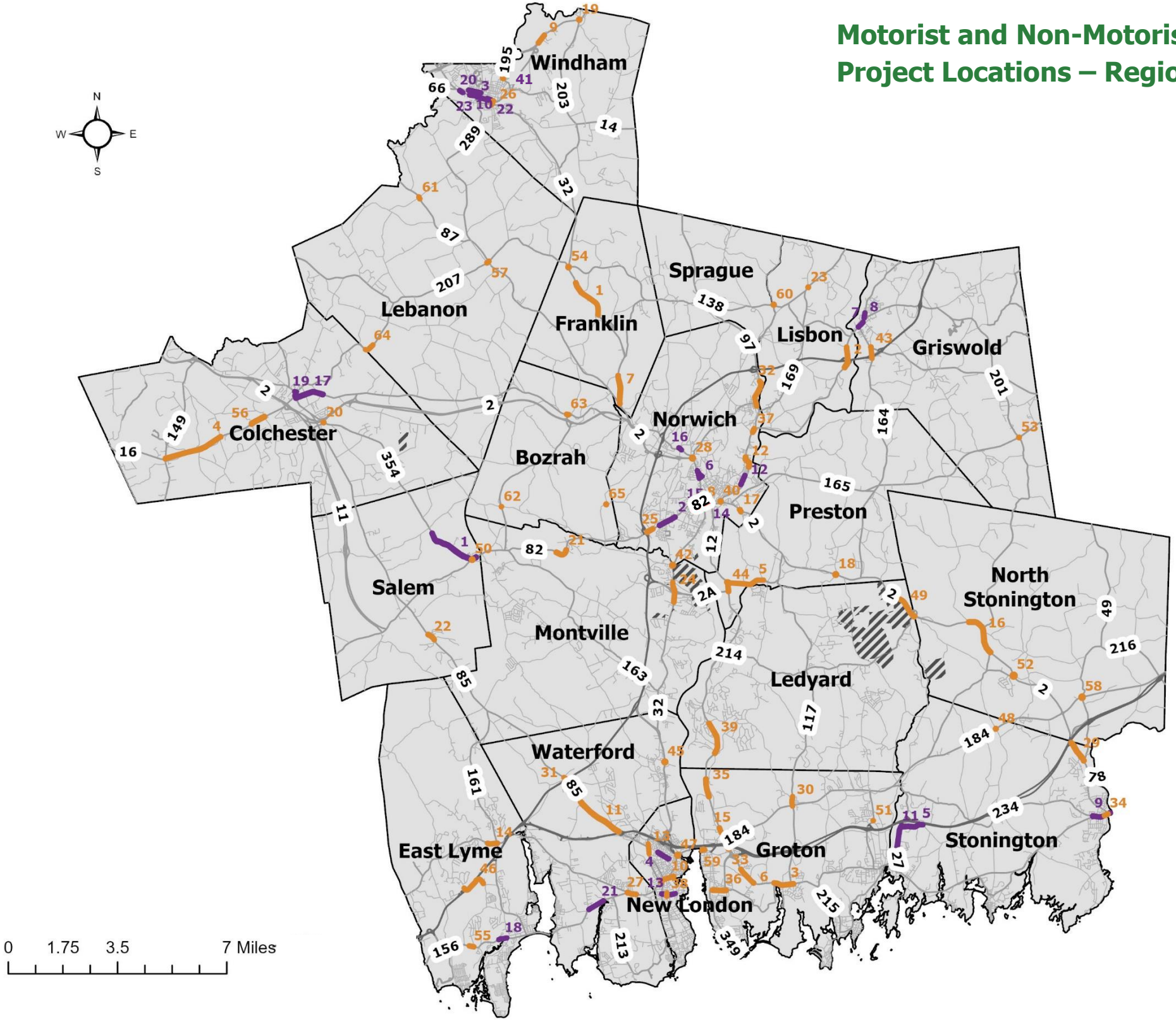
The project development process resulted in the identification of **65 motorist and 23 non-motorist projects** which included projects in each municipality of the SECOG region. Projects may combine high injury segments and intersections into one project.

Project Scoring

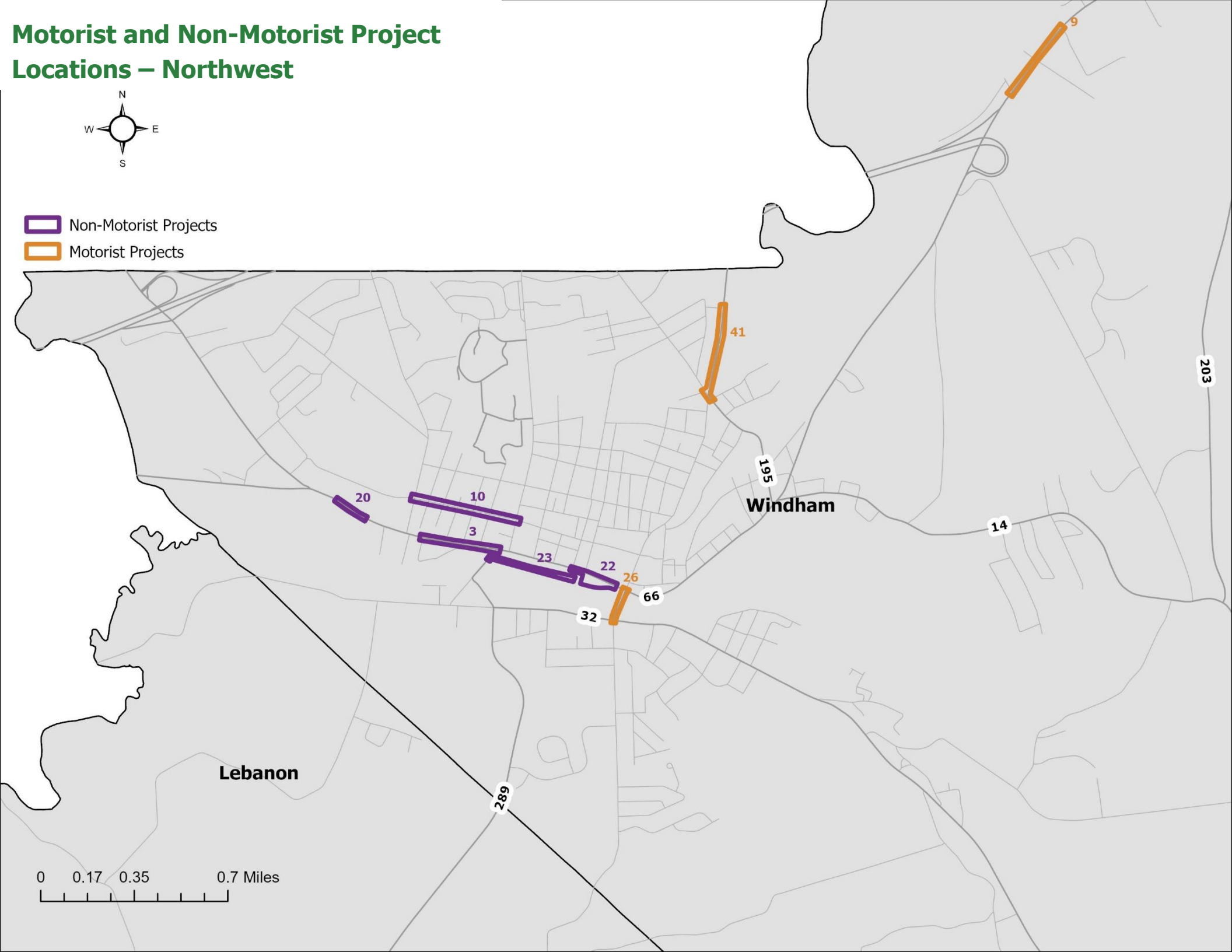
Projects developed from the results of the high injury network and community input were then rescored based on the frequency and severity of crashes within the project area. The projects were ranked by **equivalent property damage only (EPDO),** which is a methodology documented in the Highway Safety Manual (HSM) and provided through the USDOT Federal Highway Administration (FHWA). The EPDO score weighs the societal costs associated with fatal and injury crashes relative to property damage only crashes. EPDO severity weighting factors are shown in the table below and are a function of the Property Damage Only (PDO) crash cost.

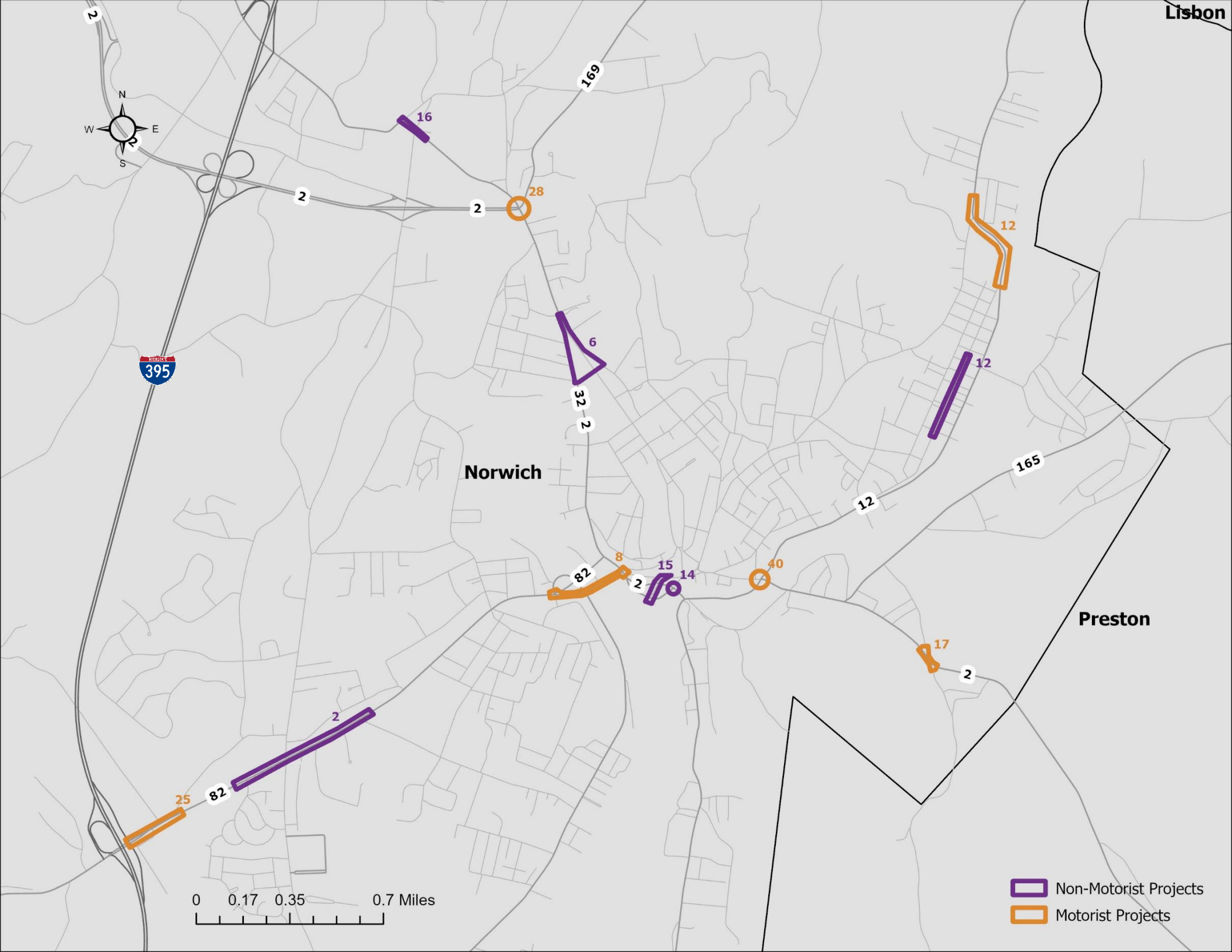
Crash Type	EPDO Weighting Factor
Fatality	541.7
Injury	11.2
Property Damage Only (PDO)	1.0

Motorist and Non-Motorist Project Locations – Regionwide



Motorist and Non-Motorist Project Locations – Northwest

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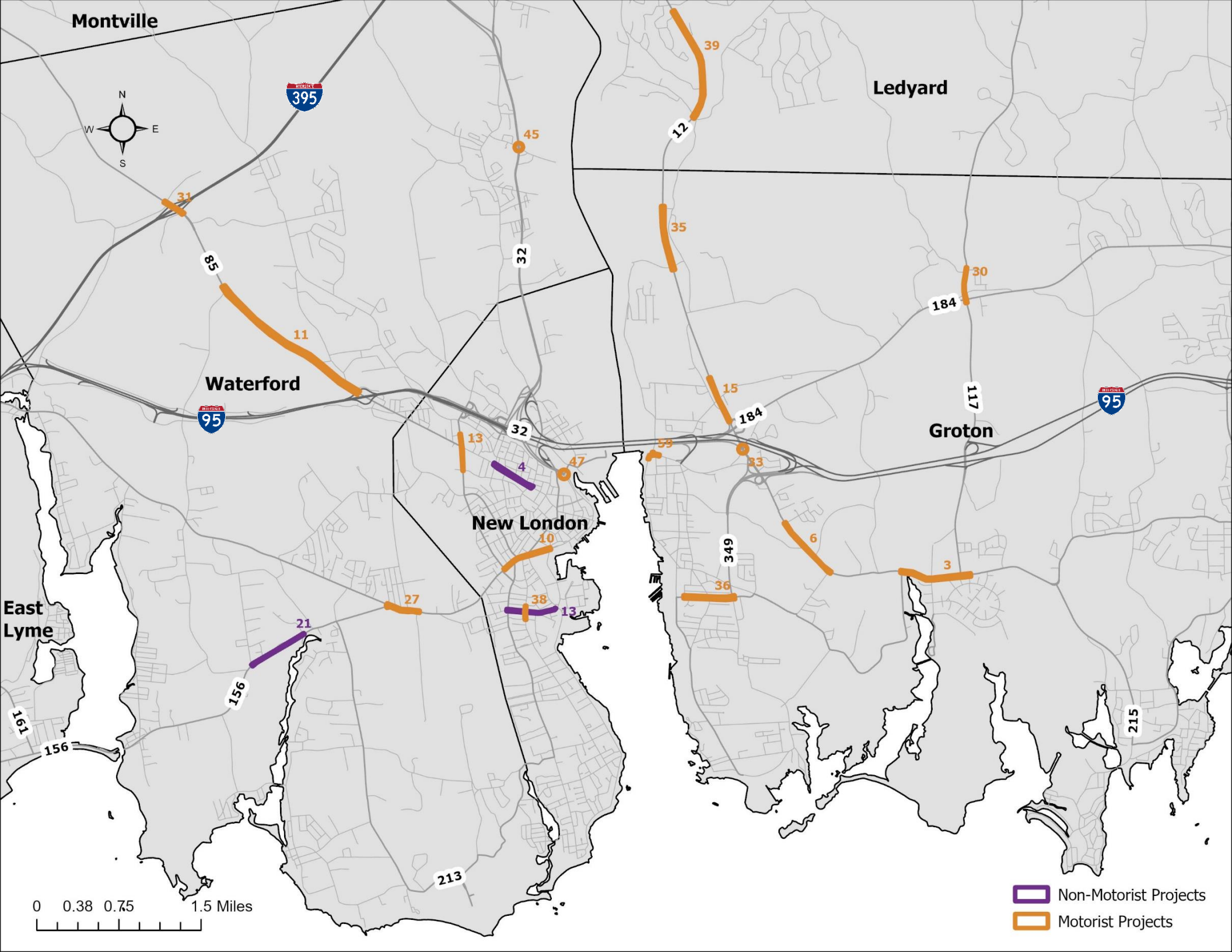
Non-Motorist Projects
Motorist Projects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Ledyard
Waterford
New London
Groton
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59
33
10
6
3
36
27
38
13
21
0 0.38 0.75 1.5 Miles
Non-Motorist Projects
Motorist Projects

Project Tables

The following tables, **Motorist Projects** and **Non-Motorist Projects,** include the following information:

- Rank: SECOG regional ranking according to the Equivalent Property Damage Only (EPDO) scale
- City/Town
- EPDO: Project EPDO score
- Total KABC Crashes: Total of crashes involving a fatality (K) or injury type A, B, or C (A – incapacitating, B – non-incapacitating, C – possible injury)
- Traffic Safety Countermeasures: List of proven safety countermeasures and project specific recommendations to improve safety (traffic safety countermeasures provided in the table are not in order of priority). Countermeasure selection was informed by location-specific safety issues, conversations with municipal leaders, review of other plans such as the SECOG 2019 Bicycle and Pedestrian Plan and countermeasure toolboxes. Further evaluation of countermeasures may be needed during design based on design standards and operational concerns.
- Preliminary Planning Level Cost Estimates: Each of the projects contains a preliminary planning level cost estimate, including the estimated cost of construction and design. The cost estimate does not include any land acquisition cost.

The **Motorist Projects** table contains the top **30** ranked motorist projects in the SECOG region.

The **Non-Motorist Projects** table contains the top **10** ranked non-motorist projects in the SECOG region.

The remaining motorist and non-motorist regional projects can be found in **Appendix A: Safety Action Plan – Municipal Project Guide.**

Motorist Projects

Rank	City/Town	Project Description	EPDO	Total Fatal/Injury (KABC) Crashes	Location Issue	Traffic Safety Countermeasures	Cost Estimate
M-1	Franklin	Franklin Turnpike (CT-32) from Franklin Town Hall to Tyler Road	2336	22	Speeding, Single Vehicle and Angle Crashes, Night Crashes	• Install speed feedback radar signs. • Install center line rumble strips. • Re-stripe climbing lane striping north of Town Hall. • Trim vegetation at Whippoorwill Hollow Road. • Consider installing no passing signs on the downhill.	$65,000-100,000
M-2	Lisbon	River Road (CT-12) from Lee Road to I-395 Interchange	1592	29	Angle Crashes, Access Management, Speeding	• Narrow lanes to 11' consistently near Lisbon Landing Shopping Plaza. • Evaluate a road diet. Install signal backplates. • Provide pedestrian crossing refuge island at Lisbon Landing and Target intersection across the north leg of River Road. • Provide continuous sidewalk, in line with sidewalks recommended from Lisbon Landing to Jewett City in the SECOG 2019 Bicycle and Pedestrian Plan. • Install wayfinding signage at commercial area north of I-395 to reduce access management confusion.	$640,000-800,000
M-3	Groton	Fort Hill Road (US-1) from South Road (CT-649) to Vergennes Court	1563	40	Rear-End and Angle Crashes, Access Management, Ped/Bike Conflicts	• On-road bike lanes planned between South Road and Depot Road. • Evaluate a shared use path on the south side of US-1 from boardwalk terminus east of the Poquonnock River to South Road. • Replace side street signals at South Road with pedestrian signal and new crosswalk on north leg. • Consider options for developing a continuous sidewalk network on the north side and south side of US-1, including accommodation at driveways. • At Depot Road, consider curb extension on southwest corner to shorten crossing distance. • Evaluate yellow and all-red clearance intervals at Depot Road intersection and signal timing optimization. • At Newtown Road (CT-117), move stop bar and crossing for the north leg further south, provide bump-out on the northeast corner. Close gas station driveway closest to intersection. • Install crosswalk across east leg of US-1. • Consider upgrades to crosswalk and ramps at Vergennes Court, consider RRFB at midblock crossing.	$450,000-575,000
M-4	Colchester	Middletown Road (CT-16) from Westchester Road (CT-149) to Standish Road	1313	52	Speeding, Single Vehicle, Rear End, and Angle Crashes	• Install speed feedback radar signs. • Ensure lanes are consistently 11 feet wide. • Install wider edge lines. • Delineate the side of road using reflective object markers. • Install centerline rumble strips. • Extend sidewalk on south side of roadway to Dunkin Donuts at 723 Middletown Road. • Narrow eastbound lane in commercial district. Evaluate clearance intervals and left turn phasing at the intersection of CT-149 and CT-16. • Provide a median refuge island at the CT-149 and CT-16 intersection on the eastern leg of CT-16.	$350,000-450,000

Rank	City/Town	Project Description	EPDO	Total Fatal/Injury (KABC) Crashes	Location Issue	Traffic Safety Countermeasures	Cost Estimate
M-5	Preston	Poquetanuck Road (CT-2A) from Laurel Hill Road (CT-12) to Middle Road	1275	7	Speeding, Single Vehicle Run Off Road Crashes, Night Crashes	• Evaluate impact and future needs of the Preston Riverwalk project. • Install chevron signage, curve ahead signage, add reflectors on telephone poles and trees near curves. Consider high friction surface treatment near 188-196 Poquetanuck Road (CT-2A). • Evaluate corridor illumination. • Consider edge rumble strips and thicker edge lines. • Coordinate with project 0172-0515 resurfacing for restriping edge lines and center lines. • Evaluate providing bike lanes on CT-2A, in line with the SECOG 2019 Bicycle and Pedestrian Plan.	$325,000-425,000
M-6	Groton	Long Hill Road (US-1) from Wayne Road to Poquonnock Rd	1268	17	Access Management, Angle and Rear End Crashes, Ped/Bike Conflicts	• Consider road diet from 4-3 with a center left turn lane and/or center median with separated bike lanes. • Install pedestrian signal heads and crosswalks across the east leg of Meridian Street intersection. • Install a wider sidewalk with raised crossings across driveways similar to recent improvements by Take 5 Oil Change. • Fill gaps in existing sidewalk network. • Add detectable warning panels at Poquonnock Road • Evaluate yellow and all-red clearance intervals at all signals along the corridor. Update signal timing and phasing, consider signal coordination for improved corridor mobility. • Install signal backplates at Meridian Street intersection. • At Drozdyk Drive, revise and narrow driveways to allow a westerly unrestricted "in" and an easterly right-turn-only "out." • Install pedestrian signal heads on east leg of Poquonnock Road intersection. • Restripe crosswalks at Poquonock Road. • Conduct a corridor study.	$1,100,000-1,500,000
M-7	Franklin	Franklin Turnpike (CT-32) from Norwich-Lebanon Road (CT-87) to Murphy Road	1257	18	Access Management, Rear End and Angle Crashes, Speeding	• Consider eliminating southbound passing zone south of Murphy Road. • Install street lighting near commercial driveways. • Provide wayfinding signage for entrance into gas stations. • Designate entrance and exit driveways at Gulf station. • Install signal backplates at Norwich-Lebanon Road intersection. • Consider conducting speed study to lower speed in commercial area. • Install sidewalks along Route 32 as recommended in the SECOG 2019 Bicycle and Pedestrian Plan.	$1,650,000-2,00,000
M-8	Norwich	W Main Street (CT-82) from N High Street to Washington St (CT-2)	1047	50	Rear End and Angle Crashes, Ped/Bike Conflicts	• Review and implement recommendations from 2024 Chelsea Harbor and Downtown Norwich Mobility Study including a roundabout at CT-82 and CT-2, a roundabout at CT-82 and N High Street, bike accommodations and a two-way roadway conversion along W Main Street, and dead ending of N Thames Street.	See Mobility Study

Rank	City/Town	Project Description	EPDO	Total Fatal/Injury (KABC) Crashes	Location Issue	Traffic Safety Countermeasures	Cost Estimate
M-9	Windham	Boston Post Road (US-6) from Airport Road to Walmart Driveway (Northridge Drive)	1046	33	Angle Crashes, Access Management, Speeding, Ped/Bike Concerns	• Install sidewalk pavement markings on the east leg of Airport Road. • Evaluate changes to signal timing and phasing from Projects 0172-0450 and 0172-044. • At Northridge Drive, coordinate with project 0172-0541 to upgrade pedestrian APS equipment. • Install crosswalks on the south leg of Boston Post Road and east leg of Northridge Drive, provide a pedestrian refuge island on the south leg using existing shoulder width. • Consider a traversable median island on the north leg of the Airport Road intersection. • Restrict left turns from unsignalized driveways and side streets. • Long term – evaluate repurposing shoulder into median to restrict left turns. • Designate two lane approaches at Airport Road with pavement markings. • Provide consistent 11' travel lanes.	$650,000-850,000
M-10	New London	Bank Street (US-1) from Colman Street (CT-639 / US-1) to Howard Street	968	23	Rear End and Angle Crashes, Ped/Bike Conflicts, Traffic Congestion	• Signal detection upgrades planned. • Realign Ocean Avenue intersection by providing curb extension on the southeast side and install crosswalk on the southern leg across Ocean Avenue. • Improve alignment of crosswalks across Bank Street by Ocean Avenue and US-1. • Realign Truman Avenue intersection by constructing a curb extension on the northwest corner. • Provide new signal equipment at intersections. • Connect sidewalk and ADA ramp network between Colman Street and Howard Street along both sides of the corridor. • Evaluate yellow and red clearance interval times. Evaluate pedestrian phasing to minimize pedestrian delay and maximize separation from vehicles. • Install pedestrian signal heads and buttons on south leg of Montauk Avenue, provide pedestrian refuge island. • Provide raised median between Montauk Avenue and Shaw Street with pedestrian refuge islands on Bank Street approaches. • Stripe on-street parking spaces throughout corridor, where applicable. • Evaluate for temporary pedestrian refuge islands at the Bank Street approaches at the intersection of Howard Street. • Conduct corridor study.	$2,000,000-2,500,000

Rank	City/Town	Project Description	EPDO	Total Fatal/Injury (KABC) Crashes	Location Issue	Traffic Safety Countermeasures	Cost Estimate
M-11	Waterford	Hartford Turnpike (CT-85), from I-95 WB Off Ramps to Cross Road	957	28	Rear-End and Angle Crashes, Access Management, Speeding, Ped/Bike Conflicts	• Traffic signal system planned to be upgraded along corridor. • Optimize signal timing, phasing, and detection. • Upgrade signal equipment at Cross Road, Target driveway and Dayton Place to improve visibility at signals. • Remove side street green buttons. Install pedestrian signals at Target driveway. • Install speed feedback radar signs. • Provide separated bicycle lanes or multi-use shared path to connect to Cross Road bike facilities, provide access to nearby residential and retail land use, and support regional redevelopment of the nearby mall. • Convert existing median at southern leg of Target intersection into a pedestrian refuge island. • Close left turn lane on Hartford Turnpike NB towards Olive Garden. Meet with OSTA to discuss major traffic generator (MTG) conditions of approvals. • Install crosswalk and ramps across Petco driveway on north leg. • Narrow all travel lanes to 11 feet wide. • Close driveway entrance between Target driveway and west Crystal Mall Entrance. Meet with OSTA to discuss major traffic generator (MTG) conditions of approvals. • Install crosswalk and sidewalks at Dayton Place on the west side and add pedestrian signals. Provide pedestrian facilities throughout the corridor, coordinate for addition of transit stops where applicable along the corridor.	$2,100,000-2,650,000
M-12	Norwich	N Main Street (CT-12) from north of 14th Street to north of Edgewood Road	928	22	Angle, Single Vehicle, and Rear End Crashes, Access Management, Intersection Alignment, Ped/Bike Conflicts	• Manage vegetation along sidewalk network. • Connect sidewalk network on the east side of CT-12 between Dunkin Donuts and 695 Boswell Avenue (currently Vocatura Bakery). • Coordinate with project 0172-0541 Signals APS upgrades at Boswell Avenue and N Main Street intersection. Coordinate updating signal timing, signal phasing, and clearance intervals. • Coordinate a pedestrian-signalized crossing across N Main Street at Barnes Street (south leg) and at Edgewood Road (north leg). • Consider centerline rumble strips, high friction surface treatments, or additional speed and chevron signage at the curve north of 15th Street. • Install reflective markers to trees and poles along the curve. • Evaluate corridor access management. • Consider a midblock RRFB controlled crossing north of Edgewood Road with curb bump outs.	$400,000-550,000
M-13	New London	Colman Street (US-1) from Waldo Street to Cedar Grove Avenue	914	8	Rear End Crashes, Speeding, Access Management	• Evaluate sidewalk network and repair sidewalk/add detectable warning panels. • Enhance access management, evaluate driveway entrances and consider closing access points, consider making entrances one way in/out or right turn in only. Meet with OSTA to discuss major traffic generator (MTG) conditions of approval, as applicable. • At corridor signals, install signal backplates, update clearance intervals, timing, and phasing, evaluate pedestrian phasing to minimize pedestrian delay and maximize separation from vehicles. • Evaluate road diet, considering a center median with restricted right out only turning movements, evaluate truck movement patterns and evaluate designs using truck design radii.	$350,000-450,000

Rank	City/Town	Project Description	EPDO	Total Fatal/Injury (KABC) Crashes	Location Issue	Traffic Safety Countermeasures	Cost Estimate
M-14	East Lyme	Boston Post Road (US-1) from Church Lane to Flanders Road (CT-161)	794	2	Speeding, Angle and Rear End Crashes, Ped/Bike Conflicts	• Install RRFB's at midblock crossings near East Lyme High School. • Narrow travel lanes from 12 ft to 11 ft. • Evaluate bike lanes along the stretch including bicycle treatment at intersections and/or sidewalk widening on the north side of Boston Post Road. • Consider on-road painted "School Zone." • Install speed feedback warning signs, and/or additional speed limit signage. • Provide crosswalk markings across High School Driveway Entrance/Exit near 164 Boston Post Road. • Evaluate driveway narrowing. • Construct midblock crossing with bump out near Flanders Fire Station. • Evaluate sidewalk network between Flanders Road and East Lyme High School on the north side of Boston Post Road. Upgrade sidewalks where applicable.	$250,000-350,000
M-15	Groton	CT-12 corridor, from Charter Oak Drive to Gold Star Highway (CT-184) WB Off-Ramps Interchange	731	13	Speeding, Access Management, Angle and Rear End Crashes, Ped/Bike Conflicts	• Coordinate with Groton to advance recommendations and concept plans developed for the Groton Complete Streets Plan for CT-12 north of Gold Star Highway intersection. Recommendations include adding side paths, providing crosswalks and pedestrian signals, and adjusting driveway widths along the corridor. • Widen sidewalk on the west side to be shared-use path width. Consider a corridor study of RT 12 from Pleasant Valley Road S to I-95 interchange, evaluating potential road diet of the corridor. • Restrict access to right-in right out driveways along the corridor. • Consider centerline barriers at driveway entrances for enforcement. • Install reflective backplates at Hickory Drive and other signals as needed. • Evaluate sidewalk network and upgrade and replace pedestrian ramps and sidewalk sections as needed. • Evaluate signal and phasing upgrades from project 0172-0525 at Toll Gate Road. Add pedestrian signal heads and crosswalks on all 4 legs of the intersection. • Realign Pleasant Valley Road S with CT-12. Create a formalized T geometry. • Install pedestrian signal heads and crosswalks on all sides of Pleasant Valley Road S and CT-12 intersection. Add pedestrian refuge islands on long crossings of CT-12.	$1,800,000-2,300,000
M-16	North Stonington	Norwich-Westerly Road (CT-2) from Mains Crossing Road (CT-201) to Swantown Hill Road	712	9	Single Vehicle, Rear End, and Angle Crashes, Night Crashes, Speeding	• Increase clearance times and install signal backplates at signalized intersections. • At CT 201 re-align signal heads with approach lanes. CTDOT upgrading signal detection. • Upgrade signal equipment and controller and remove side street green buttons. • Add additional curve signs on CT 201 approach. • Install centerline rumble strip on CT 201 approach to CT 2. • At Ryder Road stripe do not block box pavement markings. • Move Ryder Road stop sign and stop bar closer to intersection. • On northbound CT 2 approach to Ryder Road, install intersection ahead sign for both Ryder Road and CT 201. • Consider traffic calming devices such as speed humps on Ryder Road. • Provide painted cross hatching between directions on both CT 2 approaches at Main Crossing Road. • Install curve signs on CT 2 east of Hewitt Pond. • Install intersection ahead signs on CT 2 in both directions approaching Swantown Hill Road.	$300,000-400,000

Rank	City/Town	Project Description	EPDO	Total Fatal/Injury (KABC) Crashes	Location Issue	Traffic Safety Countermeasures	Cost Estimate
M-17	Norwich	Stonington Road / E Main Street (CT-2) at Palmer Street / Palmer Street Ext	645	7	Speeding, Angle and Single Vehicle Crashes, Night Crashes, Ped/Bike Conflicts	• Improve intersection lighting (60+% of crashes during dark conditions). • Remove side street green, replace with pedestrian signal heads and APS buttons, and add pedestrian signal phase. • Update signal phasing, timing, and clearance intervals. Add signal backplates. • Add speed feedback signage. • Install reflective markers to trees and telephone poles. • Install pedestrian signalized crossing across Palmer Street leg. • Construct sidewalk bump out on southeast corner of Palmer Street at E Main Street intersection. • Improve RT2 wayfinding signage at Palmer Street Ext intersection. • Evaluate tracking lines connecting CT-2 at Palmer Street Ext intersection. • Evaluate sidewalks along the corridor and repair, replace, and widen sidewalks where needed along the corridor.	$550,000-700,000
M-18	Preston	Norwich-Westerly Road (CT-2) at Ross Road and Mathewson Mill Road	640	10	Access Management, Night Crashes, Angle and Single Vehicle Crashes	• Coordinate with project 0172-0541 Signal APS upgrades. • Access management, including closing driveways and providing access to local businesses through Mathewson Mill Road. • Adjust clearance intervals and signal timing/phasing. • Consider mountable medians at intersection approaches. • Narrow travel lanes to 11 ft. • Coordinate with Preston for access to lot on the southeast corner of the intersection, access currently on Mathewson Mill Road.	$135,000-200,000
M-19	Windham	Boston Post Road (US-6) at North Windham Road (CT-203)	632	38	Speeding, Angle and Single Vehicle Crashes, Speeding	• Install dynamic speed feedback radar signs on RT-6. • Update clearance intervals at signal, update pedestrian timing. • Install signal backplates / upgrade signal equipment to standard bulb sizing. • Install wayfinding signage for the Airline Trail Beaver Hill Road parking lot. • Install trail crossing signage on CT-203 N Windham Road. • Evaluate RRFB and painted crosswalk.	$115,000-150,000
M-20	Colchester	Parum Road (CT-354) at Lake Hayward Road	616	7	Angle and Single Vehicle Crashes, Speeding	• Evaluate a signal or roundabout to manage turning conflicts. • Install shoulder rumble strips in areas with wide shoulders to discourage passing on the shoulder. • Install speed reduction pavement markings on hill approaching the intersection. • Install flashing stop signs.	$130,000-175,000
M-21	Montville	Norwich Salem Turnpike (CT-82) south of Green Valley Drive	599	16	Single Vehicle Run Off Road Crashes, Speeding	• Evaluate for high friction surface treatment, supplement with additional chevron signs. • Consider shoulder or centerline rumble strips. • Consider additional reflective markers on trees or telephone poles. • Consider thicker edge lines. • Evaluate bike lanes on Route 82, as recommended in the SECOG 2019 Bicycle and Pedestrian Plan.	$300,000-400,000

Rank	City/Town	Project Description	EPDO	Total Fatal/Injury (KABC) Crashes	Location Issue	Traffic Safety Countermeasures	Cost Estimate
M-22	Salem	New London Road (CT-85) from Horse Pond Road to Emerald Glen Lane	588	16	Angle and Rear End Crashes, Speeding	• Install intersection ahead signage on SB New London Road before Horse Pond Road. • Stripe a thicker painted stop bar on Horse Pond Road. • Manage vegetation. • Consider shoulder or enhancing existing centerline rumble strips. • Widen shoulder near Horse Pond Boat Launch to allow for better visibility of vehicles exiting the parking lot. • Provide intersection ahead signage. • Manage vegetation near boat launch entrance for better sight distance looking north.	$80,000-150,000
M-23	Lisbon	N Burnham Highway (CT-169) at Kimbal Road and Meadow Brook Circle	566	8	Angle and Rear End Crashes, Speeding, Intersection Alignment	• Improve intersection lighting. • Install speed feedback signage. • Create "T" intersection of Kimball Road. • Manage vegetation for sight distance. • Consider intersection ahead signage. • Coordinate with Town and CTDOT (recently repaved CT-169) to stripe thicker edge lines and maintain 11 ft. maximum travel lanes.	$600,000-800,000
M-24	Montville	Norwich New London Turnpike (CT-32) from Fort Shantok Road to Golden Road	557	3	Access Management, Speeding, Angle and Rear End Crashes, Ped/Bike Conflicts, Traffic Congestion	• Evaluate feasibility of roundabouts connecting CT-2A and CT-32 offramps. • Consider a raised median in conjunction with roundabouts on CT-32 to reduce crashes related to left-turning movements into businesses. • Consider a road diet and corridor study, including a center left turn lane or turn pockets with raised center median. • At signals, update timing and phasing, update clearance intervals, and install signal backplates. • At Golden Road, install a pedestrian crossing median. • Install missing sidewalks at side streets and across off-ramp approaches along the corridor on the west side of CT-32. • At Occum Lane, install a crosswalk across the west leg (driveway) and evaluate pedestrian phasing to minimize pedestrian delay and maximize separation from vehicles, add pedestrian median crossing island, reduce lanes to 11ft and add a center mountable median. • Remove side street green at WB 2A offramps, replace with pedestrian signal heads and APS buttons, and create crosswalks on west and north intersection legs. • Evaluate corridor sidewalk network and repair/fill gaps in sidewalks.	$700,000-850,000
M-25	Norwich	Salem Turnpike (CT-82) from I-395 NB Off Ramp to Orchard Lane	555	69	Angle and Rear End Crashes, Speeding, Access Management	• Coordinate with project 0172-0546 detection upgrades at traffic signals and adjust additional signal timing, phasing, and clearance intervals. • Evaluate corridor for a road diet, and consider additional corridor evaluation/study coordinated with additional project to the east at intersection of New London Turnpike along CT-82. • Consider a center median. • Consider pedestrian refuge islands at crossings at Old Salem Road and McDonalds driveway. • Evaluate corridor access management. • Evaluate corridor lighting.	$300,000-400,000

Rank	City/Town	Project Description	EPDO	Total Fatal/Injury (KABC) Crashes	Location Issue	Traffic Safety Countermeasures	Cost Estimate
M-26	Windham	South Street over Frog Bridge, including intersections of Pleasant Street (CT-32) and Main Street (CT-66)	406	27	Angle and Rear End Crashes, Ped/Bike Conflicts with Airline Trail	• In conjunction with Non-Motorist Project #22 and #23 on Riverside Drive, reconstruct the Willimantic Footbridge connecting Riverside Drive and Pleasant Street over the Willimantic River. • Coordinate signals. • Narrow travel lanes to 11 ft. • Install lane utilization signage. • Install pedestrian median refuge islands focusing on north leg of Jackson Street (main crossing for trail connection). • Update signal timing, phasing, and clearance intervals, add leading pedestrian interval (LPI). • Install wayfinding signage for Air Line trail. • Upgrade detection to video detection (or adaptive signal control). • Evaluate intersection bump outs, consider squaring off crosswalk with separate curb ramp. • Provide bicycle safety improvements corridor wide, such as separated bike lanes, bike boxes at traffic signals, and/or informative signage such as "walk your bike" at both signalized intersections. • Consider adding new flashing yellow arrow signal head for NB left movements.	$225,000-300,000
M-27	Waterford	Boston Post Road (US-1) from Rope Ferry Road (CT-156) to Miner Lane	367	8	Angle and Rear End Crashes, Access Management, Ped/Bike Conflicts	• Evaluate a road diet and/or corridor study on RT-1. • Evaluate signal timing, phasing, coordination, and clearance intervals, add signal backplates. • Consider center median barriers and add pedestrian refuge islands. • Evaluate bicycle accommodation along US-1 and at the Rope Ferry Road intersection. • Evaluate and repair/connect sidewalk network with wider sidewalks between Miner Lane and Rope Ferry Road. • Install crosswalks on side streets. • Evaluate corridor access management. • Evaluate and improve corridor lighting. • Long term - consider roundabout at Rope Ferry Road and RT-1.	$650,000-850,000
M-28	Norwich	Veterans of Foreign Wars Highway (CT-2 / CT-32) at Washington Street (CT-2)	339	40	Rear End Crashes, Traffic Congestion	• Evaluate sidewalk network and add links/repair sidewalks to connect the north and south approaches of Washington Street through the intersection. • Evaluate coordination with downstream and upstream signalized intersections. • Consider adding emergency signal priority. • Evaluate roundabout in the long term.	$420,000-525,000
M-29	Stonington	Liberty Street (CT-2) from Voluntown Road (CT-49) to I-95 NB Off-Ramp	331	4	Angle and Rear End Crashes, Speeding, Access Management	• Upgrade signal heads at I-95 NB off-ramp to have retroreflective backplates to improve nighttime visibility. • Upgrade signal heads at Pawcatuck Farms Road to have retroreflective backplates, and upgrade mast arms. • Extend sidewalk from south of Pawcatuck Farms Road to Voluntown road, and construct crosswalk with ramps and pedestrian signal heads across Voluntown Road. • Consider realignment of Voluntown Road approach to intersection with Liberty Street.	$900,000-1,200,000

Rank	City/Town	Project Description	EPDO	Total Fatal/Injury (KABC) Crashes	Location Issue	Traffic Safety Countermeasures	Cost Estimate
M-30	Groton	North Road (CT-117) from Gold Star Highway (CT-184) to Alpha Ave	305	10	Angle and Rear End Crashes, Night Crashes, Ped/Bike Conflicts	• Improve lighting on North Road (30+% of crashes). • Evaluate lane configurations at North Road approaches, consider adding left turn storage lanes. • Install sidewalk landings with detectible warning panels at southeast and southwest corners. • Evaluate signal timing, phasing, and clearance intervals. Provide signal head backplates. • Add crosswalk across Candlewood Road. • Evaluate traffic patterns bypassing the signal using Candlewood Road. • Consider speed humps on Candlewood Road, speed feedback signage or other speed slowing countermeasures. • Evaluate RRFB or bump outs for pedestrian crossing at Gales Ferry Road. • Extend sidewalk to Homelong Cove and to Alpha Avenue on both sides of North Road. • Provide bike intersection treatments at the intersection with Gold Star Highway (CT-184), in line with the bike lane recommendation on CT-184 in the SECOG 2019 Bicycle and Pedestrian Plan.	$750,000-1,000,000

Non-Motorist Projects

Rank	City/Town	Project Description	EPDO	Total KABC Crashes	Location Issue	Traffic Safety Countermeasures	Cost Range - Contingency
NM-1	Salem	Old Colchester Road (CT-354) from Gardner Lake Volunteer Fire Company to Norwich Road (CT-82)	1326.4	22	Ped/Bike Crashes, Single Vehicle Crashes, Speeding	• For additional counter measures refer to walk audit notes. • Install speed feedback radar signs. • Use 6" edge lines to slow vehicles. • Install lighting at key locations. • Consider corridor-wide speed limit with signage. • Trim vegetation for improved visibility and sight distances. • Consider a flashing overhead beacon or pre-emption at the fire station. • Install no passing signs.	$620,000-775,000
NM-2	Norwich	Salem Turnpike / W Main Street (CT-82) from west of Surrey Lane to east of Dunham Street	1105.2	76	Ped/Bike Crashes, Access Management, Speeding, Traffic Congestion	• Evaluate a road diet on CT-82. • Remove side street green at 45 Driveway CT-82 intersection, replace with pedestrian signal heads and APS push buttons. • Upgrade pedestrian signal and APS equipment along corridor. • Install LPI for pedestrian phasing, review signal timing, phasing, and clearance intervals. • Coordinate with project 0103-0275 CT-82 improvements phase two - replacing 3 signalized intersections with roundabouts and installing a continuous raised median between Old Salem Plaza and Maple Street. • Coordinate with project 0103-0275 to address corridor wide bicycle needs, evaluate for buffered bike lanes, a shared use path, or other form of separated bicycle facility. • Evaluate and connect sidewalk network between Dunham Street and 45 CT-82 Plaza. • Provide a separated bicycle facility. • Improve corridor lighting, crosswalks, and landscaping.	$850,000-1,100,000

Rank	City/Town	Project Description	EPDO	Total KABC Crashes	Location Issue	Traffic Safety Countermeasures	Cost Range - Contingency
NM-3	Windham	Main Street (CT-66) from Bridge Street (CT-32) to Arnolds Lane	943.7	31	Ped/Bike Crashes and Conflicts, Speeding, Access Management	• Curb extensions at intersection of Bridge Street and Main Street. • Consider a further corridor study of Main Street evaluating a road diet to 1 11' lane each direction, install buffered bike lanes, and provide shortened turn pockets where necessary (evaluating Bridge Street intersection). • Realign crosswalks, repaint crosswalks, and evaluate all ADA ramps for compliance. • Evaluate access management along the corridor including restricting driveways to entrance or exit only, consider center left turn lane where applicable. • Provide bike infrastructure such as bike parking near Memorial Park. • Provide speed calming measures such as speed feedback signage. Evaluate need for midblock RRFB crossing at Memorial Park with bump outs. • For additional countermeasures refer to Main Street RSA completed in 2016. • Short-term countermeasures included: adjust pedestrian crossing times, repaint crosswalks, repair damaged sidewalks, add detectable warning panels that are missing, and add pavement markings for shoulder lanes to direct vehicles to travel in one lane. • Medium-term countermeasures included: add ADA pushbuttons and pedestrian signal heads, provide bike accommodations in front of the First Baptist Church, add signage for bikers to dismount when crossing, and add speed feedback radar signage. • Consider updating intersection to include bike actuated movements, a bike box, and a bicycle signal phase. • Long-term countermeasures included: develop bike accommodations on Riverside Drive (curb protected bike lanes, cycle track, bicycle boulevard) and add signage for the trail connection. • Where parking is not allowed, stripe hatched markings.	$350,000-450,000
NM-4	New London	Broad Street from Ledyard Street to Cleveland Street	859.3	24	Ped/Bike Crashes and Conflicts, Speeding	• Evaluate, repair, and replace sidewalks connecting Williams Street to Ledyard Street. • Stripe corridor center lines and edge lines. • Define parking spaces. • Consider buffered or on-road bike lane. • Review corridor access management. • At signals, install LPI and adjust signal timing, phasing, and clearance intervals. • Restripe side street crosswalks. • Evaluate corridor for key midblock locations and provide RRFB midblock crossing with bump outs. • Consider a fire pre-emption signal in front of the firehouse near Connecticut Avenue.	$450,000-550,000

Rank	City/Town	Project Description	EPDO	Total KABC Crashes	Location Issue	Traffic Safety Countermeasures	Cost Range - Contingency
NM-5	Stonington	Coogan Boulevard from Greenmanville Avenue (CT-27) to Jerry Brown Road	786.1	18	Ped/Bike Conflicts, Access Management, Traffic Congestion	• Evaluate corridor road diet. • Coordinate with CTDOT for results of Coogan Boulevard road diet per project 0170-3584. • Improve corridor lighting. • Consider visibility, traffic calming or control improvements to the midblock crossing to the east of Clara Drive by Mystic Aquarium. • Evaluate a signal at Queen's Chapel Road. Add pedestrian crossings and pedestrian signal heads. • Coordinate with town on changes to Clara Drive signal (new crosswalks, left turn signals, signal timing changes). • Long term - consider roundabout at Clara Drive and Queen's Chapel Road. • Coordinate with Greenmanville Avenue at Coogan Boulevard signal replacement project 0172-0513. • Consider a raised pedestrian bridge or tunnel crossing at key locations along Coogan Boulevard. Add median refuge islands to midblock crossings. • Add speed feedback signage. • Add additional pedestrian crossing ahead signage. • Evaluate and complete sidewalk network on the north side of Coogan Boulevard. • Complete a corridor study of Coogan Boulevard. • Evaluate pedestrian connectivity and access to Mystic Aquarium.	$1,700,000-2,100,000
NM-6	Norwich	Washington Street (CT-2), Chelsea Parade St, Crescent Street, and Broadway near Norwich Free Academy and Chelsea Parade	779.9	17	Ped/Bike Crashes and Conflicts, Speeding	• Consider enhanced existing and new pedestrian crossings across Washington Street with curb extensions and RRFBs. • Consider narrowing of travel lanes to 11 ft with striped edge lines throughout area. • Consider improvements at the intersection of Washington Street and Broadway including intersection realignment, accessible ramps, pedestrian signals and crosswalk relocation for a shortened crossing distance. • Enhance crossings on Broadway and Chestnut Street. • Install speed feedback signage. • Install new sidewalks along Chestnut Street and through the Chelsea Parade along existing desire lines. • Consider upgrading the traffic signal, pedestrian ramps and pedestrian signals at the intersection of Chelsea Parade and Broadway. • Coordinate with NFA for additional recommendations and plans for safety improvements. See Full Walk Audit Notes in Appendix G of the Safety Action Plan.	$850,000-1,100,000

Rank	City/Town	Project Description	EPDO	Total KABC Crashes	Location Issue	Traffic Safety Countermeasures	Cost Range - Contingency
NM-7	Griswold	Main Street (CT-12 / CT-138) from S Main Street to Ashland Street – Jewett City	693.5	10	Ped/Bike Conflicts, Speeding	• Install RRFB at School Street midblock crossing, add pedestrian crossing ahead signage, and add a bump out/curb extension of the midblock crossing. • Install crosswalk across the south leg of School Street. • Install a mid-block crossing of Main Street at the south corner of Soule Street near Fanning Court and Soule Street, including curb extensions in front of the fire hydrant at Soule/Main and opposite it at the mouth of Fanning Court. • Consider a corridor study of Main Street from South Main Street to North Main Street, extending on North Main Street to Lenox Avenue. The corridor study would include evaluating the addition of bike lanes, removal or striping of formalized parking, as well as additional improvements to sidewalk connectivity. • Hatch stripe shoulders where parking is not allowed through the downtown section (within 20 ft. of intersections). • Evaluate sidewalk and ramp network within project limits and upgrade ramps and sidewalks to ADA compliance as necessary. • Restripe crossings at Ashland Street. • Consider curb extensions and streetscape improvements at Main Street pedestrian crossings to enhance pedestrian visibility around parked vehicles. • Evaluate future results of traffic signal replacement at Ashland Street and S Main Street per project 0172-0525. • Coordinate with projects for updates to signal timing, pedestrian phasing, and clearance intervals at the intersection.	$300,000-400,000
NM-8	Griswold	N Main Street (CT-12) from north of E Main Street (CT-201) to south of Lenox Avenue	600.5	5	Ped/Bike Conflicts, Access Management	• Coordinate with CTDOT for RRFB installations at key midblock crossings on N Main Street, including the crossing in front of Saint Mary's Church and 47 N Main Street. • Coordinate with DOT and private business owners to complete sidewalk network on the east side of N Main Street. • Determine access to parking lot at 86 N Main Street, as well as evaluate a midblock crossing between the parking lot and Jewett City Pizza Palace. • Provide crosswalk across west leg of Green Avenue to the north of the parking lot. • Coordinate with SECOG for future improvements to the parking lot near Green Avenue and an additional midblock crossing on N Main Street.	$100,000-150,000
NM-9	Stonington	W Broad Street (US-1) from Pequot Trail (CT-234) east to the RI border	549.6	38	Angle and Rear End Crashes, Ped/Bike Crashes and Conflicts	• Refer to motorist project #19 - W Broad Street at Liberty Street and Mechanic Street for intersection specific countermeasures. • Evaluate and improve corridor lighting. • Stripe 11-foot travel lanes and corridor edge lines (where missing). • At midblock crossings, evaluate for raised crosswalks, curb extensions and RRFB's, repaint ladder crosswalks, consider red brick crossings for enhanced visibility (matching corridor to the east near Liberty Street). • Evaluate pedestrian phasing to minimize pedestrian delay and maximize separation from vehicles at Edwards Street, including LPI. Update signal timing, phasing and clearance intervals, and add crosswalks on missing legs of intersection. Coordinate pedestrian improvements along the corridor with Westerly (RI) Planning. • Evaluate a corridor road diet and add buffered bike lanes, striped edge lines and shoulders. • Install additional pedestrian and bike signage in coordination with CTDOT Tier 1 Bike/Ped improvement project.	$330,000-450,000

Rank	City/Town	Project Description	EPDO	Total KABC Crashes	Location Issue	Traffic Safety Countermeasures	Cost Range - Contingency
NM-10	Windham	Valley Street from Mansfield Avenue to High Street	378.6	28	Angle Crashes, Ped and Bike Crashes and Conflicts, Speeding	• Consider a corridor study or RSA of Valley Street between Mansfield Avenue and High Street. • Evaluate and improve street lighting. • Provide 11 ft. travel lanes by striping edge lines on Valley Street, and evaluate for on-road or shoulder bike lanes. • Connect all side streets with crosswalks and ADA-compliant ramps. • Consider movable pedestrian crossing signage for the center of Valley Street crosswalks. • Evaluate the addition of a midblock crossing between Windham Street and High Street and between Noble Hall and Shafer Hall. Add RRFB, ADA compliant ramps, and a ladder crosswalk. • Coordinate with nearby schools for addition of bike focused infrastructure such as bike racks. • Evaluate stop sign signage along the corridor. • Evaluate for LED stop signs at key locations at Mansfield Avenue, Windham Street, and High Street. • Evaluate for long-term bike accommodations connecting Valley Street to Jillson Square (start of Airline Trail connection).	$700,000-900,000

Strategy Development

Beside the site-specific safety recommendations within the Safety Action Plan, policy, educational, and programmatic strategies were identified to address key parts of the Safe System Approach – Safer People, Safer Vehicles, Safer Speeds, Safer Roads, and Post-Crash Care. The strategies listed were developed referencing plans described in the policy and process review and feedback from public engagement, as well as other federal, state, and regional sources on safety strategies.

Strategies

Safer People

Strategy/Policy	Implementation Responsibility	Crash Type	Strategy Type
Engage Watch For Me CT to educate all road users on safer travel behavior and to promote safer bicycle and pedestrian travel.	Regional/Local	Bicycle/pedestrian	Education
Partner with rideshare and taxi companies to provide vouchers for people traveling between 9 PM and 6 AM (such as people leaving bars or restaurants, or night shift workers).	Regional	Impaired driving	Policy
Establish mandatory helmet usage for all ages.	State	Bicycle	Policy/Enforcement
Engage with CTDOT's Safe Routes to School program to host bicycle and pedestrian trainings at schools.	State/Local	All	Education
Support the development and adoption of municipal Complete Streets policies and plans.	Regional	All	Policy/Education
Collaborate with community partners to target DUI behaviors through focused enforcement activities and educational programs.	Regional/Local	Impaired driving	Enforcement
Coordinate bicycle light and helmet purchases across municipalities.	Regional/Local	Bicycle	Program/Education

Strategy/Policy	Implementation Responsibility	Crash Type	Strategy Type
Continue to leverage CTDOT's Active Transportation Microgrant Program for educational materials and funding.	Regional/Local	Bicycle/pedestrian	Program/Education
Promote motorcycle safety awareness utilizing resources from Connecticut Rider Education Program, the Motorcycle Safety Foundation, and helmetcheck.org, among others.	State	Motorcycle	Education
Support and advance recommendations noted in the SECOG and local Bike and Pedestrian Plans.	Regional/Local	Bicycle/pedestrian	Program/ Engineering
Collaborate with municipalities to use MMUCC data in awareness campaigns for specific crash types and issues.	Regional/Local	All	Education

Safer Vehicles

Strategy/Policy	Implementation Level	Crash Type	Strategy Type
Advocate for safer regulations for e-bikes.	Local	Bicycle	Policy/Enforcement
Improve MMUCC's reporting by including fields for e-bikes, dirt bikes, and ATVs to better understand the prevalence and severity of associated crashes.	State	Bicycle	Policy/Enforcement
Develop educational materials and campaigns in coordination with law enforcement and Watch For Me CT relating to safe usage of e-bikes.	Regional	Bicycle	Education
Mandate front and rear lights on bicycles.	State	Bicycle	Policy/Enforcement

Safer Speeds

Strategy/Policy	Implementation Level	Crash Type	Strategy Type
Pass Ordinance and Establish Program of Automated Traffic Enforcement.	Local	Speed-related	Program/Enforcement

Strategy/Policy	Implementation Level	Crash Type	Strategy Type
Consider speed humps or speed tables where appropriate.	Regional/Local	Speed-related	Engineering
Install speed feedback radar signs to increase driver awareness and reduce speeds.	State/Local	Speed-related	Program/Enforcement
Designate speed safety zones near schools, parks, and community centers.	Local	Speed-related	Program/ Engineering
Implement traffic calming measures in downtown areas through interventions such as pavement markings, traffic control devices, and signage to naturally slow traffic.	Regional/Local	All	Engineering
Provide RSA assistance or participation for towns.	Regional	All	Education
Increase high-visibility enforcement at high injury locations.	State/Local	All	Enforcement
Conduct speed studies at key locations with high speeds.	State/Regional/Local	All	Engineering
Maintain ongoing coordination with CTDOT related to vehicle speeding concerns on State roads to encourage innovative speed management approaches.	State/Regional/Local	Speed-related	Policy/Engineering

Safer Roads

Strategy/Policy	Implementation Level	Crash Type	Strategy Type
Advocate for improvements to MMUCC form to ensure consistent and clear reporting of crashes.	Regional/State	All	Policy/Emergency Response
Address barriers to local law enforcement and consider regional approach to traffic enforcement.	Regional	All	Enforcement
Apply for funding for bicycle and pedestrian safety improvement planning, design, and construction.	State/Regional/Local	Bicycle/pedestrian	Program/ Engineering

Strategy/Policy	Implementation Level	Crash Type	Strategy Type
Implement targeted safety countermeasures at high-crash locations with context-appropriate interventions such as enhanced signage and lighting, stop control measures, and roadway redesign.	State/Regional/Local	All	Engineering
Create and maintain maintenance schedules for sidewalk and sightline clearing.	Local	All	Engineering/ Maintenance
Develop ADA transition plans.	State/Local	Bicycle/Pedestrian	Policy/Engineering
Coordinate with municipalities to ensure consistent design standards for shared-use paths.	Regional/Local	Bicycle/Pedestrian	Policy/Engineering
Engage with CTDOT to implement bicycle and pedestrian improvements on roads subject to the Maintenance Resurfacing Program and Pavement Preservation Program.	State/Regional/Local	Bicycle/pedestrian	Policy/Engineering
Develop a policy for access management to reduce driveway conflicts.	State/Local	All	Policy/Engineering
Lower speed limits along major arterials by moving away from the 85th percentile standard for speed limit-setting.	State	All	Engineering
Improve targeted lighting improvements on rural roads.	Regional/Local	Nighttime	Engineering
Work with communities to apply for CTDOT funding for Rectangular Rapid Flashing Beacons (RRFB) installations.	State/Regional/Local	Pedestrian	Program/Engineering

Strategy/Policy	Implementation Level	Crash Type	Strategy Type
Stripe 6-inch edge lines to narrow vehicle travel lanes with the goal of reducing vehicle speeds and lower crash rates.	State/Regional/Local	All	Engineering
Designate high pedestrian traffic areas as Pedestrian Zones to encourage slower speeds and safer vehicle behavior.	Local	Pedestrian	Policy/Engineering
Enhance sidewalk connectivity by constructing ADA and PROWAG-compliant sidewalk ramps to promote walking and pedestrian safety.	State/Regional/Local	Pedestrian	Engineering
Continue and expand use of Intersection Control Evaluation to identify appropriate intersection control measures, such as roundabouts and traffic signals.	State/Local	All	Engineering
Implement project recommendations in SECOG's 2019 Bicycle and Pedestrian Plan.	State/Regional/Local	Bicycle and Pedestrian	Engineering

Post-Crash Care

Strategy/Policy	Implementation Level	Crash Type	Strategy Type
Develop customized standards of care for different crash types in coordination with Connecticut Department of Public Health.	Regional	All	Policy/Emergency Response
Evaluate traffic signal priority and signal pre-emption for emergency vehicles.	State/Regional/Local	All	Engineering/Emergency Response
Engage with CTDOT's Safety Service Patrol for post-crash cleanup and management.	State/Regional/Local	All	Policy/Education
Consider mass notification alerts to cellphones after a crash incident to minimize instances of secondary traffic incidents.	State/Regional/Local	All	Policy/Emergency Response

PROGRESS & TRANSPARENCY

Introduction

This chapter describes the framework for monitoring and evaluating the safety outcomes from projects and strategies implemented in the safety action plan and identifies clear, trackable performance measures and outcomes towards Vision Zero.

As communities in the Southeastern Connecticut Council of Governments (SECOG) region implement the projects and strategies within the Safety Action Plan, it will be important to understand if the implemented improvements have the desired safety outcomes, moving the region towards the Vision Zero goal in 2047.

Evaluation and Reporting Framework

The evaluation and reporting framework of the Safety Action Plan will focus on the following five key topics:

1. Assign responsibility for evaluating progress of the Safety Action Plan.
2. Identify key performance measures to track progress towards Vision Zero.
3. Develop targets / milestones related to performance measures.
4. Report annually on key performance measures and progress towards targets.
5. Update the plan as is necessary.

Assign Responsibility

To ensure tracking is completed efficiently and timely each year, SECOG will have dedicated staff in charge of monitoring the progress of the Safety Action Plan.

In addition, SECOG will task the existing Vision Zero Action Committee – comprised of representatives from transit agencies, fire and police departments, and town administrators – to review the progress of safety measure implementation and assist SECOG with annual reporting.

Key Performance Measures

As part of the annual reporting process, SECOG will focus on tracking the highest impact and easily trackable measures with available data. SECOG will also continue to evaluate and improve data availability and reliability, such as improving the accuracy of crash data reporting.

Below are several key performance measures SECOG will use to track progress on the implementation of recommendations from the Safety Action Plan and on moving towards the goal of Vision Zero by 2047.

Key Measure #1 – Measures of Outcome

Key Question: Has roadway safety improved in line with Vision Zero goals?

1. # of fatal and serious injury crashes over the past five years
2. # of fatal and serious injury crashes over the past five years by type
    a. Motorist (ALL Crash Types)
    b. Pedestrian
    c. Bicyclist

Key Measure #2 – Measure of Implementation

Key Question: Have safety improvements been implemented?

1. # of safety projects/strategies in the Safety Action Plan completed year by year regionwide and by community

Key Outcome Milestones and Targets

The tables below show the targets for fatal and serious injury crashes over time, beginning in year 2026 and tracking towards zero fatal and serious injury crashes in **target goal year 2047**. The baseline data, taken from 2020 – 2024, displays the rolling 5-year average of fatal and serious injury crashes. The 2034 target represents the Vision Zero Action Committee's goal of reducing the number of fatal and serious injury crashes by 50% within 10 years. The final goal of the Vision Zero Safety Action is zero fatal and serious injury crashes starting in the year 2047. This goal was chosen by the Vision Zero Task Force Committee with the goal of achieving Vision Zero before the federal Vision Zero goal in the year 2050.

Performance Measure: 5-Year Rolling Average Fatal Crashes*

User / Crash Type	Baseline Average Crashes per year 2020-2024	2034 Target Average Crashes per Year 2034-2039	2047 Target Average Crashes per year 2047-2051
All	27	13.5	0
Motorist – All	21.8	10.9	0
Pedestrian	2.8	1.4	0
Bicyclist	4.3	2.2	0

* Crash data provided by UConn Connecticut Crash Data Repository (CTCDR)

Performance Measure: 5-Year Rolling Average Serious Injury Crashes*

User / Crash Type	Baseline Average Crashes per year 2020-2024	2034 Target Average Crashes per Year 2034-2039	2047 Target Average Crashes per year 2047-2051
All	84.6	42.3	0
Motorist – All	68.8	34.4	0
Pedestrian	9.6	4.8	0
Bicyclist	1.75	0.9	0

* Crash data provided by UConn Connecticut Crash Data Repository (CTCDR)

Annual Reporting

Annual reporting progress is focused on answering the following questions:

- Are safety projects and strategies being implemented?
- Are the implemented projects and strategies resulting in a decrease in the number of serious and fatal injury crashes?
- Is the public aware of the region's Vision Zero goal and the progress SECOG communities are making towards the goal?
- Is the public successfully interacting and providing comments on safety projects and any other safety concerns through social media and/or SECOG's website?
- Are there any new safety issues or crash hotspots in the SECOG region?

The SS4A program requires accessible annual public reporting on progress toward reducing roadway fatalities and serious injuries. To comply, a report will be published annually that shares progress on the outcome and implementation performance measures over time. The report will be publicly accessible and shared with USDOT. The report will be supplemented with updates to the SECOG online dashboard which will include updated crash data, progress towards Vision Zero goals, and progress towards the completion of identified Safety Action Plan projects and strategies.

Updating the Plan

SECOG will evaluate whether the plan should be updated every five years, and update the plan pending the availability of funding. Safety trends and prioritized projects within the SECOG Region are likely to have changed. An updated plan would update the project lists, strategies, and safety analysis using new crash data and any new understandings of safety countermeasures that may have evolved.

Appendices

A. Municipal Project Guide
B. Vision Zero Task Force Meeting Notes
C. Public Meeting Notes
D. Summary of Online Survey Results
E. Summary of Interactive Map
F. Walk Audit Reports
G. Crash Modification Factors Sources
H. Willetts Avenue Preliminary Design Documents
I. Public Comment Period Resolution Matrix