

# CONNECTICUT SHSP

STRATEGIC HIGHWAY  
SAFETY PLAN  
2022-2026



# CONTENTS



FROM THE OFFICE OF

# GOVERNOR NED LAMONT



**Ned Lamont**  
GOVERNOR  
STATE OF CONNECTICUT

May 1, 2022

Dear Citizens of Connecticut and Fellow Safety Colleagues:

The safety of all who travel in and through Connecticut is a top priority. When anyone uses the transportation system, whether driving a car or riding a motorcycle, walking or cycling, driving a truck or riding a bus – our goal is for everyone to arrive safely at their destination, every trip, every time. Our mission for the 2022-2026 Strategic Highway Safety Plan (SHSP) is a simple one – to enhance the lives of those who use Connecticut’s transportation system by preventing crashes that result in deaths and serious injuries.

This plan is Connecticut’s roadmap to the future of transportation safety and we believe that the journey is the safest when the roadmap is the clearest. This plan outlines clear strategies, goals, objectives and opportunities for the next five years to prevent transportation related deaths and serious injuries. Cooperation and collaboration are critical to our success in many areas and highway safety is no different. This Plan represents the collaboration of many stakeholders from both the public and private sectors and it encourages organizations which make up highway safety’s “Four Es” – Education, Engineering, Enforcement and Emergency Medical Services – to lead by example and work together to deliver timely, actionable solutions to Connecticut’s most pressing highway safety challenges.

I appreciate all who will work to implement this plan as well as those who contributed to it. That list includes my representative for highway safety, Deputy Transportation Commissioner Garrett Eucalitto, the SHSP Executive Committee, SHSP Steering Committee, SHSP Emphasis Area Teams, National Highway Traffic Safety Administration, Federal Highway Administration, Federal Motor Carrier Safety Administration and the Connecticut Transportation Institute at the University of Connecticut.

This plan is our roadmap, but ultimately highway safety is everyone’s responsibility. Working together, every one of us can make a positive difference in the lives of Connecticut road users and contribute to the health and economic vitality of our great State.

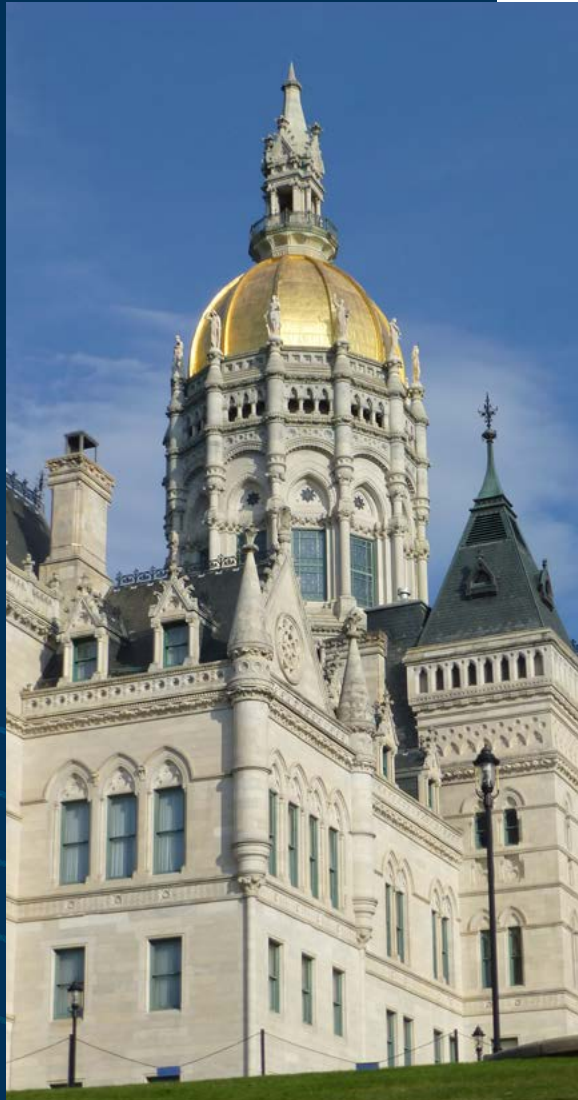
Join me in this call to action toward zero fatalities and serious injuries on Connecticut’s roads. If we all do our part, we can get to zero.

Sincerely,

A handwritten signature in blue ink that reads "Ned Lamont".

Ned Lamont  
Governor

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**ES**

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# **Executive Summary**









## EXECUTIVE SUMMARY

# Connecticut is Moving Toward **ZERO** Deaths

Connecticut has made a commitment to support healthy, livable, and safe communities and established a **Toward Zero Deaths** vision.

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In particular, the Connecticut General Assembly passed, and Governor Ned Lamont signed into law, Public Act 21-28, which took effect October 1, 2021. This law intended to improve transportation safety by defining laws to improve pedestrian and bicycle safety, and established the Vision Zero Council to develop a statewide policy and interagency approach to eliminate all transportation-related fatalities and severe injuries to pedestrians, bicyclists, transit users, motorists, and passengers. Transportation safety for all users is a statewide priority that has gained support from leadership and a wide variety of safety stakeholders and partners. Law enforcement, education, emergency services, engineers, and safety advocates across the State have been collaborating and directing projects, programs, and investments to reduce the number of people killed or seriously injured on Connecticut roadways. **One roadway death is too many; they are preventable, and we are taking action.**



# Safety Partners and Stakeholders are Collaborating to Save Lives and Reduce Serious Injuries

The number of roadway deaths in Connecticut decreased from 311 in 2016 to 254 in 2019 (18% decrease). During this same time, serious injuries resulting from motor vehicle crashes also steadily decreased from 1,689 serious injuries to 1,363 (19% decrease).<sup>1</sup>

Despite reductions in vehicular travel in 2020, 307 people lost their lives while traveling our roadways. Fatalities and serious injuries involving pedestrians have decreased from 317 in 2016 to 221 in 2020; however, the five-year rolling average has increased by 31% between 2015 and 2019. Similarly, fatalities and serious injuries involving impairment have decreased from 278 in 2016 to 232 in 2020 however the five-year rolling average has increased by 31% between 2015 and 2019. **These trends highlight the need to stay vigilant by focusing on transportation safety for all users, and contributing factors in crashes.**

## THE STRATEGIC HIGHWAY SAFETY PLAN PROVIDES THE FRAMEWORK TO SAVE LIVES OF ALL ROADWAY USERS

The Strategic Highway Safety Plan (SHSP) is a statewide, data-driven, comprehensive, multidisciplinary transportation safety plan integrating the **4Es of safety — education, enforcement, engineering, and emergency response.**

By conducting innovative data analysis to prioritize system needs, combined with broad and diverse stakeholder outreach, the **Connecticut SHSP provides the framework to collaborate and prioritize safety needs and investments.** This SHSP is focused on three Emphasis Areas—Behavior, Infrastructure, and Pedestrian—and identifies proven strategies, approaches, and policies that will be implemented to move **Toward Zero Deaths.**

<sup>1</sup> Substitute House Bill No. 5429, Public Act No. 21-28, An Act Concerning Pedestrian Safety, the Vision Zero Council, Speed Limits for Municipalities, Fines and Charges for Certain Violations and the Greenways Commemorative Account. Effective October 1, 2021. <https://www.cga.ct.gov/2021/act/Pa/pdf/2021PA-00028-R00HB-05429-PA.PDF>

## OUR VISION


That all users of Connecticut's transportation system will arrive safely to their destinations, achieving zero deaths.

## OUR MISSION

To provide a safe transportation system by using partnerships to coordinate and implement **education, enforcement, engineering, and emergency response initiatives.**



## OUR GOAL

**15%**  **A 15% or more reduction in the number of fatalities and serious injuries on all public roads in Connecticut by 2026.**  
**BY 2026**

## EMPHASIS AREAS

- 1. INFRASTRUCTURE** focuses on reducing the number of fatal and serious-injury roadway departure and intersection-related crashes.
- 2. BEHAVIORAL** accounts for eliminating fatalities and serious injuries related to impaired driving, aggressive driving, unrestrained occupants, motorcycles, and distracted driving.
- 3. PEDESTRIAN** is focused on eliminating fatalities and severe injuries while walking, running, or standing along or near the roadway.

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# Introduction





## SECTION 1

# Introduction

## Background

State Strategic Highway Safety Plans (SHSPs) were first required under the Safe, Accountable, Flexible, Efficient, Transportation Equity Act: A Legacy for Users (SAFETEA-LU) in 2005, which established the Highway Safety Improvement Program (HSIP) as a core federal program.

In 2012, Moving Ahead for Progress in the 21st Century (MAP-21) continued the HSIP as a core federal-aid program along with the requirement for States to develop, implement, evaluate, and update an SHSP at least every five years that identifies and analyzes highway safety opportunities on all public roads. MAP-21 also required performance target setting and tracking of specific metrics to increase focus and accountability for the reduction of fatalities and serious injuries. The Fixing America's Surface Transportation (FAST) Act, enacted in 2015, continued to be collaborative, data-drive, and focus on the reduction of fatalities and serious injuries for all users.

The SHSP is a federal requirement codified under 23 United States Code (U.S.C.) 148, with implementing rules under 23 *Code of Federal Regulations* (CFR) Part 924, and is a statewide, data-driven, comprehensive, multidisciplinary transportation safety plan integrating the 4Es of safety—education, enforcement, engineering, and emergency services. The SHSP establishes statewide performance measures, goals, objectives, and Emphasis Areas (EAs) and describes a program of strategies that use design, technology, behavioral, and policy approaches to significantly reduce fatalities and serious injuries on all public roads. It is the

comprehensive plan around which other transportation safety plans must coordinate. The SHSP allows highway safety programs and partners in the State to work together to align goals, leverage resources, and collectively address the State's safety challenges.

It is anticipated SHSPs will continue to be a priority in future transportation legislation as the safety of our nation's roadways continues to be a major and growing public health priority. The National Safety Council estimates that over 42,000 people died in motor vehicle crashes in 2020. This represents an increase of 8% in roadway fatalities and a 24% increase in the fatality rate over the past 12 months, despite a 13% drop in miles driven. The Governors Highway Safety Association (GHSA) projects a 20% increase in the pedestrian fatality rate per one billion vehicle miles traveled (VMT) for the first half of 2020 compared with the first half of 2019.<sup>2,3</sup> The report attributes the increase in pedestrian fatalities to reckless driving behavior and highlights the need for a comprehensive approach that leverages engineering, public education, emergency services, and equitable enforcement for reducing pedestrian-motor-vehicle crashes and saving lives.

A Safe System Approach applied equitably across the transportation network is also a national and legislative priority.

The Connecticut SHSP is the overarching organizational document for roadway safety planning. It is administered by the Connecticut Department of Transportation (CTDOT) through the SHSP Steering

2. Pedestrian Fatalities by State, 2020 Preliminary Data, Governors Highway Safety Administration (GHSA), May 2021, [Pedestrian Traffic Fatalities by State: 2020 Preliminary Data | GHSA](#)

3. Pedestrian Fatalities by State, 2020 Preliminary Data Addendum, Governors Highway Safety Association (GHSA), May 2021, [Pedestrian Traffic Fatalities By State 2020 Preliminary Data Addendum 5-20-21.pdf \(ghsa.org\)](#)



Committee, under the oversight of the SHSP Executive Committee. The Connecticut SHSP adheres to federal regulations as described above, while prioritizing Connecticut's transportation safety needs to move Toward Zero Deaths.

## Connecticut – The State of Safety

Connecticut has over 45,000 public road lane miles. Almost 10,000 lane miles are on the State-maintained system and 35,000 miles are locally maintained. There are 5.3 miles of Bureau of Indian Affairs-owned roads in Ledyard and 31.7 miles of Indian Nation roads in Ledyard and Windham County, though the exact location of these roadways is unknown.

Although Connecticut is the third smallest state in terms of area, it is ranked 44<sup>th</sup> for length of network centerline road mileage, 37<sup>th</sup> for vehicle miles of traveled, and has the 4<sup>th</sup> highest population density in the country.<sup>4</sup>

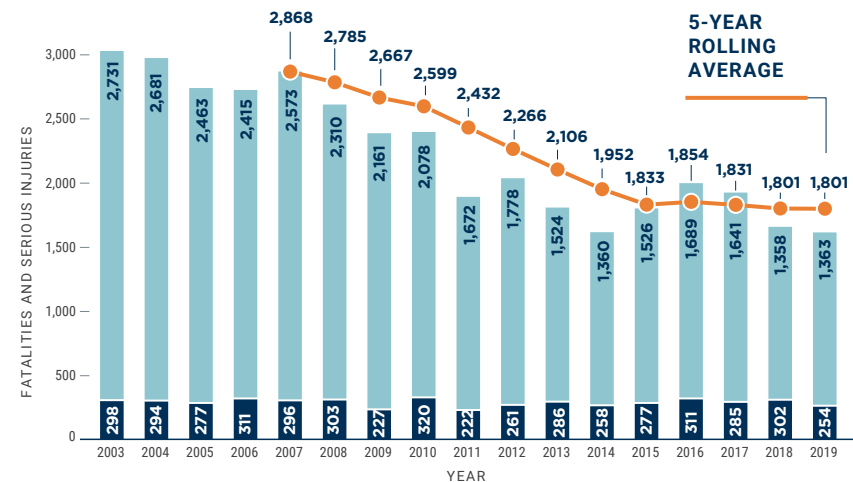
In May 2017 for the 2017-2021 SHSP,<sup>5</sup> Connecticut set the goal of reducing fatalities and serious injuries on all public roads by 15% by 2021. Since setting that goal, Connecticut has made significant progress. From 2014 to 2019, the five-year rolling averages of fatalities and serious injuries have been reduced by more than 8%.

In 2019, 254 people died in motor vehicle crashes on Connecticut roadways. This a significant decrease from 2018 when 302 people lost their lives and represents an overall downward trend in fatalities from 311 in 2016.<sup>1</sup> Despite reductions in vehicular travel in 2020, roadway fatalities have increased to 307, and the five-year rolling average from 2015 to 2019 increased by 9%.

Results of the analyses are based on data that was downloaded from the Connecticut Crash Data Repository. Crash data for years 2003 to 2019 was accessed on February 12, 2020, and crash data

for 2019 was accessed on April 14, 2020. Preliminary crash data for 2020 was accessed on February 1, 2021. The data was used “as is” for analysis purposes and should be interpreted accordingly.

**Connecticut has been successful in reducing motor vehicle serious injuries between years 2016 and 2019 from 1,689 serious injuries to 1,363. The five-year rolling average of serious injuries from 2015 to 2019 reflects a 4% decrease. The SHSP primarily focused on fatalities and serious injuries through year 2019.**



**Figure 1-1. Number of Fatalities and Serious-Injuries in CT**

4. 2020 Connecticut Highway Safety Improvement Program, Federal Highway Administration (FHWA), July 2020, <https://safety.fhwa.dot.gov/hisp/reports/pdf/2020/ct.pdf>

5. Connecticut Strategic Highway Safety Plan 2017-2021. [https://www.cti.uconn.edu/images/cti/documents/T2Center/17-014L-CONN\\_SHSP.pdf](https://www.cti.uconn.edu/images/cti/documents/T2Center/17-014L-CONN_SHSP.pdf)

Between 2015 and 2019, most of the fatalities occurred on urban-state routes, while most of the serious injuries occurred on urban-local roadways.

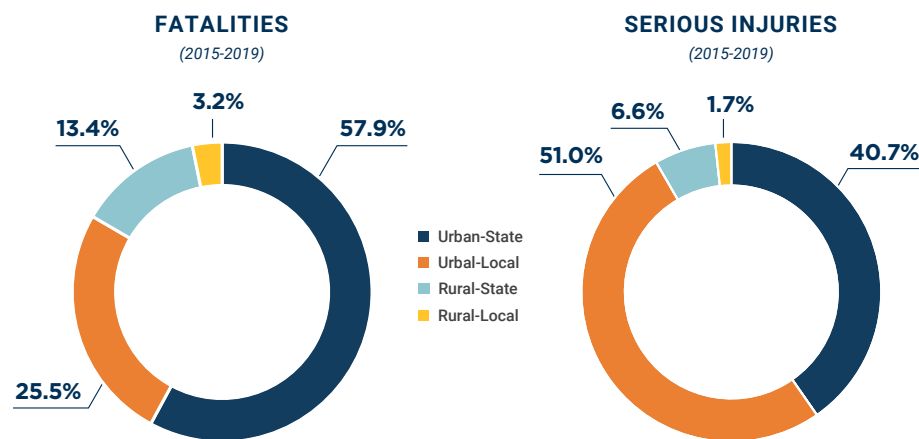


Figure 1-2. Fatalities and Serious Injuries (2015-2019)

During this same period, there was a higher number of fatalities and serious injuries among males—especially those between the ages of 20 to 25.

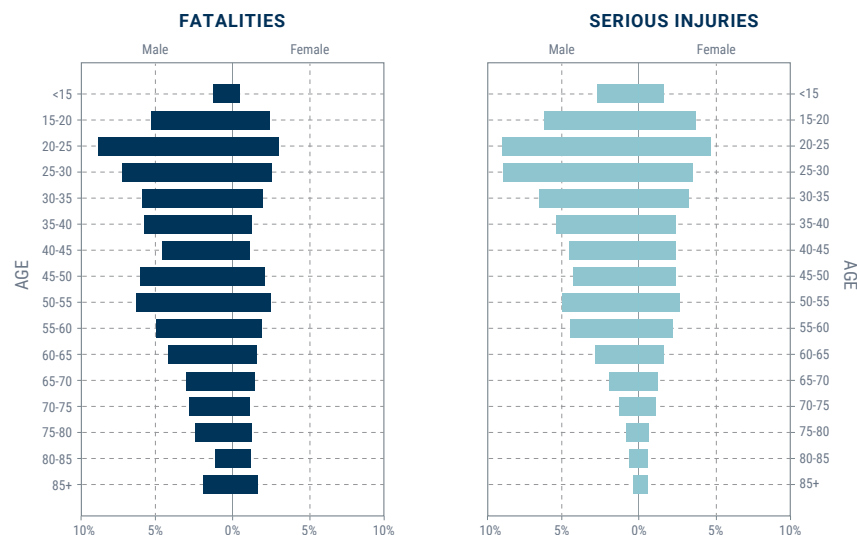


Figure 1-3. Distribution of Age and Gender (2015-2019)



In addition, fatalities and serious injuries were most frequent during the months of June, July, and August. They were also clustered during the weekend between 6 PM and 10 PM.

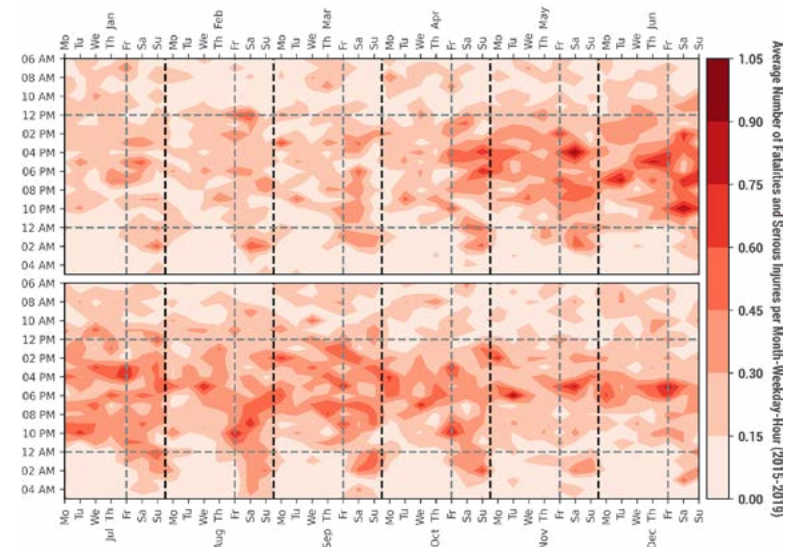
**Driver behavior contributed to more than 91% of fatal and serious-injury crashes between 2015 and 2019.**

Most of the behavior-related contributing factors were due to an improper maneuver, followed by unrestrained occupants, speeding, impaired driving, and distracted driving.

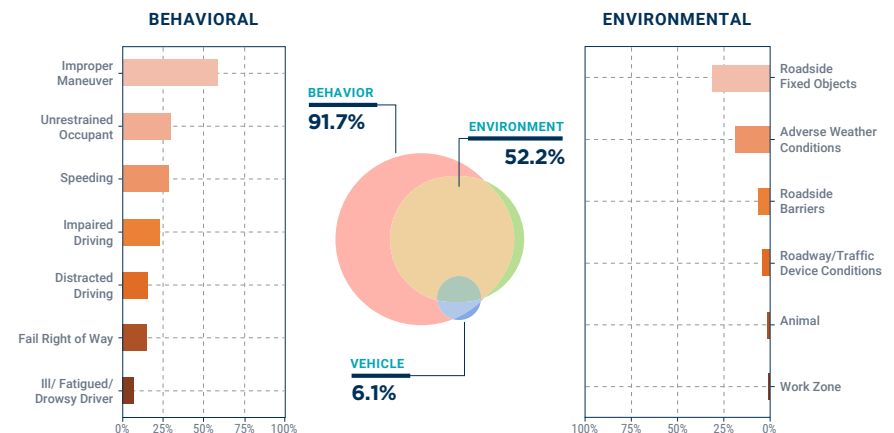
Roadway and environmental factors contributed to more than 52% of fatal and serious-injury crashes; 45% of these also involved behavior as a contributing factor. A majority of the roadway and environmental factors included roadside barriers and objects, followed by adverse weather conditions.

6% of fatal and serious-injury crashes involved a vehicle factor, and less than 1% of those involving a vehicle issue had no overlap with human or roadway factors.

Based on the initial data analysis, it is evident that a comprehensive 4E approach is necessary to drive down fatalities and serious injuries in Connecticut.



**Figure 1-4. Fatalities and Serious Injuries by Month-Weekday-Hour**



**Figure 1-5. Contributing Factors for Fatalities and Serious Injuries**

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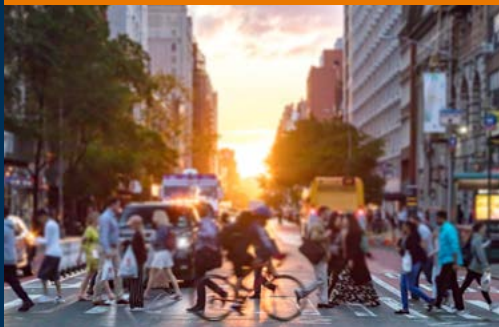
# **Our Mission. Vision. Goal.**







## OUR **MISSION**



To provide a safe transportation system by using partnerships to coordinate and implement education, enforcement, engineering, and emergency response initiatives.

## OUR **VISION**



That all users of Connecticut's transportation system will arrive safely to their destinations, achieving zero deaths.

## OUR **GOAL**



Achieve a 15% reduction or more based on the five year rolling average of fatalities and serious injuries from 2022 to 2026.



## SECTION 2

# Mission, Vision, and Goal

Based on Connecticut's commitment to **Toward Zero Deaths**, the goal is to achieve a **15% reduction or more** based on the five year rolling average of fatalities and serious injuries from 2022 to 2026, which can be seen on *Figure 2-1, Number of Fatal and Serious-Injury Crashes in CT with SHSP Goal*. Connecticut is working towards reducing the five-year rolling average to 1,497 fatalities and serious injuries or less by 2026. Note that the 15% reduction goal set in the 2017 to 2021 SHSP was not met; therefore, safety stakeholders must innovate, collaborate, and implement solutions to meet this goal.

Continuing this trend for future years will set Connecticut up for meeting the zero-fatality vision many years in the future as shown on *Figure 2-2, Fatalities and Serious Injuries Five-Year Rolling Average Projection Based on 15% Reduction Every Year*.

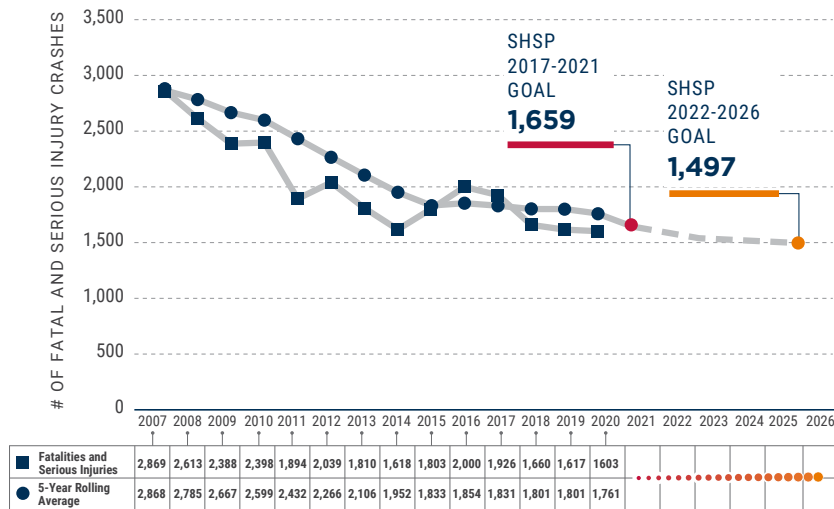


Figure 2-1. Number of Fatal and Serious-Injuries in CT with SHSP Goal

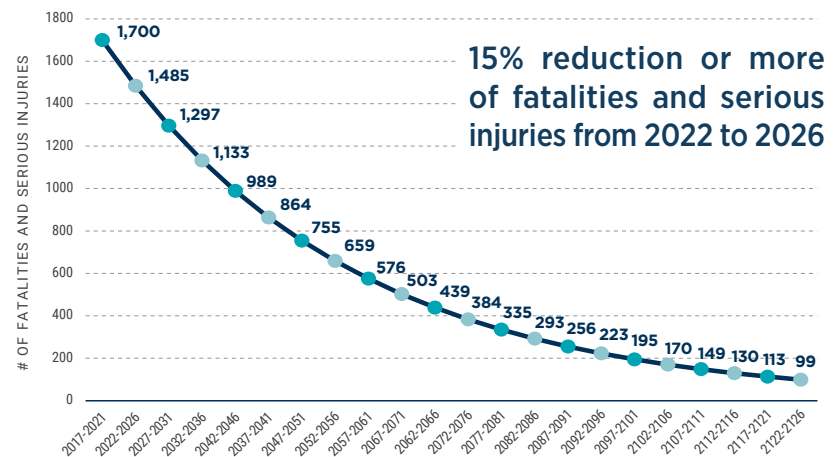


Figure 2-2. Fatalities and Serious Injuries Five-Year Rolling Average Projection Based on 15% Reduction Every Year

## Performance Measures

Connecticut's SHSP performance-based strategies are consistent with safety performance measures in accordance with 23 U.S.C. 150 and are coordinated with other Connecticut safety plans. The five safety performance measures are described below. Targets are set annually and reported in the HSIP annual report. The targets for the first three performance measures are also required in the Highway Safety Plan (HSP) Report and are identical to the HSIP targets.

The following are the performance measures:

1. **Fatalities:** The number of persons killed in crashes on all public roads in a calendar year.
2. **Fatality Rate:** The number of persons killed in crashes per 100 million VMT in a calendar year.
3. **Serious Injuries:** The number of persons seriously injured in crashes on all public roads in a calendar year.
4. **Serious-Injury Rate:** The number of persons seriously injured in crashes per 100 million VMT in a calendar year.
5. **Non-Motorized Fatalities & Serious Injuries:** The number of pedestrians and bicyclists killed or seriously injured in crashes involving a motor vehicle on all public roads in a calendar year.

Connecticut developed HSIP Implementation Plans to outline investments for federal fiscal year (FFY) 2021 and FFY 2022 since performance targets were not met in 2018 and 2019, respectfully. The HSIP Implementation Plan serves as an opportunity to re evaluate HSIP investments and identify gaps and deficiencies to ensure that projects are identified, prioritized, and programmed to have the best potential for reducing fatalities and serious injuries.

**The SHSP countermeasures and strategies in each EA are meant to support the vision of moving Toward Zero Deaths.**

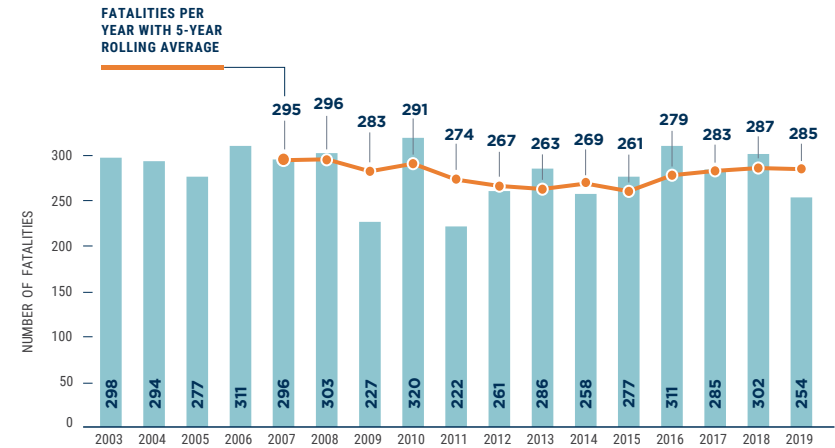


Figure 2-3. Fatalities Per Year with Five-Year Rolling Average

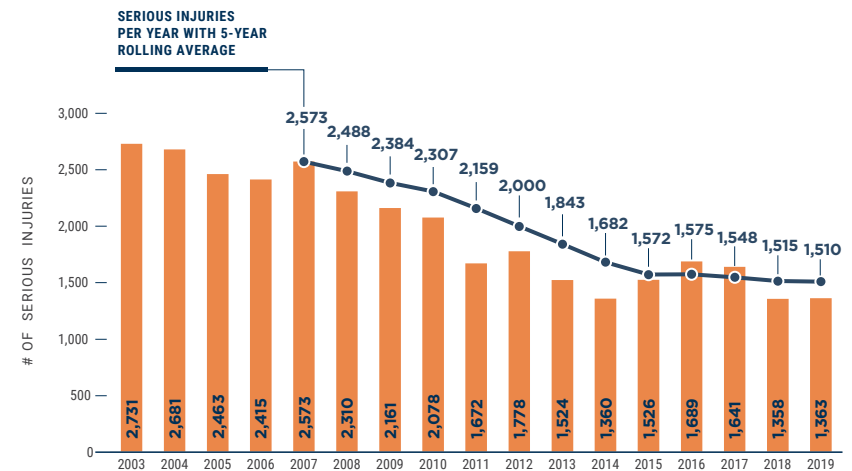
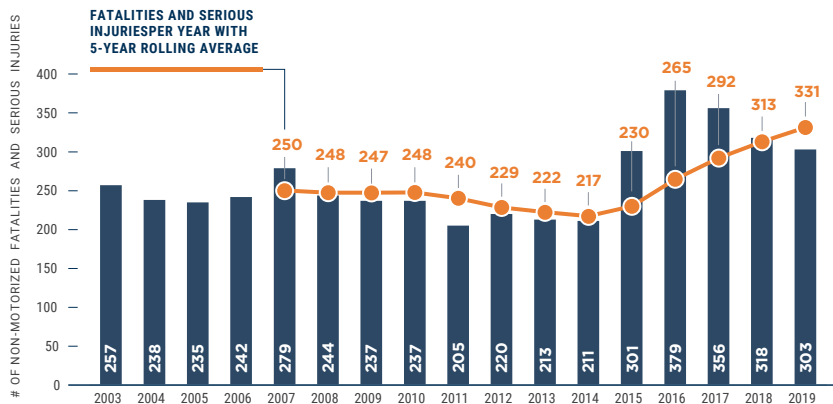


Figure 2-4. Serious Injuries Per Year with Five-Year Rolling Average





**Figure 2-5. Non-motorized Fatalities and Serious Injuries Per Year with Five-Year Rolling Average**

Figures 2-3 to 2-5 show the trend of fatalities, serious injuries, and non-motorized fatalities and serious injuries. Overall, fatalities and serious injuries have decreased between 2007 and 2019. However, starting in 2016, there is a slight increase in fatalities based on the five-year rolling average indicator. The five-year rolling average of the non-motorized fatalities and serious injuries have been increasing since 2015 which is contributing to the increase in fatalities.

### SAFETY PERFORMANCE SPECIAL RULES

Federal provisions enacted in MAP-21 include Special Rules focused on improving safety on rural roads as well as the safety of older drivers and pedestrians.

### HIGH-RISK RURAL ROADS

Connecticut defines High-Risk Rural Roads (HRRR) as any roadway functionally classified as a rural major or minor collector or a rural local road with a significant safety risk. The State of Connecticut defines significant safety risk as those

roadways where their expected crash frequency is at least 10% higher than the average crash frequency of segments with a similar classification in the State. The Special Rule applies when fatality rates (per VMT) on rural roads, measured in five year rolling averages, are found to be increasing. This is determined annually and reported in the State HSIP. Per 23 U.S.C. 148(g)(1), if the fatality rate on rural roads increases, additional HSIP funds must be directed to these HRRRs to improve rural road safety.

### OLDER DRIVERS AND OLDER PEDESTRIANS

The older drivers and older pedestrians Special Rule requires States to track the rate (per capita) of traffic fatalities and serious injuries combined for drivers and pedestrians aged 65 and older. The rule applies when the rate, measured as a five-year rolling average, is found to be increasing over the prior two years. This is determined annually and reported in the State HSIP.

Connecticut had an increase in the fatality and serious-injury rate for drivers and pedestrians over the age of 65 for the periods of 2013-2017 and 2015-2019, which invoked the FY 2021 Older Drivers and Pedestrians Special Rule. As a result of 23 U.S.C. 148(g)(2), suggested strategies for mitigating older driver and pedestrian injuries are shown in the SHSP Additional Safety Areas Section.

### SAFETY PERFORMANCE SET-ASIDE

Per 23 U.S.C. 130, there is a set-aside for railway-highway grade crossing improvements.

## RAILWAY-HIGHWAY GRADE CROSSINGS

While there were no fatalities and serious injuries in Connecticut related to rail grade crossings between 2015 and 2019, SHSP implementation efforts will include analysis and prioritization of crossings for closure and potential improvement. Analysis and implementation progress and evaluation is reported annually in the Federal Highway Administration (FHWA) HSIP Railway-Highway Grade Crossing Report.

## FOUNDATIONS

Achieving the zero-fatality vision requires foundational principles that support the transportation safety program in Connecticut. These include a Safe System Approach, incorporating traffic safety culture principles while focusing on equitable values.

The Safe System Approach acknowledges that people make mistakes that lead to crashes. The human body has a limited physical ability to tolerate crash forces before harm occurs. The transportation system is a shared responsibility amongst those who design, build, manage, and use roads and vehicles and provide post-crash care to prevent crashes that result in serious injury or death. All parts of the system must be strengthened to multiply their effects and to ensure that if one part fails, road users are still protected. This is a foundational principle that is considered for all safety programs, policies, initiatives, and treatments in Connecticut to maximize lives saved and achieve our vision of zero fatalities. CTDOT will evaluate how to integrate Safe System principles into CTDOT's planning and design practices and will discuss the best ways to integrate this during the Executive and Steering Committee meetings.

Connecticut strives to achieve a transportation safety culture that supports individual and community decision making to improve safety for all users. Positive social norming, protective behaviors, proactive behavior, and effective partnerships are essential aspects of safety programming and initiatives.



**Figure 2-6. Safe System Approach**

Source: [U.S. Department of Transportation, Federal Highway Administration](#)



## Connecticut is committed to ensuring that all people travel safely

Connecticut will provide an equitable approach to a Safe System by establishing an inclusive and representative process that engages communities of traditionally underserved populations, ensuring highway safety investment is inclusive of their interests. By incorporating the interests of all populations, Connecticut can then establish performance measures to provide safe transportation system for all road users across the State.

Equity was raised as a high priority during the State Safety Summit and will be addressed in the SHSP implementation process in several ways such as additional representation on the Executive, Steering, and EA committees, broad stakeholder engagement with a focus on underserved populations, consideration of specific strategies that consider equity issues and needs, or other process changes. CTDOT has adopted the Toward Zero Deaths National Strategy on Highway Safety, which sets a long-term goal of reducing traffic fatalities to zero for all users.



**03**



# Update Process









## SECTION 3

# Update Process

Connecticut and States across the country have been developing and updating their SHSPs regularly since 2005 with the passage of SAFETEA-LU. With each update of the SHSP, processes evolve, and approaches advance to be more focused, accountable, data-driven, and collaborative, maximizing the number of fatalities and serious injuries reduced. This Connecticut SHSP is the result of innovative data analysis and diverse stakeholder engagement.

**UNDERSTANDING:** Initial steps of the development process included gaining an understanding of current SHSP successes and areas for potential enhancement using the Toward Zero Deaths Program Development Assessment Tool and reviewing the evaluation of the previous SHSP. These two resources and associated discussions indicated areas of success under the current SHSP, which included an effective organizational structure, positive collaboration, leadership commitment, effective data-driven approach, and alignment of proven effective strategies. Areas for potential enhancement included concerns regarding reduced and inconsistent EA participation, broadened stakeholder involvement and new stakeholder recruitment, lack of innovative strategies, minimal tracking, and evaluation of investments to enhance safety performance. These observations offered a springboard for increased engagement and participation from Steering Committee members and helped to lay the foundation for the SHSP.

Since the SHSP is the overarching highway safety document for all public roads and all users in Connecticut, it is important that the SHSP reflect the specific needs and

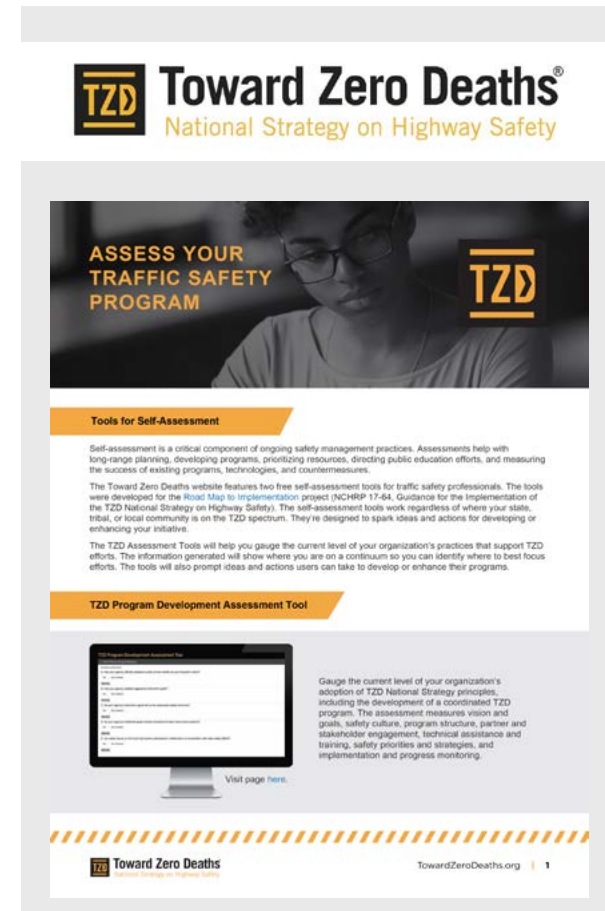
priorities highlighted in safety plans. Since the SHSP is a five-year plan and others are annual or shorter term plans representative plans will offer more details and will be resources for implementation. As such, the existing HSIP, HSP, Commercial Vehicle Safety Plan (CVSP), and regional transportation safety plans (RTSP) were reviewed to identify programs and strategies to align with the SHSP.

The HSIP is the projects, activities, plans, and reports carried out under 23 U.S.C. 148. A report is required annually by the U.S. Department of Transportation (USDOT) and is primarily focused on infrastructure transportation safety investments. FHWA oversees the HSIP.

The HSP is a State document, coordinated with the State SHSP as defined in 23 U.S.C. 148(a), that the State submits each fiscal year as its application for highway safety grants, which describes the strategies and projects that State plans to implement and the resources from all sources it plans to use to achieve its highway safety performance targets. Reference 23 CFR 1200. Subpart B. The HSP is primarily focused on behavioral programs or those related to law enforcement and education. The National Highway Traffic Safety Administration (NHTSA) oversees the HSP.

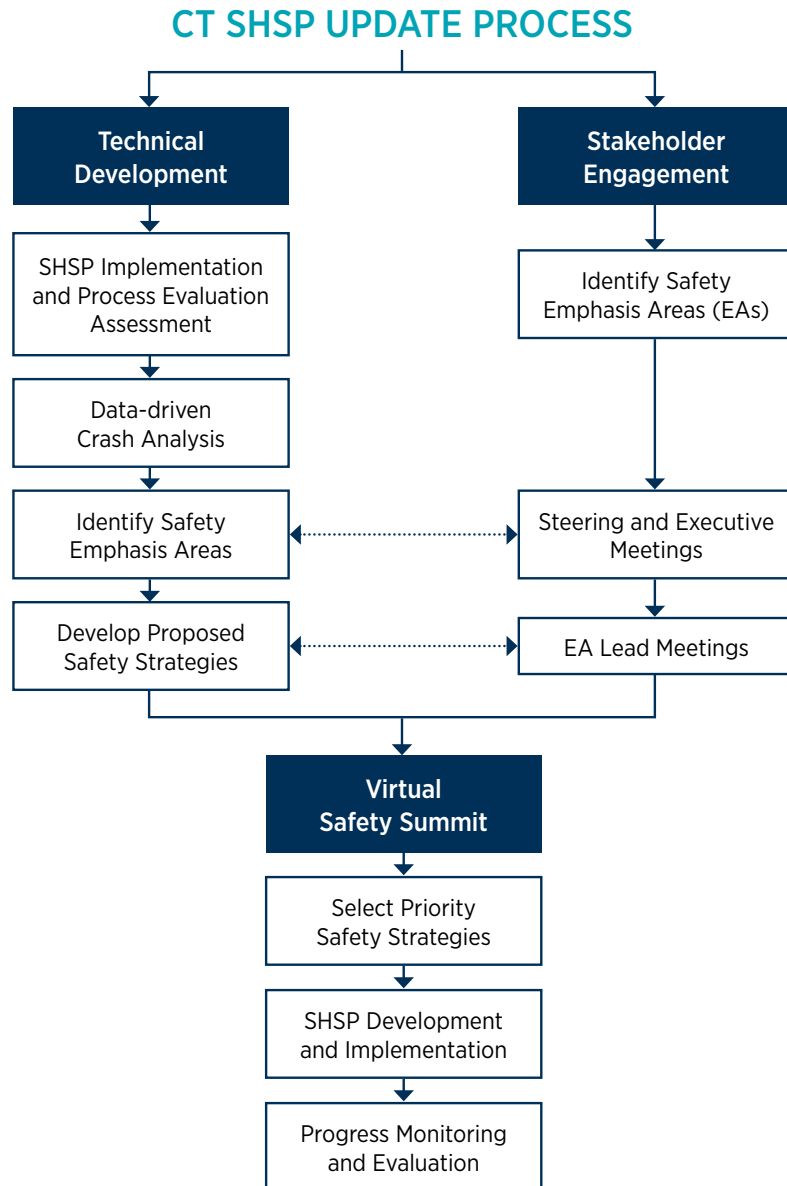
The Motor Carrier Safety Assistance Program (MCSAP) is a federal grant program that provides financial assistance to States to help reduce the number and severity of crashes and hazardous materials incidents involving commercial motor vehicles (CMV). The goal of the MCSAP is to reduce CMV-involved crashes, fatalities, and injuries through consistent, uniform, and effective CMV safety programs. A State lead MCSAP agency is eligible to apply for grant funding by submitting a CVSP, in accordance with the provisions of 49 CFR 350.201 and 205. The Federal Motor Carrier Safety Administration (FMCSA) oversees the CVSP.

## Connecticut is Moving Toward Zero Deaths



**Figure 3-1. Toward Zero Deaths**  
Source: [www.towardzerodeaths.org](http://www.towardzerodeaths.org)

Figure 3-2. CT SHSP Update Process



RTSPs have been developed for each of the Connecticut Council of Governments (COG) to reduce fatalities and injuries. RTSPs specifically identify high frequency crash locations and possible countermeasures that have the potential to reduce crashes and improve overall safety for all roadway users in the region.

The potential improvements to the SHSP process were discussed with each of the EA Leaders to identify 4E participation, progress, and areas for growth. Current leaders offered insights on initiatives, programs, and project implementation, and evaluation, as well as emerging trends and anticipated future needs.

**Discussions with EA leaders identified positive attributes associated with the current SHSP, such as:**

- Investment in proven, evidence-based safety strategies
- Leveraging partnerships for strategy implementation
- Data-driven strategy implementation efforts (e.g., enforcement)

**Areas for improvement included:**

- “Low-hanging fruit” has been largely picked. Bold, proven safety strategies and strategies that partners and stakeholders agree to are more difficult to identify or they are more expensive
- Challenge of officer availability to conduct sufficient and sustained enforcement

The team utilized the existing SHSP and SHSP EA tracking tools to discuss each of the strategies to understand implementation progress, effectiveness and barriers associated with each EA. The EA leads collaborated with the EA teams to indicate which strategies and programs they would like to continue to implement and which ones were deemed ineffective. The EA leads reviewed crash data for each of the focus areas to identify



system needs and emerging trends and determine potential strategies for future investment. Strategies were identified based on current and proposed safety plans, anticipated legislation and policy changes, innovative technology and proven effective treatments highlighted in published resources such as the Connecticut-specific research and studies, the National Cooperative Highway Research Program (NCHRP) 500 series, the FHWA Crash Modification Factor Clearinghouse and NHTSA's Countermeasures That Work. The EA leads and stakeholders met over the course of a year and engaged a broad cross section of agency and organizations to ensure the SHSP was grounded in understanding of current practices and informed by transportation users. Section 8 reflects safety partners and supporters engaged throughout the process. The feedback and input provided by the EA leads and their teams were retained for consideration during the State Safety Summit to allow for more comprehensive review of strategies and prioritizing for potential inclusion in the CT SHSP.

With an understanding of current processes and opportunities, data analysis and stakeholder engagement continued in parallel.

## Data-Driven Process

Connecticut analyzed transportation safety data to determine the frequency and rate of fatalities and serious injuries, emerging trends, and overrepresentation of crash types and contributing factors. These crash analyses revealed some of Connecticut's successes as well as areas for increased attention and focus.

### TREND ANALYSIS

The change in trends were calculated by comparing the five-year rolling average of number of fatalities and serious injuries from 2011 to 2015 and from 2015 to 2019. The greatest reduction in fatalities and serious injuries was with **unrestrained occupants** (with a **reduction of 16%**, *Figure 3-3*), while increasing trends were identified for **impaired drivers (32% increase, Figure 3-4)** and **pedestrians (31% increase, Figure 3-5)**. As a result, pedestrians and impaired drivers were identified as focuses for the SHSP. While unrestrained occupant fatalities and serious injuries have decreased in recent years, they still make up almost 30% of the total number of fatalities in Connecticut. Unrestrained occupants remain a priority to meet safety targets.

## SECTION 3: UPDATE PROCESS

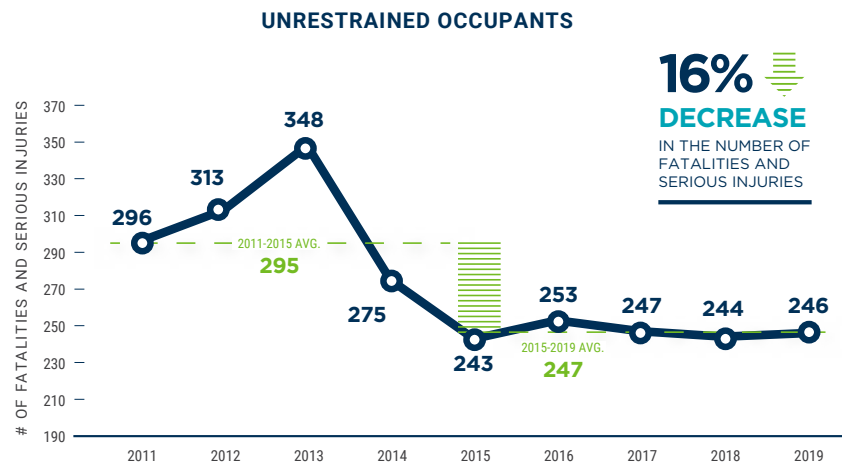


Figure 3-3. Unrestrained Occupants Trend Analysis

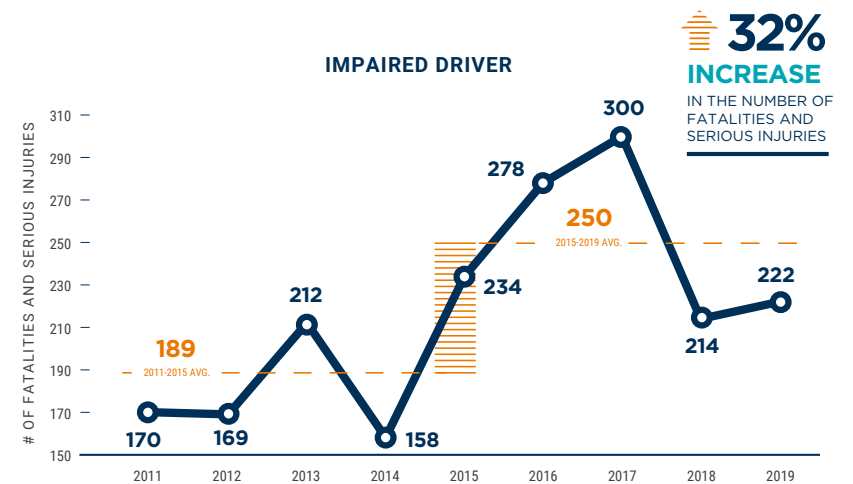


Figure 3-4. Impaired Driver Trend Analysis

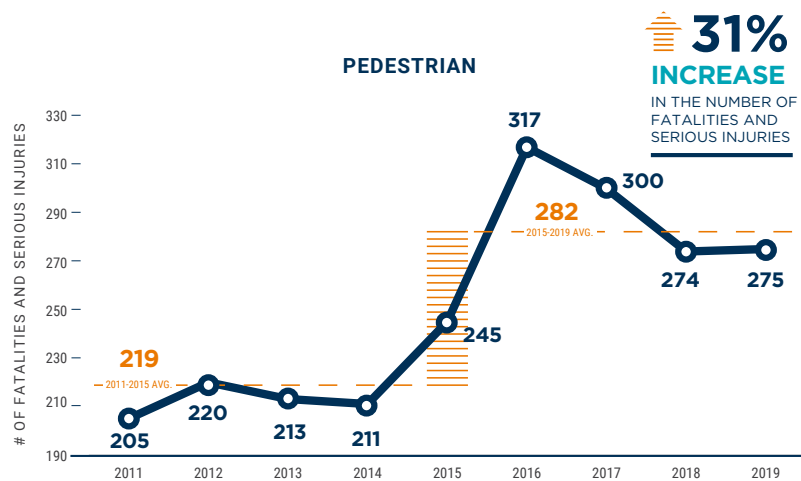


Figure 3-5. Pedestrian Trend Analysis

# Prioritization Approach

## TRADITIONAL APPROACH

Using 2015 through 2019 crash data and a traditional approach of assigning crashes to multiple potential EAs, roadway departure crashes represented the greatest proportion of fatalities, and intersection-related crashes represented the greatest proportion of serious injuries. Aggressive driving, unrestrained occupants and impaired driving are also high priority based on the total proportion of fatalities and serious injuries.

## CONTRIBUTING FACTOR PRIORITIZATION APPROACH

Taking a more innovative approach, crashes were assigned to only one potential EA to ensure every crash is counted only once. By using all the relevant data elements available in crash data and incorporating data classification techniques, the most probable cause of the crash is identified, and the EAs are prioritized accordingly. This allowed for assessment of the potential EA based on the primary contributing factor. Using this approach, from 2015 to 2019, impaired driving crashes represented the greatest proportion of fatalities, and aggressive driving crashes represented the greatest proportion of serious injuries followed by Aggressive Driver. Pedestrian, roadway departure and unrestrained occupants also had a high proportion of fatalities using this approach.

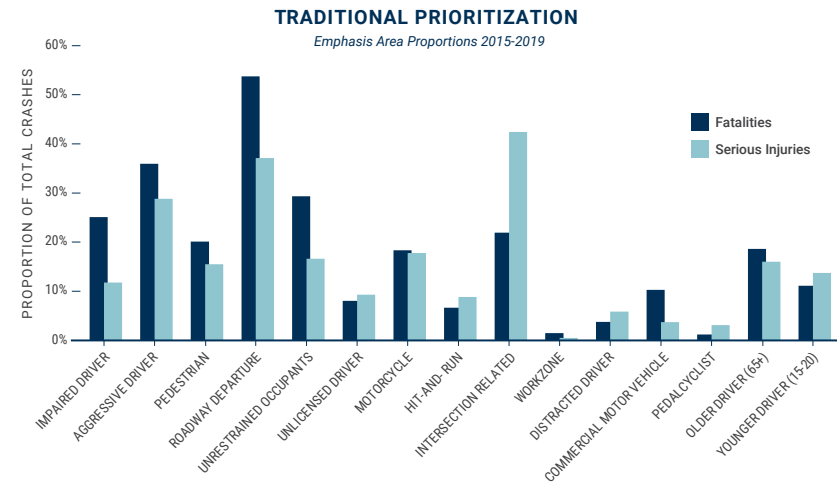


Figure 3-6. Traditional Prioritization Approach EA Proportions 2015-2019

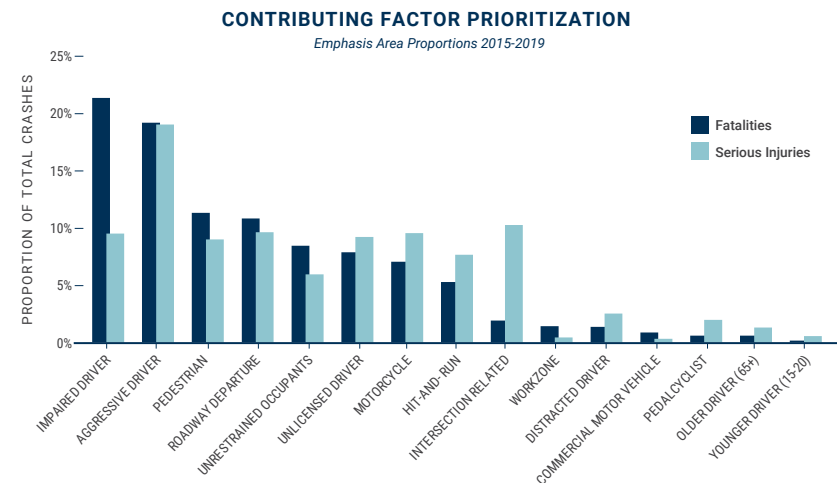


Figure 3-7. Contributing Factor Prioritization Approach EA Proportions 2015-2019



# Stakeholder Engagement

Leadership meetings and stakeholder discussions focused on data analysis findings and potential strategies to address system and user needs.

Stakeholder engagement culminated with the State Safety Summit held on December 8 and 9, 2020. The Summit was held virtually due to the COVID-19 pandemic. The Summit was led by the Connecticut Department of Transportation in partnership with the Connecticut State Police, Connecticut Department of Public Health, Connecticut Department of Motor Vehicles, Connecticut Department of Education, FHWA, NHTSA, and FMCSA.

Over 200 safety stakeholders representing tribal, local, State, and federal agencies and organizations were invited to gather to discuss current safety trends, programs, and initiatives and to support the advancement of the SHSP to save

lives on Connecticut roadways. Key partners participating in the Summit included AAA Allied Group, Watch for Me CT, University of Connecticut (UConn) Training and Technical Assistance Center, Connecticut Police Chiefs Association, and the Capitol Region COG. Participants represented a variety of backgrounds from engineering, education, law enforcement, and emergency services.

During the Summit, State, local, and federal safety partners provided their perspectives. There were also presentations on the background of the SHSP, key principles, and the vision for the future of transportation in Connecticut. Analysis of safety data and how that information coalesced into recommendations of initiating EAs focusing on Infrastructure, Behavior, and Pedestrians was shared. There were presentations and discussions on

each EA to obtain input and reaction to strategies that may be considered in the development of the SHSP. While there was significant time on the Summit agenda to discuss each of the EAs, time was also allotted to gaining a deeper understanding of data, contributing factors and opportunities for improvement of Additional Safety Areas. The Additional Safety Areas did not yield the same level of priority and focus but are important to address transportation safety for all users and be comprehensive. The following Additional Safety Areas were discussed: Unlicensed Drivers, Hit-and-runs, Work Zones, Commercial Vehicles, Older Drivers and Older Pedestrians, Pedal Cyclists, Younger Drivers, Railway-highway grade crossings, Tribal owned roadways, Traffic Incident Management, and wrong way drivers.

This combination of innovative data analysis, focus, and collaboration allowed CT SHSP safety stakeholders to identify strategies and partnerships to ensure Connecticut is on **“The Road to Saving Lives.”**



**ROAD TO  
SAVING LIVES**

**04**

A decorative graphic on a dark blue background. It features a series of concentric, curved lines in shades of blue and orange. A white curved line with two large white circular markers and a series of small white dots is also present. The dots form a path that curves upwards and then horizontally to the right.

# **Emphasis Areas**









## SECTION 4

# Safety Emphasis Areas

Connecticut coalesced around three EAs: Infrastructure, Behavior, and Pedestrian. The EAs were based on data analysis and stakeholder input. They were endorsed by both the SHSP Steering Committee and Executive Committee.

The Infrastructure EA focuses on reducing the number of fatal and serious-injury roadway departure and intersection-related crashes. The Behavioral EA accounts for eliminating fatalities and serious injuries related to impaired driving, aggressive driving, unrestrained occupants, motorcycles, and distracted driving. Finally, the Pedestrian EA is focused on eliminating fatalities and severe injuries while walking, running, or standing along or near the roadway. Pedestrians may be in the crosswalk, crossing at midblock, or walking on the side of the road, on a path, or on a sidewalk. Each of the EAs requires collaboration with enforcement, education, engineering, and emergency services or the 4Es partners to identify and implement effective strategies to reduce fatalities and serious injuries.

Additional Safety Areas were identified to ensure a comprehensive SHSP that addresses all system and user safety needs. The Additional Safety Areas represent fewer fatalities and serious injuries than EAs but require detailed analysis to identify effective strategies and continue on-going programs and initiatives as part of a successful Connecticut safety program.

## Infrastructure EA

- Roadway Departure
- Intersections

## Behavior EA

- Impaired
- Unrestrained
- Aggressive
- Motorcycle
- Distracted

## Pedestrian EA

**The 4Es of safety – education, enforcement, engineering, and emergency services.**



These areas include:

- Unlicensed Drivers
- Hit-and-runs
- Work Zones
- Commercial Vehicles
- Older Drivers and Older Pedestrians
- Pedal Cyclists
- Younger Drivers
- Railway-highway grade crossings
- Tribal owned roadways
- Wrong Way Drivers
- Traffic Incident Management

These Additional Safety Areas are vital to the transportation system and should be considered in the implementation and evaluation of the SHSP.

Data analysis was conducted for each of the EAs and Additional Safety Areas to understand contributing factors. Understanding the contributing factors, effectiveness, and economic impact is necessary for prioritizing investments. After gaining an understanding of system and site-specific needs, a 4E collaborative approach is necessary for making investments to achieve the greatest results. Each of the EAs are shown in the next section along with data highlights, performance metrics and potential strategies for eliminating fatalities and serious injuries. The strategies were assembled based on the latest research of countermeasure and program effectiveness along with stakeholder input.

A performance objective is defined for each EA to support the overall SHSP goal of 15% reduction from 2020 to 2026 based on the five-year rolling average. Given that in average each crash is assigned to more than 2 EAs, and assuming EA strategies are independent and impact all crashes within that EA, the performance objective is set to 7% reduction for each EA which supports the 15% reduction goal of the SHSP.



## INFRASTRUCTURE EMPHASIS AREA

# Roadway Departure

The Infrastructure EA **Roadway Departure** crash type, is defined based on the “first harmful event” field in the crash report being marked as rollover, immersion, hitting a fixed object, parked vehicle, or a barrier, or “manner of collision” field marked as head on or sideswipe opposite direction.

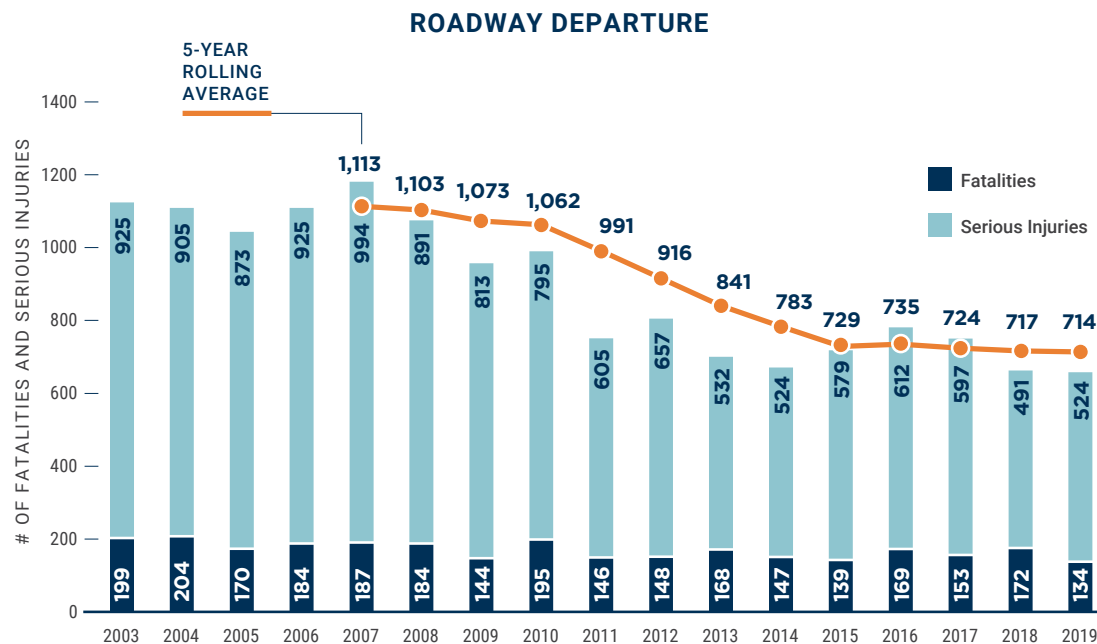


Figure 4-1. Infrastructure EA – Roadway Departure

### CT 2015-2019 STATS

**767** TOTAL FATALITIES

**2,803** TOTAL SERIOUS INJURIES

### HIGHLIGHTS

**58%** of roadway departure fatalities occur on urban-state roads.

**46%** of roadway departure serious injuries occur on urban-local roads.

Roadway departure fatalities and serious injuries typically involve **unrestrained occupants** and **speeding**.

### OBJECTIVE

**LESS THAN**

**665** ↓

BY 2026

Reduce the five-year rolling average of roadway departure fatalities and serious injuries to less than 665 by 2026.

# Key Strategies

There are a variety of proven effective strategies for mitigating roadway departure fatalities and serious injuries. The transportation network should be analyzed to determine areas with the greatest opportunity for improvement. Locations may be identified using a hot spot or systemic approach and utilize American Association of State Highway and Transportation Officials (AASHTO) Highway Safety Manual principles. The following strategies are considered best practices to reduce crashes relating to roadway departure. Using the FHWA Crash Modification Factor Clearinghouse and Connecticut-specific countermeasure effectiveness allows practitioners to implement treatments that are appropriate and effective under specific circumstances.

The following strategies may be implemented to eliminate roadway departure fatalities and serious injuries:

## THE STRATEGIES TO KEEP VEHICLES FROM ENCROACHING ON THE ROADSIDE ALONG TANGENTS MAY INCLUDE:

- Enhanced edgeline markings
- Shoulder rumble strips
- Eliminate edge drop-offs
- Shoulder widening
- Safety Edge

## THE STRATEGIES TO KEEP VEHICLES FROM ENCROACHING ON THE ROADSIDE AT CURVES MAY INCLUDE:

- Chevrons
- Advanced signing
- High-friction surface treatment
- Improve geometry such as changing the superelevation, widening the radius
- Educate public on safety treatment effectiveness
- Lighting

## STRATEGIES TO KEEP VEHICLES ON THE ROAD VIA SPEED MANAGEMENT MAY INCLUDE:

- Speed management pavement markings
- Speed feedback signs
- Update speed limit setting policy
- Provide education to users on safe speeds

## STRATEGIES THAT MAY BE IMPLEMENTED TO MINIMIZE THE LIKELIHOOD OF CRASHING INTO AN OBJECT OR OVERTURNING VEHICLES INCLUDE THE FOLLOWING:

- Safer slopes
- Increase clear zone widths
- Improve barriers

## HEAD-ON CRASHES MAY BE REDUCED BY IMPLEMENTING THE FOLLOWING STRATEGIES:

- Centerline rumble strips
- Center buffers
- Median barriers

## COMPREHENSIVE EFFECTIVE STRATEGIES FOR MITIGATING ROADWAY DEPARTURE CRASHES INCLUDE:

- Safety corridors with enforcement
- Road safety audits
- Automotive technology
- Promote smartphone applications that monitor speeds and provide feedback to users, insurance companies or parents of new drivers
- RTSPs
- Expand and utilize Safety Circuit Rider Programs
- Review of design practices on non-safety projects to strengthen the analysis of safety data to improve the safety benefit on all capital projects
- Evaluation of the Safe Systems Approach to integrate those principles into CTDOT's planning/design
- Equity analysis and equity stakeholder inclusion

## INFRASTRUCTURE EMPHASIS AREA

# Intersection

The Infrastructure EA **Intersection** crash type is defined based on the “crash specific location” field in the crash report marked as “Intersection” or “Intersection-Related.”

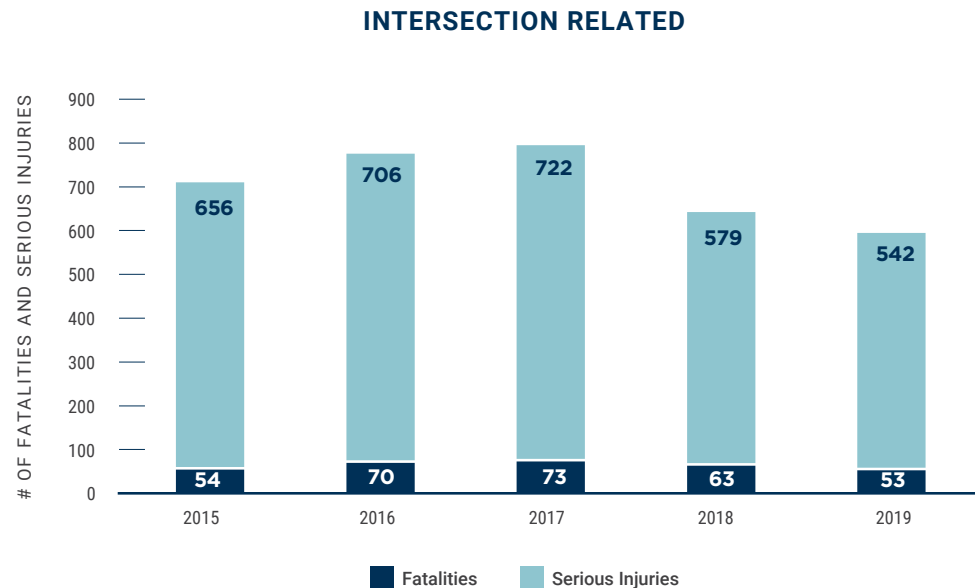


Figure 4-2. Infrastructure EA - Intersection

### CT 2015-2019 STATS

**313** TOTAL FATALITIES

**3,205** TOTAL SERIOUS INJURIES

### HIGHLIGHTS

**52%** of intersection-related fatalities occur on urban-state roads.

**56%** of intersection-related serious injuries occur on urban-local roads.

Intersection fatalities and serious-injury crashes typically involve **speeding**.

### OBJECTIVE

**LESS THAN**  
**655** ↓  
BY 2026

Reduce the five-year rolling average of intersection-related fatalities and serious injuries to less than 655 by 2026.



# Key Strategies

Similar to roadway departures, there are a variety of proven effective strategies for mitigating intersection-related fatalities and serious injuries. Intersections should be evaluated based on traffic control and the predominant severe crash type to identify potential treatments.

The following strategies may be implemented to eliminate intersection-related fatalities and serious injuries:

## STRATEGIES REDUCING FATAL AND SERIOUS-INJURY CRASHES AT SIGNALIZED INTERSECTIONS MAY INCLUDE:

- Flashing yellow arrows
- Permissive to protected phasing
- Optimize clearance intervals
- Eliminate turning movements
- Signal coordination
- Pedestrian phasing and timing
- Conversion to roundabout

## STRATEGIES THAT MAY BE IMPLEMENTED TO REDUCE ANGLE AND TURNING CRASHES:

- Left-turn channelization
- Right-turn channelization
- Restricted Crossing U-turn
- Continuous Green T intersection to provide free-flow operations in one direction on the arterial by using acceleration/merge lanes for left-turn movements from the cross street
- Improve bike and pedestrian accommodations

## THE BELOW STRATEGIES IMPROVE DRIVER AWARENESS AT SIGNALIZED INTERSECTIONS:

- Signal head backplates
- 12-inch LED lenses
- Mast arms with street names
- Educate the public to improve understanding of traffic control devices
- Improve driver training content

## STRATEGIES THAT MAY BE CONSIDERED TO IMPROVE DRIVER COMPLIANCE AND ACCESS MANAGEMENT INCLUDE:

- Red-light running cameras
- Confirmation lights for red-light running
- Restrict access to properties
- Restrict cross-median access
- Driveway closures
- Clear sight triangles

## STRATEGIES FOR REDUCING FATAL AND SEVERE CRASHES AT UNSIGNALIZED INTERSECTIONS MAY INCLUDE:

- Left-turn / Offset left-turn lanes
- Acceleration lanes
- Right-turn / Offset right-turn lanes
- Close median openings
- Realign intersection approaches
- Restricted Crossing U-turn

- Close intersections
- Improve geometry—skew or radial T

## STRATEGIES TO IMPROVE DRIVER AWARENESS AND IMPROVE OPERATIONS AT UNSIGNALIZED INTERSECTIONS:

- Signing and pavement markings such as advanced street name signs, warning signs and doubling up of signing
- Street lighting
- LED stop signs
- Dynamic speed feedback signs
- Dynamic intersection conflict warning systems
- Urbanization approaches
- Roundabouts
- All-way stop

## BEHAVIORAL EMPHASIS AREA

# Impaired Driving

The Behavioral EA **Impaired Driving** crash type is defined where the “condition at time of crash” field in the crash report is marked as “Under the Influence of Medications/Drugs/Alcohol” for the driver.

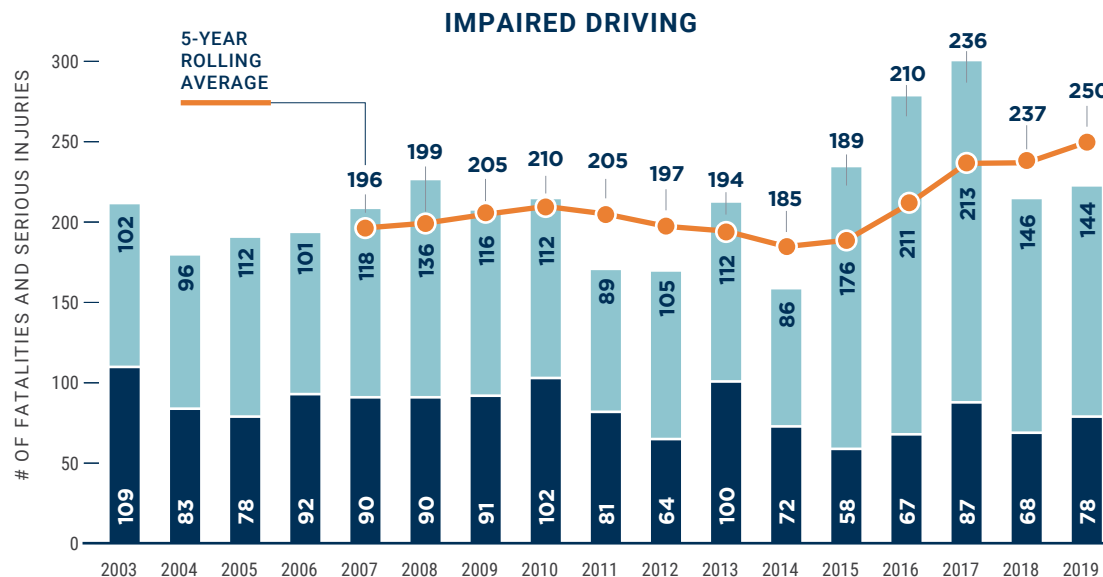


Figure 4-3. Behavioral EA – Impaired Driving

### CT 2015-2019 STATS

**358** TOTAL FATALITIES

**890** TOTAL SERIOUS INJURIES

#### HIGHLIGHTS

**58%** of impaired driving fatalities occur on urban-state roads.

**47%** of impaired driving serious injuries occur on urban-local roads.

Impaired driving crashes often involve **unrestrained occupants** and are **roadway departure** crashes.

#### OBJECTIVE

**LESS THAN**

**233** ↓

BY 2026

Reduce the five-year rolling average of impaired driving fatalities and serious injuries to less than 233 by 2026.

## Key Strategies

The following strategies may be considered to reduce impaired driving fatalities and serious injuries:

### STRATEGIES TO REDUCE EXCESSIVE AND UNDERAGE DRINKING INCLUDE:

- Support media buys for increase public awareness and education to reduce impaired driving
- Continue to engage high school students in educational events and peer-to-peer activities
- Develop safe-ride community partnerships
- Seek partnerships with ride-share programs
- Improve access to transit
- Expand screening, brief intervention, and referral to treatment
- Prohibit open alcohol containers in passenger vehicles

### STRATEGIES TO IMPROVE PUBLIC INFORMATION AND STRENGTHEN ENFORCEMENT AGAINST IMPAIRED DRIVING INCLUDE:

- Educate, communicate, publicize, and enforce zero tolerance laws
- Sanctions for high blood alcohol content (BAC) offenders and for first time high BAC offenders
- Reduce BAC limit (from 0.08 to 0.05)
- Increase number of law enforcement agencies receiving grants
- Increase the number of officers trained and expand the Standardized Field Sobriety Testing program focusing on local law enforcement
- Expand officers trained in Advanced Roadside Impaired Driving Enforcement (ARIDE)
- Increase the number of officers certified Drug Recognition Experts (DRE)

### STRATEGIES FOCUSING ON PROSECUTION AND IMPOSING SANCTIONS MAY BE IMPLEMENTED OR ENHANCED, SUCH AS:

- Increase law enforcement recognition and conviction of impairment (beyond alcohol)
- Increase prosecution and conviction of DUI offenders
- Assess administration of licensing sanctions
- Implement DUI offender license plate sanctions
- High-supervision Driving While Intoxicated (DWI) Courts
- Remove option for refusal of BAC test
- Educate officers and courts to identify re-offense and felony charge



## BEHAVIORAL EMPHASIS AREA

# Aggressive Driver

The Behavioral EA **Aggressive Driver** crash type is defined based on the “speeding related” field in the crash report marked as “Racing,” “Exceeding speed limit,” or “Too fast for condition” in addition to “driver action” field marked as “Following too closely” or “Reckless driving.”

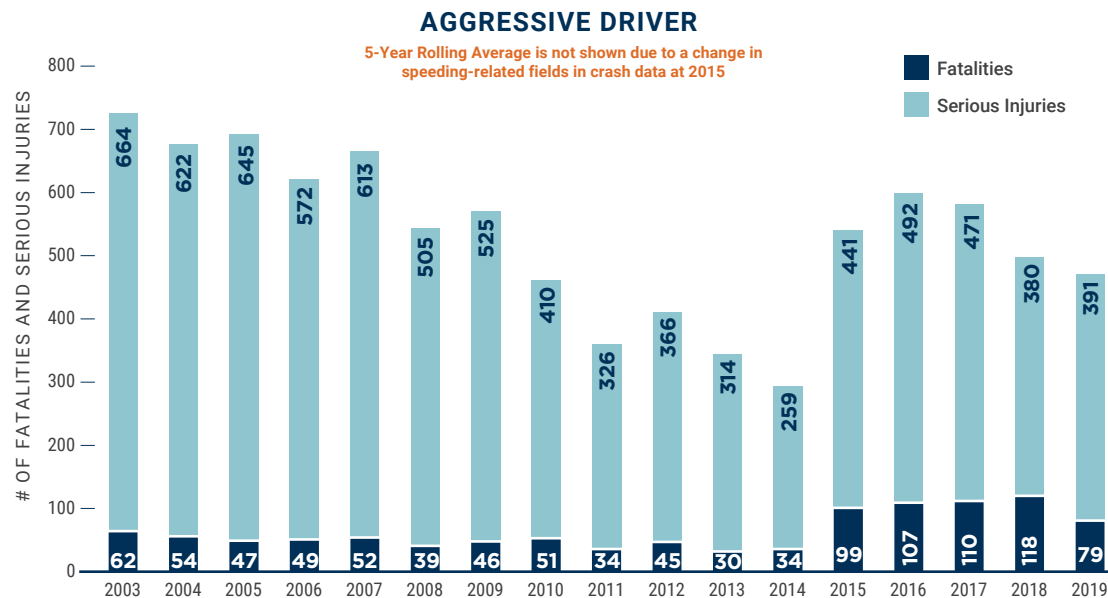


Figure 4-4. Behavioral EA – Aggressive Driver

### CT 2015-2019 STATS

**513** TOTAL FATALITIES

**2,175** TOTAL SERIOUS INJURIES

#### HIGHLIGHTS

**59%** of aggressive driving fatalities occur on urban-state roads.

**48%** of aggressive driving serious injuries occur on urban-local roads.

Aggressive driving fatalities and serious injuries are typically **roadway departure** and involve **unrestrained occupants**.

#### OBJECTIVE

**LESS THAN**

**502** ↓

BY 2026

Reduce the five-year rolling average of aggressive driving fatalities and serious injuries to less than 502 by 2026.

## Key Strategies

Aggressive and speed related fatalities and severe injuries may be reduced by implementing the following proven strategies:

### STRATEGIES THAT MAY BE IMPLEMENTED TO DETECT SPEEDING AND SUPPORT LAW ENFORCEMENT INCLUDE:

- Strengthen speed detection
- Explore automated enforcement
- Red-light running cameras
- Confirmation lights
- Analyze data to identify contributing factors
- High-visibility enforcement

### ADDITIONAL LAW ENFORCEMENT RESOURCES MAY BE IDENTIFIED TO REDUCE SPEED RELATED FATALITIES AND SERIOUS INJURIES:

- Purchase, deploy and utilize speed measuring devices
- Use Law Enforcement Liaisons to link partners

### JUDICIAL AND LEGISLATIVE STRATEGIES TO REDUCE SPEEDING-RELATED FATALITIES AND SEVERE INJURIES MAY INCLUDE:

- Support legislation to strengthen penalties
- Strengthen adjudication of speed citations

### INCORPORATE INFRASTRUCTURE TREATMENTS TO REDUCE AGGRESSIVE AND SPEEDING BEHAVIOR:

- Employ traffic calming strategies
- Prepare Complete Streets policies and implementation projects

### STRATEGIES TO IMPROVE UNDERSTANDING AND AWARENESS OF THE IMPACTS OF SPEED AND CRASH OUTCOMES INCLUDE:

- Provide additional education and public information to better understand the consequences of speeding and aggressive driving, especially in marginalized communities and areas with an overrepresentation of speed related severe crashes

## BEHAVIORAL EMPHASIS AREA

# Unrestrained Occupants

The Behavioral EA **Unrestrained Occupants** crash type is defined based on the “restraint system” field in the crash report marked as “None Used” for either the driver or the passenger.

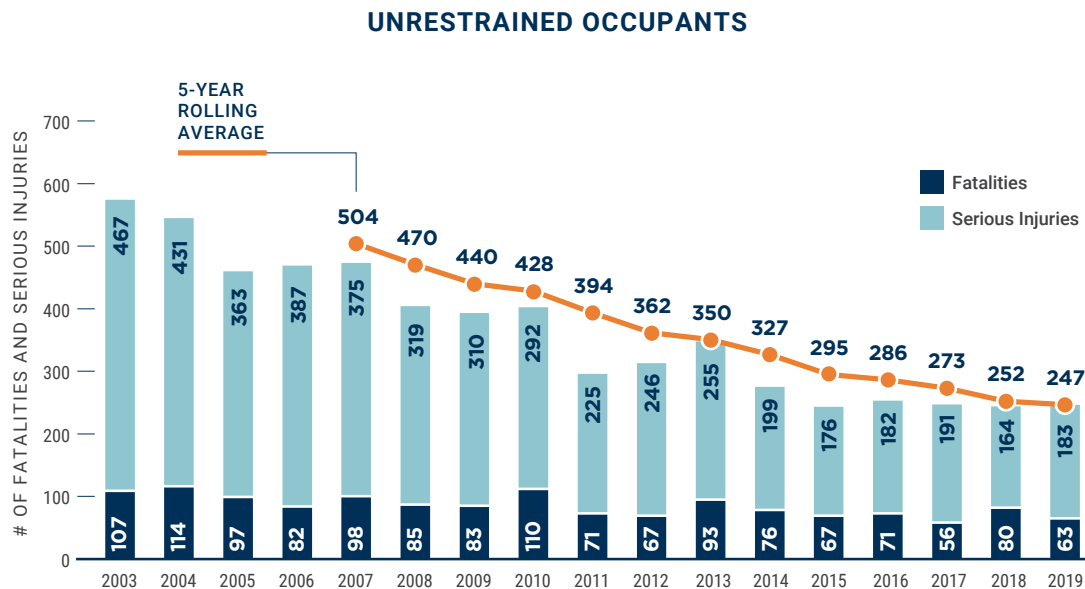


Figure 4-5. Behavioral EA – Unrestrained Occupants

### CT 2015-2019 STATS

**337** TOTAL FATALITIES

**896** TOTAL SERIOUS INJURIES

#### HIGHLIGHTS

**63%** of unrestrained occupant fatalities and 50% of unrestrained occupant serious injuries occur on urban-state roads.

Unrestrained occupant fatalities and serious injuries are typically **speeding** and **run-off-the road**.

#### OBJECTIVE

**LESS THAN**  
**230** ↓  
BY 2026

Reduce the five-year rolling average of unrestrained occupant fatalities and serious injuries to less than 230 by 2026.



## Key Strategies

Connecticut continues to implement a wide range of effective strategies to reduce unrestrained occupant fatalities and serious injuries. Further reduction will require deeper focus and collaboration.

### **STRENGTHENING LAWS AND ENFORCEMENT TO REDUCE FATALITIES AND SERIOUS INJURIES RELATED TO UNRESTRAINED OCCUPANTS SUCH AS:**

- Primary enforcement for rear seated passengers
- High-visibility, highly publicized, focused enforcement
- Seatbelt enforcement checkpoints
- Before and after seat belt observation surveys
- Coordinated nighttime belt enforcement with other offenses

### **COMMUNICATION AND EDUCATION CAMPAIGNS ARE ALSO EFFECTIVE IN REDUCING UNRESTRAINED OCCUPANT-RELATED FATALITIES AND SEVERE INJURIES SUCH AS:**

- Child passenger safety events in underserved communities
- Communicate child restraint system through outreach and campaigns
- Social norming campaigns
- “Saved by the Belt” campaigns



## BEHAVIORAL EMPHASIS AREA

# Motorcycle

The Behavioral EA **Motorcycle** crash type is defined based on the “body type” field in the crash report marked as “Motorcycle” or “Moped.”

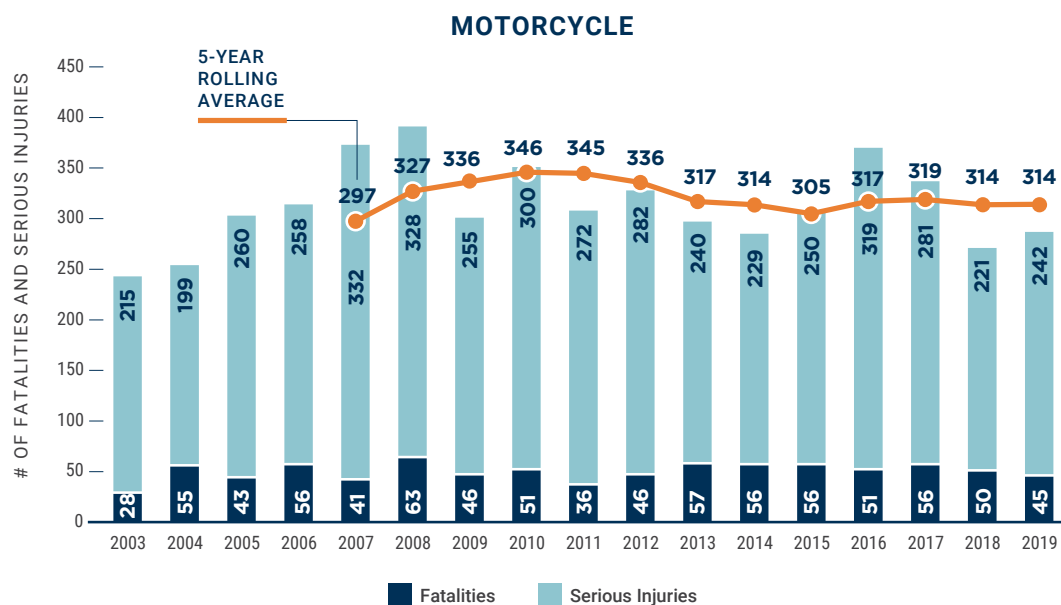


Figure 4-6. Behavioral EA – Motorcycle

### CT 2015-2019 STATS

**258** TOTAL FATALITIES

**1,313** TOTAL SERIOUS INJURIES

#### HIGHLIGHTS

**49%** of motorcycle fatalities and 47% of serious injuries occur on urban-state roads.

Motorcycle crashes have the highest overlap with **intersection** and **aggressive driving** crashes.

#### OBJECTIVE

LESS THAN

**293** ↓

BY 2026

Reduce the five-year rolling average of motorcycle fatalities and serious injuries to less than 293 by 2026.

# Key Strategies

Reductions in severe motorcycle fatalities and serious injuries will be maximized through multiple approaches and require 4E collaboration.

## DATA ANALYSIS, PRIORITIZATION AND ENFORCEMENT STRATEGIES REDUCE MOTORCYCLE-RELATED FATALITIES AND SEVERE INJURIES:

- Conduct nighttime high-visibility enforcement along with improved messaging and communication
- Expand vehicle impoundment for substance-impaired and high-speed riders
- Analyze data to identify locations and times for impairment and speed enforcement

## STRATEGIES TO STRENGTHEN AWARENESS AND EDUCATION SHOULD BE IMPLEMENTED SUCH AS:

- Conduct targeted media to promote helmet use
- Conduct targeted media to inform riders of dangers of impaired riding
- Maintain and promote websites aimed at changing unsafe riding behavior, such as [www.ride4ever.com](http://www.ride4ever.com)
- Promote awareness of high-visibility clothing
- Strengthen social norms around helmet use
- Expand the CT Rider Education Program
- Encourage riders to obtain motorcycle endorsement
- Campaigns about sharing the road with motorcycles
- Campaign on the benefit of the CT Rider Education Program

## STRATEGIES SHOULD BE IMPLEMENTED TO IMPROVE VISIBILITY THROUGH HIGHLY VISIBLE AND PROTECTIVE WEAR SUCH AS:

- Enact universal helmet-use law
- Promote Snell-certified helmets



## BEHAVIORAL EMPHASIS AREA

# Distracted Driving

The Behavioral EA **Distracted Driving** crash type is defined based on the “driver distracted by” field in the crash report marked as: “Manually Operating an Electronic Communication Device (texting, typing, dialing),” “Talking on Hands-Free Electronic Device,” “Talking on Hand-Held Electronic Device,” “Other Activity, Electronic Device,” “Passenger,” “Other Inside the Vehicle (eating, personal hygiene, etc.),” or “Outside the Vehicle (includes unspecified external distractions).”

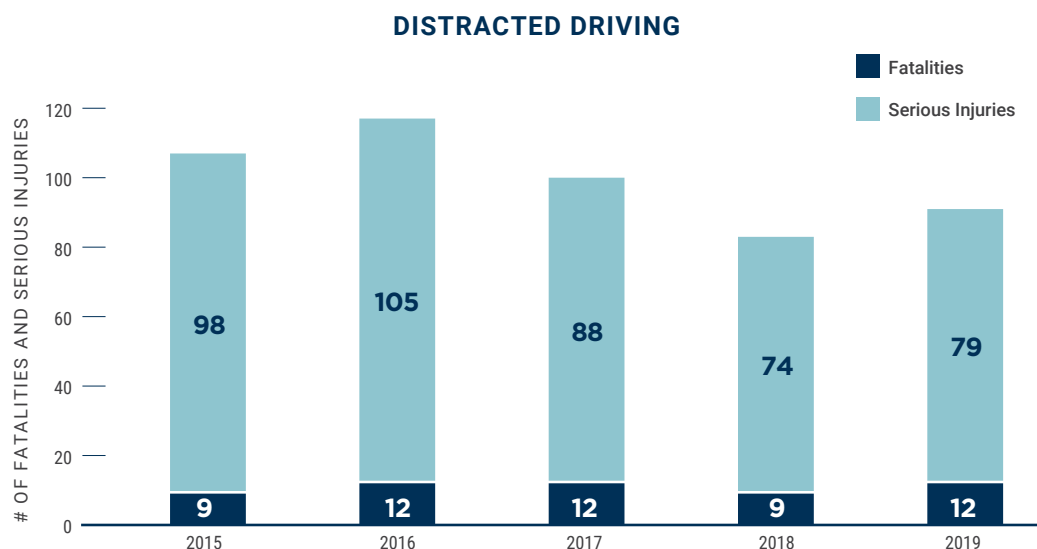


Figure 4-7. Behavioral EA - Distracted Driving

### CT 2015-2019 STATS

**54** TOTAL FATALITIES

**444** TOTAL SERIOUS INJURIES

#### HIGHLIGHTS

**52%** of distracted driving fatalities and serious injuries occur on urban-state roads.

Distracted driver fatalities and serious injuries often involve younger drivers and are hit-and-run crashes.

#### OBJECTIVE

LESS THAN  
**93**↓  
BY 2026

Reduce the five-year rolling average of distracted driving fatalities and serious injuries to less than 93 by 2026.

## Key Strategies

Distractions are widely recognized as being underreported and effective strategies are often challenging to implement.

### **ENFORCEMENT AND EDUCATION STRATEGIES SHOULD BE CONSIDERED FOR REDUCING DISTRACTED DRIVER-RELATED FATALITIES AND SEVERE INJURIES SUCH AS:**

- Increase enforcement, especially conduct high-visibility distracted driving enforcement campaigns
- Educate the driving public regarding the dangers of distracted driving through media campaigns, public awareness campaigns, public information campaigns, and education programs
- Outreach programs addressing social norms
- Incorporate family safe driving agreement in driver education classes

### **PARTNERSHIPS AND TECHNOLOGY STRATEGIES MAY SUPPORT THE REDUCTION OF FATALITIES AND SEVERE INJURIES DUE TO DISTRACTION:**

- Partner with employers
- Promote use of smartphone technology to limit or eliminate calls or texting while driving
- Promote understanding of vehicle technology



## EMPHASIS AREA

# Pedestrian

The **Pedestrian** EA is defined based on the “person type” field in the crash report marked as “Pedestrian” or “Other Pedestrian (wheelchair, person in a building, skater, pedestrian conveyance).”

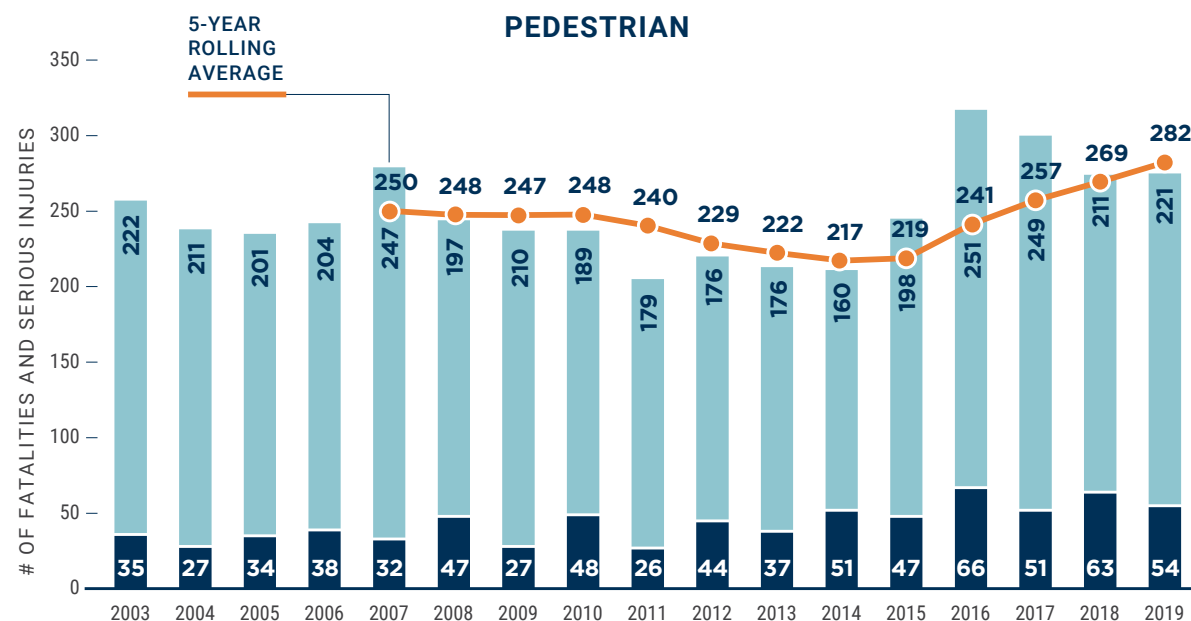


Figure 4-8. Pedestrian Emphasis Area

### CT 2015-2019 STATS

**281** TOTAL FATALITIES

**1,130** TOTAL SERIOUS INJURIES

#### HIGHLIGHTS

**57%** of pedestrian fatalities occur on urban-state roads.

**63%** of pedestrian serious injuries occur on urban-local roads.

Pedestrian fatalities and serious injuries are most likely to occur at **intersections** and have a **high incidence of hit-and-run**.

#### OBJECTIVE

**LESS THAN**  
**263** ↓  
BY 2026

Reduce the five-year rolling average of pedestrian fatalities and serious injuries to less than 263 by 2026.



# Key Strategies

There are several contributing factors influencing the increase in pedestrians killed or seriously injured while traveling. Some of the factors include more people walking for fitness or commuting, an increase in vehicle size from passenger cars to SUVs and pick-up trucks, additional pedestrian and driver distractions from smartphones and increased incidence of impaired driving and walking. While these factors present challenges there are proven effective 4E strategies that Connecticut has used successfully and will continue to expand through the SHSP.

## STRATEGIES SHOULD BE IMPLEMENTED TO REDUCE PEDESTRIAN EXPOSURE SUCH AS:

- Sidewalks
- Accessible Pedestrian Signals
- Pedestrian refuge islands
- Curb extensions
- Pedestrian bridge/tunnel installation
- Countdown timers
- Leading pedestrian interval (LPI)
- Update policy to make LPI and other Proven Safety Countermeasure as “standard” treatments in CT on all projects
- Road diets

## STRATEGIES THAT IMPROVE VISIBILITY FOR PEDESTRIANS INCLUDE:

- Crosswalk enhancements
- Crosswalk illumination
- Eliminate screening by physical objects
- Pedestrian Hybrid Beacon (PHB)
- Rectangular Rapid Flashing Beacon Pedestrian Crosswalk Systems (RRFBs)
- Install crosswalks at roundabouts

- Evaluate and improve access at transit stops
- Adding sidewalk connectivity and accessibility to/from transit stops

## STRATEGIES FOR IMPROVING AWARENESS FOR PEDESTRIAN SAFETY INCLUDE:

- Education, outreach, and training
- Enforcement campaigns
- Education campaign in high-risk communities
- Pedestrian Road Safety Audits
- Disallow plea bargaining for violations in pedestrian crossing laws
- Complete Streets policies
- Renaming and updating the Highway Design Manual to reflect the complete street design aspect
- Data collection of pedestrian infrastructure elements and pedestrian exposure

## SAFE SPEED OR SLOWING VEHICLE STRATEGIES TO IMPROVE SAFETY FOR PEDESTRIANS INCLUDE:

- Speed humps
- Speed feedback signs
- Install chicanes
- Semi-diverter
- Speed tables/raised crosswalks
- Full / partial diverters and street closure
- Reduce statutory speed limits
- Continue to allow municipalities to set speed limits and allow creation of pedestrian safety zones
- Speed management training program



**05**

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# **Additional Safety Areas**







## SECTION 5

# Additional Safety Areas

Additional Safety Areas were identified to be comprehensive and direct efforts to achieving zero fatalities for all users. The Additional Safety Areas include Unlicensed Drivers, Hit-and-Runs, Work Zones, Commercial Vehicles, Older Drivers and Older Pedestrians, Pedal Cyclists, Younger Drivers, Railway-Highway Grade Crossings, Tribal-owned Roadways, Wrong Way Drivers, and Traffic Incident Management.

This section includes the definition of each of the Additional Safety Areas and highlights based on 2015 to 2019 crash data, along with strategies and resources for implementation consideration. The Additional Safety Areas will be considered by each EA team and the SHSP leadership and stakeholders and incorporated as appropriate into implemented strategies.

### **UNLICENSED DRIVERS:** Unlicensed driving crashes are identified in the crash report as “Not Licensed.”

- Unlicensed driving fatalities and serious injuries typically occur in urban areas. 49% of unlicensed driving fatalities occur on urban-State roads and 65% of unlicensed driving serious injuries occur on urban-local roads.
- Unlicensed driving fatalities and serious injuries tend to also be aggressive or speeding drivers and hit-and-run.
- Additional data improvements and analysis are needed to better understand where drivers are commonly not getting licensed and the potential causes. After understanding

some of the causes, partners will collaborate to determine appropriate strategies and implementation approach to improving licensing or eliminating unlicensed drivers. There are several resources available to identify proven effective treatments and programs to address the needs of unlicensed drivers such as NCHRP Report 500: *A Guide for Addressing Collisions Involving Unlicensed Drivers and Drivers with Suspended or Revoked Licenses*<sup>6</sup> and NHTSA *Countermeasures That Work*.<sup>7</sup>

### **HIT-AND-RUNS:** Hit-and-run fatalities and serious injuries are identified in the crash report as “true” in the “hit-and-run status.”

- A majority of hit-and-run fatalities and serious injuries occur on urban-local roadways (70%) and fatalities are more likely to occur on urban-State roads (51%).
- Hit-and-runs most commonly result in pedestrian injuries and typically have an unlicensed driver.
- Additional data improvements and analysis are needed to better understand where hit-and-run crashes are occurring

and the potential causes. After understanding some of the causes, partners will collaborate to determine appropriate strategies and implementation approach to reduce hit-and-run crashes. There are resources available to identify potential treatments and programs to eliminate hit-and-run crashes such as the AAA Foundation for Traffic Safety Research *Brief Hit-and-Run Crashes: Prevalence, Contributing factors and Countermeasures*.<sup>8</sup>

### **WORK ZONES:** Work zone crashes are identified as “Yes” based on the “Work Zone Related” field in the crash report.

- Work zone fatalities and serious injuries typically occur on State roads in urban areas (77% and 59% respectively).
- There are a wide variety of 4E treatments that are effective in reducing the frequency and severity of work zone crashes. Many of the effective work zone safety strategies are highlighted in publications, guide documents and resources that are posted on the USDOT Work Zone Management Program website and Connecticut Department of Transportation website. In addition to the wide range of strategies considered, increased awareness campaigns along with enforcement and roadway safety audits at work zones are necessary to improve safety.
- Continue to utilize the Operation Big Orange work zone safety program which focuses on Work Zone Safety by

reducing moving violations. Operation Big Orange is a highway enforcement program that primarily utilizes the Connecticut State Police to make traffic stops in and around active work zones to help protect roadway workers and to deter irresponsible motorist behavior.

- Work Zone Safety and Mobility Process Review and Annual Work Zone Reports are conducted to identify potential issues and best practices that help make Connecticut’s work zones safer for workers and road users.
- Continue to study the effects of (and possibly expand) the pilot program focusing on automated Work Zone Speed Cameras.

**COMMERCIAL VEHICLES:** Commercial Vehicle fatalities and serious injuries are defined where the “body type” field in the crash report is “Medium / Heavy Trucks (more than 10,000 lbs (4,536 kg)),” “Motor Home,” “School Bus,” “Transit Bus,” “Motor Coach,” or “Other Bus.”

- Fatalities and serious injuries involving a commercial vehicle typically occur on State roads in urban areas (77 and 60 respectively).
- Fatalities and serious injuries involving a commercial vehicle often also involve unrestrained occupants and older drivers.
- Strategies are detailed in the *Annual Connecticut Commercial Vehicle Safety Plan*.<sup>9</sup>

**OLDER DRIVERS AND OLDER PEDESTRIANS:** Older Drivers and Older Pedestrians refer to crashes involving a pedestrian or driver that is 65 years of age or older.

- A majority of the older driver fatalities and serious injuries occur on urban, State routes (63% and 58% respectively).
- Older driver fatalities and serious injuries typically occur at intersections or are roadway departure.
- There have been about 9 older pedestrians killed and 28 older pedestrians serious injured annually, which is about 13% of total pedestrian fatalities and serious injuries.
- Connecticut will conduct a secondary analysis to determine whether the increase in older drivers and pedestrians is attributable to driver fatalities and injuries, pedestrian fatalities and injuries, or a combination of the two.
- Connecticut will consider effective strategies for reducing older driver and pedestrian fatalities and serious injuries.
- Older driving fatalities and serious injuries will be reduced, in part, by implementing strategies shown in the FHWA *Handbook for Designing Roadways for the Aging Population*<sup>10</sup> (FHWA-SA-15-088) since these are proven effective for addressing the needs of older drivers and pedestrians. [https://safety.fhwa.dot.gov/older\\_users/fhwasa15088/](https://safety.fhwa.dot.gov/older_users/fhwasa15088/).

**RAILWAY-HIGHWAY GRADE CROSSING:** Railway-highway grade crossing crashes are defined as crashes where railway vehicle (train, engine) is identified in the first harmful event or sequence of events.

- There were no fatalities or serious injuries at highway grade crossings during the analysis period.
- Strategies will include an assessment of longer-term crashes, determination of proactive methods for identify potential locations for improvement, analysis of opportunities for closure and railway-highway grade crossing improvements.



**PEDAL CYCLISTS:** Pedal cyclist crashes are those where the “person type” field in the crash report is marked as “Bicyclist” or “Other Cyclist.” This reflects bicycle and motor vehicle collisions but does not include collisions with another bicycle or pedestrian.

- A majority of the pedal cyclist fatalities and serious injuries occur on urban roadways (54 of fatalities occur on urban-State roads, and 64% of serious injuries occur on urban-local roads).
- Pedal cyclist fatalities and serious injuries typically also involve a distracted driver and are likely to be hit-and-run.
- Connecticut will continue to assess bicycle safety needs and collaborate with partners such as AAA, Watch for Me CT, CT Bicycle and Pedestrian Advisory Board, and bicycle leagues and organizations to improve bicycle safety.
- The State will continue to implement the Connecticut Active Transportation Plan and consider additional data collection needs (e.g., bicycle count data, bike infrastructure databases) and analysis to understand and prioritize bicycle transportation system needs. 4E effective treatments and programs will be considered for reducing bicycle fatalities and serious injuries such as designate a percentage of safety-related funding to improve bicycle safety, aim to reduce distraction by all road users, ensure law enforcement is properly trained to enforce safe road users, consider implementing roadway diets, improve education for all users and create methods and plans to improve the bicycling environment.

**YOUNGER DRIVERS:** Younger Driver crashes are defined where the age of the driver is between (and including) 15 to 20.

- 60% of younger driver fatalities occur on urban-State roads and 50% of serious injuries occur on urban-local roads.
- Young driver involved fatalities and serious injuries are also typically aggressive or speeding and occur at intersections.
- Younger driver fatalities and serious injuries may be reduced using a variety of 4E strategies such as high school events, drivers training enhancements and mitigating risky driving behavior. NHTSA *Countermeasures That Work*<sup>11</sup> is a valuable resource for eliminating crashes involving younger drivers.

**TRIBAL-OWNED ROADWAYS:** There are 30 miles of tribal roadways in Connecticut, but the exact location of them is unknown.

- Strategies include increased tribal engagement in the SHSP process and identification and subsequent safety analysis of those tribal roadway facilities.

**WRONG WAY DRIVERS:** Wrong way driving (WWD) happens when a driver, inadvertently or deliberately, drives in the opposite direction of traffic flow. When this happens on a high speed divided highway (freeway, expressway, or Interstate highway), head-on or opposite direction sideswipe crashes may occur resulting in serious injuries and fatalities.

- Concerned about the rise in WWD crashes, CTDOT's Division of Traffic Engineering Safety Engineering Unit is continuing its efforts to reduce the likelihood of wrong-way drivers on limited access highways through research, studies and implementation of innovative traffic control and infrastructure initiatives.
- Continue to enhance wrong way signing at highway off ramps such as "Wrong Way," "Do Not Enter," "One-Way," "Keep Right", "No Left/Right Turn", oversized and doubled up "Do Not Enter" and "One-Way" signs, red retroreflective strips on signposts, and lower mounting height for the "Do Not Enter" and "Wrong-Way" signs.
- Continue to install pavement markings to deter wrong way driving such as double-wide stop lines, multiple wrong way pavement arrows, lane-use pavement arrows near the stop line, 8-inch wide edge lines around the nose of raised median dividers and short dashed lines to guide turning vehicles onto the on-ramps.
- Continue to upgrade traffic signal relamping projects by replacing the circular green ball with vertical green arrow on the intersecting road of signalized off-ramps, where applicable.
- Expand the use of wrong way driving detection and activate flashers on Wrong Way signs.
- Implement WWD treatments to locations identified through the network screening and risk factor assessment process. Risk factors identified were: multiple off-ramps that meet at the same location, wrong way event history, presence of alcohol establishments, presence of raised median or guiderail, and lack of highway illumination.
- Continue the Statewide Limited Access Highway Sheet Aluminum Sign Replacement project to install Wrong Way signs on the back of Speed Limit signs.
- Review of National research studies and collaboration with other states on Wrong Way driving countermeasures.
- CTDOT to continue to participate as a member of the FHWA Traffic Control Device Consortium Pooled Fund Study which provides information on research traffic control devices on various topics including wrong way drivers.

**TRAFFIC INCIDENT MANAGEMENT:** Additional data collection and analysis may be needed to address all 3 of the FHWA TIM performance measures: incident clearance time, roadway clearance time and secondary crashes. Consider forming a group to determine approaches for obtaining the data to calculate the metrics and assess the ambiguity of secondary crash metrics to improve TIM. The reduction of secondary crashes is a high priority for the CT SHSP.

- Develop a statewide TIM group with a lead agency to administer clearly defined responsibilities that meet the requirements of the National Incident Management System (NIMS) and the National Unified Goal.
- Encourage and support the regional COG TIM programs.
- Implement a statewide NIMS-based Unified Response Manual (URM).
- Reduce incident and roadway clearance duration, which is achieved through (a) reducing the time to detect incidents, (b) initiating an expedient and appropriate response, and (c) clearing the incident and emergency responders as quickly as possible.
- Continue to operate and support the CTDOT CHAMP (CT Highway Assistance Motorist Patrol) program on limited access highways, which promotes the quick response and clearance of incidents, reducing secondary crashes, and providing motorist and responder safety.
- Continue to improve Traveler Information to the media and public.
- Continue to conduct public awareness programs to support effective on-scene TIM by road users.
- Promote best practices for TIM and provide accessibility to ITS (Intelligent Transportation System) tools.
- Support regular multidisciplinary TIM training and exercises.
- Conduct After-Action Reviews to improve response and scene management.
- Identify staffing needs and training resources for CTDOT staff and emergency responders.
- Evaluate expansion of ITS infrastructure to additional regional corridors based on prioritized need.
- Support the tracking of TIM performance metrics following national standards and definitions.
- Recommend the appropriate NIMS training courses for emergency responders including DOT and State Police personnel.



## TRAFFIC INCIDENT MANAGEMENT (CONTINUED)

- Continue to provide TIM and emergency response training to a variety of emergency responders such as towing companies, local agencies, and law enforcement.
- Educate emergency responders on the importance of incident management and quick clearance practices.
- Educate the public about the dangers of exiting a disabled or crashed vehicle.
- Increase public awareness of the importance of yielding the right-of-way to emergency vehicles and personnel and on the “Move Over” law.
- Increase public awareness of the importance of moving disabled vehicles involved in non-injury crashes from the roadway as soon as practical in accordance with the “Move It” law.
- Encourage the use of required personal safety vest and enforce the use of required high-visibility apparel for first responders.
- Investigate opportunities to improve the collection and reporting of secondary crash information.
- Continue to raise awareness to the State of Connecticut Incident Management Policy and the Connecticut Quick Clearance Policies.
- Continue to provide information and guidance to emergency responders on the management of traffic incidents to ensure a quick and safe clearance of roadways. Example is the use of Connecticut Traffic Incident Scene Management Field Guide recently published and distributed by the Greater Hartford TIM Coalition. Consider development and distribution as a mobile app for easier accessibility and resource guide for TIM related subjects.
- Continue upgrading of diversion plans to assist responders and support personnel and develop electronic application for easier access during incidents.

6. Report 500 Volume 2 A Guide for Addressing Collisions Involving Unlicensed Drivers and Drivers with Suspended or revoked Licenses. National Cooperative Highway Research Program, 2003, [http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp\\_rpt\\_500v2.pdf](http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rpt_500v2.pdf)
7. NCHRP Report 500 Guidance for Implementation of the AASHTO Strategic Highway Safety Plan, National Cooperative Highway Research Program, 2009, <http://www.trb.org/Main/Blurbs/152868.aspx>
8. Hit-and-Run Crashes: Prevalence, Contributing Factors and Countermeasures Research Brief, AAA Foundation for Traffic Safety, [https://aaaafoundation.org/wp-content/uploads/2018/04/18-0058\\_Hit-and-Run-Brief\\_FINALv2.pdf](https://aaaafoundation.org/wp-content/uploads/2018/04/18-0058_Hit-and-Run-Brief_FINALv2.pdf)
9. Connecticut Commercial Vehicle Safety Vehicle Plan, Federal Motor Carrier Safety Administration's Motor Carrier Safety Assistance, July 7, 2019, Program, <https://www.fmcsa.dot.gov/sites/fmcsa.dot.gov/files/2020-01/Connecticut%20CVSP%20Final%20FY19.pdf>
10. Handbook for Designing Roadways for the Aging Population, Federal Highway Administration (FHWA-SA-14-103), [https://safety.fhwa.dot.gov/older\\_users/fhwasa15088/](https://safety.fhwa.dot.gov/older_users/fhwasa15088/).
11. Countermeasures That Work, National Highway Traffic Safety Administration (NHTSA), April 2018, [https://www.nhtsa.gov/sites/nhtsa.gov/files/documents/812478\\_countermeasures-that-work-a-highway-safety-countermeasures-guide-.pdf](https://www.nhtsa.gov/sites/nhtsa.gov/files/documents/812478_countermeasures-that-work-a-highway-safety-countermeasures-guide-.pdf)



06

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# Implementation









## SECTION 6

# Implementation

The aggressive vision for eliminating all roadway deaths in Connecticut can only be achieved through the thoughtful, deliberate, coordinated efforts of all safety leaders and partners to commit to implementing and tracking strategies and initiatives established in the SHSP.

The SHSP foundations of Safe System, traffic safety culture and equity should be considered throughout SHSP implementation. SHSP leadership should ensure broad and meaningful engagement by incorporating representatives to address safe road users, safe vehicles, safe speeds, safe roads, and post-crash care so that implementation is proactive, shares responsibility among safety partners and ensures system redundancy. SHSP leadership should also include representatives of marginalized communities and underserved populations to address the needs of all transportation users in Connecticut.

The SHSP serves as the umbrella document that influences the State HSIP, the HSP, the CVSP, RTSPs, and other relevant plans and provides the basis for investment in statewide transportation safety initiatives. Leadership and communication along with performance management are critical aspects of the SHSP implementation process. For this reason, Connecticut will rely on the CT SHSP Leadership Structure to fulfill key SHSP implementation roles and responsibilities. The CTDOT Division of Traffic and Safety Engineering Section led the SHSP leadership team through the CT SHSP development process and continues to lead and oversee the CT SHSP implementation and evaluation. *Figure 6-1, Implementation Organization Chart*

conveys the leadership structure from Executive Committee to the Steering Committee and the EA teams that will continue to deliver on commitments made in the SHSP. This section describes each leadership level, participating agencies or organizations and their role in the implementation of the SHSP.

In particular, the **Executive Committee** represents leadership from each of the partnering organizations:

Commissioners from Departments of:

- Transportation
- Motor Vehicles
- Public Health
- Education
- Emergency Services and Public Protection

The Executive Committee provides high-level coordination and oversight for policy, legislation, and agency collaboration, and appoints staff to the Steering Committee and each EA. It is anticipated the Executive Committee will meet two to four times a year to ensure progress towards the SHSP vision.

## SHSP LEADERSHIP STRUCTURE & RESPONSIBILITIES

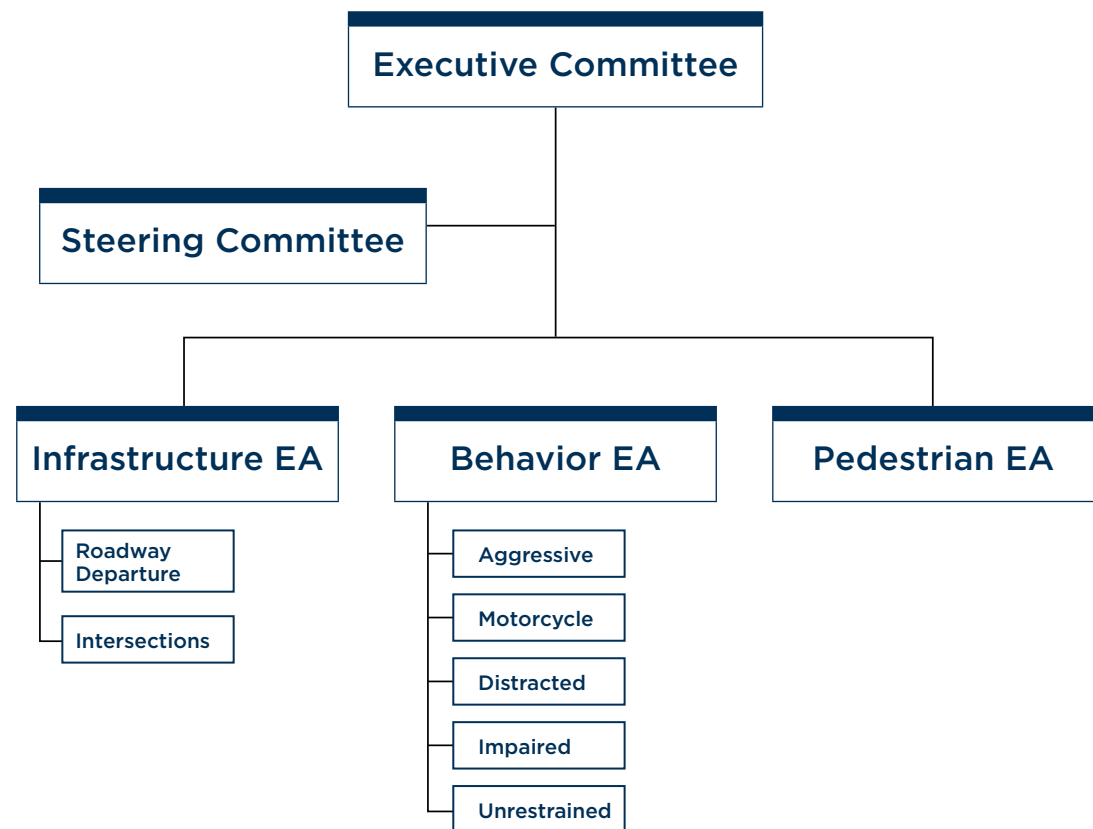


Figure 6-1. Implementation Organization Chart



The **Steering Committee** members include representation from:

- CTDOT (including the Connecticut Highway Safety Office)
- Connecticut Department of Motor Vehicles
- Capitol Regional COG
- Western Connecticut COG
- Northeastern Connecticut COG
- Connecticut Police Chiefs Association
- Jacobs
- AARP
- AAA Allied
- FHWA
- NHTSA
- FMCSA
- University of Connecticut (UConn)
- Department of Emergency Services and Public Protection
- Mashantucket Pequot Tribal Nation
- Mohegan Tribe

The Steering Committee will meet three times a year to receive updates from the EA leads and teams, understand progress, identify potential challenges and solutions, and provide support for SHSP implementation. The Steering Committee members also serve as liaisons to their respective organizations to ensure consistent messaging, identify potential funding

sources and to direct efforts to achieve maximum results. The Steering Committee will explicitly consider equity in SHSP communications with high-risk communities and align programs and investment to meet the diverse needs statewide.

The **EA teams** have been established for **Infrastructure, Behavior, and Pedestrian** to focus on collaborating and coordinating efforts with 4E stakeholders.

EA teams have broad representation and will continually review membership to ensure inclusion and representation of at-risk and diverse communities. Stakeholders will also consider sustainable funding sources and prioritization of funding to maximize return while accounting for equity. Co-leads for each of the EA teams will coordinate meetings as needed, provide resources, and communicate with stakeholders on a regular basis. The EA teams will share programs, initiatives and efforts by their respective agencies and will bring key issues to the Steering Committee to seek support that will allow Connecticut to realize the full capabilities and commitment of transportation safety partners. Connecticut will support an Annual Safety Summit to gather safety stakeholders and continue to address implementation needs. The Summit will allow stakeholders to gain a better understanding of progress to reducing fatalities and serious injuries and collaborate on mitigation strategies.

EA teams will review the performance objectives, develop interim goals as needed, prioritize strategies, guide, and oversee implementation of the strategies and track progress. Continuous tracking of implementation progress will allow for evaluation of the effectiveness of treatments and future development of state-specific crash modification factors that will inform future investments and provide necessary feedback

through the HSIP, HSP, and CVSP annual reporting process. Each of the five performance targets will be evaluated and reported in the HSP and the HSIP. At the same time, crash trends and EA performance objectives will be reassessed as each year of crash data is finalized and becomes available. Trend analysis and awareness of progress will allow safety stakeholders and leaders to adjust programs and investments to realize their full impact. While insights are gained through trend analysis, specific countermeasure treatment and program effectiveness is ideal. Treatments may need to be in place for three to five years to have enough data to conduct before and after studies, so it is important to track specific projects to conduct more detailed effectiveness evaluations which lead to the development of state-specific crash modification factors (CMFs). State-specific CMFs are valuable for understanding the effectiveness of treatments under local conditions and are used to inform investment decisions. Countermeasure effectiveness tools are under development and will be an informative resource for SHSP implementation. Strategies and their implementation will deliberately consider Safe System, traffic safety culture and equity. Strategies should be considered in the context of Connecticut's diverse community needs to ensure appropriate initiatives, programs and treatments are implemented to reduce fatalities and serious injuries.

While the Executive Committee, Steering Committee and EA Teams are formalized with specific responsibilities and regular communication, the Additional Safety Areas are also identified to be comprehensive and direct efforts to achieving zero fatalities for all users. The Additional Safety Areas include unlicensed drivers, hit-and-run, work zones, commercial vehicles, older drivers and older pedestrians, pedal cyclists, younger drivers, railway-highway grade crossings, Tribal owned roadways, Traffic Incident Management, and

wrong way drivers. Each of the Additional Safety Areas have different needs and stakeholder participation. For example, unlicensed drivers and hit-and-run are newer areas of focus that will require some additional data analysis to determine appropriate next steps for addressing safety needs. Traffic Incident Management and work zone safety have well established membership, initiatives and programs that are important for the on-going transportation safety needs in Connecticut. The Steering Committee will review on-going efforts for each of the Additional Safety Areas to determine SHSP implementation needs. The approach will be outlined in initial implementation meetings and will be reviewed and endorsed by the Executive Committee.

The **SHSP Champion** is responsible for gathering key players and ensuring forward progress. The State Safety Engineer at CTDOT serves as the State's lead for this effort and, along with the rest of the Safety Engineering unit in the CTDOT Division of Traffic Engineering, is responsible for program management.

Critical to successful SHSP implementation is marketing, coordination, and communication to maximize stakeholder engagement, obtain support for strategies and initiatives and collaborate to improve effectiveness. Connecticut prepared CT SHSP brand guidelines and resources for use by leaders and partners to offer clear and consistent messaging and grow awareness of the SHSP and associated initiatives. Leadership will also develop newsletters and the CT SHSP website to provide regular communication to stakeholders regarding implementation progress and areas of opportunity to achieve our statewide vision.

**07**

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# Evaluation









## SECTION 7

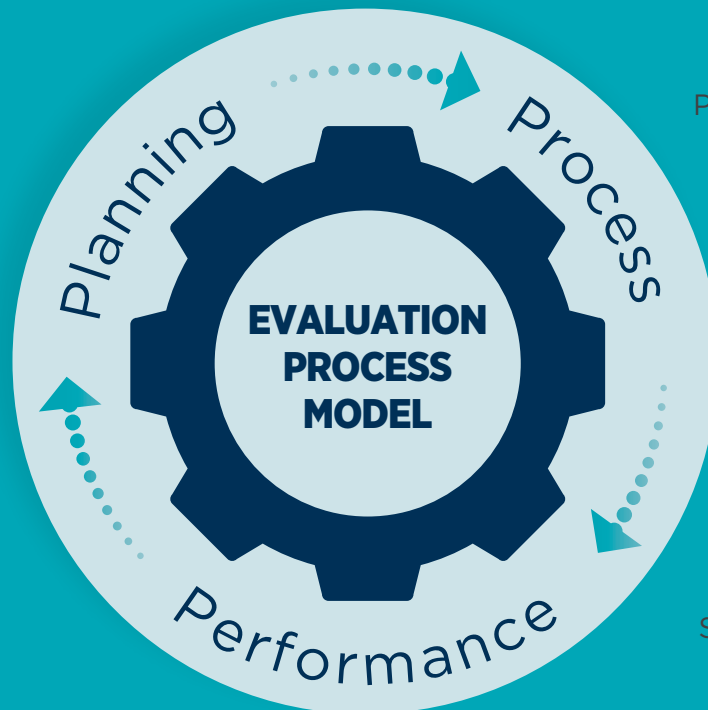
# Evaluation

### **SHSP Effectiveness is Maximized through Evaluation and Implementation Adaptation**

Connecticut will make progress towards achieving the vision of zero fatalities for all roadways through continuous implementation and evaluation of the SHSP. The SHSP is a living document and can be adjusted to meet the changing needs of the safety program and the communities it serves.

In particular, the SHSP was finalized on the cusp of new federal transportation legislation, the Investment in Infrastructure and Jobs Act (IIJA), and State policies and programs will continue to evolve. As trends change, Connecticut will respond and adjust to improve quality of life for all transportation users.

Evaluation of the SHSP will be completed in accordance with the FHWA Guidance on Strategic Highway Safety Plans, MAP-21 and the IIJA. Since the CT SHSP serves as the foundation for transportation safety initiatives from 2022 to 2026, at the end of 2026 it is appropriate to conduct a comprehensive evaluation. The CTDOT Traffic and Safety Engineering Section will lead the evaluation process using the SHSP Evaluation Process Model as a guide. This formal **evaluation will focus on two major aspects of the SHSP – process evaluation and performance evaluation** (*Figure 7-1*).



Process evaluation will assess SHSP management from organizational structure and Safe System collaboration to the effectiveness of data and alignment with stakeholder agency priorities. This assessment will identify strengths, weaknesses, and areas for potential improvement for future SHSPs. The performance evaluation will measure the effectiveness of the SHSP in achieving the fatal and serious-injury goal of **less than 1,492 by 2026 and determine progress towards achieving the vision of zero fatalities for all users on all public roadways in Connecticut.** Output and outcomes of each of the SHSP EAs will be quantified. The EA output reflects the units of implementation such as miles of shoulder widening and number of impaired driving media buys or paid service announcements (PSA). The outcomes for each of the EAs refers to the number of fatalities and serious injuries and EA specific performance measures. The SHSP evaluation will be documented and shared with the Steering Committee to inform future SHSPs and to continue to enhance the safety program.

Figure 7-1. Evaluation Process Model



**08**

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# Conclusion





## SECTION 8: CONCLUSION

# Connecticut is Moving Toward **ZERO Deaths** through Partnerships, Innovation, and Proven Strategies

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While Connecticut has made great progress in reducing motor vehicle fatalities and serious injuries, there is still much work to be done to move Toward Zero Deaths.

The Connecticut SHSP provides the strategic, collaborative platform to support collaboration and achieve greater results. The SHSP is a federal requirement codified under 23 U.S.C. 148, with implementing rules under 23 CFR Part 924, and is a statewide, data-driven, comprehensive, multidisciplinary transportation safety plan integrating the **4Es of safety—education, enforcement, engineering, and emergency services**. The SHSP establishes statewide performance measures, goals, objectives, and EAs and describes a program of strategies that use design, technology, behavioral, and policy approaches to significantly reduce fatalities and serious injuries on all public roads. It is the comprehensive plan with which other transportation safety plans must coordinate. The SHSP allows highway safety programs and partners in the State to work together to align goals, leverage resources, and collectively address the State's safety challenges.

Connecticut's SHSP is developed through stakeholder outreach and engagement and a data-driven approach that is focused on reducing fatalities and serious injuries on all public roads by targeting the most probable cause of crashes. By focusing on Behavior, Infrastructure, and Pedestrian EAs, Connecticut will maximize resources to address existing and emerging transportation safety system needs.



# CT SHSP SAFETY PARTNERS

## Federal Agencies

- FHWA
- FMCSA
- NHTSA

## State Agencies

- Dept. of Education
- Dept. of Emergency Services and Public Protection
- Dept. of Motor Vehicles
- Dept. of Public Health
- Dept. of Transportation
- Division of Criminal Justice
- Judicial Branch
- Legislative Commission on Aging
- University of Connecticut
- Connecticut Local Technical Assistance Program (LTAP)
- Planning Organizations
- Capitol Region Council of Governments (COG)
- Southeastern Connecticut COG
- Northeastern CT COG
- Naugatuck Valley COG
- Western CT COG

## Local Government Agencies

- Cheshire Fire Rescue
- Cheshire Police Department (PD)
- City of Stamford
- Clinton PD
- Enfield PD
- Fairfield PD
- Greater Hartford Transit District
- Hartford PD
- Naugatuck PD
- Norwich PD
- Somers PD
- Stafford PD
- Stamford PD
- Town of Canton
- Town of Durham
- Town of East Hartford
- Town of Groton
- Town of Manchester
- Town of New Milford
- Town of Stafford
- Town of Watertown
- Town of West Hartford
- West Haven Fire Department
- Westport PD

## Other Stakeholders

- AAA Northeast
- AAA Allied
- AARP Connecticut
- Bike Walk Connecticut
- Connecticut Children's Medical Center
- Connecticut Cycling Advancement Program
- Connecticut Main Street Center
- Connecticut Motorcycle Riders Association
- Farmington Valley Trails Council
- Jacobs
- MADD Connecticut
- Mashantucket Pequot Tribal Nation
- Mohegan Tribe
- Private Consulting Companies
- Towing and Recovery Professionals of Connecticut
- Yale-New Haven Hospital

## SECTION 9

# References and Acronyms

## REFERENCES

1. Substitute House Bill No. 5429, Public Act No. 21-28, An Act Concerning Pedestrian Safety, the Vision Zero Council, Speed Limits for Municipalities, Fines and Charges for Certain Violations and the Greenways Commemorative Account. Effective October 1, 2021. <https://www.cga.ct.gov/2021/act/Pa/pdf/2021PA-00028-ROOHB-05429-PA.PDF>
2. Pedestrian Fatalities by State, 2020 Preliminary Data, Governors Highway Safety Administration (GHSA), May 2021, [Pedestrian Traffic Fatalities by State: 2020 Preliminary Data | GHSA](https://www.ghsa.org/resources/research-and-data/pedestrian-traffic-fatality-data)
3. Pedestrian Fatalities by State, 2020 Preliminary Data Addendum, Governors Highway Safety Association (GHSA), May 2021, [Pedestrian Traffic Fatalities By State 2020 Preliminary Data Addendum 5-20-21.pdf \(ghsa.org\)](https://www.ghsa.org/resources/research-and-data/pedestrian-traffic-fatality-data)
4. 2020 Connecticut Highway Safety Improvement Program, Federal Highway Administration (FHWA), July 2020, <https://safety.fhwa.dot.gov/hsip/reports/pdf/2020/ct.pdf>
5. Connecticut Strategic Highway Safety Plan 2017-2021. [https://www.cti.uconn.edu/images/cti/documents/T2Center/17-014L-CONN\\_SHSP.pdf](https://www.cti.uconn.edu/images/cti/documents/T2Center/17-014L-CONN_SHSP.pdf)
6. Report 500 Volume 2 A Guide for Addressing Collisions Involving Unlicensed Drivers and Drivers with Suspended or revoked Licenses. National Cooperative Highway Research Program, 2003, [http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp\\_rpt\\_500v2.pdf](http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rpt_500v2.pdf)
7. NCHRP Report 500 Guidance for Implementation of the AASHTO Strategic Highway Safety Plan, National Cooperative Highway Research Program, 2009, <http://www.trb.org/Main/Blurbs/152868.aspx>
8. Hit-and-Run Crashes: Prevalence, Contributing Factors and Countermeasures Research Brief, AAA Foundation for Traffic Safety, [https://aaafoundation.org/wp-content/uploads/2018/04/18-0058\\_Hit-and-Run-Brief\\_FINALv2.pdf](https://aaafoundation.org/wp-content/uploads/2018/04/18-0058_Hit-and-Run-Brief_FINALv2.pdf)
9. Connecticut Commercial Vehicle Safety Vehicle Plan, Federal Motor Carrier Safety Administration's Motor Carrier Safety Assistance, July 7, 2019, Program, <https://www.fmcsa.dot.gov/sites/fmcsa.dot.gov/files/2020-01/Connecticut%20CVSP%20Final%20FY19.pdf>

10. Handbook for Designing Roadways for the Aging Population, Federal Highway Administration (FHWA-SA-14-103), [https://safety.fhwa.dot.gov/older\\_users/fhwasa15088/](https://safety.fhwa.dot.gov/older_users/fhwasa15088/).
11. Countermeasures That Work, National Highway Traffic Safety Administration (NHTSA), April 2018, [https://www.nhtsa.gov/sites/nhtsa.gov/files/documents/812478\\_countermeasures-that-work-a-highway-safety-countermeasures-guide-.pdf](https://www.nhtsa.gov/sites/nhtsa.gov/files/documents/812478_countermeasures-that-work-a-highway-safety-countermeasures-guide-.pdf)
12. Connecticut DOT Annual Pavement Report 2019, Connecticut Department of Transportation, April 2020, [https://portal.ct.gov/-/media/DOT/documents/dpavement/Connecticut-DOT-Annual-Pavement-Report\\_2019.pdf](https://portal.ct.gov/-/media/DOT/documents/dpavement/Connecticut-DOT-Annual-Pavement-Report_2019.pdf)
13. FHWA Proven Safety Countermeasures, Federal Highway Administration, <https://safety.fhwa.dot.gov/provencountermeasures/>
14. Road Map for Implementing the TZD National Strategy on Highway Safety, Program Development Assessment Tool, National Cooperative Highway Research Program, <https://www.towardzerodeaths.org/assessment-tools/assessment-02/>
15. Connecticut Comprehensive Pedestrian Safety Strategy, Connecticut Department of Transportation, January 2021, [https://portal.ct.gov/-/media/DOT/documents/dcommunications/Press\\_Release/Comprehensive-Pedestrian-Safety-Strategy-JanFeb-2021.pdf](https://portal.ct.gov/-/media/DOT/documents/dcommunications/Press_Release/Comprehensive-Pedestrian-Safety-Strategy-JanFeb-2021.pdf).
16. USDOT Work Zone safety Management Program, <https://ops.fhwa.dot.gov/wz/>
17. Toward Zero Deaths, <https://www.towardzerodeaths.org>
18. Vision Zero Council, <https://portal.ct.gov/DOT/VisionZeroCouncil/WhatIsTheVisionZeroCouncil>



## SECTION 9

# References and Acronyms

## ACRONYMS

AAA	American Automobile Association	EA	Emphasis Area
ARIDE	Advanced Roadside Impaired Driving Enforcement	FAST	Fixing America's Surface Transportation
BAC	Blood Alcohol Concentration	FHWA	Federal Highway Administration
CFR	Code of Federal Regulations	FMCSA	Federal Motor Carrier Safety Administration
COG	Council of Governments	GHSA	Governors Highway Safety Association
CMF	crash modification factors	HRRR	High-Risk Rural Roads
CMV	Commercial Motor Vehicles	HSIP	Highway Safety Improvement Program
COG	Council of Governments	HSP	Highway Safety Plan
CT	Connecticut	IJA	Investment in Infrastructure and Jobs Act
CTDOT	Connecticut Department of Transportation	ITS	Intelligent Transportation Systems
CVSP	Commercial Vehicle Safety Plan	LPI	Leading Pedestrian Interval
DOT	Department of Transportation	LTAP	Local Technical Assistance Program
DRE	Drug Recognition Expert	MADD	Mothers Against Drunk Driving
DUI	Driving Under the Influence	MAP	Moving Ahead for Progress in the 21st Century
DWI	Driving While Impaired	MCSAP	Motor Carrier Safety Assistance Program

NCHRP	National Cooperative Highway Research Program
NHTSA	National Highway Traffic Safety Administration
NIMS	National Incident Management System
NMVCCS	National Motor Vehicle Crash Causation Survey
PD	Police Department
PHB	Pedestrian Hybrid Beacon
PSA	Paid Service Announcements
RTSP	Regional Transportation Safety Plan
SHSP	Strategic Highway Safety Plan
TIM	Traffic Incident Management
TZD	Toward Zero Deaths
UConn	University of Connecticut
URM	Unified Response Manual
U.S.C.	United States Code
VMT	Vehicle Miles Traveled

## SECTION 10

# Appendices

### Protection of Data from Discovery Admission into Evidence

#### **23 U.S.C. 148(H)(4) STATES:**

“Notwithstanding any other provision of law, reports, surveys, schedules, lists, or data compiled or collected for any purpose relating to this section [HSIP], shall not be subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location identified or addressed in the reports, surveys, schedules, lists, or other data.”

#### **23 U.S.C. 148(H)(4) STATES:**

“Notwithstanding any other provision of law, reports, surveys, schedules, lists, or data compiled or collected for any purpose relating to this section [HSIP], shall not be subject to discovery or admitted into evidence in a Federal or

State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location identified or addressed in the reports, surveys, schedules, lists, or other data.”

#### **23 U.S.C. 409 STATES:**

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

### Data Source

Results of the analyses are based on data that was downloaded from the Connecticut Crash Data Repository. Crash data for years 2003 to 2019 was accessed on February 12, 2020, and crash data for 2019 was accessed on April 14, 2020. Preliminary crash data for 2020 was accessed on February 1, 2021. The data was used “as is” for analysis purposes and should be interpreted accordingly.





# Appendix A – CT SHSP Data Sheets



## ROAD TO SAVING LIVES

For more information on the Connecticut SHSP 2022-2026, visit <https://portal.ct.gov/dot>

A dark, atmospheric photograph of a two-lane road stretching into the distance at night. The road is flanked by dark trees and foliage. A bright light source, possibly the moon or a distant light, is visible on the horizon, creating a soft glow. The overall color palette is dark blue and black.

**Jacobs**