

# CONNECTICUT

## HIGHWAY SAFETY IMPROVEMENT PROGRAM 2022 ANNUAL REPORT



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## **Disclaimer**

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

## **Executive Summary**

The reporting period for 2022 is from October 1, 2020 to September 30, 2021. Connecticut's (5 year rolling average) fatalities and fatal crash rates have increased in calendar years 2019 and 2020. Both (5 year rolling average) serious injuries and the serious injury crash rate have seen little change in recent years. Connecticut uses HSIP resources to incorporate safety improvements across a broad range of maintenance, safety and non-infrastructure projects. Innovative methodologies developed and used by CTDOT will continue to identify more locations, on a statewide scale, with the greatest potential for crash reduction. Applications of new Highway Safety Manual concepts and systemic approaches are also being integrated into the HSIP program. The SHSP will target goals and devise strategies in each emphasis area to see where improvements can be made in order to support the vision of moving towards zero deaths.

Since CT did not meet its 2020 safety performance targets, an HSIP Implementation Plan was prepared and submitted to the Division Office on June 30, 2022. CTDOT took this opportunity to re-evaluate its HSIP investments and identify gaps and deficiencies to ensure that projects identified, prioritized, and programmed have the best potential for reducing fatalities and serious injuries. Consideration is also being made to help CT meet safety performance targets in subsequent years.

## **Introduction**

The Highway Safety Improvement Program (HSIP) is a core Federal-aid program with the purpose of achieving a significant reduction in fatalities and serious injuries on all public roads. As per 23 U.S.C. 148(h) and 23 CFR 924.15, States are required to report annually on the progress being made to advance HSIP implementation and evaluation efforts. The format of this report is consistent with the HSIP Reporting Guidance dated December 29, 2016 and consists of five sections: program structure, progress in implementing highway safety improvement projects, progress in achieving safety outcomes and performance targets, effectiveness of the improvements and compliance assessment.

## **Program Structure**

### ***Program Administration***

#### **Describe the general structure of the HSIP in the State.**

CTDOT's Safety Engineering Section, which is located within the Division of Traffic Engineering, Bureau of Engineering and Construction utilizes both the spot improvement approach and the systemic approach to identify, select, and implement HSIP projects. The spot improvement approach, known as High Frequency Crash Locations (HFCL), results in safety investments at specific locations. The systemic approach leads to widespread implementation of treatments to reduce the potential for fatalities and/or serious injuries, regardless of if crashes occurred at a given site. Since many of CT's fatal and serious injury crashes are spread out across all public roads, the systemic approach provides an alternate method to identify and implement low-cost safety countermeasures addressing specific risk factors across the entire roadway network. As data becomes available, spot and systemic improvement projects will be evaluated to determine their effectiveness.

#### **Where is HSIP staff located within the State DOT?**

Engineering

#### **How are HSIP funds allocated in a State?**

- SHSP Emphasis Area Data

#### **Describe how local and tribal roads are addressed as part of HSIP.**

Local Roads are addressed by the Local Road Safety Program (LRSP). The LRSP provides federal funding for safety-related improvements on the non-State-maintained roadways, to address hazardous elements identified at locations and along roadway sections. To address all public roads requirement, Regional Transportation Safety Plans (RTSP) have been prepared for each of the nine regional councils of government (COG). The RTSPs identify key safety issues for all public roads. The plans utilized are similar to Connecticut's Strategic Highway Safety Plan (SHSP) but focused instead on the local and regional level needs of the individual communities and region. Since RTSPs include all public roads, communities have been made aware of potential or emerging safety issues on locally owned and maintained roadways and recommendations on how to address them. A program is being developed for the 9 RTSPs to apply for HSIP projects not on the State system. Project sponsors will be encouraged to examine a full range of options starting with low-cost spot and systemic treatments such as signs and pavement markings, to mid-range solutions such as traffic signals, turning lanes or roadway realignment. The applications will be reviewed and evaluated based on factors such as crash analysis, regional or local priority, and benefit/cost analysis. Additional program details will be made available at a later date. Local road projects are also included in the HSIP Implementation Plan for FFY2022

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and for FFY2023. Projects selected are based on comprehensive data gathered; SHSP Emphasis Areas; and input from regional councils of government.

Tribal roads open to public travel are located in Southeastern CT and are not included in the RTSPs. The Tribal Nations have been invited to participate in the transportation safety planning process under the SHSP on numerous occasions but have not yet been involved. In the past, the Bureau of Indian Affairs has contacted the Department to conduct RSAs on Tribal roads and CTDOT has willingly participated. It is acknowledged that tribal roads qualify for HSIP funding. Contact information for CT's State and Federal transportation officials are available under the Transportation Safety for Tribal Governments website.

### **Identify which internal partners (e.g., State departments of transportation (DOTs) Bureaus, Divisions) are involved with HSIP planning.**

- Districts/Regions
- Maintenance
- Operations
- Planning
- Traffic Engineering/Safety

### **Describe coordination with internal partners.**

The Safety Engineering Section within the Department's Division of Traffic Engineering conducts network screening on the state system to determine those intersection and segments that have the greatest potential for injury reduction. The lists are forwarded to the Operations Section within Traffic Engineering which reviews locations for possible highway safety improvements and the Highway Division's Highway Management Unit (HMU). All of the sections coordinate and collaborate with each other as necessary. The study locations typically originate from internal databases, such as High Frequency Crash Location (HFCL) lists or via appointed and elected officials, town officials, or the public. Depending on the cost and scope of the countermeasure, CTDOT's Office of Maintenance may be requested to implement low-cost improvements such as traffic signal timing changes, as well as installation of signs and pavement markings. In those situations where the scope of work is beyond the resources of the DOT's Division of Maintenance, the Operations Section recommends a project for inclusion in the CTDOT's Capital Improvement Plan. These safety projects are further developed, and plans, specifications, and estimates are taken on by the Department's Division of Highway Design.

### **Identify which external partners are involved with HSIP planning.**

- FHWA
- Regional Planning Organizations (e.g. MPOs, RPOs, COGs)
- Other-Safety Circuit Rider Program

### **Describe coordination with external partners.**

Discussion of ongoing and initiated safety projects to be included in the HSIP Plan with FHWA - Division Office.

Regional Transportation Safety Plans (RTSP) have been prepared for all nine Councils of Government (COG) in CT. A program is being developed for the COGs to solicit member towns for candidate HSIP projects. CTDOT plans to evaluate all the projects received and will notify the COG if the project is selected for funding. The COGs then inform the member towns accordingly. In addition CTDOT participates in quarterly COG meetings to share latest safety information and answer any questions.

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The Department's Traffic Safety Engineering group works in partnership with CT's Safety Circuit Rider Program (CT SCR) which provides safety-related information, training, and technical assistance to local agencies. Some of the initiatives include coordination of Road Safety Assessments (RSA), collection and analysis of traffic volume data, identification of low cost safety improvements, assistance in the development of Local Road Safety Plans, development of a Connecticut Toolbox of Safety Resources, development of a series of Roadway Safety Briefs, and delivery of Local Road Safety Training. The CT SCR program also provides assistance to local agencies in understanding the capabilities of the new CT Crash Data Repository at the University of Connecticut (UConn) and provides accurate information to local practitioners to make informed roadway safety decisions.

### **Describe other aspects of HSIP Administration on which the State would like to elaborate.**

Projects can qualify for the Department's HSIP funds and placement on the HSIP Safety Project Plan when they are initiated from the following sources:

- High Frequency Crash Locations (HFCL)
- Local Road Safety Program (LRSP)
- Railway-Highway Grade Crossing Program (RHGCP)
- Projects supporting SHSP Emphasis Areas
- High Risk Rural Roads
- Regional Transportation Safety Plans (RTSPs)
- HSIP Implementation Plan

### ***Program Methodology***

#### **Does the State have an HSIP manual or similar that clearly describes HSIP planning, implementation and evaluation processes?**

Yes

See attached file. Guide is in the process of being updated to reflect change in personnel as well as additions/revisions in the Federal IIJA Legislation.

#### **Select the programs that are administered under the HSIP.**

- Horizontal Curve
- Intersection
- Local Safety
- Pedestrian Safety
- Roadway Departure
- Wrong Way Driving
- Other-spot improvements (HFCL)

#### **Program: Horizontal Curve**

***Date of Program Methodology: 7/1/2015***

#### ***What is the justification for this program?***

- Addresses SHSP priority or emphasis area
- FHWA focused approach to safety

**What is the funding approach for this program?**

Competes with all projects

**What data types were used in the program methodology?**

**Crashes**

- All crashes

**Exposure**

- Traffic

**Roadway**

- Horizontal curvature
- Functional classification
- Roadside features

**What project identification methodology was used for this program?**

- Probability of specific crash types

**Are local roads (non-state owned and operated) included or addressed in this program?**

Yes

**Are local road projects identified using the same methodology as state roads?**

No

**Describe the methodology used to identify local road projects as part of this program.**

Horizontal curves projects on local roads are based on risk factors as well as input from the municipality.

**How are projects under this program advanced for implementation?**

- selection committee

**Select the processes used to prioritize projects for implementation. For the methods selected, indicate the relative importance of each process in project prioritization.**

**Enter either the weights or numerical rankings. If weights are entered, the sum must equal 100. If ranks are entered, indicate ties by giving both processes the same rank and skip the next highest rank (as an example: 1, 2, 2, 4).**

Rank of Priority Consideration

Available funding:100

**Program: Intersection**

**Date of Program Methodology:9/1/2020**

**What is the justification for this program?**

- Addresses SHSP priority or emphasis area
- FHWA focused approach to safety

**What is the funding approach for this program?**

Competes with all projects

**What data types were used in the program methodology?**

**Crashes**

- Fatal and serious injury crashes only

**Exposure**

- Traffic
- Volume

**Roadway**

- Functional classification
- Roadside features

**What project identification methodology was used for this program?**

- Probability of specific crash types

**Are local roads (non-state owned and operated) included or addressed in this program?**

Yes

**Are local road projects identified using the same methodology as state roads?**

Yes

**How are projects under this program advanced for implementation?**

- selection committee

**Select the processes used to prioritize projects for implementation. For the methods selected, indicate the relative importance of each process in project prioritization. Enter either the weights or numerical rankings. If weights are entered, the sum must equal 100. If ranks are entered, indicate ties by giving both processes the same rank and skip the next highest rank (as an example: 1, 2, 2, 4).**

Rank of Priority Consideration

Available funding:100

**Program: Local Safety**

**Date of Program Methodology:7/1/2008**

**What is the justification for this program?**

- Addresses SHSP priority or emphasis area

**What is the funding approach for this program?**

Competes with all projects

**What data types were used in the program methodology?**

**Crashes**

**Exposure**

**Roadway**

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- Other-As supplied by the applicant
- Functional classification

**What project identification methodology was used for this program?**

- Crash frequency

**Are local roads (non-state owned and operated) included or addressed in this program?**

Yes

**Are local road projects identified using the same methodology as state roads?**

No

**Describe the methodology used to identify local road projects as part of this program.**

Submittals by the regional planning organizations. The submittals that meet the program's criteria are funded.

**How are projects under this program advanced for implementation?**

- Other-Submittals are checked for accuracy and if the improvement yields a b/c ratio greater than 1.0, the submittals are forwarded to financial to obtain funding

**Select the processes used to prioritize projects for implementation. For the methods selected, indicate the relative importance of each process in project prioritization. Enter either the weights or numerical rankings. If weights are entered, the sum must equal 100. If ranks are entered, indicate ties by giving both processes the same rank and skip the next highest rank (as an example: 1, 2, 2, 4).**

Rank of Priority Consideration

Ranking based on B/C:50

Available funding:50

**Program: Pedestrian Safety**

**Date of Program Methodology:9/1/2014**

**What is the justification for this program?**

- Addresses SHSP priority or emphasis area

**What is the funding approach for this program?**

Competes with all projects

**What data types were used in the program methodology?**

Crashes

Exposure

Roadway

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- All crashes

***What project identification methodology was used for this program?***

- Crash frequency
- Probability of specific crash types

***Are local roads (non-state owned and operated) included or addressed in this program?***

Yes

***Are local road projects identified using the same methodology as state roads?***

Yes

***How are projects under this program advanced for implementation?***

- selection committee

***Select the processes used to prioritize projects for implementation. For the methods selected, indicate the relative importance of each process in project prioritization. Enter either the weights or numerical rankings. If weights are entered, the sum must equal 100. If ranks are entered, indicate ties by giving both processes the same rank and skip the next highest rank (as an example: 1, 2, 2, 4).***

Rank of Priority Consideration

Available funding:100

**Program: Roadway Departure**

***Date of Program Methodology:7/1/2015***

***What is the justification for this program?***

- Addresses SHSP priority or emphasis area

***What is the funding approach for this program?***

Competes with all projects

***What data types were used in the program methodology?***

**Crashes**

- All crashes

**Exposure**

- Traffic

**Roadway**

- Horizontal curvature

***What project identification methodology was used for this program?***

- Probability of specific crash types

**Are local roads (non-state owned and operated) included or addressed in this program?**

Yes

**Are local road projects identified using the same methodology as state roads?**

Yes

**How are projects under this program advanced for implementation?**

- selection committee

**Select the processes used to prioritize projects for implementation. For the methods selected, indicate the relative importance of each process in project prioritization. Enter either the weights or numerical rankings. If weights are entered, the sum must equal 100. If ranks are entered, indicate ties by giving both processes the same rank and skip the next highest rank (as an example: 1, 2, 2, 4).**

Rank of Priority Consideration

Available funding:100

**Program: Wrong Way Driving**

**Date of Program Methodology:7/1/2015**

**What is the justification for this program?**

- FHWA focused approach to safety

**What is the funding approach for this program?**

Competes with all projects

**What data types were used in the program methodology?**

**Crashes**

- All crashes

**Exposure**

- Traffic

**Roadway**

- Functional classification
- Roadside features
- Other-Interchange Geometry

**What project identification methodology was used for this program?**

- Probability of specific crash types

**Are local roads (non-state owned and operated) included or addressed in this program?**

Yes

**Are local road projects identified using the same methodology as state roads?**

Yes

**How are projects under this program advanced for implementation?**

- selection committee

**Select the processes used to prioritize projects for implementation. For the methods selected, indicate the relative importance of each process in project prioritization. Enter either the weights or numerical rankings. If weights are entered, the sum must equal 100. If ranks are entered, indicate ties by giving both processes the same rank and skip the next highest rank (as an example: 1, 2, 2, 4).**

Rank of Priority Consideration

Available funding:100

**Program: Other-spot improvements (HFCL)**

**Date of Program Methodology:7/1/2018**

**What is the justification for this program?**

- Addresses SHSP priority or emphasis area

**What is the funding approach for this program?**

Competes with all projects

**What data types were used in the program methodology?**

Crashes

Exposure

Roadway

- Fatal and serious injury crashes only
- Traffic

**What project identification methodology was used for this program?**

- Crash frequency
- Probability of specific crash types

**Are local roads (non-state owned and operated) included or addressed in this program?**

No

**Are local road projects identified using the same methodology as state roads?**

**How are projects under this program advanced for implementation?**

- selection committee

**Select the processes used to prioritize projects for implementation. For the methods selected, indicate the relative importance of each process in project prioritization. Enter either the weights or numerical rankings. If weights are entered, the sum must equal 100. If ranks are entered, indicate ties by giving both processes the same rank and skip the next highest rank (as an example: 1, 2, 2, 4).**

**Rank of Priority Consideration**

Cost Effectiveness:1.0

**What percentage of HSIP funds address systemic improvements?**

14

**HSIP funds are used to address which of the following systemic improvements?**

- Add/Upgrade/Modify/Remove Traffic Signal
- High friction surface treatment
- Horizontal curve signs
- Install/Improve Pavement Marking and/or Delineation
- Install/Improve Signing
- Wrong way driving treatments

**What process is used to identify potential countermeasures?**

- Crash data analysis
- Data-driven safety analysis tools (HSM, CMF Clearinghouse, SafetyAnalyst, usRAP)
- Engineering Study
- Road Safety Assessment
- SHSP/Local road safety plan
- Stakeholder input
- Other-CT Roadway Safety Management System

**Does the State HSIP consider connected vehicles and ITS technologies?**

No

**Does the State use the Highway Safety Manual to support HSIP efforts?**

Yes

**Please describe how the State uses the HSM to support HSIP efforts.**

CTDOT, in partnership with UCONN, is currently updating the agency's safety analysis tools and methods to match the six-step safety management process as described in the HSM. CT's Roadway Safety Management System (CRSMS) has a network screening module which is used to identify and rank sites with a higher than predicted crash frequency for specific roadway types, crash types, or the presence of a specific traffic control device. In the diagnosis module, users can create collision diagrams and crash trees as well as conduct a test of proportions. Condition diagrams are also available to provide a visual site overview and can be used in coordination with the collision diagram. CTDOT is also using IHSDM in the safety planning process to evaluate and compare design alternatives.

## Project Implementation

### *Funds Programmed*

**Reporting period for HSIP funding.**

Federal Fiscal Year

**Enter the programmed and obligated funding for each applicable funding category.**

FUNDING CATEGORY	PROGRAMMED	OBLIGATED	% OBLIGATED/PROGRAMMED
HSIP (23 U.S.C. 148)	\$19,308,248	\$27,236,843	141.06%
HRRR Special Rule (23 U.S.C. 148(g)(1))	\$300,000	\$300,000	100%
Penalty Funds (23 U.S.C. 154)	\$7,395,434	\$7,395,434	100%
Penalty Funds (23 U.S.C. 164)	\$0	\$0	0%
RHCP (for HSIP purposes) (23 U.S.C. 130(e)(2))	\$1,936,820	\$2,061,820	106.45%
Other Federal-aid Funds (i.e. STBG, NHPP)	\$0	\$0	0%
State and Local Funds	\$0	\$0	0%
<b>Totals</b>	<b>\$28,940,502</b>	<b>\$36,994,097</b>	<b>127.83%</b>

**How much funding is programmed to local (non-state owned and operated) or tribal safety projects?**

\$644,832

**How much funding is obligated to local or tribal safety projects?**

\$704,832

**How much funding is programmed to non-infrastructure safety projects?**

\$17,014,826

**How much funding is obligated to non-infrastructure safety projects?**

\$20,634,826

**How much funding was transferred in to the HSIP from other core program areas during the reporting period under 23 U.S.C. 126?**

\$0

**How much funding was transferred out of the HSIP to other core program areas during the reporting period under 23 U.S.C. 126?**

\$15,256,418

**Discuss impediments to obligating HSIP funds and plans to overcome this challenge in the future.**

None.

**General Listing of Projects**

List the projects obligated using HSIP funds for the reporting period.

PROJECT NAME	IMPROVEMENT CATEGORY	SUBCATEGORY	OUTPUTS	OUTPUT TYPE	HSIP PROJECT COST(\$)	TOTAL PROJECT COST(\$)	FUNDING CATEGORY	LAND USE/AREA TYPE	FUNCTIONAL CLASSIFICATION	AADT	SPEED	OWNERSHIP	METHOD FOR SITE SELECTION	SHSP EMPHASIS AREA	SHSP STRATEGY
0015-0335	Intersection geometry	Intersection geometry - other	1	Intersections	\$24570	\$24570	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0	30	State Highway Agency	Spot	Intersections	reduce conflicts
0063-0720	Intersection geometry	Intersection geometry - other	1	Intersections	\$50000	\$234222	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0	30	State Highway Agency	Spot	Intersections	reduce conflicts
0076-0224	Intersection geometry	Intersection geometry - other	4	Intersections	\$32220	\$35800	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0	35	State Highway Agency	Systemic	Intersections	reduce conflicts
0079-0238	Intersection geometry	Intersection geometry - other	2	Intersections	\$32000	\$35800	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0	25	State Highway Agency	Systemic	Intersections	reduce conflicts
0092-0681	Intersection geometry	Intersection geometry - other	1	Intersections	\$108000	\$120000	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0	35	State Highway Agency	Systemic	Intersections	reduce conflicts
0102-0285	Intersection geometry	Intersection geometry - other	1	Locations	\$139397	\$154886	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0	25	State Highway Agency	Systemic	Intersections	reduce conflicts
0102-0364	Intersection traffic control	Intersection traffic control - other	1	Locations	\$50000	\$110430	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0	0	State Highway Agency	Systemic	Intersections	reduce conflicts
0156-0183	Intersection traffic control	Systemic improvements - signal-controlled	1	Intersections	\$50000	\$50000	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0	25	State Highway Agency	Systemic	Intersections	reduce conflicts
0170-3490	Intersection traffic control	Modify traffic signal - modernization/replacement	4	Intersections	\$1026252	\$1628368	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0	0	State Highway Agency	Systemic	Intersections	reduce conflicts
0170-3490	Intersection traffic control	Modify traffic signal - modernization/replacement	4	Intersections	\$81000	\$90000	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0	0	State Highway Agency	Systemic	Intersections	reduce conflicts
0171-0462	Intersection traffic control	Intersection traffic control - other	34	Intersections	\$682500	\$682500	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0	0	State Highway Agency	Systemic	Intersections	reduce conflicts
0171-0463	Intersection traffic control	Intersection traffic control - other	200	Intersections	\$699000	\$699000	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0	0	State Highway Agency	Systemic	Intersections	reduce conflicts
0171-0488	Intersection traffic control	Intersection signing -other	200	Intersections	\$275000	\$275000	Penalty Funds (23 U.S.C. 154)	Urban	Multiple/Varies	0	0	State Highway Agency	Systemic	Intersections	reduce conflicts

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PROJECT NAME	IMPROVEMENT CATEGORY	SUBCATEGORY	OUTPUTS	OUTPUT TYPE	HSIP PROJECT COST(\$)	TOTAL PROJECT COST(\$)	FUNDING CATEGORY	LAND USE/AREA TYPE	FUNCTIONAL CLASSIFICATION	AADT	SPEED	OWNERSHIP	METHOD FOR SITE SELECTION	SHSP EMPHASIS AREA	SHSP STRATEGY
0172-0484	Intersection traffic control	Intersection traffic control - other	200	Intersections	\$2985068	\$2985068	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0	0	State Highway Agency	Systemic	Intersections	reduce conflicts
0172-0485	Intersection traffic control	Intersection traffic control - other	200	Intersections	\$4572600	\$4572600	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0	0	State Highway Agency	Systemic	Intersections	reduce conflicts
0172-0507	Intersection traffic control	Pavement markings	1	Locations	\$35000	\$35000	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0	0	State Highway Agency	Systemic	Intersections	reduce conflicts
0172-0521	Intersection traffic control	Pavement markings	1	Locations	\$80000	\$80000	Penalty Funds (23 U.S.C. 154)	Urban	Multiple/Varies	0	0	State Highway Agency	Systemic	Intersections	reduce conflicts
0173-0460	Intersection traffic control	Modify traffic signal –other	2	Intersections	\$55742	\$55742	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0	25	State Highway Agency	Systemic	Intersections	reduce conflicts
0173-0500	Intersection traffic control	Intersection traffic control - other	200	Intersections	\$50000	\$407000	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0	0	State Highway Agency	Systemic	Intersections	reduce conflicts
0173-0500	Intersection traffic control	Intersection traffic control - other	200	Intersections	\$575000	\$575000	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0	0	State Highway Agency	Systemic	Intersections	reduce conflicts
0173-0501	Intersection traffic control	Intersection traffic control - other	200	Intersections	\$470500	\$50000	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0	0	State Highway Agency	Systemic	Intersections	reduce conflicts
0173-0501	Intersection traffic control	Intersection traffic control - other	200	Intersections	\$560000	\$560000	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0	0	State Highway Agency	Systemic	Intersections	reduce conflicts
0173-0528	Intersection traffic control	Pavement markings	1	Intersections	\$460000	\$460000	Penalty Funds (23 U.S.C. 154)	Urban	Multiple/Varies	0	0	State Highway Agency	Systemic	Intersections	reduce conflicts
0174-0435	Intersection traffic control	Intersection traffic control - other	200	Intersections	\$425000	\$425000	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0	0	State Highway Agency	Systemic	Intersections	reduce conflicts
0174-0435	Intersection traffic control	Intersection traffic control - other	200	Intersections	\$50000	\$50000	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0	0	State Highway Agency	Systemic	Intersections	reduce conflicts
0174-0461	Intersection traffic control	Pavement markings	1	Intersections	\$175000	\$175000	Penalty Funds (23 U.S.C. 154)	Urban	Multiple/Varies	0	0	State Highway Agency	Systemic	Intersections	reduce conflicts
0050-0224	Pedestrians and bicyclists	Pedestrians and bicyclists – other	1	Intersections	\$210000	\$210000	Penalty Funds (23 U.S.C. 154)	Urban	Multiple/Varies	0	0	State Highway Agency	Systemic	Pedestrians	reduce conflicts

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PROJECT NAME	IMPROVEMENT CATEGORY	SUBCATEGORY	OUTPUTS	OUTPUT TYPE	HSIP PROJECT COST(\$)	TOTAL PROJECT COST(\$)	FUNDING CATEGORY	LAND USE/AREA TYPE	FUNCTIONAL CLASSIFICATION	AADT	SPEED	OWNERSHIP	METHOD FOR SITE SELECTION	SHSP EMPHASIS AREA	SHSP STRATEGY
0151-0338	Pedestrians and bicyclists	Pedestrian signal	200	Intersections	\$50000	\$170000	HSIP (23 U.S.C. 148)	Urban	Minor Arterial	0	0	State Highway Agency	Spot	Pedestrians	reduce conflicts
0171-0454	Pedestrians and bicyclists	Modify existing crosswalk	11	Crosswalks	\$300477	\$333863	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0	0	State Highway Agency	Systemic	Pedestrians	reduce conflicts
0171-0454	Pedestrians and bicyclists	Modify existing crosswalk	11	Crosswalks	\$27000	\$30000	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0	0	State Highway Agency	Systemic	Pedestrians	reduce conflicts
0171-0473	Pedestrians and bicyclists	Pedestrians and bicyclists – other	14	Intersections	\$50000	\$50000	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0	0	State Highway Agency	Systemic	Pedestrians	reduce conflicts
0171-0473	Pedestrians and bicyclists	Pedestrians and bicyclists – other	14	Intersections	\$38000	\$38000	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0	0	State Highway Agency	Systemic	Pedestrians	reduce conflicts
0172-0495	Pedestrians and bicyclists	Modify existing crosswalk	50	Crosswalks	\$1537536	\$1708373	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0	0	State Highway Agency	Systemic	Pedestrians	reduce conflicts
0172-0495	Pedestrians and bicyclists	Modify existing crosswalk	50	Crosswalks	\$67500	\$75000	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0	0	State Highway Agency	Systemic	Pedestrians	reduce conflicts
0172-0509	Pedestrians and bicyclists	Pedestrians and bicyclists – other	30	Intersections	\$45000	\$45000	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0	0	State Highway Agency	Systemic	Pedestrians	reduce conflicts
0173-0507	Pedestrians and bicyclists	Modify existing crosswalk	50	Crosswalks	\$650543	\$722825	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0	0	State Highway Agency	Systemic	Pedestrians	reduce conflicts
0173-0507	Pedestrians and bicyclists	Modify existing crosswalk	50	Crosswalks	\$27000	\$30000	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0	0	State Highway Agency	Systemic	Pedestrians	reduce conflicts
0173-0521	Pedestrians and bicyclists	Modify existing crosswalk	80	Intersections	\$127000	\$127000	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0	0	State Highway Agency	Systemic	Pedestrians	reduce conflicts
0174-0405	Pedestrians and bicyclists	Pedestrian signal - other	200	Signal heads	\$678689	\$678689	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0	0	State Highway Agency	Systemic	Pedestrians	reduce conflicts
0174-0438	Pedestrians and bicyclists	Rapid Rectangular Flashing Beacons (RRFB)	50	Crosswalks	\$1503376	\$1670418	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0	0	State Highway Agency	Systemic	Pedestrians	reduce conflicts
0174-0438	Pedestrians and bicyclists	Rapid Rectangular Flashing Beacons (RRFB)	50	Crosswalks	\$36000	\$40000	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0	0	State Highway Agency	Systemic	Pedestrians	reduce conflicts

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PROJECT NAME	IMPROVEMENT CATEGORY	SUBCATEGORY	OUTPUTS	OUTPUT TYPE	HSIP PROJECT COST(\$)	TOTAL PROJECT COST(\$)	FUNDING CATEGORY	LAND USE/AREA TYPE	FUNCTIONAL CLASSIFICATION	AADT	SPEED	OWNERSHIP	METHOD FOR SITE SELECTION	SHSP EMPHASIS AREA	SHSP STRATEGY
0170-3595	Roadway	Roadway - other	1	Locations	\$50000	\$50000	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0	0	State Highway Agency	Systemic	Roadway Departure	Keep drivers on road
0170-3597	Roadway	Rumble strips – center	1	Locations	\$14851	\$14851	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0	0	State Highway Agency	Systemic	Roadway Departure	Keep drivers on road
0171-0440	Roadway	Roadway - other	1	Locations	\$2212217	\$2212217	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0	0	State Highway Agency	Systemic	Roadway Departure	Keep drivers on road
0171-0469	Roadway	Pavement surface – high friction surface	1	Locations	\$2400801	\$2485744	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0	0	State Highway Agency	Systemic	Roadway Departure	Keep drivers on road
0171-0489	Roadway	Pavement surface – high friction surface	1	Locations	\$157500	\$175000	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0	0	State Highway Agency	Systemic	Roadway Departure	Keep drivers on road
0172-0477	Roadway	Roadway - other	1	Locations	\$50000	\$50000	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0	0	State Highway Agency	Systemic	Roadway Departure	Keep drivers on road
0172-0506	Roadway	Pavement surface – high friction surface	1	Locations	\$2782594	\$2870004	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0	0	State Highway Agency	Systemic	Roadway Departure	Keep drivers on road
0173-0485	Roadway	Roadway - other	1	Locations	\$271303	\$271303	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0	0	State Highway Agency	Systemic	Roadway Departure	Keep drivers on road
0173-0518	Roadway	Pavement surface – high friction surface	1	Locations	\$50000	\$287822	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0	0	State Highway Agency	Systemic	Roadway Departure	Keep drivers on road
0173-0518	Roadway	Pavement surface – high friction surface	1	Locations	\$67500	\$75000	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0	0	State Highway Agency	Systemic	Roadway Departure	Keep drivers on road
0174-0449	Roadway	Roadway - other	1	Locations	\$95000	\$95000	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0	0	State Highway Agency	Systemic	Roadway Departure	Keep drivers on road
0174-0450	Roadway	Pavement surface – high friction surface	1	Locations	\$50000	\$397540	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0	0	State Highway Agency	Systemic	Roadway Departure	Keep drivers on road
0174-0450	Roadway	Pavement surface – high friction surface	1	Locations	\$67500	\$75000	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0	0	State Highway Agency	Systemic	Roadway Departure	Keep drivers on road
0093-0241	Miscellaneous	Data collection	1	Numbers	\$2243716	\$2243716	Penalty Funds (23 U.S.C. 154)	N/A	N/A	0	0	State Highway Agency	Systemic	Data	other

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PROJECT NAME	IMPROVEMENT CATEGORY	SUBCATEGORY	OUTPUTS	OUTPUT TYPE	HSIP PROJECT COST(\$)	TOTAL PROJECT COST(\$)	FUNDING CATEGORY	LAND USE/AREA TYPE	FUNCTIONAL CLASSIFICATION	AADT	SPEED	OWNERSHIP	METHOD FOR SITE SELECTION	SHSP EMPHASIS AREA	SHSP STRATEGY
0093-0242	Miscellaneous	SHSP Development	1	Numbers	\$870820	\$870820	Penalty Funds (23 U.S.C. 154)	N/A	N/A	0	0	State Highway Agency	Systemic	Data	other
0099-0114	Railroad grade crossings	Active grade crossing equipment installation/upgrade	50	Locations	\$1284930	\$1427700	HSIP (23 U.S.C. 148)	N/A	N/A	0	0	State Highway Agency	Spot	Intersections	other
0099-0115	Railroad grade crossings	Active grade crossing equipment installation/upgrade	50	Locations	\$539427	\$539427	HSIP (23 U.S.C. 148)	N/A	N/A	0	0	State Highway Agency	Spot	Intersections	other
0139-0103	Railroad grade crossings	Active grade crossing equipment installation/upgrade	50	Locations	\$591200	\$656889	HSIP (23 U.S.C. 148)	N/A	N/A	0	0	State Highway Agency	Spot	Intersections	other
0170-3565	Miscellaneous	Data analysis	1	Numbers	\$1752572	\$1752572	Penalty Funds (23 U.S.C. 154)	N/A	N/A	0	0	State Highway Agency	Systemic	Data	other
0170-3566	Speed management	Speed management - other	1	Signs	\$328200	\$328000	HSIP (23 U.S.C. 148)	N/A	N/A	0	0	State Highway Agency	Systemic	Data	other
0170-3621	Miscellaneous	SHSP Development	1	Numbers	\$125000	\$125000	Penalty Funds (23 U.S.C. 154)	N/A	N/A	0	0	State Highway Agency	Systemic	Data	other
0170-3624	Miscellaneous	Data analysis	1	Locations	\$450476	\$450476	Penalty Funds (23 U.S.C. 154)	N/A	N/A	0	0	State Highway Agency	Systemic	Data	other
0170-3628	Miscellaneous	Local road safety plans	1	Locations	\$4813180	\$4813180	HSIP (23 U.S.C. 148)	N/A	N/A	0	0	State Highway Agency	Systemic	Data	other
0170-3630	Speed management	Speed management - other	1	Locations	\$650000	\$650000	Penalty Funds (23 U.S.C. 154)	N/A	N/A	0	0	State Highway Agency	Systemic	Data	other
0170-3631	Miscellaneous	Transportation safety planning	1	Numbers	\$504000	\$560000	Penalty Funds (23 U.S.C. 154)	N/A	N/A	0	0	State Highway Agency	Systemic	Data	other

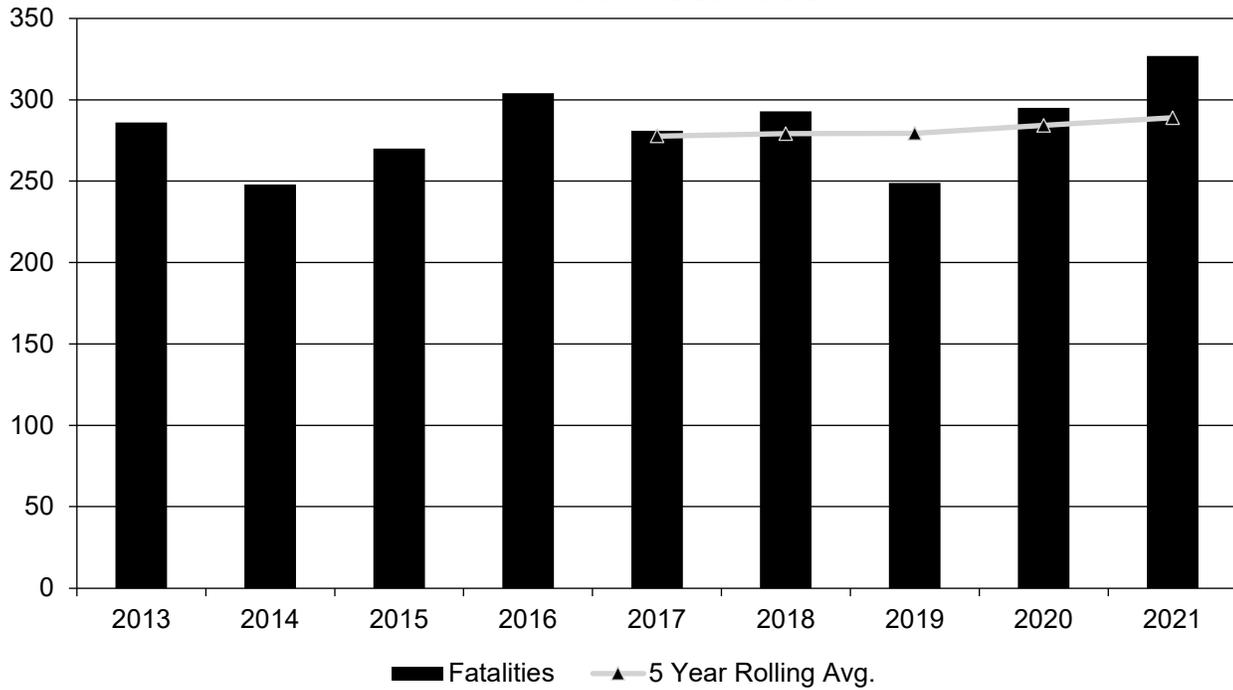
## Safety Performance

### *General Highway Safety Trends*

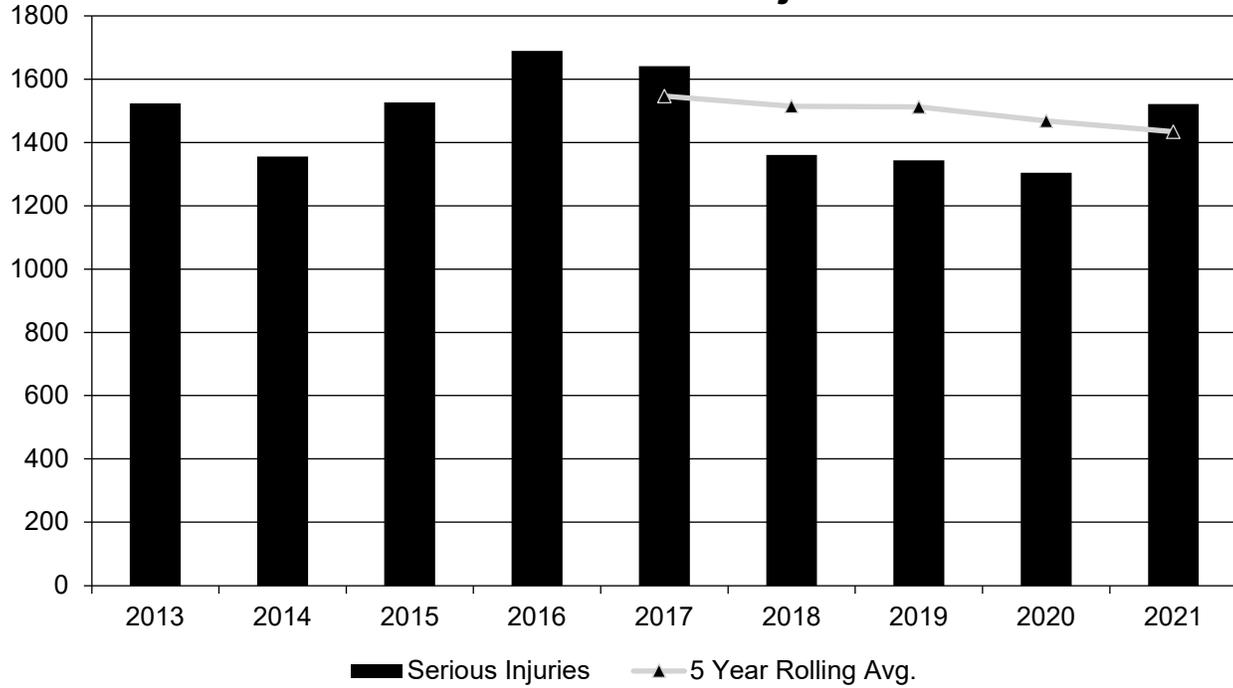
Present data showing the general highway safety trends in the State for the past five years.

<b>PERFORMANCE MEASURES</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>
Fatalities	286	248	270	304	281	293	249	295	327
Serious Injuries	1,523	1,356	1,526	1,689	1,641	1,361	1,344	1,304	1,521
Fatality rate (per HMVMT)	0.924	0.795	0.855	0.961	0.892	0.930	0.788	0.988	1.064
Serious injury rate (per HMVMT)	4.920	4.348	4.830	5.338	5.210	4.308	4.253	4.127	4.951
Number non-motorized fatalities	40	51	49	65	52	61	59	63	58
Number of non-serious motorized injuries	226	210	251	307	302	255	247	197	213

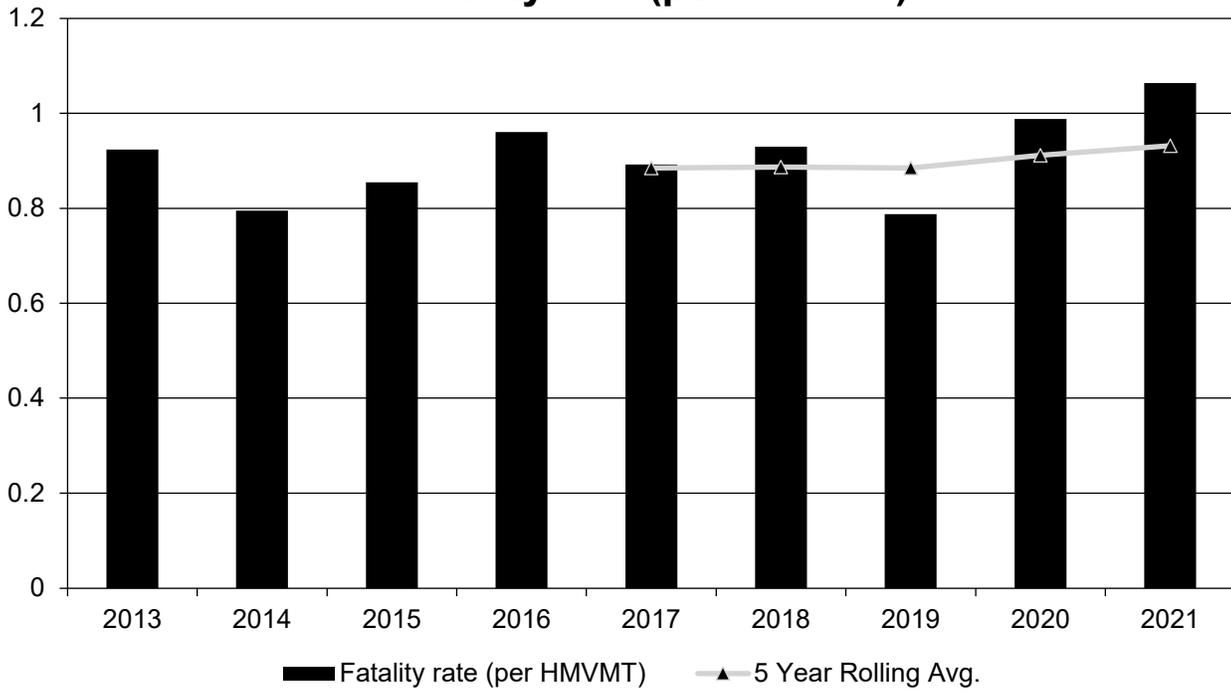
### Annual Fatalities



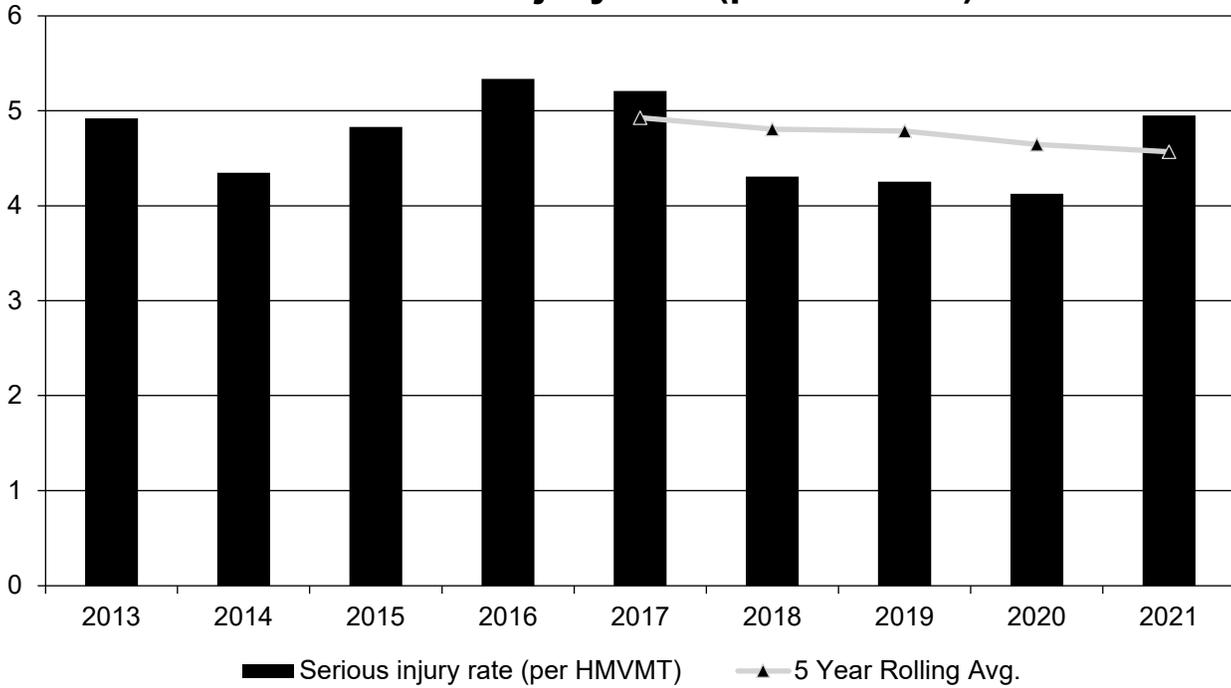
### Annual Serious Injuries



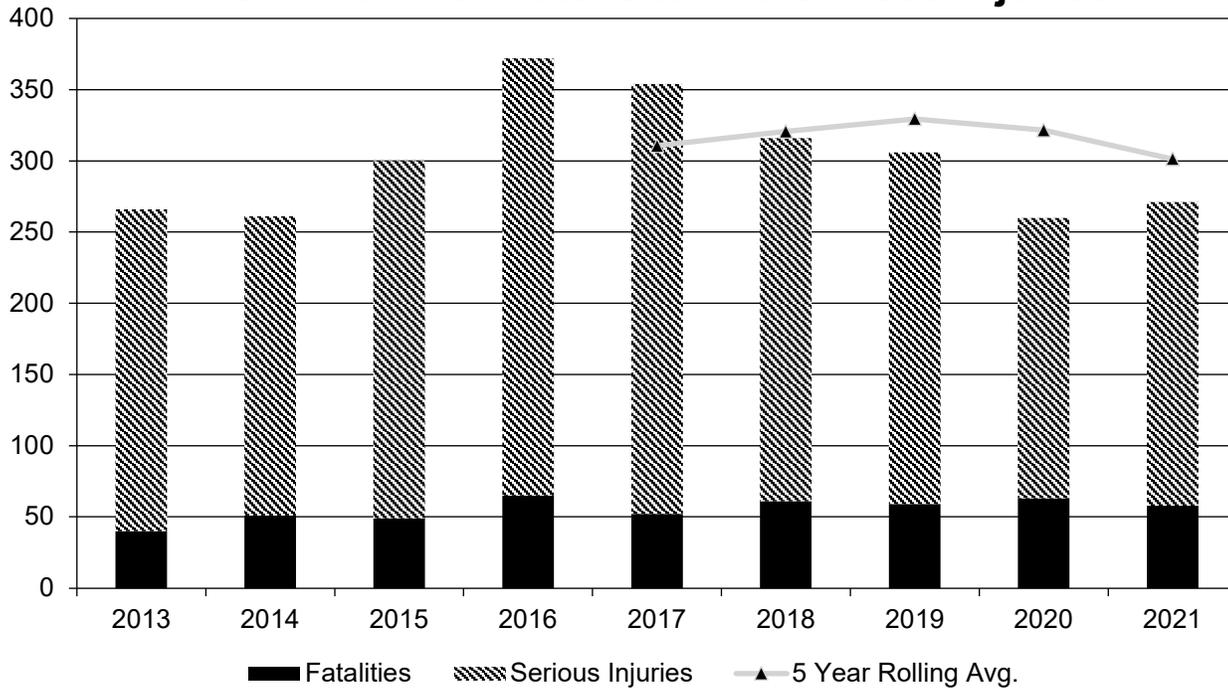
### Fatality rate (per HMVMT)



### Serious injury rate (per HMVMT)



### Non Motorized Fatalities and Serious Injuries



Describe fatality data source.

FARS

To the maximum extent possible, present this data by functional classification and ownership.

#### Year 2020

Functional Classification	Number of Fatalities (5-yr avg)	Number of Serious Injuries (5-yr avg)	Fatality Rate (per HMVMT) (5-yr avg)	Serious Injury Rate (per HMVMT) (5-yr avg)
Rural Principal Arterial (RPA) - Interstate	1.8		0.37	
Rural Principal Arterial (RPA) - Other				
Freeways and Expressways				
Rural Minor Arterial				
Rural Minor Collector				
Rural Major Collector				

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<b>Functional Classification</b>	<b>Number of Fatalities (5-yr avg)</b>	<b>Number of Serious Injuries (5-yr avg)</b>	<b>Fatality Rate (per HMVMT) (5-yr avg)</b>	<b>Serious Injury Rate (per HMVMT) (5-yr avg)</b>
Rural Local Road or Street				
Urban Principal Arterial (UPA) - Interstate	43.2		0.44	
Urban Principal Arterial (UPA) - Other Freeways and Expressways	24.4		0.58	
Urban Principal Arterial (UPA) - Other	58.6		1.54	
Urban Minor Arterial	81.8		1.58	
Urban Minor Collector				
Urban Major Collector	37.8		1.45	
Urban Local Road or Street	30.8		1.22	

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**Year 2018**

<b>Roadways</b>	<b>Number of Fatalities (5-yr avg)</b>	<b>Number of Serious Injuries (5-yr avg)</b>	<b>Fatality Rate (per HMVMT) (5-yr avg)</b>	<b>Serious Injury Rate (per HMVMT) (5-yr avg)</b>
State Highway Agency	196.4	479.4		
County Highway Agency				
Town or Township Highway Agency	83	747.2		
City or Municipal Highway Agency				
State Park, Forest, or Reservation Agency				
Local Park, Forest or Reservation Agency				
Other State Agency				
Other Local Agency				
Private (Other than Railroad)				
Railroad				
State Toll Authority				
Local Toll Authority				
Other Public Instrumentality (e.g. Airport, School, University)				
Indian Tribe Nation				

***Safety Performance Targets***

**Safety Performance Targets**

**Calendar Year 2023 Targets \***

***Number of Fatalities:270.0***

***Describe the basis for established target, including how it supports SHSP goals.***

## "Annual" Fatalities

&middledot; The annual number of fatalities has fluctuated from year to year. There was a declining trend until 2019 after a high point of 304 fatalities in the year 2016. However, the trend started to reverse in 2020 with the COVID-19 pandemic. The years 2020 and 2021 saw a dramatic increase in fatalities in Connecticut and was observed at the national level as well. The 2021 preliminary data suggest 327 fatalities which is a 11% increase over 2020 in Connecticut.

&middledot; A time series regression analysis was conducted to project the likely number of fatalities in 2022 and 2023 (our target year). Based on this regression analysis, the projected fatalities are around 317, but there is a significant amount of statistical variance around the projection.

## 5-Year Moving Average

&middledot; The 5-year moving average trendline shows the projected fatalities of around 292, lower than the projection with the annual numbers for the target year of 2023.

## TARGET

&middledot; CTDOT is choosing to maintain a 2023 fatality target of **270.0**. The selection is based on careful consideration of the following:

1. CTDOT has chosen to set an aggressive target that will move the state back toward fatality levels experienced in 2014-2015 and 2019 before the impact of the COVID-19 pandemic.
2. Prior to the COVID-19 pandemic, there had been a decreasing trend in the number of fatalities for the past couple of years with safety related infrastructure projects as well as enforcement and educational campaigns. CTDOT recognizes that 2020 and 2021 were unusual years with the COVID-19 pandemic which resulted in higher-than-expected traffic fatalities. This was an unexpected consequence observed in most of the states in the U.S.

***Number of Serious Injuries:1300.0***

***Describe the basis for established target, including how it supports SHSP goals.***

## "Annual" Serious Injuries

&middledot; The annual number of serious injuries has fluctuated from year to year, but the annual data also suggest a downward trend since a high point of 1778 in 2012.

&middledot; A time series regression analysis was conducted to project the likely number of serious injuries in 2022 and 2023 (our target year). The preliminary data for 2021 suggest an uptick in the number of serious injuries but based on the regression analysis, we should expect a reduction in serious injuries. This decrease is expected to bring the annual number down to around 1350, but there is a significant amount of statistical variance around the projection.

## 5-Year Moving Average

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• Unlike the case for *fatalities*, the 5-year moving average for *serious injuries* is exhibiting a steady downward trend. Nonetheless, there is still a small difference between the 5-year average trendline and the annual regression analysis forecast. The 5-year average is expected to fall to around 1399, while the regression forecast is around 1350.

## TARGET

• CTDOT is choosing to maintain a 2023 target of **1300.0** serious injuries. The selection is based on careful consideration of the following:

1. The 2 trendlines in the graph suggest the actual value should fall closer to 1350-1399.

CTDOT wants to set an aggressive target that will move the state back toward serious injury levels experienced in 2020 and lower. At the beginning of the COVID-19 pandemic in 2020 the number of fatalities increased but the number of serious injuries decreased.

***Fatality Rate:0.850***

***Describe the basis for established target, including how it supports SHSP goals.***

## "Annual" Fatality Rate

• The annual fatality rate has fluctuated from year to year, but the annual data suggest an upward trend since the start of the COVID-19 pandemic. In 2020, the VMT dropped by approximately 6% compared to 2019. However, the number of fatalities continued to increase reaching high points of 0.988 fatalities/100 million VMT in 2020 during the COVID-19 pandemic. Preliminary 2021 data suggest a further increase in the fatality rate.

• A time series regression analysis was conducted to project the likely number of fatalities in 2022 and 2023 (our target year). Based on the regression analysis the projected fatality rate is around 1.031, but there is a significant amount of statistical variance around the projection.

## 5-Year Moving Average

• In parallel with the annual numbers, the 5-year moving average is exhibiting an upward trend. The trendline for the 5-year moving average suggests the fatality rate could increase to 0.942 in 2023.

## TARGET

• CTDOT is choosing to maintain an aggressive target of **0.850** in 2023. The selection is based on careful consideration of the following:

1. The 2 trendlines in the graph suggest the actual value may be between 0.942 and 1.031. These trends are higher due to the impact of the COVID-19 pandemic on the number of fatalities and the VMT.

2. CTDOT wants to set an aggressive target that will move the state back toward fatality rate levels experienced in 2014-2015 and 2019 time periods before the impact of the COVID-19 pandemic.

## 2022 Connecticut Highway Safety Improvement Program

[3. CTDOT recognizes that 2020 and 2021 were unusual years with the COVID-19 pandemic](#) when Connecticut saw an increase in traffic fatalities even though the traffic volume dropped. This resulted in higher fatality rate in 2020 and the increase in fatalities has continued in 2021 which will likely push the fatality rate even higher.

4. The latest available NHTSA data for 2019 suggest that historically, Connecticut has one of the lowest fatality rates in the country. In 2019, it had a fatality rate of 0.788 that was the 8th lowest rate nationwide, while the national fatality rate of 1.11 was 41% higher than Connecticut. In 2020, during the COVID-19 pandemic, Connecticut's fatality rate increased to 0.988. Early estimates from NHTSA suggest a national fatality rate of 1.37 in 2020 which is 39% higher than Connecticut.<sup>[1]</sup> Connecticut is choosing to strive for a lower rate by setting a target at 0.850 for 2023. The goal is to return to pre-COVID-19 pandemic levels.

[1] NHTSA Report No. DOT HS 813 118. Early Estimates of Motor Vehicle Traffic Fatalities and Fatality Rate by Sub-Categories in 2020

***Serious Injury Rate:4.300***

***Describe the basis for established target, including how it supports SHSP goals.***

### **"Annual" Serious Injury Rates**

&middledot; The annual serious injury rates have fluctuated from year to year, but the annual data suggest a downward trend since a high point of 5.686 serious injuries/100 million VMT in 2012.

&middledot; A [time series](#) regression analysis was conducted to project the likely serious injury rates in 2022 and 2023 (our target year). Based on the regression analysis, we should expect a continuing reduction in serious injury rates. This decrease is expected to bring the annual rate down to 4.414-4.495, but there is a significant amount of statistical variance around the projection.

### **5-Year Moving Average**

&middledot; Unlike the case for *fatality rates*, the 5-year moving average for *serious injury rates* is exhibiting a steady downward trend. Nonetheless, there is still a small difference between the 5-year average trendline and the annual regression analysis forecast. The 5-year average is expected to fall to around 4.495, while the regression forecast is 4.414.

### **TARGET**

&middledot; CTDOT is choosing to maintain a 2023 target of **4.300** serious injuries/100 million VMT. The selection is based on careful consideration of the following:

1. The 2 trendlines in the graph suggest the actual value should fall between 4.414-4.495, but CTDOT wants to set an aggressive target that will move the state back toward fatality rate levels experienced in 2018 and lower.

CTDOT recognizes that 2020 and 2021 were unusual years with the COVID-19 pandemic. There was a decrease in the number of serious injuries likely due to a reduction in traffic volume in 2020 whereas, the preliminary data for 2021 suggest an increase in the number of serious injuries with the traffic volume returning closer to the pre-COVID-19 pandemic times.

***Total Number of Non-Motorized Fatalities and Serious Injuries:280.0***

***Describe the basis for established target, including how it supports SHSP goals.***

## **"Annual" Non-Motorist Fatalities and Serious Injuries**

&middledot; The annual number of non-motorist fatalities and serious injuries has fluctuated from year to year, but the annual data suggest a downward trend since a high point of 372 in 2016.

&middledot; A time series regression analysis was conducted to project the likely number of non-motorist fatalities and serious injuries in 2022 and 2023 (our target year). The regression analysis, suggest a small increase to around 306.4-308.8 similar to the 2019 pre-COVID-19 pandemic number. There is a significant amount of statistical variance around the projection.

## **5-Year Moving Average**

&middledot; Similar to the "annual" projection, the 5-year moving average for non-motorist fatalities and serious injuries is projecting an increase although there is a significant difference between the 5-year moving average trendline and the annual regression analysis forecast. The 5-year moving average is expected to increase to around 326.0, while the regression forecast is 308.8 for the year 2023.

## **TARGET**

&middledot; CTDOT is choosing to maintain a 2023 target of **280.0** non-motorist fatalities and serious injuries. The selection is based on careful consideration of the following:

1. High Priority for Pedestrian Safety. The safety of pedestrians became a major issue in Connecticut when pedestrian fatalities unexpectedly jumped in 2014. While it was part of a larger national trend, it raised great concern in a state that is heavily urbanized and where walking and bicycling are essential modes of transport for many residents. These forms of active transportation are also increasingly popular forms of physical exercise. CTDOT adopted pedestrian safety as a high priority and has a major program to improve safety and expand opportunities for walking and bicycling. Several safety-related infrastructure projects were undertaken from 2015-2021 to improve the conspicuity of traffic control devices for non-motorized road users including but not limited to marked crosswalk enhancements and other signing. Connecticut remains committed to these goals.

In addition, there were several changes to the non-motorist Safety Laws in Connecticut in 2021 with the *Connecticut House Bill No. 5429*, which included the following:

&middledot; *Pedestrian Law – &sect; 1 &dash; YIELDING TO PEDESTRIANS AT CROSSWALKS: Expands the circumstances under which drivers must yield to pedestrians at uncontrolled crosswalks*

&middledot; *Dooring Law – &sect; 4 &dash; DOORING: Prohibits causing physical contact with moving traffic by (1) opening a vehicle door or (2) leaving it open longer than necessary to load or unload passengers*

&middledot; *Speed Limit Law – &sect;&sect; 6-12 &dash; LOCAL ROAD SPEED LIMITS AND PEDESTRIAN SAFETY ZONES: Allows municipalities to establish speed limits on local roads without OSTA approval and allows for the establishment of pedestrian safety zones with speed limits as low as 20 mph in downtown districts, community centers, and areas around hospitals*

2. Aggressive Target. The CTDOT wants to set an aggressive target that will move the state back toward fatality rate levels experienced in 2014 and lower.

**Describe efforts to coordinate with other stakeholders (e.g. MPOs, SHSO) to establish safety performance targets.**

Internal coordination between the Highway Safety Office (HSO) and Traffic Engineering began in the Spring of 2022. The HSO's contractor prepared initial targets for each of the safety performance targets for discussion. Once the draft targets were approved at the staff level, they were forwarded to CTDOT management for discussion and approval. After the targets were approved, CTDOT hosted a meeting with the MPOs to discuss safety performance targets. During the meeting, there was a presentation and discussion on Federal reporting requirements, deadlines, and an assessment on past and current trends.

**Does the State want to report additional optional targets?**

No

**Describe progress toward meeting the State's 2021 Safety Performance Targets (based on data available at the time of reporting). For each target, include a discussion of any reasons for differences in the actual outcomes and targets.**

PERFORMANCE MEASURES	TARGETS	ACTUALS
Number of Fatalities	270.0	289.0
Number of Serious Injuries	1360.0	1434.2
Fatality Rate	0.850	0.932
Serious Injury Rate	4.300	4.570
Non-Motorized Fatalities and Serious Injuries	300.0	301.4

Number of Fatalities:

Preliminary data suggests that target will not be achieved and is slightly worse than baseline.

Number of Serious Injuries:

Preliminary data suggests that target will not be achieved and is slightly worse than baseline.

Fatality Rate:

Preliminary data suggests that target will not be achieved and is slightly worse than baseline.

Serious Injury Rate (per HMVMT):

Preliminary data suggests that target will not be achieved and is slightly worse than baseline.

Number of Non-Motorized Fatalities and Serious Injuries:

Preliminary data suggests that target will not be achieved and is slightly worse than baseline.

***Applicability of Special Rules***

**Does the HRRR special rule apply to the State for this reporting period?**

No

**Provide the number of older driver and pedestrian fatalities and serious injuries 65 years of age and older for the past seven years.**

<b>PERFORMANCE MEASURES</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>
Number of Older Driver and Pedestrian Fatalities	38	50	53	40	53	42	48
Number of Older Driver and Pedestrian Serious Injuries	124	120	132	117	137	138	152

## Evaluation

### *Program Effectiveness*

#### How does the State measure effectiveness of the HSIP?

- Change in fatalities and serious injuries

#### Based on the measures of effectiveness selected previously, describe the results of the State's program level evaluations.

During COVID the traffic volume decreased by almost 50% and as a result there was an increase in speeding and aggressive driving behavior which has continued as the traffic volumes get back to normal. As a result it is difficult to evaluate the State's HSIP program. The safety effectiveness evaluation module within the CT Roadway Safety Management System (CRSMS) will allow users to evaluate individual project(s).

#### What other indicators of success does the State use to demonstrate effectiveness and success of the Highway Safety Improvement Program?

- HSIP Obligations
- Increased awareness of safety and data-driven process
- Increased focus on local road safety
- More systemic programs

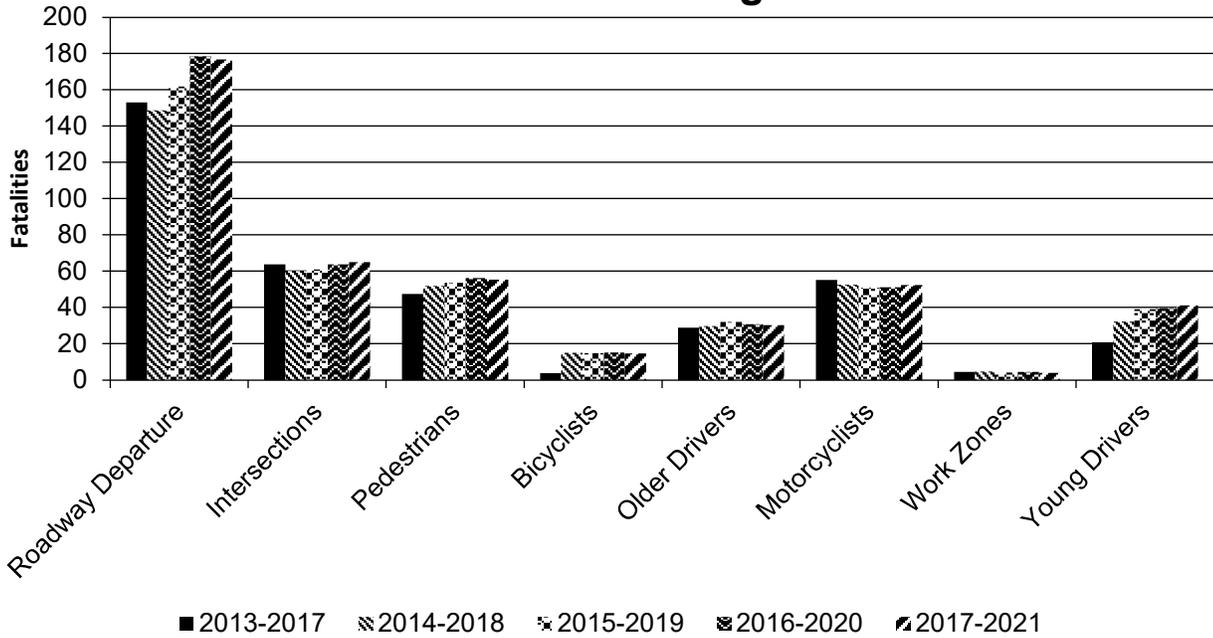
### *Effectiveness of Groupings or Similar Types of Improvements*

#### Present and describe trends in SHSP emphasis area performance measures.

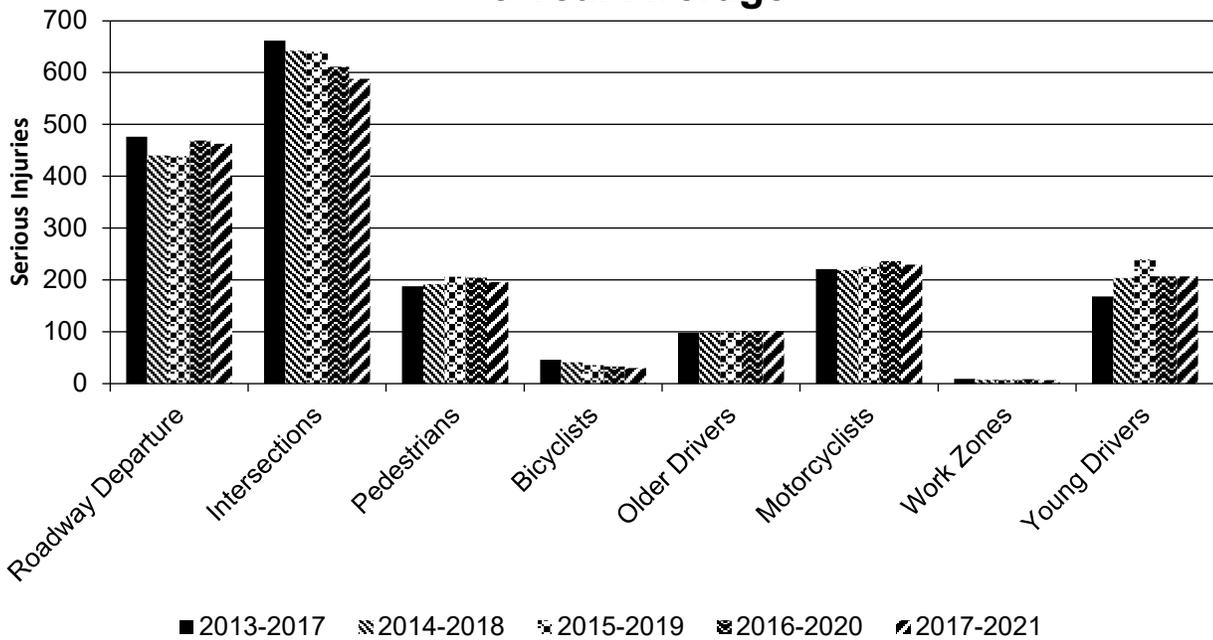
Year 2021

SHSP Emphasis Area	Targeted Crash Type	Number of Fatalities (5-yr avg)	Number of Serious Injuries (5-yr avg)	Fatality Rate (per HMVMT) (5-yr avg)	Serious Injury Rate (per HMVMT) (5-yr avg)
Roadway Departure		176.8	462.6	0.56	1.47
Intersections		65	587.8	0.21	1.86
Pedestrians		55.4	195.4	0.18	0.62
Bicyclists		14.6	29.6	0.01	0.1
Older Drivers		30.2	100.8	0.1	0.32
Motorcyclists		52.4	229.4	0.17	0.73
Work Zones		4	6.6	0.01	0.02
Young Drivers		41.2	206.6	0.13	0.65

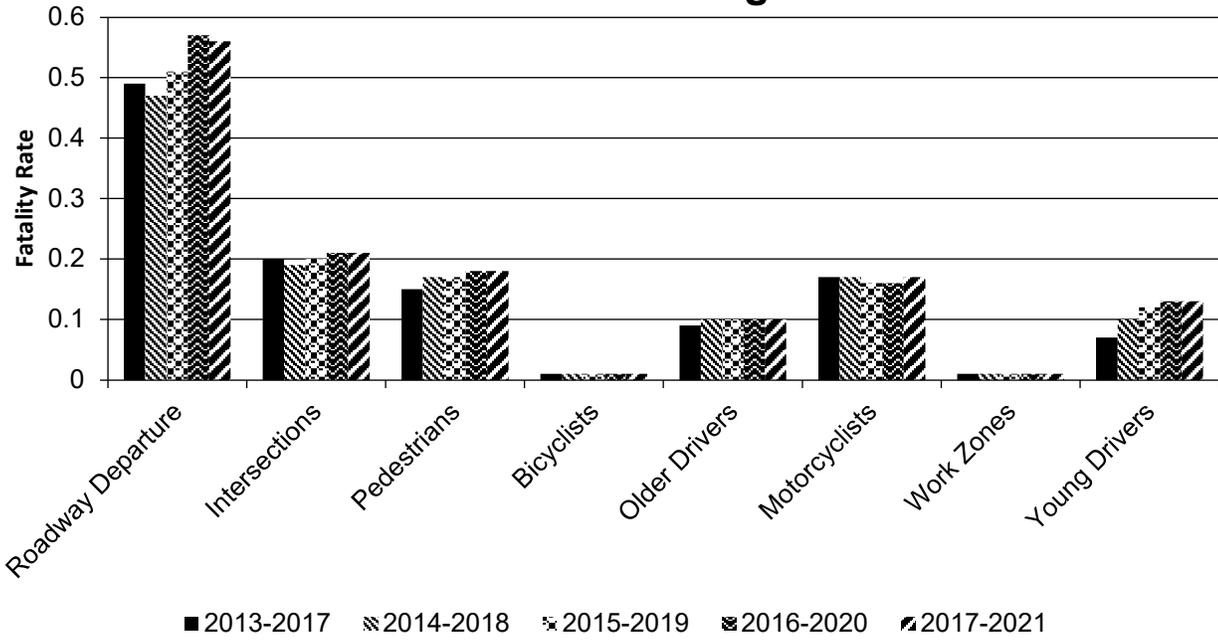
### Number of Fatalities 5 Year Average



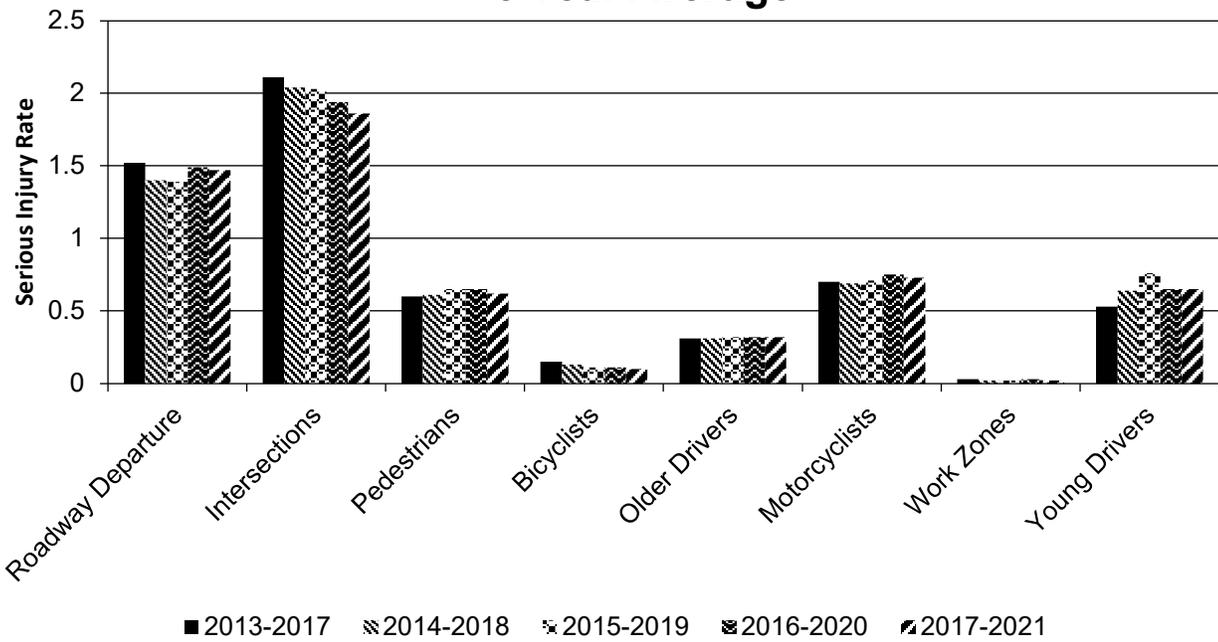
### Number of Serious Injuries 5 Year Average



### Fatality Rate (per HMVMT) 5 Year Average



### Serious Injury Rate (per HMVMT) 5 Year Average



***Project Effectiveness***

**Provide the following information for previously implemented projects that the State evaluated this reporting period.**

## Compliance Assessment

**What date was the State’s current SHSP approved by the Governor or designated State representative?**

05/01/2022

**What are the years being covered by the current SHSP?**

From: 2022 To: 2026

**When does the State anticipate completing it’s next SHSP update?**

2026

**Provide the current status (percent complete) of MIRE fundamental data elements collection efforts using the table below.**

\*Based on Functional Classification (MIRE 1.0 Element Number) [MIRE 2.0 Element Number]

ROAD TYPE	*MIRE NAME (MIRE NO.)	NON LOCAL PAVED ROADS - SEGMENT		NON LOCAL PAVED ROADS - INTERSECTION		NON LOCAL PAVED ROADS - RAMPS		LOCAL PAVED ROADS		UNPAVED ROADS	
		STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE
ROADWAY SEGMENT	Segment Identifier (12) [12]	100	100					90	99	65	99
	Route Number (8) [8]	100	100								
	Route/Street Name (9) [9]	100	100								
	Federal Aid/Route Type (21) [21]	100	100								
	Rural/Urban Designation (20) [20]	100	100					99	99		
	Surface Type (23) [24]	100	100					90	99		
	Begin Point Segment Descriptor (10) [10]	100	100					90	99	65	99
	End Point Segment Descriptor (11) [11]	100	100					90	99	65	99
	Segment Length (13) [13]	100	100								
	Direction of Inventory (18) [18]	100	100								
Functional Class (19) [19]	100	100					99	99	100	90	

2022 Connecticut Highway Safety Improvement Program

ROAD TYPE	*MIRE NAME (MIRE NO.)	NON LOCAL PAVED ROADS - SEGMENT		NON LOCAL PAVED ROADS - INTERSECTION		NON LOCAL PAVED ROADS - RAMPS		LOCAL PAVED ROADS		UNPAVED ROADS	
		STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE
	Median Type (54) [55]	95	50								
	Access Control (22) [23]	100	100								
	One/Two Way Operations (91) [93]	100	100								
	Number of Through Lanes (31) [32]	100	100					99	99		
	Average Annual Daily Traffic (79) [81]	100	100					99	99		
	AADT Year (80) [82]	100	100								
	Type of Governmental Ownership (4) [4]	100	100					99	99	99	90
<b>INTERSECTION</b>	Unique Junction Identifier (120) [110]			100	100						
	Location Identifier for Road 1 Crossing Point (122) [112]			100	100						
	Location Identifier for Road 2 Crossing Point (123) [113]			100	100						
	Intersection/Junction Geometry (126) [116]			100	100						
	Intersection/Junction Traffic Control (131) [131]			100	100						
	AADT for Each Intersecting Road (79) [81]			100	100						
	AADT Year (80) [82]			100	100						
	Unique Approach Identifier (139) [129]			100	100						
<b>INTERCHANGE/RAMP</b>	Unique Interchange Identifier (178) [168]					100	100				
	Location Identifier for Roadway at					100	100				

2022 Connecticut Highway Safety Improvement Program

ROAD TYPE	*MIRE NAME (MIRE NO.)	NON LOCAL PAVED ROADS - SEGMENT		NON LOCAL PAVED ROADS - INTERSECTION		NON LOCAL PAVED ROADS - RAMPS		LOCAL PAVED ROADS		UNPAVED ROADS	
		STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE
	Beginning of Ramp Terminal (197) [187]										
	Location Identifier for Roadway at Ending Ramp Terminal (201) [191]					100	100				
	Ramp Length (187) [177]					100	100				
	Roadway Type at Beginning of Ramp Terminal (195) [185]					100	100				
	Roadway Type at End Ramp Terminal (199) [189]					100	100				
	Interchange Type (182) [172]					100	100				
	Ramp AADT (191) [181]					100	100				
	Year of Ramp AADT (192) [182]					100	100				
	Functional Class (19) [19]					100	100				
	Type of Governmental Ownership (4) [4]					100	100				
<b>Totals (Average Percent Complete):</b>		<b>99.72</b>	<b>97.22</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>95.00</b>	<b>99.00</b>	<b>78.80</b>	<b>95.40</b>

\*Based on Functional Classification (MIRE 1.0 Element Number) [MIRE 2.0 Element Number]

**Describe actions the State will take moving forward to meet the requirement to have complete access to the MIRE fundamental data elements on all public roads by September 30, 2026.**

<https://portal.ct.gov/-/media/DOT/documents/dhighwaysafety/TRCC/Traffic-Records-Strategic-Plan-2021.pdf>

MIRE FDE section begins on page 36

## **Optional Attachments**

Program Structure:

[CT HSIP guide.pdf](#)

Project Implementation:

Safety Performance:

Evaluation:

Compliance Assessment:

## Glossary

**5 year rolling average:** means the average of five individuals, consecutive annual points of data (e.g. annual fatality rate).

**Emphasis area:** means a highway safety priority in a State's SHSP, identified through a data-driven, collaborative process.

**Highway safety improvement project:** means strategies, activities and projects on a public road that are consistent with a State strategic highway safety plan and corrects or improves a hazardous road location or feature or addresses a highway safety problem.

**HMVMT:** means hundred million vehicle miles traveled.

**Non-infrastructure projects:** are projects that do not result in construction. Examples of non-infrastructure projects include road safety audits, transportation safety planning activities, improvements in the collection and analysis of data, education and outreach, and enforcement activities.

**Older driver special rule:** applies if traffic fatalities and serious injuries per capita for drivers and pedestrians over the age of 65 in a State increases during the most recent 2-year period for which data are available, as defined in the Older Driver and Pedestrian Special Rule Interim Guidance dated February 13, 2013.

**Performance measure:** means indicators that enable decision-makers and other stakeholders to monitor changes in system condition and performance against established visions, goals, and objectives.

**Programmed funds:** mean those funds that have been programmed in the Statewide Transportation Improvement Program (STIP) to be expended on highway safety improvement projects.

**Roadway Functional Classification:** means the process by which streets and highways are grouped into classes, or systems, according to the character of service they are intended to provide.

**Strategic Highway Safety Plan (SHSP):** means a comprehensive, multi-disciplinary plan, based on safety data developed by a State Department of Transportation in accordance with 23 U.S.C. 148.

**Systematic:** refers to an approach where an agency deploys countermeasures at all locations across a system.

**Systemic safety improvement:** means an improvement that is widely implemented based on high risk roadway features that are correlated with specific severe crash types.

**Transfer:** means, in accordance with provisions of 23 U.S.C. 126, a State may transfer from an apportionment under section 104(b) not to exceed 50 percent of the amount apportioned for the fiscal year to any other apportionment of the State under that section.